

COASTSIDE COUNTY WATER DISTRICT WATER RATE UPDATE – FY 2017-18





COASTSIDE COUNTY WATER DISTRICT

766 Main Street Half Moon Bay, CA 94019



WATER RATE UPDATE – FY 2017-18

April 11, 2017

HF&H CONSULTANTS, LLC

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Managing Tomorrow's Resources Today

201 North Civic Drive, Suite 230 Walnut Creek, California 94596 Tel: (925) 977-6950 Fax: (925) 977-6955 hfh-consultants.com Robert D. Hilton, CMC John W. Farnkopf, PE Laith B. Ezzet, CMC Richard J. Simonson, CMC Marva M. Sheehan, CPA Robert C. Hilton, CMC

April 11, 2017

Mr. David Dickson General Manager Coastside County Water District 766 Main Street Half Moon Bay, California 94019

Subject: Water Rate Update - FY 2017-18

Dear Mr. Dickson:

HF&H is pleased to submit this water rate update of the Coastside County Water District's (District) FY 2017-18 rates. The report summarizes the analysis that was conducted to develop the proposed rates.

The District has demonstrated leadership in improving rate payer equity during a time when costs are increasing in compliance with regulatory mandates. It has been a privilege to assist the District with this step forward.

Very truly yours,

HF&H CONSULTANTS, LLC

John W. Farnkopf, P.E., Senior Vice President Richard J. Simonson., Vice President

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Water Rate Update - FY 2017-18

ACRONYMS

FY	Fiscal Year
CCF or HCF	Hundred cubic feet of metered water sold; 748 gallons; a cube of water
	4.6 feet on edge
EMU	Equivalent metered unit
GPD	Gallons per Day
GPCD	Gallons per Capita per Day
O&M	Operations and Maintenance
PAYGo	Pay-As-You-Go, in reference to funding capital improvements from
	cash rather than from borrowed sources of revenue
SFPUC	San Francisco Public Utilities Commission
SWRCB	State Water Resources Control Board

ACKNOWLEDGEMENTS

District Board

Glenn Reynolds, President Bob Feldman, Vice President Arnie Glassberg, Board Director Ken Coverdell, Board Director Chris Mickelsen, Board Director

District Staff

Dave Dickson, General Manager Mary Rogren, Assistant General Manager

HF&H Consultants

John Farnkopf, Sr. Vice President Rick Simonson, Vice President

LIMITATIONS

This document was prepared solely for Coastside County Water District in accordance with the contract between the District and HF&H and is not intended for use by any other party for any other purpose.

In preparing this analysis, we relied on information and instructions from the District, which we consider to be accurate and reliable and did not independently verify.

Rounding differences caused by stored values in electronic format may exist.

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

SECTION 1. EXECUTIVE SUMMARY

In preparing this water rate update, expenses, revenues, and reserves were projected for a five-year financial planning period from FY 2017-18 through FY 2021-22, with the understanding that the Board will consider and potentially act on proposed rate increases for only the first year of the financial planning period, FY 2017-18. Based on these projections, annual rate increases (effective July 1 of each year through 2021) were derived to meet the funding requirements.

The following findings and recommendations were made.

1.1 Findings and Recommendations

1. Projected FY 2017-18 Operating Shortfall. The revenue from existing rates is insufficient to cover the District's projected operating and capital needs. Without a rate increase, the \$773,018 projected operating deficit would reduce the District's operating and capital reserve fund balance to \$3,867,498. In other words, an approximate 7.4% increase in revenue is required to avoid reducing the District's fund balance.

	<u> </u>		
	FY 2017-18		
Revenue Requirement	\$12,609,223		
Non-Operating Revenue	(\$1,377,174)		
Net Revenue Requirement	\$11,232,048		
Revenue from Current Rates	\$10,459,030		
Surplus/(Deficit)	(\$773,018)		
	-7.4%		
District Fund Balance			
Beginning Balance	\$4,640,516		
Surplus/(Deficit)	(\$773,018)		
EOY Fund Balance	\$3,867,498		
Target EOY Fund Balance	\$6,475,328		

Figure 1-1. FY 2017-18 Projected Operating Deficit

2. Recent Rate Increases. As a result of increasing capital costs and decreasing revenue from decreasing water sales (the result of successful conservation efforts during the recent drought), the District needed to increase rates by double-digit figures in recent years, 24% in July 2015 and 10% in July 2016.

