

City of Calistoga Rate Study 2017



Water Final Draft Tables
11/2/2017



BARTLE WELLS ASSOCIATES
Independent Public Finance Advisors

Table 1
City of Calistoga
Water Rates

rates effective January 1, 2017

Fixed Charge

Meter Size	Peak service Unit (hcf) of water use per month	Fixed Monthly Charge
5/8" or 3/4"	35	\$23.05
1"	88	\$57.63
1 1/2"	175	\$115.25
2"	280	\$184.40
3"	525	\$345.75
4"	875	\$576.25
6"	1750	\$1,152.50
8"	2800	\$1,844.00

Meter Demand Factor

Customer Class	Meter Demand Factor
Single Family Residential	1.00
Multi-Family Residential	1.42
Mobile Home Parks	2.11
Commerical-General	1.10
Commercial-Restaurants	2.39
Commercial-Laundry	1.10
Commerical-Transient Occupancy	1.25
Commercial-Spa Resorts	2.57
Industrial	3.19

Single Family Volume Charge

Tier	Bimonthly water use	Volume Charge
Tier 1	1-32 hcf	\$6.50
Tier 2	33-50 hcf	\$6.83
Tier 3	51-99 hcf	\$7.15
Tier 4	100+ hcf	\$8.71

Multi-Family and Commercial Volume Charge

Volume Charge per hcf	\$6.50
Volume charge per hcf over peak [1]	\$9.27

[1] Peak unit equal to meter demand factor multiplied by meter peak service unit

Out of city customers subject to 115% of volumetric rates

Low income rate assistance available to single family, multi-family, and mobile home park customers at 20% bill reduction

