

## 2020 Wastewater Rate Studies

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**Sonoma  
Water**

**Airport Larkfield Wikiup  
Sanitation Zone  
Wastewater Rate Study**

**Final Report  
May 5, 2020**



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May 5, 2020

Lynne Rosselli  
Finance Manager  
Sonoma Water  
404 Aviation Blvd  
Santa Rosa, CA 95403

Re: Airport Larkfield Wikiup Sanitation Zone 2020 Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to Sonoma Water the attached 2020 Wastewater Rate Study for Airport Larkfield Wikiup Sanitation Zone (Zone).

This study presents BWA's analysis of the operating and non-operating expenses of the Zone's wastewater enterprise and provides updated five-year cash flow projections and rates for FY 2020. The primary purpose of this study is to assess the long-term financial condition of the Zone and provide recommendations to recover the cost of wastewater service equitably between ratepayers.

The enclosed report recommends increasing wastewater rates to recover the increasing cost of operations and capital improvement. Recommendations were developed with substantial input from Agency staff and engineering subconsultant Woodard & Curran. BWA finds that the rates and charges proposed in this report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. Financial projections generally align with Sonoma Water's internal long-range financial plan for the Zone. BWA can confirm that the proposed rates are fair and reasonable to the Zone's customers.

We have enjoyed working with Sonoma Water on this rate study. Please contact us with any future questions about this study and the recommended rates.

Sincerely,

Doug Dove, CIPMA  
Principal

Abigail Seaman  
Consultant

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# 1 Executive Summary

## 1.1 Background

Airport Larkfield Wikiup Sanitation Zone (Zone), managed by Sonoma Water, provides wastewater service to approximately 1,800 accounts within a 2,100 acre service area. The Zone's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from fixed annual wastewater rates) aim to recover the cost to operate and maintain the wastewater system. The Zone faces ongoing increases to operations costs and annual capital project costs to repair and replace aging infrastructure.

Sonoma Water has retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update for FY 2021 which examines any changes in current and projected costs and determines cost-of-service based rates that distribute costs equally among ratepayers. Basic objectives of the rate study include:

- Identify rate setting principles.
- Update long-term financial projections to determine future annual wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service

Based on input from Sonoma Water staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for operations and capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws

## 1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require Sonoma Water's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** Sonoma Water must mail a notice of proposed rate increases to all affected property owners in the Zone. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The Sonoma Water must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

### 1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed charges levied on each customer based on an assigned equivalent single family dwelling unit (ESD). Rates recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing wastewater rates, charges, and fees. In developing wastewater rates, it is important to note that there is no “one-size-fits-all” approach for establishing cost-based wastewater rates.

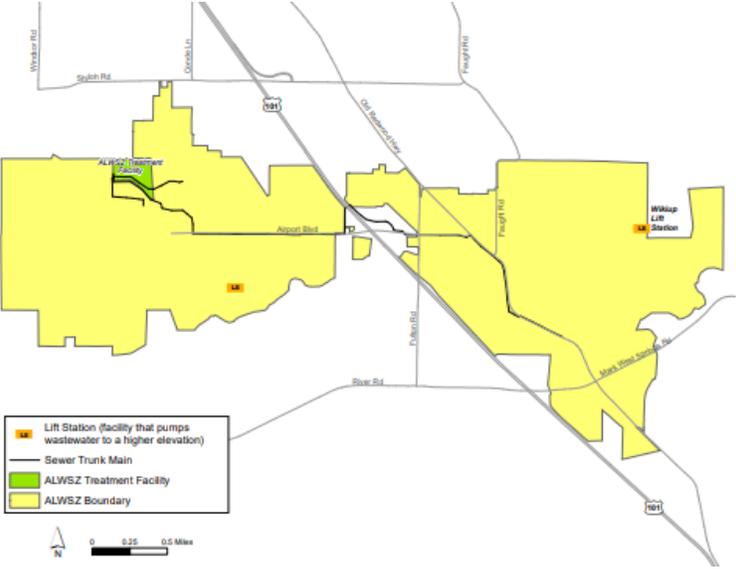
BWA used the following criteria when developing recommendations for the Zone’s wastewater rates and finances:

- 1) *Revenue Sufficiency:* Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact:* While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable:* Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical:* Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

### 1.4 Wastewater System Overview

The Zone serves 3,700 ESDs within a 2,100-acre service area in northern Santa Rosa as shown **Figure 1** below.

**Figure 1: Airport Larkfield Wikiup Service Area Map**



Zone Services include collection, distribution and tertiary treatment of wastewater, as well as regular operations, maintenance, and replacement of wastewater infrastructure. The Zone’s main source of wastewater revenue is annual wastewater rates on each customer’s property tax bill. Rates were last increased on July 1, 2019 and will need small annual increases over the next 5 years to keep up with wastewater system expenses.

## 1.5 Factors Driving Rate Increases

The primary wastewater cost factors affecting the Zone are ongoing operations cost increases and the \$2 million Capital Improvement Plan which will address ongoing maintenance, repair and replacement needs.

## 1.6 Current Wastewater Rates

The Zone’s current wastewater rates are shown in Table 1 below. Wastewater charges are billed annually on the property tax roll according to Sonoma Water’s evaluation of each customer’s Equivalent Single-Family Dwelling (ESD). ESDs are evaluated according to the Zone’s Exhibit A document, which provides the latest flow and strength estimates for common residential and commercial customer classes. The FY 2021 Proposed Exhibit A is provided in the appendix of this report.

**Table 1 Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Annual Fixed Charge

All Customers per ESD per year	\$979
per month	\$81.58

Revenue from current rates will not be sufficient to fund rising operations and capital costs over the next five years without small annual increases to the rate revenue.

## 1.7 Proposed Wastewater Rates

Table 2 shows the proposed wastewater rates which reflect a 4% rate revenue increase.

**Table 2 Proposed Wastewater Rates**

Wastewater rates effective July 1, 2020

Annual Fixed Charge

All Customers per ESD per year	\$1,018
per month	\$84.85

## 2 Wastewater Financial Projections and Rates

### 2.1 Wastewater Financial Overview

BWA conducted an independent evaluation of the Zone’s wastewater enterprise finances. Key observations include the following:

- Wastewater rates have increased an average of 5.9% per year for the last 10 years. This has allowed the Zone to keep up with operations cost increases and capital improvement needs.
- The wastewater enterprise has one debt service obligation of approximately \$440,000 per year.
- The current Capital Improvement Plan totals \$2 million and addresses ongoing maintenance, repair and replacement needs.
- Projected wastewater expenses were determined based on input from Sonoma Water Staff. Projections are based on the average annual change in CPI (3.0% per year)
- The current wastewater rate structure equitably distributes costs among ratepayers. Since no water data is available, water use is estimated using typical flow and strength data in Exhibit A.

### 2.2 Current Monthly Wastewater Rates

Current rates (as shown on Table 1) are determined by Equivalent Single-Family Dwelling (ESD) using an ESD assignment schedule based on customer class and size. Rates have increased an average of 5.9% annually over the last 10 years.

### 2.3 Current Wastewater Accounts

The Zone serves 1,814 wastewater accounts, the majority of which are single family residential. A current customer listing is provided in Table 3 below.

**Table 3 Airport Larkfield Wikiup SZ – Customer Listing**

Customer Class	Parcels	ESDs
Residential	1,519	2,318.7
Single Family Dwelling	1,373	1,382.3
Multi Family	143	826.1
Mobile Home	3	110.3
Commercial	132	475.8
Industrial	141	602.5
Recreational	3	26.2
Institutional	6	14.2
Miscellaneous	2	2.1
Governmental	11	279.6
<b>Total</b>	<b>1,814</b>	<b>3,718.9</b>

Airport Larkfield Wikiup Sanitation Zone is a relatively slow-growth community. The Zone can conservatively expect 0.1% wastewater revenue growth per year as a result of new sewer connections or increased demand.

## 2.4 Factors Affecting 5-Year Financial Plan

The Zone will need annual rate increases to keep up with ongoing operating cost inflation and the current Capital Improvement Plan. Key cost components over the next five years are summarized as follows.

### 2.4.1 Ongoing Operating Cost Inflation

The Zone's wastewater operations budget totals approximately \$3.5 million for FY 2019/20. The Zone's largest expenses include maintenance, utilities, and Zone operations charges for Sonoma Water oversight and equipment. All operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI.

### 2.4.2 Debt Obligations

In addition to operating costs, the Zone pays annual debt service payments on one debt issuance according to the schedule shown on Table 4.

**Table 4: Debt Obligations**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
1998 Bond Repayment	\$439,588	\$439,588	\$439,588	\$439,588	\$439,588	\$439,588

### 2.4.3 Current Wastewater Capital Plan

The Zone's Wastewater Capital Improvement Plan totals \$2 million through 2024/25 and addresses aging infrastructure and other necessary improvements. Costs are provided in Table 5 based on engineering estimates as of 2019/20. A full schedule of projects is provided in the Appendix.

**Table 5: Capital Improvement Plan Summary**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CIP	\$531,000	\$425,000	\$0	\$325,000	\$475,000	\$300,000

## 2.5 Wastewater Enterprise Revenue Requirements

The wastewater cash flow projection incorporates the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

### **Growth & Water Demand Assumptions**

- The Zone is a relatively slow-growth community and BWA has conservatively assumed 0.1% growth in new connections or increased demand, which will contribute to rate revenue.
- Wastewater system demand (estimated with ESD ratings) is assumed to stay constant from FY 2019/20 (excluding estimated growth of 0.1% per year)

### **Revenue Assumptions**

- Rate revenue will increase according to the proposed rate increases assuming a relatively static number of customers and water consumption with the exception of growth projections.
- Other revenues are projected to remain stagnant from 2019/20 budget amounts.

- Annual interest earnings are estimated at 1% of beginning fund balance

**Expense Assumptions**

- Operations and maintenance costs are based on the 2019/20 budget and escalate at the annual rate of 3.0% to account for future cost inflation.
- Capital expenditures include \$2 million in projects through FY 2024/25

Based on the assumptions above, BWA created a cash flow projection that determined 4% annual wastewater rate increases are needed for the next 5 years. The proposed schedule is shown on Table 6 below.

**Table 6: Proposed Wastewater Rate Increases**

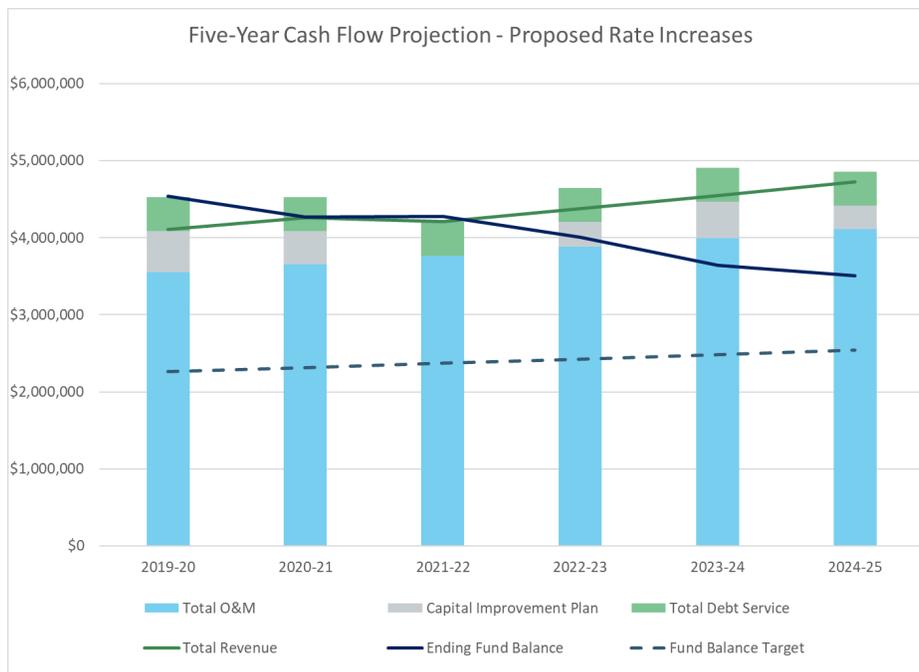
	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increases	4.0%	4.0%	4.0%	4.0%	4.0%

The proposed annual wastewater rate revenue increases accomplish the following:

- Projected operations and Capital Improvement Plan funding
- Minimum debt service coverage of 1.2x net operating revenues over the next 5 years
- Minimum operations fund balance of 6 months operating costs
- Minimum construction fund balance of 3% asset value

Figure 2 illustrates BWA’s 5-year cash flow projection with proposed rate revenue.

**Figure 2: 5-Year Cash Flow Projection**



The Zone would need to mail a Proposition 218 notice to notify ratepayers of the proposed wastewater rate structure changes as outlined in the next section. Rates would be effective following a mailed Proposition 218 notice and successful public hearing.

## 2.6 Cost of Service Study

Bartle Wells Associates conducted an independent analysis of the Zone’s current sewer rate structure. Based on an evaluation of rate alternatives and input from City staff, no major modifications are recommended to the Zone’s sewer rate structure. Rate revenue is 100% fixed based on ESDs assigned to each customer based on Exhibit A. Table 7 shows the total rate revenue requirement (including proposed rate increase) divided by projected 2020 ESDs.

<b>Table 7 Cost of Service Rate Calculation</b>	
2020-21 Revenue Requirement <sup>1</sup>	\$3,791,567
Projected ESDs <sup>2</sup>	3,724
<b>Proposed Rate - Fixed \$/ESD</b>	<b>\$1,018</b>

*1 – FY 2020 Calculated rate revenue plus FY 2021 proposed rate increase*  
*2 – 2020 ESDs plus FY 2021 growth projection*

## 2.7 Rate Structure Recommendations

BWA recommends that the Zone increase rate revenue according to the proposed annual rate increases shown on Table 6. We also recommend that the Zone continue to collect annual fixed charges based on ESD evaluations in Exhibit A, since customer-level water data is not available. Future ESD evaluations should be made from the latest flow and strength estimates in the proposed 2020 Exhibit A (attached).

The proposed fixed charge per ESD for 2020-21 is shown on Table 8 below.

