

Clear Creek Community Services District Water Rate Study



DECEMBER 8, 2019



HF&H Consultants, LLC

CLEAR CREEK COMMUNITY SERVICES DISTRICT

462-895 CLEAR CREEK DRIVE
WESTWOOD, CA, 96137

WATER RATE STUDY

December 8, 2019

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December 8, 2019

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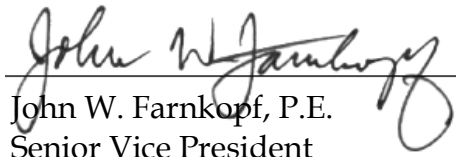
Subject: Water Rate Study

Dear Ms. Moroney:

HF&H Consultants, LLC (HF&H) is pleased to submit this water rate study. The report summarizes the projected revenue requirements and proposed rates over the next five fiscal years. The revenue requirements are based on the District's operating budget and the capital improvement program prepared by PACE Engineering, a copy of which is included in the Appendix. The rates for the first two years are based on the existing unmetered rate structure and for the next three years on metered water demand, which is possible after water meters are installed.

Very truly yours,

HF&H CONSULTANTS, LLC

A handwritten signature in black ink, appearing to read 'John W. Farnkopf', written over a horizontal line.

John W. Farnkopf, P.E.
Senior Vice President

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ACRONYMS

FY	Fiscal Year (FY 2018-19 means the fiscal year ending June 30, 2019)
CIP	Capital Improvement Plan
O&M	Operations and Maintenance
Service charge	Refers to the District's fixed charge per account based on customer class
HCF	Hundred Cubic Feet
Volumetric charge	Refers to the District's charge per hcf, which varies depending on the amount of water use during the billing period.

ACKNOWLEDGEMENTS

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LIMITATIONS

This document was prepared solely for the Clear Creek Community Services District (District) and is not intended for use by any other party for any other purpose. In preparing this study, we relied on information from the District, which we consider accurate and reliable and did not independently verify. Rounding differences caused by stored values in electronic models may exist.

This document represents our understanding of relevant laws, regulations, and court decisions but should not be relied on as legal advice. Questions concerning the interpretation of legal authorities referenced in this document should be referred to a qualified attorney.

CLEAR CREEK COMMUNITY SERVICES DISTRICT

WATER RATE STUDY



I. OVERVIEW

BACKGROUND

This report was prepared pursuant to the Proposition 1 Technical Assistance Work Plan No. 5281-A with University Enterprises, Inc. and the California State Water Resources Control Board. HF&H Consultants, LLC (HF&H) was retained to conduct a water rate study for the Clear Creek Community Service District (District) for FY 2019-20 through FY 2024-25. This report describes our approach, analysis, and findings. This report was prepared for inclusion in the District's application for grant funding under Proposition 1. This rate analysis is predicated on the District receiving approximately \$2.9 million in grant funding through Proposition 1 to rebuild its water system. Should the District receive an amount substantially lower or higher, the findings and conclusions of this rate study should be revisited.

The District has an estimated population of approximately 400 and provides water services to 166 active accounts in Lassen County, CA. These accounts are currently unmetered. The District relies on a spring that is classified as a groundwater source and is the sole source of water supply to meet potable water demands.

SUMMARY OF PROPOSED RATES

In preparing this water rate study, expenses, revenues, and reserves were projected for a planning period through FY 2023-24. The projections determined the annual increases in revenue that are needed from rates. Those annual revenue increases are summarized in **Figure I-1**.

Figure I-1. Projected Annual Revenue Increases

Fiscal Year	Rate Increase
FY 2019-20 (eff. Feb 1, 2020)	9.0%
FY 2020-21 (eff. Jan 1, 2021)	9.0%
FY 2021-22 (eff. Jan 1, 2022)	5.0%
FY 2022-23 (eff. Jan 1, 2023)	5.0%
FY 2023-24 (eff. Jan 1, 2024)	5.0%

The revenue increases derived for this period can be used for setting rates under Article XIID, Section 6 of the State Constitution.¹ The rates are summarized in **Figure I-2**.