Chart 1: Single Family Residence Bi-Monthly Water Bills FY2016

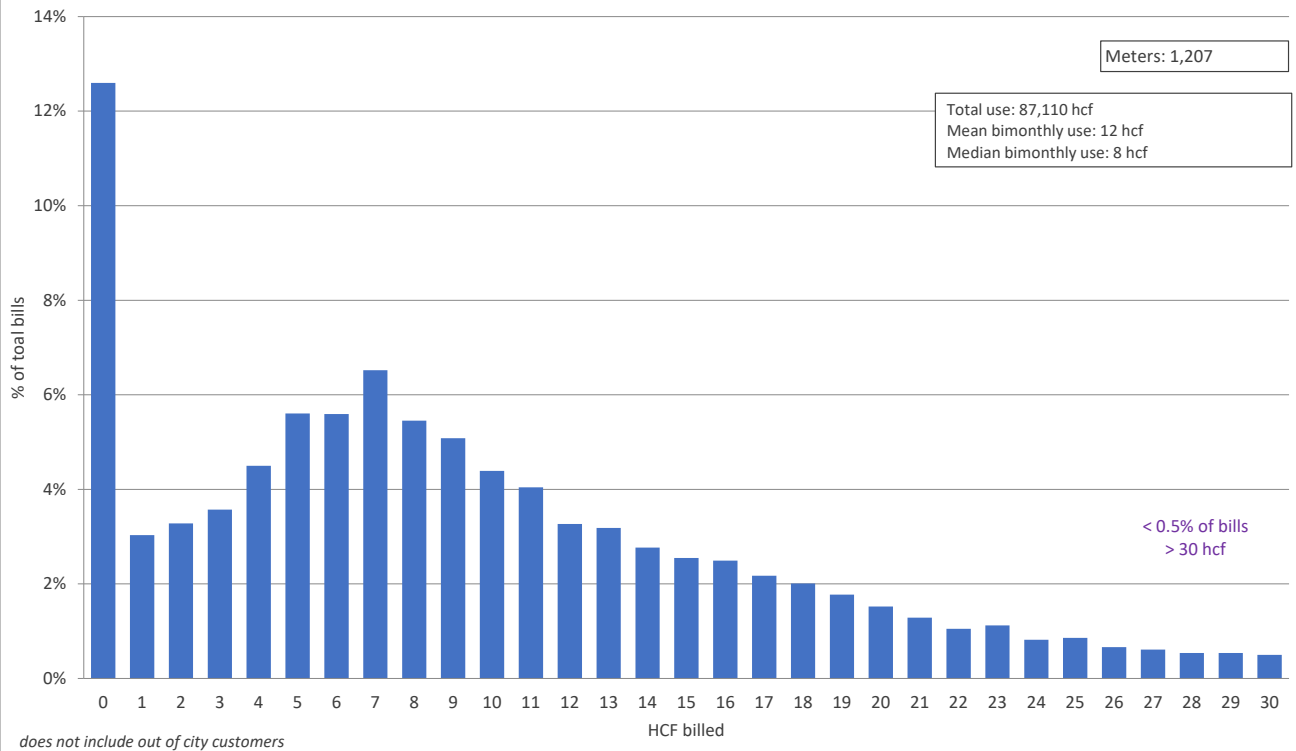


Chart 2: Single Family Residence Total Bimonthly Use FY2016

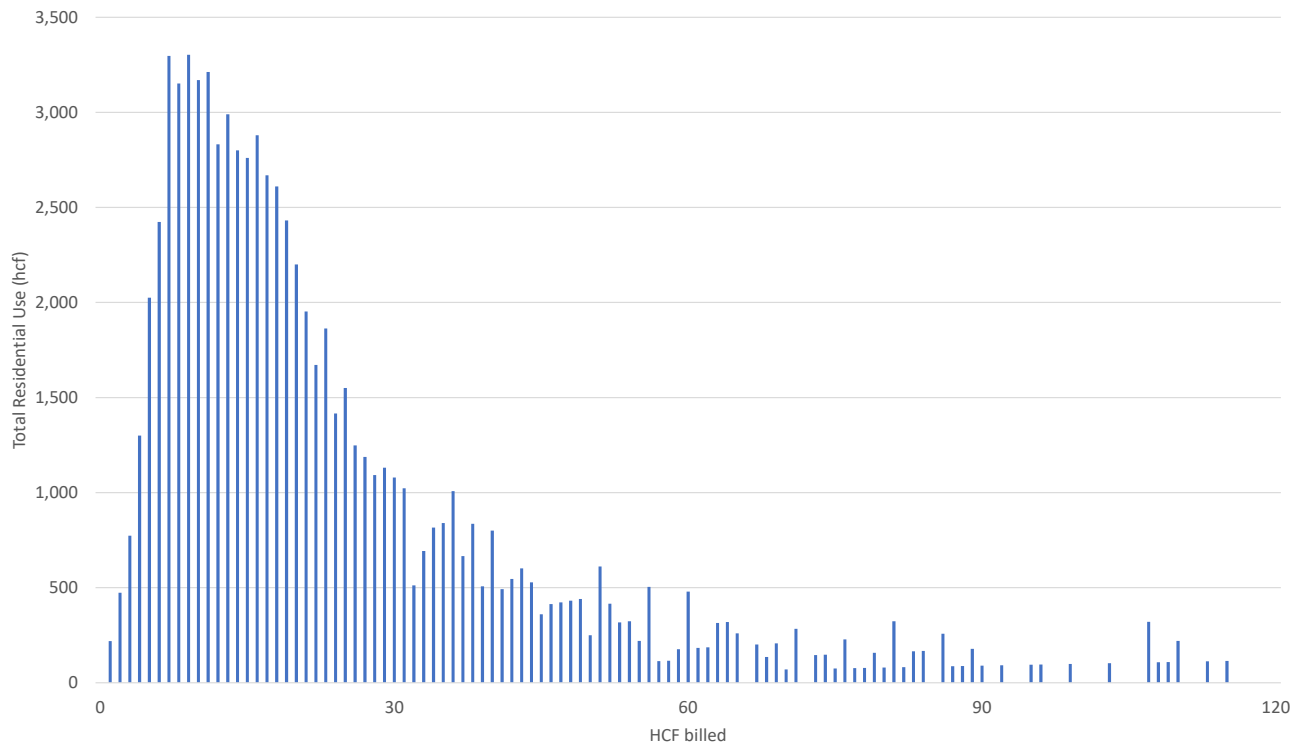
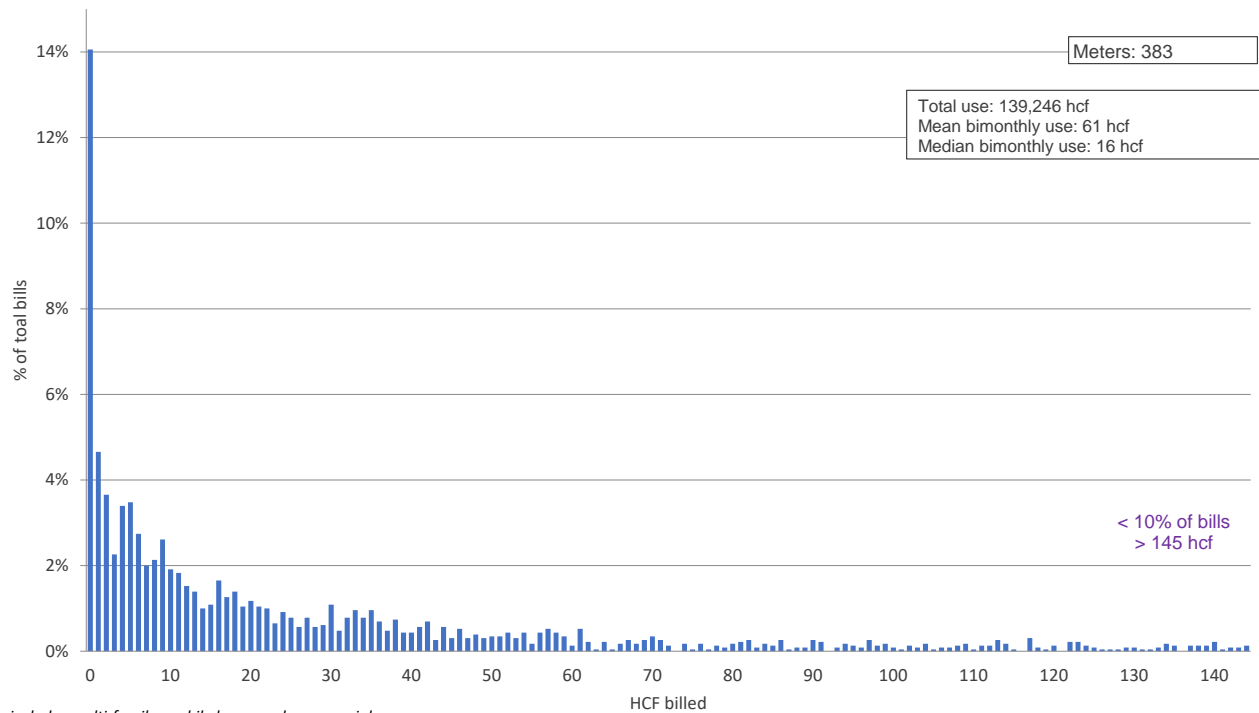


Chart 3: All Other Users Bimonthly Water Consumption FY2016



includes multi-family, mobile home and commercial users
 does not include out of city customers