**Table 8: Proposed Rates**

*Wastewater rate effective July 1, 2020*

All Customers per ESD per year	\$1,018
per month	\$84.85

*Equivalent Single-Family Dwelling (ESD) assigned per parcel based on probable quantity and quality of sewage effluent generated.*

## 2.8 Exhibit A Recommendations

Bartle Wells partnered with engineering consultant Woodard & Curran (W&C) to review and update Exhibit A. W&C reviewed the latest Sonoma Water data, relevant neighboring community data, and California Government Code to recommend updated Exhibit A values for 2021. W&C analyzed wastewater treatment plant and monitored neighborhood sewer flow and load data where available to determine recent trends and update sewer flow and loading estimates for all customer classes. New categories were added for new/emerging commercial and industrial sewer uses (e.g. high tech medical manufacturing, online vacation rentals). Accessory dwelling units and junior accessory dwelling unit factors were updated to reflect recent California legislation. The 2021 proposed Exhibit A will be used to evaluate ESDs for new sewer connections and capacity charges in the future.

### 3 Conclusion and Recommendations

This water and wastewater rate study presents a comprehensive review of Airport Larkfield Wikiup Sanitation Zone’s wastewater revenue requirements and rate structure. Since the last rate increase for FY 2020, the Zone has identified needed capital improvements and increases in ongoing operations costs. These factors were considered in the rate study to develop equitable rates for customers.

#### 3.1 Conclusion

The Zone practices sound financial planning that has provided for the general financial health of the wastewater enterprise given current cost estimates. Unfortunately, operations costs continue to increase, and the Zone also faces capital replacement needs and debt service obligations. The Zone will need small annual rate increases to keep up with these costs. These factors have been considered in this comprehensive wastewater rate study and are reflected in the above proposed rates. Adoption of these rates reflect the Zone’s commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future.

#### 3.2 Recommendations

BWA recommends that the Agency adopt the rates shown in this report. Rates were developed as part of a collaborative process that included extensive review by Sonoma Water, Woodard & Curran Engineering, and Agency Staff.

At minimum, BWA recommends that the Zone review and update its water and wastewater rate study every five years and/or concurrent with Master Plan Updates. Rates should be noticed and adopted on an annual basis per Zone policy according to the 5-year schedule of annual rate increases. There is no proposed change to the current wastewater rate structure. New connections should be given an ESD evaluation based on the proposed 2021 Exhibit A, which reflects the latest sewer flow and strength factors for the Zone.

Please find the complete Final Rate Study Tables as of 5/6/2020 and 2021 proposed Exhibit A attached to this report.

## **Appendix A: 2021 Proposed Exhibit A**

# EXHIBIT A

## EQUIVALENT SINGLE-FAMILY DWELLING BILLING UNIT FOR AIRPORT SANITATION ZONE

Use Category	Billing Basis			2020-2021	
	Flow gallons	BOD mg/l	TSS mg/l	Use	ESD
<b>Residential</b>					
Single-Family	280	200	200	connections	1.00
Condominium (Over 900 square ft)	280	200	200	dwelling units	1.00
Condominium (Under 900 square ft)	224	200	200	dwelling units	0.80
Multiple-Family (Apts, Duplex/Triplex)	224	200	200	dwelling units	0.80
Mobile home park	224	200	200	spaces	0.80
Mobile home (Individual)	224	200	200	units	0.80
JADU	-	200	200	units	0.00
ADU, under 751 sq ft*	112	200	200	units	0.40
ADU, 751-900 sq ft*	224	200	200	units	0.80
ADU, over 900 sq ft*	280	200	200	units	1.00
<b>Commercial</b>					
Appliance repair	190	200	200	1,000 sq. ft.	0.68
Art gallery	190	200	200	1,000 sq. ft.	0.68
Auto dealers					
With service facilities	190	180	280	connection	0.75
Without service facilities	38	180	280	add per service bay	0.15
Without service facilities	190	200	200	connection	0.68
Auto repair	38	300	300	per service bay	0.18
Bakery	190	1000	600	1,000 sq. ft.	2.02
Beer Making/Brewery				see note 1 below	
Butcher				see note 1 below	
Banks & financial institutions	190	130	80	1,000 sq. ft.	0.47
Barber shop	19	130	80	per chair	0.05
Beauty shop	38	130	80	per chair	0.09
Bars & taverns	20	200	200	per seat	0.07
Camp ground or RV park					
with hookups	125	200	200	site	0.45
without hookups	75	200	200	site	0.27
Cannabis production/manufacturing				see note 1 below	
Car washes					
manual	190	20	150	per bay	0.42
automatic	125	210	210	per bay	0.46
Cheese Maker				see note 1 below	
Churches, hall & lodges	2	200	200	per seat	0.01
Coffee shops with some food service	6	1000	600	per seat	0.06
Dry cleaners	285	150	110	1,000 sq. ft.	0.78
Fire stations	190	200	200	1,000 sq. ft.	0.68
with sleeping quarters and kitchens	220	300	300	1,000 sq. ft.	1.05
without sleeping quarters and kitchens	190	210	210	1,000 sq. ft.	0.70
Garages	95	180	280	per service bay	0.37
Gas Stations (no other automotive services)					
with convenience store	70	480	480	1,000 sq. ft.	0.48
without convenience store	38	210	210	1,000 sq. ft.	0.14
Gym					
with shower	400	300	300	1,000 sq. ft.	1.90
without shower	50	210	210	1,000 sq. ft.	0.18
High Tech Medical Manufacturing				see note 1 below	
Hospitals					
Convalescent	125	250	100	per bed	0.41
General	175	250	100	per bed	0.57
Veterinarian	6	250	100	per cage	0.02
Hotels/motels	100	310	120	sleeping rooms	0.37
without restaurant	100	310	120	sleeping rooms	0.37
B&B/Online Rentals/Vacation Rental homes	100	300	300	per occupant	0.48
Hydroponic Cultivation (including cannabis)	1.2	210	210	per plant	0.00
Laundromats	500	150	110	washing machines	1.37
High efficiency washers	250	210	210	washing machines	0.92
Library	190	200	200	1,000 sq. ft.	0.68
Machine shops	152	180	280	1,000 sq. ft.	0.60
Markets	38	800	800	1,000 sq. ft.	0.40
Nail Salon	10	210	210	per seat	0.04
Offices					
Business	76	130	80	1,000 sq. ft.	0.19
Chiropractic Office	190	210	210	Exam. room	0.70
Dental	190	130	80	Exam. room	0.47
Medical (clinic)					
with central handwashing stations	175	300	300	Exam. room	0.83
with office, surgery, lab and treatment rooms	190	300	300	Exam. room	0.90
offices with sink	125	300	300	Exam. room	0.59
offices without sink	100	300	300	Exam. room	0.48
Veterinarian					
with office, surgery, and treatment rooms	130	300	300	Exam. room	0.62
Pet Groomers	260	210	210	1,000 sq. ft.	0.96
Post office	190	130	80	1,000 sq. ft.	0.47
Resort				see note 1 below	

<b>Restaurants</b>						
Dine-in						
With DW & garbage disp.	6	1000	600	per seat		<b>0.06</b>
With DW or garbage disp.	6	619	371	per seat		<b>0.04</b>
Without DW & garbage disp.	6	238	143	per seat		<b>0.02</b>
Take-out	475	238	143	1,000 sq. ft.		<b>1.64</b>
Rest homes	125	250	100	per bed		<b>0.41</b>
Retail stores	38	150	150	1,000 sq. ft.		<b>0.11</b>
Schools						
Elementary	9	130	100	per student day		<b>0.02</b>
High	14	130	100	per student day		<b>0.04</b>
with entertainment facilities	19	300	300	per student day		<b>0.09</b>
Service stations	380	180	280	set of gas pumps		<b>1.49</b>
	38	180	280	add per service bay		<b>0.15</b>
Shoe repair	190	200	200	1,000 sq. ft.		<b>0.68</b>
Spa with various beauty treatments	38	300	300	per chair		<b>0.18</b>
Supermarkets	76	300	300	1,000 sq. ft.		<b>0.36</b>
Tasting Rooms						
Ale, Winery (no food)	120	210	210	1,000 sq. ft.		<b>0.44</b>
Ale, Winery (with food)	240	480	480	1,000 sq. ft.		<b>1.65</b>
Theaters	2	200	200	per seat		<b>0.01</b>
Trash Enclosures				see note 1 below		
Warehouse				see note 1 below		
Winery				see note 1 below		
Others as determined by the Engr.				see note 1 below		
<b>Industrial</b>					see note 1 below	
ALL COMMERCIAL ESDs TO BE DETERMINED BY THE GENERAL MANAGER USING THE FOLLOWING FORMULA:						
$ESD = ( TSS \times FLOW \times 0.33 ) / ( SFD \ TSS \times SFD \ FLOW ) + ( BOD \times FLOW \times 0.33 ) / ( SFD \ BOD \times SFD \ FLOW ) + ( FLOW \times ( 0.34 / SFD \ FLOW ) )$						
Note 1: For non-standard uses, warehouses and when agreement on a use category cannot be reached, the General Manager, in his or her sole discretion, may						
a) base charges on the user's actual or estimated contribution of wastewater into the District's facilities in terms of flow, biological oxygen demand (BOD), and total suspended solids (TSS), and						
b) calculate the user's charge using the above Charge Formula. The user shall provide verifiable data, as requested by the General Manager, for the charge to be determined.						
Note 2: In general, users with annual average TSS and/or BOD over 1,000 mg/L and users with annual average Flow greater than 5,000 gallons per day should be considered Monitored Users and use the Monitored User Charge Formula.						
Definitions	Flow = Gallons per Day	TSS = Total Suspended Solids				
	BOD = Biological Oxygen Demand	DW = dishwasher				
	ESD = Equivalent Single Family Dwelling	disp. = disposal				
* Note that no Capacity Charge is assessed when existing structures are converted in accordance with CGC 65852.2 (e)(1)(A) as determined by the County of Sonoma.						

**Appendix B: Wastewater Rate Study  
Supplementary Tables**



# AIRPORT / LARKFIELD / WIKIUP Wastewater COS Rate Study 2020

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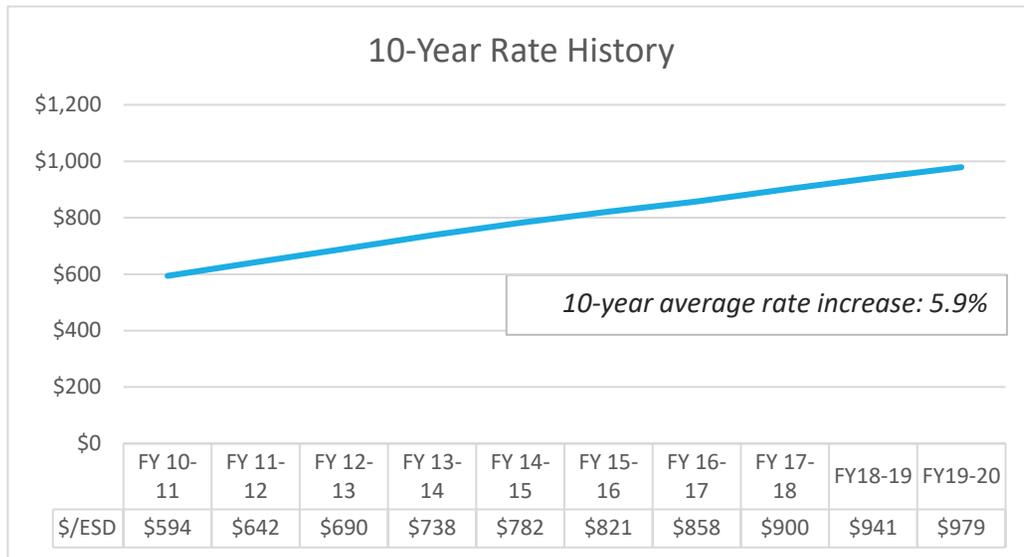
**Table B1: Current Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**AIRPORT / LARKFIELD / WIKIUP**

## Current Rates

**Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)**

\$979 annual - tax roll

\$81.58 monthly



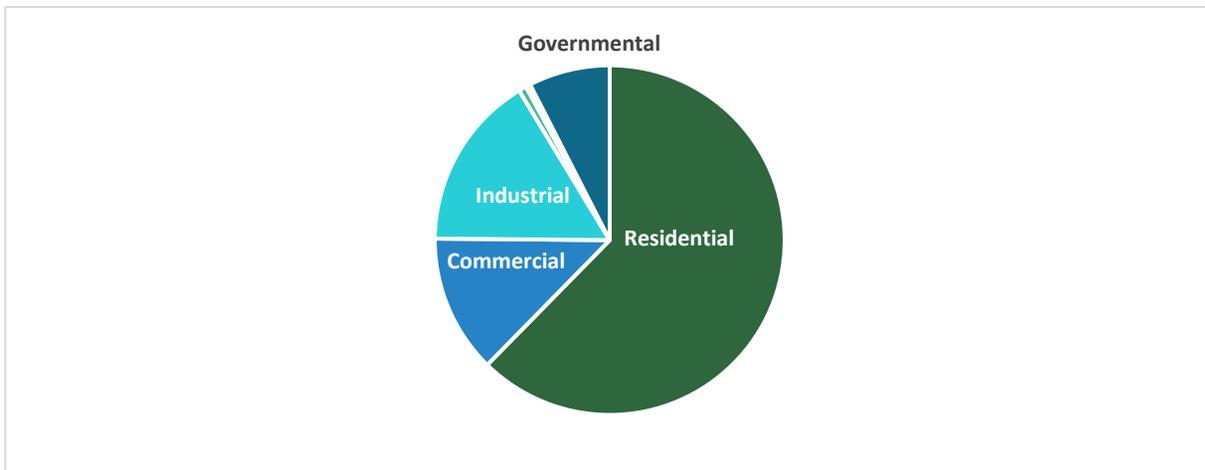
Source: Sonoma Water/Lynne Rosselli, District and Zones\_annual rates\_summary, via email 9/9/19

**Table B2: Customer Information**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**AIRPORT / LARKFIELD / WIKIUP**

## Customer Information

### FY 2019-20 Customer Master List

Customer Class	Parcels	ESDs	2019-20 Revenue	% total
Residential	1,519	2,318.7	\$2,269,968	58.2%
Single Family Dwelling	1,373	1,382.3		
Multi Family	143	826.1		
Mobile Home	3	110.3		
Commercial	132	475.8	\$465,769	11.9%
Industrial	141	602.5	\$589,799	15.1%
Recreational	3	26.2	\$25,660	0.7%
Institutional	6	14.2	\$13,872	0.4%
Miscellaneous	2	2.1	\$2,075	0.1%
Governmental	11	279.6	\$273,699	7.0%
<b>Total</b>	<b>1,814</b>	<b>3,718.9</b>	<b>\$3,899,174</b>	



