



DATE: March 26, 2018

TO: President and Members of the EMID Board of Directors

VIA: Kevin M. Miller, District Manager

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

SUBJECT: REVIEW OF PROJECTED WASTEWATER RATES FOR FY 2018-2019 THROUGH FY 2022-2023; 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 a rolling 5-year wastewater rate increase schedule of 14.25% per year from FY 2018-2019 through FY 2022-2023; and
2. Based on that direction, authorize District staff to establish the new wastewater rates for FY 2018-2019 through FY 2022-2023 that will be noticed to all rate payers under the requirements of Proposition 218.

EXECUTIVE SUMMARY

EMID is responsible for its share of operating and maintenance costs that San Mateo (as the lead agency and the contracting party) incurs treating the District's wastewater, as well as approximately 24.5% of the capital improvement costs incurred as part of the Clean Water Program (CWP), a 10-year comprehensive capital improvement project initiated in 2014 at the Waste Water Treatment Plant (WWTP). Last year, the EMID Board of Directors adopted a 5-year annual wastewater rate increase of 14.25% on all wastewater rates for the period between FY 2018-2019 to FY 2022-2023. The rate was designed to ensure that the wastewater enterprise generates enough revenue to pay for its share of the future capital improvement costs of the WWTP and to strengthen the District's position to obtain low-cost long-term financing for that purpose.

Based on updated WWTP cost estimates from the City of San Mateo, the District's share of the project requires an additional \$36 million contribution. District staff recommends that the District extend the 14.25% rate increase one additional year to FY 2022-2023 and approve a rolling 5-year wastewater rate increase schedule of 14.25% per year from FY 2018-2019 to FY 2022-2023 to ensure that the District will remain eligible to receive debt proceeds. Rates must be in place to ensure adequate funds to cover debt service.

Based upon the EMID Board of Directors' policy direction this evening, the District will mail a notice to all ratepayers on or before April 16, 2018 for a public hearing to be held on June 4, 2018 to consider the new rates. If adopted, the new rates will go into effect on July 1, 2018.

BACKGROUND/ANALYSIS

EMID's wastewater operations serve 13,482 residential, commercial and institutional accounts. The operational costs for wastewater services are borne jointly by the District and the City of San Mateo via the San Mateo Wastewater Treatment Plant Joint Exercise of Powers Agreement executed in June 1974. Those costs include recurring operations and maintenance, as well as capital improvement costs. The rates that residential wastewater customers pay are based on a fixed charge for the category or type of residential unit (single-family, townhouse - duplex, or apartment - condominium). Commercial customers are charged a variable rate based upon the amount of water consumed by their business and the business wastewater strength category.

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 in order to meet minimum reserve requirements equal to 25% of annual operating expenditures and \$2 million for unanticipated capital expenditures, consistent with the EMID Board of Directors' existing reserve policy.

The City of San Mateo and Estero Municipal Improvement District are expanding the jointly owned WWTP at an estimated cost of about \$578 million, of which the District is responsible for approximately \$155 million. This is in addition to local capital projects for the District's own sewage collection system. The wastewater enterprise intends to fund collection system capital expenditures through annual transfers of \$1,080,000 from the operating fund to the capital improvement fund.

In June 2017, to fund the anticipated costs of the WWTP Clean Water Program (CWP) improvements, the EMID Board of Directors approved a 5-year wastewater rate increase of 14.25% per year from FY 2017-2018 through FY 2021-2022. Based on updated cash flow estimates, Bartle Wells Associates (BWA) recommends that the District extend the 14.25% rate increase one additional year to FY 2022-2023 and approve a rolling 5-year wastewater rate increase schedule of 14.25% per year from FY 2018-2019 to FY 2022-2023 to ensure that the District will remain eligible to receive debt proceeds. Rates must be in place to ensure adequate funds to cover debt service.

FY 2018-2019 to FY 2022-2023 Wastewater Rate Impact

Single Family Residential and Multi-Family Residential class customers are billed using a flat rate. Commercial customers are billed at a variable volumetric rate based on water usage and strength classification. The new wastewater rate projections propose an overall rate increase of 14.25% on all wastewater rates for FY 2018-2019 to FY 2022-2023. The table below provides a comparison of current rates to proposed rates.

Table 2
City of Foster City / Estero Municipal Improvement District
Projected Wastewater Rate Impacts

| Projected Rates | Current | Projected - Fiscal Year Ending June 30 | | | | |
|---|---------|--|---------------|---------------|---------------|---------------|
| | FY2018 | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 |
| % Rate Increase | | 14.25% | 14.25% | 14.25% | 14.25% | 14.25% |
| Residential (flat monthly rate) | | | | | | |
| Single Family | \$65.27 | \$74.57 | \$85.20 | \$97.34 | \$111.21 | \$127.06 |
| <i>Increase (Decrease)</i> | | 9.30 | 10.63 | 12.14 | 13.87 | 15.85 |
| Townhouse/Duplex | \$54.83 | \$62.64 | \$71.57 | \$81.77 | \$93.42 | \$106.73 |
| <i>Increase (Decrease)</i> | | 7.81 | 8.93 | 10.20 | 11.65 | 13.31 |
| Apartment/Condominium (Pools w/ Restrooms) | \$54.83 | \$62.64 | \$71.57 | \$81.77 | \$93.42 | \$106.73 |
| <i>Increase (Decrease)</i> | | 7.81 | 8.93 | 10.20 | 11.65 | 13.31 |
| Commercial (rate per ccf of water use) | | | | | | |
| High Strength | \$11.86 | \$13.55 | \$15.48 | \$17.69 | \$20.21 | \$23.09 |
| <i>Increase (Decrease) per ccf</i> | | 1.69 | 1.93 | 2.21 | 2.52 | 2.88 |
| Medium/Domestic Strength | \$4.17 | \$4.76 | \$5.44 | \$6.22 | \$7.11 | \$8.12 |
| <i>Increase (Decrease) per ccf</i> | | 0.59 | 0.68 | 0.78 | 0.89 | 1.01 |
| Low Strength | \$2.74 | \$3.13 | \$3.58 | \$4.09 | \$4.67 | \$5.34 |
| <i>Increase (Decrease) per ccf</i> | | 0.39 | 0.45 | 0.51 | 0.58 | 0.67 |

Rate Survey

The survey found that the District's water rates are among the lowest in the region. The average monthly water bill for the region (based on 8 ccf of monthly usage) is \$75.07 per month and the District's current average monthly residential water bill is \$60.09 per month, or about 20% less than the current average of neighboring communities.

The District's wastewater rates are also low amongst its comparator agencies. The average monthly bill among the comparator agencies is \$74.23 and the District's current monthly residential wastewater bills for FY 2017-2018 is \$65.27 per month, or about 12% less than the average of the neighboring communities.

Proposition 218 Notification

Per the requirements under Proposition 218, the District will mail a notice to all ratepayers on or before April 16, 2018, based upon the EMID Board of Directors' policy direction this evening. Due to the complexity of the rate model changes being

recommended, District staff will prepare a user-friendly notice that also meets the Proposition 218 noticing requirements. A public hearing will be held and the rates adopted on June 4, 2018. The rates would go into effect on July 1, 2018.

It should be noted that between the notification date and the public hearing date, the EMID Board of Directors will receive the FY 2018-2019 Preliminary Annual Budget and 5-Year Financial Plan. Any adjustments that occur based upon EMID Board of Directors' 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 District staff that conservative assumptions have been employed in the creation of the attached rate model. Accordingly, District staff believes that the rates proposed herein are the maximum rates that would be recommended for FY 2018-2019 to FY 2022-2023. At the public hearing, the EMID Board of Directors 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.

Attachment:

- Bartle Wells Associates Water and Wastewater Rate Study Results Memo



DATE: March 1st, 2018

TO: City of Foster City/Estero Municipal Improvement District

FROM: Bartle Wells Associates

SUBJECT: Water and Wastewater Rate Study Update Results

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Introduction and Background

The Estero Municipal Improvement District (District) engaged Bartle Wells Associates (BWA) to develop 10-year financial projections for the District's Water and Wastewater Enterprises and to recommend water and wastewater rate increases for the next five-year period. BWA last conducted formal rate studies in 2017, which resulted in a one-year rate approval for water rates for FY 2018 and five-year rate approval for wastewater rates.

Current and projected water service rates are in the lower range compared to other agencies on the Peninsula and wastewater service rates are in the low to mid-range compared to other agencies on the Peninsula. The District water and wastewater enterprises are currently debt free, however, the District faces unique infrastructure funding challenges in each enterprise.

Water

The primary driver for the proposed rate increases are higher than expected system water losses over past years, which has contributed to the depletion of the operating fund below target levels (90 days of operating expenses). Additionally, the District faces costs associated with the \$4.8 billion Water System Improvement Project (WSIP) to upgrade the Hetch Hetchy Water System, resulting in significant additional wholesale SFPUC rate increases beginning in FY 2023. The WSIP is over 90% complete, however SFPUC operating costs and debt service are projected to increase over the next five years.

The San Francisco Public Utilities Commission (SFPUC), the sole source of water supply for the District, released updated projections for their wholesale rate for water in February 2018. SFPUC is projecting the current rate of \$4.10 in FY 2018 per hundred cubic feet (ccf) will remain the same in FY 2019.

SFPUC rates are projected to be held level at \$4.10/ccf for the next four years despite escalating SFPUC debt service and operating costs through use of a balancing account, which is estimated to be \$66.4 million as of June 30th, 2018. The balancing account was built up from SFPUC wholesale water sales exceeding projections used in rate setting. The balancing account represents the amount SFPUC owes to wholesale customers. BWA proposed water rates are designed to phase in District rate increases over time to avoid sharp increases.

The District will also continue to make annual payments, projected to be \$869,496 in FY 2019, to the Bay Area Water Supply and Conservation Agency (BAWSCA) for the WSIP capital improvements that were funded through the issuance of bonds. The water enterprise's single largest cost is water purchases from SFPUC.

BWA proposed water rates are designed to cover the additional water loss rate and replenish the operating fund above target levels by FY 2020. Current water rates are based on 7% water loss. That is, 93% of the water EMID purchases is sold to retail customers. The 7% water loss estimate was designed to be conservative, as historical data showed a positive loss from SFPUC purchases for many years. Actual water purchase and sales data from FY 2017 revealed realized water losses of approximately 11.5%. This water loss is primarily due to an SFPUC meter which had been under-reporting. The SFPUC meter was of age and was replaced in 2016. The water loss is within the range that other municipalities experience.

Due to 4.5% greater water losses and a water operating fund below target levels, BWA recommends the District implement an 8% volumetric rate increase in FY 2019. Additionally, meter charges are recommended to be increased by 8% in FY 2019 to cover increasing operation and maintenance costs, as well as to meet the operating fund balance target.

Detailed water rate calculations are shown in APPENDIX C.