3. Proposed Rates (effective 7/1/2017). Given the recent high rate increases and much improved local and imported water supply conditions, which has stabilized water demand (i.e., it is no longer decreasing), the District's fund balance has increased. The increased fund balance can accommodate increasing rates something less than the 7.4% projected deficit. Working with District staff, we developed a financial plan that results in no increase in the base service charge and a 5% increase in the quantity charges, as shown in **Figure 1-2**.

Figure 1-2. Current and Proposed Kates (effective //1/2017)							
Base Service Charg	e						
		Bi-Monthly Billing		Monthly Billing			
		<u>Current</u>	Proposed	<u>Current</u>	Proposed		
Meter Size	_		No Increase		No Increase		
5/8"		\$52.20	\$52.20	\$26.10	\$26.10		
5/8" for 2 dwelli	ng units	\$104.39	\$104.39	\$52.20	\$52.20		
3/4"		\$78.45	\$78.45	\$39.23	\$39.23		
3/4 inch for 2 dw	elling units	\$156.89	\$156.89	\$78.45	\$78.45		
1"		\$130.76	\$130.76	\$65.38	\$65.38		
1.5"		\$252.52	\$252.52	\$126.26	\$126.26		
2"		\$418.48	\$418.48	\$209.24	\$209.24		
3"		\$915.50	\$915.50	\$457.75	\$457.75		
4"		\$3,139.22	\$3,139.22	\$1,569.61	\$1,569.61		
Quantity Charge							
	<u>E</u>	Bi-Monthly Bil	ling	Monthly Billing			
	<u>HCF</u>	<u>Current</u>	Proposed	<u>HCF</u>	<u>Current</u>	Proposed	
Residential			5% Increase			5% Increas	
Tier 1	1 to 4	\$9.19	\$9.65	1 to 2	\$9.19	\$9.65	
Tier 2	5 to 16	\$10.26	\$10.77	3 to 8	\$10.26	\$10.77	
Tier 3	17 to 30	\$13.23	\$13.89	9 to 15	\$13.23	\$13.89	
Tier 4	Over 30	\$17.53	\$18.41	Over 15	\$17.53	\$18.41	
Non-Residential	per HCF	\$11.31	\$11.88	per HCF	\$11.31	\$11.88	

Figure 1-2.	Current and Pro	posed Rates	(effective 7/1	/2017)
Inguit I Z.	Current and 110	posed Mates		/ E UI/ j

- **3. Residential Bill Impact (effective 7/1/2017).** Increases in residential bills vary depending on the customer's meter size and the amount of water use. The average residential customer has a 5/8" meter and uses 10 HCF during a bimonthly period. The bill for using 10 HCF will increase \$4.90 for the bi-monthly period (or \$2.45 per month). If a customer uses less than 10 HCF, the bill impact will be less than \$2.45 per month and more if they use more than 10 HCF in a bimonthly period.
- **4. Five-Year Financial Planning.** The proposed rates are part of a five-year projection, but the District is considering, and potentially acting on, only the rates to be effective July 1, 2017. **Figure 1-3** summarizes the projected rate

increases for the base and quantity charge over the full five-year planning period.

54	are 1-5. Annual Projected Rate and Revenue mere						
		Base	Quantity	Total			
	Date of	Charge	Charge	Revenue			
	Increase	Increase	Increase	Increase			
	July 1, 2017	0.0%	5.0%	3.9%			
	July 1, 2018	5.0%	5.0%	5.0%			
	July 1, 2019	5.0%	5.0%	5.0%			
	July 1, 2020	5.0%	5.0%	5.0%			
	July 1, 2021	5.0%	5.0%	5.0%			

Figure 1-3. Annual Projected Rate and Revenue Increases

5. Reserve Fund Balance (Figure 1-4). With the recommended rate increases, in **Figure 1-3**, the District's reserve fund balance (solid green line) will achieve the District's reserve target (discussed in detail in **Section 2.2**) by FY 2021-22.