Source: Sonoma Water/Lynne Rosselli, ALWSZ Dist11 FY 19-20, 9/9/19

**Table B3: O&M Expense Projection**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**AIRPORT / LARKFIELD / WIKIUP**

## O&M Expense Projection

Budget (FY)	2018-19	2019-20	Projection <sup>1</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
<b>EXPENDITURES</b>								
<b>Services and Supplies</b>								
51061 Maintenance - Equipment	\$225,000	\$314,000	3.0%	\$323,420	\$333,123	\$343,116	\$353,410	\$364,012
51076 Maint FACOPS	\$332,800	\$150,000	3.0%	\$154,500	\$159,135	\$163,909	\$168,826	\$173,891
51231 Testing/Analysis	\$23,000	\$30,000	3.0%	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778
51201 Administration Services	\$27,000	\$27,000	3.0%	\$27,810	\$28,644	\$29,504	\$30,389	\$31,300
51211 Legal Services	\$2,000	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
51241 Outside Printing & Binding	\$2,600	\$4,000	3.0%	\$4,120	\$4,244	\$4,371	\$4,502	\$4,637
51244 Permits/License/Fees	\$35,000	\$65,000	3.0%	\$66,950	\$68,959	\$71,027	\$73,158	\$75,353
51401 Rents & Leases-Equipment	\$20,000	\$39,000	3.0%	\$40,170	\$41,375	\$42,616	\$43,895	\$45,212
51421 Rents & Leases-Bldgs/Land	\$0	\$9,000	3.0%	\$9,270	\$9,548	\$9,835	\$10,130	\$10,433
51803 Other Contract Services	\$331,200	\$293,750	3.0%	\$302,563	\$311,639	\$320,989	\$330,618	\$340,537
51902 Telecommunications Usage	\$6,000	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
51917 District Operations Charges	\$1,900,000	\$2,024,460	3.0%	\$2,085,194	\$2,147,750	\$2,212,182	\$2,278,548	\$2,346,904
51921 Equipment Usage Charges	\$134,100	\$135,000	3.0%	\$139,050	\$143,222	\$147,518	\$151,944	\$156,502
52061 Fuel/Gas/Oil	\$1,000	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
52072 Chemicals	\$58,000	\$57,000	3.0%	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079
52081 Medical/Laboratory Supplies	\$2,000	\$6,000	3.0%	\$6,180	\$6,365	\$6,556	\$6,753	\$6,956
52111 Office Supplies	\$700	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
52117 Mail and Postage Supplies	\$1,000	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
52141 Minor Equipment/Small Tools	\$18,000	\$14,000	3.0%	\$14,420	\$14,853	\$15,298	\$15,757	\$16,230
52142 Computer Equip/Accessories	\$0	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
52143 Software/Licensing Fees	\$2,300	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
52171 Water Conservation Program	\$2,000	\$18,000	3.0%	\$18,540	\$19,096	\$19,669	\$20,259	\$20,867
52191 Utilities	\$15,000	\$15,000	3.0%	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389
52193 Utilities-Power	\$280,000	\$316,000	3.0%	\$325,480	\$335,244	\$345,302	\$355,661	\$366,331
<b>Total Services &amp; Supplies</b>	<b>\$3,418,700</b>	<b>\$3,532,210</b>		<b>\$3,638,176</b>	<b>\$3,747,322</b>	<b>\$3,859,741</b>	<b>\$3,975,533</b>	<b>\$4,094,799</b>
	<b>2018-19</b>	<b>2019-20</b>	<b>Projection</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Appropriations for Contingency</b>								
55011 Appropriations for Contingency	\$20,000	\$20,000	0.0%	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
<b>Total Services &amp; Supplies</b>	<b>\$20,000</b>	<b>\$20,000</b>		<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>
<b>TOTAL EXPENDITURES</b>	<b>\$3,438,700</b>	<b>\$3,552,210</b>		<b>\$3,658,176</b>	<b>\$3,767,322</b>	<b>\$3,879,741</b>	<b>\$3,995,533</b>	<b>\$4,114,799</b>

1 - Expense projection based on Operations Services CPI, LRFDP Draft 9/9/19

Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRFDP Draft via email 9/9/2019

**Table B4: Capital Improvement Plan  
Sonoma Water  
Wastewater COS Rate Study 2020  
AIRPORT / LARKFIELD / WIKIUP**

## Capital Improvement Plan

CIP	Long Range Financial Plan 12-20-19							
	Project Title	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total Through FY 2028-29
A0053	TP Third Line & Pump							\$0
A0070	Aeration Basin Aerators	\$125,000	\$50,000					\$175,000
A0079	Recycled Water Truck Fill	\$0	\$0					\$0
tbd	Replace Filter Modules	\$0	\$0	\$0	\$300,000	\$0		\$300,000
tbd	Drying Bed - Sludge	\$0	\$0	\$0	\$25,000	\$175,000	\$0	\$200,000
tbd	EQ Basin	\$0	\$0					\$0
A0082	TP Control Improvements	\$356,000	\$150,000					\$506,000
tbd	Headworks Meter	\$50,000	\$50,000					\$100,000
tbd	Recycled Water Pipeline Improvements		\$175,000					\$175,000
A0076 & A0077	Larkfield Estates Sewer Main Cost	\$0	\$0					\$0
tbd	Miscellaneous Improvements	\$0	\$0	\$0	\$0	\$300,000	\$300,000	\$3,500,000
<b>Total</b>		<b>\$531,000</b>	<b>\$425,000</b>	<b>\$0</b>	<b>\$325,000</b>	<b>\$475,000</b>	<b>\$300,000</b>	<b>\$4,956,000</b>

Table B5: Debt Service  
 Sonoma Water  
 Wastewater COS Rate Study 2020  
 AIRPORT / LARKFIELD / WIKIUP

## Debt Service

Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>OUTSTANDING LOANS/BONDS</u></b>							
98 Bond Repayment	\$443,563	\$439,588	\$439,588	\$439,588	\$439,588	\$439,588	\$439,588
<b>Total</b>	<b>\$443,563</b>	<b>\$439,588</b>	<b>\$439,588</b>	<b>\$439,588</b>	<b>\$439,588</b>	<b>\$439,588</b>	<b>\$439,588</b>

Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRFP Draft via email 9/9/2019

## Fund Balance & Policies

### Undes/Unreserved Beginning Fund Balance 7/1/2019

33100100 ALW Operations	\$1,716,576
33100300 ALW Rev. Bond	\$181,776
33100400 ALW Rate Stabilization Fund	\$466
33100500 Larkfield Estates Sewer System	\$384,155
33100200 ALW Construction	\$2,668,019
<b>Total</b>	<b>\$4,950,992</b>

### 1. Fund Balance Policy

Operations Fund Target - at least 6 months budgeted Operating Expenses  
Construction Fund Target - 3% asset value

### 2. Debt Service Coverage Policy

Coverage Requirement - 1.2x net operating expenses

### 3. Growth Estimates

Estimated 5 new users per Fiscal Year, 1.0 ESDs  
Connection fee revenue estimated based on 3% per year CPI adjustment to current capacity fee

### 3. Rate Structure

Water data unavailable - expenses are equally divided among all ESDs and billed on the tax roll

Source: Sonoma Water/Lynne Rosselli, LRF Draft via email 9/9/2019

**Table B7: Cash Flow**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**AIRPORT / LARKFIELD / WIKIUP**

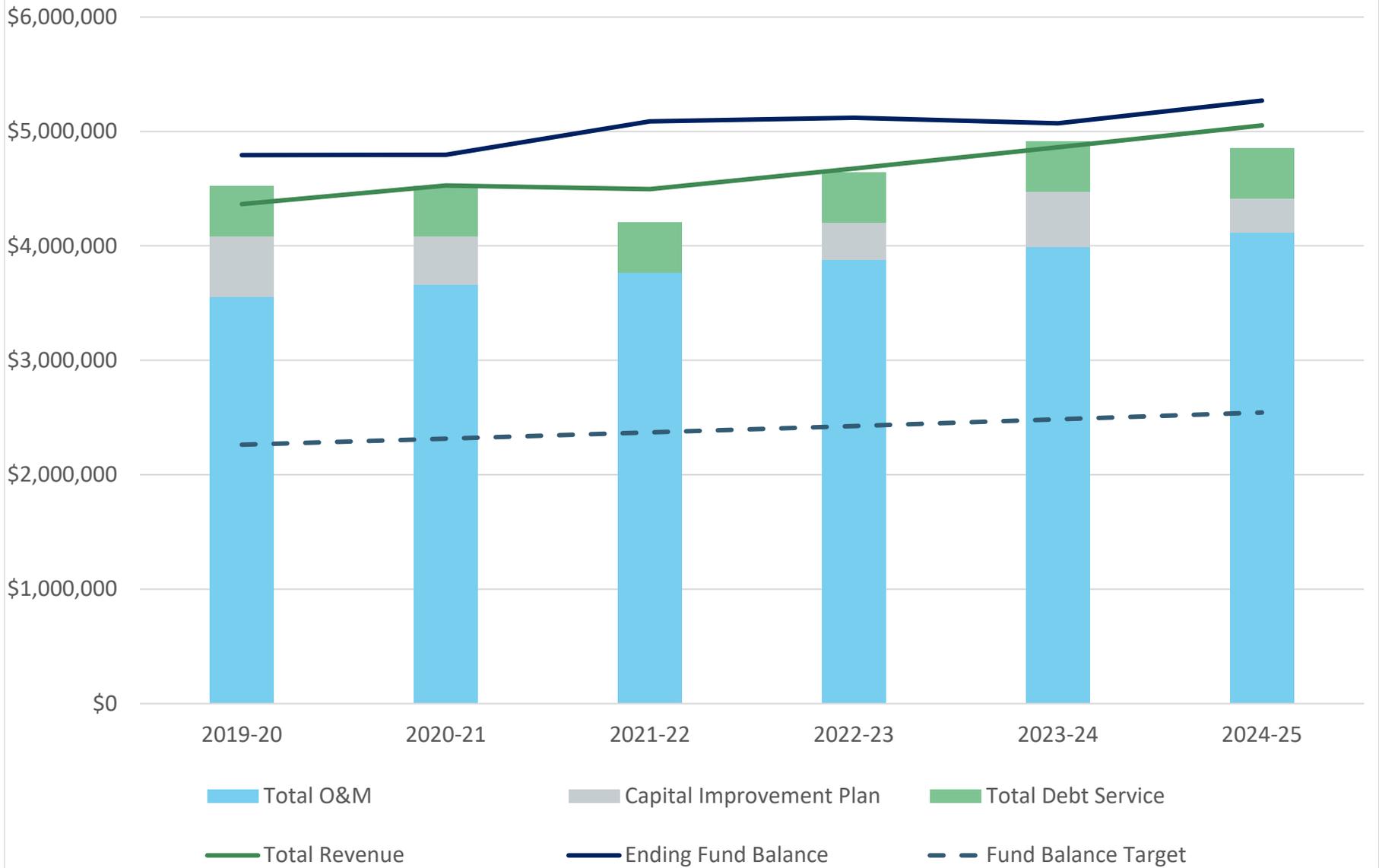
## Cash Flow

Five-Year Projection		Budget	1	2	3	4	5
Fiscal Year	Reference	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increase			4.0%	4.0%	4.0%	4.0%	4.0%
Growth			0.1%	0.1%	0.1%	0.1%	0.1%
Annual Rate - \$/ESD		\$979	\$1,018	\$1,059	\$1,101	\$1,145	\$1,191
Beginning Fund Balance	Table 5	\$4,950,992	\$4,793,296	\$4,797,333	\$5,087,280	\$5,119,737	\$5,071,065
<b><u>REVENUE</u></b>							
Sanitation Charges - Calc.	Table 2	\$3,899,174	\$4,060,593	\$4,228,695	\$4,403,755	\$4,586,063	\$4,775,918
Connection Fees	LRFP	\$261,918	\$263,775	\$65,688	\$67,659	\$69,689	\$71,779
Penalties/Costs on Taxes	LRFP	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500
Interest on Pooled Cash <sup>1</sup>	LRFP	\$49,510	\$47,933	\$47,973	\$50,873	\$51,197	\$50,711
Rent - Real Estate	LRFP	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Misc. Revenue	LRFP	\$0	\$0	\$0	\$0	\$0	\$0
Proposed Debt Proceeds	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Revenue</b>		<b>\$4,365,102</b>	<b>\$4,526,801</b>	<b>\$4,496,856</b>	<b>\$4,676,787</b>	<b>\$4,861,449</b>	<b>\$5,052,908</b>
<b><u>EXPENDITURES</u></b>							
Total O&M	Table 3	\$3,552,210	\$3,658,176	\$3,767,322	\$3,879,741	\$3,995,533	\$4,114,799
Capital Improvement Plan	Table 4 <sup>2</sup>	\$531,000	\$425,000	\$0	\$325,000	\$475,000	\$300,000
Total Debt Service	Table 5	\$439,588	\$439,588	\$439,588	\$439,588	\$439,588	\$439,588
<b>Total Expenditures</b>		<b>\$4,522,798</b>	<b>\$4,522,764</b>	<b>\$4,206,910</b>	<b>\$4,644,329</b>	<b>\$4,910,121</b>	<b>\$4,854,387</b>
Net Revenue		(\$157,696)	\$4,037	\$289,947	\$32,458	(\$48,672)	\$198,520
Ending Fund Balance		<b>\$4,793,296</b>	<b>\$4,797,333</b>	<b>\$5,087,280</b>	<b>\$5,119,737</b>	<b>\$5,071,065</b>	<b>\$5,269,585</b>
<i>Fund Balance Target</i>		<i>\$2,262,520</i>	<i>\$2,315,503</i>	<i>\$2,370,076</i>	<i>\$2,426,286</i>	<i>\$2,484,182</i>	<i>\$2,543,815</i>
Debt Service Coverage		1.8	2.0	1.7	1.8	2.0	2.1

1 - 1% earnings on beginning fund balance

2 - CIP Value 2019-20 equal to total capital expenditures less change in encumbrances/adjustments, LRFP DRAFT 9/9/2019

## Five-Year Cash Flow Projection - Proposed Rate Increases



**Table B8: Proposed Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**AIRPORT / LARKFIELD / WIKIUP**

## Proposed Rates

<b>Five-Year Projection</b>	<b>Current</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Fiscal Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Proposed Increase</b>		<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>
<b>Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)</b>						
Annual - tax roll	\$979	\$1,018	\$1,059	\$1,101	\$1,145	\$1,191
Monthly	\$81.58	\$84.85	\$88.24	\$91.77	\$95.44	\$99.26



**Sonoma  
Water**

**Geyserville  
Sanitation Zone  
Wastewater Rate Study**

**Final Report  
May 5, 2020**



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May 5, 2020

Lynne Rosselli  
Finance Manager  
Sonoma Water  
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Re: Geyserville Sanitation Zone 2020 Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to Sonoma Water the attached 2020 Wastewater Rate Study for Geyserville Sanitation Zone (Zone).