Wastewater

The District has entered into a Joint Powers Agreement with the City of San Mateo where the District receives treatment of its wastewater via the San Mateo Wastewater Treatment Plant (WWTP). The District is responsible for its share of operating and maintenance costs that San Mateo (as the lead agency and the contracting party) incurs treating the District's wastewater, as well as approximately 24.5% of the capital improvement costs incurred as part of the Clean Water Program (CWP), a 10-year comprehensive capital improvement project initiated in 2014 at the WWTP. The Cities of San Mateo and Foster City (District) are expanding the jointly owned WWTP at an estimated cost of about \$578 million of which the District is responsible for approximately \$155 million. This is in addition to local capital projects for the District's own sewage collection system. The wastewater enterprise intends to fund collection system capital expenditures through annual transfers of \$1,080,000 from the operating fund to the capital improvement fund.

In June 2017, to fund the anticipated costs of the WWTP CWP improvements, the District Board approved a 5-year wastewater rate increase of 14.25% per year from FY 2018 through FY 2022. Based on updated cash flow estimates, BWA recommends that the District extend the 14.25% rate increase one additional year to FY 2023 and approve a rolling 5-year wastewater rate increase schedule of 14.25% per year from FY 2019 to FY 2023 to ensure that the District remain eligible to receive debt proceeds. Rates must be in place to ensure adequate funds to cover debt service.

Detailed wastewater rate calculations are shown in APPENDIX E.

Rate Surveys

BWA conducted a water and wastewater rate survey of neighboring communities along the San Francisco Peninsula. The results of the water survey are summarized in APPENDIX B and the results of the wastewater survey are summarized in APPENDIX D.

The survey found that the District's water rates are among the lowest in the region. The average monthly water bill for the region (based on 8 ccf of monthly usage) is \$75.07 per month and the District's current average monthly residential water bill is \$60.09 per month, or about 20% less than the current average of neighboring communities.

The District's wastewater rates are also low amongst its comparator agencies. The average monthly bill among the comparator agencies is \$74.23 and the District's current monthly residential wastewater bills for FY 2018 is \$65.27 per month, or about 12% less than the average of the neighboring communities.

Water Enterprise Fund

The District currently provides water service to a population of approximately 37,687. Most of the District's customers are residential. Table 1 shows the approximately 8,161 accounts/meters that allow for water service and fire protection service.

Table 1
City of Foster City / Estero Municipal Improvement District
Water Meters By Size

Data as of: 01/17/18

| Meter Size | Accounts | Meter Ratio ^{1,2} | Est. Meter Equivalents ³ |
|--|-----------|----------------------------|-------------------------------------|
| Water Service | | | |
| 3/4" | 6,788 | 1.00 | 6,788 |
| 1" | 421 | 1.67 | 702 |
| 1-1/2" | 168 | 4.00 | 672 |
| 2" | 388 | 5.33 | 2,069 |
| 3" | 84 | 11.67 | 980 |
| 4" | 52 | 21.00 | 1,092 |
| 6" | 28 | 46.67 | 1,307 |
| 8" or greater | <u>18</u> | 80.00 | <u>1,440</u> |
| Subtotal | 7,947 | | 15,050 |
| Private Fire Protection Service | | | |
| 3/4" | 1 | 1.40 | 1 |
| 1" | 7 | 1.40 | 10 |
| 1-1/2" | 3 | 1.40 | 4 |
| 2" | 0 | 1.87 | 0 |
| 3" | 2 | 4.08 | 8 |
| 4" | 26 | 7.35 | 191 |
| 6" | 100 | 16.33 | 1,633 |
| 8" or greater | <u>75</u> | 28.00 | <u>2,100</u> |
| Subtotal | 214 | | 3,948 |
| Total | 8,161 | | 18,998 |

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.

Table 2 illustrates the current reserves that the District can draw down in case of emergency or to smooth any “rate shocks” to its customers. In recent years reserves were used as a buffer due to unexpected increases in system water losses.

BWA projected rate increases to meet the District’s 90-day operating fund reserve target by FY 2020 (estimated to be \$3.55 million in FY 2020.)

Table 2
City of Foster City / Estero Municipal Improvement District
Water Enterprise Operating Reserves

| Fund Reserve Component | July 1, 2017 |
|--|-----------------|
| | Reserve Balance |
| Reserved for Maintenance & Operation (401) | \$1,483,791 |
| Total | \$1,483,791 |

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

Source: City of Foster City/Estero Municipal Improvement District Staff

The wholesale water purchase rates that SFPUC is projecting through FY 2025 are shown graphically in CHART A. The SFPUC also collects the BAWSCA Bond Surcharge from the District. The chart incorporates the BAWSCA Bond Surcharge estimated at \$0.42 cents per ccf. The SFPUC rates and BAWSCA surcharge combined are projected to remain flat from FY 2018 to FY 2022 at \$4.52/ccf (\$4.10 SFPUC + \$.42 BAWSCA). The SFPUC rate plus BAWSCA surcharge is projected to increase by 27% from FY 2023 to FY 2025.

CHART A

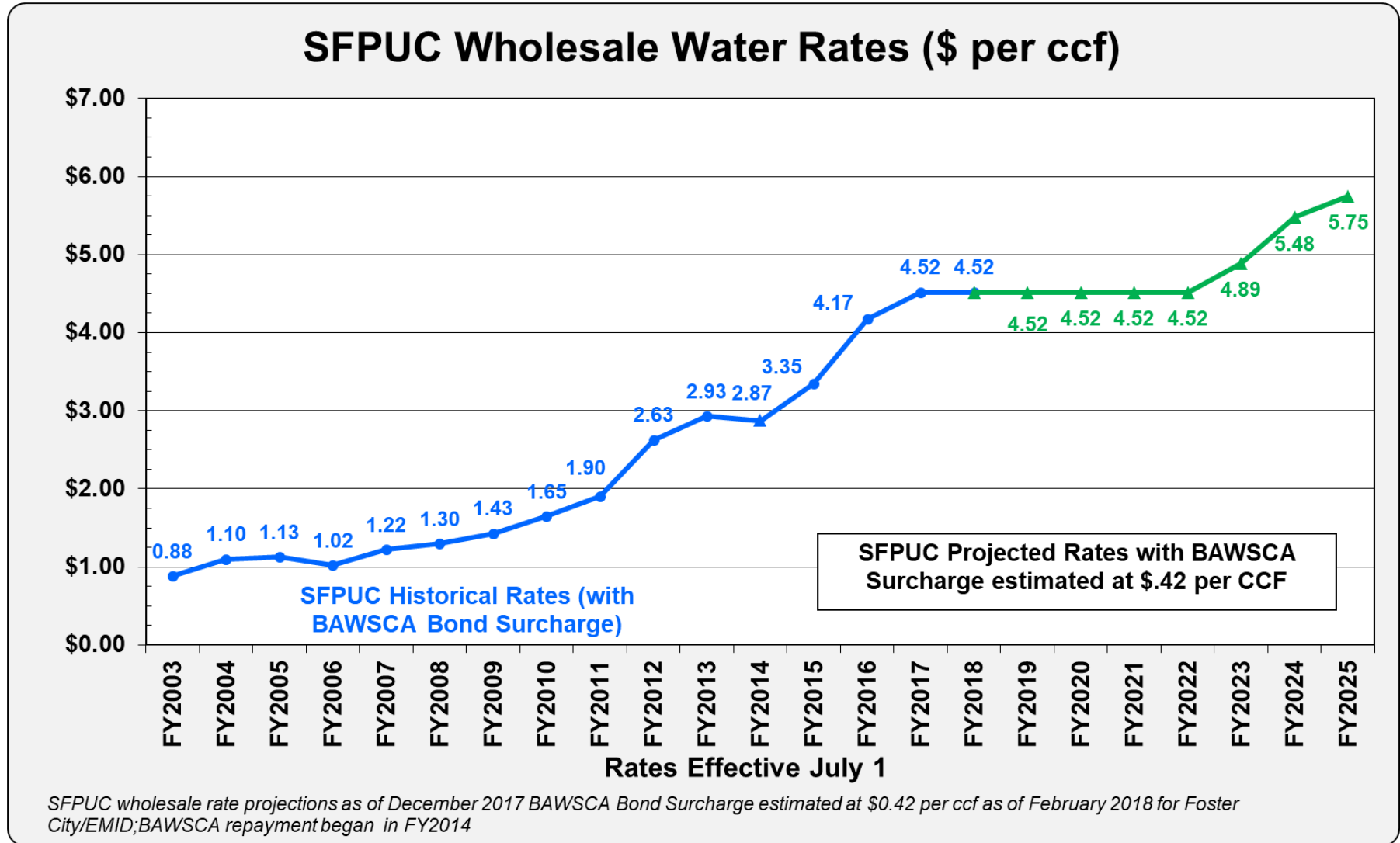


Table 3 summarizes the District’s projected operating expenditures which are anticipated to increase over the next five years by about 15%.

Table 3
 City of Foster City / Estero Municipal Improvement District
 Water Enterprise O&M Projection

| Expenditures | Five Year Projection | | | | | | Annual % Increase [1] |
|-----------------------------------|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|
| | FY2018 Projected | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | |
| Employee Services | 1,865,400 | 1,960,700 | 2,039,128 | 2,120,693 | 2,205,521 | 2,293,742 | 4.0% |
| Internal Services - Others | 564,087 | 582,293 | 596,850 | 611,772 | 627,066 | 642,743 | 2.5% |
| Internal Services - ERF | 322,593 | 316,582 | 324,497 | 332,609 | 340,924 | 349,447 | 2.5% |
| Services & Supplies | 610,600 | 570,550 | 584,814 | 599,434 | 614,420 | 629,780 | 2.5% |
| SFPUC Water Purchases | 8,281,384 | 8,691,000 | 8,736,000 | 8,782,000 | 8,827,000 | 9,665,000 | varies |
| BAWSCA Bond Repayment | 929,000 | 869,496 | 900,000 | 900,000 | 900,000 | 900,000 | |
| Reallocation | 1,069,457 | 1,177,420 | 1,206,856 | 1,237,027 | 1,267,953 | 1,299,651 | 2.5% |
| Water Sustainability | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | |
| Capital Outlay | 25,000 | 25,000 | 25,625 | 26,266 | 26,922 | 27,595 | 2.5% |
| TOTAL O&M Expenditures | 13,867,521 | 14,393,041 | 14,613,769 | 14,809,800 | 15,009,806 | 16,007,959 | |
| | | 3.8% | 1.5% | 1.3% | 1.4% | 6.7% | |

[1] Based on City/District Staff direction

Table 4 summarizes the current water rates. The District has variable expenditures which are expenditures that are impacted by the amount of water its customers consume. These costs must be recouped via its volumetric water charge, \$5.15 per ccf in FY 2018. Likewise the District's meter charges recover fixed expenditures, expenditures that are fixed regardless of amount of water that is consumed, \$19.85 for a ¾" meter in FY 2018.

