



*East Bay Municipal Utility District
Oakland, California*

FY20 and FY21 Recommended Revisions to the Water and Wastewater Systems Schedule of Rates and Charges Subject to Proposition 218

East Bay Municipal Utility District

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Fiscal Years 2020 and 2021

May 2, 2019

East Bay Municipal Utility District

TABLE OF CONTENTS

**Recommended Revisions to the Water and Wastewater Systems
Fiscal Years 2020 and 2021
Schedule of Rates and Charges Subject to Proposition 218**

Chapter-Page

GENERAL MANAGER’S MEMORANDUM

CHAPTER 1 – WATER SYSTEM RATES, CHARGES AND FEES

Introduction	1-1
Recommendations.....	1-1
Discussion	1-2
Water System Rates and Charges.....	1-2
Water System Cost of Service Study and Proposed FY20 and FY21 Rates and Charges	1-4
Drought Surcharges.....	1-8
Exhibit 1 – Comparative Residential Water Charges – 8 Ccf	1-10

CHAPTER 2 – WASTEWATER SYSTEM RATES AND CHARGES

Introduction	2-1
Recommendations.....	2-1
Discussion	2-2
Wastewater Treatment Charges and Wet Weather Facilities Charge.....	2-2
Wastewater System Cost of Service Study and FY20 and FY21 Proposed Charges	2-3
Wastewater Pollution Prevention Programs	2-9
Exhibit 1 – Comparative Residential Wastewater Charges	2-11

East Bay Municipal Utility District

TABLE OF CONTENTS

CHAPTER 3 – RECOMMENDED SCHEDULES OF RATES, CHARGES AND FEES

- FY20 Water System
 - Schedule A – Rate Schedules for Water Service
 - Schedule L – Drought Surcharge Rate Schedule For Water Service
- FY20 Wastewater System
 - Schedule A – Schedules of Rates for Treatment Service
 - Schedule B – Wet Weather Facilities Charge
- FY21 Water System
 - Schedule A – Rate Schedules for Water Service
- FY21 Wastewater System
 - Schedule A – Schedules of Rates for Treatment Service
 - Schedule B – Wet Weather Facilities Charge

APPENDIX

Appendix A - Fiscal Years 2020 and 2021 Update to East Bay Municipal Utility District Water and Wastewater Cost of Service Studies of April 2015 and May 2019 In Support of Proposed FY20 and FY21 Water and Wastewater Rates

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 2, 2019

MEMO TO: Board of Directors

FROM: Alexander R. Coate, General Manager *CCC for ALK*

SUBJECT: FY20 & FY21 Recommended Revisions to the Water and Wastewater System Schedule of Rates and Charges Subject to Proposition 218

Every two years, the District develops a report recommending revisions to the District's rates and charges for the water and wastewater systems subject to California Constitution Article XIII D, Section 6 (commonly known as Proposition 218). The District's proposed Fiscal Years 2020 and 2021 (FY20 and FY21) water and wastewater system charges subject to Proposition 218 were presented to the Board along with the proposed FY20 and FY21 operating and capital budgets at the March 26, 2019 Budget Workshop No. 2. At that workshop, the Board also received a draft copy of the Proposition 218 notice which, among other items, provides information about the public hearing on the proposed revisions to the District's water and wastewater system charges. The public hearing is scheduled for June 11, 2019.

The attached report summarizes all proposed changes to rates and charges subject to Proposition 218. The proposed charges are designed to meet Board policy goals and recover costs identified in the proposed FY20 and FY21 operating and capital budgets. In preparation for the FY20 and FY21 budget and rates determination, two Board workshops were held this year (on January 22 and March 26) to discuss details of the proposed budget, including staffing, capital projects, water sales projections and rate sensitivities.

To determine the appropriate rates needed to support the costs identified in the FY20 and FY21 budgets, the District hired an independent rate consultant in 2015 and 2019 to perform cost of service (COS) studies for its water and wastewater systems. The COS studies ensure charges are appropriately and equitably established in compliance with California law including Proposition 218. The proposed FY20 and FY21 rates incorporate the results of the COS studies as well as the increased revenue required to address proposed FY20 and FY21 expenditures.

Recommended changes to the water system rates and charges are:

- Increase water charges (service, flow, elevation and private fire service) 6.5 percent overall for FY20 and an additional 6.25 percent overall for FY21. These increases support proposed FY20 and FY21 operating and capital expenses.
- Maintain the staged system of Drought Surcharges developed in the District's COS study as a contingency plan in the event of a water shortage. The Drought Surcharge percentage is imposed on the potable Water Flow Charge when the Board declares a drought Stage 2, 3, or 4.

The proposed increases to rates and charges for the water system in FY20 and FY21 are lower than the projections made in FY17 when the FY18 and FY19 biennial budget was adopted. At that time, it was projected that water system charges in FY20 and FY21 would need to increase by 7.0 percent each year. The proposed water system charges are lower than originally projected due to two factors: actual revenues in FY18 and projected revenues for FY19 exceed budgeted amounts, which reduced the amount of debt issued to fund the capital program; and projected increases in non-rate revenues in FY20 and FY21.

District revenues depend on water usage. The proposed charges are based on the assumption that water consumption will be 141 million gallons per day (MGD) in FY20 and 143 MGD in FY21. This is about two percent lower than the water consumption projected for FY20 and FY21 at the time the FY18 and FY19 biennial budget was adopted. Despite the end of the recent drought and lifting of water restrictions, the District expects customers to maintain many of their conservation habits.

Following the most recent drought, the average residential water user now consumes 8 hundred cubic feet (CCF) per month (about 200 gallons per day) as compared to 10 CCF in FY13 and 12 CCF in FY07. The average 8 CCF residential user will see an increase of \$3.62 per month (6.5 percent) in FY20 from \$56.12 to \$59.74 and an increase of \$3.73 per month (6.2 percent) in FY21 from \$59.74 to \$63.47. The overall impact to individual customers will vary depending on their actual water consumption.

As part of long-term financial stability efforts, the District developed a staged system of Drought Surcharges to recover water shortage-related costs, which was implemented during the Stage 4 Drought in FY16. Under this staged system, the Drought Surcharge rises as the severity of the water shortage increases (i.e., Stage 1 – 0 percent; Stage 2 – up to 8 percent; Stage 3 – up to 20 percent; Stage 4 – up to 25 percent on the Water Flow Charge). The District does not anticipate a water shortage in FY20 or FY21 as a result of the high levels of water currently in storage due to recent storms and reduced customer demand. However, the Drought Surcharge percentages that were developed in the 2015 COS study and adopted and implemented for FY16 will remain in effect as a contingency plan in the event of a water shortage. If a water shortage occurs, the District will update the drought-related costs and develop and adopt Drought Surcharges based on the updated COS study. Any Drought Surcharges imposed will be consistent with the existing staged system.

Recommended changes to the wastewater system rates and charges are:

- Modify the wastewater system charges for FY20 to include the 2019 Wastewater COS study adjustments, which result in some wastewater rates and charges decreasing and others increasing.
- Increase the proposed rates for FY20 wastewater system charges an additional 4.0 percent for FY21. The FY20 and FY21 wastewater rate increases support the District's proposed FY20 and FY21 operating and capital expenses and meet Board policy goals.

The proposed increases are consistent with the projections made in FY17, when the FY18 and FY19 biennial budget was adopted. At that time, it was projected that wastewater system charges in FY20

and FY21 would need to increase by 4.0 percent and 4.0 percent, respectively. The wastewater system rates and charges increases for FY20 and FY21 are consistent with the levels projected for these years, largely as a result of operating cost savings and debt savings from using more cash funding and less debt financing of capital expenditures.

With the proposed FY20 and FY21 changes to the wastewater system charges, revenue collected from all wastewater system charges would increase by 4.0 percent in FY20 and an additional 4.0 percent in FY21. The impact of the proposed changes to the FY20 and FY21 wastewater system charges on customer bills will depend on the type of customer and the volume of wastewater discharge.

For the typical single-family residential homeowner who pays both the wastewater treatment charges collected on the water bill and the Wet Weather Facilities Charge collected on the property tax bill, the total proposed increase for wastewater system charges is 2.7 percent for FY20 and 4.0 percent for FY21. The changes to the FY20 wastewater service charges result in an increase of \$0.20 per month from \$21.95 to \$22.15 (0.9 percent) on the monthly wastewater charge collected on the water bill for the average residential customer. For FY21, the bill would increase \$0.87 per month from \$22.15 to \$23.02 (3.9 percent). However, the overall impact to individual customers will vary depending on their actual water consumption. The wastewater service charges collected on the water bill include the San Francisco Bay Pollution Prevention monthly fee, which remains at \$0.20 per month for FY20 and FY21 for residential customers.

In addition to the wastewater charges collected on the water bill, wastewater customers also pay a Wet Weather Facilities Charge via their property tax bill that varies with individual lot size. As a result of the 2019 Wastewater COS study adjustment, the annual Wet Weather Facilities Charge is proposed to increase 7.2 percent to \$111.24 in FY20, and 4.0 percent increase to \$115.70 in FY21 for the typical residential customer.

In compliance with Proposition 218, which established specific rules for implementing new or adjusting existing rates, the District will hold a public hearing on June 11, 2019 to consider the adoption of the charges. The Proposition 218 notice for the June 11, 2019 public hearing was sent by mail to the record owners of parcels upon which the proposed charges will be imposed and tenants directly responsible for the payment of the proposed charges (i.e., “customers” who are not property owners,) at least 45 days prior to the scheduled public hearing.

Any owner of record and any customer directly liable to the District for water and/or wastewater charges may submit a written protest to the proposed increased water and wastewater system charges; however, only one written protest will be counted per identified parcel. Each protest must: (1) be in writing; (2) state the identified property owner or customer is in opposition to the proposed increases to the rates and charges for water, wastewater, or both; (3) provide the location of the identified parcel by assessor’s parcel number or street address; and (4) include the original signature of the property owner or customer submitting the protest. Written protests against the proposed increases may be personally delivered to the District, submitted at the hearing, or mailed to the District. Protests submitted by fax, email or other electronic means will not be counted. To be tabulated, however, any written notice must be received by the District prior to the close of the

public hearing. If a majority of the affected parcel owners or customers submit written protests, the proposed increases may not be imposed.

The Proposition 218 notice for the June 11, 2019 public hearing on the proposed increases was mailed to all parcel owners and customers by April 26, 2019 in compliance with Proposition 218 requirements.

The proposed rates and charges for the water and wastewater systems are recommended to be effective on bills issued on or after July 1, 2019 for FY20, and on or after July 1, 2020 for FY21. The customer billing system will prorate bills for water and wastewater rate increases that occur during the billing cycle.

ARC: RL:rl

**1. Water System Rates,
Charges and Fees**

Chapter 1 – Water System Rates and Charges

INTRODUCTION

The District updates the water system's rates and charges biennially in conjunction with the development of its biennial budget. The charges are designed to recover costs identified in the proposed operating and capital budgets and to meet Board policy goals. The District's water system rates and charges include a Water Service Charge, which is a fixed charge to the ratepayer that does not change regardless of water use, and a Water Flow Charge, which is a variable charge that rises and falls depending upon the level of water used (also known as a consumption or volumetric charge). In addition to the Water Service Charge and the Water Flow Charge, the District water system rates and charges levied under specified circumstances include a water Elevation Surcharge, a Private Fire Service Charge, and Nonpotable/Recycled water charges, as well as a system of Drought Surcharges. The District completed a cost of service (COS) study in FY15 to ensure that all of the District's rates and charges for the water system are appropriately and equitably established, and consistent with California law including Proposition 218. The proposed overall increase to the water system's rates and charges is 6.5 percent for FY20 and 6.25 percent for FY21; however, the overall impact to individual customers will vary depending on their actual water consumption. Illustrations of the varying impacts are presented below for FY20 and FY21.

Details of the COS analysis and the FY20 and FY21 calculations are contained in the District's April 2015 COS study and the updated COS analysis for FY20 and FY21 (see Appendix A). They are also addressed in the General Manager's March 21, 2019 memorandum to the Board which discusses the proposed FY20 and FY21 water system rates and charges that are subject to Proposition 218.

The District is not currently experiencing a water shortage and does not anticipate a water shortage in FY20 or FY21 as a result of the high levels of water currently in storage due to recent storms and reduced customer demand. A water shortage could occur from declared drought or other situations where the District's available water supply is limited or restricted. However, the drought surcharge percentages that were developed in the 2015 COS study and adopted for FY16 and FY17 will remain in effect as a contingency plan in the unanticipated event of a water shortage. If a water shortage occurs, the proposed rate structure for the water system rates and charges will allow the District to update its drought related costs and develop and implement Drought Surcharges based on the updated COS study. Any Drought Surcharges that are imposed will be consistent with the FY16 staged system of Drought Surcharges and will not exceed the Drought Surcharge percentages from FY16, as set forth in the notice of public hearing.

The proposed rates and charges for the water system will be effective on bills issued on or after July 1, 2019 for FY20, and on or after July 1, 2020 for FY21.

RECOMMENDATIONS

The recommendations in this section cover the rates and charges for the water system, including the Water Service Charge, Water Flow Charge (consumption), Drought Surcharges, Elevation Surcharge, and Private Fire Service Charge.

Recommended changes to the rates and charges for the water system are:

- Increase water charges (service, flow, elevation and private fire service charges) 6.5 percent for FY20 and an additional 6.25 percent for FY21. These increases support the projected FY20 and FY21 operating and capital expenditures.
- Adopt the FY20 and FY21 water system rates and charges as shown in Water System Schedule A – Rates Schedule for Water Service (see Chapter 3).
- Retain Drought Surcharges from FY16 and FY17 in the event of an unanticipated event or water shortage in FY20 or FY21.

DISCUSSION

Water System Rates and Charges

Increase rates and charges for the water system by 6.5 percent in FY20 and 6.25 percent in FY21.

The purpose of the rates and charges for the water system is to recover costs in the District's operating and capital budgets for the water system and to meet the Board's policy goals. The proposed increases address the District's needs as presented in its proposed biennial budget for FY20 and FY21. Details of the proposed increases to the individual components of the water system rates and charges are shown below under **Water System Cost of Service and FY20 and FY21 Proposed Charges**. Details of the FY20 and FY21 budget objectives, operating budget, capital expenses, and debt expenses are available in the FY20 and FY21 Proposed Biennial Budget and Capital Project Summaries.

The proposed increases in water system rates and charges for FY20 and FY21 are lower than the projections made in FY17, when the FY18 and FY19 biennial budget was adopted. At that time, it was projected that water system rates and charges in FY20 and FY21 would need to increase by 7.0 percent each year. The proposed water system rates and charges are lower than originally projected two years ago due to actual revenues in FY18 and projected revenues for FY19 exceeding budgeted amounts, which reduced the amount of debt issued to fund the capital program, and projected higher non-rate revenues in FY20 and FY21.

District revenues are in large part dependent upon water usage which is projected to be about the same as the prior projections for water usage in FY19. The proposed charges are based on the assumption that water consumption will be 141 million gallons per day (MGD) in FY20 and 143 MGD in FY21. This is about two percent lower than the water consumption that had been projected for FY20 and FY21 at the time the FY18 and FY19 biennial budget was adopted. Despite the fact that the recent drought has ended and water use restrictions have been lifted, it is projected that customers will maintain many of their conservation habits.