This study presents BWA's analysis of the operating and non-operating expenses of the Zone's wastewater enterprise and provides updated five-year cash flow projections and rates for FY 2020. The primary purpose of this study is to assess the long-term financial condition of the Zone and provide recommendations to recover the cost of wastewater service equitably between ratepayers.

The enclosed report recommends increasing wastewater rates to recover the increasing cost of operations and capital improvement. Recommendations were developed with substantial input from Agency staff and engineering subconsultant Woodard & Curran. BWA finds that the rates and charges proposed in this report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. Financial projections generally align with Sonoma Water's internal long-range financial plan for the Zone. BWA can confirm that the proposed rates are fair and reasonable to the Zone's customers.

We have enjoyed working with Sonoma Water on this rate study. Please contact us with any future questions about this study and the recommended rates.

Sincerely,

Doug Dove, CIPMA  
Principal

Abigail Seaman  
Consultant

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## Appendices

- Appendix A: Proposed 2021 Exhibit A
- Appendix B: Wastewater Rate Study Supplementary Tables

# 1 Executive Summary

## 1.1 Background

Geyserville Sanitation Zone (Zone), managed by Sonoma Water (Agency), provides wastewater service to approximately 280 accounts, within a 177 acre service area. The Zone's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from fixed annual wastewater rates) aim to recover the cost to operate and maintain the wastewater system. The Zone faces ongoing increases to operations costs and annual capital project costs to repair and replace aging infrastructure.

Sonoma Water has retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update for FY 2021 which examines any changes in current and projected costs and determines cost-of-service based rates that distribute costs equally among ratepayers. Basic objectives of the rate study include:

- Identify rate setting principles.
- Update long-term financial projections to determine future annual wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service

Based on input from Sonoma Water staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for operations and capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws

## 1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require Sonoma Water's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** Sonoma Water must mail a notice of proposed rate increases to all affected property owners in the Zone. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The Sonoma Water must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

### 1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed charges levied on each customer based on an assigned equivalent single-family dwelling unit (ESD). Rates recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing wastewater rates, charges, and fees. In developing wastewater rates, it is important to note that there is no “one-size-fits-all” approach for establishing cost-based wastewater rates.

BWA used the following criteria when developing recommendations for the Zone’s wastewater rates and finances:

- 1) *Revenue Sufficiency*: Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact*: While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable*: Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical*: Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

### 1.4 Wastewater System Overview

The Zone serves about 360 ESDs within a 2,100-acre service area shown **Figure 1** below.

**Figure 1: Geyserville Service Area Map**



Zone Services include collection, distribution and treatment of wastewater, as well as regular operations, maintenance, and replacement of wastewater infrastructure. The Zone’s main source of wastewater revenue is annual wastewater rates on each customer’s property tax bill. Rates were last increased on July 1, 2019 and will need small annual increases over the next 5 years to keep up with wastewater system expenses.

### 1.5 Factors Driving Rate Increases

The primary wastewater cost factors affecting the Zone include the need to address the projected operating deficit, ongoing operations cost increases and the Capital Improvement Plan which will address ongoing maintenance, repair and replacement needs.

### 1.6 Current Wastewater Rates

The Zone’s current wastewater rates are shown in Table 1 below. Wastewater charges are billed annually on the property tax roll according to Sonoma Water’s evaluation of each customer’s Equivalent Single-Family Dwelling (ESD). ESDs are evaluated according to the Zone’s Exhibit A document, which provides the latest flow and strength estimates for common residential and commercial customer classes. The FY 2021 Proposed Exhibit A is provided in the appendix of this report.

**Table 1 Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Annual Fixed Charge

All Customers per ESD per year	\$1,099
per month	\$91.58

Revenue from current rates will not be sufficient to fund rising operations and capital costs over the next five years without small annual increases to the rate revenue.

### 1.7 Proposed Wastewater Rates

Table 2 shows the proposed wastewater rates which reflect a 5.5% rate revenue increase.

**Table 2 Proposed Wastewater Rates**

Wastewater rates effective July 1, 2020

Annual Fixed Charge

All Customers per ESD per year	\$1,159
per month	\$96.62

## 2 Wastewater Financial Projections and Rates

### 2.1 Wastewater Financial Overview

BWA conducted an independent evaluation of the Zone’s wastewater enterprise finances. Key observations include the following:

- Wastewater rates have increased an average of 3.9% per year for the last 10 years. This has allowed the Zone to keep up with operations cost increases and capital improvement needs.
- The wastewater enterprise has no debt service obligations.
- The current Capital Improvement Plan totals \$216,000 and addresses ongoing maintenance, repair and replacement needs.
- Projected wastewater expenses were determined based on input from Sonoma Water Staff. Projections based on the average annual change in CPI (3.0% per year) and cost projections provided by Staff.
- The current wastewater rate structure equitably distributes costs among ratepayers. Since no water data is available, water use is estimated using typical flow and strength data in Exhibit A.

### 2.2 Current Monthly Wastewater Rates

Current rates (as shown on Table 1) are determined by Equivalent Single-Family Dwelling (ESD) using an ESD assignment schedule based on customer class and size. Rates have increased an average of 3.9% annually over the last 10 years.

### 2.3 Current Wastewater Accounts

The Zone serves 282 wastewater accounts, the majority of which are single family residential. A current customer listing is provided in Table 3 below.

**Table 3 Geyserville SZ – Customer Listing**

Customer Class	Parcels	ESDs
Residential	244	294.9
Single Family Dwelling	211	217.0
Multi Family	33	77.9
Mobile Home	0	0.0
Commercial	25	41.5
Industrial	3	5.4
Recreational	4	4.0
Institutional	2	2.0
Miscellaneous	3	3.5
Governmental	1	6.7
<b>Total</b>	<b>282</b>	<b>358.0</b>

Geyserville Sanitation Zone is a relatively slow-growth community. The Zone can conservatively expect 0.3% wastewater revenue growth per year as a result of new sewer connections or increased demand.

## 2.4 Factors Affecting 5-Year Financial Plan

The Zone will need annual rate increases to keep up with ongoing operating cost inflation and the current Capital Improvement Plan. Key cost components over the next five years are summarized as follows.

### 2.4.1 Operating Deficit / Ongoing Operating Cost Inflation

The Zone's wastewater rate revenue is not sufficient to cover current operating costs. Rising operating costs will exacerbate the deficit without rate increases and an internal loan. The Zone's wastewater operations budget totals approximately \$408,000 for FY 2019/20. The Zone's largest expenses include maintenance, utilities, and Zone operations charges for Sonoma Water oversight and equipment. Most operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI.

### 2.4.2 Debt Obligations

The Zone has no current debt obligations but will receive a \$365,000 loan from Sonoma Water's General Fund in 2020/21 to help address the Zone's operating deficit and some capital improvement needs. A schedule of debt service payments is shown on Table 4.

**Table 4: Debt Obligations**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Internal Loan – Sonoma Water General Fund	\$0	\$0	\$65,000	\$65,000	\$65,000	\$65,000

### 2.4.3 Current Wastewater Capital Plan

The Zone's Wastewater Capital Improvement Plan totals \$216,000 through 2024/25 and addresses aging infrastructure and other necessary improvements. Costs are provided in Table 5 based on engineering estimates as of 2019/20. A full schedule of projects is provided in the Appendix.

**Table 5: Capital Improvement Plan Summary**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CIP	\$116,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000

## 2.5 Wastewater Enterprise Revenue Requirements

The wastewater cash flow projection incorporates the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

### Growth & Water Demand Assumptions

- The Zone is a relatively slow-growth community and BWA has conservatively assumed 0.3% growth in new connections or increased demand, which will contribute to rate revenue.
- Wastewater system demand (estimated with ESD ratings) is assumed to stay constant from FY 2019/20 (excluding estimated growth of 0.3% per year)

**Revenue Assumptions**

- Rate revenue will increase according to the proposed rate increases assuming a relatively static number of customers and water consumption with the exception of growth projections.
- Other revenues are projected to remain stagnant from 2019/20 budget amounts.
- Annual interest earnings are estimated at 1% of beginning fund balance

**Expense Assumptions**

- Operations and maintenance costs are based on the 2019/20 budget and escalate at an annual rate of approximately 3.0% to account for future cost inflation.
- Capital expenditures include \$216,000 in projects through FY 2024/25

Based on the assumptions above, BWA created a cash flow projection that determined 5.5% annual wastewater rate increases are needed for the next 5 years. The proposed schedule is shown on Table 6 below.

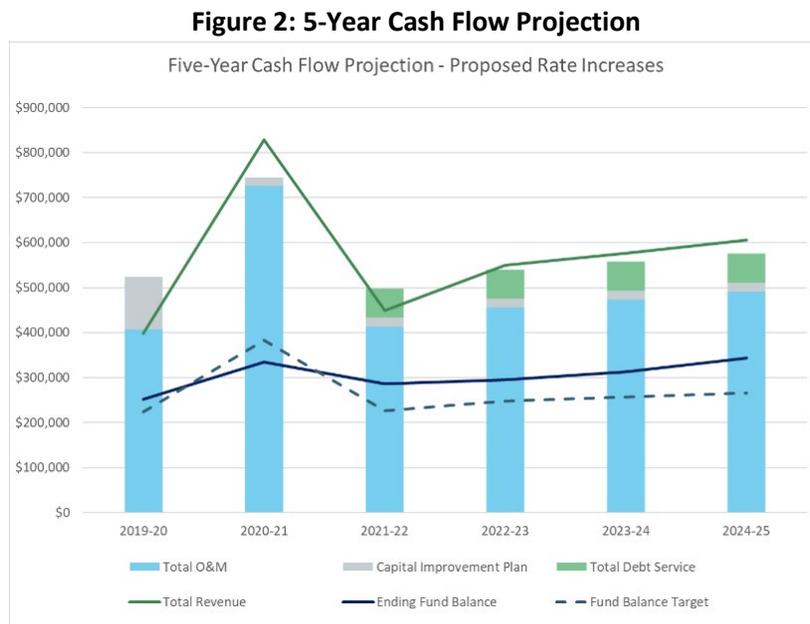
**Table 6: Proposed Wastewater Rate Increases**

	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increases	5.5%	5.5%	5.5%	5.5%	5.5%

The proposed annual wastewater rate revenue increases accomplish the following:

- Projected operations and Capital Improvement Plan funding
- Minimum operations fund balance of 6 months operating costs

Figure 2 illustrates BWA’s 5-year cash flow projection with proposed rate revenue and 2020/21 general fund loan proceeds.



The Zone would need to mail a Proposition 218 notice to notify ratepayers of the proposed wastewater rate increases before adoption. Rates would be effective following a mailed Proposition 218 notice and successful public hearing.

## 2.6 Cost of Service Study

Bartle Wells Associates conducted an independent analysis of the Zone’s current sewer rate structure. Based on an evaluation of rate alternatives and input from Staff, no major modifications are recommended to the Zone’s sewer rate structure. Rate revenue is 100% fixed based on ESDs assigned to each customer based on Exhibit A. Table 7 shows the total rate revenue requirement (including proposed rate increase) divided by projected 2020 ESDs.

**Table 7 Cost of Service Rate Calculation**

2020-21 Revenue Requirement <sup>1</sup>	\$416,183
Projected ESDs <sup>2</sup>	359
<b>Proposed Rate - Fixed \$/ESD</b>	<b>\$1,159</b>

*1 – FY 2020 Calculated rate revenue plus FY 2021 proposed rate increase*

*2 – 2020 ESDs plus FY 2021 growth projection*

## 2.7 Rate Structure Recommendations

BWA recommends that the Zone increase rate revenue according to the proposed annual rate increases shown on Table 6. We also recommend that the Zone continue to collect annual fixed charges based on ESD evaluations in Exhibit A, since customer-level water data is not available. Future ESD evaluations should be made from the latest flow and strength estimates in the proposed 2020 Exhibit A (attached).

The proposed fixed charge per ESD for 2020-21 is shown on Table 8 below.

**Table 8: Proposed Rates**

*Wastewater rate effective July 1, 2020*

All Customers per ESD per year	\$1,159
per month	\$96.62

*Equivalent Single-Family Dwelling (ESD) assigned per parcel based on probable quantity and quality of sewage effluent generated.*

## 2.8 Exhibit A Recommendations

Bartle Wells partnered with engineering consultant Woodard & Curran (W&C) to review and update Exhibit A. W&C reviewed the latest Sonoma Water data, relevant neighboring community data, and California Government Code to recommend updated Exhibit A values for 2021. W&C analyzed wastewater treatment plant and monitored neighborhood sewer flow and load data where available to determine recent trends and update sewer flow and loading estimates for all customer classes. New categories were added for new/emerging commercial and industrial sewer uses (e.g. high-tech medical manufacturing, online vacation rentals). Accessory dwelling units and junior accessory dwelling unit factors were updated to reflect recent California legislation. The 2021 proposed Exhibit A will be used to evaluate ESDs for new sewer connections and capacity charges in the future.

### 3 Conclusion and Recommendations

This water and wastewater rate study presents a comprehensive review of Geyserville Sanitation Zone’s wastewater revenue requirements and rate structure. Since the last rate increase for FY 2020, the Zone has identified necessary capital improvements and increases in ongoing operations costs. These factors were considered in the rate study to develop equitable rates for customers that recover the cost of wastewater service.

