



DATE: March 28, 2016

TO: President and Members of the EMID Board of Directors

VIA: Kevin Miller, District Manager

FROM: Dante Hall, Assistant District Manager
Edmund Suen, Finance Director

SUBJECT: Review of Projected Water Rates for FY 2016 – 2017; Policy Direction for
Rate Notification under Proposition 218

RECOMMENDATION

It is recommended that the Estero Municipal Improvement District (EMID) Board of Directors:

1. Review and approve the proposed water rates for FY 2016-2017 based on a conservation-based rate model with two tiers (currently in use), or provide alternative direction; and
2. Based on that direction, authorize staff to establish the proposed water rates for FY 2016-2017 that will be noticed to all rate payers under the requirements of Proposition 218.

EXECUTIVE SUMMARY

The District engaged Bartle Wells Associates (BWA) to prepare the FY 2016-2017 Water Rate Study and recommend rate adjustments to recover increased costs while adhering to budget policy objectives established by the District Board related to Water Enterprise Funds.

EMIDS's water enterprise is in good financial standing. As of July 1, 2015, the enterprise meets the budget policy objectives established by the Board related to the Water Reserve Fund (equal to 25% of annual operating expenditures), the Capital Investment – Water Fund, and the Water Equipment Replacement Fund. As of July 2015, the Operating Reserve balance was \$454,739 to be used in case of an operational emergency or to smooth any “rate shocks” to water customers. The District

has seen declines in water consumption since conservation-based water rates and rebate programs were put in place. For FY 2014-2015, the overall water consumption decreased by 12% compared to FY 2013-2014. A review of water consumption data from the first five months of FY 2015-2016 suggests an average overall decrease in water consumption of 15% for the entire year.

Several factors influence the water rate adjustment proposals for next fiscal year and into the future. They include the following:

- **Increased San Francisco Public Utility Commission (SFPUC) wholesale rate (Effective July 1, 2016):** SFPUC anticipates a wholesale water rate increase of 8% (from \$3.75/hundred cubic feet, or “CCF”, to \$4.05/ccf) for FY 2016/17.
- **Bay Area Water Supply and Conservation Agency (BAWSCA) Surcharge:** The District will pay a new surcharge amount projected to be \$0.53/ccf through the SFPUC to the Bay Area Water Supply and Conservation Agency (BAWSCA) for capital improvement costs associated with the Water System Improvement Project (WSIP) to upgrade the Hetch Hetchy Water System.
- **Capital Funding:** The District’s strategy for funding long-term capital water improvements calls for an annual transfer from water operating revenues to the City’s Capital Improvement Fund to fund those projects. The proposed rate projections include a transfer out of \$205,000 for FY 2016-2017 and will be increased by inflation (3% per year) each year.
- **Conservation Costs:** Staff is recommending that the EMID Board increase funds allocated to the Water Sustainability Rebate Program from \$200,000 approved in FY 2015-2016 to \$400,000 for FY 2016-2017 to continue to support water conservation.
- **Ongoing Cost Inflation:** Draft operations and maintenance projections assume 2.5% to 3% annual cost inflation; meaning 2.5% to 3% annual rate adjustments are needed just to keep revenues in line with operating expenses (excluding wholesale water purchases).
- **Pension Liability:** Under new accounting rules, a pension liability was recorded at the end of last fiscal year. This resulted in a \$2.7 million reduction in available Water Operating Reserve Funds and prevents the Water District from meeting its operations and maintenance reserve target level of at least 25% of operating expenses. The proposed rate model developed by BWA utilizes available water enterprise reserves to satisfy pension liability obligations and incrementally increases rates to restore the Water Operating Reserve to its target by year five.

Staff recommends that the District continue to utilize the conservation-based rate model with two tiers (currently in use) for establishing both residential and commercial water rates whereby increasing levels of water consumption are subjected to higher rates. A base

level of consumption was established based on the need for a 20% reduction in overall water consumption. This base consumption standard is set at a bi-monthly consumption rate of 20 ccf., or what is known as Tier 1. Usage above 20 ccf. for the same period is identified as Tier 2 and charged at a higher rate. Approximately 81% of all water customers are Tier 1 users.

Based upon the SFPUC's anticipated wholesale water rate increase, the BAWSCA Surcharge for the WSIP and the projected increase in the water operations costs heading into FY 2016-2017, BWA recommends the following water rate adjustments:

1. A rate increase of 9.8% for Tier-One Single Family Residential customers and an increase of 28.2% for Tier-Two residential class customers.
2. A rate increase of 9.8% for Tier-One Multi-Family Residential customers and an increase of 27% for Tier-Two Multi-Family Residential class customers.
3. A rate increase of 13% for all Commercial and Fire Line class customers.
4. A rate increase of 9.8% for Irrigation customers with usage up to 100% of their annual water budget and an increase of 30.1% customers for customers that exceed their annual water budget.

The table below provides a comparison of current rates to proposed rates.

Estero Municipal Improvement District Proposed Water Rates for FY 2016-2017 To be effective July 1, 2016 Conservation-Based Water Rate Model (based on bi-monthly allotments)			
Fiscal Year Ending June 30	Current 2016	Proposed 2017	Proposed Increase %
Residential: Single-Family Residences			
Tier 1: 0-20 ccf	\$ 4.30	\$ 4.72	9.8%
Tier 1: Over 20 ccf	\$ 4.64	\$ 5.95	28.2%
Residential: Multi-Family Residences			
Tier 1: 0-20 ccf	\$ 4.30	\$ 4.72	9.8%
Tier 1: Over 20 ccf	\$ 4.67	\$ 5.93	27.0%
Commercial Customers and Fire Line			
All Usage	\$ 4.40	\$ 4.97	13.0%
Irrigation Customers			
<=100% of annual budget	\$ 4.30	\$ 4.72	9.8%
>100% of annual budget	\$ 5.65	\$ 7.35	30.1%

Table 1

Estero Municipal Improvement District
Proposed Water Rates for
FY 2016-2017
(Continued)

Fiscal Year Ending June 30	Current 2016	Proposed 2017	Proposed Increase %
Monthly Meter Charge			
3/4"	\$ 17.25	\$ 18.90	9.6%
1"	\$ 28.75	\$ 31.50	9.6%
1-1/2"	\$ 69.00	\$ 75.60	9.6%
2"	\$ 92.00	\$ 100.80	9.6%
3"	\$ 201.25	\$ 220.50	9.6%
4"	\$ 362.25	\$ 396.90	9.6%
6"	\$ 805.00	\$ 882.00	9.6%
8"	\$ 1,380.00	\$ 1,512.00	9.6%
Private Fire Service Protection Meter Charge			
3/4"	\$ 24.15	\$ 26.46	9.6%
1"	\$ 24.15	\$ 26.46	9.6%
1-1/2"	\$ 24.15	\$ 26.46	9.6%
2"	\$ 32.20	\$ 35.34	9.8%
3"	\$ 70.45	\$ 77.11	9.5%
4"	\$ 126.80	\$ 138.92	9.6%
6"	\$ 281.75	\$ 308.64	9.5%
8"	\$ 483.00	\$ 529.20	9.6%

(Continued) Table 1

Staff requests that the Board review the information prepared by BWA and provide staff with direction regarding the water rates. Based on that direction, staff will prepare a notice that will be mailed to all ratepayers on or before April 11, 2016 in compliance with the provisions of Proposition 218. A public hearing on and adoption of the proposed rates will occur at the June 6, 2016 Board meeting in conjunction with the FY 2015-2016 Annual Budget Public Hearing. The new rates will become effective July 1, 2016.

BACKGROUND & ANALYSIS

The District currently provides water service to a population of approximately 32,500. Most of the District's customers are residential. There are approximately 8,127 water accounts that allow for water service and fire protection service. Eighty-five percent of all accounts utilize 3/4" water meters. Total water use decreased approximately 12% overall from FY 2013-2014 and FY 2014-2015. Single family residential use dropped 18%, multi-family residential use dropped 6% during that time period. Although we are only in the first five months of FY 2015-2016, water consumption data suggests an average overall decrease in water consumption of 15% for the entire year.

Historical Water Rate Setting Policies

The District purchases wholesale treated water from the SFPUC which is passed along to customers residing in the District boundaries. The rates that water customers pay are determined, in part, on a fixed charge based upon the size of the meter installed at the customer's location. The preponderance of revenue collected by the District is based upon the volume of water used by customers. Historically, the District has attempted to establish water rates that mirror the fixed vs. variable nature of the District's operating costs. Fixed costs (personnel, overhead expenses, capital improvement projects, etc.) are paid for through fixed charges associated with the size of the pipe that supplies a customer's location (meter charges). Variable costs associated with the cost of wholesale water purchased from SFPUC, including the BAWSCA Surcharge, are paid for by the volume-based water consumption rate charged to customers.

The District has historically set rates on a "Pay As You Go" basis, meaning that rates are increased only based upon budgeted current operating expenditures and planned capital improvement projects, in order to meet minimum reserve requirements equal to 25% of annual operating expenditures, plus \$2 million for unanticipated capital improvement expenditures.

Commercial Customers & Private Fire Line Service Protection

The District Board has consistently held that commercial customers should continue to pay for water using flat rate due to two factors: 1) the complexities involved in establishing effective conservation-based rate models that take into account the differences in commercial customers and how to define "normal use" for varying customer types (e.g., office buildings vs. restaurants); and, 2) the fact that some commercial customers are also irrigation customers where water conservation efforts would be most effective.

Staff recommends that the Commercial Customer flat rate structure be maintained by charging them the \$4.97/ ccf. for FY 2016-2017. BWA concurred with the District's practice of using a single tier as commercial customers are too heterogeneous to be fairly placed in a tiered rate structure. The single tier methodology is also commonly used by many water agencies. Staff continues to explore options to provide rebate programs to commercial customers to incentivize conservation.

Public safety is an important matter to the community. Fire Lines mitigate the risks of fire damage to a property and the surrounding community. Water usage for these systems is used on an as-needed basis. Staff recommends a flat rate model as the basis for consumption, which for FY 2016-2017 is recommended to be \$4.97 / ccf.

Rate Smoothing

In FY 2006-2007, the District Board implemented a long-term rate smoothing model that is still in use today. That long-term model takes into consideration the long-range projections by the SFPUC in terms of wholesale water rates and in light of significant capital improvements that have a profound impact on the rate, such as the WSIP program. The rate smoothing model attempts to maintain revenue increases at no

greater than 10% per year. The proposed FY 2016-2017 rates continue the use of a 10-year model which has proven to be successful in dampening the impacts of significant rate increases imposed by the SFPUC on the ratepayers.

Pension Liability Obligations

Effective June 30, 2015, the Governmental Accounting Standards Board issued new accounting standards that significantly change the way pension obligations are reported. Statement No. 68, Accounting and Reporting for Pensions requires that the District report its proportionate share of pension liability on financial statements to provide a better picture of its overall financial position. The pension liability recognition will reduce approximately \$2.7 million of water enterprise reserves and prevent the District from meeting its budget policy objective of maintaining 25% of annual operating expenditures in the Water Operating Reserve Fund. Attached to this report is a scenario developed by BWA for the District to consider for addressing pension liability through rate increases in a five-year period.

Funding District Long-Term Capital Improvements / Operating Reserves Maintained in the Operating Fund

In FY 2009-2010, the District implemented a long-term capital improvement funding strategy whereby a 10-year forecast was prepared for capital improvement projects (CIPs) and funding is transferred annually from water operating revenues to the Capital Improvement Fund to fund water projects. Each year, an analysis is performed to ensure that there are adequate funds available on a “pay-as-you-go” basis. The proposed water rate projections include a level annual transfer out of \$205,000 increased by inflation (3% per year).