The District has a two-tiered model for its residential customers where higher levels of water consumption are subject to higher water rates based on a proportionate share of conservation program costs. Commercial customers are charged a uniform rate, which includes commercial customer's proportionate share of conservation program costs.

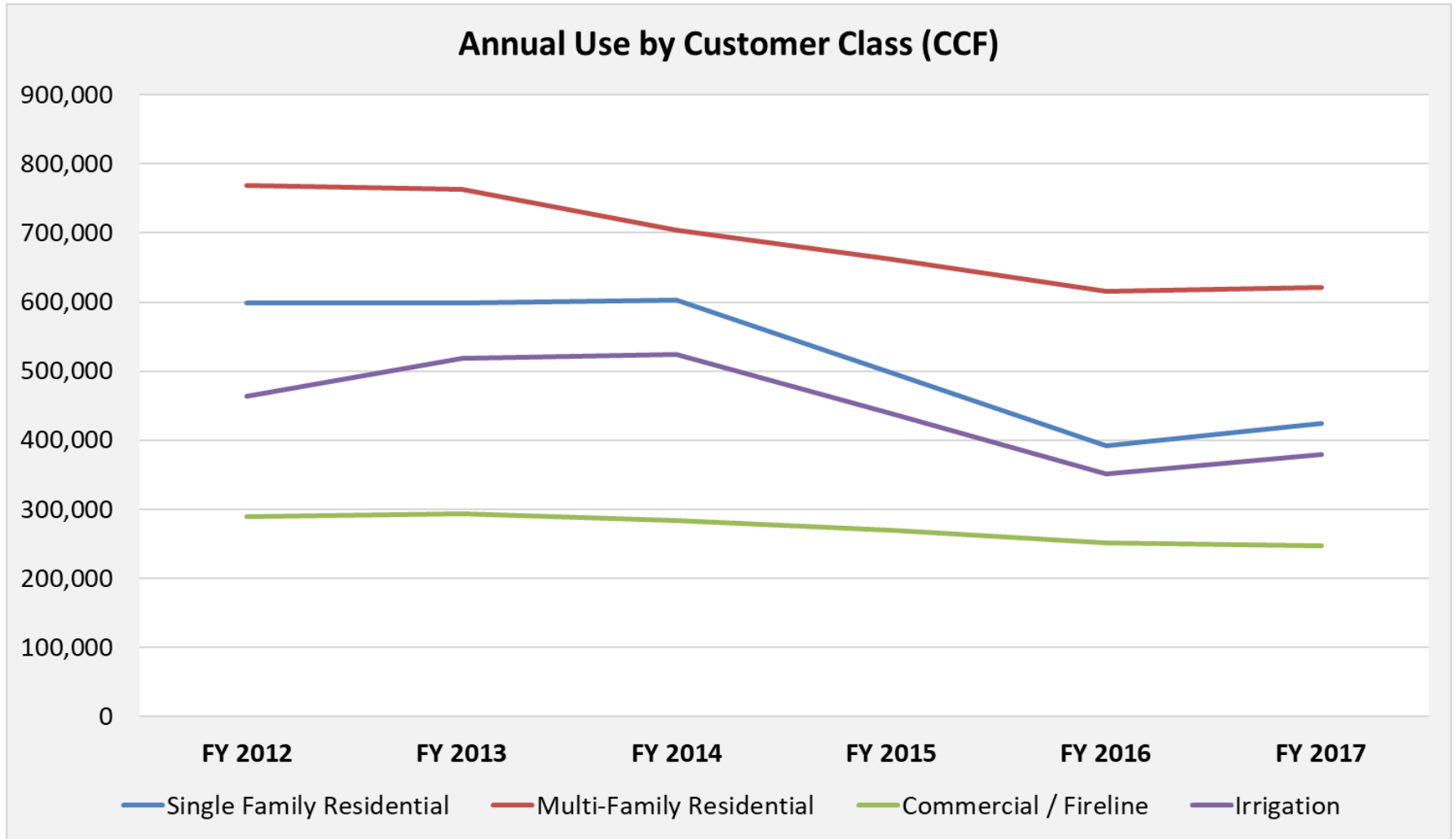
For its irrigation customers, the District has worked with John Whitcomb of Waterfluence to assign each irrigation customer a water budget. Any water consumed above the irrigation customers allotted amount is subject to a higher Tier 2 rate based on each customer's share of conservation program costs.

APPENDIX A shows District historical water use trends. Customer use has reversed declines due to drought and has bumped up slightly from FY 2016 lows. BWA's proposed rates are designed to match volumetric expenses (such as water purchases) with volumetric revenue. The rate structure mitigates over or under collecting revenue due to fluctuations in water use.

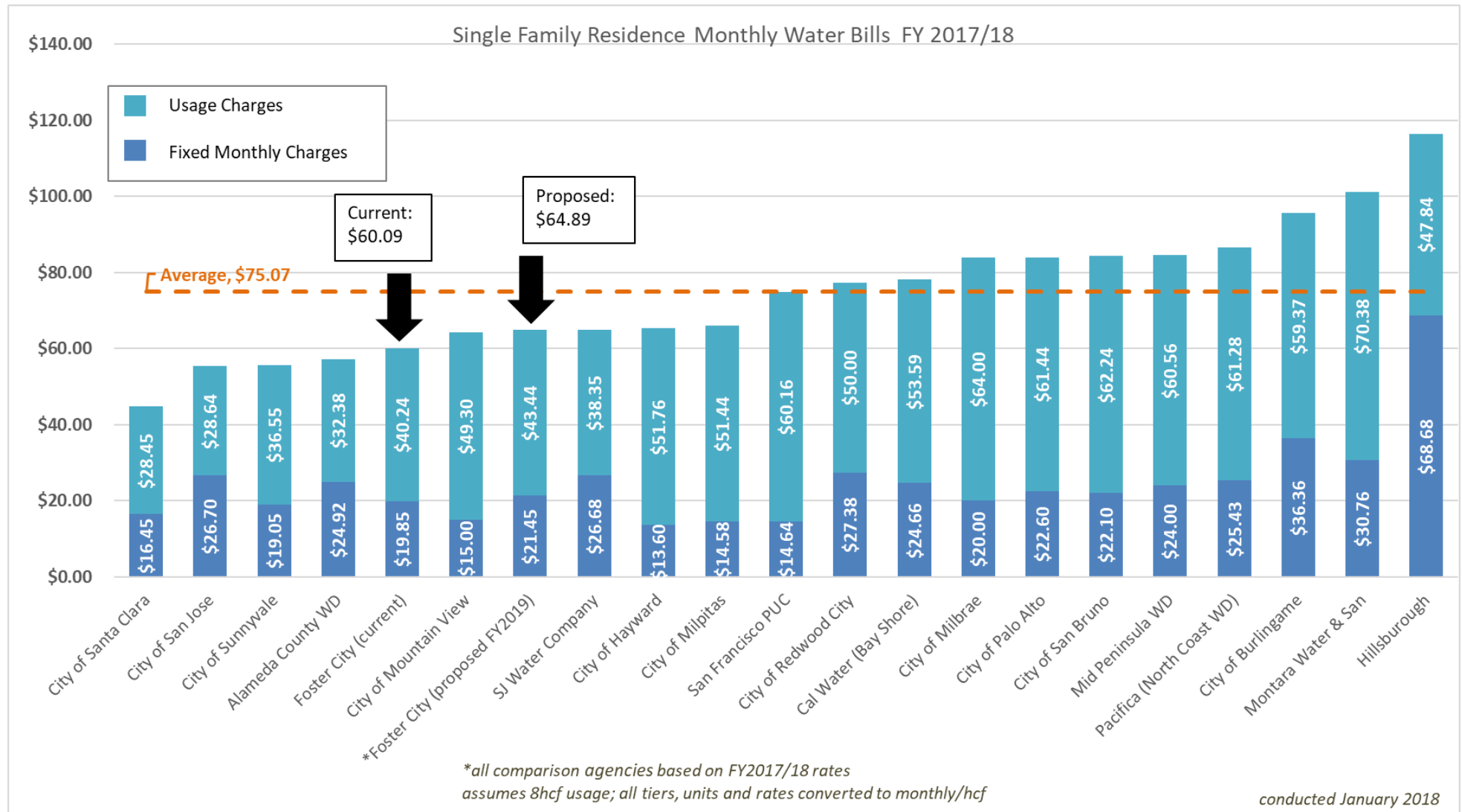
Table 4
 City of Foster City / Estero Municipal Improvement District
 Current Rates

| Current Rates | 2018 |
|---|------------|
| Fixed Meter Charge | |
| Monthly Meter Charge | |
| <u>Meter Size</u> | |
| 3/4" | \$19.85 |
| 1" | \$33.08 |
| 1-1/2" | \$79.40 |
| 2" | \$105.87 |
| 3" | \$231.58 |
| 4" | \$416.85 |
| 6" | \$926.33 |
| 8" or greater | \$1,588.00 |
| Bi-Monthly Water Consumption Tiers and Rates | |
| <u>Single Family Residential</u> | |
| Tier 1 0-20 per ccf | \$5.03 |
| Tier 2 Over 20 ccf | \$6.06 |
| <u>Multi-Family Residential</u> | |
| Tier 1 0-10 ccf per living unit | \$5.03 |
| Tier 2 Over 10 ccf per living unit | \$5.62 |
| <u>Irrigation Customers</u> | |
| Tier 1 <=100% of annual budget | \$5.03 |
| Tier 2 >100% of annual budget | \$7.21 |
| <u>Commercial and Fire Line</u> | |
| All usage | \$5.15 |
| Monthly Private Fire Protection Charge | |
| <u>Meter Size</u> | |
| 3/4" | \$27.79 |
| 1" | \$27.79 |
| 1-1/2" | \$27.79 |
| 2" | \$37.12 |
| 3" | \$80.99 |
| 4" | \$145.90 |
| 6" | \$324.15 |
| 8" or greater | \$555.80 |