#### 3.1 Conclusion

The Zone practices sound financial planning that has provided for the general financial health of the wastewater enterprise given current cost estimates. Unfortunately, the Zone’s operations deficit is projected to grow as O&M costs continue to increase. The Zone also faces capital replacement needs and projected debt service obligations. The Zone will need small annual rate increases to keep up with these costs. These factors have been considered in this comprehensive wastewater rate study and are reflected in the above proposed rates. Adoption of these rates reflect the Zone’s commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future.

#### 3.2 Recommendations

BWA recommends that the Agency adopt the rates shown in this report. Rates were developed as part of a collaborative process that included extensive review by Sonoma Water, Woodard & Curran Engineering, and Agency Staff.

At minimum, BWA recommends that the Zone review and update its water and wastewater rate study every five years and/or concurrent with Master Plan Updates. Rates should be noticed and adopted on an annual basis per Zone policy according to the 5-year schedule of annual rate increases. There is no proposed change to the current wastewater rate structure. New connections should be given an ESD evaluation based on the proposed 2021 Exhibit A, which reflects the latest sewer flow and strength factors for the Zone.

Please find the complete Final Draft Tables as of 5/6/2020 and 2021 proposed Exhibit A attached to this report.

## **Appendix A: 2021 Proposed Exhibit A**

# EXHIBIT A

## EQUIVALENT SINGLE-FAMILY DWELLING BILLING UNIT FOR GEYSERVILLE SANITATION ZONE

Use Category	Billing Basis			2020-2021	
	Flow	BOD	TSS	Use	ESD
	gallons	mg/l	mg/l		
<b>Residential</b>					
Single-Family	200	315	315	connections	1.00
Condominium (Over 900 square ft)	200	315	315	dwelling units	1.00
Condominium (Under 900 square ft)	160	315	315	dwelling units	0.80
Multiple-Family (Apts, Duplex/Triplex)	160	315	315	dwelling units	0.80
Mobile home park	160	315	315	spaces	0.80
Mobile home (Individual)	160	315	315	units	0.80
JADU	-	315	315	units	0.00
ADU, under 751 sq ft*	80	315	315	units	0.40
ADU, 751-900 sq ft*	160	315	315	units	0.80
ADU, over 900 sq ft*	200	315	315	units	1.00
<b>Commercial</b>					
Appliance repair	190	200	200	1,000 sq. ft.	0.72
Art gallery	190	200	200	1,000 sq. ft.	0.72
Auto dealers					
With service facilities	190	180	280	connection	0.78
	38	180	280	add per service bay	0.16
Without service facilities	190	200	200	connection	0.72
Auto repair	38	325	325	per service bay	0.19
Bakery	190	1000	600	1,000 sq. ft.	1.92
Beer Making/Brewery					
Butcher				see note 1 below	
Banks & financial institutions	190	130	80	1,000 sq. ft.	0.53
Barber shop	19	130	80	per chair	0.05
Beauty shop	38	130	80	per chair	0.11
Bars & taverns	20	200	200	per seat	0.08
Camp ground or RV park					
with hookups	125	200	200	site	0.47
without hookups	75	200	200	site	0.28
Cannabis production/manufacturing				see note 1 below	
Car washes					
manual	190	20	150	per bay	0.49
automatic	125	228	228	per bay	0.51
Cheese Maker				see note 1 below	
Churches, hall & lodges	2	200	200	per seat	0.01
Coffee shops with some food service	6	1000	600	per seat	0.06
Dry cleaners	285	150	110	1,000 sq. ft.	0.87
Fire stations	190	200	200	1,000 sq. ft.	0.72
with sleeping quarters and kitchens	220	325	325	1,000 sq. ft.	1.12
without sleeping quarters and kitchens	190	228	228	1,000 sq. ft.	0.78
Garages	95	180	280	per service bay	0.39
Gas Stations (no other automative services)					
with convenience store	70	520	520	1,000 sq. ft.	0.50
without convenience store	38	228	228	1,000 sq. ft.	0.16
Gym					
with shower	400	325	325	1,000 sq. ft.	2.04
without shower	50	228	228	1,000 sq. ft.	0.20
High Tech Medical Manufacturing				see note 1 below	
Hospitals					
Convalescent	125	250	100	per bed	0.44
General	175	250	100	per bed	0.62
Veterinarian	6	250	100	per cage	0.02
Hotels/motels	100	310	120	sleeping rooms	0.40
without restaurant	100	310	120	sleeping rooms	0.40
B&B/Online Rentals/Vacation Rental homes	100	325	325	per occupant	0.51
Hydroponic Cultivation (including cannabis)	1.2	228	228	per plant	0.00
Laundromats					
High efficiency washers	250	228	228	washing machines	1.02
Regular washers	500	150	110	washing machines	1.53
Library	190	200	200	1,000 sq. ft.	0.72
Machine shops	152	180	280	1,000 sq. ft.	0.62
Markets	38	800	800	1,000 sq. ft.	0.38
Nail Salon	10	228	228	per seat	0.04
Offices					
Business	76	130	80	1,000 sq. ft.	0.21
Chiropractic Office	190	228	228	Exam. room	0.78
Dental	190	130	80	Exam. room	0.53
Medical (clinic)					
with central handwashing stations	175	325	325	Exam. room	0.89
with office, surgery, lab and treatment rooms	190	325	325	Exam. room	0.97
offices with sink	125	325	325	Exam. room	0.64
offices without sink	100	325	325	Exam. room	0.51
Veterinarian					
with office, surgery, and treatment rooms	130	325	325	Exam. room	0.66
Pet Groomers	260	228	228	1,000 sq. ft.	1.06
Post office	190	130	80	1,000 sq. ft.	0.53
Resort				see note 1 below	

Restaurants						
Dine-in						
With DW & garbage disp.	6	1000	600	per seat		0.06
With DW or garbage disp.	6	619	371	per seat		0.04
Without DW & garbage disp.	6	238	143	per seat		0.02
Take-out	475	238	143	1,000 sq. ft.		1.76
Rest homes	125	250	100	per bed		0.44
Retail stores	38	150	150	1,000 sq. ft.		0.12
Schools						
Elementary	9	130	100	per student day		0.03
High	14	130	100	per student day		0.04
with entertainment facilities	19	325	325	per student day		0.10
Service stations	380	180	280	set of gas pumps		1.56
	38	180	280	add per service bay		0.16
Shoe repair	190	200	200	1,000 sq. ft.		0.72
Spa with various beauty treatments	38	325	325	per chair		0.19
Supermarkets	76	325	325	1,000 sq. ft.		0.39
Tasting Rooms						
Ale, Winery (no food)	120	228	228	1,000 sq. ft.		0.49
Ale, Winery (with food)	240	520	520	1,000 sq. ft.		1.72
Theaters	2	200	200	per seat		0.01
Trash Enclosures				see note 1 below		
Warehouse				see note 1 below		
Winery				see note 1 below		
Others as determined by the Engr.				see note 1 below		
ALL COMMERCIAL ESDs TO BE DETERMINED BY THE GENERAL MANAGER USING THE FOLLOWING FORMULA:						
ESD = ( TSS x FLOW x 0.33 ) / ( SFD TSS x SFD FLOW ) + ( BOD x FLOW x 0.33 ) / ( SFD BOD x SFD FLOW ) + ( FLOW x ( 0.34 / SFD FLOW ) )						
<p>Note 1: For non-standard uses, warehouses and when agreement on a use category cannot be reached, the General Manager, in his or her sole discretion, may</p> <p>a) base charges on the user's actual or estimated contribution of wastewater into the District's facilities in terms of flow, biological oxygen demand (BOD), and total suspended solids (TSS), and</p> <p>b) calculate the user's charge using the above Charge Formula. The user shall provide verifiable data, as requested by the General Manager, for the charge to be determined.</p> <p>Note 2: In general, users with annual average TSS and/or BOD over 1,000 mg/L and users with annual average Flow greater than 5,000 gallons per day should be considered Monitored Users and use the Monitored User Charge Formula.</p>						
Definitions	Flow = Gallons per Day	TSS = Total Suspended Solids				
	BOD = Biological Oxygen Demand	DW = dishwasher				
	ESD = Equivalent Single Family Dwelling	disp. = disposal				
* Note that no Capacity Charge is assessed when existing structures are converted in accordance with CGC 65852.2 (e)(1)(A) as determined by the County of Sonoma.						

**Appendix B: Wastewater Rate Study  
Supplementary Tables**



## GEYSERVILLE SANITARY ZONE Wastewater COS Rate Study 2020

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### Supplementary Tables

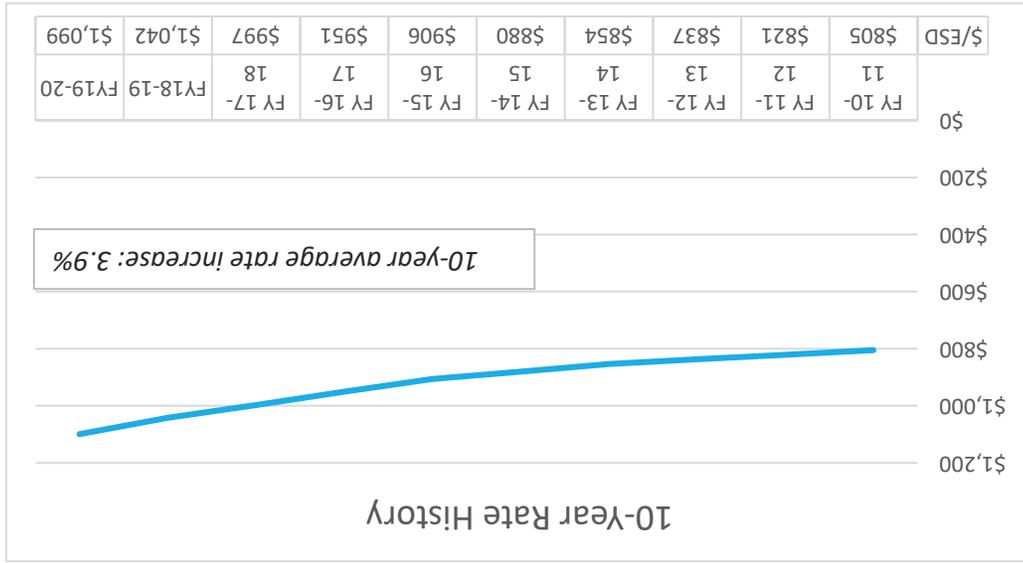
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Table B4	Capital Improvement Plan
Table B5	Debt Service
Table B6	Fund Balance & Policies
Table B7	Cash Flow
Table B8	Proposed Rates



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

## Current Rates

Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)  
 \$1,099 annual - tax roll  
 \$91.58 monthly



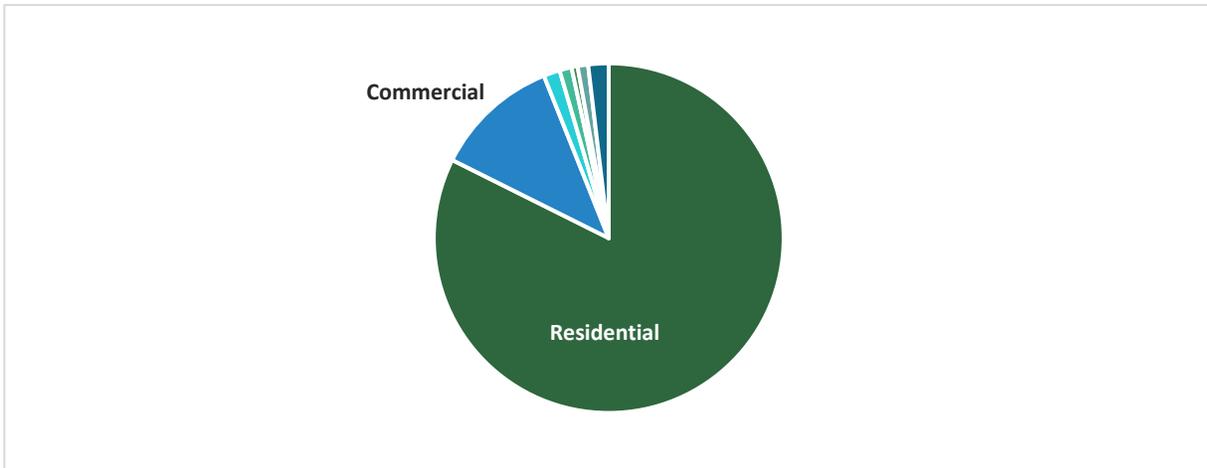
Source: Sonoma Water/Lynne Rosselli, District and Zones annual rates summary, via email 9/9/19

**Table B2: Customer Information**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**GEYSERVILLE SANITARY ZONE**

## Customer Information

### FY 2019-20 Customer Master List

Customer Class	Parcels	ESDs	2019-20 Revenue	% total
Residential	244	294.9	\$324,051	82.4%
Single Family Dwelling	211	217.0		
Multi Family	33	77.9		
Mobile Home	0	0.0		
Commercial	25	41.5	\$45,576	11.6%
Industrial	3	5.4	\$5,935	1.5%
Irrigated Farm	4	4.0	\$4,396	1.1%
Institutional	2	2.0	\$2,198	0.6%
Miscellaneous	3	3.5	\$3,825	1.0%
Governmental	1	6.7	\$7,407	1.9%
<b>Total</b>	<b>282</b>	<b>358.0</b>	<b>\$393,387</b>	