Chart 4: All Other Users Bimonthly Water Use FY2016

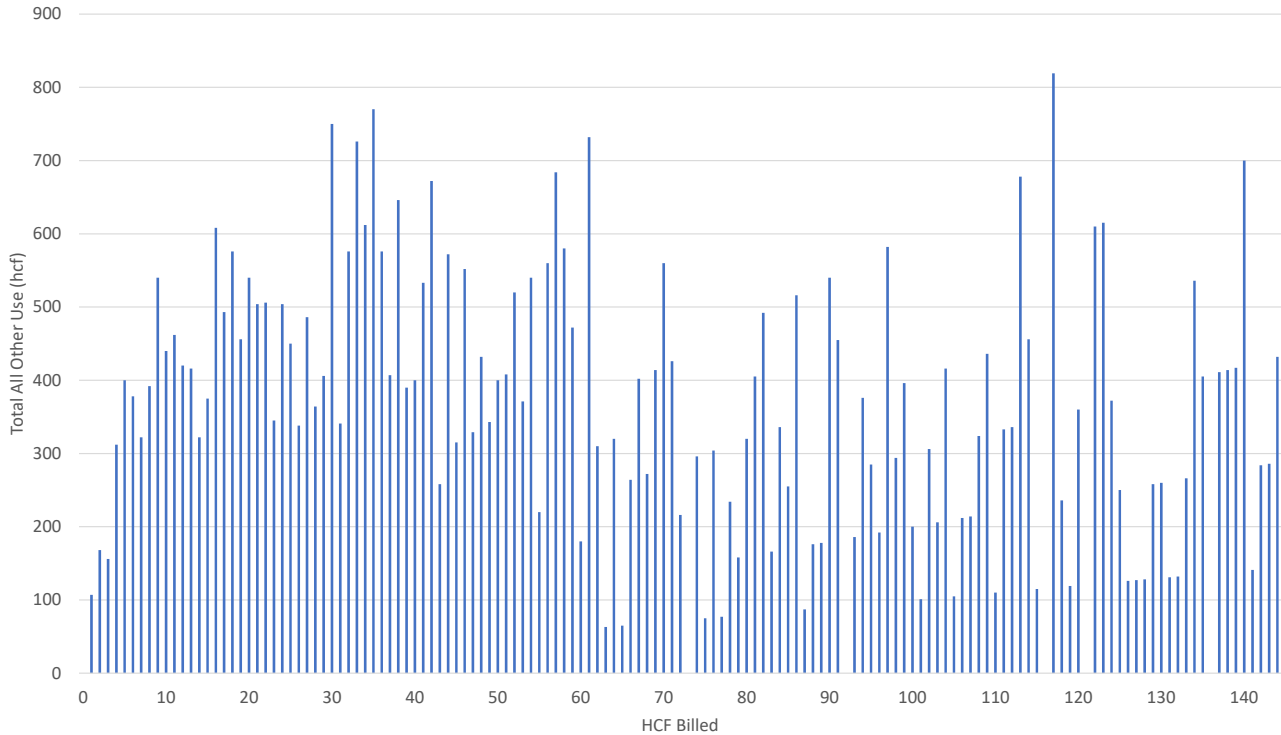


Table 2
City of Calistoga
10-year Water CIP Plan

Project	FY16/17	FY17/18	FY18/19	FY19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	Total Cost	Known Grant Funding
Critical Priority												
Replace Fiege Tank	\$100,000	\$400,000	\$1,500,000								\$2,000,000	\$1,326,100
Kimball Intake and Drain Valve Replacement	400,000	900,000									1,300,000	1,300,000
Kimball Inflow Stream Study		200,000	100,000								300,000	
THM Compliance Improvements		250,000	250,000								500,000	
Lake Street Water Line Replacement		300,000									300,000	
Cross Connection Control	<u>20,000</u>	<u>25,000</u>	<u>30,000</u>	<u>35,000</u>	<u>40,000</u>						<u>150,000</u>	
Total Critical Priority	\$520,000	\$2,075,000	\$1,880,000	\$35,000	\$40,000	\$0	\$0	\$0	\$0	\$0	\$4,550,000	\$2,626,100
High Priority												
Taste & Odor			\$500,000	\$800,000							\$1,300,000	
Dweyer Road Pump Station Project		500,000	1,500,000								2,000,000	
Utility Survey/Mobile GIS		75,000									75,000	
Abandon Old Kimball Main and Relocate Bennett Lane Water Services			200,000								200,000	
Replacement Mains & Valves		350,000	360,000	370,000	380,000	390,000	400,000	405,000	420,000	430,000	3,505,000	
Update & Recalibrate Water Model					100,000						100,000	
Automatic Meter Read Program		<u>50,000</u>	<u>50,000</u>	<u>100,000</u>	<u>300,000</u>						<u>500,000</u>	
Total High Priority	\$0	\$975,000	\$2,610,000	\$1,270,000	\$780,000	\$390,000	\$400,000	\$405,000	\$420,000	\$430,000	\$7,680,000	\$0
Normal Priority												
NBA Cathodic Protection Program				\$470,000							\$470,000	
Relocate Dunaweal Booster Pump Station Down Valley									500,000	1,000,000	1,500,000	
Start Planning, Design, Permitting for Replacing NBA Pipeline - St. Helena to Calistoga										350,000	350,000	
Kimball Water Treatment Plant Upgrades								250,000	500,000	250,000	1,000,000	1,000,000
Investigate Additional (Down Valley) Well Supply Source										<u>250,000</u>	<u>250,000</u>	
Total Normal Priority	\$0	\$0	\$0	\$470,000	\$0	\$0	\$0	\$250,000	\$1,000,000	\$1,850,000	\$3,570,000	\$1,000,000
Total Critical CIP	\$520,000	\$2,075,000	\$1,880,000	\$35,000	\$40,000	\$0	\$0	\$0	\$0	\$0	\$4,550,000	\$2,626,100
Total Critical and High Priority CIP	\$520,000	\$3,050,000	\$4,490,000	\$1,305,000	\$820,000	\$390,000	\$400,000	\$405,000	\$420,000	\$430,000	\$12,230,000	\$2,626,100
Total All CIP	\$520,000	\$3,050,000	\$4,490,000	\$1,775,000	\$820,000	\$390,000	\$400,000	\$655,000	\$1,420,000	\$2,280,000	\$15,800,000	\$3,626,100

**Table 3
City of Calistoga
Water Expenses**

Title	Actual FY15-16	Revised Budget FY16-17	Adopted Budget FY17-18	Escalation ¹	Projected			
					FY18-19	FY19-20	FY20-21	FY21-22
WATER DISTRIBUTION								
Personnel Services								
Full-Time Salaries	\$244,398	\$261,336	\$292,476	4.0%	\$304,175	\$316,342	\$328,996	\$342,156
Overtime	9,701	9,792	11,083	4.0%	11,526	11,987	12,467	12,966
FICA/Medicare	20,118	23,019	24,915	4.0%	25,912	26,948	28,026	29,147
Part-Time Salaries	3,602	4,591	4,966	4.0%	5,165	5,371	5,586	5,810
Special Pay	14,117	17,383	17,161	4.0%	17,847	18,561	19,304	20,076
PERS	64,885	68,711	70,518	4.0%	73,339	76,272	79,323	82,496
Medical/Dental	48,443	47,886	73,570	4.0%	76,513	79,573	82,756	86,066
Workers Comp	16,067	17,242	18,662	4.0%	19,408	20,185	20,992	21,832
Other Pay	4,322	1,098	1,212	4.0%	1,260	1,311	1,363	1,418
Housing Allowance	1,225	1,575	0	4.0%	0	0	0	0
Total Personnel Services	\$426,878	\$452,633	\$514,563		\$535,146	\$556,551	\$578,813	\$601,966
Services & Supplies								
Materials & Supplies	\$5,202	\$18,500	\$13,850	4.0%	\$14,404	\$14,980	\$15,579	\$16,203
Contract Services	14,211	50,150	31,000	4.0%	32,240	33,530	34,871	36,266
Utilities	0	578	600	4.0%	624	649	675	702
Repairs & Maintenance	456	500	8,320	4.0%	8,653	8,999	9,359	9,733
Training & Seminars: Staff	3,291	1,000	2,000	4.0%	2,080	2,163	2,250	2,340
Uniform Allowance	2,883	3,000	3,120	4.0%	3,245	3,375	3,510	3,650
Postage	2,427	0	425	4.0%	442	460	478	497
Fuel & Oil	0	1,000	0	4.0%	0	0	0	0
Pension Expense	1,006	40,000	40,000	4.0%	41,600	43,264	44,995	46,794
Health & Safety	80,973	1,200	2,000	4.0%	2,080	2,163	2,250	2,340
Meters	91	9,000	5,200	4.0%	5,408	5,624	5,849	6,083
Dues & Subscriptions	4,294	0	120	4.0%	125	130	135	140
Vehicles	7,813	1,260	0	4.0%	0	0	0	0
BAD Debt Expense	5,012	0	0	4.0%	0	0	0	0
Training & Seminars: Management	0	0	1,040	4.0%	1,082	1,125	1,170	1,217
Equipment Fund Rental	<u>29,892</u>	<u>32,727</u>	<u>30,129</u>	4.0%	<u>31,334</u>	<u>32,588</u>	<u>33,891</u>	<u>35,247</u>
Total Services & Supplies	\$157,551	\$158,915	\$137,804		\$143,316	\$149,049	\$155,011	\$161,211
Other								
Vehicles	\$0	\$0	\$0	4.0%	\$0	\$0	\$0	\$0
Misc Office Equipment	0	0	30,000	4.0%	31,200	32,448	33,746	35,096
Misc Computer	0	4,968	0	4.0%	0	0	0	0
Misc Field Equipment	<u>6,276</u>	<u>0</u>	<u>23,335</u>	4.0%	<u>24,268</u>	<u>25,239</u>	<u>26,249</u>	<u>27,299</u>
Total Other	\$6,276	\$4,968	\$53,335		\$55,468	\$57,687	\$59,995	\$62,394
TOTAL WATER DISTRIBUTION	\$590,705	\$616,516	\$705,702		\$733,930	\$763,287	\$793,819	\$825,572

