



City of Alameda

SEWER RATE STUDY

February 2020



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February 25th, 2020

Erin Smith
Deputy Public Works Director
City of Alameda, Public Works Department
2263 Santa Clara Avenue
Alameda, CA 94501

Re: Sewer Rate Study

Bartle Wells Associates is pleased to submit to the City of Alameda the attached Sewer Rate Study. The report presents BWA's analysis of the capital and operating costs of the sewer utility. It lists the assumptions and rate design objectives used in BWA's analysis.

BWA finds that the sewer rates and charges proposed in our report to be based on the cost of service, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218.

We enjoyed working with you on the rate study and appreciate the assistance and cooperation of City staff throughout the project. Please contact us if you ever have any future questions about this study and the rate recommendations.

Yours truly,

Doug Dove, CIPFA
Principal

Michael DeGroot
Consultant

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EXECUTIVE SUMMARY

The City of Alameda (City) contracted with Bartle Wells Associates (BWA) to conduct a comprehensive review of the City’s sewer fund and to recommend sewer service charges. The City last conducted a sewer rate review in 2015 that recommended rate increases through FY2020. BWA evaluated sewer funding needs and revenue sources and recommends an annual increase of 3% to the sewer service charges. Rates must be adequate to:

- Cash fund sewer pipeline replacements and other capital improvements
- Maintain reasonable and adequate operating and capital reserves
- Meet or exceed debt coverage requirements
- Mitigate impacts on the ratepayers

The most significant source of on-going capital costs is the Sewer Pipeline Replacement Program. The program was initiated in response to direction from the Environmental Protection Agency to reduce inflow and infiltration. The replacement program will be conducted in conjunction with the City’s other planned capital projects such as pump station upgrades and manhole repairs.

The City’s primary source of sewer fund revenue is the service charges which are collected annually with the Alameda County property taxes. Other revenue sources include “hand-billed” sewer service charges, connection fees, interest earnings, and permit fees. Total FY2020 budgeted annual revenue is \$11.4 million. The City’s current sewer service charge for residential customers is \$323.16 annually (\$26.93 monthly), \$291.12 annually (\$24.26 monthly) for multi-family customers, and \$291.12 annually plus volume charges for commercial customers. BWA projects a rate increase of 3% per year through FY2025 is required to fund sewer capital and operating expenses.

Table 1
Current & Proposed Sewer Service Charges
City of Alameda
Sewer Financial Plan and Rate Study

Customer Class	FY 2020 Current	FY 2021 Proposed	FY 2022 Proposed	FY 2023 Proposed	FY 2024 Proposed	FY 2025 Proposed
% Increase		3.0%	3.0%	3.0%	3.0%	3.0%
Single Family (\$/month)	\$26.93	\$27.74	\$28.57	\$29.43	\$30.31	\$31.22
Multi-Family (\$/month)	\$24.26	\$24.99	\$25.74	\$26.51	\$27.31	\$28.13
Commercial						
Fixed Charge (\$/month) (includes first 730 cubic feet)	\$24.26	\$24.99	\$25.74	\$26.51	\$27.31	\$28.13
Flow-Based Rate (\$ per HCF)	\$3.33	\$3.43	\$3.53	\$3.64	\$3.75	\$3.86

HCF = Hundred cubic feet

INTRODUCTION

The City of Alameda (City) contracted with Bartle Wells Associates (BWA) to conduct a sewer financial plan and rate study. This report provides recommended rate adjustments and capital financing for the next five year period (FY2021 through FY2025).

Background

The City owns and operates a wastewater collection system that collects and conveys wastewater generated within the City to the East Bay Municipal Utility District (EBMUD) interceptor system, which conveys the flow to EBMUD's Main Wastewater Treatment Plant (MWWTP) located near the eastern terminus of the San Francisco-Oakland Bay Bridge. EBMUD also receives flows from six other "Satellite" collection system agencies: the cities of Albany, Berkeley, Emeryville, Oakland, and Piedmont, and the Stege Sanitary District.

City facilities on the main Alameda island and Harbor Bay Isle include 32 pump stations and about 128 miles of collection lines ranging from 4 inches to 30 inches in diameter. In addition, approximately 14 miles of pipeline and 9 pump stations are located in the City-owned portion of Alameda Point, the former Alameda Naval Air Station. Currently, revenue for sewer maintenance on the Navy legacy facilities at Alameda Point come from leaseholders and other revenue sources. As Alameda Point is developed, sewer assets will be renewed, parcel ownership will become private and the sewer system will then be considered part of the main City system. When this occurs, revenue for Alameda Point sewers will transfer to the rate payer system.