Conservation-Based Water Modeling

The District currently operates under the terms of a Water Supply Assurance (WSA) Agreement that was approved by the District Board and the SFPUC in 2009. Under the terms of that agreement, the District is guaranteed a water supply assurance in non-drought years of 5.9 million gallons per day (MGD) on an annual basis. If the District exceeds the WSA threshold, the SFPUC would have the authority to charge an “environmental surcharge” penalty to the District for water usage above the 5.9 MGD cap. Those penalties have the potential to be financially severe to the District and its customers.

In an effort to ensure that the District lived within its WSA, the Board approved the implementation of a conservation-based water rate model for residential and irrigation customers as a means of striving towards conservation. Residential customer classes were assigned to a “tiered-rate” model whereby increasing levels of water consumption are subjected to higher rates. A base level of consumption was established based on the need for a 20% reduction in overall water consumption. This base consumption standard, which serves as Tier 2 of the model, was set at a bi-monthly consumption rate of 20 ccf.

Irrigation customers were assigned to a water budget rate model, that is based on landscaped areas, actual climate conditions, and evapotranspiration factors based on plant materials.

Water Sustainability Fund

To incentivize water conservation, the District created a Water Sustainability Fund that makes rebates available to residential customers and irrigation customers who implement water saving measures such as replacing existing toilets with high efficiency toilet retrofits, installing drought resistant plant materials, or replacing real turf with synthetic turf. Last year \$200,000 was placed in the Sustainability Fund budget. However, due to its popularity, the landscape conservation rebate program had to be suspended mid-year because funding ran out. The rate proposal for FY 2016 – 2017 includes an increase in the Water Sustainability Fund budget from \$200,000 to \$400,000 per year to continue the program with a few recommended alterations. The current program was \$4/SF for synthetic turf with the average cost for installation being \$15/SF. The current program was \$4/SF for Lawn-be-gone with the average cost for installation being \$8/SF. The proposal for FY 16/17 is the same for synthetic turf \$4, but a reduction to \$2/SF for Lawn-be-gone. The table below summarizes the increase in rebate distribution and justification for the changes (Table 2).

Proposed FY 2016 – 2017 Water Sustainability Fund Budget			
PROGRAM	FY 15/16	FY 16/17	JUSTIFICATION
Synthetic Turf	\$ 40,000	\$ 100,000	Funds ran out in FY 15/16
HET - Toilet	\$ 25,000	\$ 50,000	Focus on Apartments/Offices
Washing Machine	\$ 10,000	\$ 25,000	Focus on Apartments/Offices
Lawn -Be-Gone	\$ 40,000	\$ 100,000	Funds ran out in FY 15/16
Large Landscape Program	\$ 60,000	\$ 75,000	Focus on increasing participation
Resource Action Program - Schools	\$ 13,750	\$ 13,750	No change
Earthcapades - Schools	\$ 7,500	\$ 7,500	No Change
Tuolumne River Trust - Education	\$ 1,200	\$ 1,200	No change
Part Time Intern (Civic Spark)	-	\$ 12,000	Addition in FY 15/16 proved valuable
Misc.	\$ 2,500	\$ 5,000	Unknown programs
Totals	\$ 199,950	\$ 389,450	

Table 2

Rate Survey

A survey of communities along the San Francisco Peninsula was conducted to compare the District's typical residential monthly bill with the neighboring communities. The results of the survey are summarized in the comparison chart attached to this report (Attachment – Water Rate Survey Comparison Chart). The survey indicates the District's wastewater rates remain among the lowest on the Peninsula. The proposed monthly wastewater charge for a single family residential unit would be increased from

to \$51.65 to \$56.65, while the average monthly rate for the agencies surveyed is \$64.16.

POLICY DIRECTION

Staff seeks Board direction on the following policy issues:

1. Water Rate Model

- a. Authorization to proceed with the water rate increase assumptions that reflect an increase of 9.67% for residential customers and a 13% increase for fire line and commercial customers, or as otherwise directed by the Board.

2. Pension liability recognition

- a. Authorization to proceed with the strategy developed by BWA to address the water fund pension liability through incremental rate increases over a five-year period, or as otherwise directed by the Board.

3. Water Sustainability Fund Rebate Programs

- a. Authorization to continue and increase the Water Sustainability Fund budget from \$200,000 to a \$400,000 for FY 2016 – 2017 to continue to support water conservation, or as otherwise directed by the Board.

PROPOSITION 218 NOTIFICATION

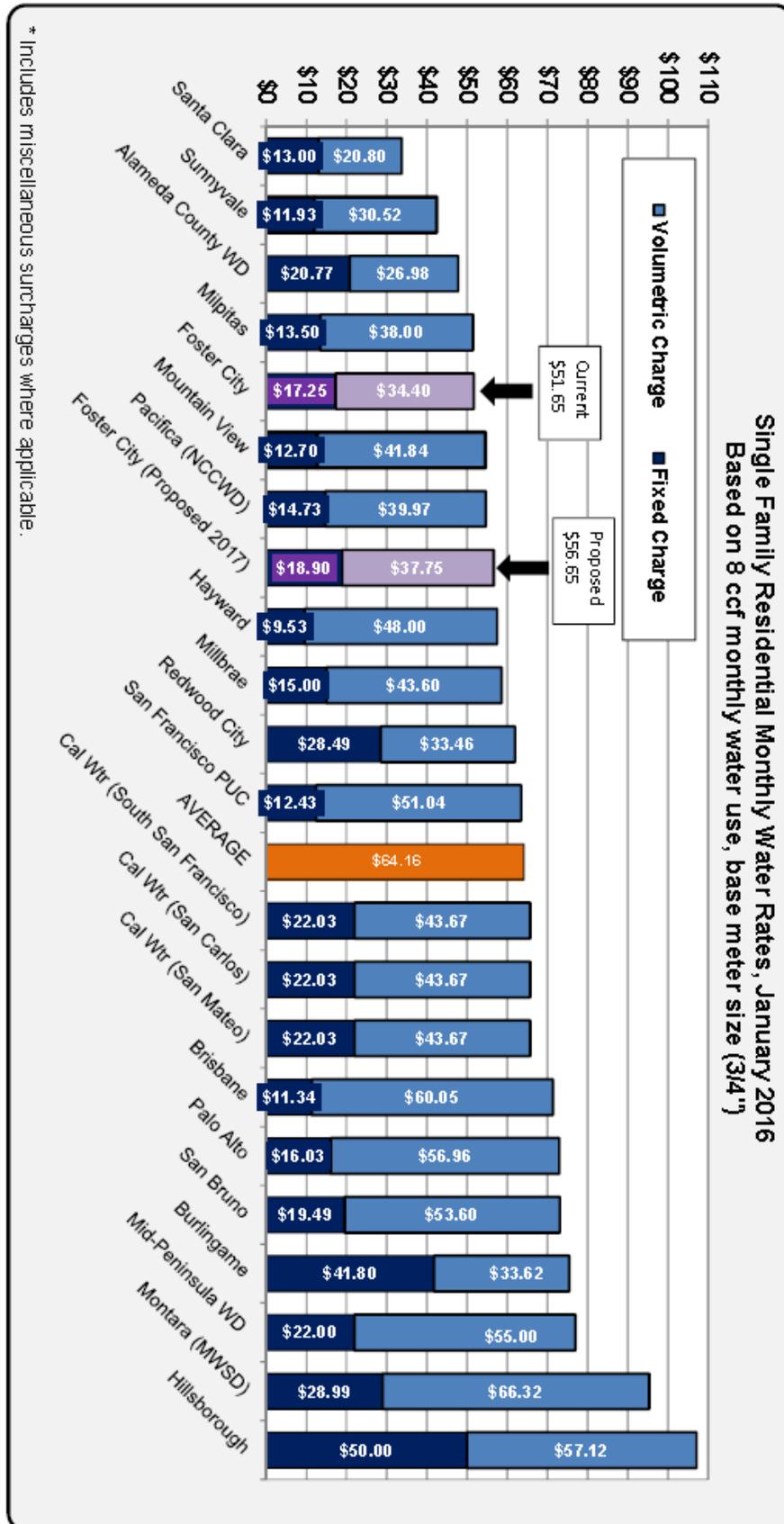
Per the requirements under Proposition 218, all ratepayers will receive a notice on or before April 11, 2016, based upon the District Board's policy direction this evening. Due to the complexity of the rate model changes being recommended, a user-friendly notice will continue to be prepared that still meets the Proposition 218 noticing requirements. A public hearing will be held and the rates adopted on June 6, 2016. The rates will go into effect on July 1, 2016.

It should be noted that between the notification date and the public hearing date, the District Board will receive the FY 2016-2017 Preliminary Annual Budget and 5-Year Financial Plan. Any adjustments that occur based upon District Board direction at the Budget Study Session will be incorporated into an updated rate model at the time of the public hearing. However, it is the opinion of staff that conservative assumptions have been employed in the creation of the attached rate models. Accordingly, staff believes that the rates proposed herein are the maximum rates that would be recommended for FY 2016-2017. At the public hearing, the District Board would have the option of reducing rates lower than what was noticed to rate payers under Proposition 218 if budgetary estimates change, but it could not increase the rates above what was noticed.

Attachments:

FY 2016-2017 Water Rate Survey Comparison Chart
Bartle Wells Associates Water and Wastewater Rate Study Data

FY 2016-2017 WATER RATE SURVEY COMPARISON CHART



Foster City/Estero Municipal Improvement District 2016 Rate Study

**Draft Water Tables
March 2, 2016**



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

Table 1
City of Foster City / Estero Municipal Improvement District
Water Enterprise Operating Reserves

Fund Reserve Component	July 1, 2015
	Beginning Cash Balance
Reserved for Maintenance & Operation (402)	<u>\$454,739</u>
Total	\$454,739

Note: Rate model only includes fund reserve components available to fund ongoing operating expenditures.

