



DRAFT RATE TABLES

Christian Valley Park Community Services District

Water Rate Study

February 23, 2024

Rate Study notes:

- 1) Treatment plant maintenance:** In FY2023/24, the water treatment plant maintenance expense was budgeted at \$19,000. We will assume \$25,000 in FY2024/25 and inflationary increases thereafter.
- 2) Cost of line breaks:** In FY2023/24, CVPCSD budgeted \$80,000 for water line repairs. We will include this cost plus inflation as a capital cost going forward.
- 3) Growth/new connections:** This draft assumes one new 1" meter will connect to the District each year over the next five years.
- 4) Capital improvement funding:** This draft assumes all capital improvements will be funded via rate revenues (i.e. cash – PAYGO).

Table 1: Current Water Rates
Christian Valley Park CSD
Water Rate Study

Meter Size	Monthly Service Charge	Quarterly Service Charge
3/4"	\$59.79	\$179.37
1"	\$99.66	\$298.98
1-1/2"	\$199.32	\$597.96
2"	\$318.91	\$956.73
3"	\$597.95	\$1,793.85
4"	\$996.58	\$2,989.74
Usage Charge per Unit (1 ccf)		\$1.28

ccf – hundred cubic feet, one ccf = 748 gallons

Table 2: Current Rate Revenues
Christian Valley Park CSD
Water Rate Study

Rate Categories	Charge	# of Units	Annual Revenue	
Fixed Charges	per quarter	account		
Residential – 3/4"	\$179.37 x	627	\$449,860	
Residential - 1"	\$298.98 x	4	\$4,784	
CCC - 2"	\$956.73 x	<u>1</u>	<u>\$3,827</u>	
Total Fixed		632	\$458,471	70.47%
Volume Rates	per ccf	ccf		
Residential Usage (ccf)	\$1.28 x	148,364	\$189,906	
CCC Usage (ccf)	\$1.28 x	<u>1,715</u>	<u>\$2,195</u>	
Total Volume [1]		150,079	\$192,101	29.60%
Total Rate Revenue			\$650,572	

1 - 2023-2024 Budget estimates water use at 171,000 ccf

Table 3: Number of Meter Equivalents
Christian Valley Park CSD
Water Rate Study

Meter Size	Total	Flow Rate (gpm)	Meter Ratio	No. of Meter Equivalents
3/4"	627	30	1.00	627
1"	4	50	1.67	7
1-1/2"	0	100	3.33	0
2"	1	160	5.33	5
3"	0	320	10.67	0
4"	<u>0</u>	500	16.67	<u>0</u>
Total	632			639

Gpm – gallons per minute maximum flow capacity

Note: table reflects existing meters. It is assumed that one new 1" meter will connect to the District each year over the next five years.

**Table 4: Historical Water Use
Christian Valley Park CSD
Water Rate Study**

	Residential Water Use (ccf)	CCC (ccf)	Total
2017	137,470	1,206	138,676
2018	149,522	1,424	150,946
2019	138,325	1,227	139,552
2020	162,626	401	163,027
2021	161,624	488	162,112
2022	151,744	1,491	153,235
2023*	148,364	1,715	150,079

*Estimate

Notes: In 2020 and 2021, the CCC had unusually low water use due to construction. The CCC's storage tank is filled with ditch water for fire protection and does not take potable water from CVPCSD.

**Table 5: Typical Residential Bills
Christian Valley Park CSD
Water Rate Study**

Quarter		Average Water Use (ccf)	Quarterly Bill
1	Jan through Mar	25	\$211.37
2	Apr through Jun	64	\$261.29
3	Jul through Sep	109	\$318.89
4	Oct through Dec	39	\$229.29
Annual Quarterly Average		59	\$254.89

Table 6: Summary of Operating Expenses FY2023/24 and FY2024/25
Christian Valley Park CSD
Water Rate Study