¹ This law was enacted by Proposition 218 in 1996. The law contains procedural and substantive requirements that apply to property-related fees and charges such as water rates. The law exempts connection charges, which instead are governed by Section 66000 of the Government Code.

Rates effective February 1, 2020 and January 1, 2021 can be increased by the annual percentages in Figure I-1 with no change in the rate structure. The same annual percentage increase would apply equally to each of the flat rates.

Figure I-2. Current and Proposed Monthly Water Rates*

	Current	1/1/2020	1/1/2021	1/1/2022	1/1/2023	1/1/2024
Flat Charges per Account						
Residential	\$36.00	\$39.24	\$42.77			
Commercial	\$42.00	\$45.78	\$49.90			
Motel (per room)	\$1.75	\$1.91	\$2.08			
Clear Creek Park	\$87.50	\$95.38	\$103.96			
Service Charge per Account						
3/4" Meter				\$26.68	\$28.01	\$29.41
1" Meter				\$44.56	\$46.78	\$49.12
Volumetric Charge for All Water Usage						
per HCF				\$1.05	\$1.10	\$1.16

*Customers are billed bi-monthly

Beginning January 1, 2022, after water meters are installed at all services, the rate structure should be converted from the current flat rate structure to a conventional rate structure that comprises a fixed charge based on the size of the meter and a volumetric charge based on metered water use. A customer’s bill will be the sum of the service charge, which will remain constant unless the meter size is changed, and a volumetric charge based on the volume of metered water use multiplied times the water use in the billing period. The combination of the revenue from the service and volume charges is designed to equal the amount of projected revenue, including the annual revenue increases shown in Figure I-1.

Note that the metered water use is based on an estimate of customer demand. The District should monitor customer water use once their bills include a charge based on water use. If customer demand varies significantly from the estimate on which rates were based, unexpected revenue surpluses or deficits could occur, which may be so significant that compensating adjustments to the rates are required.

The remainder of this report documents how the revenue increases and annual rates were determined.

II. REVENUE REQUIREMENT PROJECTIONS

To determine whether additional rate revenue is required, projected operating and capital expenses are compared with projected revenue from current rates. Annual surpluses and deficits are then applied to the reserve funds. Rates are then increased so that the expenses are covered and the operating and capital reserves targets are met.

EXPENSE PROJECTIONS

A spreadsheet model was developed to derive revenue requirements for FY 2019-20 through FY 2024-25. The revenue requirements represent the costs that must be covered by revenue from rates and other sources. The District's operating and capital budget for FY 2019-20 served as the starting point for projecting the District's expenses and revenues.

The derivation of future rates builds on the trend analysis described later in this report. In setting future rates, expenses, revenues, and reserve balances are forecasted. This projection should reflect the District's rate-making objectives. The financial planning model that was developed to make these projections reflects the current understanding of the District's financial position, which is summarized below:

1. The District develops its budget on a consolidated basis; that is, it compiles the costs for all categories (e.g., salaries, utilities, maintenance, etc.) for the entire District.
2. Operating expenses (e.g. salaries, utilities, maintenance, etc.) will generally increase at the rate of inflation.
3. The District is applying for a \$2.9 million dollar grant to cover the installation of capital improvements contained in the PACE Engineering facilities plan (see Appendix).
4. The District has low reserves but is currently operating at a surplus. It is recommended that the District increase its reserve balance quickly to ensure an adequate cash buffer is available to offset potential demand (and revenue) reductions that may occur once customers are billed based on metered water demand.
5. The District does not have any debt and does not plan on issuing any debt in the future.

Figure II-1 summarizes the assumptions that are used to project expenses.