Source: City of Foster City/Estero Municipal Improvement District CAFR, FY 2014/15

Table 2
 City of Foster City / Estero Municipal Improvement District
 Current Rates

Current Rates	2016
Fixed Meter Charge	
Monthly Meter Charge	
<u>Meter Size</u>	
3/4"	\$17.25
1"	28.75
1-1/2"	69.00
2"	92.00
3"	201.25
4"	362.25
6"	805.00
8"	1,380.00
Bi-Monthly Water Consumption Tiers and Rates	
<u>Single Family Residential</u>	
Tier 1 0-20 per ccf	\$4.30
Tier 2 Over 20 ccf	4.64
<u>Multi-Family Residential</u>	
Tier 1 0-10 ccf per living unit	\$4.30
Tier 2 Over 10 ccf per living unit	4.67
<u>Irrigation Customes</u>	
Tier 1 <=100% of annual budget	\$4.30
Tier 2 >100% of annual budget	5.65
<u>Commercial and Fire Line</u>	
All usage	\$4.40
Monthly Private Fire Protection Charge	
% of Water Meter Charge	
<u>Meter Size</u>	
3/4"	\$24.15
1"	24.15
1-1/2"	24.15
2"	32.20
3"	70.45
4"	126.80
6"	281.75
8"	483.00

Table 3
 City of Foster City / Estero Municipal Improvement District
 Water Meters By Size

Data as of:	12/07/15
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Meter Size	Accounts	Meter Ratio ^{1,2}	Est. Meter Equivalents ³
Water Service			
3/4"	6,807	1.00	6,807
1"	411	1.67	685
1-1/2"	161	4.00	644
2"	377	5.33	2,011
3"	79	11.67	922
4"	50	21.00	1,050
6"	26	46.67	1,213
8"	<u>15</u>	80.00	<u>1,200</u>
Subtotal	7,926		14,532
Private Fire Protection Service			
3/4"	2	1.40	3
1"	7	1.40	10
1-1/2"	3	1.40	4
2"	0	1.87	0
3"	2	4.08	8
4"	27	7.35	198
6"	95	16.33	1,551
8"	<u>65</u>	28.00	<u>1,820</u>
Subtotal	201		3,595
Total	8,127		18,127

Source: Foster City/Estero Municipal Improvement District water use records

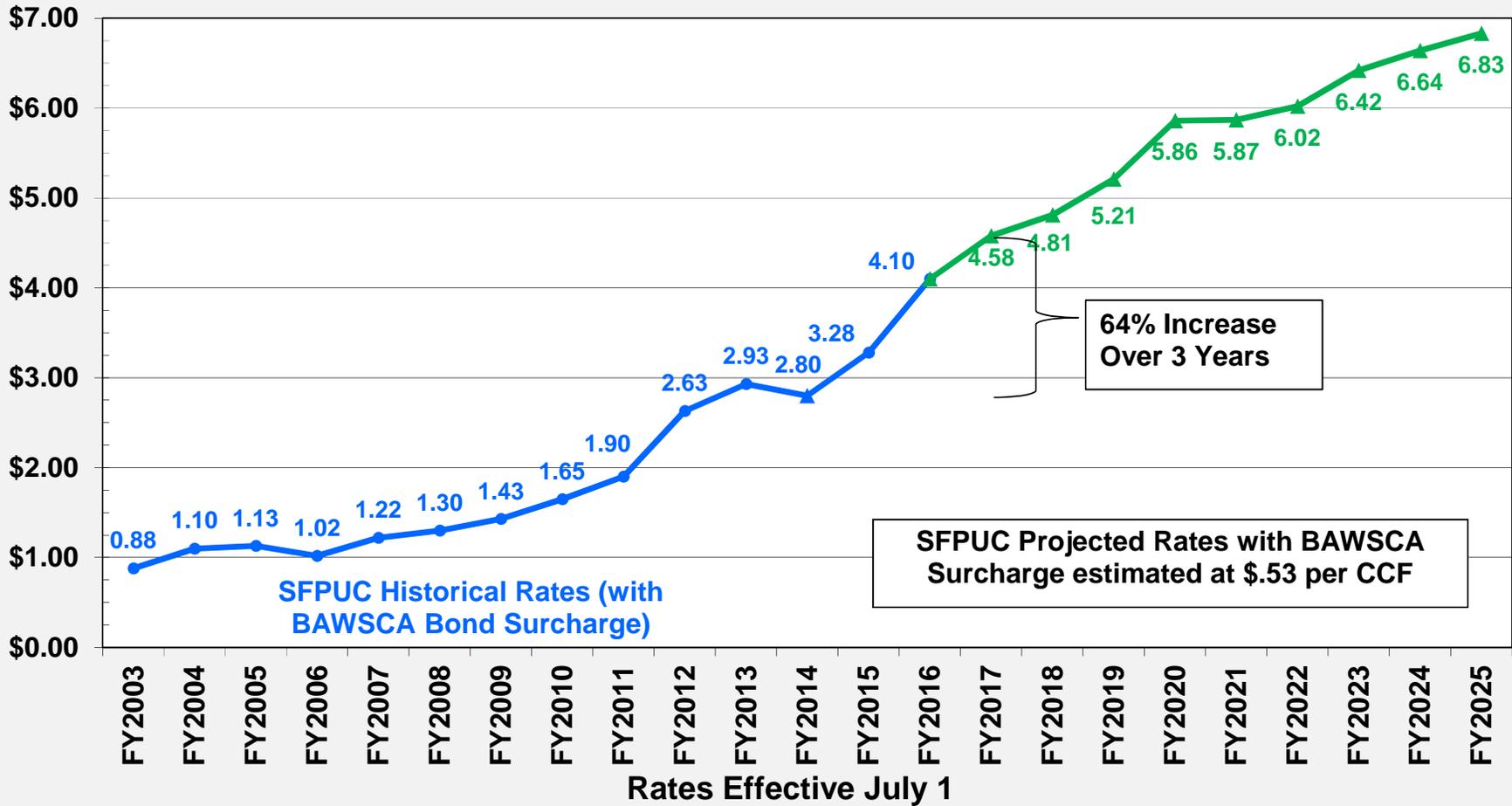
[1] The meter ratios shall be based on meter size in compliance with ratios established by the American Water Works Association (AWWA) Sizing Water Service Lines and Meters M22, Second Edition, 2004 (M22 Manual)

[2] Private fire protection service ratio based on the fire service line; Resolution No. 2715

[3] Equals the number of accounts multiplied by the meter ratio for each meter size.

SFPUC Wholesale Water Rates (\$ per ccf)

4.3.1 - 14



SFPUC wholesale rate projections as of December 2016 BAWSCA Bond Surcharge estimated at \$0.53 per ccf as of February 2016 for Foster City/EMID;BAWSCA repayment began in FY2014

Table 4
 City of Foster City / Estero Municipal Improvement District
 Water Enterprise O&M Projection

Expenditures	Five Year Projection (Prop 218)						Annual % Increase [1]
	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	
Employee Services	1,640,647	1,747,009	1,799,419	1,853,402	1,909,004	1,966,274	3.0%
Internal Services - Others	477,547	503,761	516,355	529,264	542,496	556,058	2.5%
Internal Services - ERF	273,440	281,643	288,684	295,901	303,299	310,881	2.5%
Services & Supplies	448,550	536,000	549,400	563,135	577,213	591,644	2.5%
SFPUC Water Purchases [2]	6,070,433	6,723,000	7,190,000	7,953,000	9,158,000	9,288,000	varies
BAWSCA Bond Repayment	647,666	859,152	900,000	900,000	900,000	900,000	
Reallocation	884,323	910,853	933,624	956,965	980,889	1,005,411	2.5%
Capital Outlay	35,000	-	-	-	-	-	2.5%
TOTAL O&M Expenditures	10,477,606	11,561,418	12,177,483	13,051,667	14,370,901	14,618,268	
		10.3%	5.3%	7.2%	10.1%	1.7%	

[1] Based on City/District Staff direction

[2] Updated based on BWA's water use projections (Table 6 & Table 8)

4.3.1 - 16

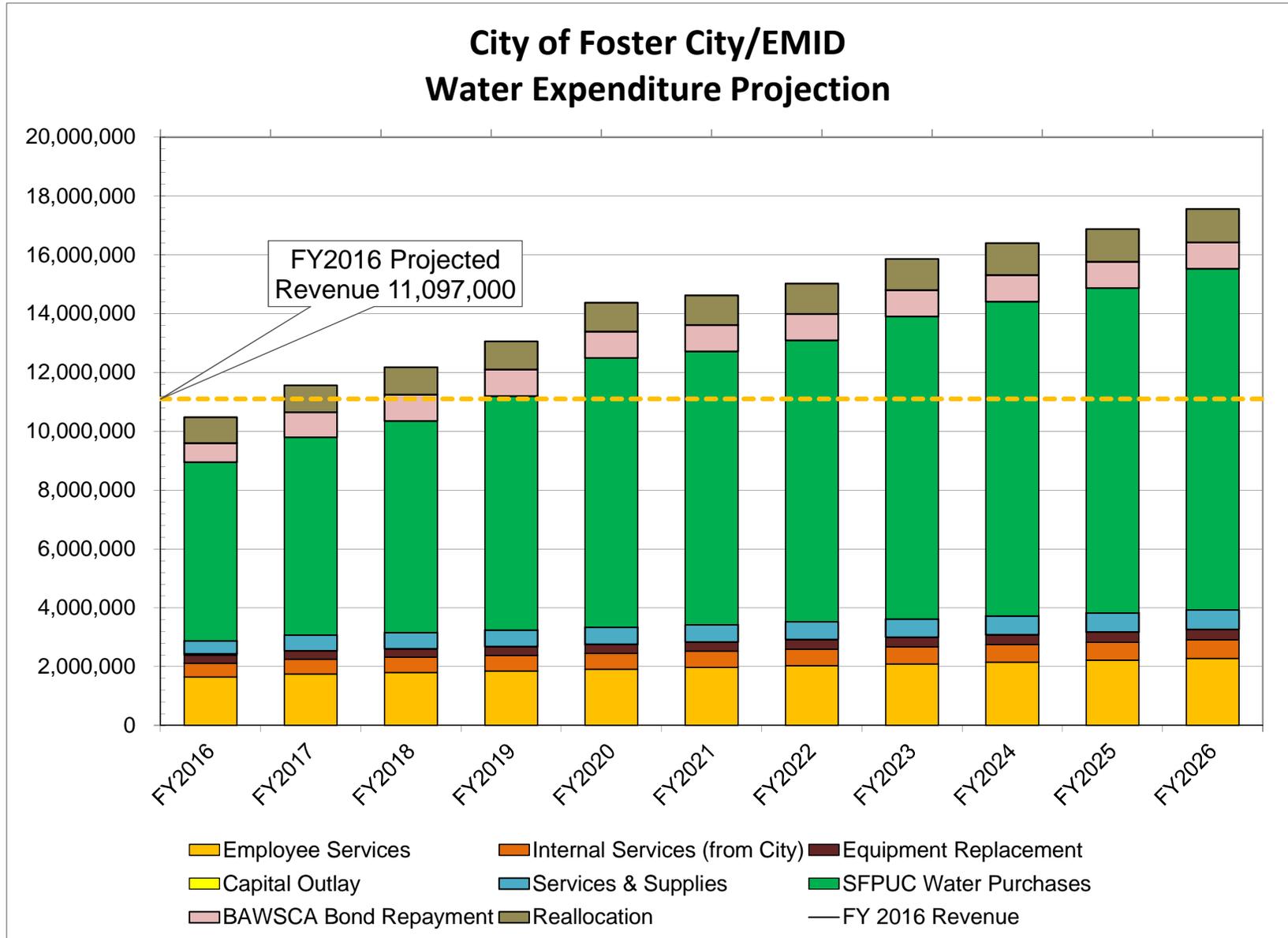


Table 5
 City of Foster City / Estero Municipal Improvement District
 Water Enterprise Cash Flow Projection - Residential Two Tier Rate Structure Hybrid Model