Title	Actual FY15-16	Revised Budget FY16-17	Adopted Budget FY17-18	Escalation ¹	Projected			
					FY18-19	FY19-20	FY20-21	FY21-22
WATER TREATMENT								
Personnel Services								
Full-Time Salaries	\$189,760	\$242,847	\$246,848	4.0%	\$256,722	\$266,991	\$277,670	\$288,777
Overtime	7,417	19,667	22,737	4.0%	23,646	24,592	25,576	26,599
FICA/Medicare	16,457	20,764	22,236	4.0%	23,125	24,050	25,012	26,013
Part-Time Salaries	5,486	7,591	4,966	4.0%	5,165	5,371	5,586	5,810
Special Pay	24,903	26,780	16,113	4.0%	16,758	17,428	18,125	18,850
PERS	50,045	56,740	55,333	4.0%	57,546	59,848	62,242	64,732
Medical/Dental	28,041	41,654	46,092	4.0%	47,936	49,853	51,847	53,921
Workers Comp	15,553	16,051	16,655	4.0%	17,321	18,014	18,735	19,484
Other Benefits	4,328	1,039	1,034	4.0%	1,075	1,118	1,163	1,210
Housing Allowance	1,400	1,800	0	4.0%	0	0	0	0
Total Personnel Services	\$343,390	\$434,933	\$432,014		\$449,295	\$467,266	\$485,957	\$505,395
Services & Supplies								
Materials & Supplies	\$26,829	\$62,732	\$65,000	4.0%	\$67,600	\$70,304	\$73,116	\$76,041
Contract Services	223,933	175,050	89,450	4.0%	93,028	96,749	100,619	104,644
Utilities	96,691	81,400	85,000	4.0%	88,400	91,936	95,613	99,438
Repairs & Maintenance	11,995	33,000	31,000	4.0%	32,240	33,530	34,871	36,266
Training & Seminars: Staff	1,513	2,150	2,500	4.0%	2,600	2,704	2,812	2,925
Uniform Allowance	1,740	1,685	3,000	4.0%	3,120	3,245	3,375	3,510
Advertising	0	0	0	4.0%	0	0	0	0
Taxes & Fees	1,871	4,174	4,004	4.0%	4,164	4,331	4,504	4,684
Postage	5,761	7,679	8,700	4.0%	9,048	9,410	9,786	10,178
Fuel & Oil	2,358	2,565	2,670	4.0%	2,777	2,888	3,003	3,124
Pension Expense	62,453	40,000	40,000	4.0%	41,600	43,264	44,995	46,794
Health & Safety	321	0	300	4.0%	312	324	337	351
Dues & Subscriptions	207	1,812	2,200	4.0%	2,288	2,380	2,475	2,574
Fees	36,735	37,553	37,180	4.0%	38,667	40,214	41,822	43,495
Vehicle Repairs	14,267	12,000	0	4.0%	0	0	0	0
Central Serv. Overhead	82,500	82,500	82,500	4.0%	85,800	89,232	92,801	96,513
Water Purchase - NBA								
<i>NBA Purchase</i>	443,157	443,157	483,042	Varies ²	526,515	573,902	596,858	620,732
<i>Misc NBA Costs</i>	650,358	463,703	487,868	4.0%	507,383	527,679	548,786	570,737
Total Water Purchase	1,093,515	906,860	970,910	Varies ²	1,033,898	1,101,580	1,145,643	1,191,469
Training & Seminars: Management	0	0	500	4.0%	520	541	562	585
Equipment Fund Rental	89,802	90,491	68,995	4.0%	71,755	74,625	77,610	80,714
Total Services & Supplies	\$1,752,491	\$1,541,651	\$1,493,909		\$1,577,817	\$1,667,256	\$1,733,946	\$1,803,304
Other								
Misc Field Equipment	\$0	\$0	\$15,500	4.0%	\$16,120	\$16,765	\$17,435	\$18,133
Misc Office Equipment	0	0	0	4.0%	0	0	0	0
Computer Equipment	0	0	0	4.0%	0	0	0	0
Total Other	\$0	\$0	\$15,500		\$16,120	\$16,765	\$17,435	\$18,133
TOTAL WATER TREATMENT	\$2,095,881	\$1,976,584	\$1,941,423		\$2,043,232	\$2,151,287	\$2,237,339	\$2,326,832

Title	Actual FY15-16	Revised Budget FY16-17	Adopted Budget FY17-18	Escalation ¹	Projected			
					FY18-19	FY19-20	FY20-21	FY21-22
WATER CONSERVATION								
Personnel Services								
Full-Time Salaries	\$8,353	\$9,123	\$12,612	4.0%	\$13,116	\$13,641	\$14,187	\$14,754
FICA/Medicare	2,106	2,979	965	4.0%	1,004	1,044	1,085	1,129
Part-Time Salaries	19,703	8,742	0	4.0%	0	0	0	0
PERS	3,781	5,913	3,645	4.0%	3,791	3,942	4,100	4,264
Medical/Dental	1,910	2,227	2,954	4.0%	3,072	3,195	3,323	3,456
Workers Comp	3,659	4,104	723	4.0%	752	782	813	846
Benefits	91	151	54	4.0%	56	58	61	63
Total Personnel Services	\$39,603	\$33,239	\$20,953		\$21,791	\$22,663	\$23,569	\$24,512
Services & Supplies								
Materials & Supplies	\$52	\$0	\$5,200	4.0%	\$5,408	\$5,624	\$5,849	\$6,083
Contract Services	1,142	3,125	5,200	4.0%	5,408	5,624	5,849	6,083
Training & Seminars	114	24	250	4.0%	260	270	281	292
Advertising	5,863	4,509	2,500	4.0%	2,600	2,704	2,812	2,925
Postage	20	0	400	4.0%	416	433	450	468
Pension Expense	4,718	2,000	2,000	4.0%	2,080	2,163	2,250	2,340
Water Use Efficiency - Toilet Replacement Washer Rebate Program	<u>12,736</u>	<u>6,420</u>	<u>13,000</u>	4.0%	<u>13,520</u>	<u>14,061</u>	<u>14,623</u>	<u>15,208</u>
Total Services & Supplies	\$24,645	\$16,078	\$28,550		\$29,692	\$30,880	\$32,115	\$33,399
TOTAL WATER CONSERVATION	\$64,248	\$49,317	\$49,503		\$51,483	\$53,542	\$55,684	\$57,912
TOTAL WATER EXPENSES	\$2,750,834	\$2,642,417	\$2,696,628		\$2,828,645	\$2,968,117	\$3,086,841	\$3,210,315

1 - Escalation based on average yearly percent change in actual operating expenses FY2011-2016 (3.6%)

2 - NBA Purchase is escalated by proposed Napa water rate increases: 9%, 9%, 9%, 4%, 4% over the next 5 years.