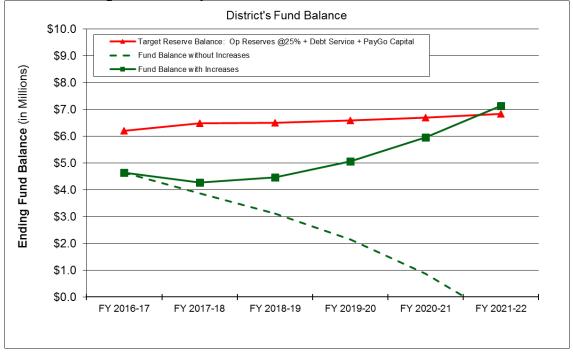


Figure 1-4. Projected Fund Balance at Year End

SECTION 2. REVENUE REQUIREMENT PROJECTIONS

To determine whether additional rate revenue is required, projected operating expenses, 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 reserves are maintained.

2.1 Operating and Capital Expense Projections

The District's FY 2017-18 budget served as the basis for determining the operating and capital expense projections. The FY 2017-18 budgeted operating and maintenance (O&M) expenses were projected through FY 2020-21 using appropriate escalation factors. Capital expenses are projected based on the District's current capital improvement program. The operating and capital expense projections are noteworthy in the following respects:

Operating Expenses

O&M Expenses – General operating and maintenance expenses to operate the water system (i.e., salaries and benefits, utility costs, administrative support, etc.) are generally projected to increase during the planning period at the rate of inflation.

SFPUC water purchases – The cost to purchase water from the SFPUC is projected to decrease slightly in FY 2017-18 and FY 2018-19 as the District plans to increase the local water supply (i.e., Pilarcitos Well and Denniston project) which will reduce the need for water purchases from the SFPUC. In addition, the SFPUC wholesale cost of water is not expected to increase until July 1, 2019 based on recent financial analysis by the SFPUC.

Capital Expenses

Capital projects – The District's capital expenses are summarized by category in Figure 2-1. The District's annual budgeted capital expenditures range from \$2.1 million to \$4.2 million during the modeling period. On average, the District expects to spend approximately \$3.283 million annually on these projects. The District plans to fund these capital improvements on a pay-as-you-go (PAYGo) basis without issuing debt.

Debt service – Debt service is flat (approximately \$1.1 million per year) during the planning period as the District does not plan on issuing new debt to fund the capital projects.

rigure 2-1. Capital improvement riojeet Summary							
Category	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22		
Equipment Purchase & Replacement	398,000	148,000	218,000	88,000	88,000		
Facilities & Maintenance	1,525,000	95 <i>,</i> 000	95 <i>,</i> 000	65,000	65,000		
Pipeline Projects	1,130,000	1,425,000	185,000	1,000,000	2,900,000		
Pump Stations/Tanks/Wells	330,000	1,960,000	120,000	400,000	80,000		
Water Supply Development	100,000	-	1,300,000	1,000,000	1,000,000		
Water Treatment Plants	280,000	80,000	180,000	80,000	80,000		
Total	\$3,763,000	\$3,708,000	\$2,098,000	\$2,633,000	\$4,213,000		

Figure 2-1. Capital Improvement Project Summary

2.2. Reserve Funds

In addition to covering annual expenses, base and quantity charges need to generate sufficient revenue to maintain adequate operating and capital reserves. It is the District's practice to maintain a single operating and capital reserve fund. For purposes of rate making, we have subdivided the reserves into operating, capital, and debt service components. In this way, it is possible to set target balances for each component based on the components' functions:

- **Operating Reserve** the Operating Reserve provides working capital for monthto-month operating expenditures. With sufficient working capital, the District can operate without cash flow constraints. At a minimum, we recommend an operating reserve that is based on how frequently customers are billed. This frequency establishes the lag between when the District incurs expenses and when it receives revenue from billings. The District currently bills nearly all of its customer's bi-monthly. In most cases, a rule of thumb used by the California PUC is sufficient for determining the minimum working capital that is needed. The rule states that the allowance for working capital should equal 1.50 times the billing frequency. In the District's case, this equals three months or 90 days, which is roughly 25% of annual operating revenue. As such, during this five-year planning period, the District's target operating reserve ranges from \$2.0 to \$2.4 million, as operating costs increase each year.
- **Capital Reserve** the Capital Reserve provides working capital for the District's capital improvement program. The fund balance needs to be sufficient to at least pay contractors without delays caused by cash flow limitations and can fund larger construction projects on a pay-as-you-go basis from rate revenue only¹, thereby eliminating financing costs. The fund balance can also be larger to provide a measure of self-insurance for emergencies. In the District's case, we have recommended a capital reserve target of \$3,283,000, which is equal to the District's average annual capital expenditures based on the PAYGo projects

¹ Projects funded from rate revenue are sometimes referred to as "pay-as-you-go" or "PAYGo" projects. By contrast, debt-funded projects are "pay-as-you-use" projects.

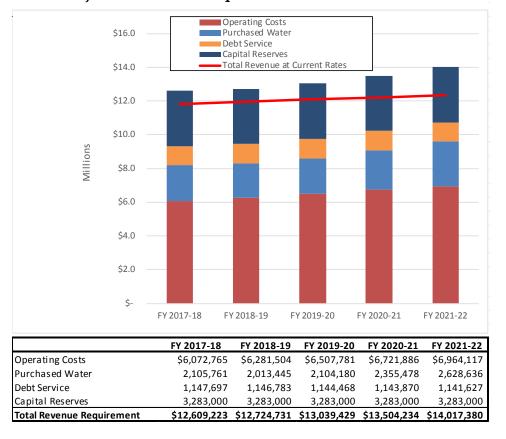
projected over the coming five years (as shown if **Figure 2-1**). This target also provides a buffer from debt service payments, which are highest in July.

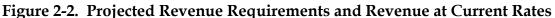
The target capital reserve does not include a margin for emergency contingencies. The District may want to consider an emergency contingency once the current capital reserve target is met, which is projected to occur in FY 2021-22.

• **Debt Service Reserve** – The purpose of a debt service reserve is to provide funding to avoid defaulting on the loan if the District failed to make a loan payment. We recommend maintaining a full year's loan repayment. As such, the District's target debt service reserve is \$1.1 million.

2.3 Total Revenue Requirements

The major expenses described above that comprise the revenue requirements are summarized and graphed in **Figure 2-2**. As shown in the graph, current revenues at current rates (solid red line)² are not sufficient to cover the projected revenue requirements.





² Includes projected annual 1% rebound in water consumption by current customers (beginning FY 2018/19)

2.4 Revenue Increases

To top portion of **Figure 2-3** summarizes the projected revenue requirements (from **Figure 2-2**), revenue from current rates, annual surpluses and deficits, and the fund balance, all before rate increases.

The bottom portion of **Figure 2-3** shows the projected revenue increases to offset future deficits so that the District's fund balance is maintained at an adequate level and reaches the target balance by the end of the five-year planning period. The revenue increases that are projected would become effective July 1 of each year. This coming year's rate increase, which is the only rate increase which the District Board is considering, if adopted, will become effective July 1, 2017 and will increase revenue 3.9%. The magnitude of this increase compares favorably to recent increases, an average increase of 24% on July 1, 2015 and a 10% increase on July 1, 2016.