APPENDIX A



APPENDIX B



APPENDIX C

Table 1
 City of Foster City / Estero Municipal Improvement District
 Water Enterprise Cash Flow Projection - Residential Two Tier Rate Structure Hybrid Model

| Fiscal Year Ending June 30 | Five Year Projection | | | | | | Extended Year Projection | | | | |
|--|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------------|-------------------|-------------------|-------------------|-------------------|
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
| Assumptions: | | | | | | | | | | | |
| Interest Earnings Rate | 1.00% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% |
| Revenue Increase from Growth [1] | | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% |
| Fixed Charge | \$19.85 | \$21.45 | \$23.15 | \$23.85 | \$24.55 | \$25.30 | \$26.05 | \$26.85 | \$27.65 | \$28.50 | \$29.35 |
| Fixed Rate Adjustment | | 8.1% | 7.9% | 3.0% | 2.9% | 3.1% | 3.0% | 3.1% | 3.0% | 3.1% | 3.0% |
| SFR Variable Charge | \$5.03 | \$5.43 | \$5.85 | \$6.06 | \$6.27 | \$6.49 | \$6.73 | \$6.96 | \$7.21 | \$7.46 | \$7.69 |
| Variable Rate Adjustment | | 8.0% | 7.7% | 3.6% | 3.5% | 3.5% | 3.7% | 3.4% | 3.6% | 3.5% | 3.1% |
| Monthly Service Charge Single Family (8 ccf) | \$60.09 | \$64.89 | \$69.95 | \$72.33 | \$74.71 | \$77.22 | \$79.89 | \$82.53 | \$85.33 | \$88.18 | \$90.87 |
| Rate Adjustment | | 8.0% | 7.8% | 3.4% | 3.3% | 3.4% | 3.5% | 3.3% | 3.4% | 3.3% | 3.1% |
| Beginning Fund Balance | \$1,483,791 | \$1,168,000 | \$1,867,000 | \$3,626,200 | \$5,863,400 | \$8,588,600 | \$11,026,600 | \$12,720,600 | \$14,356,600 | \$15,765,600 | \$17,120,600 |
| Revenues | | | | | | | | | | | |
| Water Sales & Service Charges | | | | | | | | | | | |
| <i>Meter Charge Revenue Estimate</i> | 4,526,000 | 4,915,000 | 5,330,000 | 5,519,000 | 5,709,000 | 5,913,000 | 6,119,000 | 6,338,000 | 6,560,000 | 6,795,000 | 7,033,000 |
| <i>Volumetric Revenue Estimate</i> | 9,116,000 | 10,303,000 | 11,159,000 | 11,618,000 | 12,082,000 | 12,548,000 | 13,048,000 | 13,555,000 | 14,102,000 | 14,649,000 | 15,164,000 |
| Connection Fees [1] | 33,140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interest Earnings - Operating Reserve [2] | 21,000 | 18,000 | 28,000 | 54,000 | 88,000 | 129,000 | 165,000 | 191,000 | 215,000 | 236,000 | 257,000 |
| Interest Earnings - Capital Improvement Fund [3] | 61,000 | 61,000 | 61,000 | 61,000 | 61,000 | 61,000 | 61,000 | 61,000 | 61,000 | 61,000 | 61,000 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Operating Revenues | 13,757,140 | 15,297,000 | 16,578,000 | 17,252,000 | 17,940,000 | 18,651,000 | 19,393,000 | 20,145,000 | 20,938,000 | 21,741,000 | 22,515,000 |
| Expenses | | | | | | | | | | | |
| Employee Services | 1,865,400 | 1,960,700 | 2,039,128 | 2,120,693 | 2,205,521 | 2,293,742 | 2,385,000 | 2,480,000 | 2,579,000 | 2,682,000 | 2,789,000 |
| Internal Services - Others | 564,087 | 582,293 | 596,850 | 611,772 | 627,066 | 642,743 | 659,000 | 675,000 | 692,000 | 709,000 | 727,000 |
| Internal Services - ERF | 322,593 | 316,582 | 324,497 | 332,609 | 340,924 | 349,447 | 358,000 | 367,000 | 376,000 | 385,000 | 395,000 |
| Services & Supplies | 610,600 | 570,550 | 584,814 | 599,434 | 614,420 | 629,780 | 646,000 | 662,000 | 679,000 | 696,000 | 713,000 |
| SFPUC Water Purchases | 8,281,384 | 8,691,000 | 8,736,000 | 8,782,000 | 8,827,000 | 9,665,000 | 10,986,000 | 11,626,000 | 12,469,000 | 13,144,000 | 14,067,000 |
| BAWSCA Bond Repayment | 929,000 | 869,496 | 900,000 | 900,000 | 900,000 | 900,000 | 900,000 | 900,000 | 900,000 | 900,000 | 900,000 |
| Reallocation | 1,069,457 | 1,177,420 | 1,206,856 | 1,237,027 | 1,267,953 | 1,299,651 | 1,332,000 | 1,365,000 | 1,399,000 | 1,434,000 | 1,470,000 |
| Capital Outlay | 25,000 | 25,000 | 25,625 | 26,266 | 26,922 | 27,595 | 28,000 | 29,000 | 30,000 | 31,000 | 32,000 |
| Operating Expenses | 13,667,521 | 14,193,041 | 14,413,769 | 14,609,800 | 14,809,806 | 15,807,959 | 17,294,000 | 18,104,000 | 19,124,000 | 19,981,000 | 21,093,000 |
| Operating Net Revenues | 89,619 | 1,103,959 | 2,164,231 | 2,642,200 | 3,130,194 | 2,843,041 | 2,099,000 | 2,041,000 | 1,814,000 | 1,760,000 | 1,422,000 |
| Water Sustainability Fund Transfer | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 |
| Capital Improvement Transfer [4] | 205,000 | 205,000 | 205,000 | 205,000 | 205,000 | 205,000 | 205,000 | 205,000 | 205,000 | 205,000 | 205,000 |
| Total Expenses | 14,072,521 | 14,598,041 | 14,818,769 | 15,014,800 | 15,214,806 | 16,212,959 | 17,699,000 | 18,509,000 | 19,529,000 | 20,386,000 | 21,498,000 |
| Revenues Less O&M Expenses | 89,619 | 1,103,959 | 2,164,231 | 2,642,200 | 3,130,194 | 2,843,041 | 2,099,000 | 2,041,000 | 1,814,000 | 1,760,000 | 1,422,000 |
| Revenues Less Total Expenses | (315,381) | 698,959 | 1,759,231 | 2,237,200 | 2,725,194 | 2,438,041 | 1,694,000 | 1,636,000 | 1,409,000 | 1,355,000 | 1,017,000 |
| Ending Fund Balance | 1,168,410 | 1,866,959 | 3,626,231 | 5,863,400 | 8,588,594 | 11,026,641 | 12,720,600 | 14,356,600 | 15,765,600 | 17,120,600 | 18,137,600 |
| Revenue Test: Annual Revenues > O&M Expenses | | | | | | | | | | | |
| Annual Revenues Less O&M Expenses | 89,619 | 1,103,959 | 2,164,231 | 2,642,200 | 3,130,194 | 2,843,041 | 2,099,000 | 2,041,000 | 1,814,000 | 1,760,000 | 1,422,000 |
| 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 | 1,168,410 | 1,866,959 | 3,626,231 | 5,863,400 | 8,588,594 | 11,026,641 | 12,720,600 | 14,356,600 | 15,765,600 | 17,120,600 | 18,137,600 |
| 25% operating expenses | 3,370,000 | 3,500,000 | 3,550,000 | 3,600,000 | 3,650,000 | 3,900,000 | 4,260,000 | 4,460,000 | 4,720,000 | 4,930,000 | 5,200,000 |
| # of Days O&M in Reserves | 31 | 48 | 92 | 146 | 212 | 255 | 268 | 289 | 301 | 313 | 314 |
| Pass/fail | FAIL | FAIL | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

[1] Estimated for planning purposes
 [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

Table 2
 City of Foster City / Estero Municipal Improvement District
 Water Rate Calculation - Two Tier Hybrid Model