Figure II-1. Key Modeling Assumptions

	Budget		Projected		
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Annual Account Growth Rate		0.00%	0.00%	0.00%	0.00%
General Inflation	Budgeted	3.00%	3.00%	3.00%	3.00%
Salaries & Wages	Budgeted	3.00%	3.00%	3.00%	3.00%
Benefits	Budgeted	5.00%	5.00%	5.00%	5.00%
Interest on Fund Balance	0.40%	0.40%	0.40%	0.40%	0.40%
Bad debt as a percent of rate revenue	2.0%	0.0%	0.0%	0.0%	0.0%
Connection Fee Revenue	\$0	\$0	\$0	\$0	\$0
Utilites	Budgeted	3.0%	3.0%	3.0%	3.0%

Operating and Capital Expenses

The District’s revenue requirement comprises four major categories: personnel, operations, maintenance, and contributions to reserves (capital and operating reserves).

- Personnel - Personnel expenses are the largest single expense funded by rate revenue.
- Other operations - Operating expenses include items such as utility costs, insurance, and communications.
- Maintenance - The budget for maintenance covers the existing facilities plus the future grant-funded facilities.
- Capital Reserves - The capital expenses are related to ongoing capital improvements that are in addition to those that will be funded by the State grant.
- Operating Reserves - The operations reserve provides working capital for monthly O&M expenses. The District needs to increase its cash reserves to adequately cover cash flows.

The District does not have a formal long-term capital improvement program; rather, it is planning to replace the water system as a whole using grant money within the next two or three years. With a new system, capital spending will be relatively low during most of the planning period for this rate study. However, it is recommended that the District start gradually increasing its rates to avoid “rate shock” as capital spending increases.

Reserve Funds

To determine what constitutes adequate reserve amounts for rate making purposes, separate operating and capital reserve target balances are established. The Operations Reserve provides working capital for monthly operating expenses. We recommend an operating reserve target balance of six months of operating expenses, which is adequate to cover potential cash flow lags between when the District incurs expenses and when it receives revenue from billings. Furthermore, six months will accommodate uneven

expense and revenues throughout the year as the District will eventually include a volumetric component in its rate structure.

Just as working capital is needed to pay operating expenses, working capital is also needed to fund construction of cash-funded (as opposed to debt-funded) capital projects. For purposes of this study, one year of depreciation expense of the future water system is recommended.

The District should contribute funds to its capital reserve every year starting with 5% of the system's annual renewal and replacement cost. In each subsequent year, the District should contribute an additional 5%. By the end of the planning period, 25% of the annual renewal and replacement cost should be funded by rates. Because the system will be brand new, it is not anticipated that there will be any significant capital costs during the planning period. Slowly increasing the contribution to the capital reserve will allow the District to build an adequate reserve for when the system eventually needs repair.

Figure II-2 shows the calculation of the annual renewal and replacement cost. The construction cost of each of the system's assets is divided by its useful life. The Project Indirect Costs were subtracted because this is the value of the purchased land, engineering services, and various non-physical asset related expenses which will not depreciate and will not need to be replaced.

Figure II-2. Annual Renewal and Replacement Cost

Project Description	Cost	Avg. Life (years)	Annual Dep'n
Spring House & Water Supply	\$602,440	40.00	\$15,061
Pump Station	\$534,000	25.00	\$21,360
Water Storage Tank	\$588,165	40.00	\$14,704
Distribution System	\$401,150	30.00	\$13,372
Project Indirect Costs	\$751,783	30.00	\$25,059
	Total		\$89,556
Construction Contingency (10%)	\$212,576		\$6,450
		<i>less Indirect Costs</i>	\$25,059
		Annual Renewal & Replacement Cost	\$70,946

Source: PACE Engineering report pg. 50

Figure II-3 shows the annual contribution to reserves, which is a percentage of the annual renewal and replacement cost. By FY 2023-24, the \$14,189 equals 20% of the \$70,946 annual renewal and replacement amount. During the rate projection period the cumulative contributions to the capital reserve will equal about \$35,000, assuming there are few capital expenses because the facilities are new. The annual contribution to the capital reserve should be re-evaluated at the end of the rate projection period. It should