Figure 2-3. Revenue Increases							
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22		
Revenue Requirement	\$12,609,223	\$12,724,731	\$13,039,429	\$13,504,234	\$14,017,380		
Non-Operating Revenue	(\$1,377,174)	(\$1,420,690)	(\$1,465,620)	(\$1,512,014)	(\$1,559,922)		
Net Revenue Requirement	\$11,232,048	\$11,304,042	\$11,573,809	\$11,992,220	\$12,457,459		
Revenue from Current Rates [1]	\$10,459,030	\$10,540,353	\$10,622,489	\$10,705,447	\$10,789,234		
Surplus/(Deficit) <u>without</u> Rate Increase	(\$773,018)	(\$763,689)	(\$951,320)	(\$1,286,773)	(\$1,668,225)		
EOY Fund Balance (before increase)	\$3,867,498	\$3,103,809	\$2,152,490	\$865,716	(\$802,509)		
Revenue Increase	3.9%	5.0%	5.0%	5.0%	5.0%		
Revenue from Increases	\$406,614	\$958,232	\$1,546,108	\$2,172,416	\$2,839,458		
Surplus/(Deficit) <u>with</u> Rate Increase Transfer to/(from) Reserves	(\$366,404)	\$194,543	\$594,788	\$885,643	\$1,171,232		
EOY Fund Balance (after increase)	\$4,274,112	\$4,468,656	\$5,063,444	\$5,949,086	\$7,120,319		
Target EOY Fund Balance	\$6,204,618	\$6,475,328	\$6,503,520	\$6,580,458	\$6,696,211		

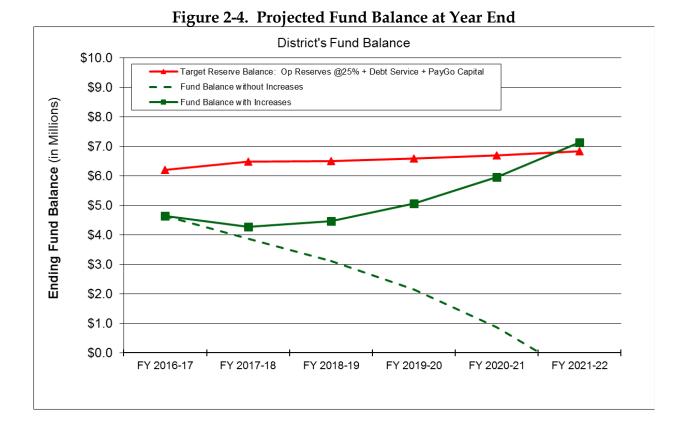
Figure 2-3. Revenue Increases

[1] Includes projected annual 1% rebound in water consumption by current customers (beginning FY 2018/19)

Figure 2-4 shows the combined fund balance for the Operating, Capital, and Debt Service Reserves compared with the target balance. The line labeled "Total Target Balance" (diamond symbols) is the sum of the target balances for the Operating, Capital, and Debt Service Reserves. The dashed green line shows what the fund balance would be without rate increases. The fund balance drops quickly and would be negative by FY 2021-22.

Water Rate Update – FY 2017-18

Figure 2-4 shows the fund balance (solid green line with square symbols) compared with the target balance. **Figure 2-4** indicates that the fund balance achieves the target balance by FY 2021-22, with the projected revenue increases.



SECTION 3. RATE MODIFICATIONS AND BILL IMPACTS

3.1 Current Rates

The District's rate payers pay the sum of two charges for water service on a bi-monthly or monthly basis: a base service charge based on the size of the service connection plus a quantity charge based on metered water use during the billing period. The current rates are summarized in **Figure 3-1**.

Base Service Charge							
		<u>Bi-Monthly</u>	<u>Monthly</u>				
Meter Size							
5/8"		\$52.20	\$26.10				
5/8" for 2 dwellir	ng units	\$104.39	\$52.20				
3/4"		\$78.45	\$39.23				
3/4 inch for 2 dw	elling units	\$156.89	\$78.45				
1"		\$130.76	\$65.38				
1.5"		\$252.52	\$126.26				
2"		\$418.48	\$209.24				
3"		\$915.50	\$457.75				
4"		\$3,139.22	\$1,569.61				
Quantity Charge							
	<u>Bi-M</u>	lonthly	<u>Mo</u>	<u>nthly</u>			
	<u>HCF</u>	<u>\$/HCF</u>	<u>HCF</u>	<u>\$/HCF</u>			
Residential							
Tier 1	1 to 4	\$9.19	1 to 2	\$9.19			
Tier 2	5 to 16	\$10.26	3 to 8	\$10.26			
Tier 3	17 to 30	\$13.23	9 to 15	\$13.23			
Tier 4	Over 30	\$17.53	Over 15	\$17.53			
Non-Residential	per HCF	\$11.31	per HCF	\$11.31			