| Fiscal Year Ending June 30 | Five Year Projection | | | | | | Extended Year Projection | | | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------------------|----------------------|----------------------|----------------------|
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
| Fixed Meter Charge Increase | | 8.00% | 8.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |
| Fixed Revenues +/- 5% of Fixed Costs? | | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Reserves % Above (Below) Reserve Target | | 53.3% | 102.1% | 162.9% | 235.3% | 282.7% | 298.6% | 321.9% | 334.0% | 347.3% | 348.8% |
| Reserve Target Met? | | NO | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Revenue Estimates | | | | | | | | | | | |
| Meter Charge Revenue | \$ 4,526,000 | \$ 4,915,000 | \$ 5,330,000 | \$ 5,519,000 | \$ 5,709,000 | \$ 5,913,000 | \$ 6,119,000 | \$ 6,338,000 | \$ 6,560,000 | \$ 6,795,000 | \$ 7,033,000 |
| Other Fixed Revenue | \$ 115,140 | \$ 79,000 | \$ 89,000 | \$ 115,000 | \$ 149,000 | \$ 190,000 | \$ 226,000 | \$ 252,000 | \$ 276,000 | \$ 297,000 | \$ 318,000 |
| Volumetric Revenue | \$ 9,116,000 | \$ 10,299,000 | \$ 11,171,000 | \$ 11,625,000 | \$ 12,083,000 | \$ 12,558,000 | \$ 13,044,000 | \$ 13,553,000 | \$ 14,106,000 | \$ 14,656,000 | \$ 15,159,000 |
| Total Projected | \$ 13,757,140 | \$ 15,293,000 | \$ 16,590,000 | \$ 17,259,000 | \$ 17,941,000 | \$ 18,661,000 | \$ 19,389,000 | \$ 20,143,000 | \$ 20,942,000 | \$ 21,748,000 | \$ 22,510,000 |
| Revenue Allocation | | | | | | | | | | | |
| Fixed | 33.7% | 32.7% | 32.7% | 32.6% | 32.7% | 32.7% | 32.7% | 32.7% | 32.6% | 32.6% | 32.7% |
| Variable | 66.3% | 67.3% | 67.3% | 67.4% | 67.3% | 67.3% | 67.3% | 67.3% | 67.4% | 67.4% | 67.3% |
| Costs Estimates | | | | | | | | | | | |
| Fixed Costs [1] | \$4,662,137 | \$4,837,545 | \$4,982,769 | \$5,132,800 | \$5,287,806 | \$5,447,959 | \$5,613,000 | \$5,783,000 | \$5,960,000 | \$6,142,000 | \$6,531,000 |
| Variable Costs [2] | \$9,410,384 | \$9,760,496 | \$9,836,000 | \$9,882,000 | \$9,927,000 | \$10,765,000 | \$12,086,000 | \$12,726,000 | \$13,569,000 | \$14,244,000 | \$15,167,000 |
| Total Projected Costs | \$14,072,521 | \$14,598,041 | \$14,818,769 | \$15,014,800 | \$15,214,806 | \$16,212,959 | \$17,699,000 | \$18,509,000 | \$19,529,000 | \$20,386,000 | \$21,698,000 |
| Net Revenue | | | | | | | | | | | |
| Fixed Charges | -\$20,997 | \$156,455 | \$436,231 | \$501,200 | \$570,194 | \$655,041 | \$732,000 | \$807,000 | \$876,000 | \$950,000 | \$820,000 |
| Volumetric Charges | -\$294,384 | \$538,504 | \$1,335,000 | \$1,743,000 | \$2,156,000 | \$1,793,000 | \$958,000 | \$827,000 | \$537,000 | \$412,000 | -\$8,000 |
| Total | -\$315,381 | \$694,959 | \$1,771,231 | \$2,244,200 | \$2,726,194 | \$2,448,041 | \$1,690,000 | \$1,634,000 | \$1,413,000 | \$1,362,000 | \$812,000 |
| Cost Analysis | | | | | | | | | | | |
| Fixed | 33.1% | 33.1% | 33.6% | 34.2% | 34.8% | 33.6% | 31.7% | 31.2% | 30.5% | 30.1% | 30.1% |
| Variable | 66.9% | 66.9% | 66.4% | 65.8% | 65.2% | 66.4% | 68.3% | 68.8% | 69.5% | 69.9% | 69.9% |
| Meter Charge Calculation | | | | | | | | | | | |
| Monthly charge per meter equivalent (Rounded to nearest \$0.05) | \$ 19.85 | \$ 21.45 | \$ 23.15 | \$ 23.85 | \$ 24.55 | \$ 25.30 | \$ 26.05 | \$ 26.85 | \$ 27.65 | \$ 28.50 | \$ 29.35 |
| Annual charge per meter equivalent | \$ 238.20 | \$ 257.40 | \$ 277.80 | \$ 286.20 | \$ 294.60 | \$ 303.60 | \$ 312.60 | \$ 322.20 | \$ 331.80 | \$ 342.00 | \$ 352.20 |
| Meter equivalents [3] | 18,998 | 19,093 | 19,188 | 19,284 | 19,380 | 19,477 | 19,574 | 19,672 | 19,770 | 19,869 | 19,968 |
| Meter Charge Revenue Estimate | \$ 4,526,000 | \$ 4,915,000 | \$ 5,330,000 | \$ 5,519,000 | \$ 5,709,000 | \$ 5,913,000 | \$ 6,119,000 | \$ 6,338,000 | \$ 6,560,000 | \$ 6,795,000 | \$ 7,033,000 |
| Volumetric Rate Calculation | | | | | | | | | | | |
| EMID Proposed Uniform Rate | \$5.15 | \$ 5.54 | \$ 5.98 | \$ 6.19 | \$ 6.40 | \$ 6.62 | \$ 6.84 | \$ 7.07 | \$ 7.32 | \$ 7.57 | \$ 7.79 |
| Projected annual water sales (ccf) [4] | 1,770,000 | 1,859,000 | 1,868,000 | 1,878,000 | 1,888,000 | 1,897,000 | 1,907,000 | 1,917,000 | 1,927,000 | 1,936,000 | 1,946,000 |
| Variable revenue estimate | \$9,116,000 | \$10,299,000 | \$11,171,000 | \$11,625,000 | \$12,083,000 | \$12,558,000 | \$13,044,000 | \$13,553,000 | \$14,106,000 | \$14,656,000 | \$15,159,000 |
| % Spread between EMID and SFPUC | | | | | | | | | | | |
| Surcharge | | 35.1% | 45.9% | 51.0% | 56.1% | 48.1% | 35.2% | 32.6% | 28.6% | 26.8% | 22.5% |
| SFPUC PROJECTED RATES | \$4.10 | \$4.10 | \$4.10 | \$4.10 | \$4.10 | \$4.47 | \$5.06 | \$5.33 | \$5.69 | \$5.97 | \$6.36 |
| Increase (Decrease) % | | 0.0% | 0.0% | 0.0% | 0.0% | 9.0% | 13.2% | 5.3% | 6.8% | 4.9% | 6.5% |
| BAWSCA Surcharge | \$0.42 | \$0.42 | \$0.42 | \$0.42 | \$0.42 | \$0.42 | \$0.42 | \$0.42 | \$0.42 | \$0.42 | \$0.42 |
| SFPUC Rate + BAWSCA Surcharge | \$4.52 | \$4.52 | \$4.52 | \$4.52 | \$4.52 | \$4.89 | \$5.48 | \$5.75 | \$6.11 | \$6.39 | \$6.78 |
| EMID Fixed Meter Charge Increase (Decrease) | | 8.1% | 7.9% | 3.0% | 2.9% | 3.1% | 3.0% | 3.1% | 3.0% | 3.1% | 3.0% |
| EMID Volumetric Rate Increase (Decrease) | | 7.6% | 7.9% | 3.5% | 3.4% | 3.4% | 3.3% | 3.4% | 3.5% | 3.4% | 2.9% |

Note:
 [1] Includes: Employee Services, Internal Services - Other, Internal Services - ERF, Services & Supplies, Reallocation, Capital Outlay, Capital Improvement Fund Transfers, and net revenues for the operating fund.
 [2] Includes: SFPUC Water Purchases, BAWSCA Bond Repayment, and Water Sustainability Fund Transfers.
 [3] 0.5% growth estimated for planning purposes
 [4] Includes 11.5% water loss factor

Table 3
 City of Foster City / Estero Municipal Improvement District
 Proposed Water Rates - Two Tier Hybrid Model

TWO TIER HYBRID MODEL

| Recommended Rates | Current Rates | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 | FY2028 |
|---|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Monthly Meter Charge | | | | | | | | | | | |
| 3/4" | \$19.85 | \$21.45 | \$23.15 | \$23.85 | \$24.55 | \$25.30 | \$26.05 | \$26.85 | \$27.65 | \$28.50 | \$29.35 |
| 1" | 33.08 | 35.75 | 38.58 | 39.75 | 40.92 | 42.17 | 43.42 | 44.75 | 46.08 | 47.50 | 48.92 |
| 1-1/2" | 79.40 | 85.80 | 92.60 | 95.40 | 98.20 | 101.20 | 104.20 | 107.40 | 110.60 | 114.00 | 117.40 |
| 2" | 105.87 | 114.40 | 123.47 | 127.20 | 130.93 | 134.93 | 138.93 | 143.20 | 147.47 | 152.00 | 156.53 |
| 3" | 231.58 | 250.25 | 270.08 | 278.25 | 286.42 | 295.17 | 303.92 | 313.25 | 322.58 | 332.50 | 342.42 |
| 4" | 416.85 | 450.45 | 486.15 | 500.85 | 515.55 | 531.30 | 547.05 | 563.85 | 580.65 | 598.50 | 616.35 |
| 6" | 926.33 | 1,001.00 | 1,080.33 | 1,113.00 | 1,145.67 | 1,180.67 | 1,215.67 | 1,253.00 | 1,290.33 | 1,330.00 | 1,369.67 |
| 8" or greater | 1,588.00 | 1,716.00 | 1,852.00 | 1,908.00 | 1,964.00 | 2,024.00 | 2,084.00 | 2,148.00 | 2,212.00 | 2,280.00 | 2,348.00 |
| Conservation-Based Water Rate Model (based on bi-monthly allotments) | | | | | | | | | | | |
| <i>Single Family Residential</i> | | | | | | | | | | | |
| Tier 1 0-20 per ccf | 5.03 | 5.43 | 5.85 | 6.06 | 6.27 | 6.49 | 6.73 | 6.96 | 7.21 | 7.46 | 7.69 |
| Tier 2 Over 20 ccf | 6.06 | 6.10 | 6.58 | 6.80 | 7.04 | 7.22 | 7.40 | 7.62 | 7.85 | 8.09 | 8.30 |
| <i>Multi-Family Residential (per living unit)</i> | | | | | | | | | | | |
| Tier 1 0-10 ccf per living unit | 5.03 | 5.43 | 5.85 | 6.06 | 6.27 | 6.49 | 6.73 | 6.96 | 7.21 | 7.46 | 7.69 |
| Tier 2 Over 10 ccf per living unit | 5.62 | 6.10 | 6.58 | 6.81 | 7.04 | 7.23 | 7.40 | 7.62 | 7.85 | 8.09 | 8.30 |
| <i>Irrigation Customers</i> | | | | | | | | | | | |
| Tier 1 <=100% of annual budget | 5.03 | 5.43 | 5.85 | 6.06 | 6.27 | 6.49 | 6.73 | 6.96 | 7.21 | 7.46 | 7.69 |
| Tier 2 >100% of annual budget | 7.21 | 6.47 | 6.98 | 7.22 | 7.46 | 7.63 | 7.77 | 7.99 | 8.20 | 8.44 | 8.64 |
| <i>Commercial and Fire Line Customers</i> | | | | | | | | | | | |
| Base Consumption Rate | 5.15 | 5.54 | 5.98 | 6.19 | 6.40 | 6.62 | 6.84 | 7.07 | 7.32 | 7.57 | 7.79 |
| Monthly Fire Meter Charge | | | | | | | | | | | |
| 3/4" | 27.79 | 30.03 | 32.41 | 33.39 | 34.37 | 35.42 | 36.47 | 37.59 | 38.71 | 39.90 | 41.09 |
| 1" | 27.79 | 30.03 | 32.41 | 33.39 | 34.37 | 35.42 | 36.47 | 37.59 | 38.71 | 39.90 | 41.09 |
| 1-1/2" | 27.79 | 30.03 | 32.41 | 33.39 | 34.37 | 35.42 | 36.47 | 37.59 | 38.71 | 39.90 | 41.09 |
| 2" | 37.12 | 40.11 | 43.29 | 44.60 | 45.91 | 47.31 | 48.71 | 50.21 | 51.71 | 53.30 | 54.88 |
| 3" | 80.99 | 87.52 | 94.45 | 97.31 | 100.16 | 103.22 | 106.28 | 109.55 | 112.81 | 116.28 | 119.75 |
| 4" | 145.90 | 157.66 | 170.15 | 175.30 | 180.44 | 185.96 | 191.47 | 197.35 | 203.23 | 209.48 | 215.72 |
| 6" | 324.15 | 350.28 | 378.04 | 389.47 | 400.90 | 413.15 | 425.40 | 438.46 | 451.52 | 465.41 | 479.29 |
| 8" or greater | 555.80 | 600.60 | 648.20 | 667.80 | 687.40 | 708.40 | 729.40 | 751.80 | 774.20 | 798.00 | 821.80 |
| (Minimum charge is equivalent to 1-1/2" meter charge) | | | | | | | | | | | |

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

| | | Current | FY2019 | |
|----------------------------------|--------------------------|----------|-----------------------|---------------------|
| | | Rates | Two Tier Hybrid Model | |
| Monthly meter charge | | \$19.85 | | \$21.45 |
| % Change | | | | 8.1% |
| Single Family Residential | | | | |
| Bi-Monthly Tiers | | | | |
| Tier 1: 0 to 20 ccf | | \$5.03 | | \$5.43 |
| Tier 2: over 20 ccf | | \$6.06 | | \$6.10 |
| <u>Water Use Level</u> | <u>Monthly Use (ccf)</u> | | | <u>Monthly Bill</u> |
| Low User | 5 | \$45.00 | | \$48.60 |
| <i>\$ Increase</i> | | | | 3.60 |
| <i>% Increase</i> | | | | 8.0% |
| Average User | 8 | \$60.09 | | \$64.89 |
| <i>\$ Increase</i> | | | | 4.80 |
| <i>% Increase</i> | | | | 8.0% |
| High User | 10 | \$70.15 | | \$75.75 |
| <i>\$ Increase</i> | | | | 5.60 |
| <i>% Increase</i> | | | | 8.0% |
| Very High User | 20 | \$120.45 | | \$136.75 |
| <i>\$ Increase</i> | | | | 16.30 |
| <i>% Increase</i> | | | | 13.5% |
| Excessive User | 50 | \$302.25 | | \$319.75 |
| <i>\$ Increase</i> | | | | 17.50 |
| <i>% Increase</i> | | | | 5.8% |