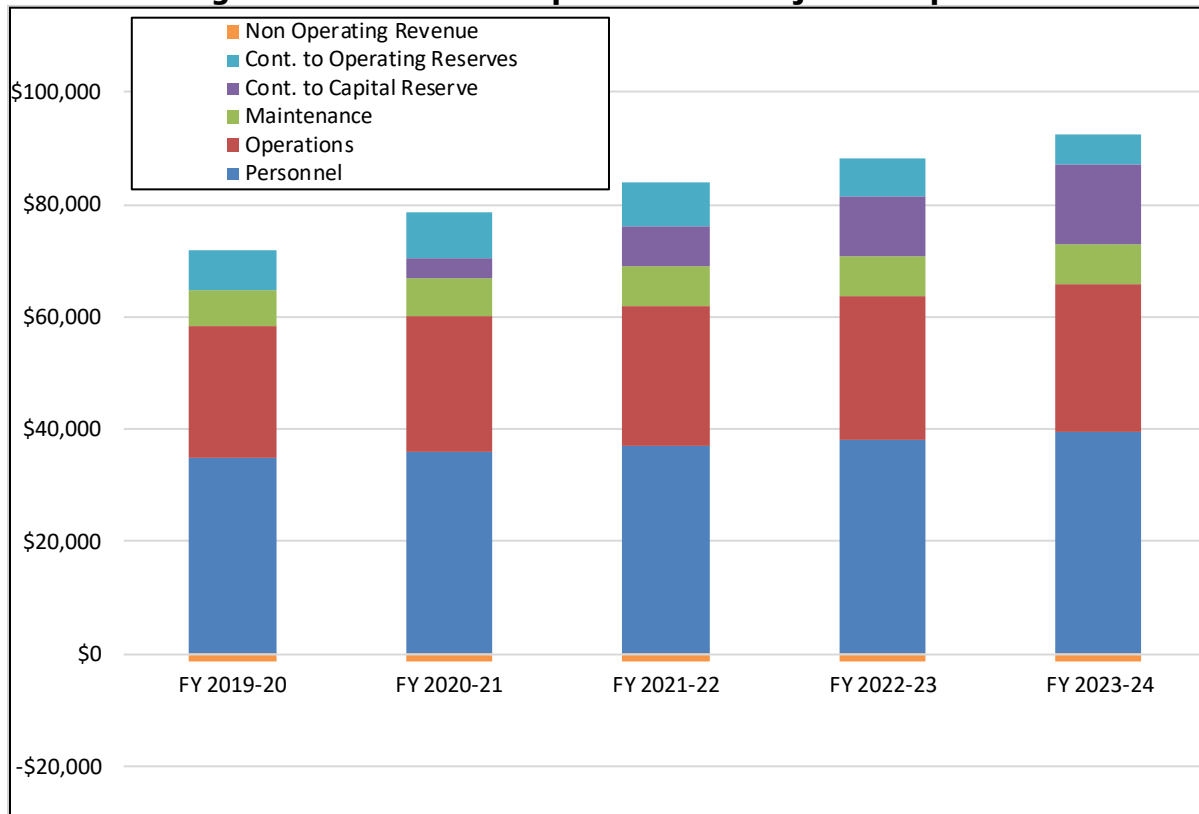
be expected that the annual contribution will need to increase as the facilities age and renewal and replacement costs are incurred.

Figure II-3. Contribution to Capital Reserves

	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Renewal & Replacement Funded	0%	5%	10%	15%	20%
Annual Contribution to Reserves	\$0	\$3,547	\$7,095	\$10,642	\$14,189
Cummulative Contributions	\$0	\$3,547	\$10,642	\$21,284	\$35,473

Figure II-4 shows the projected annual revenue requirements for the rate projection period. Most expenses are gradually increasing based on the escalation factors in Figure II-1. The contribution to the capital reserve shows the greatest increase. Even with these increases, the capital reserve balance is growing slowly.