TWO TIER HYBRID MODEL											
Fiscal Year Ending June 30	Five Year Projection						Extended Year Projection				
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Assumptions:											
Interest Earnings Rate		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Revenue Increase from Growth [1]		1.28%	1.26%	1.25%	1.23%	1.22%	0.25%	0.25%	0.25%	0.25%	0.25%
Fixed Charge	\$17.25	\$18.90	\$19.45	\$20.25	\$20.55	\$20.95	\$21.40	\$21.95	\$22.50	\$23.05	\$23.55
Fixed Rate Adjustment		9.57%	2.91%	4.11%	1.48%	1.95%	2%	3%	3%	2%	2%
SFR Variable Charge	\$4.30	4.72	4.97	5.37	6.03	6.03	6.18	6.59	6.81	7.00	7.31
Variable Rate Adjustment		9.7%	5.3%	8.0%	12.3%	0.0%	2.5%	6.6%	3.3%	2.8%	4.4%
Monthly Service Charge Single Family (8 ccf)	\$51.65	\$56.65	\$59.21	\$63.21	\$68.79	\$69.19	\$70.84	\$74.67	\$76.98	\$79.05	\$82.03
Rate Adjustment		9.7%	4.5%	6.8%	8.8%	0.6%	2.4%	5.4%	3.1%	2.7%	3.8%
Beginning Fund Balance	\$454,739	\$669,000	\$886,200	\$1,089,400	\$1,299,700	\$1,524,800	\$1,776,500	\$2,012,500	\$2,264,500	\$2,521,500	\$2,780,500
Revenues											
Water Sales & Service Charges											
Meter Charge Revenue Estimate	3,753,000	4,165,000	4,340,000	4,574,000	4,699,000	4,849,000	4,966,000	5,106,000	5,247,000	5,389,000	5,519,000
Volumetric Revenue Estimate	6,980,000	7,985,000	8,489,000	9,249,000	10,463,000	10,592,000	10,864,000	11,584,000	11,986,000	12,337,000	12,892,000
Connection Fees [1]	278,000	180,594	107,634	0	0	0	0	0	0	0	0
Interest Earnings - Operating Reserve [2]	34,000	7,000	9,000	11,000	13,000	15,000	18,000	20,000	23,000	25,000	28,000
Interest Earnings - Capital Improvement Fund [3]	52,000	52,000	52,000	52,000	52,000	52,000	52,000	52,000	52,000	52,000	52,000
Other	0	0	0	0	0	0	0	0	0	0	0
Operating Revenues	11,097,000	12,389,594	12,997,634	13,886,000	15,227,000	15,508,000	15,900,000	16,762,000	17,308,000	17,803,000	18,491,000
Expenses											
Employee Services	1,640,647	1,747,009	1,799,419	1,853,402	1,909,004	1,966,274	2,025,000	2,086,000	2,149,000	2,213,000	2,279,000
Internal Services - Others	477,547	503,761	516,355	529,264	542,496	556,058	570,000	584,000	599,000	614,000	629,000
Internal Services - ERF	273,440	281,643	288,684	295,901	303,299	310,881	319,000	327,000	335,000	343,000	352,000
Services & Supplies	448,550	536,000	549,400	563,135	577,213	591,644	606,000	621,000	637,000	653,000	669,000
SFPUC Water Purchases	6,070,433	6,723,000	7,190,000	7,953,000	9,158,000	9,288,000	9,568,000	10,283,000	10,688,000	11,043,000	11,592,000
BAWSCA Bond Repayment	647,666	859,152	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000
Reallocation	884,323	910,853	933,624	956,965	980,889	1,005,411	1,031,000	1,057,000	1,083,000	1,110,000	1,138,000
Capital Outlay	35,000	0	0	0	0	0	0	0	0	0	0
Operating Expenses	10,477,606	11,561,418	12,177,483	13,051,667	14,370,901	14,618,268	15,019,000	15,858,000	16,391,000	16,876,000	17,559,000
Operating Net Revenues	619,394	828,176	820,151	834,333	856,099	889,732	881,000	904,000	917,000	927,000	932,000
Water Sustainability Fund Transfer	200,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Capital Improvement Transfer [4]	205,000	211,000	217,000	224,000	231,000	238,000	245,000	252,000	260,000	268,000	276,000
Total Expenses	10,882,606	12,172,418	12,794,483	13,675,667	15,001,901	15,256,268	15,664,000	16,510,000	17,051,000	17,544,000	18,235,000
Revenues Less O&M Expenses	619,394	828,176	820,151	834,333	856,099	889,732	881,000	904,000	917,000	927,000	932,000
Revenues Less Total Expenses	214,394	217,176	203,151	210,333	225,099	251,732	236,000	252,000	257,000	259,000	256,000
Ending Fund Balance	669,133	886,176	1,089,351	1,299,733	1,524,799	1,776,532	2,012,500	2,264,500	2,521,500	2,780,500	3,036,500
Revenue Test: Annual Revenues > O&M Expenses											
Annual Revenues Less O&M Expenses	619,394	828,176	820,151	834,333	856,099	889,732	881,000	904,000	917,000	927,000	932,000
Pass/fail	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Fund Reserve Test: Minimum Fund Balance > 25% O&M Expenses											
Year-end fund balance	669,133	886,176	1,089,351	1,299,733	1,524,799	1,776,532	2,012,500	2,264,500	2,521,500	2,780,500	3,036,500
25% operating expenses	2,620,000	2,890,000	3,040,000	3,260,000	3,590,000	3,655,000	3,750,000	3,960,000	4,100,000	4,220,000	4,390,000
# of Days O&M in Reserves	23	28	33	36	39	44	49	52	56	60	63
Pass/fail	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL

[1] Based on CDD and City of Foster City/EMID estimates
 [2] Calculated as 1% of the Beginning Fund Balance of the Water Revenue Fund
 [3] Calculated as 1% of the Beginning Fund Balance of the Water Capital Improvement Project Fund
 [4] Capital Improvements are funded through the Long-Term Capital Improvement Project Fund. Transfer outs are escalated at 3% per year.

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Table 6
 City of Foster City / Estero Municipal Improvement District
 Water Rate Calculation - Two Tier Hybrid Model

TWO TIER HYBRID MODEL											
Fiscal Year Ending June 30	Five Year Projection						Extended Year Projection				
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Fixed Meter Charge Increase		9.50%	3.00%	4.00%	1.50%	2.00%	2.25%	2.5%	2.5%	2.5%	2.3%
Fixed Revenues +/- 5% of Fixed Costs?		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Reserves % Above (Below) Reserve Target		30.7%	35.8%	39.9%	42.5%	48.6%	53.7%	57.2%	61.5%	65.9%	69.2%
Reserve Target Met?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Revenue Estimates											
Meter Charge Revenue	\$ 3,753,000	\$ 4,165,000	\$ 4,340,000	\$ 4,574,000	\$ 4,699,000	\$ 4,849,000	\$ 4,966,000	\$ 5,106,000	\$ 5,247,000	\$ 5,389,000	\$ 5,519,000
Other Fixed Revenue	\$ 364,000	\$ 239,594	\$ 168,634	\$ 63,000	\$ 65,000	\$ 67,000	\$ 70,000	\$ 72,000	\$ 75,000	\$ 77,000	\$ 80,000
Volumetric Revenue	\$ 6,980,000	\$ 7,987,000	\$ 8,482,000	\$ 9,245,000	\$ 10,465,000	\$ 10,596,000	\$ 10,869,000	\$ 11,591,000	\$ 11,992,000	\$ 12,344,000	\$ 12,886,000
Total Projected	\$ 11,097,000	\$ 12,391,594	\$ 12,990,634	\$ 13,882,000	\$ 15,229,000	\$ 15,512,000	\$ 15,905,000	\$ 16,769,000	\$ 17,314,000	\$ 17,810,000	\$ 18,485,000
Total Projected Revenue (Rounded '000's)	\$ 11,097,000	\$ 12,392,000	\$ 12,991,000	\$ 13,882,000	\$ 15,229,000	\$ 15,512,000	\$ 15,905,000	\$ 16,769,000	\$ 17,314,000	\$ 17,810,000	\$ 18,485,000
	\$11,097,000	\$12,389,594	\$12,997,634	\$13,886,000	\$15,227,000	\$15,508,000	\$15,900,000	\$16,762,000	\$17,308,000	\$17,803,000	\$18,491,000
Revenue Allocation											
Fixed	37.1%	35.5%	34.7%	33.4%	31.3%	31.7%	31.7%	30.9%	30.7%	30.7%	30.3%
Variable	62.9%	64.5%	65.3%	66.6%	68.7%	68.3%	68.3%	69.1%	69.3%	69.3%	69.7%
Costs Estimates											
Fixed Costs [1]	\$4,164,507	\$4,390,266	\$4,510,483	\$4,634,867	\$4,762,501	\$4,893,468	\$5,028,000	\$5,166,000	\$5,309,200	\$5,454,600	\$5,604,200
Variable Costs [2]	\$6,918,099	\$7,982,152	\$8,490,000	\$9,253,000	\$10,458,000	\$10,588,000	\$10,868,000	\$11,583,000	\$11,988,000	\$12,343,000	\$12,882,000
Total Projected Costs	\$11,082,606	\$12,372,418	\$13,000,483	\$13,887,867	\$15,220,501	\$15,481,468	\$15,896,000	\$16,749,000	\$17,297,200	\$17,797,600	\$18,486,200
Cost Analysis											
Fixed	37.6%	35.5%	34.7%	33.4%	31.3%	31.6%	31.6%	30.8%	30.7%	30.6%	30.3%
Variable	62.4%	64.5%	65.3%	66.6%	68.7%	68.4%	68.4%	69.2%	69.3%	69.4%	69.7%
Meter Charge Calculation											
Monthly charge per meter equivalent (Rounded to nearest \$0.05)	\$ 17.25	\$ 18.90	\$ 19.45	\$ 20.25	\$ 20.55	\$ 20.95	\$ 21.40	\$ 21.95	\$ 22.50	\$ 23.05	\$ 23.55
Annual charge per meter equivalent	\$ 207.00	\$ 226.80	\$ 233.40	\$ 243.00	\$ 246.60	\$ 251.40	\$ 256.80	\$ 263.40	\$ 270.00	\$ 276.60	\$ 282.60
Meter equivalents [3]	18,130	18,362	18,593	18,825	19,057	19,289	19,337	19,385	19,433	19,482	19,531
Meter Charge Revenue Estimate	\$ 3,753,000	\$ 4,165,000	\$ 4,340,000	\$ 4,574,000	\$ 4,699,000	\$ 4,849,000	\$ 4,966,000	\$ 5,106,000	\$ 5,247,000	\$ 5,389,000	\$ 5,519,000
Volumetric Rate Calculation											
EMID Proposed Uniform Rate	\$4.40	\$ 4.97	\$ 5.21	\$ 5.61	\$ 6.27	\$ 6.27	\$ 6.42	\$ 6.83	\$ 7.05	\$ 7.24	\$ 7.54
Projected annual water sales (ccf) [4]	1,586,407	1,607,000	1,628,000	1,648,000	1,669,000	1,690,000	1,693,000	1,697,000	1,701,000	1,705,000	1,709,000
Variable revenue estimate	\$6,980,000	\$7,987,000	\$8,482,000	\$9,245,000	\$10,465,000	\$10,596,000	\$10,869,000	\$11,591,000	\$11,992,000	\$12,344,000	\$12,886,000
% Spread between EMID and SFPUC											
Surcharge		22.7%	21.7%	19.9%	17.6%	17.4%	16.9%	16.0%	15.4%	14.9%	14.2%
SFPUC PROJECTED RATES	\$3.75	\$4.05	\$4.28	\$4.68	\$5.33	\$5.34	\$5.49	\$5.89	\$6.11	\$6.30	\$6.60
Increase (Decrease) %		8.0%	5.7%	9.3%	13.9%	0.2%	2.8%	7.3%	3.7%	3.1%	4.8%
BAWSCA Surcharge	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53						
SFPUC Rate + BAWSCA Surcharge	\$4.28	\$4.58	\$4.81	\$5.21	\$5.86	\$5.87	\$6.02	\$6.42	\$6.64	\$6.83	\$7.13
EMID Fixed Meter Charge Increase (Decrease)		9.6%	2.9%	4.1%	1.5%	1.9%	2.1%	2.6%	2.5%	2.4%	2.2%
EMID Volumetric Rate Increase (Decrease)		13.0%	4.8%	7.7%	11.8%	0.0%	2.4%	6.4%	3.2%	2.7%	4.1%

Note:

[1] Includes: Employee Services, Internal Services - Other, Internal Services - ERF, Services & Supplies, Reallocation, Capital Outlay, Capital Improvement Fund Transfers, and \$200,000 of net revenues for the operating fund.

[2] Includes: SFPUC Water Purchases, BAWSCA Bond Repayment, and Water Sustainability Fund Transfers.