The original sewers in Alameda were primarily terra cotta pipe and were installed between 1890 and 1920. The sewers constructed after 1920 can be divided into three major groups based on the date of construction: those built prior to 1950; between 1950 and 1970; and 1970 to the present. In Alameda, the property owner owns the entire sewer lateral, from the building drain to the connection to the City's sewer main. However, the City takes maintenance responsibility for the lower portion of the lateral (within the public right-of-way) and replaces the lower when rehabilitating the public sewer main to which it is connected, or if the lower lateral fails, whichever occurs first.

During large storms, wastewater flows from the Satellite agencies can exceed regional conveyance and sewage treatment capacity. When this occurs, EBMUD diverts and directs the excess flow to three wet weather facilities, designed to store and provide partial treatment prior to discharging to the SF Bay. In 2014, EBMUD and the Satellite agencies reached a settlement with the Environmental Protection Agency (EPA) regarding the excess wet weather flows and wet weather facility discharges. Each agency has developed plans and programs to reduce I&I flows, reduce sanitary sewer overflows (SSOs), and

repair and replace aging sewer pipelines.¹ Under Final Consent Decree requirements, Alameda will replace approximately 2.6 miles of sewer pipeline annually for the remaining term of the Consent Decree, or eighteen additional years. This work will be conducted in addition to other planned capital improvements. A history of the regulatory events that have impacted the City over the last twenty-six years is shown in Figure 1.

Figure 1 History of Regulatory Action

1987	<p>State Regional Water Quality Control Board (State Board) issued a Cease and Desist Order (CDO) to the Cities of Alameda, Berkeley, Emeryville, Oakland, Piedmont, Albany, EBMUD and Stege Sanitary District</p> <ul style="list-style-type: none"> - Permission to continue to discharge treated wastewater to the SF Bay was conditioned upon each City adopting a Sewer Compliance Plan, administered under the National Pollution Elimination System (NPDES) Permit - The City's NPDES permit requires participation in regionally administered Infiltration and Inflow Correction Program (I/ICP)
1988	<p>Provision to test private laterals, and repair as necessary, upon property sale was added to the City Municipal Code.</p>
Oct 2003	<p>San Francisco Bay Regional Water Board (Regional Board) passed a resolution that stated its intent to implement new regulations that would uniformly address sanitary sewer overflows (SSOs). The resolution also included a reference to a requirement that all agencies prepare a sewer system management plan (SSMP).</p>
Jul 2005	<p>The Regional Board transmitted a Water Code Section 13267 request to City of Alameda, and all other collection systems in the region, that formally required the preparation of SSMPs.</p>
May 2006	<p>State Board adopted Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems, Order No. 2006-003-DWQ. WDR required development and implementation of Sewer System Management Plan (SSMP).</p> <p>East Bay Municipal District's (EBMUD) NPDES permit no longer allowed the discharge of partially treated sewage from three Wet Weather Facilities that are used when sanitary flows surcharge the capacity of the main treatment plant.</p>
May 2009	<p>EPA issued the City an Administrative Order (AO) for maintenance, operations, and data collection.</p>
Sept 2011	<p>City entered into a Stipulated Order for Preliminary Relief with EPA and the Water Boards to develop measures to address excess wet weather flow and to address unauthorized sanitary sewer overflows.</p>
Sept 2014	<p>City entered into a Final Consent Decree with seven other defendants (Berkeley, Emeryville, Oakland, Piedmont, Albany, EBMUD and Stege Sanitary District), three plaintiffs (EPA and Water Boards) and two intervenors (San Francisco Bay Keeper and Our Childrens Earth Foundation). The multi-decade decree</p>

¹ Sanitary Sewer Overflows (SSOs) from sewer collection systems throughout California cities and communities have often caused beach closures, pollution of creeks and a threat to public health. A consensus has developed among the public regulatory agencies and municipal sewer agencies that there is a need to develop and implement comprehensive Sewer System Management Plans (SSMP) to prevent or significantly reduce SSOs from public sewer systems.

defines the programs and work needed to reach the goals of eliminating discharges from the Wet Weather Facilities and of eliminating SSOs.

Sewer Customers

The City serves approximately 19,924 parcels throughout its service area. The majority of customers are single family and multi-family residential units. The City's estimated customer base for FY2019 is shown in Table 2. The customer base is expressed in terms of single-family equivalent dwelling units (EDUs). The City expects growth over the next 25 years due to redevelopment of the Naval Air Station.

Table 2
Estimated Sewer Customers and Rate Revenue
City of Alameda
Sewer Financial Plan and Rate Study

Customer Class	Number of Parcels	Number of EDUs	Revenue	% of Revenue
Single Family	14,497	14,822	\$4,651,144	42.0%
Multi-Family	4,643	14,270	\$4,477,797	40.4%
Commercial	642	4,053	\$1,271,842	11.5%
Combination	61	336	\$105,426	1.0%
Handbills	<u>81</u>	<u>1,818</u>	<u>\$570,406</u>	<u>5.1%</u>
Total	19,924	35,298	\$11,076,615	100.0%

Regional Sewer Rates

Table 3 and Chart A show a comparison of monthly sewer service charges with regional agencies. Rates are on the low end compared to regional agencies and are projected to remain low over the next 5 years. Rates only include collection. East Bay Municipal Utility District (EBMUD) charges a separate fee for treatment. As of July 1, 2019, the monthly EBMUD charge for a single family home ranges from \$14.53 to \$25.96 based on water usage.