Expenses do not include depreciation

Table 4
City of Calistoga
Water Debt Service

	Fund	Total Payment (interest + principal)										
		FY15/16	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25	FY25/26
CSCDA Installment Agreement	Water Operations	\$354,111	\$356,794	\$353,991	\$355,791	\$352,157	\$357,893	\$353,069	\$351,950	\$354,325	\$355,950	\$171,575
2008 Certificates of Participation	Water Operations	\$113,131	\$112,687	\$113,199	\$112,624	\$113,006	\$112,299	\$112,549	\$112,712	\$112,787	\$112,774	\$112,674
2011 Certificates of Participation	Water CIP	\$135,071	\$134,559	\$135,009	\$134,421	\$134,796	\$135,121	\$134,409	\$134,659	\$134,859	\$135,009	\$135,109
Total Debt Service		\$602,313	\$604,039	\$602,199	\$602,837	\$599,959	\$605,313	\$600,027	\$599,321	\$601,971	\$603,733	\$419,358

Table 5
City of Calistoga
Water Estimated Revenue

Total Annual Estimated Revenue				
	Volumetric Revenue	Fixed Revenue	Total Estimated Revenue	% total
SFR Inside	\$574,199	\$375,074	\$949,273	41%
SFR Outside	\$49,998	\$32,128	\$82,126	4%
All Other Inside	\$935,389	\$324,042	\$1,259,430	54%
<u>All Other Outside</u>	<u>\$20,527</u>	<u>\$7,953</u>	<u>\$28,480</u>	1%
Total	\$1,580,113	\$739,196	\$2,319,309	100%
<i>% total</i>	68%	32%		

Single Family Residences Inside City Limits					
Volumetric Charges					
Tier	\$/hcf	Tier breakpoint	Total Annual Use	% Total Use	Revenue
Tier 1	\$6.50	32	76,947	88.33%	\$500,155.50
Tier 2	\$6.83	50	4,858	5.58%	\$33,180.14
Tier 3	\$7.15	99	3,425	3.93%	\$24,488.75
Tier 4	\$8.71	>100	<u>1,880</u>	2.16%	<u>\$16,374.80</u>
Total			87,110		\$574,199
Fixed Charges					
Meter Size	# Units	Monthly Rate	Fixed Revenue		
5/8	1121	\$23.05	\$310,068.60		
1	78	\$57.63	\$53,941.68		
1 1/2	8	\$115.25	\$11,064.00		
2	0	\$184.40	\$0.00		
3	0	\$345.75	\$0.00		
4	0	\$576.25	\$0.00		
6	0	\$1,152.50	\$0.00		
8	<u>0</u>	<u>\$1,844.00</u>	<u>\$0.00</u>		
Total	1207		\$375,074		

Single Family Residences Outside City Limits					
Volumetric Charges					
Tier	\$/hcf (115%)	Tier Breakpoint	Total Annual Use	% Total Use	Revenue
Tier 1	\$7.48	32	3,533	58.49%	\$26,409.18
Tier 2	\$7.85	50	325	5.38%	\$2,552.71
Tier 3	\$8.22	99	457	7.57%	\$3,757.68
Tier 4	\$10.02	>100	<u>1,725</u>	28.56%	<u>\$17,278.46</u>
Total			6,040		\$49,998
Fixed Charges					
Meter Size	# Units	Monthly Rate	Fixed Revenue		
5/8	51	\$26.51	\$16,222.59		
1	8	\$66.27	\$6,362.35		
1 1/2	6	\$132.54	\$9,542.70		
2	0	\$212.06	\$0.00		
3	0	\$397.61	\$0.00		
4	0	\$662.69	\$0.00		
6	0	\$1,325.38	\$0.00		
8	<u>0</u>	<u>\$2,120.60</u>	<u>\$0.00</u>		
Total	65		\$32,128		

All Other Users Inside City Limits									
Volumetric Charges									
Meter Size	Peak Service Unit	\$/hcf (115%)	\$/hcf over peak (115%)	Total annual use under peak	Total annual use over peak	Rev under peak	Rev over peak	Total Revenue	
5/8	35	\$6.50	\$9.27	24,773	1,970	\$161,024	\$18,263	\$179,287	
1	88	\$6.50	\$9.27	21,706	8,260	\$141,090	\$76,569	\$217,659	
1 1/2	175	\$6.50	\$9.27	13,454	283	\$87,448	\$2,619	\$90,067	
2	280	\$6.50	\$9.27	30,084	0	\$195,546	\$0	\$195,546	
3	525	\$6.50	\$9.27	8,535	0	\$55,478	\$0	\$55,478	
4	875	\$6.50	\$9.27	7,257	0	\$47,171	\$0	\$47,171	
6	1750	\$6.50	\$9.27	6,219	0	\$40,424	\$0	\$40,424	
8	2800	\$6.50	\$9.27	<u>16,886</u>	<u>0</u>	<u>\$109,759</u>	<u>\$0</u>	<u>\$109,759</u>	
Total				128,914	10,512	\$837,938	\$97,451	\$935,389	
<i>% total</i>				92%	8%	90%	10%		
Fixed Charges									
Meter Size	# Units	Monthly Rate	Fixed Revenue						
5/8	231	\$23.05	\$63,894.60						
1	81	\$57.63	\$56,016.36						
1 1/2	22	\$115.25	\$30,426.00						
2	36	\$184.40	\$79,660.80						
3	6	\$345.75	\$24,894.00						
4	4	\$576.25	\$27,660.00						
6	3	\$1,152.50	\$41,490.00						
8	0	\$1,844.00	<u>\$0.00</u>						
Total	383		\$324,042						

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All Other Users Outside City Limits									
Volumetric Charges									
Meter Size	Peak Service Unit	\$/hcf	\$/hcf over peak	Use under peak	Use over peak	Rev under peak	Rev over peak	Total Revenue	
5/8	35	\$7.48	\$10.66	364	61	\$2,724	\$646	\$3,370	
1	88	\$7.48	\$10.66	560	0	\$4,186	\$0	\$4,186	
1 1/2	175	\$7.48	\$10.66	1,022	20	\$7,636	\$208	\$7,844	
2	280	\$7.48	\$10.66	686	0	\$5,128	\$0	\$5,128	
3	525	\$7.48	\$10.66	0	0	\$0	\$0	\$0	
4	875	\$7.48	\$10.66	0	0	\$0	\$0	\$0	
6	1750	\$7.48	\$10.66	0	0	\$0	\$0	\$0	
8	2800	\$7.48	\$10.66	0	0	\$0	\$0	\$0	
Total				2,632	80	19,673	854	20,527	
<i>% total</i>				97%	3%	96%	4%		
<u>Fixed Charges</u>									
	<u>Meter Size</u>		<u># Units</u>	<u>Monthly Rate</u>	<u>Fixed Revenue</u>				
	5/8		2	\$26.51	\$636.18				
	1		4	\$66.27	\$3,181.18				
	1 1/2		1	\$132.54	\$1,590.45				
	2		1	\$212.06	\$2,544.72				
	3		0	\$397.61	\$0.00				
	4		0	\$662.69	\$0.00				
	6		0	\$1,325.38	\$0.00				
	8		0	\$2,120.60	\$0.00				
	Total		8		\$7,953				