Based on projected water consumption, rates and charges for the water system need to increase by 6.5 percent in FY20 and an additional 6.25 percent in FY21 to cover the expenditures identified in the proposed FY20 and FY21 operating and capital budgets, and to meet Board policy goals. Table 1 below illustrates the amount of revenue needed from the FY20 and FY21 increases in water system rates and charges to fund FY20 and FY21 expenditures. Between FY19 and FY21,

operation and maintenance (O&M), debt service, and capital expenses are budgeted to increase to varying degrees. In total, expenses in FY20 are projected to be \$918.6 million, which is 18.9 percent higher than FY19. The District can access a variety of non-water system revenues, such as property taxes, lease revenues, water system reserves, and bond proceeds to pay for O&M and capital expenses. These revenues are projected to cover \$336.1 million of expenditures in FY21, leaving \$582.5 million to be paid for from revenues from the rates and charges of the water system. FY19 water system rates and charges are projected to generate \$516.7 million of the necessary \$582.5 million, leaving \$65.8 million, or 12.75 percent, of incremental expenditures to be addressed from increases in water system rates and charges. This 12.75 percent increase is proposed to be distributed over two years, with a 6.5 percent increase in FY20 and a 6.25 percent increase in FY21.

Table 1 - Revenue Shortfalls (In Million\$) Addressed Through Rate Increase

	FY19	FY21	2-Yr Δ
Revenue Requirement			
+ O&M expense	\$292.5	\$315.4	7.8%
+ Debt service expense	210.0	217.7	3.7%
+ Capital expense	269.8	385.5	42.9%
Total expenses =	772.3	918.6	18.9%
- Other revenues	-264.8	-336.1	26.9%
Revenue requirement =	\$507.5	\$582.5	14.8%
Revenue Adjustment			
+ Revenue requirement		\$582.5	
- Revenue from existing rates		-516.7	
Difference =		\$65.8	
Total Rate Revenue Requirement Adjustment		12.75%	

The details of the FY20 and FY21 budget objectives, operating budget, capital expenses, and debt expenses are contained in the FY20 and FY21 Proposed Biennial Budget and Capital Project Summaries. The proposed operating and capital budgets, combined with the decreased water consumption projections, contribute to the increased FY20 and FY21 water system's rates and charges in roughly the following proportions:

- Operations – additional funded positions, increases in labor and benefits, and increases in non-labor expenses drive approximately 35 percent of the additional revenue required in FY20 and FY21.
- Capital – increases in rate-funded capital and debt service drive approximately 65 percent of the additional revenue required in FY20 and FY21.

Continue the Drought Surcharge percentages calculated in the COS and implemented in FY16 as a contingency in the unlikely event of a water shortage in FY20 or FY21.

As part of long-term financial stability efforts, the District developed a staged system of Drought Surcharges to recover water shortage related costs, including without limitation reduced revenues due to mandatory conservation, increases rates for purchased water, administrative costs, and penalties or fines for consumption of water over state-mandated limits. Under this staged system of Drought Surcharges, the Drought Surcharge rises as the severity of the water shortage increases. The District does not anticipate a water shortage in FY20 or FY21 as a result of the high levels of water currently in storage due to recent storms and reduced customer demand. However, the Drought Surcharge percentages that were developed in the 2015 COS study and adopted and implemented for FY16 will remain in effect as a contingency plan in the unanticipated event of a water shortage.

In its 2015 COS study, the District developed a detailed COS analysis to calculate the Drought Surcharges for the District's drought stages. The 2015 COS study calculated Drought Surcharges that would address the financial aspects of a limited or restricted water supply situation for each drought stage. The revenue requirement for each drought stage was developed and a Drought Surcharge was calculated to recover the revenue requirement based on the decreased water sales, costs of supplemental supply and increased customer service related costs during a drought. The District's COS study calculated Drought Surcharge percentages of up to 8 percent, 20 percent and 25 percent to be assessed on the potable Water Flow Charge in each billing period during Drought Stages 2, 3 and 4, respectively. In the FY16 and FY17 budget, the Board adopted the staged system of Drought Surcharges to recover water shortage-related costs. After declaring a Stage 4 drought, the District implemented a 25 percent Drought Surcharge on the potable Water Flow charge for FY16 water bills. After the Board declared an end to the shortage emergency, the 25 percent Drought Surcharge was terminated at the start of FY17.

The District does not anticipate a water shortage in FY20 or FY21; however, the Drought Surcharge percentages that were developed in the 2015 COS study and adopted for FY16 and FY17 will remain in effect as a contingency plan in the unanticipated event of a drought, water shortage emergency, or state mandated reductions in potable water use. The District's Drought Surcharges are set forth in Schedule L – Drought Surcharge Rate Schedule for Water Service (see Chapter 3). Prior to implementing Drought Surcharges, the District will update drought related costs and develop and adopt surcharges consistent with the COS study and will not exceed the Drought Surcharge percentages listed in Schedule L. The District's Proposition 218 notice for FY20 and FY21 includes information regarding these surcharges so that they remain available to the Board to implement in the event the District is in a drought, water shortage or other situations requiring reductions in water use by its customers.

Water System Cost of Service Study and Proposed FY20 and FY21 Rates and Charges

State law and District policy requires that the District's rates and charges be based on COS and that they be proportional to the cost of providing service on a parcel basis. A COS study allocates operating and capital costs to customer classes based both on customer class usage characteristics and on facility design and operations. This nexus between usage and cost forms the financial and legal basis for setting utility rates and charges. Over time, both customer usage characteristics and costs can change and a COS study helps reconcile these changes with

revenues under existing rates and charges. COS studies often result in recommended modifications to existing rates and charges.

The District retained Raftelis Financial Consultants (RFC) to perform COS studies for the water and wastewater systems' rates and charges, including a study of the proposed drought rate structure. The RFC study was completed in FY15 and indicated that the District's water system rates and charges are consistent with Proposition 218's cost of service requirements. The RFC study also recommended certain adjustments to the rates and charges, which have been incorporated into the proposed FY20 and FY21 water system rates and charges. For FY20 and FY21, the District updated the original COS study for the proposed and projected FY20 and FY21 expenditures, revenues, and water sales (see Appendix A). The adjustments ensure the rates and charges for the water system represent the District's current costs of providing water service, and allocate such costs proportionally to customers.

Based on the rate models from the District's COS studies, water system rates and charges have five customer classes: single family residential, multi-family residential, all other (including non-residential, commercial, and industrial), private fire customer, and nonpotable/recycled. Together, the rates and charges of the water system are structured to proportionately recover the costs of providing water service among the various customer classes. The District's rates and charges for the water system have five components: a Water Flow Charge, a Water Service Charge, an Elevation Surcharge, a Private Fire Service Charge, and a Drought Surcharge.

The Water Flow Charge is charged to all customers based on customer class, and recovers a portion of the District's fixed costs as well as the variable costs associated with provision of water. The Water Flow Charge is imposed per unit of water consumed per month, with each unit of water equaling 748 gallons. The Water Service Charge is a fixed charge upon all water customers, based on the size of the meter serving the property, and recovers the remaining portion of the District's fixed costs. The Elevation Surcharge applies only to properties within designated geographic pressure zones, and recovers the increased costs of pumping water to such areas. The Private Fire Service Charge applies only to properties with a private fire service connection, and is charged based on the size of the private fire connection serving the property to pay for the costs of maintaining adequate water pressure to serve the private fire service connection. Finally, the Drought Surcharge is only imposed upon the Board's declaration of a Stage 2, 3, or 4 drought, and recovers the increased costs associated with providing water under water shortage conditions.

Proposed FY20 and FY21 Water System Rates and Charges

Overall, the rates and charges for the water system are proposed to increase by 6.5 percent in FY20 and an additional 6.25 percent in FY21. Individual charges are rounded to the nearest whole cent after the increases are applied to the current charges. The impact on a customer's water bill of the proposed increases will differ slightly for each customer class and for individual customers within each customer class depending on water use and meter size. Tables 2 through 6 illustrate the impact of the proposed increases on specific charges for various categories of users. All these tables incorporate the proposed increases consistent with the COS study.

Table 2 illustrates the rates for various single family residential customers in FY19, FY20 and FY21 at varying levels of usage. The bottom row of the table shows the impact of the increases on the average single family residential customer. Note that the average customer is now using about 8 CCF per month, down from the previous historic average use of 10 CCF per month. The monthly

water bill for FY19 based on the average use for single family residential customers is \$56.12 and would rise to \$59.74 in FY20, an increase of \$3.62 or 6.5 percent. In FY21 the monthly water bill would rise to \$63.47, an additional increase of \$3.73 or 6.2 percent.

The table shows the water bill impact from the proposed increases based on differing levels of usage. The user in the 25th percentile is among the lowest user of water at 4 CCF per month; only 25 percent of ratepayers use less. Users in the 50th percentile are the median users at 6 CCF of water; half of ratepayers use more and half use less. Ratepayers in the 75th percentile use 10 CCF of water per month; three quarters of ratepayers use less. Finally, ratepayers in the 95th percentile use 24 CCF per month; 95 percent of ratepayers use less. Monthly bills in FY20 for the range of usage shown below range from \$42.23 to \$161.98 and reflect a 6.5 percent increase from the corresponding monthly bill in FY19. Monthly bills in FY21 range from \$44.87 to \$172.03 and reflect an increase of 6.25 percent over FY20 monthly bills. **Exhibit 1** shows a comparison of the proposed FY20 annual water bill for a typical EBMUD single family residential customer using 8 CCF per month with the water bill for other local water agencies.

Table 2 - Single Family Residential Customer Monthly Water Bill Impacts – Including Proposed Water Service and Flow Charges

Single Family Residential Water Charges on Water Bill								
	Use (CCF)	FY19 Bill	FY20 Bill	Increase from FY19	Percent Change	FY21 Bill	Increase from FY20	Percent Change
25 th Percentile	4	\$39.67	\$42.23	\$2.56	6.5%	\$44.87	\$2.64	6.3%
50 th Percentile (median use)	6	\$47.19	\$50.23	\$3.04	6.4%	\$53.37	\$3.14	6.3%
75 th Percentile	10	\$66.46	\$70.76	\$4.30	6.5%	\$75.17	\$4.41	6.2%
95 th Percentile	24	\$152.12	\$161.98	\$9.86	6.5%	\$172.03	\$10.05	6.2%
Average Single Family Residential Use*	8	\$56.12	\$59.74	\$3.62	6.5%	\$63.47	\$3.73	6.2%

*8 CCF/moth represents recent average single family residential use. Previous comparisons used 10 CCF/mo, which represented historic average single family residential use prior to recent drought conditions.

Table 3 illustrates the FY20 and FY21 monthly bill impact due to increases for multi-family residential and other customers based on the size of the customer's water meter and monthly water usage in CCF.

Table 3 - Other Customer Monthly Water Bill Impacts – Includes Proposed Water Service and Flow Charges

Multi-Family Residential and Non-Residential Water Charges on Water Bill									
	Meter (Inches)	Use (CCF)	FY19 Bill	FY20 Bill	Increase from FY19	Percent Change	FY21 Bill	Increase from FY20	Percent Change
Multi-Family Residential 4 dwelling units	1	25	\$169.95	\$181.12	\$11.17	6.6%	\$192.35	\$11.23	6.2%
Multi-Family Residential 5+dwelling units	1	50	\$302.70	\$322.62	\$19.92	6.6%	\$342.60	\$19.98	6.2%
Commercial	1	50	\$301.70	\$321.12	\$19.42	6.4%	\$341.10	\$19.98	6.2%
Industrial	2	500	\$2,751.36	\$2,928.27	\$176.91	6.4%	\$3,110.35	\$182.08	6.2%

Table 4 illustrates the FY20 and FY21 monthly Water Service and Private Fire Service Charges by meter size. Table 5 illustrates the Proposed Flow Charge and Elevation Surcharge.

Table 4 - Proposed Monthly Water Service Charges (Meter Size) and Private Fire Service Charges (\$/Meter Size)

Monthly Water Service and Private Fire Service Charges on Water Bill						
		FY19	FY20	Percent Change	FY21	Percent Change
Private Fire Service Charge						
	4"	\$127.85	\$136.16	6.5%	\$144.67	6.3%
	6"	\$249.92	\$266.16	6.5%	\$282.80	6.3%
	8"	\$396.39	\$422.16	6.5%	\$448.55	6.3%
Water Service Charge						
Single Family Residential	5/8" & 3/4"	\$24.63	\$26.23	6.5%	\$27.87	6.3%
Multi-Family Residential	2"	\$106.36	\$113.27	6.5%	\$120.35	6.3%
All Other	4"	\$320.13	\$340.94	6.5%	\$362.25	6.3%

Table 5 - Proposed Monthly Water Flow Charge (Volume) and Elevation Surcharge (\$/CCF)

Water Flow and Elevation Charges on Monthly Water Bill					
Flow Charges (\$/CCF)	FY19	FY20	Percent Change	FY21	Percent Change
Single Family Residential					
Tier 1 up to 7 CCF	\$3.76	\$4.00	6.4%	\$4.25	6.25%
Tier 2 up to 16 CCF	\$5.17	\$5.51	6.6%	\$5.85	6.17%
Tier 3 over 16 CCF	\$6.83	\$7.27	6.4%	\$7.72	6.19%
Multi-Family Residential	\$5.31	\$5.66	6.6%	\$6.01	6.18%
All other accounts (commercial/industrial)	\$5.29	\$5.63	6.4%	\$5.98	6.22%
Nonpotable/Recycled Water	\$4.12	\$4.39	6.6%	\$4.66	6.15%
Elevation Surcharge* (\$/CCF)					
Pressure Zone 1	\$0.00	\$0.00	0.0%	\$0.00	0.0%
Pressure Zone 2	\$0.76	\$0.81	6.6%	\$0.86	6.17%
Pressure Zone 3	\$1.58	\$1.68	6.3%	\$1.79	6.55%

*Elevation Surcharge is assessed to certain customers based on location. The Elevation Surcharge is applied to each unit of water delivered to properties in some pressure zones, and is calculated to recover the increased cost of power and facility costs required to pump water to locations 200 feet or more above sea level.

Drought Surcharges

Table 6 below shows the current Drought Surcharge percentages on potable Water Flow Charges. Schedule L – Drought Surcharge Rate Schedule for Water Service (see Chapter 3). The Drought Surcharge percentages are applied to each of the potable Water Flow Charges including the three Single Family Residential Tiers, Multi-Family, and All Other Flow Charges. The Drought Surcharge percentages for each of the four drought stages are independent of each other; the percentage surcharges are not additive to each other. The Drought Surcharge does not apply to the Elevation Surcharge or Nonpotable/Recycle Water flow charge.