Category	FY2023/24	FY2024/25
<i><u>Treatment</u></i>		
Water purchases	60,000	61,800
Contract labor (water plant)	200,750	206,800
Water plant maintenance	19,000	25,000
Short Lived Assets (Asset life is 15 years or less)[1]	15,000	15,500
Water testing / Backflow Testing	4,500	4,600
Chemicals	40,000	41,200
Electricity / Propane	21,000	21,600
Government fees	<u>7,000</u>	<u>7,200</u>
<i>Total Treatment</i>	367,250	383,700
<i><u>Transmission & Distribution (T&D) [2]</u></i>		
Employee salaries	4,800	4,900
Payroll taxes @ 14%	672	700
Water meters and boxes	<u>3,500</u>	<u>3,600</u>
<i>Total Transmission & Distribution</i>	8,972	9,200
<i><u>General & Administration</u></i>		
Employee salaries	60,380	62,200
Payroll taxes @ 14%	8,453	8,700
Office expense	25,000	25,800
Insurance	13,000	13,400
Accounting	15,000	15,500
Legal	7,000	7,200
Directors fees	<u>9,000</u>	<u>9,300</u>
<i>Total General & Administration</i>	137,833	142,100
Total Operations	\$514,055	\$535,000

1 – required by USDA loan

2 – water line breaks and/or repairs are considered capital expenses and are excluded from this table

Table 7: Billing Periods and Revenue Collection for FY2024/25
Christian Valley Park CSD
Water Rate Study

Usage Dates	Rate Year	Bill Date	Revenue Collected
Jul-Sept 2024	FY2025	Oct 2024	FY2025
Oct-Dec 2024	FY2025	Jan 2025	FY2025
Jan-Mar 2025	FY2025	Apr 2025	FY2025
April-June 2025	FY2025	July 2025	FY2026

**Table 8: Cash Flow Projection
Christian Valley Park CSD
Water Rate Study**

	Budget FY2023/24	Years 1 -5: Proposition 218				
		FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29
Rate Revenue Increase		23.0%	3.0%	3.0%	3.0%	3.0%
Rate Increase Effective		July 1	July 1	July 1	July 1	July 1
BEGINNING FUND BALANCE [1]	\$795,000	\$714,600	\$685,100	\$692,700	\$686,300	\$684,700
Revenues based on 4 quarters at new rates	650,600	800,000	824,000	849,000	874,000	900,000
REVENUES						
<i>Operating Revenues</i>						
Water Service Revenues [2]	650,600	762,700	818,000	842,800	867,800	893,500
Hook-Up Fees (1 new/yr)	16,000	8,000	8,000	8,000	8,000	8,000
Standby Fees	3,000	3,000	3,000	3,000	3,000	3,000
Gayle Loop Property Tax Income	45,000	45,000	45,000	45,000	45,000	45,000
Interest	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>
Total Revenues	717,600	821,700	877,000	901,800	926,800	952,500
EXPENSES						
<i>Operating Expenses (+3%/year)</i>						
Water Treatment Expenses	367,000	383,700	395,200	407,100	419,300	431,900
Transmission & Dist Expenses	9,000	9,200	9,500	9,800	10,100	10,400
<u>General & Admin Expenses [3]</u>	<u>138,000</u>	<u>142,100</u>	<u>146,400</u>	<u>150,800</u>	<u>155,300</u>	<u>160,000</u>
Subtotal O&M	514,000	535,000	551,100	567,700	584,700	602,300
Net Operating Revenues	203,600	286,700	325,900	334,100	342,100	350,200
<i>Debt Service</i>						
USDA Loan	134,000	135,000	134,000	134,000	135,000	134,000
Water Revenue Bonds (Gayle Loop)	<u>45,000</u>	<u>45,000</u>	<u>45,000</u>	<u>45,000</u>	<u>45,000</u>	<u>45,000</u>
Subtotal Debt Service	179,000	180,000	179,000	179,000	180,000	179,000
<i>Capital Projects – High Priority</i>						
Water Line Repairs & Audits	80,000	82,400	85,000	88,000	91,000	94,000
Engineering & Prof. Services	0	15,000	15,000	15,000	15,000	15,000
Media Replacement Filters	0	0	0	20,000	20,000	0
Valve Replacements	25,000	25,000	25,000	25,000	25,000	0
USDA Loan Reserve [4]	<u>0</u>	<u>14,000</u>	<u>14,000</u>	<u>14,000</u>	<u>14,000</u>	<u>14,000</u>
Subtotal Capital Projects	105,000	136,400	139,000	162,000	165,000	123,000
Total Expenses	798,000	851,200	869,400	908,200	928,400	903,300
Total Net Revenues	(80,400)	(29,500)	7,600	(6,400)	(1,600)	49,200
ENDING FUND BALANCE	714,600	685,100	692,700	686,300	684,700	733,900