Uses 2015/16 Consumption and Rates as of January 1, 2017

Table 6
City of Calistoga
Cash Flow Projection Option 1 - All Capital

	Actual 2015/16	Budget 2016/17	projected					
			2017/18	2018/19	2019/20	2020/21	2021/22	
Beginning Fund Balance								
Unrestricted Operating Fund	\$1,355,979	\$787,954	\$235,974	(\$204,882)	(\$180,503)	(\$118,011)	\$4,466	\$201,694
Unrestricted Capital Fund	\$172,367	\$164,342	\$3,653,128	\$8,180,012	\$4,631,331	\$2,690,340	\$2,874,668	\$2,288,198
Total Unrestricted Funds	\$1,528,346	\$952,296	\$3,889,102	\$7,975,130	\$4,450,828	\$2,572,329	\$2,879,134	\$2,489,892
% Rate Revenue Increase January 1			15.00%	14.00%	10.00%	10.00%	10.00%	10.00%
% Capacity Fee Revenue Increase January 1			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
% Growth per Fiscal Year			0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
<i>Typical Single Family Bimonthly Bill (5/8", 8hcf)</i>		\$98.10	\$112.82	\$128.61	\$141.47	\$155.62	\$171.18	
REVENUE								
Operations Fund Revenue								
Charges for Services								
Residential Sales	\$1,504,947	\$1,617,188	\$1,747,169	\$1,878,819	\$1,982,623	\$2,092,163	\$2,207,755	
Transient Sales	397,448	416,291	449,750	483,639	510,360	538,558	568,313	
Commercial Sales	288,013	305,326	329,867	354,722	374,320	395,002	416,825	
Industrial Sales	82,340	78,863	85,202	91,622	96,684	102,025	107,662	
Silver Rose Estimated Sales		0		177,805	\$186,695	\$196,030	\$205,832	
Calistoga Hills Estimated Sales		0		225,279	236,543	248,370	260,789	
Interest Earnings	890	0						
Napa County Measure A Funding	0	0						
General Fund Subsidy	79,400	0						
Other Revenues	316,984	155,944	156,724	157,507	158,295	159,086	159,882	
Total Operating Revenues	\$2,670,022	\$2,573,612	\$2,768,712	\$3,369,393	\$3,545,521	\$3,731,234	\$3,927,058	
Capital Fund Revenue								
Connection/Impact Fees	\$70,239	\$1,720,217	\$93,828	\$330,476	\$330,476	\$330,476	\$330,476	
Interest Earnings	1,295	0						
Napa County Measure A	121,685	636,647	400,000	926,100				
Other Grants/Loans ¹	56,123	500,000	900,000					
Other Sources and Uses	0	1,286,481						
Debt Proceeds - USDA Loan	0	0						
Proposed Loan Proceeds²			7,088,900			1,210,000		
Total Water Capital Fund Revenue	\$249,342	\$4,143,345	\$8,482,728	\$1,256,576	\$330,476	\$1,540,476	\$330,476	
TOTAL REVENUE	\$2,919,364	\$6,716,957	\$11,251,440	\$4,625,968	\$3,875,996	\$5,271,710	\$4,257,534	
EXPENSES								
Operations Fund Expenses								
Water Distribution	\$590,705	\$616,516	\$705,702	\$733,930	\$763,287	\$793,819	\$825,572	
Water Treatment	2,095,881	1,976,584	1,941,423	2,043,232	2,151,287	2,237,339	2,326,832	
Water Conservation	64,248	49,317	49,503	51,483	53,542	55,684	57,912	
Equipment	6,276	0	30,000	30,000	30,000	30,000	30,000	
Operation Fund Debt Service	467,242	469,481	467,191	468,416	465,162	470,192	465,618	
Low Income Rate Assistance ³	13,695	13,695	15,749	17,954	19,749	21,724	23,896	
Total Operations Fund Expenses	\$3,238,047	\$3,125,592	\$3,209,568	\$3,345,015	\$3,483,028	\$3,608,757	\$3,729,830	
Capital Expenses								
Capital Fund Debt Service	\$135,071	\$134,559	\$135,009	\$134,421	\$134,796	\$135,121	\$134,409	
Proposed Loan Debt Service⁴			180,835	180,835	361,670	401,027	392,537	
Capital Improvement Project	122,296	520,000	3,050,000	4,490,000	1,775,000	820,000	390,000	
Transfer Out - Rate Stabilization Fund			590,000					
Total Capital Expenses	\$257,367	\$654,559	\$3,955,844	\$4,805,257	\$2,271,467	\$1,356,148	\$916,946	
TOTAL EXPENSES	\$3,495,414	\$3,780,151	\$7,165,412	\$8,150,271	\$5,754,495	\$4,964,905	\$4,646,776	
Net Revenues - Operating Fund	(\$568,025)	(\$551,980)	(\$440,856)	\$24,378	\$62,492	\$122,477	\$197,228	
Net Revenues - Capital Fund	(\$8,025)	\$3,488,786	\$4,526,884	(\$3,548,681)	(\$1,940,991)	\$184,328	(\$586,470)	
NET REVENUES	(\$576,050)	\$2,936,806	\$4,086,028	(\$3,524,303)	(\$1,878,499)	\$306,805	(\$389,242)	
Ending Fund Balance								
Unrestricted Operating Fund	\$787,954	\$235,974	(\$204,882)	(\$180,503)	(\$118,011)	\$4,466	\$201,694	
Unrestricted Capital Fund	\$164,342	\$3,653,128	\$8,180,012	\$4,631,331	\$2,690,340	\$2,874,668	\$2,288,198	
Total Unrestricted Fund Balance	\$952,296	\$3,889,102	\$7,975,130	\$4,450,828	\$2,572,329	\$2,879,134	\$2,489,892	
Total Unrestricted Fund Target (90 Days O&M)	\$798,422	\$770,694	\$791,400	\$824,798	\$858,829	\$889,831	\$919,684	
# Days O&M	107	454	907	486	270	291	244	
Debt Service Coverage (Min. 1.25x)	0.25	6.72	10.87	2.23	0.89	2.12	1.00	
Target Met	no	yes	yes	yes	no	yes	no	
Rate Stabilization Fund Draw					\$340,000		\$250,000	
Debt Service Coverage using Rate Stabilization Fund					1.25		1.25	

1 - Known grant funding for capital improvement projects

2 - FY16/17 loan covers capital projects FY17/18 - FY19/20 minus grant funding received in those years. FY20/21 loan covers capital projects FY20/21 - FY21/22

3 - Total 2015/16 LIRA discount escalated by rate increases (funded from other revenue)

4 - assumes 5% loan over 30 year period, 1/2 payments for first two years

Chart 5: Water Projected Revenue, Expenses & Reserves (Option 1 - All Capital Projects)