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

| Projected Water Bills | Current | Fiscal Year Ending June 30, | | | | | Extended Year Projection | | | | |
|--|---------|-----------------------------|---------|---------|---------|---------|--------------------------|---------|---------|---------|---------|
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
| <u>Two Tier Hybrid Model</u> | | | | | | | | | | | |
| Single Family Residential Monthly Rate | \$60.09 | \$64.89 | \$69.95 | \$72.33 | \$74.71 | \$77.22 | \$79.89 | \$82.53 | \$85.33 | \$88.18 | \$90.87 |
| \$ Increase | | 4.80 | 5.06 | 2.38 | 2.38 | 2.51 | 2.67 | 2.64 | 2.80 | 2.85 | 2.69 |
| % Increase | | 8.0% | 7.8% | 3.4% | 3.3% | 3.4% | 3.5% | 3.3% | 3.4% | 3.3% | 3.1% |

Based on Single Family Residential Use of 8 ccf

Wastewater Enterprise Fund

There are approximately 13,482 wastewater accounts serviced by the District. The majority of accounts are residential with the remainder consisting of commercial and institutional accounts as shown in Table 5.

Table 5
Foster City / Estero Municipal Improvement District
Wastewater Service Accounts

Data as of: 01/01/18

| Customer Class | Number of Accounts |
|--|--------------------|
| <u>Residential</u> | |
| Single Family | 4,534 |
| Townhouse/Duplex | 2,216 |
| Apartment/Condominium (Pools w/ Restrooms) | <u>6,468</u> |
| Residential Total | 13,218 |
| <u>Commercial</u> | |
| Restaurants | 53 |
| Commercial/Hotels/Offices/Industrial/Laundromats | <u>175</u> |
| Commercial Total | 228 |
| <u>Institutional</u> | |
| Institutional/Schools | <u>36</u> |
| Insitutional Total | 36 |
| Total | 13,482 |

Source: Cognos Sewer Customer Count Report

The District has approximately \$5,327,525 in its wastewater maintenance and operations reserve fund as shown in Table 6. The District's minimum operating reserve target is 25% of operating and maintenance expenses (est. to be \$2 million).

Table 6
 Foster City / Estero Municipal Improvement District
 Wastewater Operating Fund Reserves

| Fund Reserve Component | July 1, 2017 |
|--------------------------------------|--------------------|
| | Balance |
| Reserved for Maintenance & Operation | <u>\$5,327,525</u> |
| Total | <u>\$5,327,525</u> |

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

Source: City of Foster City/Estero Municipal Improvement District Staff

Table 7 summarizes the current wastewater service rates.

Table 7
 Foster City / Estero Municipal Improvement District
 Current Wastewater Rates

| Fiscal Year Ending June 30 | Current 2018 |
|--|-----------------|
| Residential (flat monthly rate) | |
| Single Family | \$65.27 |
| Townhouse/Duplex | 54.83 |
| Apartment/Condominium (Pools w/ Restrooms) | 54.83 |
| Commercial (rate per ccf of water use) | |
| Restaurants | 11.86 |
| Commercial/Hotels/Offices/Industrial/Laundromats | 4.17 |
| Institutional (rate per ccf of water use) | |
| Institutional/Schools | 2.74 |

Table 8 summarizes the operating expenditures of the enterprise. Costs are expected to remain relatively stable over the next five years.

Table 8
 City of Foster City / Estero Municipal Improvement District
 Wastewater Enterprise O&M Projection

| Expenditures | Five Year Projection | | | | | | Annual % Increase [1] |
|--------------------------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|
| | FY2018 Projected | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | |
| Employee Services | \$1,983,475 | \$2,082,625 | \$2,165,930 | \$2,252,567 | \$2,342,670 | \$2,436,377 | 4.0% |
| Internal Services (from City) | 669,676 | 665,622 | 682,263 | 699,320 | 716,803 | 734,723 | 2.5% |
| Internal Services -ERF | 350,140 | 261,950 | 268,499 | 275,211 | 282,091 | 289,143 | 2.5% |
| Services & Supplies | 924,700 | 799,650 | 819,641 | 840,132 | 861,135 | 882,663 | 2.5% |
| EMID Share WWTP O&M | 2,500,000 | 2,500,000 | 2,575,000 | 2,652,250 | 2,731,818 | 2,813,773 | 3.0% |
| EMID Share WWTP Capital Improvements | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 0.0% |
| Reallocation | <u>716,373</u> | <u>823,974</u> | <u>836,334</u> | <u>848,879</u> | <u>861,612</u> | <u>874,536</u> | 1.5% |
| TOTAL O&M Expenditures | \$8,144,364 | \$8,133,821 | \$8,347,667 | \$8,568,359 | \$8,796,129 | \$9,031,215 | |
| | | -0.1% | 2.6% | 2.6% | 2.7% | 2.7% | |

[1] Based on historical results

Wastewater Financial Projections

Wastewater projections are shown in APPENDIX E.

Projections anticipate an interfund loan totaling \$7.67 million is required from the Capital Improvement Fund in FY 2018 to meet projected capital requirements. The interfund loan is recommended to be repaid through bond proceeds from a FY 2019 issuance.

Bond Financing:

Projections anticipate a \$143.48 million of bond issues between FY 2019 and FY 2023 (5% interest, 30 year repayment) to fund WWTP expansion costs and to refund interfund loans totaling \$14.86 million. BWA proposes annual overall rate increases of 14.25% on all wastewater rates for FY 2019 to FY 2023. The increases are consistent with the adopted FY 2018 to FY 2022 rate plan, with a sixth increase of 14.25% added on in FY 2023.

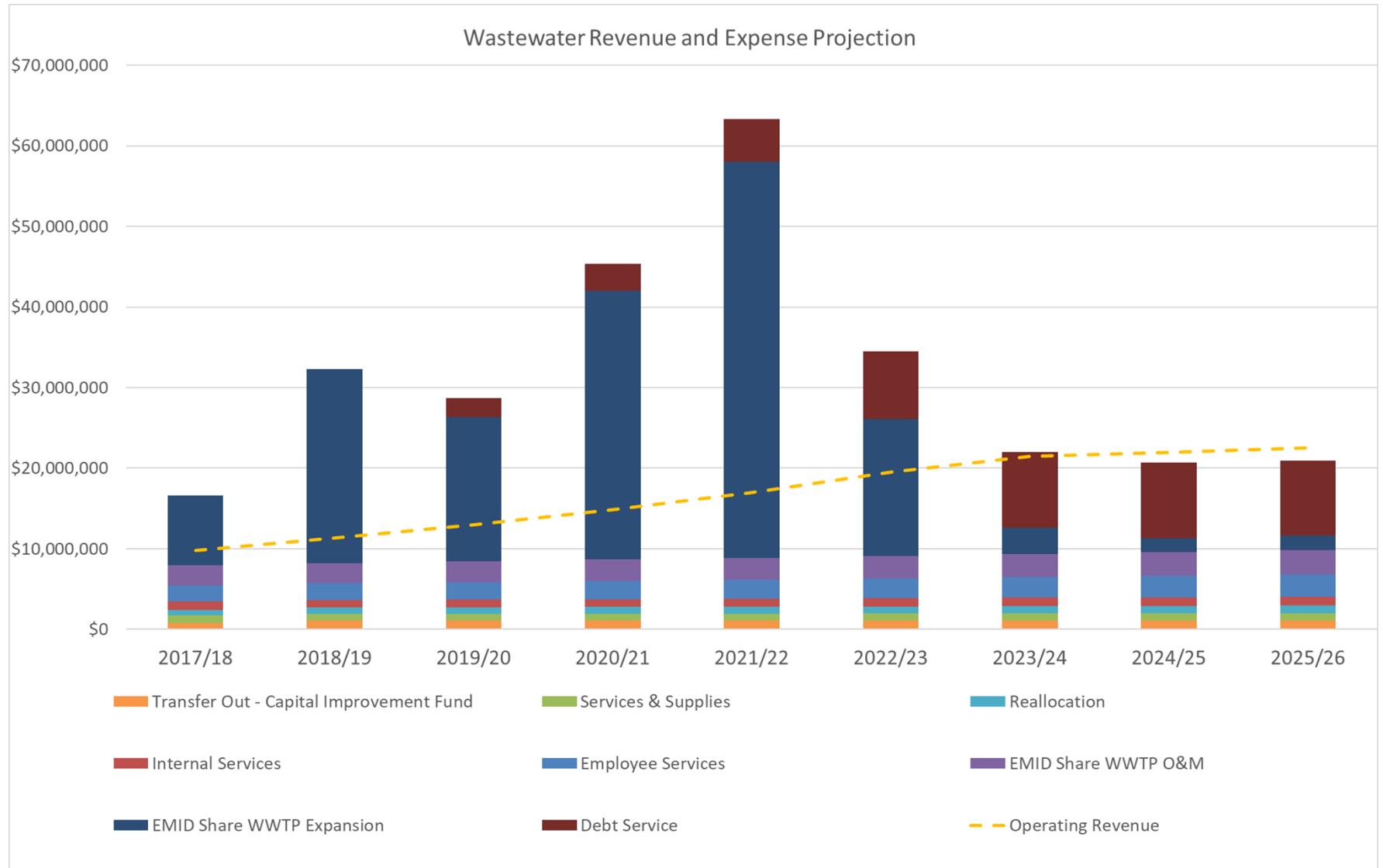
Table 9 shows bond debt service estimates for the District's share of WWTP costs. The projected total issuance costs are estimated to be \$2,185,000. Annual debt service for the combined total debt issuances is estimated to amount to \$9,334,100.