Table 3
Sewer Bill Survey
City of Alameda
Sewer Financial Plan and Rate Study

Agency	Monthly Service Charge (Single-Family Residential)*
City of Emeryville ¹	\$11.29
Stege Sanitary District	22.58
City of Alameda (current)	26.93
City of Alameda (proposed FY2021)	27.74
City of Alameda (proposed FY2022)	28.57
City of Alameda (proposed FY2023)	29.43
City of Alameda (proposed FY2024)	30.31
City of Alameda (proposed FY2025)	31.22
City of Berkeley ²	38.71
City of Oakland ²	40.08
City of Albany	44.57
City of Piedmont ³	49.92

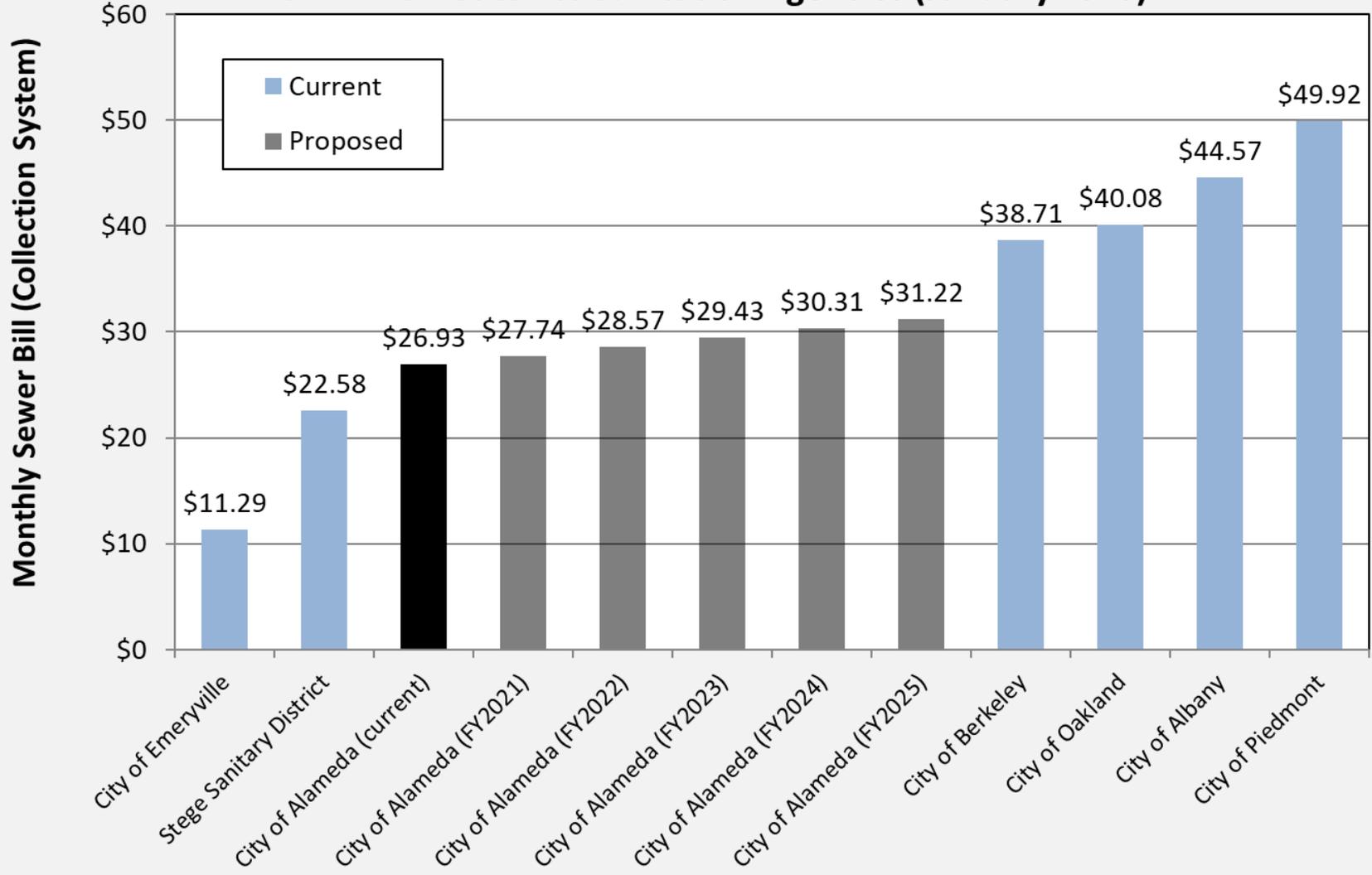
*Fees shown for collection system only

¹ Jan 1st 2020

² The service charge is based upon an estimated residential wastewater flow of 4,055 gallons per month