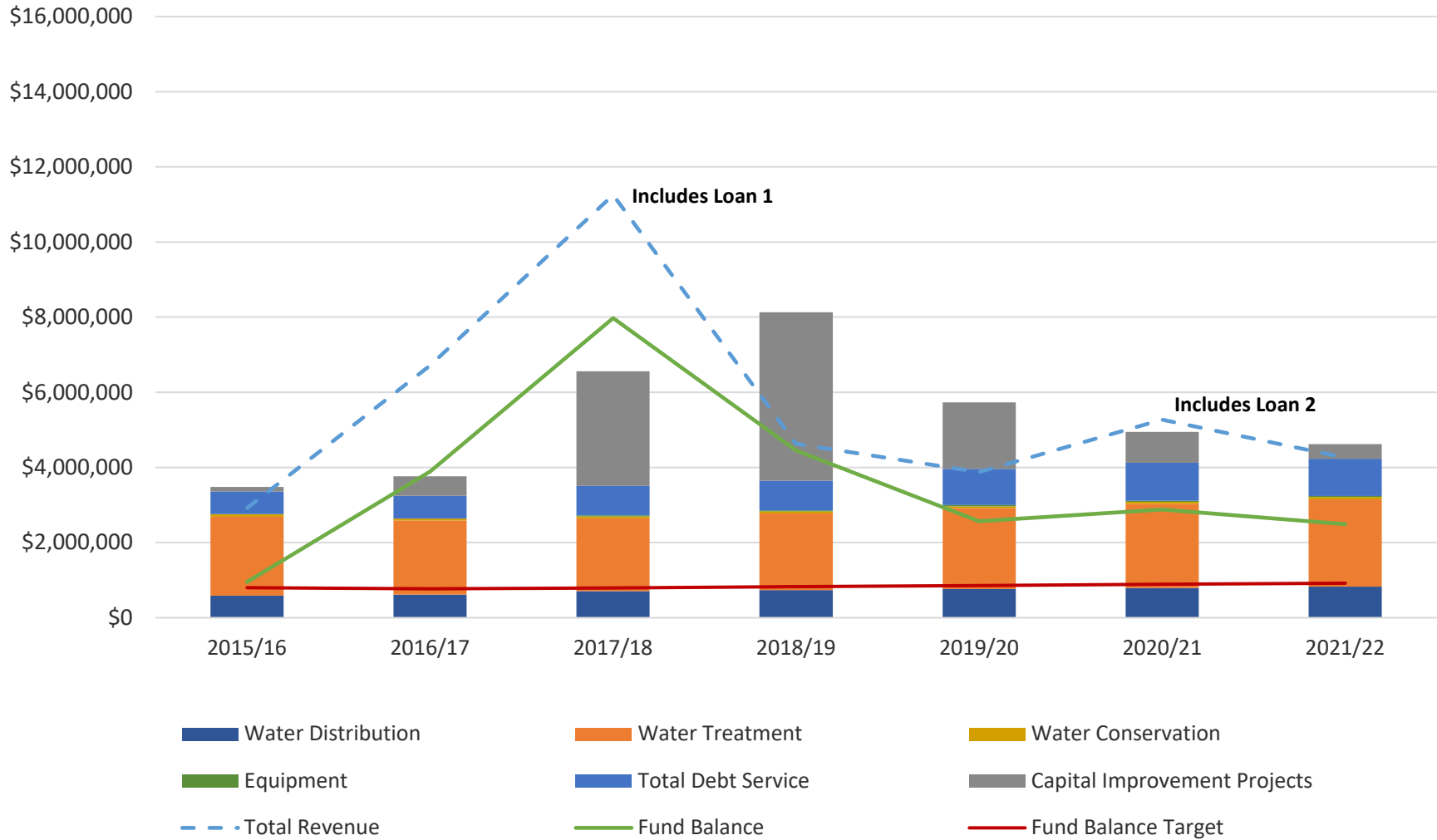


Table 7
City of Calistoga
Water Cost Analysis -- 40% fixed, 60% volumetric revenue

Expenses	<u>2016/17 Budget</u>
Expenses Recovered by Meter Charges	
Water Distribution Fixed	\$547,288
Water Treatment Fixed	750,542
Debt Service (82%)	498,026
Capital Improvement	<u>520,000</u>
Total Fixed Cost	\$2,315,856
Expenses Recovered by Usage Charges	
Utilities	\$81,978
Materials & Supplies	81,232
Contract Services	225,200
Water Purchase - NBA	906,860
Conservation	49,317
Debt Service (18%)	106,014
Total Variable Cost	\$1,450,601
Total Costs¹	\$3,766,456

1 - Does not include Low Income Rate Assistance Costs, which are funded by Other Revenue

Table 8
City of Calistoga
Water Meter Charge Calculation

Meter Charges - 40% of total revenue requirement		2016/17
Fixed Operating Costs		\$2,315,856
+ Reserve Surplus		<u>2,936,806</u>
Total Fixed Operating Costs		\$5,252,661
Less: Non Rate Operating Revenues		
Connection Fees		1,720,217
Capital Project Grants		500,000
Measure A Funding		\$636,647
Other Sources and Uses		\$1,286,481
Other Revenues (less LIRA costs)		142,249
Total Non Rate Operating Revenues		\$4,285,594
Fixed Operating Revenue Requirement		\$967,067
Meter Equivalent Units (5/8 inch) ¹		2,806
\$/Meter Equivalent (Annual)		\$345
Projected Monthly Meter Charge		
	5/8" or 3/4"	\$28.73
	1"	\$71.81
	1 1/2"	\$143.63
	2"	\$229.80
	3"	\$430.88
	4"	\$718.13
	6"	\$1,436.27
	8"	\$2,298.03
Projected Basic Rate Revenue		\$967,067
<i>percent of total revenue</i>		<i>40%</i>

Includes Out of City Customers
1- based on AWWA flow factor meter ratios

Table 9
City of Calistoga
Water Volumetric Charge Calculation

Volumetric Charges - 60% of total revenue requirement		2016/17
Base Rate Volumetric Costs		\$1,450,601
Total Use		235,288
Base Rate		\$6.17
Residential Use	93,150	
Residential Revenue		\$574,290
All Other Use	142,138	
All Other Use Revenue		<u>\$876,311</u>
Total Volumetric Revenue		\$1,450,601
<i>percent of total revenue</i>		<i>60%</i>

Includes Out of City Customers

Table 10
City of Calistoga
Analysis of Costs Incurred through Litigation

	Total Cost
Case No. 26.46826	\$457,982
Case No 26-51244	23,693
Reynolds	532,565
Mike Podlech	28,821
Somach, Simmons & Dunn	63,903
Sarnoff Court Reporter	1,006
MBK Engineers	88,462
Reynolds - Appeal	315,416
Reynolds - Measure A Appeal	61,830
Grand Total	\$1,573,677

	Cost per year
10 year payback at 1% interest	\$166,152

	10 year payback
# Meter Equivalent Units	2,806
Cost per equivalent meter per month (fixed charge)	\$4.94

- OR -

FY16 Usage	235,288
Cost per hcf usage (variable charge)	\$0.71

Includes Out of City Customers

Table 11
City of Calistoga
Proposed Water Rate Structure

Current Rate Structure (32% fixed, 68% volumetric)

Fixed Charge

Meter Size	Peak service Unit (hcf) of water use per month*	Fixed Monthly Charge
5/8" or 3/4"	35	\$23.05
1"	88	\$57.63
1 1/2"	175	\$115.25
2"	280	\$184.40
3"	525	\$345.75
4"	875	\$576.25
6"	1750	\$1,152.50
8"	2800	\$1,844.00