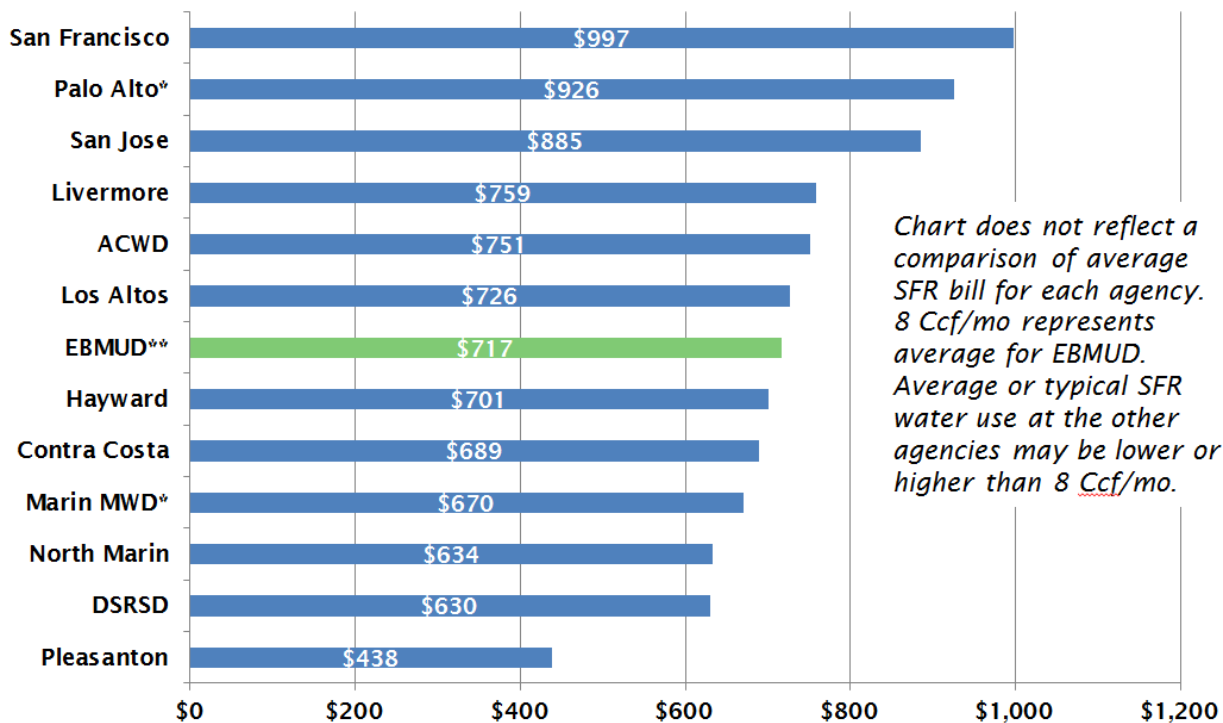
Table 6 - Drought Surcharge Percentages on Potable Water Flow Charges

	Maximum Applicable Drought Surcharge Percentage in 4 Stages			
	1	2	3	4
All potable water flow charges	0%	8%	20%	25%

In the unlikely event that a water shortage occurs, prior to implementing Drought Surcharges, the District will update the drought related costs and develop and adopt surcharges consistent with the COS study, not to exceed the Drought Surcharge percentages listed above. The District's Proposition 218 notice for FY20 and FY21 includes information regarding these Drought Surcharges as a contingency plan.

Exhibit 1

COMPARATIVE RESIDENTIAL WATER CHARGES – 8 Ccf/mo Annual Charge for SFR – July 2019



*FY19 rates, possible rate increases for July 2019

**Proposed FY20 rates

2. Wastewater System Rates and Charges

Chapter 2 – Wastewater System Rates and Charges

INTRODUCTION

The District updates the wastewater system's rates and charges biennially in conjunction with the development of its budget. The charges are designed to recover the costs identified in the proposed operating and capital budgets and to meet Board policy goals. Wastewater system charges for wastewater treatment that are collected on the water bill include the Service Charge, Strength Charge, and Flow Charge. Other Wastewater charges include special fees collected to fund the San Francisco Bay Pollution Prevention Program (SF Bay Pollution Prevention Fees) and the Wet Weather Facilities Charge (WWFC). The District completed a cost of service (COS) study in May 2019 to ensure that all of the District's charges are appropriately and equitably established and consistent with California law, including Proposition 218. The proposed FY20 rates and charges for the wastewater system have been modified to include the COS study adjustments as well as an overall increase to support the revenue requirements and capital and operating budgets for FY20 which results in some components of the wastewater system charges decreasing and others increasing. Overall the FY20 proposed rates will generate 4.0 percent more revenue for the District in FY20 than the current FY19 rates. For FY21, an additional 4.0 percent increase to the proposed FY20 rates is necessary to meet the FY21 revenue requirement. Illustrations of the varying impacts of the COS changes and overall FY20 and FY21 proposed rate increases are presented in this chapter.

Details of the COS adjustments and the FY20 and FY21 rate calculations from the District's May 2019 COS study are shown in Appendix A of this report. They are also addressed in the General Manager's March 21, 2019 memorandum to the Board which discusses the proposed FY20 and FY21 wastewater rates and charges that are subject to Proposition 218 (California Constitution article XIII D, section 6). The rates and charges for the wastewater system will be effective on bills issued on or after July 1, 2019 for FY20, and on or after July 1, 2020 for FY21.

RECOMMENDATIONS

The recommendations in this section cover wastewater system charges including Treatment Charges for Service, Strength and Flow, WWFC, and SF Bay Pollution Prevention Fee.

Recommended changes to the rates and charges for the wastewater system are:

- Modify the wastewater system charges for FY20 to include the COS study adjustments and overall increase for FY20 which result in some wastewater rates and charges decreasing and others increasing.
- Increase the rates proposed for FY20 wastewater system charges an additional 4.0 percent for FY21. The proposed FY20 and FY21 wastewater rate increases support the District's proposed FY20 and FY21 operating and capital expenditures and meets Board policy goals.
- For the wastewater treatment charges collected on the EBMUD water bill, the impact of the combined FY20 and FY21 wastewater rate to the average single family residential (SFR)

customer is an increase of \$1.07 per month or about 4.9 percent compared to the current FY19 bill.

- For the WWFC collected on the property tax bill, the impact of the combined FY20 and FY21 increases for the typical SFR customer is an increase of \$11.96 per year or about 11.5 percent compared to the current FY19 charge.
- Adopt the FY20 and FY21 Wastewater Treatment Rates and Charges as shown in Wastewater System Schedule A – Rates for Treatment Service (see Chapter 3)
- Adopt the FY20 and FY21 Wastewater System Schedule B – Wet Weather Facilities Charge (see Chapter 3).
- Retain the existing SF Bay Pollution Prevention Fee of \$0.20 and \$5.48 per month for residential and non-residential customers respectively.

DISCUSSION

Wastewater Treatment Charges and Wet Weather Facilities Charge

Update wastewater system charges for COS adjustments and increase rate revenue by 4.0 percent in FY20 and 4.0 percent in FY21.

Wastewater system charges cover expenditures in the District's operating and capital budgets and meet the Board's policy goals. The proposed increases address the District's needs as presented in its proposed biennial budget for FY20 and FY21. In 2019, the District conducted a COS study of the wastewater system to ensure that wastewater charges align with the cost to treat wastewater from residential and non-residential customers. Details of the increases in individual charges are shown below under **Wastewater System Cost of Service and FY20 and FY21 Proposed Charges**. Details of the FY20 and FY21 budget objectives, operating budget, capital expenses, and debt expenses are available in the FY20 and FY21 Proposed Biennial Budget and Capital Project Summaries.

The overall wastewater rate increases for FY20 and FY21 will be exactly as previously projected for the wastewater system, but individual components of the wastewater system charges are recommended to be adjusted to reflect the recommendations in the 2019 COS study. The average SFR bill for wastewater treatment based on the average use of 6 hundred cubic feet (CCF) will increase by approximately \$0.20 per month in FY20 and an additional \$0.87 per month in FY21. Wastewater customers also pay a WWFC collected on the property tax bill. Depending on lot size, in FY20 this charge will increase between \$7.50 to \$26.76 per year, and in FY21 between \$4.46 to \$15.90 per year.

As a result of the COS study, in FY20 some wastewater rates and charges would decrease and others would increase. For FY21, wastewater rates and charges would increase an additional 4.0 percent. With the proposed FY20 and FY21 changes to the wastewater system charges, revenue collected from all wastewater system charges would increase by 4 percent in FY20 and an additional 4.0 percent in FY21 from what would be collected under the current FY19 charges. The required revenues collected from the proposed FY20 and FY21 wastewater system charges are

developed from the proposed FY20 and FY21 operating and capital budgets and to meet the Board's financial policy goals. Table 1 below illustrates the amount of revenue needed from the FY20 and FY21 increases to the wastewater system charges to fund FY21 expenditures. Between FY19 and FY21, operation and maintenance (O&M), debt service, and capital expenses are budgeted to increase to varying degrees. In total, expenses in FY21 are projected to be \$154.4 million, 6.8 percent higher than FY19. The District can access a variety of non-wastewater system charge revenues such as bond proceeds, property taxes, and reserves to pay for O&M and capital expenses. These revenues are projected to cover \$45.0 million of expenditures in FY21, leaving \$109.4 million to be paid for from revenues from wastewater system charges. FY19 wastewater system charges are projected to generate \$101.3 million of the necessary \$109.4 million, leaving \$8.1 million, or 8 percent, of incremental expenditures to be addressed from increases in the wastewater system charges. This 8 percent increase is proposed to be distributed over two years, with a 4.0 percent increase in FY20 and a 4.0 percent increase in FY21, consistent with the projections made when the FY18 and FY19 budget was adopted.

Table 1 - Revenue Shortfalls (In Million\$) Addressed Through Rate Increase

	FY19	FY21	2-Yr Δ
Revenue Requirement			
+ O&M expense	\$73.1	\$78.6	7.5%
+ Debt service expense	31.9	29.8	-6.6%
+ Capital expense	39.6	46.0	16.2%
Total expenses =	144.6	154.4	6.8%
- Other revenues	-44.0	-45.0	2.3%
Revenue requirement =	\$100.6	\$109.4	8.7%
Revenue Adjustment			
+ Revenue requirement		\$109.4	
- Revenue from existing rates		-101.3	
Difference =		\$8.1	
Total Rate Revenue Requirement Adjustment		8%	

Wastewater System Cost of Service Study and FY20 and FY21 Proposed Charges

State law and District policy require that the District's property-related rates and charges, including most components of the wastewater system's rates and charges, be based on the cost of providing service. A COS study allocates operating and capital costs to each type of customer based on both the customer's wastewater discharge characteristics and the wastewater facility design and operations. This nexus between wastewater discharge and cost forms the financial and legal basis for setting utility rates and charges. Over time, both customer wastewater discharge characteristics and costs can change and a COS study helps reconcile these changes with revenues under existing rates and charges. COS studies often result in recommended modifications to existing rates and charges.

The District retained Raftelis Financial Consultants (RFC) to perform a COS study for the wastewater system. The RFC study was completed in May 2019 and indicated that the District's charges were generally in line with Proposition 218's cost of service principles, but the study also recommended some adjustments. The recommended adjustments were incorporated into the proposed FY20 and FY21 wastewater system charges. Details of the COS adjustments and the FY20 and FY21 rate calculations from the District's May 2019 COS study are shown in Appendix A of this report. The District believes that its established and proposed rates for wastewater service comply with the substantive standards of California Constitution article XIII D, section 6 and do not exceed the proportional cost of providing wastewater service on a parcel basis at each given level of usage.

The COS study developed detailed operating and capital cost allocations for the treatment processes at the Main Wastewater Treatment Plant (MWWTP), interceptors and wet weather facilities and evaluated alternative methods of measuring wastewater strength. Annual operating and capital costs funded by wastewater system rates and charges were allocated to wastewater treatment categories of flow, chemical oxygen demand (COD), and total suspended solids (TSS). The flow, COD, and TSS costs were then assigned to various customer classes in proportion to their loadings in compliance with Proposition 218. The billed strength loadings assumptions for residential and non-residential customers were validated with an analysis of measurements at the MWWTP. In addition, a decision was made to use the COD instead of the chemical oxygen demand filtered (CODf) as a measure of strength, to be more consistent with other larger agencies and because the District's customer base no longer has many high strength industrial customers where the distinction is relevant. The WWFC funds capital expenses for the inflow and infiltration (I&I) facilities required to handle the wet weather flows that enter the wastewater system through the local collection systems and sewer connections. The recommendations from the COS study results in slight changes to the residential and non-residential wastewater treatment and wet weather charges.

Key findings of the wastewater COS study are summarized below:

Wastewater System Treatment Charges

- Lower influent strength measured at the treatment plant confirms lower strength for residential customers, as well as non-residential customers. The result is a decrease in the residential treatment charge and a slight shift in the proportion of costs to non-residential uses with a corresponding increase in non-residential customer charges.
- The wastewater monthly cap of 9 CCF for SFR was reviewed and confirmed – usage above 9 CCF is considered to be largely irrigation usage and thus does not enter the wastewater system.
- Wastewater system treatment charges continue to be billed based on volume of flow (in \$/CCF). The strength of the flow is also considered and is measured in pounds of total suspended solids (\$/pound TSS) and pounds of COD (\$/pound COD), instead of CODf in order to be more consistent with other utilities.

Wet Weather Facilities Charge

- The COS analysis indicates adjustments to the WWFC are needed to reflect current and updated costs of the program. The result is a slight increase in the I&I costs assigned to the WWFC.

Based on the District's COS study, the District will retain its existing wastewater customer classes and rate structure. Wastewater service fees have three customer classes: residential, multi-family residential, and non-residential. Non-residential customers are further classified based on the type of business operated, which are grouped together or identified based on common characteristics of wastewater contributed to the system, including flow and strength. Together, the rates for the components of the wastewater service fees are structured to proportionately recover the costs of providing wastewater services among the various customer classes. The rates for the wastewater fees have five components: a Service Charge, a Flow Charge, a Strength Charge, a SF Bay Pollution Prevention Fee, and a WWFC.

Proposed FY20 and FY21 Wastewater System Rates and Charges

As a result of implementing the recommendations from the COS study for the proposed rates and charges for the wastewater system, some wastewater rates and charges in FY20 would decrease and others would increase. For FY21, wastewater rates and charges would increase an additional 4.0 percent. With the proposed FY20 and FY21 changes to the wastewater system rates and charges, revenue collected from all wastewater system rates and charges would increase by 4.0 percent in FY20, and an additional 4.0 percent in FY21 from what would be collected under the current FY19 charges. The impact of the proposed changes to the FY20 and FY21 wastewater system rates and charges on customer bills will depend on the type of customer and the volume of wastewater discharge. For the typical single-family residential homeowner who pays both the wastewater treatment charges collected on the water bill and the Wet Weather Facilities Charge collected on the property tax bill, the total increase for wastewater system rates and charges is 2.7 percent for FY20, and 4.0 percent for FY21.

Individual charges proposed for FY20 and FY21 are rounded to the nearest whole cent after the increases are applied to the current service charges. The impact on a customer's bill of the proposed increases will differ slightly for each customer class and for individual customers within each customer class depending on the respective monthly wastewater flow. Tables 2 through 4 illustrate the impact of the proposed increases on specific charges for various categories of users. Six CCF per month represents the average indoor water use for residential customers. All these tables incorporate the proposed increases consistent with the 2019 COS study.

Table 2 shows the customer impacts of the proposed FY20 and FY21 charges for wastewater treatment.

Table 2 - Customers' Monthly Wastewater Treatment Bill Impacts - Includes Service, Flow and Strength Charges and SF Bay Pollution Prevention Fees

Monthly Wastewater Charges on Water Bill									
	Meter (Inches)	Use (CCF)	FY19 Bill	FY20 Bill	Increase from FY19	Percent Change	FY21 Bill	Increase from FY20	Percent Change
Average Single Family Residential	5/8	6	\$21.95	\$22.15	\$0.20	0.9%	\$23.02	\$0.87	3.9%
Single Family Residential	5/8	9	\$25.55	\$25.96	\$0.41	1.6%	\$26.98	\$1.02	3.9%
Multi-Family Residential 4 dwelling units	1	25	\$70.64	\$68.81	\$(1.83)	-2.6%	\$71.50	\$2.69	3.9%
Multi-Family Residential 5+ dwelling units	1	50	\$143.62	\$149.52	\$5.90	4.1%	\$155.30	\$5.78	3.9%
Commercial	1	50	\$148.10	\$154.00	\$5.90	4.0%	\$159.78	\$5.78	3.8%
Industrial	2	500	\$8,006.60	\$9,037.50	\$1,030.90	12.9%	\$9,387.78	\$350.28	3.9%

The unit rates listed in Table 3 are used to calculate the Strength Charge and Flow Charge for residential and non-residential customers based on the billable constituents in their wastewater discharge. The unit rates are based upon an allocation of costs to billable constituents for flow, COD and TSS which are used to determine the unit cost for each billable constituent. The unit rate increases listed in Table 3 combine the results of the COS study with the overall rate increases for FY20 and FY21. Due to the proposed FY20 switch to COD from CODf, there is not a current COD unit rate for FY19.