Source: Sonoma Water/Lynne Rosselli

**Table B3: O&M Expense Projection**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**GEYSERVILLE SANITARY ZONE**

## O&M Expense Projection

Budget (FY)	2018-19	2019-20	Projection <sup>1</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
<b>EXPENDITURES</b>								
<b>Services and Supplies</b>								
51061 Maintenance - Equipment	\$5,000	\$5,250	3.0%	\$5,408	\$5,570	\$5,737	\$5,909	\$6,086
51076 Maint - FACOPS	\$248,100	\$158,160	Varies	\$468,150	\$148,479	\$182,782	\$191,921	\$201,517
51201 Administration Services	\$3,000	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
51211 County Counsel - Legal Advice	\$1,000	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
51231 Testing/Analysis	\$25,000	\$21,000	3.0%	\$21,630	\$22,279	\$22,947	\$23,636	\$24,345
51244 Permits/License/Fees	\$20,000	\$10,000	3.0%	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
51605 Private Car Expense	\$0	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51803 Other Contract Services	\$58,000	\$86,750	3.0%	\$89,353	\$92,033	\$94,794	\$97,638	\$100,567
51902 Telecommunication Usage	\$500	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51917 District Operations Chgs	\$180,000	\$100,000	3.0%	\$103,000	\$106,090	\$109,273	\$112,551	\$115,927
51921 Equipment Usage Charges	\$12,350	\$7,000	3.0%	\$7,210	\$7,426	\$7,649	\$7,879	\$8,115
52171 Water Conservation Program	\$100	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
52193 Utilities - Electric	\$12,000	\$10,000	3.0%	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
Misc <sup>2</sup>	\$16,400		3.0%	\$0	\$0	\$0	\$0	\$0
<b>Total Services &amp; Supplies</b>	<b>\$581,450</b>	<b>\$403,160</b>		<b>\$720,500</b>	<b>\$408,400</b>	<b>\$450,500</b>	<b>\$467,671</b>	<b>\$485,539</b>
	<b>2018-19</b>	<b>2019-20</b>	<b>Projection</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Appropriations for Contingency</b>								
55011 Appropriations for Contingency	\$5,000	\$5,000	0.0%	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<b>Total Services &amp; Supplies</b>	<b>\$5,000</b>	<b>\$5,000</b>		<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>
<b>TOTAL EXPENDITURES</b>	<b>\$586,450</b>	<b>\$408,160</b>		<b>\$725,500</b>	<b>\$413,400</b>	<b>\$455,500</b>	<b>\$472,671</b>	<b>\$490,539</b>

1 - Expense projection based on Operations Services CPI, LRF Draft 9/9/19

2 - 2018-19 Budget true-up expense; values equal to 0 in 2019-20 and not included in projection

Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRF Draft via email 9/9/2019

Table B4: Capital Improvement Plan  
 Sonoma Water  
 Wastewater COS Rate Study 2020  
 GEYSERVILLE SANITARY ZONE

## Capital Improvement Plan

CIP	Long Range Financial Plan 12-20-19 Project Title	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total Through FY 2028-29
G0042	Sodium Hypochlorite	\$66,000						\$66,000
td	WWTF Emergency Generator	\$0						\$0
td	Force Main Replacement	\$50,000						\$50,000
td	Misc Buildings/Improvements <sup>1</sup>	\$0	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$180,000
<b>Total</b>		<b>\$116,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$296,000</b>

Source: Sonoma Water/Lynne Rosselli, Long Range Financial Plan, via email 12/12/19

**Table B5: Debt Service**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**GEYSERVILLE SANITARY ZONE**

## Debt Service

Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>OUTSTANDING LOANS/BONDS</u></b>							
Internal Loan - SW General Fund	\$0	\$0	\$0	\$65,000	\$65,000	\$65,000	\$65,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$65,000</b>	<b>\$65,000</b>	<b>\$65,000</b>	<b>\$65,000</b>
<b><u>BWA PROPOSED LOANS/BONDS</u></b>							
			1	2	3	4	5
Rate Study Year							
Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Loan 1				\$0	\$0	\$0	\$0
Loan 2						\$0	\$0
Bond 1				\$0	\$0	\$0	\$0
Bond 2				\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Debt Service</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$65,000</b>	<b>\$65,000</b>	<b>\$65,000</b>	<b>\$65,000</b>
<b><u>PROPOSED DEBT DETAIL</u></b>							
<b><u>(Cash Flow O1 Only)</u></b>							
	<b>Loan 1</b>		<b>Loan 2</b>		<b>Bond 1</b>		<b>Bond 2</b>
Rate Study Iss. Year <sup>1</sup>	1		3		1		1
Issuance Amount	\$0		\$0		\$0		\$0
Proceeds for Construction	\$0		\$0		\$0		\$0
Interest Rate	4%		4%				
Iss. Costs	<b>\$165,500</b>		<b>\$165,500</b>		<b>\$100,000</b>		<b>\$100,000</b>
Maturity	20		20		15		15
<b>Net Annual Payment</b>	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>		<b>\$0</b>

1 - Payment begins 1 year after issuance

Source: Sonoma Water/Lynne Rosselli

## Fund Balance & Policies

### Undes/Unreserved Beginning Fund Balance 7/1/2019

33110100 Geyserville Operations	\$203,700
33110300 Geyserville GO Bonds 1980	\$10,623
33110200 Geyserville Construction	\$163,781
<b>Total</b>	<b>\$378,104</b>

### 1. Fund Balance Policy

Operations Fund Target - at least 6 months budgeted Operating Expenses

### 2. Debt Service Coverage Policy (N/A)

Coverage Requirement - 1.2x net operating expenses

### 3. Growth Estimates

Estimated 1 new user per Fiscal Year, 1.0 ESDs

Connection fee revenue estimated based on 3% per year CPI adjustment to current capacity fee

### 3. Rate Structure

Water data unavailable - expenses are equally divided among all ESDs and billed on the tax roll

**Table B7: Cash Flow O1 (All Capital)**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**GEYSERVILLE SANITARY ZONE**

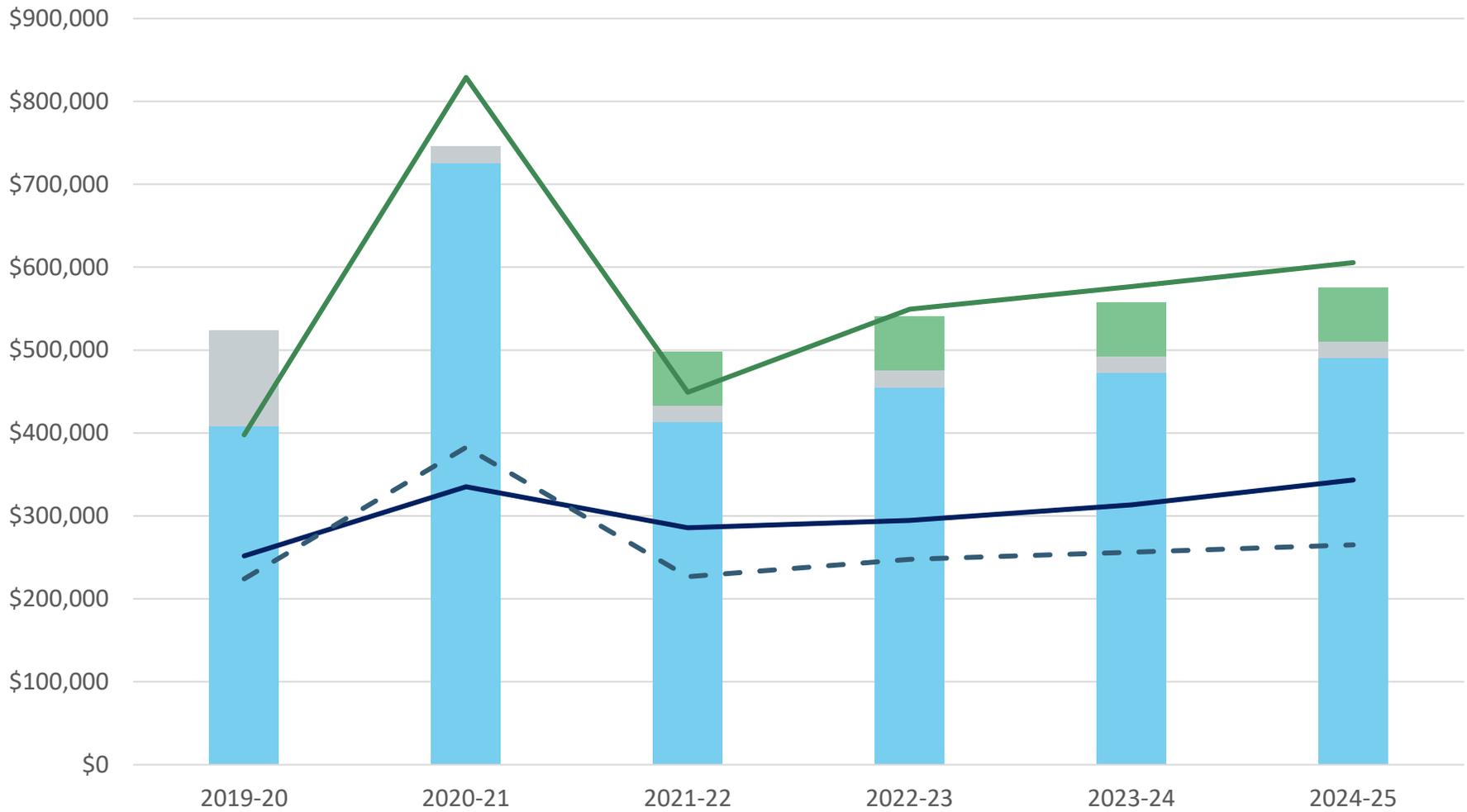
## Cash Flow

Five-Year Projection		Budget	1	2	3	4	5
Fiscal Year	Reference	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increase			5.5%	5.5%	5.5%	5.5%	5.5%
Growth			0.3%	0.3%	0.3%	0.3%	0.3%
Annual Rate - \$/ESD		\$1,099	\$1,159	\$1,223	\$1,290	\$1,361	\$1,436
Beginning Fund Balance	Table 5	\$378,104	\$251,762	\$335,181	\$285,833	\$294,592	\$313,457
<b><u>REVENUE</u></b>							
Sanitation Charges - Calc.	Table 2	\$393,387	\$416,183	\$440,299	\$465,814	\$492,806	\$521,363
Connection Fees	LRFP	\$0	\$4,519	\$4,700	\$4,888	\$5,083	\$5,286
Penalties/Costs on Taxes	LRFP	\$650	\$700	\$700	\$700	\$700	\$700
Interest on Pooled Cash <sup>1</sup>	LRFP	\$3,781	\$2,518	\$3,352	\$2,858	\$2,946	\$3,135
Transfers from Other Funds	LRFP	\$0	\$40,000	\$0	\$75,000	\$75,000	\$75,000
Proposed Debt Proceeds	Table 5	\$0	\$365,000	\$0	\$0	\$0	\$0
<b>Total Revenue</b>		<b>\$397,818</b>	<b>\$828,919</b>	<b>\$449,051</b>	<b>\$549,260</b>	<b>\$576,535</b>	<b>\$605,484</b>
<b><u>EXPENDITURES</u></b>							
Total O&M	Table 3	\$408,160	\$725,500	\$413,400	\$455,500	\$472,671	\$490,539
Capital Improvement Plan	Table 4 <sup>2</sup>	\$116,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Total Debt Service	Table 5	\$0	\$0	\$65,000	\$65,000	\$65,000	\$65,000
<b>Total Expenditures</b>		<b>\$524,160</b>	<b>\$745,500</b>	<b>\$498,400</b>	<b>\$540,500</b>	<b>\$557,671</b>	<b>\$575,539</b>
Net Revenue		(\$126,342)	\$83,419	(\$49,349)	\$8,760	\$18,865	\$29,945
Ending Fund Balance		<b>\$251,762</b>	<b>\$335,181</b>	<b>\$285,833</b>	<b>\$294,592</b>	<b>\$313,457</b>	<b>\$343,402</b>
<i>Fund Balance Target</i>		<i>\$224,080</i>	<i>\$382,750</i>	<i>\$226,700</i>	<i>\$247,750</i>	<i>\$256,335</i>	<i>\$265,270</i>
Debt Service Coverage							

1 - 1% earnings on beginning fund balance

2 - CIP Value 2019-20 equal to total capital expenditures less change in encumbrances/adjustments, LRFP

## Five-Year Cash Flow Projection - Proposed Rate Increases (O1)



■ Total O&M                      ■ Capital Improvement Plan                      ■ Total Debt Service  
— Total Revenue                      — Ending Fund Balance                      - - - Fund Balance Target

**Table B8: Proposed Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**GEYSERVILLE SANITARY ZONE**

## Proposed Rates

<b>Five-Year Projection</b>	<b>Current</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Fiscal Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Proposed Increase Option 1</b>		5.5%	5.5%	5.5%	5.5%	5.5%
<b>Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)</b>						
Annual - tax roll	\$1,099	\$1,159	\$1,223	\$1,290	\$1,361	\$1,436
Monthly	\$91.58	\$96.62	\$101.93	\$107.54	\$113.46	\$119.70



**Sonoma  
Water**

**Penngrove Sanitation Zone  
Wastewater Rate Study**

**Final Report  
May 5, 2020**



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May 5, 2020

Lynne Rosselli  
Finance Manager  
Sonoma Water  
404 Aviation Blvd  
Santa Rosa, CA 95403

Re: Penngrove Sanitation Zone 2020 Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to Sonoma Water the attached 2020 Wastewater Rate Study for Penngrove Sanitation Zone (Zone).

This study presents BWA's analysis of the operating and non-operating expenses of the Zone's wastewater enterprise and provides updated five-year cash flow projections and rates for FY 2020. The primary purpose of this study is to assess the long-term financial condition of the Zone and provide recommendations to recover the cost of wastewater service equitably between ratepayers.

The enclosed report recommends increasing wastewater rates to recover the increasing cost of operations and capital improvement. Recommendations were developed with substantial input from Agency staff and engineering subconsultant Woodard & Curran. BWA finds that the rates and charges proposed in this report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. Financial projections generally align with Sonoma Water's internal long-range financial plan for the Zone. BWA can confirm that the proposed rates are fair and reasonable to the Zone's customers.

We have enjoyed working with Sonoma Water on this rate study. Please contact us with any future questions about this study and the recommended rates.

Sincerely,

Doug Dove, CIPMA  
Principal

Abigail Seaman  
Consultant

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- Appendix A: Proposed 2021 Exhibit A
- Appendix B: Wastewater Rate Study Supplementary Tables

# 1 Executive Summary

## 1.1 Background

Penngrove Sanitation Zone (Zone), managed by Sonoma Water (Agency), provides wastewater service to approximately 376 accounts within a 475-acre service area. The Zone's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from fixed annual wastewater rates) aim to recover the cost to operate and maintain the wastewater system. The Zone faces ongoing increases to operations costs and annual capital project costs to repair and replace aging infrastructure.