	Budget FY2023/24	Years 1 -5: Proposition 218				
		FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29
<i>Reserve Fund Targets</i>						
Capital Improvement Reserve [5]		150,000	150,000	150,000	150,000	150,000
Operating Reserve [6]		<u>267,500</u>	<u>275,600</u>	<u>283,900</u>	<u>292,400</u>	<u>301,200</u>
Total Non-restricted Reserve		417,500	425,600	433,900	442,400	451,200
<i>Reserve Target Met?</i>		<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>
Debt Coverage (Target - 1.25x) [7]	1.14	1.59	1.82	1.87	1.90	1.95
<i>Target Met?</i>	<i>no</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>
<i>Restricted Reserves Ending Balance</i>						
Gayle Loop Debt Service	44,100	44,100	44,100	44,100	44,100	44,100
USDA Loan Debt Service	<u>0</u>	<u>14,000</u>	<u>28,000</u>	<u>42,000</u>	<u>56,000</u>	<u>70,000</u>
Total Restricted Reserve	44,100	58,100	72,100	86,100	100,100	114,100

- 1 - Does not include \$44,000 of restricted debt service reserve for the Gayle Loop revenue bonds
- 2 - Reflects 3 billing periods at the proposed rate and one billing period at the prior fiscal year's rate
- 3 - Does not include depreciation (a non-cash expense)
- 4 - The District is obligated to set aside 1/10th of its annual USDA debt service payment each year for the next ten years into a restricted reserve
- 5 - Cost of emergency repairs such as a main line break (\$100,000) plus engineering costs
- 6 - Target is 6 months of operating expenses
- 7 - Net operating revenues divided by total debt service

Table 9: Capital Funding PAYGO Options
Christian Valley Park CSD
Water Rate Study

Option	Revenue Increase			Additional Revenue Collected Annually	Total Rate Revenue	Description	
Existing Rate Revenue (FY2023/24)					\$650,600	Slight deficit in FY2023/24	
1 O&M and High Priority Capital	23.0%			\$149,000	\$800,000	Covers operations, debt service, required debt service reserve funding, and high priority capital	
Option	Additional Rate Increase Above Option 1	Total Rate Increase w/Option 1			Additional Revenue Collected Annually Above Option 1	Total Rate Revenue (including Opt 1)	Description
2 Gradually build-up capital funds	7.7%	30.6%			\$50,000	\$850,000	\$250,000 accumulated over 5 years (\$50k/year over 5 years)
3 Cash fund \$0.5M of projects	15.4%	38.3%			\$100,000	\$900,000	1/2 fund steel pipe replacements at \$100k/year over 5 years
4 Cash fund \$1M of projects	30.7%	53.7%			\$200,000	\$1,000,000	Fully fund steel pipe replacements at \$200k/year over 5 years

**Table 10: Cost Allocation
Christian Valley Park CSD
Water Rate Study**

Expense	FY2024/25 Budget	FIXED CHARGES		CONSUMPTION CHARGES	Total
		Meters & Services	Customer Service	Base & Extra	
Operating Expenses					
Water Treatment Expenses [1]	\$383,700	34.9%	0.0%	65.1%	100%
Transmission & Dist Expenses	\$9,200	100.0%	0.0%	0.0%	100%
General & Admin Expenses [2]	\$142,100	81.9%	18.1%	0.0%	100%
Total Operating Expenses	\$535,000	\$259,390	\$25,774	\$249,836	
<i>% of Total</i>	<i>100.0%</i>	<i>48.5%</i>	<i>4.8%</i>	<i>46.7%</i>	
Non-Operating Expenses [3]					
USDA Loan Debt Service	\$134,800	100.0%	0.0%	0.0%	100%
Capital Expenses (5-Year Average)	\$144,480	100.0%	0.0%	0.0%	100%
Subtotal Non-Operating Expenses	\$279,280	\$279,280	\$0	\$0	
Total Expenses	\$814,280	\$538,670	\$25,774	\$249,836	\$814,280
Total Allocation %		66.2%	3.2%	30.7%	100.0%

1 - Water purchases, chemicals, electricity/propane, and 60% of contract labor is allocated to *Base & Extra*. All other water treatment costs are allocated to *Meters & Services*.

2 - Office expenses are allocated to *Customer Service*.