[3] Household growth based on projections from the CDD.

[4] Includes 2% water loss factor

Table 7
 City of Foster City / Estero Municipal Improvement District
 Water Consumption by Class

Water Consumption										FY 2014 to				
Customer Category	Bi-Monthly Breakpoints (CCF)	FY2014				FY2015				FY 2015 Reduction %	FY2016 - First 5 Months			
		Number of Bills	Percent	CCF	Percent	Number of Bills	Percent	CCF	Percent		Number of Bills	Percent	CCF	Percent
RESIDENTIAL														
Single Family Residential														
Tier 1 Usage	0 to 10	5,120	19%	259,054	43%	7,168	26%	250,559	50%		5,552	49%	141,355	74%
Tier 2 Usage	11 to 20	9,868	36%	177,847	29%	11,011	40%	145,839	29%		4,030	36%	39,235	21%
Tier 3 Usage	21 and over	<u>12,493</u>	<u>45%</u>	<u>166,474</u>	<u>28%</u>	<u>9,114</u>	<u>33%</u>	<u>100,447</u>	<u>20%</u>		<u>1,656</u>	<u>15%</u>	<u>9,738</u>	<u>5%</u>
Subtotal		27,481	100%	603,375	100%	27,293	100%	496,844	100%	-18%	11,238	100%	190,328	100%
Multi-Family Residential														
Tier 1 Usage	0 to 5	2,853	19%	291,589	41%	3,053	20%	293,603	44%		2,975	44%	192,397	70%
Tier 2 Usage	6 to 10	5,291	35%	231,715	33%	6,023	39%	231,519	35%		2,479	37%	66,754	24%
Tier 3 Usage	11 and over	<u>7,062</u>	<u>46%</u>	<u>180,447</u>	<u>26%</u>	<u>6,199</u>	<u>41%</u>	<u>136,179</u>	<u>21%</u>		<u>1,264</u>	<u>19%</u>	<u>14,396</u>	<u>5%</u>
Subtotal		15,206	100%	703,751	100%	15,275	100%	661,301	100%	-6%	6,718	100%	273,547	100%
NON-RESIDENTIAL														
Commercial	All usage	1,563		284,018		1,523		268,786		-5%	582		108,432	
Fire Line	All usage	983		162		948		389			359		122	
Irrigation														
Tier 1	<=100% of budget	94	44%	450,283	86%			397,470	91%					
Tier 2	>100% of budget	<u>121</u>	<u>56%</u>	<u>73,237</u>	<u>14%</u>			<u>41,571</u>	<u>9%</u>					
		215	100%	523,520	100%	299	100%	439,041	100%	-16%	2,164		242,589	
Total Consumption				2,114,826				1,866,361		-12%			815,018	

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Table 8
 City of Foster City / Estero Municipal Improvement District
 Water Consumption Comparison - FY 2015 to FY 2016

FY 2015						
Consumption (hcf)						
	14-07	14-08	14-09	14-10	14-11	Grand Total
Sum of Charged Consumption	200,273	227,592	200,394	197,709	155,732	981,700
FY 2016						
Consumption (hcf)						
	15-07	15-08	15-09	15-10	15-11	Grand Total
Sum of Charged Consumption	152,399	181,694	161,537	182,099	137,289	815,018

Reduction	-24%	-20%	-19%	-8%	-12%	Projected Annual Reduction	-15%
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FY 2015 Total Consumption (hcf)	1,866,361
Projected FY 2016 Total Consumption (15% reduction)	1,586,407
Reduction from FY 2014	-25%

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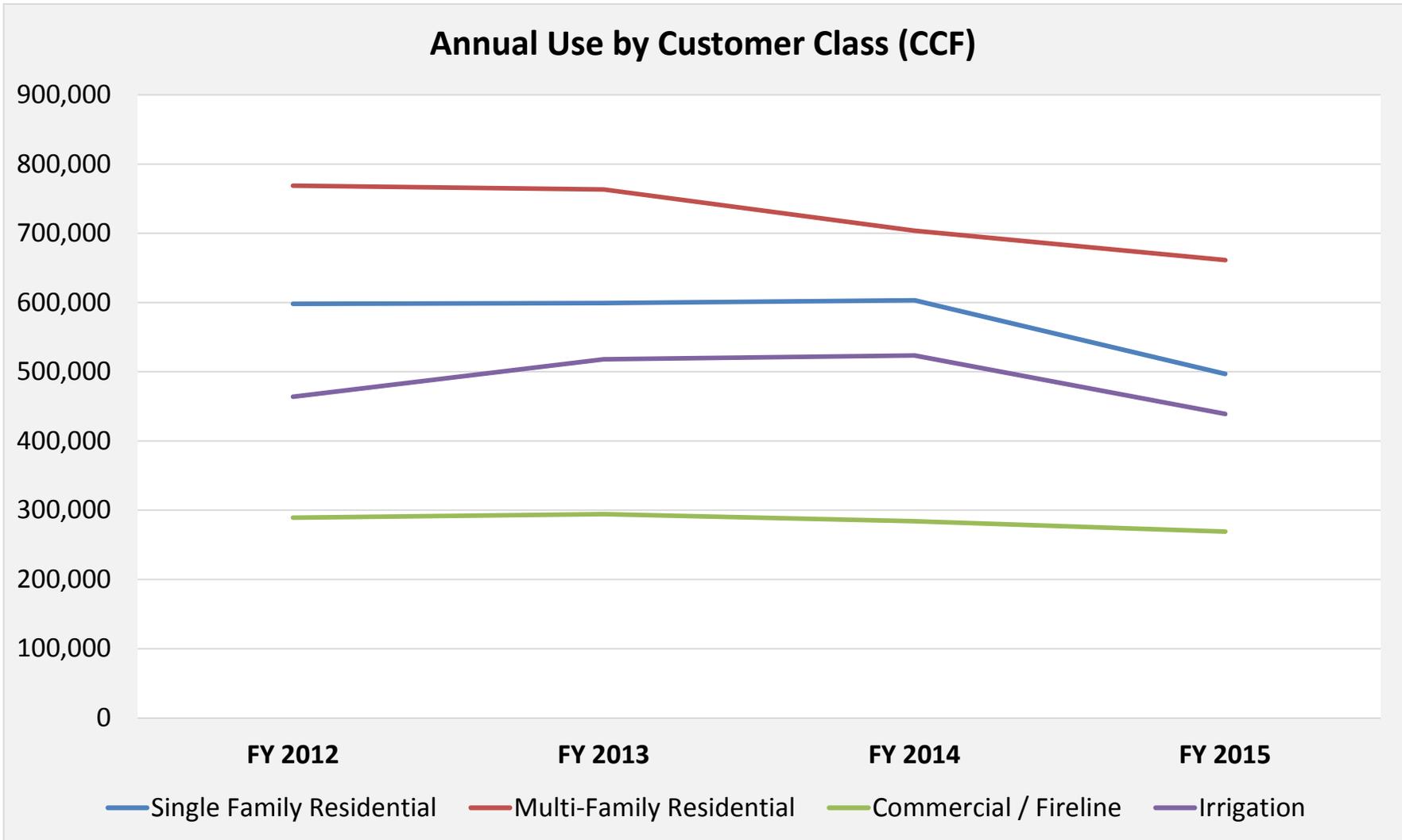


Table 9
 City of Foster City / Estero Municipal Improvement District
 Uniform Rate Structure - Raw Rate Calculation

Uniform Rate Structure															
	FY2017			FY2018			FY2019			FY2020			FY2021		
	Total Cost	Total Water Sales	Unit Cost (CCF)	Total Cost	Total Water Sales	Unit Cost (CCF)	Total Cost	Total Water Sales	Unit Cost (CCF)	Total Cost	Total Water Sales	Unit Cost (CCF)	Total Cost	Total Water Sales	Unit Cost (CCF)
Uniform Tier Structure - All Tiers															
SFPUC Water Purchases	6,723,000			7,190,000			7,953,000			9,158,000			9,288,000		
BAWSCA Bond Surcharge	859,152			900,000			900,000			900,000			900,000		
Water Sustainability Fund	<u>400,000</u>														
	7,982,152	1,607,000	4.97	8,490,000	1,628,000	5.21	9,253,000	1,648,000	5.61	10,458,000	1,669,000	6.27	10,588,000	1,690,000	6.27
	FY2022			FY2023			FY2024			FY2025			FY2026		
	Total Cost	Total Water Sales	Unit Cost (CCF)	Total Cost	Total Water Sales	Unit Cost (CCF)	Total Cost	Total Water Sales	Unit Cost (CCF)	Total Cost	Total Water Sales	Unit Cost (CCF)	Total Cost	Total Water Sales	Unit Cost (CCF)
Uniform Tier Structure - All Tiers															
SFPUC Water Purchases	9,568,000			10,283,000			10,688,000			11,043,000			11,592,000		
BAWSCA Bond Surcharge	900,000			900,000			900,000			900,000			900,000		
Water Sustainability Fund	<u>400,000</u>														
	10,868,000	1,693,000	6.42	11,583,000	1,697,000	6.83	11,988,000	1,701,000	7.05	12,343,000	1,705,000	7.24	12,892,000	1,709,000	7.54

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Table 10
 City of Foster City / Estero Municipal Improvement District
 Two Tier Conservation Based Rate Structure - Raw Rate Calculation

FY2017			Volumetric Water Costs	
Class	Usage per class	% of total usage	Base Charge Costs	Conservation Charge Costs
SFR	427,800	27%	\$ 2,124,929.22	\$ 106,484.03
MFR	569,402	35%	\$ 2,828,286.38	\$ 141,730.52
Commercial	231,434	14%	\$ 1,149,558.47	\$ 57,606.44
Fire Line	335	0%	\$ 1,663.70	\$ 83.37
Irrigation	378,029	24%	\$ 1,877,714.23	\$ 94,095.64
	<u>1,607,000.00</u>	100%	\$ 7,982,152.00	\$ 400,000.00

Class	Tier 1 Rate	Net Basic Cost Allocation	Over Water Allotment	Conservation Charge (Tier 2)	Tier 2 Rate
SFR	4.72	\$ 2,018,445.20	86,488.05	1.23	5.95
MFR	4.72	\$ 2,686,555.86	117,254.48	1.21	5.93
Commercial	4.97	\$ 1,149,558.47	~		
Fire Line	4.97	\$ 1,663.70	N/A		
Irrigation	4.72	\$ 1,783,618.60	35,794.04	2.63	7.35
		\$ 7,639,841.81			

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Table 11
 City of Foster City / Estero Municipal Improvement District
 Proposed Water Rates - Two Tier Hybrid Model