Table 9
City of Foster City / Estero Municipal Improvement District
Bond Debt Service Estimates

| Fiscal Year | 2019 | | 2020 | | 2021 | | 2022 | | 2023 | | Total |
|---|--|--|--|--|--|--|--|--|------|--|----------------------|
| | Long-Term 30-Year Bonds No Reserve | Long-Term 30-Year Bonds No Reserve | Long-Term 30-Year Bonds No Reserve | Long-Term 30-Year Bonds No Reserve | Long-Term 30-Year Bonds No Reserve | Long-Term 30-Year Bonds No Reserve | Long-Term 30-Year Bonds No Reserve | Long-Term 30-Year Bonds No Reserve | | | |
| Funding Target | \$35,941,613 | \$14,875,057 | \$30,368,952 | \$46,121,671 | \$13,995,670 | | | | | | |
| Total Debt Issue | \$36,456,213 | \$15,176,857 | \$30,827,252 | \$46,739,071 | \$14,288,570 | | | | | | \$143,487,963 |
| Project Funding | \$35,941,613 | \$14,875,057 | \$30,368,952 | \$46,121,671 | \$13,995,670 | | | | | | \$141,302,963 |
| Issuance Costs & Reserve Requirement | | | | | | | | | | | |
| Underwriter Discount | 1.00% | \$364,600 | \$151,800 | \$308,300 | \$467,400 | \$142,900 | | | | | |
| Issuance Costs/Contingency | | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | | | | | |
| Debt Service Reserve Fund | Excluded | 0 | 0 | 0 | 0 | 0 | | | | | |
| Bond Insurance | Excluded | 0 | 0 | 0 | 0 | 0 | | | | | |
| Reserve Surety Bond | Excluded | 0 | 0 | 0 | 0 | 0 | | | | | |
| Total | | 514,600 | 301,800 | 458,300 | 617,400 | 292,900 | | | | | 2,185,000 |
| Financing Terms | | | | | | | | | | | |
| Term (Years) | | 30 | 30 | 30 | 30 | 30 | | | | | |
| Est. Average Interest Rate | | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | | | | | |
| Annual Debt Service | | 2,371,500 | 987,300 | 2,005,400 | 3,040,400 | 929,500 | | | | | 9,334,100 |

Financing costs and interest rates estimated for financial planning purposes.

CHART B



Wastewater Cost of Service Analysis

In addition, Bartle Wells performed a Wastewater Cost of Service Analysis to determine equitable cost allocation to the various user classes. BWA recommends continuing the practice of placing commercial customers into three wastewater strength categories, (low, medium and high) based on the State Water Resources Control Board (SWRCB) Wastewater Revenue Program Guidelines. Low strength wastewater (Class A) customers include banks, laundromats, retail stores, schools, churches and others as shown in Table 10.

Medium strength wastewater (Class B) customers have wastewater strength factors that are assumed to be similar to residential wastewater strength factors. They include typical commercial activities such as libraries, spas, nail salons, gas stations and bars.

High strength wastewater (Class C) customers primarily include food-related businesses such as restaurants, bakeries, dairies, wineries, catering, butcher shops and fish markets.

Table 10
 City of Foster City/Estero Municipal Improvement District
 Strength Classifications into Low, Medium/Domestic, and High Strength Dischargers

| | |
|---|--|
| Low Strength | Banks & Financial Institutions Barber Shops/Hair Salons (hair cutting only) Post Offices/Government Retail Stores Libraries Schools Churches, Halls & Lodges |
| Medium/Commercial/ Domestic Strength | Residential - All Appliance Repair Beauty Shops (hair cutting w/additional treatments) Dry Cleaners Nail Salons |

Pet Groomers
 Commercial Laundromats
 Bars & Taverns
 Tasting Rooms
 Hospitals - General, Convalescent & Veterinarian
 Hotels, Motels, B&Bs, and Vacation Rentals
 Offices - Business and Professional
 Offices - Medical/Dental
 Pools with Restrooms (Clubhouse)
 Theaters
 Warehouses
 Car Washes
 High Tech Medical Manufacturing
 Light Manufacturing/Industrial
 Gym or Health Club
 Machine Shops
 Service Stations, Garages, Auto Repair Shops
 Mini Marts - W/O Dish Washer or Garbage Disposal
 Mini Mart with Gas Pumps - W/O Dish Washer or Garbage Disposal
 Spa with Various Beauty Treatments
 Parking Garages

High Strength

Restaurants
 Coffee Shops
 Ice Cream Parlors
 Catering
 Eatery
 Bakeries
 Butcher Shops
 Fish Market/Shop
 Markets - with Dish Washer or Garbage Disposal
 Markets - with Bakeries or Butcher Shops
 Mini Marts - with Dish Washer or Garbage Disposal
 Wineries
 Market
 Dairies (milk producers, yogurt, ice cream maker)
 Specialty Foods Manufacturing (e.g., cheese or olive oil maker)

Note: Wastewater users who have Fats, Oils, and Grease (FOG) waste will be put into the High Strength user category

Table 11 summarizes the assumed wastewater strength factors for the low, medium and high strength groups that are based on typical strengths provided in the SWRCB’s Revenue Program Guidelines. The strength factor for medium strength customers is equivalent to residential or “domestic” strength, of 1.00. The strength factor for low strength is calculated at 0.66 and for high strength is calculated at 2.85 based on the SWRCB guidelines.

Table 3
 City of Foster City/Estero Municipal Improvement District
 Assumed Wastewater Strength Factors

| Strength Class | LOW | LOW-MEDIUM | MEDIUM | HIGH |
|-------------------------|---|-------------------------------------|---------------------|-------------------|
| Examples: | Institutional Bank | Townhouse, Duplex, Apartment, Condo | Residential Offices | Restaurant Bakery |
| Flow (gpd) | 200 | 168 | 200 | 200 |
| BOD ¹ (mg/l) | 130 | 240 | 240 | 1000 |
| TSS ² (mg/l) | 100 | 240 | 240 | 800 |
| Strength Factor | 0.66 | 0.84 | 1.00 | 2.85 |
| Strength Factor Formula | SF=(Flow(gpd)/200)*(0.34+(0.33*BOD(mg/l)/240)+(0.33*TSS(mg/l)/240)) | | | |

WW flows and strengths based on State Water Resources Control Board's Revenue Program Guidelines

1 "BOD" stands for Biochemical Oxygen Demand

2 "TSS" stands for Total Suspended Solids

Table 12 summarizes the mass-balance analysis for the City's wastewater system and calculates the wastewater rates for each customer class. Single family residences are assumed to have an average daily (dry weather) flow of 200 gallons per day (gpd).

Based on residential occupancy data provided by the City of Foster City, single family residences are estimated to have an average of 2.67 residents per household and multi-family residences are estimated to have an average of 2.25 residents per household (84% of a single family household).

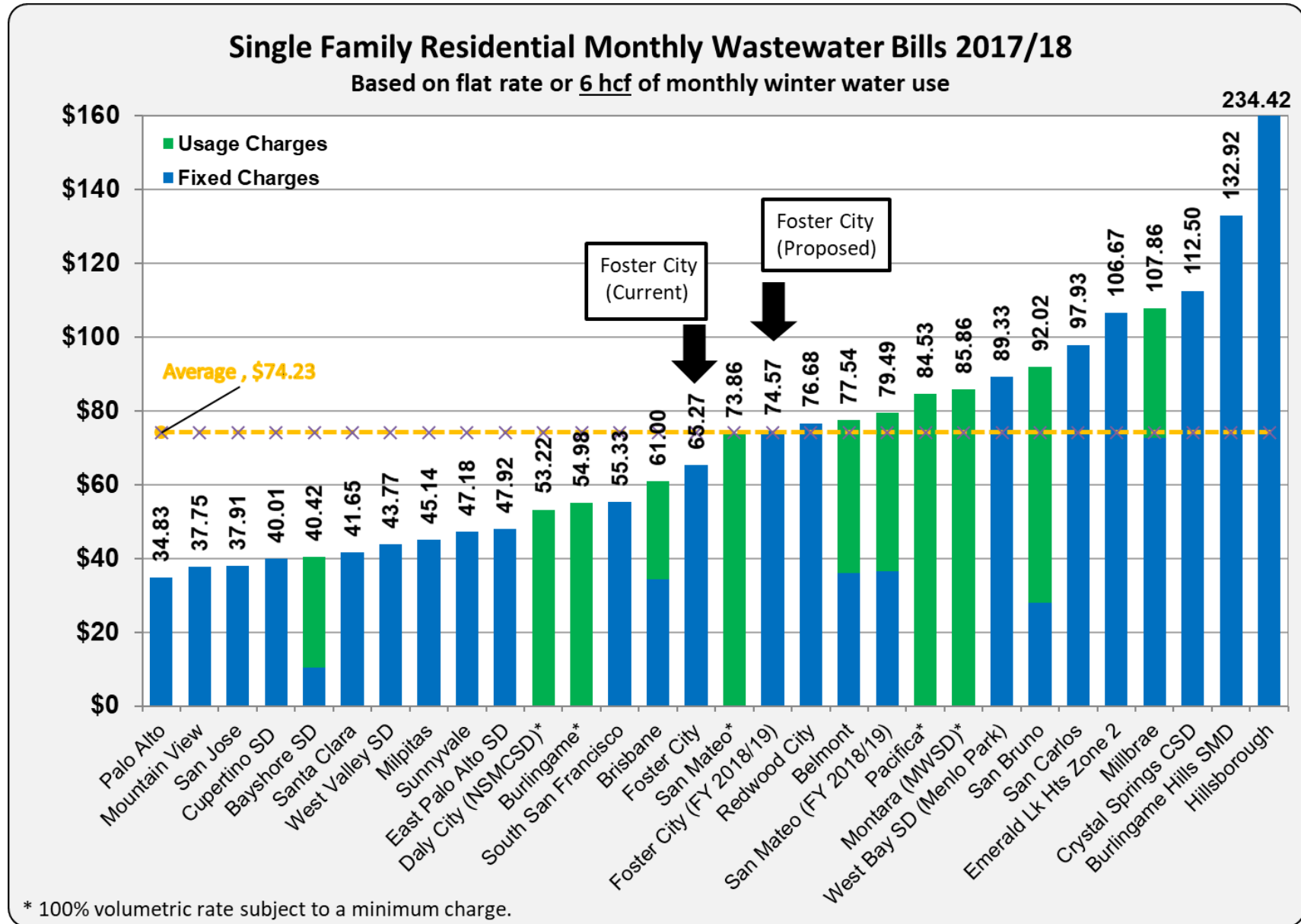
Multi-family dwellings are billed based on an estimated flow of 168 gpd or 0.84 times the single family flow. As a check, the mass balance in Table 12 compares the total calculated and measured daily wastewater flows for Foster City (average dry weather flow).

The results agree well with the estimated daily flow at 2.58 million gallons per day (mgd) and the measured flow at 2.37 mgd.