3 - Does not include the Gayle Loop debt service as that cost is paid via a direct charge and is not funded by the general body of ratepayers

Table 11: Revenue Requirement Allocation
Christian Valley Park CSD
Water Rate Study

	Cost Allocation %	PROJECTED - RATE STUDY PERIOD				
		FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29
Total Revenue Requirement [1]		\$800,000	\$824,000	\$849,000	\$874,000	\$900,000
FIXED CHARGES						
Meters & Services	66.2%	\$529,223	\$545,100	\$561,638	\$578,176	\$595,376
<u>Cust. Service Charge</u>	<u>3.2%</u>	<u>\$25,322</u>	<u>\$26,082</u>	<u>\$26,873</u>	<u>\$27,664</u>	<u>\$28,487</u>
Total Fixed Charges	69.3%	\$554,545	\$571,182	\$588,511	\$605,841	\$623,863
CONSUMPTION CHARGES						
Base & Extra	30.7%	\$245,455	\$252,818	\$260,489	\$268,159	\$276,137
TOTAL	100.0%	\$800,000	\$824,000	\$849,000	\$874,000	\$900,000

1 - 4 Billing Periods at new rate

Table 12: Rate Calculations
Christian Valley Park CSD
Water Rate Study

	PROJECTED - RATE STUDY PERIOD					
	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	
REVENUE REQUIREMENT						
Meters & Services	\$529,223	\$545,100	\$561,638	\$578,176	\$595,376	
<u>Customer Service Charge</u>	<u>\$25,322</u>	<u>\$26,082</u>	<u>\$26,873</u>	<u>\$27,664</u>	<u>\$28,487</u>	
Total Fixed Charge Revenue	\$554,545	\$571,182	\$588,511	\$605,841	\$623,863	
METER EQUIVALENT CHARGE						
Total Meter Equivalent Charge Revenue	\$529,223	\$545,100	\$561,638	\$578,176	\$595,376	
<u>Total Number of Meter Equivalents [1]</u>	<u>639.0</u>	<u>640.7</u>	<u>642.3</u>	<u>644.0</u>	<u>645.7</u>	
Total Meter Equivalent Charge	\$207.05	\$212.71	\$218.59	\$224.45	\$230.53	
<u>Meter Equivalent Charge</u> <u>by Meter Size</u>	<u>Meter</u> <u>Ratio</u>					
3/4"	1.00	\$207.05	\$212.71	\$218.59	\$224.45	\$230.53
1"	1.67	\$345.09	\$354.51	\$364.32	\$374.08	\$384.21
1-1/2"	3.33	\$690.17	\$709.03	\$728.64	\$748.16	\$768.43
2"	5.33	\$1,104.27	\$1,134.44	\$1,165.83	\$1,197.05	\$1,229.48
3"	10.67	\$2,208.55	\$2,268.89	\$2,331.66	\$2,394.11	\$2,458.96
4"	16.67	\$3,450.86	\$3,545.14	\$3,643.22	\$3,740.79	\$3,842.13
CUSTOMER SERVICE CHARGE						
Total Customer Service Revenue	\$25,322	\$26,082	\$26,873	\$27,664	\$28,487	
<u>Total Number of Meters [1]</u>	<u>632</u>	<u>633</u>	<u>634</u>	<u>635</u>	<u>636</u>	
Total Cust. Service Charge per Account	\$10.02	\$10.30	\$10.60	\$10.89	\$11.20	
TOTAL QUARTERLY FIXED CHARGE [2]						
<u>Meter Size</u>						
3/4"		\$217.07	\$223.01	\$229.19	\$235.34	\$241.73
1"		\$355.11	\$364.81	\$374.92	\$384.97	\$395.41
1-1/2"		\$700.19	\$719.33	\$739.24	\$759.05	\$779.63
2"		\$1,114.29	\$1,144.74	\$1,176.43	\$1,207.94	\$1,240.68
3"		\$2,218.57	\$2,279.19	\$2,342.26	\$2,405.00	\$2,470.16
4"		\$3,460.88	\$3,555.44	\$3,653.82	\$3,751.68	\$3,853.33
CONSUMPTION CHARGE						
Total Consumption Charge Revenue	\$245,455	\$252,818	\$260,489	\$268,159	\$276,137	
<u>Total Usage (ccf) [1]</u>	<u>150,315</u>	<u>150,552</u>	<u>150,789</u>	<u>151,026</u>	<u>151,263</u>	
Total Usage Charge (\$/ccf)	\$1.63	\$1.68	\$1.73	\$1.77	\$1.83	

1 - Projection assumes one new customer per year with a 1" meter (1.67 meter equivalents) and 236 ccf of annual usage.