		TWO TIER HYBRID MODEL										
		Current Rates	Proposed Rates									
			Two Tier FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Monthly Meter Charge												
3/4"	\$17.25	\$18.90	\$19.45	\$20.25	\$20.55	\$20.95	\$21.40	\$21.95	\$22.50	\$23.05	\$23.55	
1"	28.75	31.50	32.42	33.75	34.25	34.92	35.67	36.58	37.50	38.42	39.25	
1-1/2"	69.00	75.60	77.80	81.00	82.20	83.80	85.60	87.80	90.00	92.20	94.20	
2"	92.00	100.80	103.73	108.00	109.60	111.73	114.13	117.07	120.00	122.93	125.60	
3"	201.25	220.50	226.92	236.25	239.75	244.42	249.67	256.08	262.50	268.92	274.75	
4"	362.25	396.90	408.45	425.25	431.55	439.95	449.40	460.95	472.50	484.05	494.55	
6"	805.00	882.00	907.67	945.00	959.00	977.67	998.67	1,024.33	1,050.00	1,075.67	1,099.00	
8"	1,380.00	1,512.00	1,556.00	1,620.00	1,644.00	1,676.00	1,712.00	1,756.00	1,800.00	1,844.00	1,884.00	
Conservation-Based Water Rate Model (based on bi-monthly allotments)												
Single Family Residential												
Tier 1 0-20 per ccf	4.30	4.72	4.97	5.37	6.03	6.03	6.18	6.59	6.81	7.00	7.31	
Tier 2 Over 20 ccf	4.64	5.95	6.18	6.57	7.21	7.20	7.35	7.76	7.98	8.17	8.47	
Multi-Family Residential (per living unit)												
Tier 1 0-10 ccf per living unit	4.30	4.72	4.97	5.37	6.03	6.03	6.18	6.59	6.81	7.00	7.31	
Tier 2 Over 10 ccf per living unit	4.67	5.93	6.16	6.55	7.19	7.18	7.33	7.73	7.95	8.14	8.45	
Irrigation Customers												
Tier 1 <=100% of annual budget	4.30	4.72	4.97	5.37	6.03	6.03	6.18	6.59	6.81	7.00	7.31	
Tier 2 >100% of annual budget	5.65	7.35	7.56	7.94	8.56	8.53	8.68	9.08	9.30	9.48	9.78	
Commercial and Fire Line Customers												
Base Consumption Rate	4.40	4.97	5.21	5.61	6.27	6.27	6.42	6.83	7.05	7.24	7.54	
Monthly Fire Meter Charge												
3/4"	24.15	26.46	27.23	28.35	28.77	29.33	29.96	30.73	31.50	32.27	32.97	
1"	24.15	26.46	27.23	28.35	28.77	29.33	29.96	30.73	31.50	32.27	32.97	
1-1/2"	24.15	26.46	27.23	28.35	28.77	29.33	29.96	30.73	31.50	32.27	32.97	
2"	32.20	35.34	36.37	37.87	38.43	39.18	40.02	41.05	42.08	43.10	44.04	
3"	70.45	77.11	79.36	82.62	83.84	85.48	87.31	89.56	91.80	94.04	96.08	
4"	126.80	138.92	142.96	148.84	151.04	153.98	157.29	161.33	165.38	169.42	173.09	
6"	281.75	308.64	317.62	330.68	335.58	342.11	349.46	358.44	367.43	376.41	384.57	
8"	483.00	529.20	544.60	567.00	575.40	586.60	599.20	614.60	630.00	645.40	659.40	

(Minimum charge is equivalent to 1-1/2" meter charge)

Table 12
 Foster City / Estero Municipal Improvement District
 Projected Water Rate Impacts

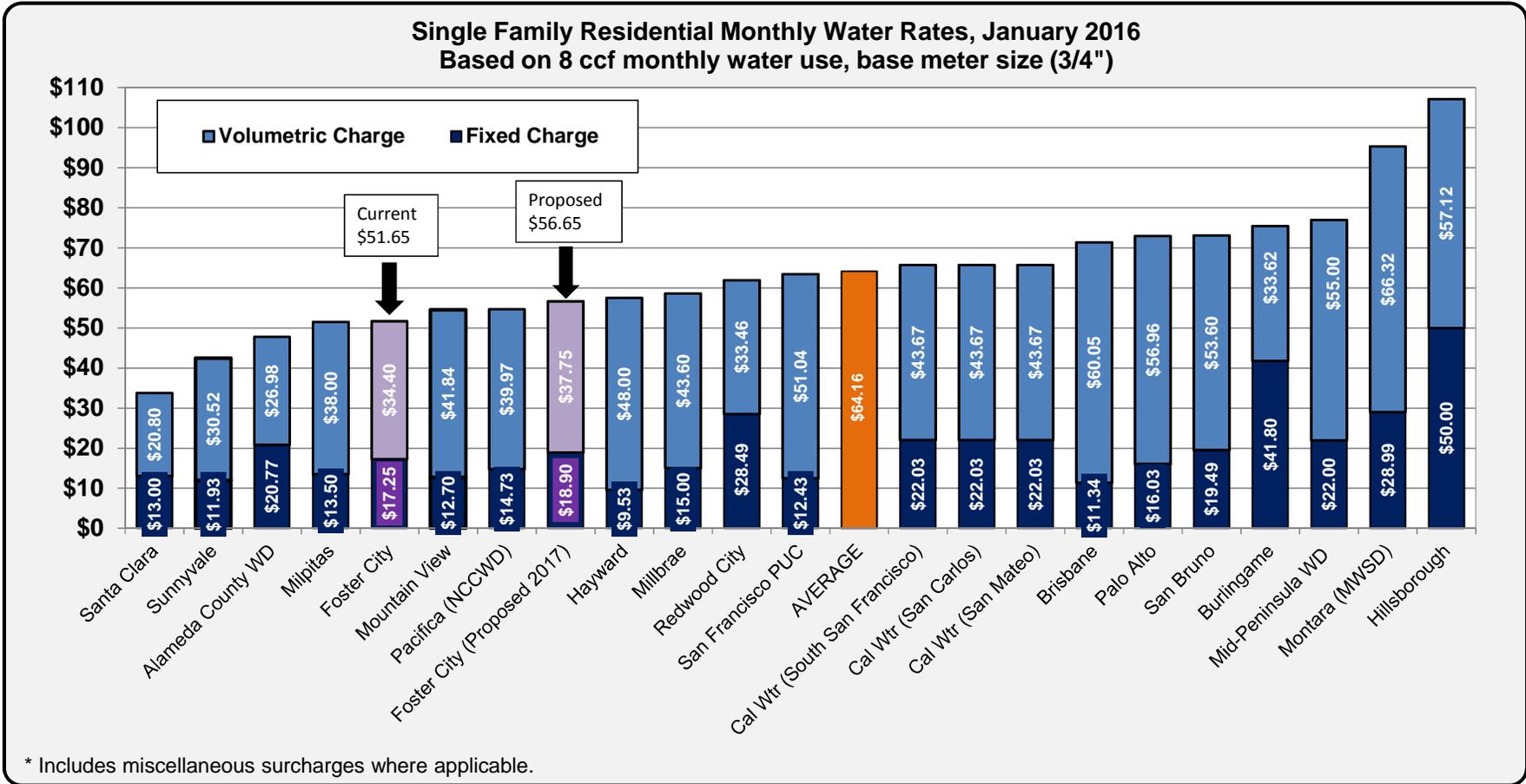
Rate Change Options	Current	Fiscal Year Ending June 30,					Extended Year Projection				
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Two Tier Hybrid Model											
Single Family Residential Monthly Rate	\$51.65	\$56.65	\$59.21	\$63.21	\$68.79	\$69.19	\$70.84	\$74.67	\$76.98	\$79.05	\$82.03
\$ Increase		5.00	2.56	4.00	5.58	0.40	1.65	3.83	2.31	2.07	2.98
% Increase		9.7%	4.5%	6.8%	8.8%	0.6%	2.4%	5.4%	3.1%	2.7%	3.8%

Based on Single Family Residential Use of 8 ccf

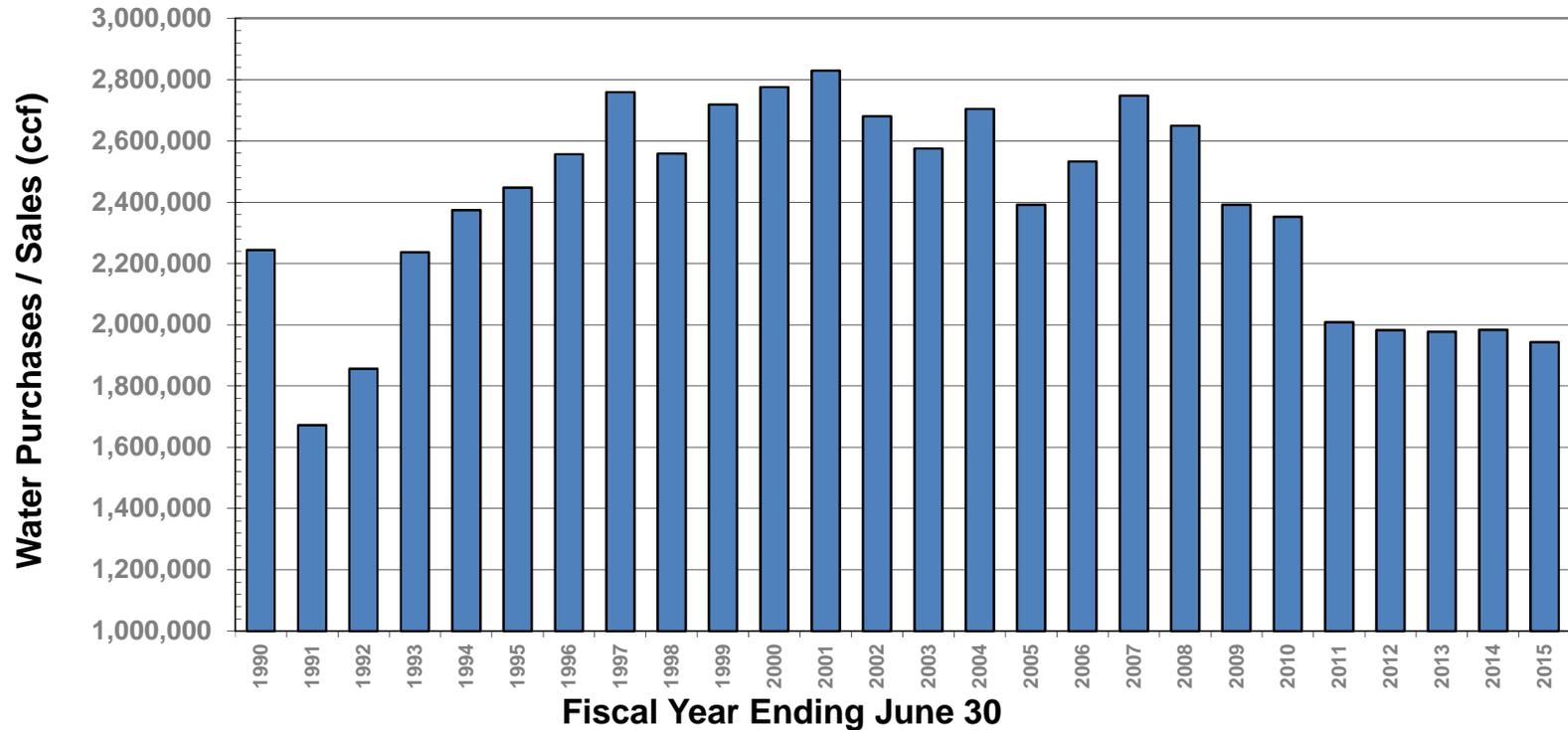
Table 13
 Foster City / Estero Municipal Improvement District
 Projected Water Rate Impacts

	Current	FY2016		FY2017
	Rates	Number of Bills	Percent	Two Tier Hybrid Model
Monthly meter charge	\$17.25			\$18.90
% Change from FY2015				9.6%
Single Family Residential Monthly Tiers				
Tier 1: 0 to 10 ccf	\$4.30	18,179	67%	\$4.72
Tier 2: over 10 ccf	\$4.64	9,114	33%	\$5.95
Total Number of Bills		27,293	100%	
<u>Water Use Level</u>	<u>Monthly Use (ccf)</u>			<u>Monthly Bill</u>
Low User	5	\$38.75		\$42.50
\$ Increase				3.75
% Increase				9.7%
FY 2015 Average User	8	\$51.65		\$56.66
\$ Increase				5.01
% Increase				9.7%
FY 2014 Average User	9.5	\$58.10		\$63.74
\$ Increase				5.64
% Increase				9.7%
Med-High User	20	\$106.65		\$125.60
\$ Increase				18.95
% Increase				17.8%
High User	50	\$245.85		\$304.10
\$ Increase				58.25
% Increase				23.7%