Table 12
 City of Foster City/Estero Municipal Improvement District
 Summary of Wastewater Users by Customer Class

| Customer Class | EDUs ¹ | | ADWF Flow (gal/day) | FY 2017 Estimate EDU x Flow ADWF Flow (gal/day) | BOD ³ (mg/l) | TSS ⁴ (mg/l) | FY 2018 Calculated Current Rate |
|---|-------------------|--------------------------|------------------------|--|----------------------------|----------------------------|--|
| Residential | | | | | | | |
| Single Family Residential | 4,534 | | 200 | 906,800 | 240 | 240 | 65.27 |
| Townhouse/Duplex | 2,216 | | 168 | 372,288 | 240 | 240 | 54.83 |
| Apartment/Condos | 6,468 | | 168 | 1,086,624 | 240 | 240 | 54.83 |
| Subtotal | | | | 2,365,712 | | | |
| | Accounts | FY 2017 Use (gal/day) | Flow Factor | Estimated ADWF Flow (gal/day) | BOD ³ (mg/l) | TSS ⁴ (mg/l) | FY 2018 Calculated Current Rate |
| Commercial | | | | | | | |
| Low Strength | 36 | 54,604 | 65% | 35,492 | 130 | 100 | 2.73 |
| Medium/Domestic Strength | 175 | 244,651 | 53% | 129,421 | 240 | 240 | 4.17 |
| High Strength | 53 | 75,973 | 70% | 53,181 | 1000 | 800 | 11.86 |
| Subtotal | | 375,228 | | 218,094 | | | |
| Totals | | | | 2,583,806 | | | |
| Check Against Lowest Actual Monthly Avg. Day Flow (May 2014 from LS 59 Flow Log): | | | | 2,367,806 | | | |

- 1 "EDU" stands for Equivalent Dwelling Unit
- 2 "ADWF" stands for Average Dry Weather Flow
- 3 "BOD" stands for Biochemical Oxygen Demand
- 4 "TSS" stands for Total Suspended Solids



APPENDIX E

Table 1
 City of Foster City / Estero Municipal Improvement District
 Wastewater Enterprise Cash Flow Projection - Bond Financing

| | Five Year Projection | | | | | | Extended Year Projection | | | | |
|---|----------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------------|-------------------|-------------------|-------------------|-------------------|
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
| Assumptions: | | | | | | | | | | | |
| Interest Earnings Rate | 1.00% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% |
| Revenue Increase from Growth | | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% | 0.50% |
| Rate Adjustment | | 14.25% | 14.25% | 14.25% | 14.25% | 14.25% | 9.50% | 2.00% | 2.00% | 0.00% | 0.00% |
| Monthly Service Charge for Single Family | \$65.27 | \$74.57 | \$85.20 | \$97.34 | \$111.21 | \$127.06 | \$139.13 | \$141.91 | \$144.75 | \$144.75 | \$144.75 |
| Beginning O&M Fund Balance | \$5,327,525 | \$6,232,400 | \$6,321,600 | \$5,480,400 | \$5,315,200 | \$5,091,900 | \$4,087,100 | \$3,547,000 | \$4,857,000 | \$6,447,600 | \$8,652,700 |
| Operating Revenues | | | | | | | | | | | |
| Service Charges | 9,768,000 | 11,209,000 | 12,862,000 | 14,759,000 | 16,936,000 | 19,434,000 | 21,377,000 | 21,911,000 | 22,459,000 | 22,571,000 | 22,684,000 |
| Connection Fees [1] | 26,250 | | | | | | | | | | |
| Interest Earnings [2] | 34,000 | 93,000 | 95,000 | 82,000 | 80,000 | 76,000 | 61,000 | 53,000 | 73,000 | 97,000 | 130,000 |
| Other Revenue | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| Operating Revenue | 9,829,250 | 11,303,000 | 12,958,000 | 14,842,000 | 17,017,000 | 19,511,000 | 21,439,000 | 21,965,000 | 22,533,000 | 22,669,000 | 22,815,000 |
| Non Operating Revenue | | | | | | | | | | | |
| Interfund Loan - Capital Improvement Fund | 7,671,545 | | | | | | | | | | |
| Bond / Loan [3] | | 35,941,613 | 14,875,057 | 30,368,952 | 46,121,671 | 13,995,670 | 0 | 0 | 0 | 0 | 0 |
| Non Operating Revenue | 7,671,545 | 35,941,613 | 14,875,057 | 30,368,952 | 46,121,671 | 13,995,670 | 0 | 0 | 0 | 0 | 0 |
| Total Revenue | 17,500,795 | 47,244,613 | 27,833,057 | 45,210,952 | 63,138,671 | 33,506,670 | 21,439,000 | 21,965,000 | 22,533,000 | 22,669,000 | 22,815,000 |
| Operating Expenses | | | | | | | | | | | |
| Employee Services | 1,983,475 | 2,082,625 | 2,165,930 | 2,252,567 | 2,342,670 | 2,436,377 | 2,533,832 | 2,635,185 | 2,740,592 | 2,850,216 | 2,964,225 |
| Internal Services (from City) | 669,676 | 665,622 | 682,263 | 699,320 | 716,803 | 734,723 | 753,091 | 771,918 | 791,216 | 810,996 | 831,271 |
| Internal Services -ERF | 350,140 | 261,950 | 268,499 | 275,211 | 282,091 | 289,143 | 296,372 | 303,781 | 311,376 | 319,160 | 327,139 |
| Services & Supplies | 924,700 | 799,650 | 819,641 | 840,132 | 861,135 | 882,663 | 904,730 | 927,348 | 950,532 | 974,295 | 998,652 |
| EMID Share WWTP O&M | 2,500,000 | 2,500,000 | 2,575,000 | 2,652,250 | 2,731,818 | 2,813,773 | 2,898,186 | 2,985,132 | 3,074,686 | 3,166,927 | 3,261,935 |
| EMID Share WWTP Capital Improvements | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 |
| Reallocation | 716,373 | 823,974 | 836,334 | 848,879 | 861,612 | 874,536 | 887,654 | 900,969 | 914,484 | 928,201 | 942,124 |
| Operating Expenses | 8,144,364 | 8,133,821 | 8,347,667 | 8,568,359 | 8,796,129 | 9,031,215 | 9,273,865 | 9,524,333 | 9,782,886 | 10,049,795 | 10,325,346 |
| Operating Net Revenue | 1,684,886 | 3,169,179 | 4,610,333 | 6,273,641 | 8,220,871 | 10,479,785 | 12,165,135 | 12,440,667 | 12,750,114 | 12,619,205 | 12,489,654 |
| Repayment of Interfund Loan | | 14,862,371 | | | | | | | | | |
| Capital Expenses | | | | | | | | | | | |
| Transfer Out - Capital Improvement Fund | 780,000 | 1,080,000 | 1,080,000 | 1,080,000 | 1,080,000 | 1,080,000 | 1,080,000 | 1,080,000 | 1,080,000 | 1,080,000 | 1,080,000 |
| EMID Share WWTP Expansion | 7,671,545 | 23,079,242 | 16,875,057 | 32,368,952 | 48,121,671 | 15,995,670 | 2,291,123 | 716,609 | 745,441 | 0 | 0 |
| Capital Expenses | 8,451,545 | 24,159,242 | 17,955,057 | 33,448,952 | 49,201,671 | 17,075,670 | 3,371,123 | 1,796,609 | 1,825,441 | 1,080,000 | 1,080,000 |
| Annual Debt Service | | | 2,371,500 | 3,358,800 | 5,364,200 | 8,404,600 | 9,334,100 | 9,334,100 | 9,334,100 | 9,334,100 | 9,334,100 |
| Debt Service | | | 2,371,500 | 3,358,800 | 5,364,200 | 8,404,600 | 9,334,100 | 9,334,100 | 9,334,100 | 9,334,100 | 9,334,100 |
| Debt Coverage [4] | | | 1.94 | 1.87 | 1.53 | 1.25 | 1.30 | 1.33 | 1.37 | 1.35 | 1.34 |
| Total Expenditures | 16,595,909 | 32,293,063 | 28,674,224 | 45,376,111 | 63,362,000 | 34,511,485 | 21,979,088 | 20,655,042 | 20,942,427 | 20,463,895 | 20,739,446 |
| Revenues Less Total Expenditures | 904,886 | 14,951,550 | (841,167) | (165,159) | (223,329) | (1,004,815) | (540,088) | 1,309,958 | 1,590,573 | 2,205,105 | 2,075,554 |
| Ending O&M Fund Balance | 6,232,411 | 6,321,579 | 5,480,433 | 5,315,241 | 5,091,871 | 4,087,085 | 3,547,012 | 4,856,958 | 6,447,573 | 8,652,705 | 10,728,254 |
| Cash Fund Reserve Test: Minimum Fund Balance > 25% O&M Expenses | | | | | | | | | | | |
| Year-end O&M Fund Balance | 6,232,411 | 6,321,579 | 5,480,433 | 5,315,241 | 5,091,871 | 4,087,085 | 3,547,012 | 4,856,958 | 6,447,573 | 8,652,705 | 10,728,254 |
| 25% Operating Expenses | 2,036,091 | 2,033,455 | 2,086,917 | 2,142,090 | 2,199,032 | 2,257,804 | 2,318,466 | 2,381,083 | 2,445,722 | 2,512,449 | 2,581,337 |
| # of Days O&M in Reserves | 279 | 284 | 240 | 226 | 211 | 165 | 140 | 186 | 241 | 314 | 379 |
| Pass/fail | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Table 2
City of Foster City / Estero Municipal Improvement District
Projected Wastewater Rate Impacts

| Projected Rates | Current | Projected - Fiscal Year Ending June 30 | | | | |
|---|---------|--|---------------|---------------|---------------|---------------|
| | FY2018 | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 |
| % Rate Increase | | 14.25% | 14.25% | 14.25% | 14.25% | 14.25% |
| Residential (flat monthly rate) | | | | | | |
| Single Family | \$65.27 | \$74.57 | \$85.20 | \$97.34 | \$111.21 | \$127.06 |
| <i>Increase (Decrease)</i> | | 9.30 | 10.63 | 12.14 | 13.87 | 15.85 |
| Townhouse/Duplex | \$54.83 | \$62.64 | \$71.57 | \$81.77 | \$93.42 | \$106.73 |
| <i>Increase (Decrease)</i> | | 7.81 | 8.93 | 10.20 | 11.65 | 13.31 |
| Apartment/Condominium (Pools w/ Restrooms) | \$54.83 | \$62.64 | \$71.57 | \$81.77 | \$93.42 | \$106.73 |
| <i>Increase (Decrease)</i> | | 7.81 | 8.93 | 10.20 | 11.65 | 13.31 |
| Commercial (rate per ccf of water use) | | | | | | |
| High Strength | \$11.86 | \$13.55 | \$15.48 | \$17.69 | \$20.21 | \$23.09 |
| <i>Increase (Decrease) per ccf</i> | | 1.69 | 1.93 | 2.21 | 2.52 | 2.88 |
| Medium/Domestic Strength | \$4.17 | \$4.76 | \$5.44 | \$6.22 | \$7.11 | \$8.12 |
| <i>Increase (Decrease) per ccf</i> | | 0.59 | 0.68 | 0.78 | 0.89 | 1.01 |
| Low Strength | \$2.74 | \$3.13 | \$3.58 | \$4.09 | \$4.67 | \$5.34 |
| <i>Increase (Decrease) per ccf</i> | | 0.39 | 0.45 | 0.51 | 0.58 | 0.67 |

CHART C