Table 3 - Proposed Wastewater Treatment Unit Rates for Residential and Non-Residential Customers

Wastewater Treatment Unit Rates					
Unit Rates	FY19	FY20	Percent Change	FY21	Percent Change
Service Charge (\$/account)	\$6.12	\$7.02	14.7%	\$7.30	4.0%
Flow (\$/CCF)	\$1.196	\$1.266	5.9%	\$1.317	4.0%
Strength - COD (\$/pound)	N/A	\$0.129	N/A	\$0.134	3.9%
Strength -Total Suspended Solids (\$/pound)	\$0.517	\$0.530	2.5%	\$0.551	4.0%

Residential Service Charges

The residential service charge on the water bill is composed of the treatment charges and a separate SF Bay Pollution Prevention Fee. Residential customers include single family customers and multi-family customers with up to four dwelling units per premise.

For the wastewater treatment, unit rates are applied to residential discharge characteristics to calculate the fixed residential Strength Charge. Residential customers also pay the Service Charge and a Flow Charge that varies with water use to a maximum of 9 CCF per month per dwelling unit. The 9 CCF per month per dwelling unit maximum flow charges only applies to residential customers. Under the proposed increase, the average wastewater charges on the residential customer bill will increase \$0.20 per month in FY20 from \$21.95 to \$22.15 (0.9 percent). For FY21, the average wastewater bill will increase \$0.87 per month from \$22.15 to \$23.02 (3.9 percent). The monthly charges include the SF Bay Pollution Prevention Fee (described below), which remains at \$0.20 per month for FY20 and FY21 for residential customers. In addition to the wastewater system charges collected on the water bill, wastewater customers also pay a WWFC (described below) that varies with lot size and is collected on the property tax bill.

Exhibit 1 compares the estimated annual residential wastewater collection and treatment service charges with comparable charges of other agencies. The total estimated average District charge for FY20, including the SF Bay Pollution Prevention Fee and WWFC, is \$377 per year for treatment and wet weather. It should be noted that in Exhibit 1 the average city charge for wastewater collection service is added to the District's wastewater treatment charges in order to calculate an average total charge for residential wastewater service. The total residential service charge is then compared to similar service charges for other agencies and communities in the Bay Area.

Non-residential Service Charges

Non-residential customers are further classified based on the type of business operated, and assigned into Business Classification Codes (BCC) based on common characteristics of wastewater contributed to the system, including flow and strength. Non-residential users are assigned typical waste strengths by BCC for COD and TSS. The unit rates are applied to the assigned strengths for each BCC to determine individual non-residential combined flow and strength charges (\$ per CCF). The proposed FY20 and FY21 non-residential combined flow and strength charges for each BCC rates are shown on Schedule A – Wastewater Department Rates for Treatment Service (see Chapter 3). These charges are based on the FY20 and FY21 proposed unit rates for flow and strength as determined by the 2019 COS study plus the overall 4.0 percent increases to support FY20 and FY21 revenue requirements and capital and operating budgets. The non-residential combined flow and strength charges have been rounded to the nearest whole cents (\$ per CCF). After the adjustments from the 2019 COS study and a 4.0 percent increase, the FY20 non-residential combined flow and strength charges are proposed to increase between 3.7 percent to 14.5 percent, depending on BCC. In FY21, non-residential combined flow and strength charges are proposed to be increased by 4.0 percent, but due to rounding of the charges to the whole cent, the resulting increases range from 3.8 percent to 4.7 percent when compared to FY20 charges. In addition to the wastewater system charges collected on the water bill, wastewater customers also pay a WWFC collected on the property tax bill depending on lot size (described below). For customers who do not receive a property tax bill (tax-exempt entities) the charge is collected on the water service bill.

Non-residential users also pay the proposed Service Charge of \$7.02 in FY20 and \$7.30 in FY21 on their monthly water service bill. The SF Bay Pollution Prevention Fee of \$5.48 for FY20 and FY21 is also included on the monthly water service bill for non-residential customers.

Wet Weather Facilities Charge

The WWFC is a fixed charge that is imposed on the property itself. The WWFC funds capital expenses for the I&I facilities (wet weather facilities, interceptors, pumping stations and storage basins) that are required to handle the wet weather flows that enter the wastewater system through the local wastewater collection systems and sewer connections. The volume of wet weather flows that enter the wastewater system from each property is proportional to the size of the collection system needed to serve each property. Properties with larger lots require more linear feet of collection system which presents more opportunity for storm water and ground water to enter through defects in the collection system. The volume of wet weather flows in the collection system has no direct relationship to a customer's monthly water use; nor is it dependent on whether the wastewater discharge is from a residential or non-residential customer. For these reasons, lot size rather than water use is used as basis of the WWFC. The structure of WWFC is based on the rationale that larger lots contribute proportionally more to the wet weather flows than smaller lots. Accordingly, the WWFC is structured into three generalized lot sizes (or bins): 0 to 5,000 square feet (sq. ft.), 5,001 to 10,000 sq. ft., and over 10,001 sq. ft. The WWFC is based on median lot size for each of these bins.

The I&I capital facilities are designed to handle wet weather flows that are in excess of the normal wastewater discharges from wastewater customers. Because the WWFC is based on the size of the property and is unrelated to water or wastewater usage at the property, the District collects the WWFC on the property tax bill for all parcels that have connections to the local wastewater collection systems within the District's wastewater service area. The WWFC for public agencies that are exempt from property taxes is collected through the District's billing process. As part of the FY20 and FY21 Proposition 218 rates approval process, the Board will adopt a separate resolution establishing the collection of the FY20 and FY21 WWFC on the property tax bill for Alameda and Contra Costa counties. In addition, prior to the submittal of the FY20 and FY21 WWFC filings with Alameda and Contra Costa counties, the complete listing of the WWFC by parcel number will be filed with the Board.

The WWFC was reviewed as part of the 2019 COS study. With adjustment for the 2019 COS study and the proposed overall 4.0 percent FY20 wastewater rate increase, the WWFC will increase 7.2 percent in FY20 when compared to the FY19 charge. The proposed increase for FY21 is 4.0 percent.

Table 4 shows the proposed 7.2 percent increase in FY20 and proposed 4.0 percent increase in FY21 for the WWFC for each of the three lot size categories.

Table 4 - Proposed Wet Weather Facilities Charge - (\$/Lot Size)

Wet Weather Facilities Charge on Property Tax Bill							
Lot Size	FY19 Bill	FY20 Bill	Increase from FY19	Percent Change	FY21 Bill	Increase from FY20	Percent Change
Small Lot 0 - 5,000 sq. ft.	\$103.74	\$111.24	\$7.50	7.2%	\$115.70	\$4.46	4.0%
Medium Lot 5,001 - 10,000 sq. ft.	\$162.06	\$173.78	\$11.72	7.2%	\$180.74	\$6.96	4.0%
Large Lot >10,000 sq. ft.	\$370.44	\$397.20	\$26.76	7.2%	\$413.10	\$15.90	4.0%

Wastewater Pollution Prevention Programs

The District must undertake a variety of activities to successfully operate the Pretreatment Program and Pollution Prevention Program required by the United States Environmental Protection Agency (EPA) and the State of California (through the Regional Water Quality Control Board (RWQCB)).

Pretreatment Program activities include:

- Establishing discharge permit and monitoring requirements for industrial and commercial users
- Conducting inspections of industrial and commercial facilities
- Sampling industrial and commercial users' waste streams
- Reviewing industrial and commercial user reports
- Determining industrial and commercial user compliance status
- Initiating enforcement actions
- Reporting progress to the EPA and RWQCB

SF Bay Pollution Prevention Program activities include:

For non-residential customers

- Identifying and monitoring pollutants of concern
- Developing pollution prevention strategies to reduce pollutants of concern from targeted commercial businesses
- Managing the federally-mandated Dental Amalgam program for dental dischargers
- Developing a permitting program for the emerging commercial businesses with potential pollutants of concern (e.g., cannabis growing and processing)
- Developing pollution prevention control strategies
- Conducting targeted outreach for identified business types including developing and distributing best management practices information and pollution prevention literature
- Coordinating with other wastewater agencies to obtain efficiencies in program development and production of outreach materials
- Providing pollution prevention information for businesses on the District's website

For residential customers

- Targeting outreach for to reduce residential discharges of pollutants of concern by creating public advertising campaigns and attending public events, providing in-person education, and outreach to residents and community groups
- Developing collaborative efforts with other wastewater agencies to obtain economies of scale and other efficiencies
- Establishing strategic partnerships with local environmental organizations such as Save The Bay, Baykeeper, and Environmental Working Group
- Conducting research to identify possible control strategies for residential sources of emerging pollutants of concern
- Developing and implementing product stewardship activities
- Providing opportunities for residential customers to dispose of targeted pollutants in an environmentally responsible manner
- Providing pollution prevention information for residents on the District's website

To effectively implement and ensure compliance with the Federal and State pretreatment program regulations, the District implements a permitting, monitoring, and enforcement response system approved by the EPA. The EPA requires that the District provide sufficient budget and staff for program implementation. Sufficient resources and qualified personnel are funded primarily by fees that are applied to industrial and commercial users. Each year, the District's Pretreatment and Pollution Prevention Program budget and source of funding is submitted to the EPA and RWQCB.

In response to continuing changes in the National Pretreatment Program and to meet requirements of the District's MWWTP National Pollutant Discharge Elimination System Permit, the District must continue to implement a robust Pretreatment Program and Pollution Prevention Program. Funds for the Pollution Prevention Program are generated by the SF Bay Pollution Prevention Fees from residential and non-residential customers. Funds to operate the Pretreatment Programs are generated from fees for Wastewater Discharge Permits, Monitoring and Testing, and Violation Follow-up activities.

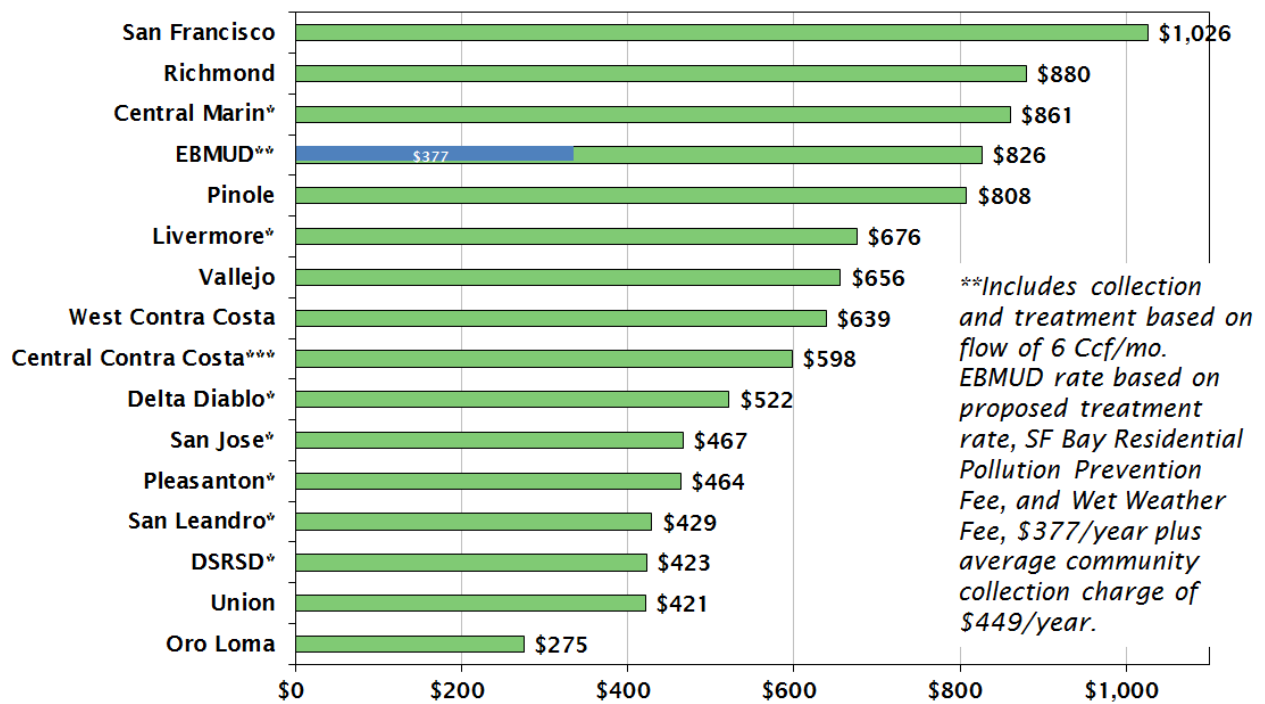
SF Bay Pollution Prevention Fees

The Pollution Prevention Program, required by the RWQCB, develops and implements strategies to minimize and monitor pollutants from both residential and non-residential sources. The fee applies to accounts in the District's wastewater service area to cover costs for program implementation. The SF Bay Pollution Prevention Fee for non-residential customers will remain \$5.48 per month for FY20 and FY21 to fund the pollution prevention activities that target pollutants from non-residential customers. The fee for residential customers will remain \$0.20 per month for FY20 and FY21 to fund the pollution prevention activities that target pollutants from residential customers. The SF Bay Pollution Prevention Fees are collected on the water bill in addition to the wastewater treatment charges and have not increased since 2008.

Exhibit 1

COMPARATIVE RESIDENTIAL WASTEWATER CHARGES

Annual Charge for SFR – July 2019



*FY19 rates, possible rate increases for July 2019

***Proposed FY20 rates

**3a. Schedules of Rates,
Charges and Fees FY20**

RECOMMENDED SCHEDULES OF RATES, CHARGES AND FEES

FY20

Water System

Schedule A – Rate Schedule for Water Service

Schedule L – Drought Surcharge Rate Schedule For Water Service

Wastewater System

Schedule A – Rates for Treatment Service

Schedule B – Wet Weather Facilities Charge

Schedule A

Rate Schedule for Water Service

FY20



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

A. ONE MONTH BILLING

Bills for all metered services shall consist of:

FIRST – A WATER SERVICE CHARGE based on the size of a standard meter:

METER SIZE	SERVICE CHARGE AMOUNT	
5/8 and 3/4 inch	\$24.63	<u>\$26.23</u>
1 inch	37.20	<u>39.62</u>
1-1/2 inch	68.65	<u>73.11</u>
2 inch	106.36	<u>113.27</u>
3 inch	206.96	<u>220.41</u>
4 inch	320.13	<u>340.94</u>
6 inch	634.43	<u>675.67</u>
8 inch	1,011.64	<u>1,077.40</u>
10 inch	1,451.69	<u>1,546.05</u>
12 inch	2,017.52	<u>2,148.66</u>
14 inch	2,583.30	<u>2,751.21</u>
16 inch	3,274.84	<u>3,487.70</u>
18 inch	3,966.36	<u>4,224.17</u>

The service charge for a special type of meter or for a battery of meters installed on one service in lieu of one meter will be based on the size of a single standard meter of equivalent capacity as determined by the District.