³ The service charge is a flat rate for lots sized 0 to 5,000 sq ft

Chart A
Residential Monthly Sewer Bills
of EBMUD Satellite Sanitation Agencies (January 2020)



SEWER SERVICE

Sewer Service Fund

The City accounts for the revenues and expenses of sewer service through Fund 602, the Sewer Service Fund. The fund includes subaccounts for operations, other reserves, and the 2012 Sewer Revenue Bond. As shown in Table 4, total sewer reserves for July 1, 2019 is estimated to be \$23.8 million. For financial planning purposes, this report combines the three subaccounts into one cash flow.

Table 4
Estimated Reserve Fund Balances
City of Alameda
Sewer Financial Plan and Rate Study

Reserve Fund	July 1, 2019
Operating Fund	\$20,877,455
Reserve Fund	\$2,150,000
2012 Sewer Bond Fund	<u>\$791,630</u>
Total	\$23,819,085

Source: Estimated based on CAFR statement of net position

BWA recommends a minimum operating reserve fund target of 60% of operating and plus one year of pipeline replacement expenditure and one year of debt service. Maintaining a prudent minimal level of fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and non-catastrophic emergency capital repairs. The fund reserve targets will escalate over time as the utility's expenses gradually increase in future years.

Sewer Rates

Table 5 shows a history of the City's sewer rates for the past 6 years. Since 2015, sewer rates increased by approximately 16%. The City completed its last rate study in 2015 which included annual rate increases of 3% per year for FY2016 to FY2020.

The sewer fixed charges are based on customer type: Single Family, Multi-Family, and Commercial. Residential customers are charged a flat monthly rate at the current monthly charge of \$26.93 per dwelling unit. Multi-family residential units are charged 90% of the single family rate at \$24.26 per month. The sewer rate for commercial customers is comprised of a flat rate equivalent to the multi-family rate plus a flow-based charge that is billed per each hundred cubic feet (hcf) of metered water use over 7.3 hcf. (One hcf of water is equal to 748 gallons of water.)

Table 5
Historical & Current Sewer Service Charges
City of Alameda
Sewer Financial Plan and Rate Study

Customer Class	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Current
% Increase		3.0%	3.0%	3.0%	3.0%	3.0%
Single Family (\$/month)	\$23.23	\$23.93	\$24.65	\$25.39	\$26.15	\$26.93
Multi-Family (\$/month)	\$20.91	\$21.54	\$22.19	\$22.86	\$23.55	\$24.26
Commercial						
Fixed Charge (\$/month) (includes first 730 cubic feet)	\$20.91	\$21.54	\$22.19	\$22.86	\$23.55	\$24.26
Flow-Based Rate (\$ per HCF)	\$2.88	\$2.96	\$3.05	\$3.14	\$3.23	\$3.33

HCF = Hundred cubic feet

Revenues

The majority of revenues for the Sewer Service Fund are collected as sewer service charges on the property tax roll. A small portion of customers are directly billed by the City based on estimated sewer flow. Other revenues include connection fees, miscellaneous revenues, and interest earnings from reserves and investments. Total revenues for FY2020 are estimated by BWA to be \$11.9 million.

Expenses

Sewer fund expenses include operating, debt service, and capital improvement costs. Operating costs include personnel services, utilities, materials, supplies, and cost allocation to the City's General Fund for administration. Operating costs are budgeted as \$4 million in FY2020 and are projected to increase by 3% per year.

Debt Service

The City's total annual debt service payment is about \$900,000 per year which includes debt service for two outstanding Clean Water State Revolving Fund (SRF) loans and the 2012 Sewer Revenue Bond (2012 bonds). Two of the SRF loans will be paid off in the 5-year rate study period which will reduce annual debt service payments to approximately \$766,000 beginning in FY2024. Covenants of the 2012 bonds require that the Sewer Fund net revenues (revenues less operating expenses) be equal to or greater than 1.20 times the total annual debt service payment. The 2012 bond will be paid off in 2042. This covenant is referred to as the debt service coverage ratio in BWA's cash flow projection presented later in this report. The City's debt service payments are shown in Table 6.