2 - Total Quarterly Fixed Charge is the sum of the "Meter Equivalent Charge" by meter size plus the "Total Customer Service Charge per Account"

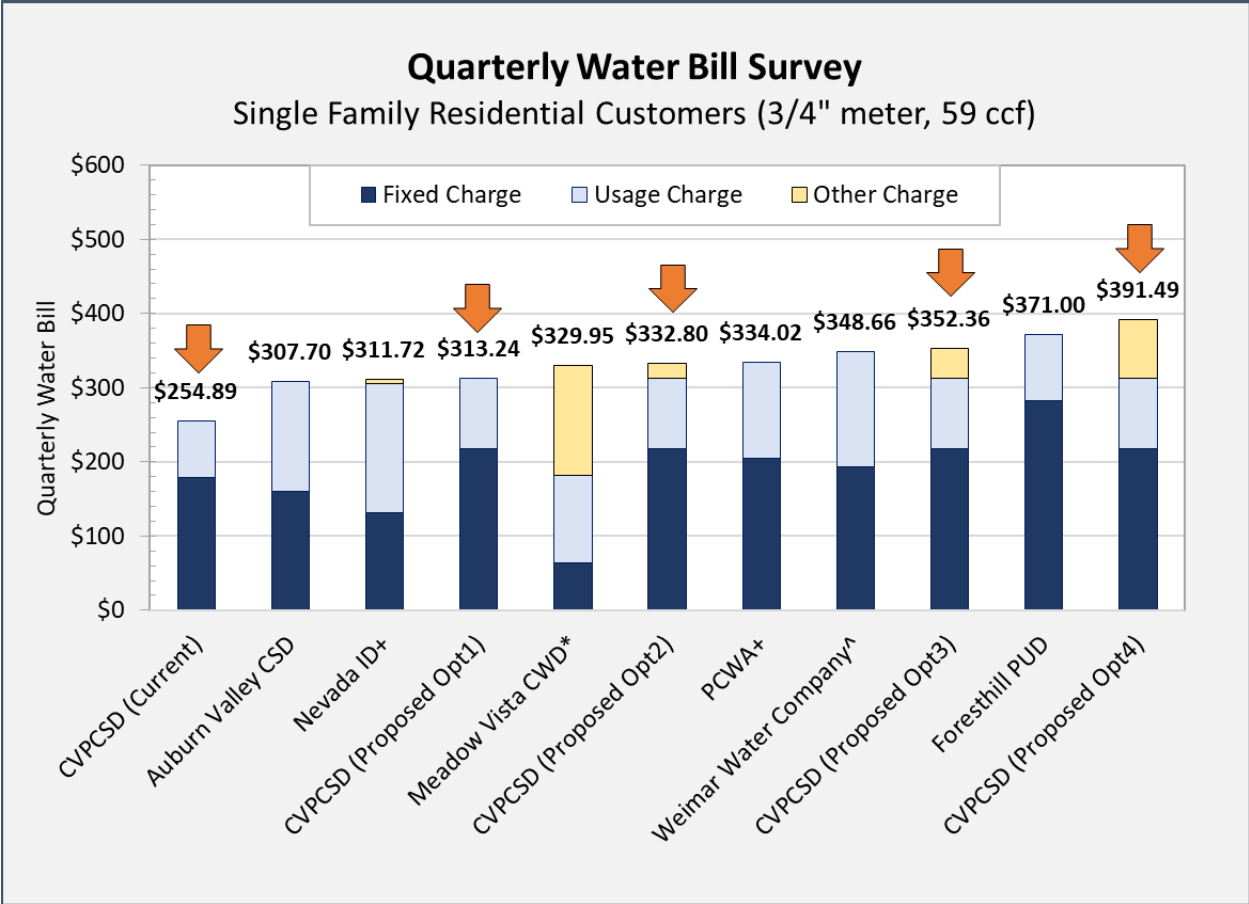
**Table 13: Proposed Quarterly Rates
Christian Valley Park CSD
Water Rate Study**