Meter Demand Factor

Customer Class	Meter Demand Factor
Single Family Residential	1.00
Multi-Family Residential	1.42
Mobile Home Parks	2.11
Commercial-General	1.10
Commercial-Restaurants	2.39
Commercial-Laundry	1.10
Commercial-Transient Occupancy	1.25
Commercial-Spa Resorts	2.57
Industrial	3.19

Single Family Volume Charge

Tier	Bimonthly water use	Volume Charge
Tier 1	1-32 hcf	\$6.50
Tier 2	33-50 hcf	\$6.83
Tier 3	51-99 hcf	\$7.15
Tier 4	100+ hcf	\$8.71

Multi-Family and Commercial Volume Charge

Volume Charge per hcf	\$6.50
Volume charge per hcf over peak [1]	\$9.27

*applies to multi-family and commercial volume charge

[1] Peak unit equal to meter demand factor multiplied by meter peak service unit

Out of city customers subject to 115% of volumetric rates

Low income rate assistance available to single family, multi-family, and mobile home park customers at 20% bill reduction

Proposed Rate Restructure (40% fixed, 60% volumetric)

Fixed Charge -- All Customer Classes

Meter Size	Fixed Monthly Charge	Fixed Monthly Charge w/ 10-year Litigation Surcharge
5/8" or 3/4"	\$28.73	\$33.66
1"	\$71.81	\$84.15
1 1/2"	\$143.63	\$168.30
2"	\$229.80	\$269.29
3"	\$430.88	\$504.91
4"	\$718.13	\$841.52
6"	\$1,436.27	\$1,683.03
8"	\$2,298.03	\$2,692.85

Volumetric Charge -- All Customer Classes

per hcf usage	\$6.17
per hcf usage w/ 10-year litigation surcharge	\$6.87

Table 12
City of Calistoga
Water Revenue Comparison

2016/17 Budget Revenue		Proposed Rate Revenue		
Residential Sales	\$1,617,188	Fixed Revenue	\$967,067	40%
Transient Sales	416,291	Volumetric Revenue	\$1,450,601	60%
Commercial Sales	305,326			
Industrial Sales	78,863			
Total	\$2,417,668		\$2,417,668	

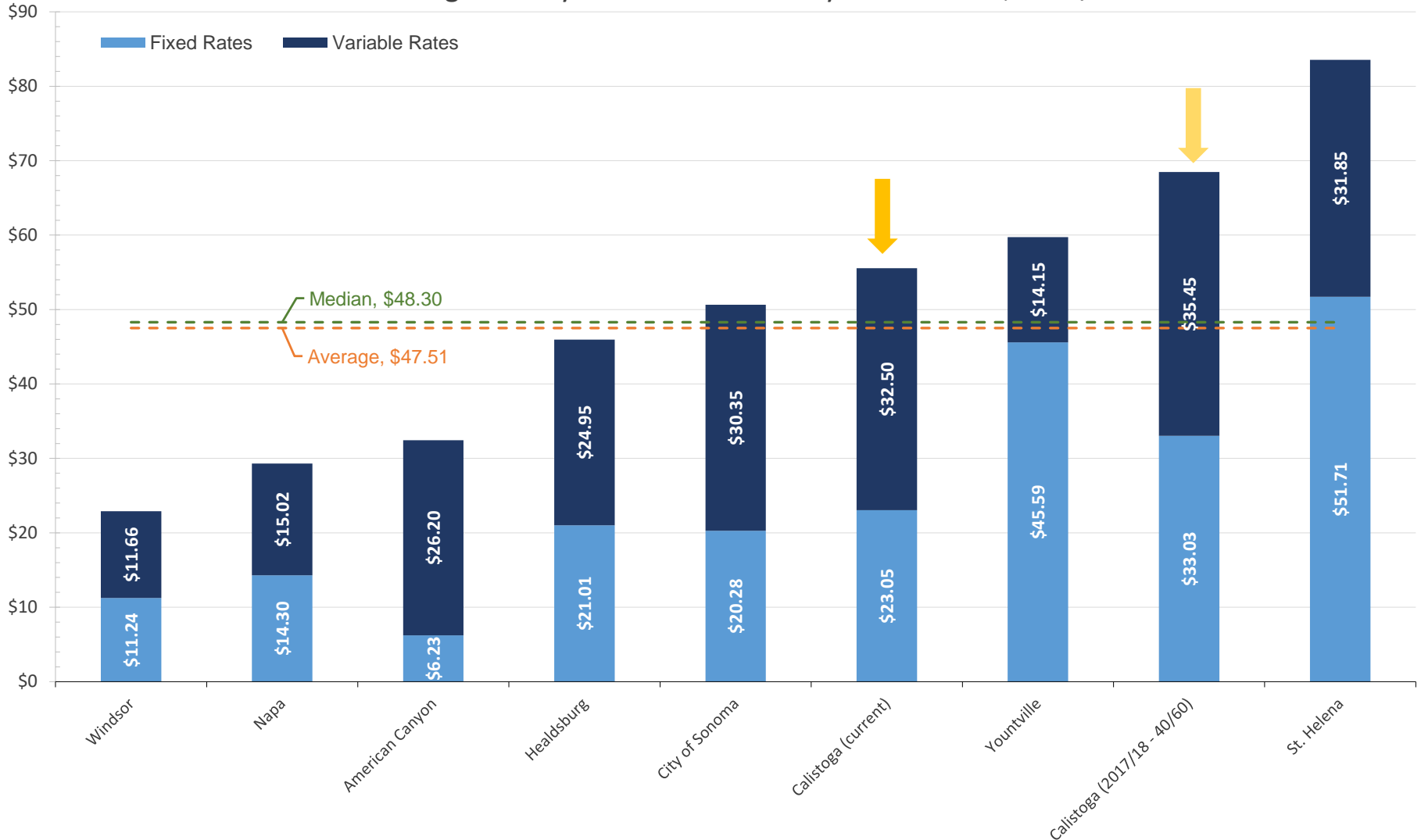
Does not Include Litigation Surcharge

Table 13
City of Calistoga
Water Bill Impacts

	Bi-Monthly Use (hcf)	Current Rate	<i>Proposed Rates (40% fixed, 60% variable, universal tier)</i>				
			<i>Does not include Litigation Surcharge</i>				
			2017/18	2018/19	2019/20	2020/21	2021/22
			<i>projected bimonthly bills (recommended increases)</i>				
			15.0%	14.0%	10.0%	10.0%	10.0%
Scenario 1 - All Capital Projects							
<u>Single Family Residences</u>							
Minimum	0	\$46.10	\$66.07	\$75.32	\$82.85	\$91.13	\$100.25
25th percentile	4	\$72.10	\$94.43	\$107.65	\$118.41	\$130.25	\$143.28
50th percentile	8	\$98.10	\$122.79	\$139.98	\$153.98	\$169.37	\$186.31
75th percentile	15	\$143.60	\$172.42	\$196.56	\$216.21	\$237.83	\$261.62
Excessive user	40	\$523.39	\$349.67	\$398.62	\$438.48	\$482.33	\$530.57

*assumes 5/8" meter

Chart 2: Single Family Residential Monthly Water Rates, FY17/18



*assumes 1 EDU, 5 hcf
all rates converted to monthly; includes all applicable surcharges

conducted October 2017