Figure II-4. Water Enterprise Annual Projected Expenses



	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Personnel	\$35,000	\$36,050	\$37,132	\$38,245	\$39,393
Operations	\$23,450	\$24,154	\$24,878	\$25,624	\$26,393
Maintenance	\$6,500	\$6,695	\$6,896	\$7,103	\$7,316
Cont. to Capital Reserve	\$0	\$3,547	\$7,095	\$10,642	\$14,189
Cont. to Operating Reserves	\$6,800	\$8,246	\$8,084	\$6,648	\$5,358
Non Operating Revenue	(\$1,200)	(\$1,236)	(\$1,273)	(\$1,311)	(\$1,351)
	\$70,550	\$77,455	\$82,811	\$86,951	\$91,299

PROJECTED REVENUE INCREASES

The required revenue increases are determined by comparing the revenue from existing rates with the projected revenue requirements. Rate revenue is then increased to reduce or eliminate deficits and maintain reserves. **Figure II-5** indicates the annual revenue increases that are projected.

Figure II-5. Water Enterprise Projected Revenues

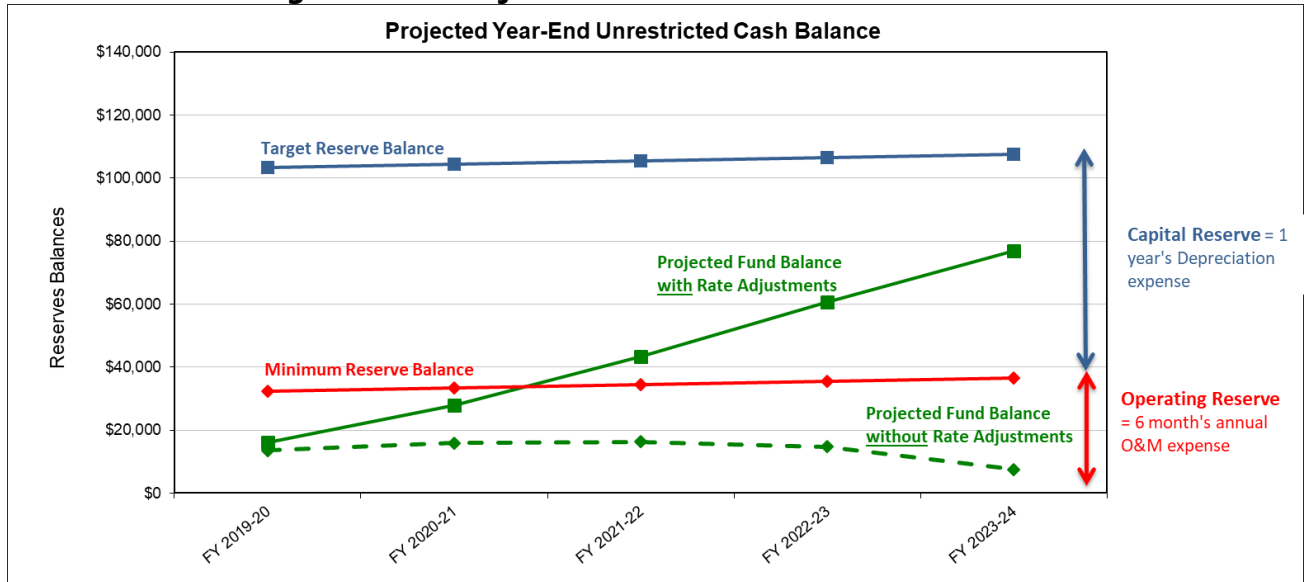
	Months Increase In Effect	Current	Projected			
		FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Rate Revenue at Current Rates						
Service Charge Revenue		\$68,000	\$68,000	\$68,000	\$68,000	\$68,000
Total Revenue (before rate increases)		\$68,000	\$68,000	\$68,000	\$68,000	\$68,000
Increase in Rate Revenue		9.0%	9.0%	5.0%	5.0%	5.0%
Revenue from Current Rates		\$68,000	\$68,000	\$68,000	\$68,000	\$68,000
Revenue from Rate Increases						
FY 2019-20 (eff. Feb 1, 2020)	5	\$2,550	\$6,120	\$6,120	\$6,120	\$6,120
FY 2020-21 (eff. Jan 1, 2021)	6		\$3,335	\$6,671	\$6,671	\$6,671
FY 2021-22 (eff. Jan 1, 2022)	6			\$2,020	\$4,040	\$4,040
FY 2022-23 (eff. Jan 1, 2023)	6				\$2,121	\$4,242
FY 2023-24 (eff. Jan 1, 2024)	6					\$2,227
Total Revenue from Rate Increases		\$2,550	\$9,455	\$14,811	\$18,951	\$23,299
Total Current Revenue		\$68,000	\$68,000	\$68,000	\$68,000	\$68,000
Total Revenue with Rate Increases		\$70,550	\$77,455	\$82,811	\$86,951	\$91,299
Total Operating Revenue Requirement		\$70,550	\$77,455	\$82,811	\$86,951	\$91,299