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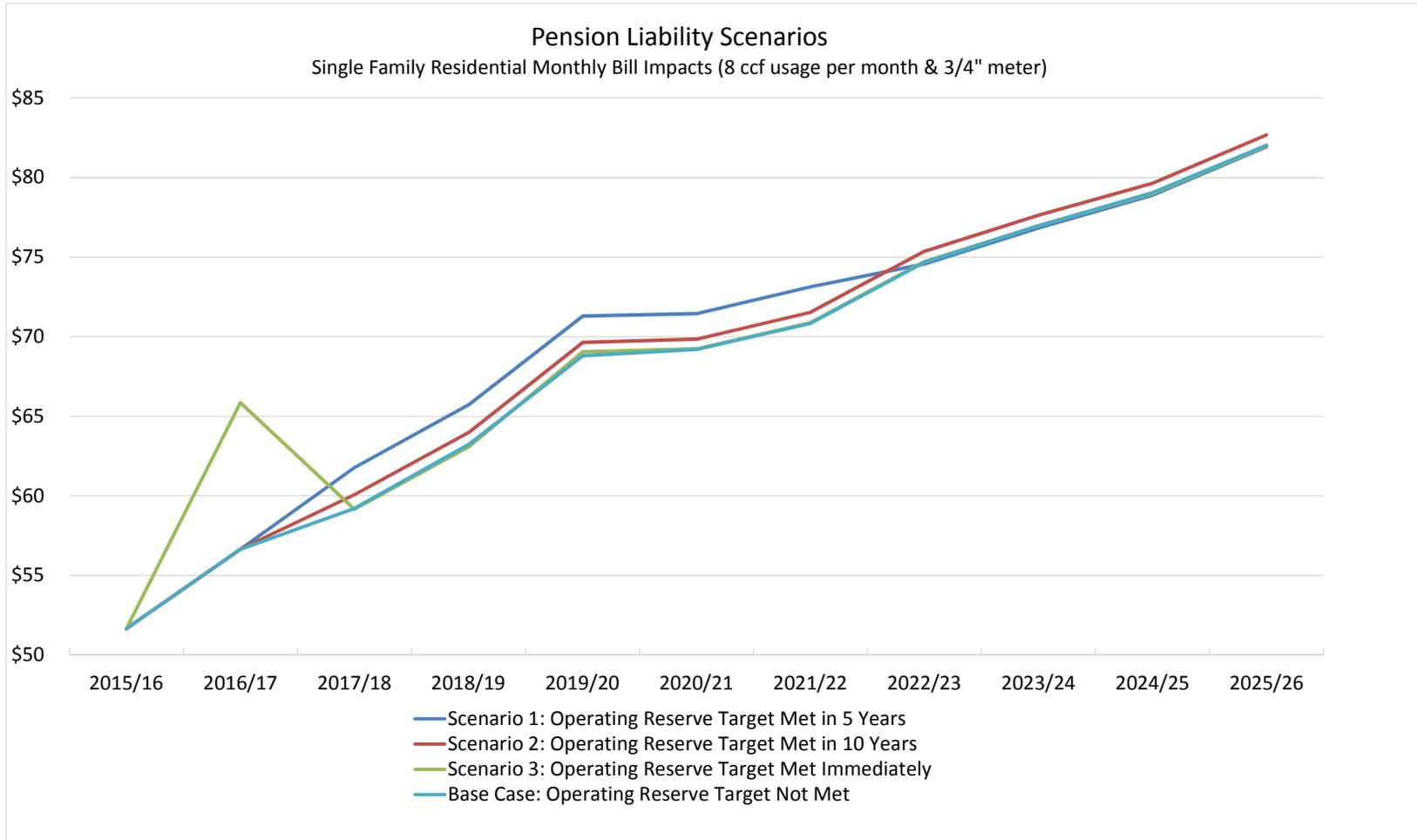


City of Foster City / EMID Historical SFPUC Wholesale Water Purchases



Note: Water purchases are billed by SFPUC monthly.
Water sales are billed by EMID on a bi-monthly, rotating basis.

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	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Scenario 1: Operating Reserve Target Met in 5 Years	\$51.65	\$56.65	\$61.76	\$65.71	\$71.29	\$71.44	\$73.14	\$74.57	\$76.83	\$78.90	\$81.93
		9.67%	9.03%	6.40%	8.49%	0.21%	2.38%	1.96%	3.03%	2.69%	3.84%
Scenario 2: Operating Reserve Target Met in 10 Years	\$51.65	\$56.65	\$60.06	\$63.96	\$69.64	\$69.84	\$71.54	\$75.37	\$77.63	\$79.65	\$82.68
		9.67%	6.03%	6.49%	8.88%	0.29%	2.43%	5.35%	3.00%	2.60%	3.80%
Scenario 3: Operating Reserve Target Met Immediately	\$51.65	\$65.85	\$59.16	\$63.06	\$69.04	\$69.24	\$70.89	\$74.72	\$76.98	\$79.00	\$81.98
		27.48%	-10.15%	6.59%	9.48%	0.29%	2.38%	5.40%	3.02%	2.62%	3.77%
Base Case: Operating Reserve Target Not Met	\$51.65	\$56.65	\$59.21	\$63.21	\$68.79	\$69.19	\$70.84	\$74.67	\$76.98	\$79.05	\$82.03
		9.67%	4.53%	6.76%	8.83%	0.58%	2.38%	5.41%	3.09%	2.69%	3.77%

Foster City/Estero Municipal Improvement District 2016 Rate Study

**Scenario 1: Pension Liability
Operating Reserve Target Met in 5 Years**



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

Table 1
City of Foster City / Estero Municipal Improvement District
Water Enterprise Cash Flow Projection

Scenario 1: Operating Reserve Target Met in 5 Years											
Fiscal Year Ending June 30	Five Year Projection						Extended Year Projection				
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Assumptions:											
Interest Earnings Rate		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Revenue Increase from Growth [1]		1.28%	1.26%	1.25%	1.23%	1.22%	0.25%	0.25%	0.25%	0.25%	0.25%
Fixed Charge	\$ 17.25	\$ 18.90	\$ 22.00	\$ 22.75	\$ 23.05	\$ 23.20	\$ 23.70	\$ 21.85	\$ 22.35	\$ 22.90	\$ 23.45
Fixed Rate Adjustment		9.57%	16.40%	3.41%	1.32%	0.65%	2%	-8%	2%	2%	2%
SFR Variable Charge	\$4.30	4.72	4.97	5.37	6.03	6.03	6.18	6.59	6.81	7.00	7.31
Variable Rate Adjustment		9.7%	5.3%	8.0%	12.3%	0.0%	2.5%	6.6%	3.3%	2.8%	4.4%
Monthly Service Charge Single Family (8 ccf)	\$51.65	\$56.65	\$61.76	\$65.71	\$71.29	\$71.44	\$73.14	\$74.57	\$76.83	\$78.90	\$81.93
Rate Adjustment		9.7%	9.0%	6.4%	8.5%	0.2%	2.4%	2.0%	3.0%	2.7%	3.8%
Beginning Fund Balance	\$454,739	\$669,000	\$885,200	\$1,656,400	\$2,436,700	\$3,243,800	\$4,032,500	\$4,823,500	\$5,079,500	\$5,328,500	\$5,579,500
Revenues											
Water Sales & Service Charges											
Meter Charge Revenue Estimate	3,753,000	4,164,000	4,908,000	5,138,000	5,270,000	5,369,000	5,499,000	5,082,000	5,211,000	5,353,000	5,495,000
Volumetric Revenue Estimate	6,980,000	7,985,000	8,489,000	9,249,000	10,463,000	10,592,000	10,864,000	11,584,000	11,986,000	12,337,000	12,892,000
Connection Fees [1]	278,000	180,594	107,634	0	0	0	0	0	0	0	0
Interest Earnings - Operating Reserve [2]	34,000	7,000	9,000	17,000	24,000	32,000	40,000	48,000	51,000	53,000	56,000
Interest Earnings - Capital Improvement Fund [3]	52,000	52,000	52,000	52,000	52,000	52,000	52,000	52,000	52,000	52,000	52,000
Other	0	0	0	0	0	0	0	0	0	0	0
Operating Revenues	11,097,000	12,388,594	13,565,634	14,456,000	15,809,000	16,045,000	16,455,000	16,766,000	17,300,000	17,795,000	18,495,000
Expenses											
Employee Services	1,640,647	1,747,009	1,799,419	1,853,402	1,909,004	1,966,274	2,025,000	2,086,000	2,149,000	2,213,000	2,279,000
Internal Services - Others	477,547	503,761	516,355	529,264	542,496	556,058	570,000	584,000	599,000	614,000	629,000
Internal Services - ERF	273,440	281,643	288,684	295,901	303,299	310,881	319,000	327,000	335,000	343,000	352,000
Services & Supplies	448,550	536,000	549,400	563,135	577,213	591,644	606,000	621,000	637,000	653,000	669,000
SFPUC Water Purchases	6,070,433	6,723,000	7,190,000	7,953,000	9,158,000	9,288,000	9,568,000	10,283,000	10,688,000	11,043,000	11,592,000
BAWSCA Bond Repayment	647,666	859,152	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000
Reallocation	884,323	910,853	933,624	956,965	980,889	1,005,411	1,031,000	1,057,000	1,083,000	1,110,000	1,138,000
Capital Outlay	35,000	0	0	0	0	0	0	0	0	0	0
Operating Expenses	10,477,606	11,561,418	12,177,483	13,051,667	14,370,901	14,618,268	15,019,000	15,858,000	16,391,000	16,876,000	17,559,000
Operating Net Revenues	619,394	827,176	1,388,151	1,404,333	1,438,099	1,426,732	1,436,000	908,000	909,000	919,000	936,000
Water Sustainability Fund Transfer	200,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Capital Improvement Transfer [4]	205,000	211,000	217,000	224,000	231,000	238,000	245,000	252,000	260,000	268,000	276,000
Total Expenses	10,882,606	12,172,418	12,794,483	13,675,667	15,001,901	15,256,268	15,664,000	16,510,000	17,051,000	17,544,000	18,235,000
Revenues Less O&M Expenses	619,394	827,176	1,388,151	1,404,333	1,438,099	1,426,732	1,436,000	908,000	909,000	919,000	936,000
Revenues Less Total Expenses	214,394	216,176	771,151	780,333	807,099	788,732	791,000	256,000	249,000	251,000	260,000
Ending Fund Balance	669,133	885,176	1,656,351	2,436,733	3,243,799	4,032,532	4,823,500	5,079,500	5,328,500	5,579,500	5,839,500
Revenue Test: Annual Revenues > O&M Expenses											
Annual Revenues Less O&M Expenses	619,394	827,176	1,388,151	1,404,333	1,438,099	1,426,732	1,436,000	908,000	909,000	919,000	936,000
Pass/fail	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Fund Reserve Test: Minimum Fund Balance > 25% O&M Expenses											
Year-end fund balance	669,133	885,176	1,656,351	2,436,733	3,243,799	4,032,532	4,823,500	5,079,500	5,328,500	5,579,500	5,839,500
25% operating expenses	2,620,000	2,890,000	3,040,000	3,260,000	3,590,000	3,655,000	3,750,000	3,960,000	4,100,000	4,220,000	4,390,000
# of Days O&M in Reserves	23	28	50	68	82	101	117	117	119	121	121
Pass/fail	FAIL	FAIL	FAIL	FAIL	FAIL	PASS	PASS	PASS	PASS	PASS	PASS

[1] Based on CDD and City of Foster City/EMID estimates

[2] Calculated as 1% of the Beginning Fund Balance of the Water Revenue Fund

[3] Calculated as 1% of the Beginning Fund Balance of the Water Capital Improvement Project Fund

[4] Capital Improvements are funded through the Long-Term Capital Improvement Project Fund. Transfer outs are escalated at 3% per year.