Table 6
Sewer Service Fund Debt Service
City of Alameda
Sewer Financial Plan and Rate Study

Outstanding Obligation Original Par Amount	1999 State Water Resources \$1,051,007	2004 State Water Resources \$1,530,442	2012 Sewer Revenue Bonds \$14,175,000	Total Annual Payment
FY2019	66,889	102,271	720,969	890,129
FY2020	66,889	102,271	767,169	936,329
FY2021	0	102,271	766,869	869,140
FY2022	0	102,271	763,069	865,340
FY2023	0	102,271	763,769	866,040
FY2024	0	0	766,169	766,169
FY2025	0	0	766,919	766,919
FY2026	0	0	765,219	765,219
FY2027	0	0	766,494	766,494
FY2028	0	0	767,319	767,319
FY2029	0	0	763,381	763,381
FY2030	0	0	764,700	764,700
FY2031	0	0	764,956	764,956
FY2032	0	0	764,131	764,131
FY2033	0	0	762,856	762,856
FY2034	0	0	766,056	766,056
FY2035	<u>0</u>	<u>0</u>	<u>763,731</u>	<u>763,731</u>
Total	\$133,779	\$511,357	\$12,963,775	\$13,608,911

Capital Improvement Program

The City's sewer utility is capital intensive. In FY2020, the sewer utility's total budget is about \$12.6 million. Capital projects are needed to keep the sewer system in good working order and to meet the clean water requirements set forth under the Consent Decree. The City's capital programs include pipeline, manhole and lower lateral rehabilitations, pump station renovation, other capital and maintenance projects, and vehicle and equipment replacement.

Pipeline Replacements

The City is required, per Consent Decree, to replace 2.6 linear miles of sewer pipeline every year for the next eighteen years or face a fine of \$1,000 per day of noncompliance. All the EBMUD satellite agencies are required to complete significant capital renewal of their collection systems. In 2015, the City prepared a Sewer Master Plan with a 20 Year Rehabilitation Program based on condition, consequence of failure, annual Consent Decree requirement and projected annual capital budgets. The City has successfully implemented the first 4 years of the 20 Year Rehabilitation Program with additional pipeline replacement completed as new condition data dictated.

The City conducted a competitive bid process during FY2014 with Ranger Pipelines as the low bid to conduct the sewer pipeline replacements. In FY2018 and FY2019, the City conducted additional competitive bid processes. Low bid unit costs have fluctuated; however BWA and City staff determined that escalating unit costs from the Sewer System Master Plan (in 2015/16 dollars) to current dollars based on the Engineering News-Record Construction Cost Index is most appropriate for future projections. Table 7 shows the City’s proposed 20-year sewer rehabilitation capital improvement program from the City’s Sewer System Master Plan.

Table 7
Proposed 20-Year Sewer System Rehabilitation CIP
City of Alameda
Sewer Financial Plan and Rate Study

<u>Fiscal Year</u>	<u>Length of Pipe (miles)</u>	<u>Estimated Capital Cost¹</u>	<u>ENR CCI (2015/16)</u>	<u>ENR 10/2019</u>	<u>ENR Adjusted Capital Cost</u>
1 FY 15/16	3.33	\$6,970,000	10,385	11,326	\$7,601,562
2 FY 16/17	2.78	\$5,410,000	10,385	11,326	\$5,900,208
3 FY 17/18	2.73	\$5,290,000	10,385	11,326	\$5,769,335
4 FY 18/19	2.80	\$5,400,000	10,385	11,326	\$5,889,302
5 FY 19/20	2.89	\$5,410,000	10,385	11,326	\$5,900,208
6 FY 20/21	2.84	\$5,540,000	10,385	11,326	\$6,041,987
7 FY 21/22	2.95	\$5,520,000	10,385	11,326	\$6,020,175
8 FY 22/23	2.71	\$5,370,000	10,385	11,326	\$5,856,584
9 FY 23/24	2.81	\$5,380,000	10,385	11,326	\$5,867,490
10 FY 24/25	2.41	\$5,470,000	10,385	11,326	\$5,965,645
11 FY 25/26	2.52	\$5,560,000	10,385	11,326	\$6,063,800
12 FY 26/27	2.47	\$5,480,000	10,385	11,326	\$5,976,551
13 FY 27/28	2.72	\$5,500,000	10,385	11,326	\$5,998,363
14 FY 28/29	2.61	\$5,540,000	10,385	11,326	\$6,041,987
15 FY 29/30	2.70	\$5,430,000	10,385	11,326	\$5,922,020
16 FY 30/31	2.72	\$5,390,000	10,385	11,326	\$5,878,396
17 FY 31/32	2.51	\$5,370,000	10,385	11,326	\$5,856,584
18 FY 32/33	2.90	\$5,480,000	10,385	11,326	\$5,976,551
19 FY 33/34	2.56	\$5,490,000	10,385	11,326	\$5,987,457
<u>20 FY 34/35</u>	<u>2.60</u>	<u>\$5,510,000</u>	10,385	11,326	<u>\$6,009,269</u>
Total 20-year CIP	54.60	\$110,510,000			\$120,523,472

1. Estimates represent current (FY2015/16) costs.

Source: City of Alameda Sewer System Master Plan. 5-2: Proposed 20-Year Sewer System Rehabilitation CIP

Pump Station Rehab

Across the service area, the City owns and maintains 35 pump stations. BWA budgets an annual sinking fund contribution of \$500,000. By contributing annually to a sinking fund, the City will have funds available for the eventual repair and replacement of the pump stations.