Sonoma Water has retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update for FY 2021 which examines any changes in current and projected costs and determines cost-of-service based rates that distribute costs equally among ratepayers. Basic objectives of the rate study include:

- Identify rate setting principles.
- Update long-term financial projections to determine future annual wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service

Based on input from Sonoma Water staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for operations and capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws

## 1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require Sonoma Water's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** Sonoma Water must mail a notice of proposed rate increases to all affected property owners in the Zone. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The Sonoma Water must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

### 1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed charges levied on each customer based on an assigned equivalent single-family dwelling unit (ESD). Rates recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing wastewater rates, charges, and fees. In developing wastewater rates, it is important to note that there is no “one-size-fits-all” approach for establishing cost-based wastewater rates.

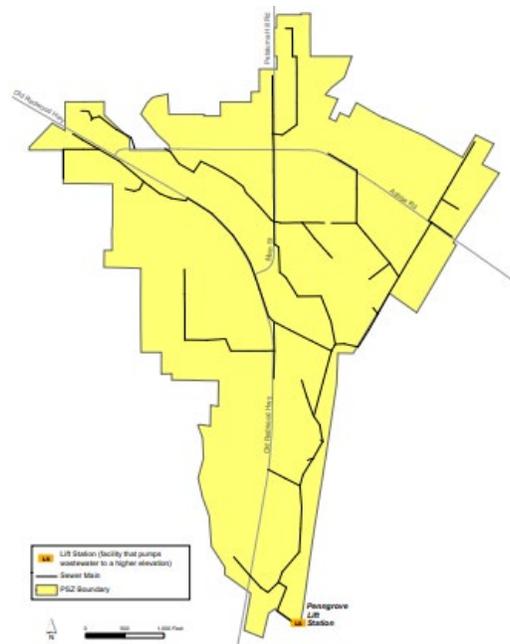
BWA used the following criteria when developing recommendations for the Zone’s wastewater rates and finances:

- 1) *Revenue Sufficiency*: Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact*: While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable*: Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical*: Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

### 1.4 Wastewater System Overview

The Zone serves about 550 ESDs within a 475-acre service area shown **Figure 1** below.

**Figure 1: Penngrove Service Area Map**



Zone services include collection and distribution of wastewater. Tertiary treatment is performed by the Petaluma Ellis Creek Water Recycling Facility. The Zone’s main source of wastewater revenue is annual wastewater rates on each customer’s property tax bill. Rates were last increased on July 1, 2019 and will need small annual increases over the next 5 years to keep up with wastewater system expenses.

### 1.5 Factors Driving Rate Increases

The primary wastewater cost factors affecting the Zone include ongoing operations and maintenance cost increases and the Capital Improvement Plan which will address ongoing maintenance, repair and replacement needs.

### 1.6 Current Wastewater Rates

The Zone’s current wastewater rates are shown in Table 1 below. Wastewater charges are billed annually on the property tax roll according to Sonoma Water’s evaluation of each customer’s Equivalent Single-Family Dwelling (ESD). ESDs are evaluated according to the Zone’s Exhibit A document, which provides the latest flow and strength estimates for common residential and commercial customer classes. The FY 2021 Proposed Exhibit A is provided in the appendix of this report.

**Table 1 Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Annual Fixed Charge

All Customers per ESD per year	\$1,543
per month	\$128.58

Revenue from current rates will not be sufficient to fund rising operations and capital costs over the next five years without small annual increases to the rate revenue.

### 1.7 Proposed Wastewater Rates

Table 2 shows the proposed wastewater rates which reflect a 5.5% rate revenue increase.

**Table 2 Proposed Wastewater Rates**

Wastewater rates effective July 1, 2020

Annual Fixed Charge

All Customers per ESD per year	\$1,628
per month	\$135.66

## 2 Wastewater Financial Projections and Rates

### 2.1 Wastewater Financial Overview

BWA conducted an independent evaluation of the Zone’s wastewater enterprise finances. Key observations include the following:

- Wastewater rates have increased an average of 4.8% per year for the last 10 years. This has allowed the Zone to keep up with operations cost increases and capital improvement needs.
- The wastewater enterprise has no debt service obligations.
- The current Capital Improvement Plan totals \$1.2 million and addresses ongoing maintenance, repair and replacement needs.
- Projected wastewater expenses were determined based on input from Sonoma Water Staff. Projections based on the average annual change in CPI (3.0% per year) and cost projections provided by Staff.
- The current wastewater rate structure equitably distributes costs among ratepayers. Since no water data is available, water use is estimated using typical flow and strength data in Exhibit A.

### 2.2 Current Monthly Wastewater Rates

Current rates (as shown on Table 1) are determined by Equivalent Single-Family Dwelling (ESD) using an ESD assignment schedule based on customer class and size. Rates have increased an average of 3.9% annually over the last 10 years.

### 2.3 Current Wastewater Accounts

The Zone serves 376 wastewater accounts, the majority of which are single family residential. A current customer listing is provided in Table 3 below.

**Table 3 Penngrove Sanitation Zone – Customer Listing**

<b>Customer Class</b>	<b>Parcels</b>	<b>ESDs</b>
Residential	344	462.5
Single Family Dwelling	103	106.7
Multi Family	240	320.6
Mobile Home	1	35.2
Commercial	15	51.1
Industrial	8	12.9
Dry Farm	1	1.0
Recreational	2	3.0
Institutional	3	3.8
Miscellaneous	1	1.0
Governmental	2	12.9
<b>Total</b>	<b>376</b>	<b>548.2</b>

Penngrove Sanitation Zone is a relatively slow-growth community. The District can conservatively expect 0.2% wastewater revenue growth per year as a result of new sewer connections or increased demand.

## 2.4 Factors Affecting 5-Year Financial Plan

The Zone will need annual rate increases to address annual cost inflation and the current Capital Improvement Plan. Key cost components over the next five years are summarized as follows.

### 2.4.1 Ongoing Operating Cost Inflation

The Zone's wastewater operations budget totals approximately \$1.08 million for FY 2019/20. The Zone's largest expenses include maintenance, operations and contract services for wastewater tertiary treatment. Most operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI.

### 2.4.2 Debt Obligations

The Zone has no current debt obligations as shown on Table 4.

**Table 4: Debt Obligations**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total Debt Service	\$0	\$0	\$0	\$0	\$0	\$0

### 2.4.3 Current Wastewater Capital Plan

The Zone's Wastewater Capital Improvement Plan totals \$1.2 million through 2024/25 and addresses aging infrastructure and other necessary improvements. Costs are provided in Table 5 based on engineering estimates as of 2019/20. A full schedule of projects is provided in the Appendix.

**Table 5: Capital Improvement Plan Summary**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CIP	\$983,605	\$144,140	\$30,000	\$30,000	\$30,000	\$30,000

## 2.5 Wastewater Enterprise Revenue Requirements

The wastewater cash flow projection incorporates the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

### **Growth & Water Demand Assumptions**

- The District is a relatively slow-growth community and BWA has conservatively assumed 0.2% growth in new connections or increased demand, which will contribute to rate revenue.
- Wastewater system demand (estimated with ESD ratings) is assumed to stay constant from FY 2019/20

### **Revenue Assumptions**

- Rate revenue will increase according to the proposed rate increases assuming a relatively static number of customers and water consumption with the exception of growth projections.
- Rate revenue will be subsidized by \$1.25m in general fund transfers over the next five years and a one-time grant/reimbursement of \$528,2000 in 2019-20

- Other revenues are projected to remain stagnant from 2019/20 budget amounts.
- Annual interest earnings are estimated at 1% of beginning fund balance

**Expense Assumptions**

- Operations and maintenance costs are based on the 2019/20 budget and escalate at an annual rate of approximately 3.0% to account for future cost inflation.
- Capital expenditures include \$1.2 million in projects through FY 2024/25

Based on the assumptions above, BWA created a cash flow projection that determined 5.5% annual wastewater rate increases are needed for the next 5 years. The proposed schedule is shown on Table 6 below.

**Table 6: Proposed Wastewater Rate Increases**

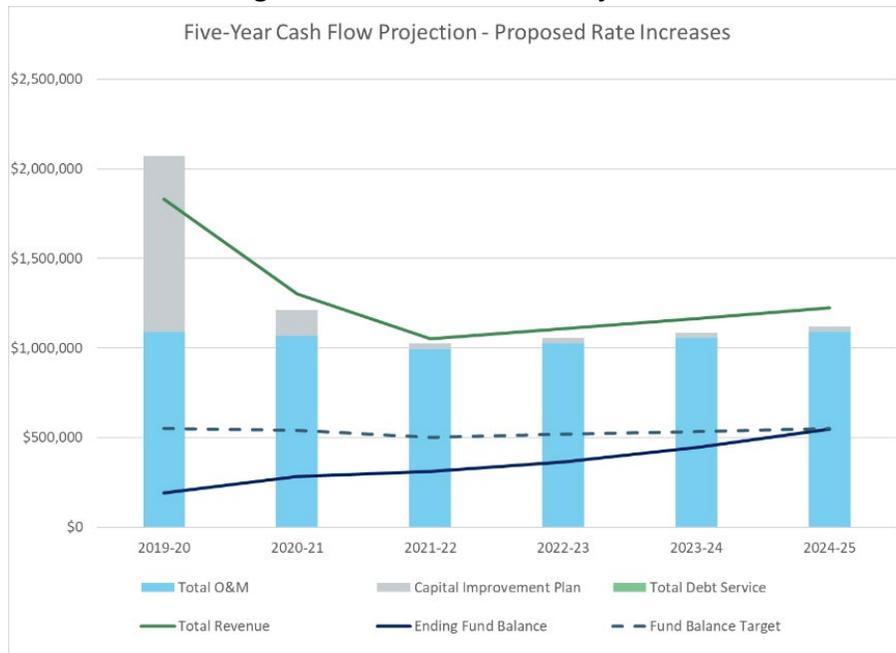
	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increases	5.5%	5.5%	5.5%	5.5%	5.5%

The proposed annual wastewater rate revenue increases accomplish the following:

- Projected operations and Capital Improvement Plan funding
- Minimum operations fund balance of 6 months operating costs
- Minimum construction fund balance of 3% current Asset value

Figure 2 illustrates BWA’s 5-year cash flow projection with proposed rate revenue and general fund contributions

**Figure 2: 5-Year Cash Flow Projection**



The Zone would need to mail a Proposition 218 notice to notify ratepayers of the proposed wastewater rate increases before adoption. Rates would be effective following a mailed Proposition 218 notice and successful public hearing.

## 2.6 Cost of Service Study

Bartle Wells Associates conducted an independent analysis of the Zone’s current sewer rate structure. Based on an evaluation of rate alternatives and input from Staff, no major modifications are recommended to the Zone’s sewer rate structure. Rate revenue is 100% fixed based on ESDs assigned to each customer based on Exhibit A. Table 7 shows the total rate revenue requirement (including proposed rate increase) divided by projected 2020 ESDs.

**Table 7 Cost of Service Rate Calculation**

2020-21 Revenue Requirement <sup>1</sup>	\$894,023
Projected ESDs <sup>2</sup>	549
<b>Proposed Rate - Fixed \$/ESD</b>	<b>\$1,628</b>

*1 – FY 2020 Calculated rate revenue plus FY 2021 proposed rate increase*

*2 – 2020 ESDs plus FY 2021 growth projection*

## 2.7 Rate Structure Recommendations

BWA recommends that the Zone increase rate revenue according to the proposed annual rate increases shown on Table 6. We also recommend that the Zone continue to collect annual fixed charges based on ESD evaluations in Exhibit A, since customer-level water data is not available. Future ESD evaluations should be made from the latest flow and strength estimates in the proposed 2021 Exhibit A (attached).

The proposed fixed charge per ESD for 2020-21 is shown on Table 8 below.

**Table 8: Proposed Rates**

*Wastewater rate effective July 1, 2020*

All Customers per ESD per year	\$1,628
per month	\$135.66

*Equivalent Single-Family Dwelling (ESD) assigned per parcel based on probable quantity and quality of sewage effluent generated.*

## 2.8 Exhibit A Recommendations

Bartle Wells partnered with engineering consultant Woodard & Curran (W&C) to review and update Exhibit A. W&C reviewed the latest Sonoma Water data, relevant neighboring community data, and California Government Code to recommend updated Exhibit A values for 2021

. W&C analyzed wastewater treatment plant and monitored neighborhood sewer flow and load data where available to determine recent trends and update sewer flow and loading estimates for all customer classes. New categories were added for new/emerging commercial and industrial sewer uses (e.g. high-tech medical manufacturing, online vacation rentals). Accessory dwelling units and junior accessory dwelling unit factors were updated to reflect recent California legislation. The 2021 proposed Exhibit A will be used to evaluate ESDs for new sewer connections and capacity charges in the future.

### 3 Conclusion and Recommendations

This water and wastewater rate study presents a comprehensive review of Penngrove Sanitation Zone's wastewater revenue requirements and rate structure. Since the last rate increase for FY 2020, the Zone has identified necessary capital improvements and increases in ongoing operations costs. These factors were considered in the rate study to develop equitable rates for customers that recover the cost of wastewater service.

#### 3.1 Conclusion

The District practices sound financial planning that has provided for the general financial health of the wastewater enterprise given current cost estimates. Unfortunately, operations costs continue to increase, and the District also faces capital replacement needs and debt service obligations. The District will need small annual rate increases to keep up with these costs. These factors have been considered in this comprehensive wastewater rate study and are reflected in the above proposed rates. Adoption of these rates reflect the Zone's commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future.

#### 3.2 Recommendations

BWA recommends that the Agency adopt the rates shown in this report. Rates were developed as part of a collaborative process that included extensive review by Sonoma Water, Woodard & Curran Engineering, and Agency Staff.

At minimum, BWA recommends that the Zone review and update its water and wastewater rate study every five years and/or concurrent with Master Plan Updates. Rates should be noticed and adopted on an annual basis per Zone policy according to the 5-year schedule of annual rate increases. There is no proposed change to the current wastewater rate structure. New connections should be given an ESD evaluation based on the proposed 2021 Exhibit A, which reflects the latest sewer flow and strength factors for the Zone.

Please find the complete Final Draft Tables as of 4/20/2020 and 2021 proposed Exhibit A attached to this report.