RESERVE FUND BALANCE

Figure II-6 shows the target balances that are recommended. The minimum fund balance (solid red line) represents the working capital that is needed to meet month-to-month cash flow for O&M expenses. **Figure II-6** also shows the total target balance that is recommended (solid blue line). The target balance for capital is derived by adding an additional amount for capital improvements to the minimum fund balances. With this additional amount, the District should have sufficient cash on hand to fund its cash-funded capital improvements without cash flow constraints. This amount is also available to help fund short-term deficits such as emergency expenditures and revenue shortfalls resulting from lower than planned water sales, which could be significant if we experience drought conditions again.

Figure II-6 shows the combined balance for the operating and capital reserves (green lines). With the proposed rate adjustments, the total reserve fund balance (solid green line) grows above the minimum balance (solid red line) during the rate period.

Figure II-6. Projected Year-End Reserve Balances



III. RATE DESIGN

CURRENT RATES

The District's customers are currently unmetered and are only charged a fixed service charge per account based on customer class. The current monthly water rates are summarized in **Figure III-1** and are billed every two months.

Figure III-1. Current Water Service Charges - Monthly

Customer Class	Current Charge
Residential	\$36.00
Commercial	\$42.00
Motel (per room)	\$1.75
Clear Creek Park	\$87.50

PROPOSED RATES

Customers will continue to be charged rates based on the current fixed service charges until meters are installed, at which point a volumetric charge will be introduced. It is proposed that the volumetric charge will be a uniform rate per HCF that does not vary based on water use during the billing period. This simple structure for the volumetric charge is recommended because the revenue that it produces is relatively stable compared to tiered rate structures in which the rate per HCF increases with higher use. Furthermore, it is necessary to use and analyze real consumption data from customers before a tiered rate structure is implemented. The installation of meters will provide that data. The District can convert the uniform rate to a tiered rate in the future if it chooses.

It is recommended that the volumetric rates generate 30% of the revenue initially, leaving 70% to be recovered from fixed service charges. At only 30%, the District's revenue will be relatively stable. However, as customers become accustomed to paying for water based on use, they may use water more efficiently, which could reduce their demand and the revenue received by the District. It is difficult to predict how much, if any reduction will occur. Hence, the District should carefully monitor customer demand and revenues to avoid significant deficits.

Over time, as customer demand stabilizes, it is recommended that the District shift more of the revenue from the service charges to the volumetric charge so that customer bills are more responsive to customer demands. However, the portion of revenue from volumetric charges should be set considering that there may be a significant number of part-time customers. There must be enough revenue collected from the service charges

(fixed revenue) and the minimum amount of water sold (average winter water use which can be thought of as fixed revenue) so that the District can cover its fixed costs. The derivation of the volumetric rate is shown in **Figure III-2**.