Figure 3-1. Current Base Service and Quantity Charges

The base service charges are the same regardless of customer class. In other words, the base service charge for a meter of a given size is the same for all meters of that size regardless of which class of customer is served. The residential quantity charges are tiered and the non-residential quantity charge is a uniform, un-tiered rate.

Residential customers pay tiered consumption charges, also referred to as "increasing block rates." The current residential increasing block rates comprise four tiers. Residential customers pay rates for successive ranges of consumption (tier or block). The rate in each tier increases as consumption increases in proportion to the increasing cost of serving higher levels of demand, which place burdens on the capacity of the

infrastructure as well as on the sources of supply. The total quantity charge is the sum of the consumption in each tier multiplied times the corresponding rate in each tier.

3.2 Rate Structure Modifications

In 2015, HF&H assisted the District in updating its rate structure by performing a costof-service analysis to ensure that its rates allocated costs to each customer class in proportion to each class' demand on the District's facilities. Within the residential class, the quantity charges were restructured to conform to the cost of providing service across the tiers.

This realignment should remain accurate for several years unless there are significant changes in the relative demands among customer classes or residential tiers, or changes in significant costs.

A review of the District's actual water use by customer class over the past couple years does not indicate a significant change; therefore, we do not recommend modifying the rate structure at this time.

The percentage increases that are recommended this year shall be applied equally, across-the-board to all meter sizes for the base service charges and applied equally, across-the-board to the quantity charges.

3.3 Proposed FY 2017-18 Rates (effective July 1, 2017)

As shown in **Figure 2-4**, to maintain the District's current reserve balance, revenues need to increase 7.3%, effective July 1, 2017. Though the District's reserve balance is not currently at the recommended target level, there are reserves available to increase revenues by 3.9% in FY 2017-18, instead of 7.3%.

The 3.9% increase in revenue can be achieved with a 5% increase in both residential and non-residential quantity charges and no increase in the base charges. Holding the base service charge at the current level benefits all customers regardless of class. The District can hold its base charges where they currently are and remain compliant with Proposition 218 because the resulting charge is proportionate to the cost of providing service. By not increasing the base service charges and only increasing the quantity charge, cost recovery from the fixed charges shifts slightly to the variable charges without disproportionate effect on customer bills because all customers are treated equally. The resulting bi-monthly and monthly rates for FY 2017-18, effective July 1, 2017, are shown in **Figure 3-2**.

Water Rate Update - FY 2017-18

Base Service Charge							
		Bi-Mont	Bi-Monthly Billing		Monthly Billing		
		<u>Current</u>	Proposed	<u>Current</u>	<u>Proposed</u>		
Meter Size	_		No Increase		No Increase		
5/8"		\$52.20	\$52.20	\$26.10	\$26.10		
5/8" for 2 dwellir	ng units	\$104.39	\$104.39	\$52.20	\$52.20		
3/4"		\$78.45	\$78.45	\$39.23	\$39.23		
3/4 inch for 2 dw	elling units	\$156.89	\$156.89	\$78.45	\$78.45		
1"		\$130.76	\$130.76	\$65.38	\$65.38		
1.5"		\$252.52	\$252.52	\$126.26	\$126.26		
2"		\$418.48	\$418.48	\$209.24	\$209.24		
3"		\$915.50	\$915.50	\$457.75	\$457.75		
4"		\$3,139.22	\$3,139.22	\$1,569.61	\$1,569.61		
Quantity Charge							
. , .	B	i-Monthly Bil	ling	N			
	<u>HCF</u>	Current	Proposed	HCF	Current	Proposed	
Residential			5% Increase			5% Increase	
Tier 1	1 to 4	\$9.19	\$9.65	1 to 2	\$9.19	\$9.65	
Tier 2	5 to 16	\$10.26	\$10.77	3 to 8	\$10.26	\$10.77	
Tier 3	17 to 30	\$13.23	\$13.89	9 to 15	\$13.23	\$13.89	
Tier 4	Over 30	\$17.53	\$18.41	Over 15	\$17.53	\$18.41	
Non-Residential	per HCF	\$11.31	\$11.88	per HCF	\$11.31	\$11.88	