Meter Size	Current	PROJECTED - RATE STUDY PERIOD				
		FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29
FIXED CHARGE (Option 1)						
3/4"	\$179.37	\$217.07	\$223.01	\$229.19	\$235.34	\$241.73
1"	\$298.98	\$355.11	\$364.81	\$374.92	\$384.97	\$395.41
1-1/2"	\$597.96	\$700.19	\$719.33	\$739.24	\$759.05	\$779.63
2"	\$956.73	\$1,114.29	\$1,144.74	\$1,176.43	\$1,207.94	\$1,240.68
3"	\$1,793.85	\$2,218.57	\$2,279.19	\$2,342.26	\$2,405.00	\$2,470.16
4"	\$2,989.74	\$3,460.88	\$3,555.44	\$3,653.82	\$3,751.68	\$3,853.33
+ ADDITIONAL CAPITAL IMPROVEMENT FEE						
Option 2 - Gradually accumulate capital funds (\$0.25M over 5 years)						
3/4"		\$19.56	\$19.56	\$19.56	\$19.56	\$19.56
1"		\$32.60	\$32.60	\$32.60	\$32.60	\$32.60
2"		\$104.33	\$104.33	\$104.33	\$104.33	\$104.33
Option 3 - Cash fund \$0.5M of projects over 5 years						
3/4"		\$39.12	\$39.12	\$39.12	\$39.12	\$39.12
1"		\$65.21	\$65.21	\$65.21	\$65.21	\$65.21
2"		\$208.66	\$208.66	\$208.66	\$208.66	\$208.66
Option 4 - Cash fund \$1M of projects over 5 years						
3/4"		\$78.25	\$78.25	\$78.25	\$78.25	\$78.25
1"		\$130.41	\$130.41	\$130.41	\$130.41	\$130.41
2"		\$417.32	\$417.32	\$417.32	\$417.32	\$417.32
USAGE CHARGE (all options)						
\$ per ccf	\$1.28	\$1.63	\$1.68	\$1.73	\$1.77	\$1.83

ccf – hundred cubic feet, one ccf = 748 gallons

Table 14: Quarterly Bill Impacts (fixed fee plus usage) – Option 1
Christian Valley Park CSD
Water Rate Study

TYPICAL WINTER BILL							
Rate Categories	Current			Proposed			
	Rate	# of Units	Total Charges	Rate	# of Units	Total Charges	
Fixed Charge - 3/4"	\$179.37	x 1	\$179.37	\$217.07	x 1	\$217.07	
Usage Charge (ccf)	\$1.28	x 25	<u>\$32.00</u>	\$1.63	x 25	<u>\$40.75</u>	Increase
Total Quarterly Bill			\$211.37			\$257.82	\$46.45 22.0%
AVERAGE QUARTERLY BILL							
Rate Categories	Current			Proposed			
	Rate	# of Units	Total Charges	Rate	# of Units	Total Charges	
Fixed Charge - 3/4"	\$179.37	x 1	\$179.37	\$217.07	x 1	\$217.07	
Usage Charge (ccf)	\$1.28	x 59	<u>\$75.52</u>	\$1.63	x 59	<u>\$96.17</u>	Increase
Total Quarterly Bill			\$254.89			\$313.24	\$58.35 22.9%
TYPICAL SUMMER BILL							
Rate Categories	Current			Proposed			
	Rate	# of Units	Total Charges	Rate	# of Units	Total Charges	
Fixed Charge - 3/4"	\$179.37	x 1	\$179.37	\$217.07	x 1	\$217.07	
Usage Charge (ccf)	\$1.28	x 109	<u>\$139.52</u>	\$1.63	x 109	<u>\$177.67</u>	Increase
Total Quarterly Bill			\$318.89			\$394.74	\$75.85 23.8%



Note: the City of Auburn is served by the Placer County Water Agency

Table 15: Connection (Hook-Up) Fee Survey
Christian Valley Park CSD
Water Rate Study

Agency	Fee for smallest meter size or single family dwelling
CVPCSD (Current) [1]	\$8,036
Foresthill PUD	\$10,534
Nevada Irrigation District	\$12,351
PCWA Upper Zone 6	\$16,065
Meadow Vista CWD	\$19,575
PCWA Lower Zone 6	\$22,805

1 – Additional water line, pump station, permitting, and other costs may apply

PCWA Upper Zone 6 - Applegate, Colfax, Monte Vista, & Alta

PCWA Lower Zone 6 - Foothill/Sunset/Ophir & Auburn/Bowman