Other Capital Projects and Capital Maintenance Projects

Other Capital costs include the upcoming Bay Farm Island force main condition assessment, rehabilitation, as determined needed, and rehabilitation of the discharge manhole. The total costs are estimated to be \$2 million in year 2 of the study.

Vehicle/Equipment Replacement

Table 8 shows the projected replacement schedule of the City's vehicles and equipment. Sewer Vehicles (Fund 602) will join the Vehicle Replacement ISF (Fund 701) - with 16 Vehicles moving over in FY2019/20 and the remaining 7 vehicles the following year. The City has calculated annual fleet replacement charges, which are incorporated in the final cashflow.

Table 8
Vehicles, Equipment, Machinery, and Tools
City of Alameda

Description	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
96 Ford F-250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11 Caterpillar Planer / Loader	\$0	\$0	\$0	\$81,037	\$0	\$0	\$0	\$0	\$0	\$0
13 Ford F-550	\$0	\$0	\$0	\$78,786	\$0	\$0	\$0	\$0	\$0	\$0
11 Chevrolet G-3500	\$0	\$0	\$0	\$0	\$0	\$418,942	\$0	\$0	\$0	\$0
18 Vac-Con / Peterbilt 348	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$674,568	\$0
12 International Durastar	\$0	\$0	\$0	\$0	\$0	\$0	\$479,651	\$0	\$0	\$0
15 Flat Bed Trailer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,002	\$0	\$0
07 Chevrolet Colorado	\$36,540	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13 Gorman RUPP	\$0	\$0	\$17,911	\$0	\$0	\$0	\$0	\$0	\$0	\$0
04 Ford F-350 (Flat-Bed)	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
04 Chevrolet Colorado	\$36,540	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
04 Chevrolet Colorado	\$36,540	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
05 Skid Steer Loader	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
03 Ford F-450	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
01 GMC C3500 Dump	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
01 Sterling Dump Truck	\$205,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
01 Ford F-350 (Dump / Box)	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
01 Caterpillar Vib. Drum Roller	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
98 Chevrolet G-2500	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
99 Gorman Rupp Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0
95 Ford F-450 Dump	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
93 Ford F-450 Dump	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
90 Chevrolet C-2500	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
89 Chevrolet C-2500	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
88 Chevrolet C-3500	\$72,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
05 Sterling Vaccum Mach	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$1,126,620	\$0	\$17,911	\$159,822	\$0	\$418,942	\$479,651	\$19,002	\$689,568	\$0

Cash Flow

BWA developed a ten-year cash flow projection to determine annual revenue requirements and project sewer rates. The financial projections incorporate the latest information available as well as a number of reasonable and slightly conservative assumptions:

Reserves

- The City has about \$20.9 MM in Operating Funds and \$23.8 MM in total reserves as of July 1, 2019.
- BWA recommends the City fund cost increases on a pay-as-you-go basis.
- BWA recommends that the City maintain reserves equal to 60% of operating and plus one year of pipeline replacement expenditure and one year of debt service. The recommended reserve is equal to about \$12.2 million in FY2020.

Revenues

- The City anticipates some new growth in the upcoming years; to be conservative BWA estimates about 200 sewer EDUs per year
- The connection fee charge is projected to increase by 3% each year.
- The interest earning rate on reserve funds is estimated at 1% each year

Expenses

- All operating expenses, including Personnel Services, Utilities, Materials & Supplies, and Cost Allocation, and capital costs are escalated by 3%.
- The City will utilize rate revenue and reserves to meet costs. No new debt is projected over the next ten years.

Table 9 shows the cash flow projection for the next five years, which is the Proposition 218 legal maximum rate horizon. Rate increases proposed for year six and beyond would be subject to additional Proposition 218 review, noticing, and public hearing requirements. An extended cash flow for years 6 through 10 for the City of Alameda's Sewer Fund is provided in Appendix A.

As shown in Table 9, the Sewer Fund's current reserves exceed BWA's recommended target. Over the next five years, BWA recommends a slight drawdown of reserves (from a \$18.2 million ending balance in FY2020 to an ending balance of \$15.2 million in FY2025).