Effective July 1, 1997, when a meter larger than 4 inches is required for a single-family residential customer to maintain adequate water pressure, the maximum service charge amount shall be set at the 4-inch meter level.



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

SECOND – A WATER FLOW CHARGE FOR WATER DELIVERED based on one month meter readings for all water delivered per unit of water (1 unit = 100 cu. ft. = 748 gallons):

<u>Potable Water Service</u>	WATER FLOW CHARGE PER <u>UNIT</u> 100 CU. FT.	
Single Family Residential Accounts:		
For the first 172 gpd	\$3.76	<u>\$4.00</u>
For all water used in excess of 172 gpd, up to 393 gpd	5.17	<u>5.51</u>
For all water used in excess of 393 gpd	6.83	<u>7.27</u>
Multiple Family Residential Accounts:		
For all water used	5.31	<u>5.66</u>
All Other Water Use:		
For all water used	5.29	<u>5.63</u>

All individually metered multi-family dwelling units or individually metered mobile home residential units that receive District service shall be billed at the single family residential rate.

<u>Nonpotable/Recycled Water Service</u>	WATER FLOW CHARGE PER <u>UNIT</u> 100 CU. CT.	
For all water used	\$4.12	<u>\$4.39</u>



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

B. TWO MONTH BILLING

Bills for all metered services shall consist of:

FIRST – A WATER SERVICE CHARGE based on the size of a standard meter:

METER SIZE	SERVICE CHARGE AMOUNT	
5/8 and 3/4 inch	\$49.26	<u>\$52.46</u>
1 inch	74.40	<u>79.24</u>
1-1/2 inch	137.30	<u>146.22</u>
2 inch	212.72	<u>226.54</u>
3 inch	413.92	<u>440.82</u>
4 inch	640.26	<u>681.88</u>
6 inch	1,268.86	<u>1,351.34</u>
8 inch	2,023.28	<u>2,154.80</u>
10 inch	2,903.38	<u>3,092.10</u>
12 inch	4,035.04	<u>4,297.32</u>
14 inch	5,166.60	<u>5,502.42</u>
16 inch	6,549.68	<u>6,975.40</u>
18 inch	7,932.72	<u>8,448.34</u>

The water service charge for a special type of meter or for a battery of meters installed on one service in lieu of one meter will be based on the size of a single standard meter of equivalent capacity as determined by the District.

Effective July 1, 1997, when a meter larger than 4 inches is required for a single-family residential customer to maintain adequate water pressure, the maximum service charge amount shall be set at the 4-inch meter level.



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

SECOND – A WATER FLOW CHARGE FOR WATER DELIVERED based on two month meter readings for all water delivered per unit of water (1 unit = 100 cu. ft. = 748 gallons):

<u>Potable Water Service</u>	WATER FLOW CHARGE PER <u>UNIT</u> 100 CU. FT.	
Single Family Residential Accounts:		
For the first 172 gpd	\$3.76	<u>\$4.00</u>
For all water used in excess of 172 gpd, up to 393 gpd	5.17	<u>5.51</u>
For all water used in excess of 393 gpd	6.83	<u>7.27</u>
Multiple Family Residential Accounts:		
For all water used	5.34	<u>5.66</u>
All Other Water Use:		
For all water used	5.29	<u>5.63</u>

All individually metered multi-family dwelling units or individually metered mobile home residential units that receive District service shall be billed at the single family residential rate.

<u>Nonpotable/Recycled Water Service</u>	WATER FLOW CHARGE PER <u>UNIT</u> 100 CU. CT.	
For all water used	\$4.12	<u>\$4.39</u>

C. EXCEPTIONS TO TWO MONTH BILLING

Except as provided below, customer accounts shall be subject to bi-monthly meter reading and customer billing schedules

- Accounts for which the average monthly bill is estimated to exceed \$1,500; such accounts will be billed monthly.
- Accounts for which there are reasonable and justifiable customer requests for monthly billing.
- Accounts for which the average monthly bill is estimated to be between \$100 and \$1,500, and the customer service manager recommends monthly billing based on an evaluation of credit and/or collection problems.



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

D. PRIVATE FIRE SERVICES

Effective July 1, 2005, the rates for Private Fire Services shall consist of:

FIRST – A MONTHLY SERVICE CHARGE based on the size of a standard meter:

METER SIZE	SERVICE CHARGE AMOUNT	
5/8 and 3/4 inch	\$13.11	<u>\$13.96</u>
1 inch	18.01	<u>19.18</u>
1-1/2 inch	30.20	<u>32.16</u>
2 inch	44.84	<u>47.75</u>
3 inch	83.92	<u>89.37</u>
4 inch	127.85	<u>136.16</u>
6 inch	249.92	<u>266.16</u>
8 inch	396.39	<u>422.16</u>
10 inch	567.27	<u>604.14</u>
12 inch	786.97	<u>838.12</u>
14 inch	1,006.69	<u>1,072.12</u>
16 inch	1,275.25	<u>1,358.14</u>
18 inch	1,543.78	<u>1,644.13</u>

Effective July 1, 1997, when a meter larger than 4 inches is required for a single-family residential customer to maintain adequate water pressure, the maximum service charge amount shall be set at the 4-inch meter level.

SECOND – A WATER FLOW CHARGE FOR WATER DELIVERED based on two-month meter readings for all water delivered per unit~~100 cu. ft.~~:

There shall be no charge for water through such services extinguishing accidental fires, but any water lost through leakage or used in violation of the District's Regulations shall be paid at the rate for general use and may be subject to a penalty as may be established by the District.



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

E. ELEVATION SURCHARGE

Elevation Designator	AMOUNT PER <u>UNIT</u> 100 CU. FT.	
<u>Pressure Zone 1: Elevation Designator</u> 0 and 1	\$0.00	
<u>Pressure Zone 2: Elevation Designator</u> 2 through 5	0.76	<u>0.81</u>
<u>Pressure Zone 3: Elevation Designator</u> 6 and greater	1.58	<u>1.68</u>

The elevation surcharge is determined by the pressure zone in which the service connection is located. Pressure zones are identified by designations that include an elevation designator.

Schedule L

Drought Surcharge Rate Schedule for Water Service

FY20



SCHEDULE L – DROUGHT SURCHARGE RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE 07/12/17

The rates for the Water Flow Charge shown in Schedule A may be increased up to the following maximum percentages during the specified declared drought stage.

A TEMPORARY SURCHARGE FOR POTABLE WATER DELIVERED based on one month or two months of meter readings for all water delivered as a percentage of the total Water Flow Charge on customer bills:

DROUGHT SURCHARGES ON TOTAL WATER FLOW CHARGE FOR WATER DELIVERED				
	Maximum Applicable Drought Surcharge Percentage ¹ in 4 Stages			
	Stage 1	Stage 2	Stage 3	Stage 4
All potable water flow charges	0%	8%	20%	25%

¹Drought surcharge percentage increase will be applied to the applicable rate of the customer's potable Water Flow Charge from Schedule A – Rate Schedule for Water Service. Prior to implementing the drought surcharges, the District will update drought related costs and develop surcharges based on the updated cost of service. Any surcharges that are imposed will be consistent with the District's staged system of drought surcharges and will not exceed the drought surcharge percentages listed in this Schedule.

Wastewater Department

Schedule A

Rates for Treatment Service

FY20



SCHEDULE A – WASTEWATER DEPARTMENT RATES FOR TREATMENT SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

Current

I. Unit Treatment Rates (for permit accounts)

Flow (\$ per <u>unit, 1 unit = 100 cubic feet = 748 gallons</u>)	\$1.196	<u>\$1.266</u>
<u>Chemical Oxygen Demand</u> ^f (\$ per pound of discharge)	0.354	<u>0.129</u>
<u>Total</u> Suspended Solids (\$ per pound)	0.517	<u>0.530</u>

Unit treatment rates for Flow, Chemical Oxygen Demand ~~filtered~~-(COD^f), Total Suspended Solids (TSS) and a Service Charge are applied to all users unless otherwise indicated.

II. Residential Monthly Charges

(6514 Multi-Family under 5 dwelling units & 8800 Single-Family)

A. Service Charge (per account)	\$6.12	<u>\$7.02</u>
B. Strength Charge (per dwelling unit)	8.43	<u>7.31</u>
Minimum monthly charge per household	14.55	<u>14.33</u>
C. Plus: A flow charge of \$ 1.20 <u>1.27</u> per <u>unit</u> cubic ft. applied to a maximum of 9 units (per dwelling unit)		
Minimum monthly charge at 0 units	\$0.00	
Maximum monthly charge at 9 units	10.80	<u>11.43</u>
D. Total Residential Charge (A+B+C above) ¹		
Minimum monthly charge (for 8800)	\$14.55	<u>\$14.33</u>
Maximum monthly charge (for 8800)	25.35	<u>25.76</u>
Average monthly charge (for 8800)	21.75	<u>21.95</u>

¹Does not include SF Bay Residential Pollution Prevention Fee

III. Non-Residential Charges

A. Monthly service charge (per account)	\$6.12	<u>\$7.02</u>
B. Treatment charge including flow processing (per <u>unit</u> 100 cubic feet of sewage discharge)		
2010 Meat Products	\$7.85	<u>\$8.90</u>
2011 Slaughterhouses	7.92	<u>8.50</u>
2020 Dairy Product Processing	6.21	<u>6.98</u>
2030 Fruit and Vegetable Canning	5.04	<u>5.61</u>
2040 Grain Mills	5.18	<u>5.58</u>



SCHEDULE A – WASTEWATER DEPARTMENT RATES FOR TREATMENT SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

	Current	
2050 Bakeries (including Pastries)	\$8.82	<u>\$9.65</u>
2060 Sugar Processing	4.83	<u>5.53</u>
2077 Rendering Tallow	15.80	<u>16.74</u>
2080 Beverage Manufacturing & Bottling	3.74	<u>4.19</u>
2090 Specialty Foods Manufacturing	15.99	<u>18.05</u>
2600 Pulp and Paper Products	4.45	<u>4.79</u>
2810 Inorganic Chemicals Mfr.	5.93	<u>6.16</u>
2820 Synthetic Material Manufacturing	1.36	<u>1.44</u>
2830 Drug Manufacturing	2.79	<u>3.11</u>
2840 Cleaning and Sanitation Products	5.64	<u>6.30</u>
2850 Paint Manufacturing	11.01	<u>12.14</u>
2893 Ink and Pigment Manufacturing	3.88	<u>4.39</u>
3110 Leather Tanning and Finishing	15.07	<u>16.77</u>
3200 Earthenware Manufacturing	3.24	<u>3.40</u>
3300 Primary Metals Manufacturing	2.56	<u>2.69</u>
3400 Metal Products Fabricating	1.47	<u>1.57</u>
3410 Drum and Barrel Manufacturing	15.21	<u>17.08</u>
3470 Metal Coating	1.60	<u>1.71</u>
4500 Air Transportation	2.07	<u>2.25</u>
4951 Groundwater Remediation	1.24	<u>1.28</u>
5812 Food Service Establishments	5.47	<u>5.83</u>
6513 Apartment Buildings (5 or more <u>dwelling</u> units)	2.73	<u>2.83</u>
7000 Hotels, Motels with Food Service	3.96	<u>4.19</u>
7210 Commercial Laundries	3.46	<u>3.77</u>
7215 Coin Operated Laundromats	2.60	<u>2.83</u>
7218 Industrial Laundries	9.55	<u>10.73</u>
7300 Laboratories	1.87	<u>2.02</u>
7542 Automobile Washing and Polishing	2.48	<u>2.68</u>
8060 Hospitals	2.42	<u>2.57</u>
8200 Schools	1.76	<u>1.89</u>
All Other Business Classification Code (includes dischargers of only segregated domestic wastes from sanitary conveniences)	2.73	<u>2.83</u>



SCHEDULE A – WASTEWATER DEPARTMENT RATES FOR TREATMENT SERVICE

EFFECTIVE ~~07/01/18~~ 07/01/19

Multi-Use Food Service Establishments and Domestic Waste Accounts

Accounts identified by EBMUD where there is one or more food service establishments or bakeries sharing the water meter with establishments or operations with only domestic waste discharges. These accounts are assigned an MT code based on the percentage split of the discharge from the food service establishment operations or bakeries and domestic waste. The unit treatment charge for each MT Code is calculated from the food service establishment or bakeries treatment rate and the domestic waste treatment rate.

MT Code		Current	
A	0-9% Food, 91-100% Domestic	\$2.73	<u>\$2.830</u>
B	10-19% Food, 81-90% Domestic	3.00	<u>3.130</u>
C	20-29% Food, 71-80% Domestic	3.28	<u>3.430</u>
D	30-39% Food, 61-70% Domestic	3.55	<u>3.730</u>
E	40-49% Food, 51-60% Domestic	3.83	<u>4.030</u>
F	50-59% Food, 41-50% Domestic	4.10	<u>4.330</u>
G	60-69% Food, 31-40% Domestic	4.37	<u>4.630</u>
H	70-79% Food, 21-30% Domestic	4.65	<u>4.930</u>
I	80-89% Food, 11-20% Domestic	4.92	<u>5.230</u>
J	90-99% Food, 1-10% Domestic	5.20	<u>5.530</u>
K	0-9% Bakery, 91-100% Domestic	2.73	<u>2.830</u>
L	10-19% Bakery, 81-90% Domestic	3.34	<u>3.512</u>
M	20-29% Bakery, 71-80% Domestic	3.95	<u>4.194</u>
N	30-39% Bakery, 61-70% Domestic	4.56	<u>4.876</u>
O	40-49% Bakery, 51-60% Domestic	5.17	<u>5.558</u>
P	50-59% Bakery, 41-50% Domestic	5.78	<u>6.240</u>
Q	60-69% Bakery, 31-40% Domestic	6.38	<u>6.922</u>
R	70-79% Bakery, 21-30% Domestic	6.99	<u>7.604</u>
S	80-89% Bakery, 11-20% Domestic	7.60	<u>8.286</u>
T	90-99% Bakery, 1-10% Domestic	8.21	<u>8.968</u>
Minimum Monthly Treatment Charge:			
6513	Apartment Buildings (5 or more units)	\$48.27	<u>\$43.57</u>
	All Others	6.12	<u>7.02</u>

Wastewater Department

Schedule B

Wet Weather Facilities Charge

FY20



SCHEDULE B (Formerly Schedule F) – WASTEWATER DEPARTMENT WET WEATHER FACILITIES CHARGE

EFFECTIVE ~~07/01/18~~ 07/01/19

Annual Charge Collected on Property Tax Bill

TYPE	RATE
Small Lot (0 - 5,000 sq. ft.)	\$103.74 <u>\$111.24</u>
Medium Lot (5,001 – 10,000 sq. ft.)	\$162.06 <u>\$173.78</u>
Large Lot (> 10,000 sq. ft.)	\$370.44 <u>\$397.20</u>

**3b. Schedules of Rates,
Charges and Fees FY21**

RECOMMENDED SCHEDULES OF RATES, CHARGES AND FEES

FY21

Water System

Schedule A – Rate Schedule for Water Service

Wastewater System

Schedule A – Rates for Treatment Service

Schedule B – Wet Weather Facilities Charge

Schedule A

Rate Schedule for Water Service

FY21



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/19~~ 07/01/20

A. ONE MONTH BILLING

Bills for all metered services shall consist of:

FIRST – A WATER SERVICE CHARGE based on the size of a standard meter:

METER SIZE	SERVICE CHARGE AMOUNT	
5/8 and 3/4 inch	\$26.23	<u>\$27.87</u>
1 inch	39.62	<u>42.10</u>
1-1/2 inch	73.11	<u>77.68</u>
2 inch	113.27	<u>120.35</u>
3 inch	220.41	<u>234.19</u>
4 inch	340.94	<u>362.25</u>
6 inch	675.67	<u>717.90</u>
8 inch	1,077.40	<u>1,144.74</u>
10 inch	1,546.05	<u>1,642.68</u>
12 inch	2,148.66	<u>2,282.95</u>
14 inch	2,751.21	<u>2,923.16</u>
16 inch	3,487.70	<u>3,705.68</u>
18 inch	4,224.17	<u>4,488.18</u>

The service charge for a special type of meter or for a battery of meters installed on one service in lieu of one meter will be based on the size of a single standard meter of equivalent capacity as determined by the District.