Figure III-2. Derivation of Volumetric Rate

FY 2021-22	
Total Rate Revenue	\$77,455
Volumetric Percentage	30%
Revenue from Volumetric	\$23,237
Total Water Production (MGD) [1]	0.050
Total Water Production (annual HCF)	24,559
Water Losses	10%
Total Water Sales (annual HCF)	22,103
Revenue from Volumetric	\$23,237
Total Water Sales (annual HCF)	22,103
Volumetric Rate per HCF	\$1.05

1. PACE Engineering Report pg. 9

At the same time that the volumetric charge is introduced, it is proposed that the structure of the current fixed service charges should be converted from charges per account or room for each customer class to charges based on the size of the meter at the service connection. This conversion will align the structure for the fixed service charges with industry standards. With the charges based on the capacity of the meter, it is no longer necessary to have customer classes.

In order to charge customers based on meter size, it is necessary to calculate the total equivalent meters units (EMUs). This is done by converting each meter to the equivalent of a base size meter, in this case a 3/4" meter. In accordance with the AWWA M1 Manual, a 1" meter has the safe operating flow, or capacity, of 1.67 3/4" meters. **Figure III-3** shows the calculation of the projected EMUs for the District in FY 2021-22.

Figure III-3. Total Equivalent Meters

Meter Size	Meter Ratio	Total Meters	Equivalent Meters
3/4"	1.00	161	161.00
1"	1.67	5	8.35
		166	169.35

The derivation of the service charges is shown in **Figure III-4**. The \$26.68 charge for the smallest meter (3/4") is the Equivalent Meter. The charge for a 1-inch meter is 1.67 times the Equivalent Meter or \$44.56, which reflects the additional capacity available in a 1-inch meter compared to a 3/4" meter.

Figure III-4. Derivation of Service Charges

FY 2021-22	
Total Rate Revenue	\$77,455
Fixed Percentage	70%
Revenue from Fixed	\$54,219
Equivalent Meters [1]	169.4
Meter Charge per Equivalent Meter	\$26.68

1. Source: **Figure III-3**.

The current and proposed rates are summarized in **Figure III-5**.

Figure III-5. Current and Proposed Water Rates

	Current	1/1/2020	1/1/2021	1/1/2022	1/1/2023	1/1/2024
Flat Charges per Account						
Residential	\$36.00	\$39.24	\$42.77			
Commercial	\$42.00	\$45.78	\$49.90			
Motel (per room)	\$1.75	\$1.91	\$2.08			
Clear Creek Park	\$87.50	\$95.38	\$103.96			
Service Charge per Account						
3/4" Meter				\$26.68	\$28.01	\$29.41
1" Meter				\$44.56	\$46.78	\$49.12
Volumetric Charge for All Water Usage						
per HCF				\$1.05	\$1.10	\$1.16

BILL IMPACTS

Customer bills based on the current and proposed structures are shown in **Figure III-6**. Due to the structure of the proposed rates, which have service and volumetric charges, the water bills depend on the size of the meter and the amount of water used. **Figure III-6** calculates monthly bills under the proposed rates based on the estimated average monthly water use per account (18.5 HCF per month, 37 HCF bi-monthly) and a 3/4" meter.

Figure III-6. Residential Bi-Monthly Bills

	Current	1/1/2020	1/1/2021	1/1/2022	1/1/2023	1/1/2024
Existing Structure						
Flat Charge	\$72.00	\$78.48	\$85.54			
Proposed Structure						
Service Charge [1]				\$53.36	\$56.03	\$58.83
Volumetric Charge [2]				\$38.90	\$40.84	\$42.88
Bi-Monthly Bill	\$72.00	\$78.48	\$85.54	\$92.26	\$96.87	\$101.71
<i>Annual percentage increase</i>		9.0%	9.0%	7.8%	5.0%	5.0%

[1] 3/4" meter.

[2] 37 HCF.