Table 9 (FY2020 through FY2025)
Sewer Fund Projected Cash Flow
City of Alameda
Sewer Financial Plan and Rate Study

	Projection FY2020	Projection FY2021	Projection FY2022	Projection FY2023	Projection FY2024	Projection FY2025
		Year 1	Year 2	Year 3	Year 4	Year 5
Revenue Increase	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Operating Fund	20,877,455	15,240,684	12,598,698	10,727,470	11,107,732	11,678,916
Reserve Fund	2,150,000	2,150,000	2,150,000	2,150,000	2,150,000	2,150,000
2012 Sewer Bond Fund	<u>791,630</u>	<u>791,630</u>	<u>791,630</u>	<u>791,630</u>	<u>791,630</u>	<u>791,631</u>
Total Beginning Cash Fund Balance	\$23,819,085	\$18,182,314	\$15,540,328	\$13,669,099	\$14,049,362	\$14,620,547
		1-Jul	1-Jul	1-Jul	1-Jul	1-Jul
Single Family Monthly Rate	\$26.93	\$27.74	\$28.57	\$29.43	\$30.31	\$31.22
Connection Fee	\$1,118.00	\$1,152.00	\$1,187.00	\$1,223.00	\$1,260.00	\$1,298.00
Customer Growth	200	200	200	200	200	200
Estimated Assessment EDUs	34,187	34,387	34,587	34,787	34,987	35,187
<u>Estimated Handbill EDUs</u>	<u>1,959</u>	<u>1,959</u>	<u>1,960</u>	<u>1,959</u>	<u>1,960</u>	<u>1,959</u>
Total	36,145	36,345	36,547	36,746	36,947	37,146
Revenues						
Charges for services (assessments)	11,048,000	11,447,000	11,858,000	12,285,000	12,725,000	13,182,000
Sewer Service Fees (handbills)	633,000	652,000	672,000	692,000	713,000	734,000
Connection Fees		230,000	237,000	245,000	252,000	260,000
Interest	209,000	152,000	126,000	107,000	111,000	117,000
<u>Misc.</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>10,000</u>	<u>10,001</u>
Total Revenues	11,895,000	12,486,000	12,898,000	13,334,000	13,811,000	14,303,001
Expenses						
Operating Expenses						
Salary and Benefits	1,679,763	1,730,000	1,782,000	1,835,000	1,890,000	1,947,000
Contractual Services	641,518	661,000	681,000	701,000	722,000	744,000
Materials & Supplies	139,529	144,000	148,000	152,000	157,000	162,000
<u>Cost Allocation</u>	<u>1,568,355</u>	<u>1,615,000</u>	<u>1,663,000</u>	<u>1,713,000</u>	<u>1,764,000</u>	<u>1,817,000</u>
Total Operating Expenses	4,029,165	4,150,000	4,274,000	4,401,000	4,533,000	4,670,000
Debt Service	936,000	869,000	865,000	866,000	766,000	767,000
Debt Service Coverage Ratio	8.40	9.59	9.97	10.32	12.11	12.56
Net Operating Revenues	6,929,835	7,467,000	7,759,000	8,067,000	8,512,000	8,866,001
Capital Expenses						
Sewer Rehab	8,844,000	8,960,000	6,848,295	6,889,189	7,122,771	7,466,472
Pump Station Rehab	2,865,000	0	500,000	515,000	530,000	546,000
Other Capital Projects			2,000,000			
Vehicle/Equipment Replacement	<u>1,126,620</u>	<u>761,222</u>	<u>281,933</u>	<u>282,549</u>	<u>288,045</u>	<u>288,045</u>
Total Capital Expenses	12,566,606	10,108,986	9,630,228	7,686,737	7,940,816	8,300,518
Total Expenses¹	17,531,771	15,127,986	14,769,228	12,953,737	13,239,816	13,737,518
Net Revenues	(5,636,771)	(2,641,986)	(1,871,228)	380,263	571,184	565,483
Total Ending Fund Balance	\$18,182,314	\$15,540,328	\$13,669,099	\$14,049,362	\$14,620,546	\$15,186,030
Operating Fund ²	15,240,684	12,598,698	10,727,470	11,107,732	11,678,916	12,244,400
Reserve Fund	2,150,000	2,150,000	2,150,000	2,150,000	2,150,000	2,150,000
2012 Sewer Bond Fund	791,630	791,630	791,630	791,630	791,630	791,631
Minimum Operating Fund	12,197,000	12,319,000	10,278,000	10,396,000	10,609,000	11,035,000
Meeting Minimum Fund Target	YES	YES	YES	YES	YES	YES

Proposed Sewer Rates

Current sewer rates are adequate to meet operating costs, maintain financial health, and make the Consent Decree required sewer pipeline replacements from FY2021 through FY2025. Sewer rate revenue is only used for the intended purpose of operating and maintaining the sewer system. The proposed sewer rates are shown in Table 10.