Effective July 1, 1997, when a meter larger than 4 inches is required for a single-family residential customer to maintain adequate water pressure, the maximum service charge amount shall be set at the 4-inch meter level.



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/19~~ 07/01/20

SECOND – A WATER FLOW CHARGE FOR WATER DELIVERED based on one month meter readings for all water delivered per unit of water (1 unit = 100 cu. ft. = 748 gallons):

<u>Potable Water Service</u>	WATER FLOW CHARGE PER <u>UNIT</u> 100 CU. FT.	
Single Family Residential Accounts:		
For the first 172 gpd	\$4.00	<u>\$4.25</u>
For all water used in excess of 172 gpd, up to 393 gpd	5.51	<u>5.85</u>
For all water used in excess of 393 gpd	7.27	<u>7.72</u>
Multiple Family Residential Accounts:		
For all water used	5.66	<u>6.01</u>
All Other Water Use:		
For all water used	5.63	<u>5.98</u>

All individually metered multi-family dwelling units or individually metered mobile home residential units that receive District service shall be billed at the single family residential rate.

<u>Nonpotable/Recycled Water Service</u>	WATER FLOW CHARGE PER <u>UNIT</u> 100 CU. CT.	
For all water used	\$4.39	<u>\$4.66</u>



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/19~~ 07/01/20

B. TWO MONTH BILLING

Bills for all metered services shall consist of:

FIRST – A WATER SERVICE CHARGE based on the size of a standard meter:

METER SIZE	SERVICE CHARGE AMOUNT	
5/8 and 3/4 inch	\$52.46	<u>\$55.74</u>
1 inch	79.24	<u>84.20</u>
1-1/2 inch	146.22	<u>155.36</u>
2 inch	226.54	<u>240.70</u>
3 inch	440.82	<u>468.38</u>
4 inch	681.88	<u>724.50</u>
6 inch	1,351.34	<u>1,435.80</u>
8 inch	2,154.80	<u>2,289.48</u>
10 inch	3,092.10	<u>3,285.36</u>
12 inch	4,297.32	<u>4,565.90</u>
14 inch	5,502.42	<u>5,846.32</u>
16 inch	6,975.40	<u>7,411.36</u>
18 inch	8,448.34	<u>8,976.36</u>

The water service charge for a special type of meter or for a battery of meters installed on one service in lieu of one meter will be based on the size of a single standard meter of equivalent capacity as determined by the District.

Effective July 1, 1997, when a meter larger than 4 inches is required for a single-family residential customer to maintain adequate water pressure, the maximum service charge amount shall be set at the 4-inch meter level.



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/19~~ 07/01/20

SECOND – A WATER FLOW CHARGE FOR WATER DELIVERED based on two month meter readings for all water delivered per 1 unit of water (1 unit = 100 cu. ft. = 748 gallons):

<u>Potable Water Service</u>	WATER FLOW CHARGE PER <u>UNIT</u> 100 CU. FT.	
Single Family Residential Accounts:		
For the first 172 gpd	\$4.00	<u>\$4.25</u>
For all water used in excess of 172 gpd, up to 393 gpd	5.54	<u>5.85</u>
For all water used in excess of 393 gpd	7.27	<u>7.72</u>
Multiple Family Residential Accounts:		
For all water used	5.66	<u>6.01</u>
All Other Water Use:		
For all water used	5.63	<u>5.98</u>

All individually metered multi-family dwelling units or individually metered mobile home residential units that receive District service shall be billed at the single family residential rate.

<u>Nonpotable/Recycled Water Service</u>	WATER FLOW CHARGE PER <u>UNIT</u> 100 CU. CT.	
For all water used	\$4.39	<u>\$4.66</u>

C. EXCEPTIONS TO TWO MONTH BILLING

Except as provided below, customer accounts shall be subject to bi-monthly meter reading and customer billing schedules

- Accounts for which the average monthly bill is estimated to exceed \$1,500; such accounts will be billed monthly.
- Accounts for which there are reasonable and justifiable customer requests for monthly billing.
- Accounts for which the average monthly bill is estimated to be between \$100 and \$1,500, and the customer service manager recommends monthly billing based on an evaluation of credit and/or collection problems.



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/19~~ 07/01/20

D. PRIVATE FIRE SERVICES

Effective July 1, 2005, the rates for Private Fire Services shall consist of:

FIRST – A MONTHLY SERVICE CHARGE based on the size of a standard meter:

METER SIZE	SERVICE CHARGE AMOUNT	
5/8 and 3/4 inch	\$13.96	<u>\$14.83</u>
1 inch	19.18	<u>20.38</u>
1-1/2 inch	32.16	<u>34.17</u>
2 inch	47.75	<u>50.73</u>
3 inch	89.37	<u>94.96</u>
4 inch	136.16	<u>144.67</u>
6 inch	266.16	<u>282.80</u>
8 inch	422.16	<u>448.55</u>
10 inch	604.14	<u>641.90</u>
12 inch	838.12	<u>890.50</u>
14 inch	1,072.12	<u>1,139.13</u>
16 inch	1,358.14	<u>1,443.02</u>
18 inch	1,644.13	<u>1,746.89</u>

Effective July 1, 1997, when a meter larger than 4 inches is required for a single-family residential customer to maintain adequate water pressure, the maximum service charge amount shall be set at the 4-inch meter level.

SECOND – A WATER FLOW CHARGE FOR WATER DELIVERED based on two-month meter readings for all water delivered per unit ~~100 cu. ft.:~~

There shall be no charge for water through such services extinguishing accidental fires, but any water lost through leakage or used in violation of the District's Regulations shall be paid at the rate for general use and may be subject to a penalty as may be established by the District.



SCHEDULE A – RATE SCHEDULE FOR WATER SERVICE

EFFECTIVE ~~07/01/19~~ 07/01/20

E. ELEVATION SURCHARGE

Elevation Designator	AMOUNT PER <u>UNIT</u> 100 CU. FT.	
<u>Pressure Zone 1: Elevation Designator</u> 0 and 1	\$0.00	
<u>Pressure Zone 2: Elevation Designator</u> 2 through 5	0.81	<u>0.86</u>
<u>Pressure Zone 3: Elevation Designator</u> 6 and greater	4.68	<u>1.79</u>

The elevation surcharge is determined by the pressure zone in which the service connection is located. Pressure zones are identified by designations that include an elevation designator.

Wastewater Department

Schedule A

Rates for Treatment Service

FY21



SCHEDULE A – WASTEWATER DEPARTMENT RATES FOR TREATMENT SERVICE

EFFECTIVE ~~07/01/19~~ 07/01/20

Current

I. Unit Treatment Rates (for permit accounts)

Flow (\$ per unit, 1 unit = 100 cubic feet = 748 gallons)	\$1.266	<u>\$1.317</u>
Chemical Oxygen Demand (\$ per pound of discharge)	\$0.129	<u>\$0.134</u>
Total Suspended Solids (\$ per pound)	0.530	<u>0.551</u>

Unit treatment rates for Flow, Chemical Oxygen Demand (COD), Total Suspended Solids (TSS) and a Service Charge are applied to all users unless otherwise indicated.

II. Residential Monthly Charges

(6514 Multi-Family under 5 dwelling units & 8800 Single-Family)

A. Service Charge (per account)	\$7.02	<u>\$7.30</u>
B. Strength Charge (per dwelling unit)	7.31	<u>7.60</u>
Minimum monthly charge per household	14.33	<u>14.90</u>
C. Plus: A flow charge of \$ 1.27 <u>1.32</u> per unit applied to a maximum of 9 units (per dwelling unit)		
Minimum monthly charge at 0 units	\$0.00	
Maximum monthly charge at 9 units	11.43	<u>11.88</u>
D. Total Residential Charge (A+B+C above) ¹		
Minimum monthly charge (for 8800)	\$14.33	<u>14.90</u>
Maximum monthly charge (for 8800)	25.76	<u>26.78</u>
Average monthly charge (for 8800)	21.95	<u>22.82</u>

¹Does not include SF Bay Residential Pollution Prevention Fee

III. Non-Residential Charges

A. Monthly service charge (per account)	\$7.02	<u>\$7.30</u>
B. Treatment charge including flow processing (per unit of sewage discharge)		
2010 Meat Products	\$8.90	<u>\$9.24</u>
2011 Slaughterhouses	8.50	<u>8.83</u>
2020 Dairy Product Processing	6.98	<u>7.25</u>
2030 Fruit and Vegetable Canning	5.61	<u>5.83</u>
2040 Grain Mills	5.58	<u>5.80</u>



SCHEDULE A – WASTEWATER DEPARTMENT RATES FOR TREATMENT SERVICE

EFFECTIVE ~~07/01/19~~07/01/20

	Current	
2050 Bakeries (including Pastries)	\$9.65	<u>\$10.03</u>
2060 Sugar Processing	5.53	<u>5.74</u>
2077 Rendering Tallow	16.74	<u>17.40</u>
2080 Beverage Manufacturing & Bottling	4.19	<u>4.36</u>
2090 Specialty Foods Manufacturing	18.05	<u>18.75</u>
2600 Pulp and Paper Products	4.79	<u>4.98</u>
2810 Inorganic Chemicals Mfgr.	6.16	<u>6.40</u>
2820 Synthetic Material Manufacturing	1.44	<u>1.50</u>
2830 Drug Manufacturing	3.11	<u>3.23</u>
2840 Cleaning and Sanitation Products	6.30	<u>6.54</u>
2850 Paint Manufacturing	12.14	<u>12.61</u>
2893 Ink and Pigment Manufacturing	4.39	<u>4.56</u>
3110 Leather Tanning and Finishing	16.77	<u>17.43</u>
3200 Earthenware Manufacturing	3.40	<u>3.53</u>
3300 Primary Metals Manufacturing	2.69	<u>2.80</u>
3400 Metal Products Fabricating	1.57	<u>1.64</u>
3410 Drum and Barrel Manufacturing	17.08	<u>17.74</u>
3470 Metal Coating	1.71	<u>1.77</u>
4500 Air Transportation	2.25	<u>2.34</u>
4951 Groundwater Remediation	1.28	<u>1.34</u>
5812 Food Service Establishments	5.83	<u>6.06</u>
6513 Apartment Buildings (5 or more dwelling units)	2.83	<u>2.94</u>
7000 Hotels, Motels with Food Service	4.19	<u>4.36</u>
7210 Commercial Laundries	3.77	<u>3.92</u>
7215 Coin Operated Laundromats	2.83	<u>2.94</u>
7218 Industrial Laundries	10.73	<u>11.15</u>
7300 Laboratories	2.02	<u>2.11</u>
7542 Automobile Washing and Polishing	2.68	<u>2.79</u>
8060 Hospitals	2.57	<u>2.68</u>
8200 Schools	1.89	<u>1.97</u>
All Other Business Classification Code (includes dischargers of only segregated domestic wastes from sanitary conveniences)	2.83	<u>7.30</u>



SCHEDULE A – WASTEWATER DEPARTMENT RATES FOR TREATMENT SERVICE

EFFECTIVE ~~07/01/19~~07/01/20

Multi-Use Food Service Establishments and Domestic Waste Accounts

Accounts identified by EBMUD where there is one or more food service establishments or bakeries sharing the water meter with establishments or operations with only domestic waste discharges. These accounts are assigned an MT code based on the percentage split of the discharge from the food service establishment operations or bakeries and domestic waste. The unit treatment charge for each MT Code is calculated from the food service establishment or bakeries treatment rate and the domestic waste treatment rate.

MT Code		Current	
A	0-9% Food, 91-100% Domestic	\$2.830	<u>\$2.940</u>
B	10-19% Food, 81-90% Domestic	3.130	<u>3.252</u>
C	20-29% Food, 71-80% Domestic	3.430	<u>3.564</u>
D	30-39% Food, 61-70% Domestic	3.730	<u>3.876</u>
E	40-49% Food, 51-60% Domestic	4.030	<u>4.188</u>
F	50-59% Food, 41-50% Domestic	4.330	<u>4.500</u>
G	60-69% Food, 31-40% Domestic	4.630	<u>4.812</u>
H	70-79% Food, 21-30% Domestic	4.930	<u>5.124</u>
I	80-89% Food, 11-20% Domestic	5.230	<u>5.436</u>
J	90-99% Food, 1-10% Domestic	5.530	<u>5.748</u>
K	0-9% Bakery, 91-100% Domestic	2.830	<u>2.940</u>
L	10-19% Bakery, 81-90% Domestic	3.512	<u>3.649</u>
M	20-29% Bakery, 71-80% Domestic	4.194	<u>4.358</u>
N	30-39% Bakery, 61-70% Domestic	4.876	<u>5.067</u>
O	40-49% Bakery, 51-60% Domestic	5.558	<u>5.776</u>
P	50-59% Bakery, 41-50% Domestic	6.240	<u>6.485</u>
Q	60-69% Bakery, 31-40% Domestic	6.922	<u>7.194</u>
R	70-79% Bakery, 21-30% Domestic	7.604	<u>7.903</u>
S	80-89% Bakery, 11-20% Domestic	8.286	<u>8.612</u>
T	90-99% Bakery, 1-10% Domestic	8.968	<u>9.321</u>
Minimum Monthly Treatment Charge:			
6513	Apartment Buildings (5 or more units)	\$43.57	<u>\$45.30</u>
	All Others	7.02	<u>7.30</u>

Wastewater Department

Schedule B

Wet Weather Facilities Charge

FY21



SCHEDULE B (Formerly Schedule F) – WASTEWATER DEPARTMENT WET WEATHER FACILITIES CHARGE

EFFECTIVE ~~07/01/19~~07/01/20

Annual Charge Collected on Property Tax Bill

TYPE	RATE
Small Lot (0 - 5,000 sq. ft.)	\$111.24 <u>\$115.70</u>
Medium Lot (5,001 – 10,000 sq. ft.)	\$173.78 <u>\$180.74</u>
Large Lot (> 10,000 sq. ft.)	\$397.20 <u>\$413.10</u>

EAST BAY MUNICIPAL UTILITY DISTRICT

UPDATE TO COST OF SERVICE (COS) STUDIES
OF APRIL 2015 AND MAY 2019

IN SUPPORT OF PROPOSED FY20 AND FY21
WATER AND WASTEWATER RATES

- Update to Chapter 7, April 2015 COS Study In Support of Proposed FY20 and FY21 Water System Rates & Charges
- Update to Chapter 5, May 2019 COS Study In Support of Proposed FY20 and FY21 Wastewater System Rates & Charges

7.0 PROPOSED FY20 & FY21 WATER SYSTEM RATES AND CHARGES

This section updates Chapter 7.0 of the 2015 Cost of Service (COS) study for Fiscal Year 2020 and 2021 (FY20 and FY21) water system rates and charges based on the District's FY20 and FY21 revenue requirements. The FY20 and FY21 revenue requirements are calculated from the District's budgeted operating, capital and debt expenses. The District's COS study rate model, prepared by Raftelis Financial Consultants, was used to calculate water system rates and charges for FY20 and FY21 that meet the FY20 and FY21 revenue requirements, and are consistent with the District's COS calculations.