Appendix A: PACE Engineering Report for Clear Creek CSD Water Systems Improvement Project

Table 11 – Alternative 1 Preliminary Cost Estimate Revised 4-22-19

No.	Item	Quantity	Unit	Unit Cost	Total Cost
1	Construction Costs				
2	Task 1 - Spring House and Water Supply Pipes				
3	Mobilization/Demobilization	1	LS	\$40,000	\$40,000
4	Spring House Rehabilitation & Decommission Existing Pump Station	1	LS	\$60,000	\$60,000
5	8-Inch Water Main Pipe Liner from Spring House to Elbow	307	LF	\$120	\$36,840
6	10-Inch Water Main from Elbow to Pump Station/Class C	120	LF	\$130	\$15,600
7	12-Inch Water Main from Pump Station to Tank/Class A1	3000	LF	\$150	\$450,000
8	Subtotal Spring House and Water Supply Pipes Construction Cost				\$602,440
9	Task 2 - Pump Station Facility				
10	Mobilization/Demobilization	1	LS	\$42,000	\$42,000
11	Layout & Locate Utilities	1	LS	\$10,000	\$10,000
12	Electrical & Telemetry	1	LS	\$100,000	\$100,000
13	Site Grading & Finish	1	LS	\$30,000	\$30,000
14	Concrete Footing and Slab	8.3	CY	\$954	\$8,000
15	Lean Mix	38	CY	\$210	\$8,000
16	Masonry	690	SF	\$54	\$37,300
17	Roof	384	SF	\$35	\$13,500
18	15 HP Pump & Motor	2	EA	\$19,400	\$38,800
19	Underground Piping & Conduits	1	LS	\$36,000	\$36,000
20	Interior Mechanical, Piping Excluding Pump	1	LS	\$36,000	\$36,000
21	3-Phase Power to Pump Station	1	LS	\$24,000	\$24,000
22	SCADA Programming	1	LS	\$45,000	\$45,000
23	Emergency Generator	1	LS	\$75,000	\$75,000
24	Shop Drawing Submittals	1	LS	\$3,600	\$3,600
25	Testing	1	LS	\$8,400	\$8,400
26	Clean Up	1	LS	\$8,400	\$8,400
27	NaOCl Dosing Pumps & Misc Fittings	2	LS	\$5,000	\$10,000
28	Subtotal Pump Station Facility Construction Cost				\$534,000
29	Task 3 - Water Storage Tank				
30	Mobilization/Demobilization	1	LS	\$33,000	\$33,000
31	300,000-Gallon Welded Steel Water Storage Tank Plus Coating	1	EA	\$450,500	\$450,500
32	Cathodic Protection	1	EA	\$37,100	\$37,100
33	Non-Bolt Concrete Ring Foundation	21	CY	\$1,200	\$25,120
34	Aggregate Base	327	CY	\$35	\$11,445
35	Fencing	340	LF	\$25	\$8,500
36	Site Piping 12-Inch Intake, Discharge, and Outflow	150	LF	\$150	\$22,500
37	Subtotal Water Storage Tank Construction Cost				\$588,165
38	Task 4 - Distribution System Improvements				
39	Fire Hydrant, Complete	35	EA	\$7,100	\$248,500
40	AMR 1/2-Inch Meter, Box, Lid, & Angle Meter Stop	186	EA	\$790	\$131,140
41	AMR Handheld Reader	1	EA	\$16,210	\$16,210
42	AMR Software and Training	1	EA	\$5,300	\$5,300
43	Subtotal Distribution System Construction Cost				\$401,150
44	Subtotal Construction Cost				\$2,125,755
45	Construction Contingency at 10%				\$212,576
46	Total Construction Cost				\$2,338,331
47	Indirect Costs				
48	Complete Final Design Cost				\$38,400
49	Bidding/Contract Award Services				\$20,000
50	Construction Engineering Services @ 8% of Construction Cost				\$187,100
51	Construction Observation for One Year at Full Time				\$360,193
52	Prevailing Wage Monitoring				\$20,000
53	Per Diem for 50 weeks				\$30,000
54	Army Corps of Engineers, CRWQCB, & CA Dept. of Fish & Wildlife Permits & Monitoring During Construction				\$45,000
55	PG&E Power Connection Fee				\$10,000
56	O&M Manual				\$7,000
57	As-Built (Record) Drawings				\$5,000
58	Project Performance Report				\$20,000
59	Total Indirect Cost				\$751,783
60	TOTAL PROJECT COST				\$3,090,090