Table 10
Proposed Sewer Service Charges
City of Alameda
Sewer Financial Plan and Rate Study

Customer Class	FY 2020 Current	FY 2021 Proposed	FY 2022 Proposed	FY 2023 Proposed	FY 2024 Proposed	FY 2025 Proposed
% Increase		3.0%	3.0%	3.0%	3.0%	3.0%
Single Family (\$/month)	\$26.93	\$27.74	\$28.57	\$29.43	\$30.31	\$31.22
Multi-Family (\$/month)	\$24.26	\$24.99	\$25.74	\$26.51	\$27.31	\$28.13
Commercial						
Fixed Charge (\$/month) (includes first 730 cubic feet)	\$24.26	\$24.99	\$25.74	\$26.51	\$27.31	\$28.13
Flow-Based Rate (\$ per HCF)	\$3.33	\$3.43	\$3.53	\$3.64	\$3.75	\$3.86

HCF = Hundred cubic feet

APPENDIX A: Extended 10-Year Cash Flow Projection

Extended Cash Flow (FY2026 through FY2030)
Sewer Fund Projected Cash Flow
City of Alameda
Sewer Financial Plan and Rate Study

	Projection FY2026	Projection FY2027	Projection FY2028	Projection FY2029	Projection FY2030
	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue Increase	3.00%	3.00%	3.00%	3.00%	3.00%
Operating Fund	12,244,400	12,791,561	13,553,294	14,408,186	15,309,887
Reserve Fund	2,150,000	2,150,000	2,150,000	2,150,000	2,150,000
2012 Sewer Bond Fund	<u>791,630</u>	<u>791,630</u>	<u>791,630</u>	<u>791,630</u>	<u>791,630</u>
Total Beginning Cash Fund Balance	\$15,186,029	\$15,733,190	\$16,494,923	\$17,349,816	\$18,251,517
	1-Jul	1-Jul	1-Jul	1-Jul	1-Jul
Single Family Monthly Rate	\$32.16	\$33.12	\$34.11	\$35.13	\$36.18
Connection Fee	\$1,337.00	\$1,377.00	\$1,418.00	\$1,461.00	\$1,505.00
Customer Growth	200	200	200	200	200
Estimated Assessment EDUs	35,387	35,587	35,787	35,987	36,187
Estimated Handbill EDUs	<u>1,959</u>	<u>1,960</u>	<u>1,959</u>	<u>1,959</u>	<u>1,960</u>
	37,346	37,547	37,746	37,946	38,147
Revenues					
Charges for services (assessments)	13,656,000	14,144,000	14,648,000	15,171,000	15,711,000
Sewer Service Fees (handbills)	756,000	779,000	802,000	826,000	851,000
Connection Fees	267,000	275,000	284,000	292,000	301,000
Interest	122,000	128,000	136,000	144,000	153,000
Misc.	<u>10,000</u>	<u>10,000</u>	<u>10,000</u>	<u>10,000</u>	<u>10,000</u>
Total Revenues	14,811,000	15,336,000	15,880,000	16,443,000	17,026,000
Expenses					
Operating Expenses					
Salary and Benefits	2,005,000	2,065,000	2,127,000	2,191,000	2,257,000
Contractual Services	766,000	789,000	813,000	837,000	862,000
Materials & Supplies	167,000	172,000	177,000	182,000	187,000
Cost Allocation	<u>1,872,000</u>	<u>1,928,000</u>	<u>1,986,000</u>	<u>2,046,000</u>	<u>2,107,000</u>
Total Operating Expenses	4,810,000	4,954,000	5,103,000	5,256,000	5,413,000
Debt Service	765,000	766,000	767,000	763,000	765,000
Debt Service Coverage Ratio	13.07	13.55	14.05	14.66	15.18
Net Operating Revenues	9,236,000	9,616,000	10,010,000	10,424,000	10,848,000
Capital Expenses					
Sewer Rehab	7,824,386	7,970,260	8,256,000	8,581,477	8,699,198
Pump Station Rehab	562,000	579,000	596,000	614,000	632,000
Other Capital Projects	0	0	0	0	0
Vehicle/Equipment Replacement	<u>302,453</u>	<u>305,007</u>	<u>303,107</u>	<u>326,822</u>	<u>326,822</u>
Total Capital Expenses	8,688,839	8,854,267	9,155,107	9,522,299	9,658,020
Total Expenses¹	14,263,839	14,574,267	15,025,107	15,541,299	15,836,020
Net Revenues	547,161	761,733	854,893	901,701	1,189,980
Total Ending Fund Balance	\$15,733,190	\$16,494,923	\$17,349,816	\$18,251,517	\$19,441,497
Operating Fund ²	12,791,561	13,553,294	14,408,186	15,309,887	16,499,867
Reserve Fund	2,150,000	2,150,000	2,150,000	2,150,000	2,150,000
2012 Sewer Bond Fund	791,630	791,630	791,630	791,630	791,630
Minimum Operating Fund	11,475,000	11,709,000	12,085,000	12,498,000	12,712,000
Meeting Minimum Fund Target	YES	YES	YES	YES	YES

1 - Operating, debt service, and capital expenses

2 - Operating fund minimum is 60% of operating, plus one year of pipeline replacement expenditure, and one year of debt service