The District's proposed budgets for the water system for FY20 and FY21 do not contain detailed budgeted costs by function. Accordingly data from FY15 was used as the Test Year (i.e., a full year of actual functionalized expense data available at the time the COS study commenced and which is a representative year for the District). The District does not anticipate that the distribution of expenses by function for FY20 and FY21 will be significantly different than the Test Year expenses. Based on the proposed budgets for FY20 and FY21, the COS results from the Test Year have been adjusted to match the FY20 and FY21 revenue requirements.

A detailed explanation of the proposed FY20 and FY21 operating expenses, capital improvement program, debt service expenses, revenue projections, and water sales for the water system are contained in the Proposed Biennial Budget Fiscal Years 2020 and 2021 that was presented to the Board at the March 26, 2019 Budget Workshop.

This section documents the process and calculations made to determine the water system rates and charges for FY20 and FY21.

7.1 FY20 AND FY21 WATER SYSTEM CHARGES AND CUSTOMER IMPACTS

Tables 7-1 and 7-2 show the current FY19 monthly water system rates and charges that were developed with the FY19 revenue requirement and the water system rates and charges calculated by the April 2015 COS study.

Table 7-1
Current FY19 Cost of Service– Monthly Water Service Charge (\$/Meter Size)

Meter Size	Monthly Water Service Charge	Monthly Private Fire Service Charge
5/8 and 3/4 inch	\$24.63	\$13.11
1 inch	\$37.20	\$18.01
1 1/2 inch	\$68.65	\$30.20
2 inch	\$106.36	\$44.84
3 inch	\$206.96	\$83.92
4 inch	\$320.13	\$127.85
6 inch	\$634.43	\$249.92
8 inch	\$1,011.64	\$396.39
10 inch	\$1,451.69	\$567.27
12 inch	\$2,017.52	\$786.97
14 inch	\$2,583.30	\$1,006.69
1 inch	\$3,274.84	\$1,275.25
16 inch	\$3,966.36	\$1,543.78

Table 7-2
Current FY19 Cost of Service– Water Flow Charge and Elevation Surcharge

		FY19
Flow Charges (\$/Ccf)		
SFR		
Tier 1	0-7 Ccf	\$3.76
Tier 2	8-16 Ccf	\$5.17
Tier 3	16+ Ccf	\$6.83
MFR		\$5.31
All Other Water Use		\$5.29
Nonpotable/Recycle Water		\$4.12
Elevation Surcharge (\$/Ccf)		
Pressure Zone 1 (0 - 1 Designator)		\$0.00
Pressure Zone 2 (2 - 5 Designator)		\$0.76
Pressure Zone 3 (6 and greater Designator)		\$1.58

Table 7-3 shows the revenue requirement for FY20 and FY21 as calculated based on the proposed FY20 and FY21 budgets for the water enterprise. Based on an updated water sales projections for FY20 and FY21, the FY19 COS water system rates and charges shown in Tables 7-1 and 7-2 need to be increased by 6.5 percent in FY20, and 6.25 percent in FY21 to meet the water system revenue requirements¹.

Table 7-3
Water System Revenue Requirements for FY20 and FY21

Water	FY20			FY21		
	Operating	Capital	Total	Operating	Capital	Total
Revenue Requirements						
Operating - O&M Expenses	299,300,000		\$299,300,000	315,400,000		\$315,400,000
Capital - Debt Service		208,200,000	\$208,200,000		217,700,000	\$217,700,000
Capital - Expenses		337,700,000	\$337,700,000		385,500,000	\$385,500,000
Total Revenue Requirements	\$299,300,000	\$545,900,000	\$845,200,000	\$315,400,000	\$603,200,000	\$918,600,000
Revenue Offsets						
Property Taxes		35,000,000	\$35,000,000		35,800,000	\$35,800,000
Power	5,000,000		\$5,000,000	5,000,000		\$5,000,000
Interest	9,300,000		\$9,300,000	9,600,000		\$9,600,000
SCC Revenue		40,000,000	\$40,000,000		40,000,000	\$40,000,000
Operating Reimbursement	12,300,000		\$12,300,000	12,600,000		\$12,600,000
RARE Reimbursement	18,200,000		\$18,200,000	18,400,000		\$18,400,000
All Other		-	\$0		-	\$0
Transfer (to)/from Rate Stabilization Reserve	\$0		\$0	\$0	-500,000	(\$5,000,000)
Total Revenue Offsets	\$44,800,000	\$75,000,000	\$119,800,000	\$45,600,000	\$70,800,000	\$116,400,000
Adjustments						
Transfer of Cash for Capital from Other Funds	\$0	(181,900,000)	(\$181,900,000)	\$0	(219,700,000)	(\$219,700,000)
Total Adjustments	\$0	(\$181,900,000)	(\$181,900,000)	\$0	(\$219,700,000)	(\$219,700,000)
Cost of Service to be Recovered from Rates	\$254,500,000	\$289,000,000	\$543,500,000	\$269,800,000	\$312,700,000	\$582,500,000

¹ As discussed in the District's March 21, 2019 Memo to the Board of Directors on proposed FY20 and FY21 rates.

Tables 7-4 and 7-5 show the proposed FY20 and FY21 Monthly Service Charges and Private Fire Service Charges, and the rates used for the water Flow Charge and Elevation Surcharge.

Table 7-4
FY20 & FY21 Water System Rates and Charges – Monthly Service Charge (\$/Meter Size)

	FY20	FY21
Monthly Water Service Charge		
Meter Size		
5/8 and 3/4 inch	\$26.23	\$27.87
1 inch	\$39.62	\$42.10
1 1/2 inch	\$73.11	\$77.68
2 inch	\$113.27	\$120.35
3 inch	\$220.41	\$234.19
4 inch	\$340.94	\$362.25
6 inch	\$675.67	\$717.90
8 inch	\$1,077.40	\$1,144.74
10 inch	\$1,546.05	\$1,642.68
12 inch	\$2,148.66	\$2,282.95
14 inch	\$2,751.21	\$2,923.16
16 inch	\$3,487.70	\$3,705.68
18 inch	\$4,224.17	\$4,488.18
Monthly Private Fire Service Charge		
Meter Size		
5/8 and 3/4 inch	\$13.96	\$14.83
1 inch	\$19.18	\$20.38
1 1/2 inch	\$32.16	\$34.17
2 inch	\$47.75	\$50.73
3 inch	\$89.37	\$94.96
4 inch	\$136.16	\$144.67
6 inch	\$266.16	\$282.80
8 inch	\$422.16	\$448.55
10 inch	\$604.14	\$641.90
12 inch	\$838.12	\$890.50
14 inch	\$1,072.12	\$1,139.13
16 inch	\$1,358.14	\$1,443.02
18 inch	\$1,644.13	\$1,746.89

**Table 7-5
FY20 and FY21 Water System– Water Flow
Charge and Elevation Surcharge**

		FY20	FY21
Flow Charges (\$/Ccf)			
SFR			
Tier 1	0-7 Ccf	\$4.00	\$4.25
Tier 2	8-16 Ccf	\$5.51	\$5.85
Tier 3	16+ Ccf	\$7.27	\$7.72
MFR		\$5.66	\$6.01
All Other Water Use		\$5.63	\$5.98
Nonpotable/Recycle Water		\$4.39	\$4.66
Elevation Surcharge (\$/Ccf)			
Pressure Zone 1 (0 - 1 Designator)		\$0.00	\$0.00
Pressure Zone 2 (2 - 5 Designator)		\$0.81	\$0.86
Pressure Zone 3 (6 and greater Designator)		\$1.68	\$1.79

The proposed customer water bill impacts, shown in Tables 7-6 through 7-8, reflect the increases described previously. Table 7-6 shows the SFR bill impacts at various levels of water usage for FY20. Bill impacts for FY21 are approximately 6.25 percent more than those shown below.

**Table 7-6
SFR Water Bill Impacts for FY20**

Use Level	Monthly Use (Ccf)	FY19 Current Bill	FY20 Proposed Bill	Difference (\$)	Difference (%)
Very Low	4	\$39.67	\$42.23	\$2.56	6.5%
Low	6	\$47.19	\$50.23	\$3.04	6.4%
Average	8	\$56.12	\$59.74	\$3.62	6.5%
High	10	\$66.46	\$70.76	\$4.30	6.5%
Very High	22	\$138.46	\$147.44	\$8.98	6.5%

All bill calculations assume 5/8" or 3/4" meter.

Table 7-7 shows the MFR bill impacts at various levels of water usage for FY20. Bill impacts for FY21 are approximately 6.25 percent more than those shown below.

Table 7-7
MFR Water Bill Impacts for FY20

Use Level	Monthly Use (Ccf)	FY19 Current Bill	FY20 Proposed Bill	Difference (\$)	Difference (%)
Very Low	15	\$116.85	\$124.54	\$7.69	6.6%
Low	20	\$143.40	\$152.84	\$9.44	6.6%
Average	42	\$260.22	\$277.36	\$17.14	6.6%
High	60	\$355.80	\$379.24	\$23.44	6.6%
Very High	100	\$568.20	\$605.64	\$37.44	6.6%

All bill calculations assume 1" meter.

Table 7-8 shows the Other (non-residential) bill impacts at various levels of water usage for FY20. Bill impacts for FY21 are approximately 6.25 percent more than those shown below.

Table 7-8
Other Water Bill Impacts for FY20

Use Level	Monthly Use (Ccf)	FY19 Current Bill	FY20 Proposed Bill	Difference (\$)	Difference (%)
Very Low	20	\$212.16	\$225.87	\$13.71	6.5%
Low	50	\$370.86	\$394.77	\$23.91	6.4%
Average	84	\$550.72	\$586.19	\$35.47	6.4%
High	100	\$635.36	\$676.27	\$40.91	6.4%
Very High	200	\$1,164.36	\$1,239.27	\$74.91	6.4%

All bill calculations assume 2" meter.

7.2 DROUGHT SURCHARGES

The 2015 COS study developed a detailed COS analysis to calculate Drought Surcharges that may be implemented during the District's drought stages. Table 7-18 shows the District's drought stages. The drought stages are part of the District's Water Shortage Contingency Plan which includes the elements contained below with respect to demand reduction and purchase of supplemental supplies of water as a water shortage becomes more severe. The 2015 COS study developed Drought Surcharges that would address the financial impact that customer reduction in water use would have during specified drought stages. The revenue requirement for each drought stage was developed and a Drought Surcharge was calculated to recover water shortage costs such as costs of acquiring and providing supplemental water, costs of water shortage-related customer service, and losses of revenue, which increases with each drought stage. The Drought Surcharges, expressed as percentage of the potable Water Flow Charge, are shown in Table 7-18. As part of the FY16 and FY17 budget process, the Board adopted the staged system of Drought Surcharges to recover water shortage-related costs.

**Table 7-18
Drought Stages and Drought Surcharges**

Stage	0	1	2	3	4
Demand Reduction		Voluntary 0-15%	Voluntary 0-15%	Mandatory up to 15%	Mandatory ≥15%
Supplemental Supplies			Up to 35,000 acre feet	35,000-65,000 acre feet	> 65,000 acre feet
Rates and Charges	Normal rates	Normal rates	Normal rates + Up to 8% surcharge	Normal rates + Up to 20% surcharge	Normal rates + Up to 25% surcharge

The District's COS study developed Drought Surcharge percentages to be added to the potable Water Flow Charges of up to 8 percent, 20 percent and 25 percent to be levied during drought Stages 2, 3 and 4, respectively. Drought surcharges would be applicable to all potable water customer accounts only if the EBMUD Board of Directors declares a Stage 2, 3, or 4 drought based on factors such as system water storage and the need to purchase supplemental supplies of water to meet customer demand. The Drought Surcharges correspond to increasingly severe stages of water shortages, and are added to the customer's total potable water Flow Charge during the billing period. The Drought Surcharges are calculated to meet the water system's revenue requirements of each drought stage.

The District's Drought Management Program Guidelines offer two scenarios for declaration of the different drought stages depending on whether the drought declaration is linked to local conditions, as measured by total system storage (TSS) in the District's reservoirs, or to a state mandate, such as the mandatory water use reductions set by the State Water Resource Control Board in 2015.

Under the "TSS Scenario," EBMUD declares different drought stages based upon projected end of September TSS as shown in Figure 7-19 of the 2015 UWMP. Table 7-20 of the 2015 UWMP shows the link between the drought stages and rates, penalties, and regulations in effect under the TSS scenario.

It is possible that the water use reductions required by state mandate could exceed water use reductions that would otherwise be called for based on the TSS. In the State Mandate Scenario, the drought stage and associated response actions would be guided by Table 7-21, which establishes stages based on state mandated customer demand reduction goals.

Under either scenario, EBMUD's Board of Directors can enact the provisions of Section 28 of its Regulations Governing Water Service during drought Stages 2, 3, and 4. When these stages of drought are declared, the Board can also implement Drought Surcharges in accordance with the rates set forth in the District's Proposition 218 notice.

Figure 7-19
Drought Management Program Guidelines

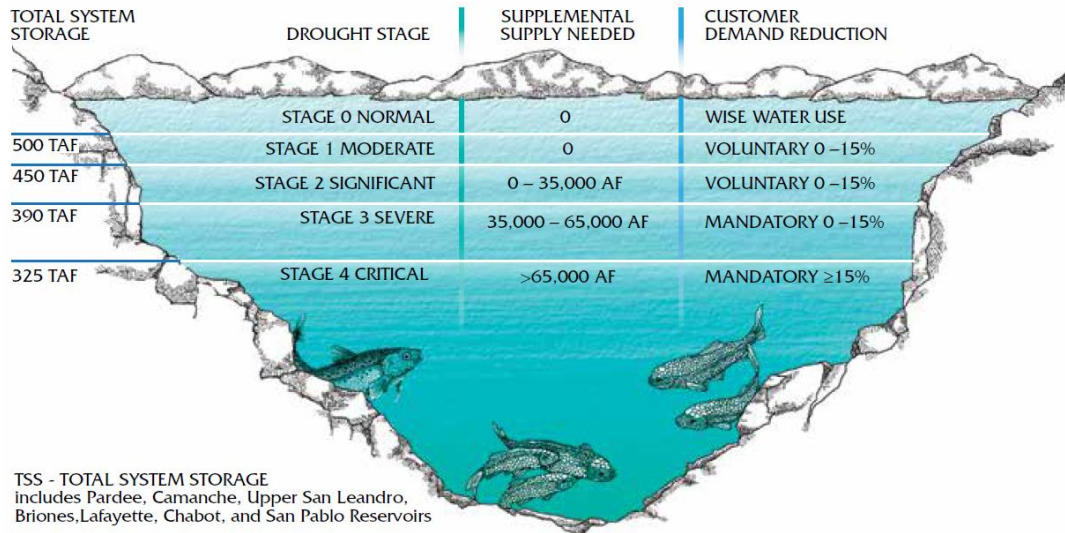


Figure 7-20
Drought Management Program Guidelines – TSS Scenario

STAGE	RATE/PENALTY IMPACTS	REGULATIONS IN EFFECT OR POTENTIALLY ENACTED
0 NORMAL	NORMAL RATES	SECTION 29
1 MODERATE	NORMAL RATES	SECTION 29
2 SIGNIFICANT	NORMAL RATES DROUGHT SURCHARGE	SECTION 29
3 SEVERE	NORMAL RATES DROUGHT SURCHARGE EXCESSIVE USE PENALTY	SECTION 28 SECTION 29 EXCESSIVE USE ORDINANCE
4 CRITICAL	NORMAL RATES DROUGHT SURCHARGE EXCESSIVE USE PENALTY	SECTION 28 SECTION 29 EXCESSIVE USE ORDINANCE

Notes:
a Drought Surcharges will reflect the most recently adopted Proposition 218 rates.
b Under Stages 3 or 4, the Board would declare a water shortage emergency and enact Section 28 to implement water conservation measures. Penalties under the Excessive Use Ordinance would apply.