Table 2
City of Foster City / Estero Municipal Improvement District
Water Rate Calculation

Scenario 1: Operating Reserve Target Met in 5 Years											
Fiscal Year Ending June 30	Five Year Projection					Extended Year Projection					
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Fixed Meter Charge Increase		9.50%	16.50%	3.50%	1.25%	0.75%	2.3%	-7.8%	2.3%	2.5%	2.5%
Fixed Revenues +/- 5% of Fixed Costs?		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Reserves % Above (Below) Reserve Target		30.6%	54.5%	74.7%	90.4%	110.3%	128.6%	128.3%	130.0%	132.2%	133.0%
Reserve Target Met?		NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
Revenue Estimates											
Meter Charge Revenue	\$ 3,753,000	\$ 4,164,000	\$ 4,908,000	\$ 5,138,000	\$ 5,270,000	\$ 5,369,000	\$ 5,499,000	\$ 5,082,000	\$ 5,211,000	\$ 5,353,000	\$ 5,495,000
Other Fixed Revenue	\$ 364,000	\$ 239,594	\$ 168,634	\$ 69,000	\$ 76,000	\$ 84,000	\$ 92,000	\$ 100,000	\$ 103,000	\$ 105,000	\$ 108,000
Volumetric Revenue	\$ 6,980,000	\$ 7,987,000	\$ 8,482,000	\$ 9,245,000	\$ 10,465,000	\$ 10,596,000	\$ 10,869,000	\$ 11,591,000	\$ 11,992,000	\$ 12,344,000	\$ 12,886,000
Total Projected	\$ 11,097,000	\$ 12,390,594	\$ 13,558,634	\$ 14,452,000	\$ 15,811,000	\$ 16,049,000	\$ 16,460,000	\$ 16,773,000	\$ 17,306,000	\$ 17,802,000	\$ 18,489,000
Total Projected Revenue (Rounded '000's)	\$ 11,097,000	\$ 12,391,000	\$ 13,559,000	\$ 14,452,000	\$ 15,811,000	\$ 16,049,000	\$ 16,460,000	\$ 16,773,000	\$ 17,306,000	\$ 17,802,000	\$ 18,489,000
	\$11,097,000	\$12,388,594	\$13,565,634	\$14,456,000	\$15,809,000	\$16,045,000	\$16,455,000	\$16,766,000	\$17,300,000	\$17,795,000	\$18,495,000
Revenue Allocation											
Fixed	37.1%	35.5%	37.4%	36.0%	33.8%	34.0%	34.0%	30.9%	30.7%	30.7%	30.3%
Variable	62.9%	64.5%	62.6%	64.0%	66.2%	66.0%	66.0%	69.1%	69.3%	69.3%	69.7%
Costs Estimates											
Fixed Costs [1]	\$3,964,507	\$4,390,266	\$5,073,127	\$5,197,511	\$5,325,145	\$5,456,112	\$5,590,644	\$5,166,000	\$5,309,200	\$5,454,600	\$5,604,200
Variable Costs [2]	\$6,918,099	\$7,982,152	\$8,490,000	\$9,253,000	\$10,458,000	\$10,588,000	\$10,868,000	\$11,583,000	\$11,988,000	\$12,343,000	\$12,892,000
Total Projected Costs	\$10,882,606	\$12,372,418	\$13,563,127	\$14,450,511	\$15,783,145	\$16,044,112	\$16,458,644	\$16,749,000	\$17,297,200	\$17,797,600	\$18,496,200
Cost Analysis											
Fixed	36.4%	35.5%	37.4%	36.0%	33.7%	34.0%	34.0%	30.8%	30.7%	30.6%	30.3%
Variable	63.6%	64.5%	62.6%	64.0%	66.3%	66.0%	66.0%	69.2%	69.3%	69.4%	69.7%
Meter Charge Calculation											
Monthly charge per meter equivalent (Rounded to nearest \$0.05)	\$ 17.25	\$ 18.90	\$ 22.00	\$ 22.75	\$ 23.05	\$ 23.20	\$ 23.70	\$ 21.85	\$ 22.35	\$ 22.90	\$ 23.45
Annual charge per meter equivalent	\$ 207.00	\$ 226.80	\$ 264.00	\$ 273.00	\$ 276.60	\$ 278.40	\$ 284.40	\$ 262.20	\$ 268.20	\$ 274.80	\$ 281.40
Meter equivalents [3]	18,127	18,359	18,590	18,822	19,054	19,286	19,334	19,382	19,430	19,479	19,528
Meter Charge Revenue Estimate	\$ 3,753,000	\$ 4,164,000	\$ 4,908,000	\$ 5,138,000	\$ 5,270,000	\$ 5,369,000	\$ 5,499,000	\$ 5,082,000	\$ 5,211,000	\$ 5,353,000	\$ 5,495,000
Volumetric Rate Calculation											
EMID Proposed Uniform Rate	\$4.40	\$ 4.97	\$ 5.21	\$ 5.61	\$ 6.27	\$ 6.27	\$ 6.42	\$ 6.83	\$ 7.05	\$ 7.24	\$ 7.54
Projected annual water sales (ccf) [4]	1,586,407	1,607,000	1,628,000	1,648,000	1,669,000	1,690,000	1,693,000	1,697,000	1,701,000	1,705,000	1,709,000
Variable revenue estimate	\$6,980,000	\$7,987,000	\$8,482,000	\$9,245,000	\$10,465,000	\$10,596,000	\$10,869,000	\$11,591,000	\$11,992,000	\$12,344,000	\$12,886,000
% Spread between EMID and SFPUC Surcharge											
SFPUC PROJECTED RATES	\$3.75	\$4.05	\$4.28	\$4.68	\$5.33	\$5.34	\$5.49	\$5.89	\$6.11	\$6.30	\$6.60
Increase (Decrease) %		8.0%	5.7%	9.3%	13.9%	0.2%	2.8%	7.3%	3.7%	3.1%	4.8%
BAWSCA Surcharge	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53
SFPUC Rate + BAWSCA Surcharge	\$4.28	\$4.58	\$4.81	\$5.21	\$5.86	\$5.87	\$6.02	\$6.42	\$6.64	\$6.83	\$7.13
EMID Fixed Meter Charge Increase (Decrease)		9.6%	16.4%	3.4%	1.3%	0.7%	2.2%	(7.8%)	2.3%	2.5%	2.4%
EMID Volumetric Rate Increase (Decrease)		13.0%	4.8%	7.7%	11.8%	0.0%	2.4%	6.4%	3.2%	2.7%	4.1%

Note:

[1] Includes: Employee Services, Internal Services - Other, Internal Services - ERF, Services & Supplies, Reallocation, Capital Outlay, Capital Improvement Fund Transfers, Pension Liability Transfers & net revenues for the Operating Fund.

[2] Includes: SFPUC Water Purchases, BAWSCA Bond Repayment, and Water Sustainability Fund Transfers.

[3] Household growth based on projections from the CDD.

[4] Includes 2% water loss factor

Table 3
 City of Foster City / Estero Municipal Improvement District
 Proposed Water Rates

	Operating Reserve Target Met in 5 Years									
	Proposed Rates Two Tier FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Monthly Meter Charge										
3/4"	\$18.90	\$22.00	\$22.75	\$23.05	\$23.20	\$23.70	\$21.85	\$22.35	\$22.90	\$23.45
1"	31.50	36.67	37.92	38.42	38.67	39.50	36.42	37.25	38.17	39.08
1-1/2"	75.60	88.00	91.00	92.20	92.80	94.80	87.40	89.40	91.60	93.80
2"	100.80	117.33	121.33	122.93	123.73	126.40	116.53	119.20	122.13	125.07
3"	220.50	256.67	265.42	268.92	270.67	276.50	254.92	260.75	267.17	273.58
4"	396.90	462.00	477.75	484.05	487.20	497.70	458.85	469.35	480.90	492.45
6"	882.00	1,026.67	1,061.67	1,075.67	1,082.67	1,106.00	1,019.67	1,043.00	1,068.67	1,094.33
8"	1,512.00	1,760.00	1,820.00	1,844.00	1,856.00	1,896.00	1,748.00	1,788.00	1,832.00	1,876.00
Monthly Fire Meter Charge										
3/4"	26.46	30.80	31.85	32.27	32.48	33.18	30.59	31.29	32.06	32.83
1"	26.46	30.80	31.85	32.27	32.48	33.18	30.59	31.29	32.06	32.83
1-1/2"	26.46	30.80	31.85	32.27	32.48	33.18	30.59	31.29	32.06	32.83
2"	35.34	41.14	42.54	43.10	43.38	44.32	40.86	41.79	42.82	43.85
3"	77.11	89.76	92.82	94.04	94.66	96.70	89.15	91.19	93.43	95.68
4"	138.92	161.70	167.21	169.42	170.52	174.20	160.60	164.27	168.32	172.36
6"	308.64	359.26	371.51	376.41	378.86	387.02	356.81	364.98	373.96	382.94
8"	529.20	616.00	637.00	645.40	649.60	663.60	611.80	625.80	641.20	656.60
(minimum charge is equivalent to 1-1/2" meter charge)										

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Table 4
 Foster City / Estero Municipal Improvement District
 Projected Water Rate Impacts

Scenario 1: Operating Reserve Target Met in 5 Years

	Current	FY2016		FY2017
	Rates	Number of Bills	Percent	Two Tier Hybrid Model
Monthly meter charge	\$17.25			\$18.90
% Change from FY2015				9.6%
Single Family Residential Monthly Tiers				
Tier 1: 0 to 10 ccf	\$4.30	18,179	67%	\$4.72
Tier 2: over 10 ccf	\$4.64	9,114	33%	\$5.95
Total Number of Bills		27,293	100%	
<u>Water Use Level</u>	<u>Monthly Use (ccf)</u>			<u>Monthly Bill</u>
Low User	5	\$38.75		\$42.50
\$ Increase				3.75
% Increase				9.7%
FY 2015 Average User	8	\$51.65		\$56.66
\$ Increase				5.01
% Increase				9.7%
FY 2014 Average User	9.5	\$58.10		\$63.74
\$ Increase				5.64
% Increase				9.7%
Med-High User	20	\$106.65		\$125.60
\$ Increase				18.95
% Increase				17.8%
High User	50	\$245.85		\$304.10
\$ Increase				58.25
% Increase				23.7%

Table 5
 Foster City / Estero Municipal Improvement District
 Projected Water Rate Impacts

Rate Change Options	Current	Fiscal Year Ending June 30,					Extended Year Projection				
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<u>Scenario 1: Operating Reserve Target Met in 5 Years</u>											
Single Family Residential Monthly Rate	\$51.65	\$56.65	\$61.76	\$65.71	\$71.29	\$71.44	\$73.14	\$74.57	\$76.83	\$78.90	\$81.93
\$ Increase		5.00	5.11	3.95	5.58	0.15	1.70	1.43	2.26	2.07	3.03
% Increase		9.7%	9.0%	6.4%	8.5%	0.2%	2.4%	2.0%	3.0%	2.7%	3.8%

Based on Single Family Residential Use of 8 ccf