Figure 3-2. Current and Proposed Rates (eff. 7/1/2017)

3.4 Residential Bill Comparison

Figure 3-3 compares the residential customer bills for the current and proposed rates across a range of consumption. The bills include both the base service charge (assuming a 5/8'' meter)³ and the quantity charges. An average residential customer uses 10 HCF during a bi-monthly period. Comparing the current bill and proposed bill for using 10 HCF, shows the average bill will increase \$4.90 for the bi-monthly period (or \$2.45 per month).

 $^{^3\,96\%}$ of residential customers have a 5/8'' meter

	94		Bi-Monthly Bills (5/8" Service)		
	Bi-Monthly Water Use		Proposed		\$
Tier	HCF	Gal/Day	Current	7/1/2017	Difference
Tier 1	0	0	\$52.20	\$52.20	\$0.00
	1	12	\$61.39	\$61.85	\$0.46
	2	25	\$70.58	\$71.50	\$0.92
	3	37	\$79.77	\$81.15	\$1.38
	4	50	\$88.96	\$90.80	\$1.84
Tier 2	5	62	\$99.22	\$101.57	\$2.35
	6	75	\$109.48	\$112.34	\$2.86
	7	87	\$119.74	\$123.11	\$3.37
	8	100	\$130.00	\$133.88	\$3.88
	9	112	\$140.26	\$144.65	\$4.39
	10	125	\$150.52	\$155.42	\$4.90
	11	137	\$160.78	\$166.19	\$5.41
	12	150	\$171.04	\$176.96	\$5.92
	13	162	\$181.30	\$187.73	\$6.43
	14	175	\$191.56	\$198.50	\$6.94
	15	187	\$201.82	\$209.27	\$7.45
	16	199	\$212.08	\$220.04	\$7.96
Tier 3	17	212	\$225.31	\$233.93	\$8.62
	18	224	\$238.54	\$247.82	\$9.28
	19	237	\$251.77	\$261.71	\$9.94
	20	249	\$265.00	\$275.60	\$10.60
	21	262	\$278.23	\$289.49	\$11.26
	22	274	\$291.46	\$303.38	\$11.92
	23	287	\$304.69	\$317.27	\$12.58
	24	299	\$317.92	\$331.16	\$13.24
	25	312	\$331.15	\$345.05	\$13.90
	26	324	\$344.38	\$358.94	\$14.56
	27	337	\$357.61	\$372.83	\$15.22
	28	349	\$370.84	\$386.72	\$15.88
	29	362	\$384.07	\$400.61	\$16.54
	30	374	\$397.30	\$414.50	\$17.20
Tier 4	31	386	\$414.83	\$432.91	\$18.08
	32	399	\$432.36	\$451.32	\$18.96
	33	411	\$449.89	\$469.73	\$19.84
	34	424	\$467.42	\$488.14	\$20.72
	35	436	\$484.95	\$506.55	\$21.60
	36	449	\$502.48	\$524.96	\$22.48
	37	461	\$520.01	\$543.37	\$23.36
	38	474	\$537.54	\$561.78	\$24.24
	39	486	\$555.07	\$580.19	\$25.12
	40	499	\$572.60	\$598.60	\$26.00

Figure 3-3. Residential Bill Comparison



HF&H Consultants, LLC 201 N. Civic Drive, Suite 230 Walnut Creek, CA 94596