Figure 7-21
Drought Management Program Guidelines – State Mandate Scenario

STAGE	STATE MANDATED CUSTOMER DEMAND REDUCTION	RATE IMPACTS	REGULATIONS IN EFFECT OR POTENTIALLY ENACTED
0 OR 1	≤10%	NORMAL RATES	SECTION 29
2	10 – 15%	NORMAL RATES DROUGHT SURCHARGE	SECTION 28 SECTION 29
3	15 – 20%	NORMAL RATES DROUGHT SURCHARGE	SECTION 28 SECTION 29
4	≥20%	NORMAL RATES DROUGHT SURCHARGE	SECTION 28 SECTION 29

Notes:
a Drought Surcharges will reflect the most recently adopted Proposition 218 rates.
b The Board can enact Section 28 to implement conservation measures to achieve desired customer demand reductions.

The District does not anticipate a water shortage in FY20 or FY21 because of the high levels of water currently in storage due to recent storms and reduced customer demand. However, the Drought Surcharge percentages that were developed in the 2015 COS study and adopted for FY16 and FY17 will remain in effect in FY20 and FY21 as a contingency plan in the unanticipated event of a water shortage. If implemented, the Drought Surcharges would impact the rates of the water Flow Charge. Prior to implementing the Drought Surcharges, the District will update its drought-related costs and develop and adopt surcharges consistent with the COS study. The surcharge and will not exceed the Drought Surcharge percentages listed above and the District's costs of providing service. The District's Proposition 218 notice for FY20 and FY21 includes information regarding these surcharges so that they remain available to the Board to implement in the event the District is in a drought, water shortage emergency, or situations that require reductions in water use by its customers.

5.0 PROPOSED FY20 & FY21 WASTEWATER SYSTEM RATES AND CHARGES

This section summarizes Chapter 5.0 of the May 2019 Wastewater COS study for the FY20 and FY21 wastewater system rates and charges based on the District's FY20 and FY21 revenue requirements. The FY20 and FY21 revenue requirements are calculated from the District's budgeted operating, capital and debt expenses. The District's COS study rate model, prepared by Raftelis Financial Consultants, was used to calculate wastewater system rate and charges for FY20 and FY21 that meet the FY20 and FY21 revenue requirements, and are consistent with the District's COS calculations.

The District's proposed budgets for the wastewater system for FY20 and FY21 do not contain detailed budgeted costs by function. Accordingly data from FY17 was used as the Test Year (i.e., a full year of actual functionalized expense data available at the time the COS study commenced and which is a representative year for the District). The District does not anticipate that the distribution of expenses by function for FY20 and FY21 will be significantly different than the Test Year expenses. Based on the proposed wastewater system budgets for FY20 and FY21, the COS results from the Test Year have been adjusted to match the FY20 and FY21 revenue requirements.

This section documents the process and calculations made to determine the wastewater system rates and charges for FY20 and FY21

5.1 FY20 AND FY21 WASTEWATER SYSTEM RATES AND CHARGES AND CUSTOMER IMPACTS

Tables 5-2 and 5-3 show the proposed FY19 wastewater system Charges that have been adjusted based on recommendations from the 2019 Wastewater COS study for residential and non-residential customers, respectively.

Table 5-2
FY19 Cost of Service Adjusted Wastewater System Rates and Charges – Residential

	FY19
Monthly Service Charge (per Account)	\$6.75
Monthly Strength Charge (per dwelling unit)	\$7.03
Minimum Monthly Charge	\$13.78
Plus: A flow charge per Ccf (maximum of 9 Ccf/mo)	\$1.22
Minimum monthly flow charge	\$0.00
Maximum monthly flow charge	\$10.98
Total Monthly Residential Charge	
Minimum monthly charge	\$13.78
Maximum monthly charge	\$24.76
Average monthly charge at 6 Ccf	\$21.10

Table 5-3
FY19 Cost of Service Adjusted Wastewater System Rates and Charges – Non-Residential

	FY19
Monthly Service Charge (per Account)	\$6.75
Treatment charge including flow processing (per Ccf of sewage discharge)	
Meat Products	\$8.55
Slaughterhouses	\$8.17
Dairy Product Processing	\$6.71
Fruit and Vegetable Canning	\$5.39
Grain Mills	\$5.37
Bakeries (including Pastries)	\$9.28
Sugar Processing	\$5.31
Rendering Tallow	\$16.10
Beverage Manufacturing & Bottling	\$4.03
Specialty Foods Manufacturing	\$17.35
Pulp and Paper Products	\$4.60
Inorganic Chemicals Mfgr.	\$5.92
Synthetic Material Manufacturing	\$1.39
Drug Manufacturing	\$2.99
Cleaning and Sanitation Products	\$6.05
Paint Manufacturing	\$11.67
Ink and Pigment Manufacturing	\$4.22
Leather Tanning and Finishing	\$16.12
Earthenware Manufacturing	\$3.27
Primary Metals Manufacturing	\$2.59
Metal Products Fabricating	\$1.51
Drum and Barrel Manufacturing	\$16.42
Metal Coating	\$1.64
Air Transportation	\$2.16
Food Service Establishments	\$1.23
Apartment Buildings (5 or more units)	\$5.61
Hotels, Motels with Food Service	\$2.72
Commercial Laundries	\$4.03
Coin Operated Laundromats	\$3.63
Industrial Laundries	\$2.72
Laboratories	\$10.32
Automobile Washing and Polishing	\$1.95
Hospitals	\$2.58
Schools	\$2.48
All Other BCC (includes dischargers of only segregated domestic wastes from sanitary conveniences)	\$1.82 2.72

Table 5-4 shows the current FY19 Wet Weather Facilities Charges adjusted for the recommended changes from the 2019 Wastewater COS study.

Table 5-4
FY19 Cost of Service Adjusted Wet Weather Facilities Charges

Lot Size (sq ft)	FY19
0-5,000	\$106.96
5,001-10,000	\$167.10
over 10,000	\$381.92

Using the FY17 test year, the 2019 Wastewater COS study recommended slight changes to ensure the wastewater rates and charges align with the treatment costs. Table 5-5 shows the revenue requirement for FY20 and FY21 based on the proposed FY20 and FY21 budgets for the wastewater enterprise. Based on an updated projection of treatment revenues for FY20 and FY21, the FY19 COS adjusted wastewater user charges, shown in Tables 5-2 through 5-4, have been further adjusted by a 4.0 percent increase in FY20 and a 4.0 percent increase in FY21 to meet the wastewater system's revenue requirements².

Table 5-5
Wastewater Revenue Requirement for FY20 and FY21

Wastewater	FY20			FY21		
	Operating	Capital	Total	Operating	Capital	Total
Revenue Requirements						
O&M Expenses	\$75,100,000		\$75,100,000	\$78,600,000		\$78,600,000
Capital - Debt Service		\$30,200,000	\$30,200,000		\$29,800,000	\$29,800,000
Capital - Expenses		\$48,500,000	\$48,500,000		\$46,000,000	\$46,000,000
Total Revenue Requirements	\$75,100,000	\$78,700,000	\$153,800,000	\$78,600,000	\$75,800,000	\$154,400,000
Revenue Offsets						
Resource Recovery	\$6,089,050	\$3,910,950	\$10,000,000	\$6,089,050	\$3,910,950	\$10,000,000
Property Taxes		\$5,400,000	\$5,400,000		\$5,600,000	\$5,600,000
Ad Valorem Bond Levy		\$0	\$0		\$0	\$0
Interest	\$2,400,000		\$2,400,000	\$2,100,000		\$2,100,000
Laboratory Services	\$4,400,000		\$4,400,000	\$4,500,000		\$4,500,000
Reimbursements	\$1,500,000		\$1,500,000	\$1,500,000		\$1,500,000
Permit Fees	\$1,600,000		\$1,600,000	\$1,600,000		\$1,600,000
Capacity Charges		\$4,000,000	\$4,000,000		\$4,000,000	\$4,000,000
All Other Revenue	\$2,200,000	\$3,500,000	\$5,700,000	\$2,200,000	\$3,500,000	\$5,700,000
Transfer (to)/from Rate Stabilization Reserve (RSR)	\$0		\$0	\$0		\$0
Total Revenue Offsets	\$18,189,050	\$16,810,950	\$35,000,000	\$17,989,050	\$17,010,950	\$35,000,000
Adjustments						
Transfer of Cash for Capital from Other Funds		(\$13,600,000)	(\$13,600,000)		(\$10,000,000)	(\$10,000,000)
Total Adjustments	\$0	(\$13,600,000)	(\$13,600,000)	\$0	(\$10,000,000)	(\$10,000,000)
Cost of Service to be Recovered from Rates	\$56,910,950	\$48,289,050	\$105,200,000	\$60,610,950	\$48,789,050	\$109,400,000

² As summarized in the District's March 21, 2019 Memo to the Board of Directors on the proposed FY20 and FY21 rates.

Tables 5-6 and 5-7 show the proposed FY20 and FY21 wastewater system rates and charges for residential and non-residential customers, respectively.

Table 5-6
FY20 and FY21 Wastewater System Rates and Charges – Residential

	FY20	FY21
Monthly Service Charge (per Account)	\$7.02	\$7.30
Monthly Strength Charge (per dwelling unit)	\$7.31	\$7.60
Minimum Monthly Charge	\$14.33	\$14.90
Plus: A flow charge per Ccf (maximum of 9 Ccf/mo)	\$1.27	\$1.32
Minimum monthly flow charge	\$0.00	\$0.00
Maximum monthly flow charge	\$11.43	\$11.88
Total Monthly Residential Charge		
Minimum monthly charge	\$14.33	\$14.90
Maximum monthly charge	\$25.76	\$26.78
Average monthly charge at 6 Ccf	\$21.95	\$22.82

Table 5-7
FY20 and FY21 Wastewater System Rates and Charges – Non-Residential

	FY20	FY21
Monthly Service Charge (per Account)	\$7.02	\$7.30
Treatment charge including flow processing (per Ccf of sewage discharge)		
Meat Products	\$8.90	\$9.24
Slaughterhouses	\$8.50	\$8.83
Dairy Product Processing	\$6.98	\$7.25
Fruit and Vegetable Canning	\$5.61	\$5.83
Grain Mills	\$5.58	\$5.80
Bakeries (including Pastries)	\$9.65	\$10.03
Sugar Processing	\$5.53	\$5.74
Rendering Tallow	\$16.74	\$17.40
Beverage Manufacturing & Bottling	\$4.19	\$4.36
Specialty Foods Manufacturing	\$18.05	\$18.75
Pulp and Paper Products	\$4.79	\$4.98
Inorganic Chemicals Mfgr.	\$6.16	\$6.40
Synthetic Material Manufacturing	\$1.44	\$1.50
Drug Manufacturing	\$3.11	\$3.23
Cleaning and Sanitation Products	\$6.30	\$6.54
Paint Manufacturing	\$12.14	\$12.61
Ink and Pigment Manufacturing	\$4.39	\$4.56
Leather Tanning and Finishing	\$16.77	\$17.43
Earthenware Manufacturing	\$3.40	\$3.53
Primary Metals Manufacturing	\$2.69	\$2.80
Metal Products Fabricating	\$1.57	\$1.64
Drum and Barrel Manufacturing	\$17.08	\$17.74
Metal Coating	\$1.71	\$1.77
Air Transportation	\$2.25	\$2.34
Groundwater Remediation	\$1.28	\$1.34
Food Service Establishments	\$5.83	\$6.06
Apartment Buildings (5 or more units)	\$2.83	\$2.94
Hotels, Motels with Food Service	\$4.19	\$4.36
Commercial Laundries	\$3.77	\$3.92
Coin Operated Laundromats	\$2.83	\$2.94
Industrial Laundries	\$10.73	\$11.15
Laboratories	\$2.02	\$2.11
Automobile Washing and Polishing	\$2.68	\$2.79
Hospitals	\$2.57	\$2.68
Schools	\$1.89	\$1.97
All Other BCC (includes dischargers of only segregated domestic wastes from sanitary conveniences)	\$2.83	\$2.94

Table 5-8 shows the Wet Weather Facilities Charges for FY20 and FY21 with the adjustment for the 2019 COS study and a further adjustment of a 4.0 percent increase for each year. When compared to the current FY19 charge that does not include the adjustments for the 2019 COS study, the FY20 increase to the annual Wet Weather Facilities Charge is 7.2 percent.

Table 5-8
FY20 and FY21 Wet Weather Facilities Charges

Lot Size (sq ft)	FY20	FY21
0-5,000	\$111.24	\$115.70
5,001-10,000	\$173.78	\$180.74
over 10,000	\$397.20	\$413.10

The resulting customer bill impacts, shown in Tables 5-9 and 5-10, reflect the increases described previously. Table 7-16 shows the bill impacts for different customers with typical water usage for FY20. Bill impacts for FY21 are approximately 4.0 percent more than those shown below.

Table 5-9
Typical Customers' Wastewater Bill Impacts for FY20

Customer Class	Monthly Use (Ccf)	FY19 Current Bill	FY20 Proposed Bill	Difference (\$)	Difference (%)
SFR	6	\$21.75	\$21.95	\$0.20	0.9%
MFR - Fourplex	25	\$69.84	\$68.01	(\$1.83)	-2.6%
Commercial - Office	50	\$142.62	\$148.52	\$5.90	4.1%
Commercial - Restaurant	50	\$279.62	\$298.52	\$18.90	6.8%
Industrial - Food Manufacturing	500	\$8,001.12	\$9,032.02	\$1,030.90	12.9%

Note: Bill does not include SF Bay Pollution Prevention Charge

Table 5-10 shows the annual charges for the FY20 Wet Weather Facilities Charge collected on the property tax bill for different customers with typical lot sizes. For properties that do not receive a property tax bill, the Wet Weather Facilities Charges are collected on the water bill. The increase to the annual Wet Weather Facilities Charge for FY21 is approximately 4.0 percent more than those shown below.

Table 5-10
Wet Weather Facilities Charge Impacts for FY20

Customer Class	Median Lot Size (sq ft)	FY19 Current Bill	FY20 Proposed Bill	Difference (\$)	Difference (%)
SFR	4,800	\$103.74	\$111.24	\$7.50	7.2%
Duplex	4,500	\$103.74	\$111.24	\$7.50	7.2%
Triplex	5,130	\$162.06	\$173.78	\$11.72	7.2%
Fourplex	5,400	\$162.06	\$173.78	\$11.72	7.2%
Apartment	7,400	\$162.06	\$173.78	\$11.72	7.2%
All Other	14,300	\$370.44	\$397.20	\$26.76	7.2%