## **Appendix A: 2021 Proposed Exhibit A**

# EXHIBIT A

## EQUIVALENT SINGLE-FAMILY DWELLING BILLING UNIT FOR PENNGROVE SANITATION ZONE

Use Category	Billing Basis			2020-2021	
	Flow gallons	BOD mg/l	TSS mg/l	Use	ESD
<b>Residential</b>					
Single-Family	180	305	305	connections	1.00
Condominium (Over 900 square ft)	180	305	305	dwelling units	1.00
Condominium (Under 900 square ft)	144	305	305	dwelling units	0.80
Multiple-Family (Apts,Duplex/Triplex)	144	305	305	dwelling units	0.80
Mobile home park	144	305	305	spaces	0.80
Mobile home (Individual)	144	305	305	units	0.80
JADU	-	305	305	units	0.00
ADU, under 751 sq ft*	72	305	305	units	0.40
ADU, 751-900 sq ft*	144	305	305	units	0.80
ADU, over 900 sq ft*	180	305	305	units	1.00
<b>Commercial</b>					
Appliance repair	190	200	200	1,000 sq. ft.	0.82
Art gallery	190	200	200	1,000 sq. ft.	0.82
Auto dealers					
With service facilities	190	180	280	connection	0.88
Without service facilities	38	180	280	add per service bay	0.18
Without service facilities	190	200	200	connection	0.82
Auto repair	38	325	325	per service bay	0.22
Bakery	190	1000	600	1,000 sq. ft.	2.19
Beer Making/Brewery					
Butcher					
Banks & financial institutions	190	130	80	1,000 sq. ft.	0.60
Barber shop	19	130	80	per chair	0.06
Beauty shop	38	130	80	per chair	0.12
Bars & taverns	20	200	200	per seat	0.09
Camp ground or RV park					
with hookups	125	200	200	site	0.54
without hookups	75	200	200	site	0.32
Cannabis production/manufacturing					
Car washes					
manual	190	20	150	per bay	0.55
automatic	125	228	228	per bay	0.58
Cheese Maker					
Churches, hall & lodges	2	200	200	per seat	0.01
Coffee shops with some food service	6	1000	600	per seat	0.07
Dry cleaners	285	150	110	1,000 sq. ft.	0.98
Fire stations					
with sleeping quarters and kitchens	220	325	325	1,000 sq. ft.	1.28
without sleeping quarters and kitchens	190	228	228	1,000 sq. ft.	0.88
Garages	95	180	280	per service bays	0.44
Gas Stations (no other automotive services)					
with convenience store	70	520	520	1,000 sq. ft.	0.57
without convenience store	38	228	228	1,000 sq. ft.	0.18
Gym					
with shower	400	325	325	1,000 sq. ft.	2.32
without shower	50	228	228	1,000 sq. ft.	0.23
High Tech Medical Manufacturing					
Hospitals					
Convalescent	125	250	100	per bed	0.50
General	175	250	100	per bed	0.70
Veterinarian	6	250	100	per cage	0.02
Hotels/motels					
without restaurant	100	310	120	sleeping rooms	0.45
B&B/Online Rentals/Vacation Rental homes	100	325	325	per occupant	0.58
Hydroponic Cultivation (including cannabis)	1.2	228	228	per plant	0.01
Laundromats	500	150	110	washing machines	1.73
High efficiency washers	250	228	228	washing machines	1.16
Library	190	200	200	1,000 sq. ft.	0.82
Machine shops	152	180	280	1,000 sq. ft.	0.71
Markets	38	800	800	1,000 sq. ft.	0.44
Nail Salon	10	228	228	per seat	0.05
Offices					
Business	76	130	80	1,000 sq. ft.	0.24
Chiropractic Office	190	228	228	Exam. room	0.88
Dental	190	130	80	Exam. room	0.60
Medical	190	130	80	Exam. room	0.60
with central handwashing stations	175	325	325	Exam. room	1.01
with office, surgery, lab and treatment rooms	190	325	325	Exam. room	1.10
offices with sink	125	325	325	Exam. room	0.72
offices without sink	100	325	325	Exam. room	0.58
Veterinarian					
with office, surgery, and treatment rooms	130	325	325	Exam. room	0.75
Pet Groomers	260	228	228	1,000 sq. ft.	1.20
Post office	0	130	80	1,000 sq. ft.	0.00
Resort					
Restaurants					
Dine-in					
With DW & garbage disp.	6	1000	600	per seat	0.07
With DW or garbage disp.	6	619	371	per seat	0.05
Without DW & garbage disp.	6	238	143	per seat	0.03
Take-out	475	238	143	1,000 sq. ft.	1.99
Rest homes	125	250	100	per bed	0.50
Retail stores	38	150	150	1,000 sq. ft.	0.14
Schools					
Elementary	9	130	100	per student day	0.03
High	14	130	100	per student day	0.05
with entertainment facilities	19	325	325	per student day	0.11

Service stations	380	180	280	set of gas pumps	1.77
	38	180	280	add per service bay	0.18
Shoe repair	190	200	200	1,000 sq. ft.	0.82
Spa with various beauty treatments	38	325	325	per chair	0.22
Supermarkets	76	325	325	1,000 sq. ft.	0.44
Tasting Rooms					
Ale, Winery (no food)	120	228	228	1,000 sq. ft.	0.56
Ale, Winery (with food)	240	520	520	1,000 sq. ft.	1.95
Theaters	2	200	200	per seat	0.01
Trash Enclosures				see note 1 below	
Warehouse				see note 1 below	
Winery				see note 1 below	
Others as determined by the Engr.				see note 1 below	

ALL COMMERCIAL ESDs TO BE DETERMINED BY THE GENERAL MANAGER USING THE FOLLOWING FORMULA:

$$ESD = ( TSS \times FLOW \times 0.33 ) / ( SFD TSS \times SFD FLOW ) + ( BOD \times FLOW \times 0.33 ) / ( SFD BOD \times SFD FLOW ) + ( FLOW \times ( 0.34 / SFD FLOW ) )$$

Note 1: For non-standard uses, warehouses and when agreement on a use category cannot be reached, the General Manager, in his or her sole discretion, may

a) base charges on the user's actual or estimated contribution of wastewater into the District's facilities in terms of flow, biological oxygen demand (BOD), and total suspended solids (TSS), and  
b) calculate the user's charge using the above Charge Formula. The user shall provide verifiable data, as requested by the General Manager, for the charge to be determined.

Note 2: In general, users with annual average TSS and/or BOD over 1,000 mg/L and users with annual average Flow greater than 5,000 gallons per day should be considered Monitored Users and use the Monitored User Charge Formula.

Definitions	Flow = Gallons per Day	TSS = Total Suspended Solids		
	BOD = Biological Oxygen Demand	DW = dishwasher		
	ESD = Equivalent Single Family Dwelling	disp. = disposal		

\* Note that no Capacity Charge is accessed when existing structures are converted in accordance with CGC 65852.2 (e)(1)(A) as determined by the County of Sonoma.

**Appendix B: Wastewater Rate Study  
Supplementary Tables**



# PENNGROVE SANITARY ZONE

## Wastewater COS Rate Study 2020

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### O Tables

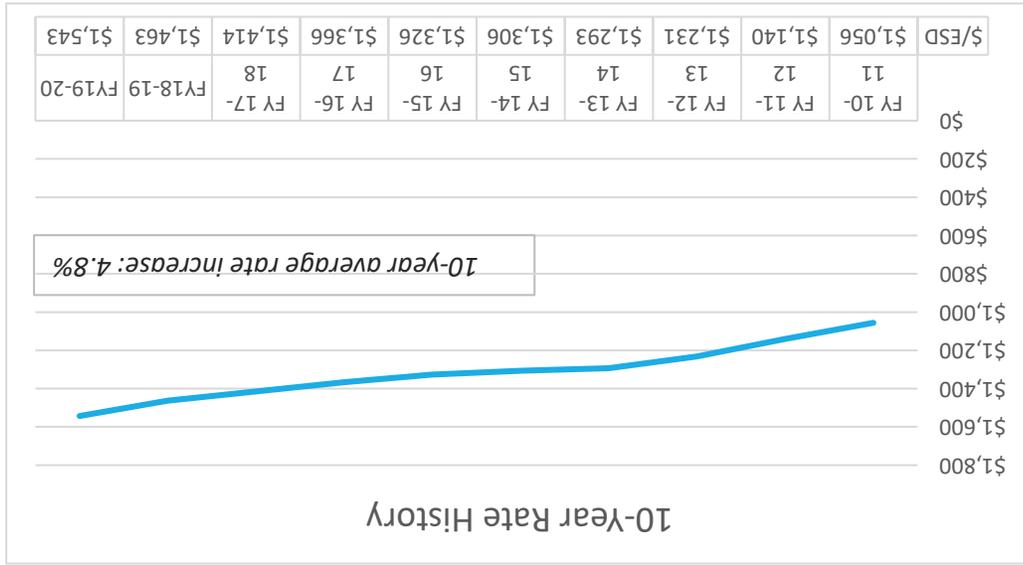
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Table B3	O&M Expense Projection
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Table B6	Fund Balance & Policies
Table B7	Cash Flow
Table B8	Proposed Rates



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

## Current Rates

Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)  
 \$1,543 annual - tax roll  
 \$128.58 monthly



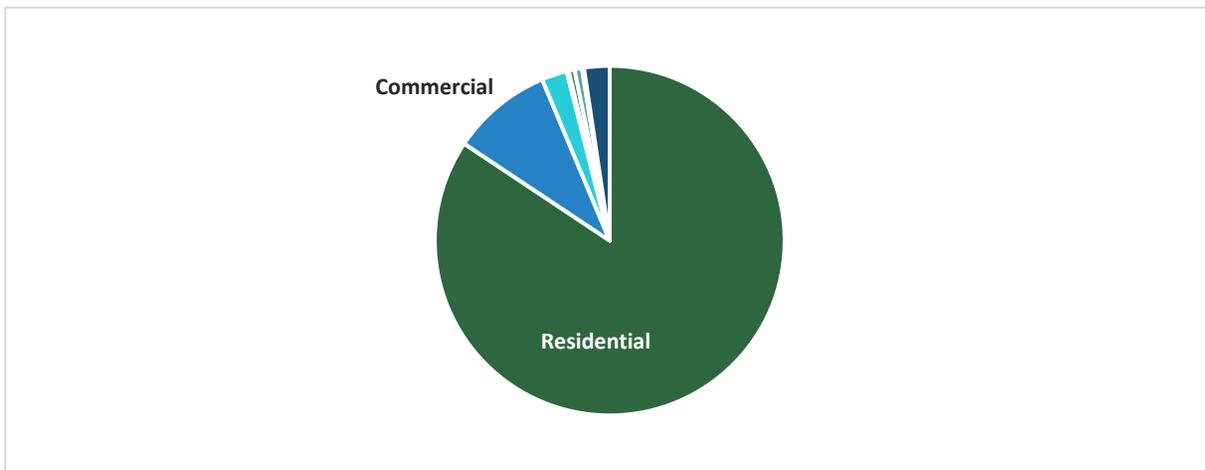
Source: Sonoma Water/Lynee Rosselli, District and Zones - annual rates - summary, via email 9/9/19

**Table B2: Customer Information**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**PENNGROVE SANITARY ZONE**

## Customer Information

### FY 2019-20 Customer Master List

Customer Class	Parcels	ESDs	2019-20 Revenue	% total
Residential	344	462.5	\$713,576	84.4%
Single Family Dwelling	103	106.7		
Multi Family	240	320.6		
Mobile Home	1	35.2		
Commercial	15	51.1	\$78,909	9.3%
Industrial	8	12.9	\$19,874	2.3%
Dry Farm	1	1.0	\$1,543	0.2%
Recreational	2	3.0	\$4,629	0.5%
Institutional	3	3.8	\$5,863	0.7%
Miscellaneous	1	1.0	\$1,543	0.2%
Governmental	2	12.9	\$19,936	2.4%
<b>Total</b>	<b>376</b>	<b>548.2</b>	<b>\$845,873</b>	



Source: Sonoma Water/Lynne Rosselli

Table B3: O&M Expense Projection  
 Sonoma Water  
 Wastewater COS Rate Study 2020  
 PENNGROVE SANITARY ZONE

## O&M Expense Projection

EXPENDITURES	Budget (FY)	2018-19	2019-20 Adj. Budget	Projection <sup>1</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
<b>Services and Supplies</b>									
51061	Maintenance - Equipment	\$14,000	\$26,000	3.0%	\$26,780	\$27,583	\$28,411	\$29,263	\$30,141
51076	Maint - FACOPS	\$25,000	\$10,000	3.0%	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
51201	Administration Services	\$6,300	\$7,500	3.0%	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695
51205	Advertising/Marketing Svc	\$0	\$500	3.0%	\$515	\$530	\$546	\$563	\$580
51211	County Counsel - Legal Advice	\$1,000	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
51241	Outside Printing and Binding	\$1,100	\$1,500	3.0%	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
51244	Permits/License/Fees	\$2,100	\$3,000	3.0%	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
51401	Rents and Leases - Equipment	\$500	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
51803	Other Contract Services	\$30,500	\$36,950	3.0%	\$38,059	\$39,200	\$40,376	\$41,588	\$42,835
51902	Telecommunication Usage	\$300	\$500	3.0%	\$515	\$530	\$546	\$563	\$580
51917	District Operations Chgs	\$155,000	\$413,050	Varies	\$370,092	\$275,928	\$287,242	\$294,214	\$306,726
51921	Equipment Usage Charges	\$15,000	\$18,500	3.0%	\$19,055	\$19,627	\$20,215	\$20,822	\$21,447
52141	Minor Equipment/Small Tools	\$0	\$500	3.0%	\$515	\$530	\$546	\$563	\$580
52142	Computer Equipment/Accessories	\$0	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
52143	Computer Software/Licensing	\$1,000	\$1,500	3.0%	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
52162	Special Department Expense	\$540,000	\$545,000	3.0%	\$561,350	\$578,191	\$595,536	\$613,402	\$631,804
52171	Water Conservation Program	\$1,000	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
52193	Utilities - Electric	\$12,000	\$15,000	3.0%	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389
52194	Utilities - Water	\$300	\$500	3.0%	\$515	\$530	\$546	\$563	\$580
	<b>Total Services &amp; Supplies</b>	<b>\$805,100</b>	<b>\$1,085,000</b>		<b>\$1,062,200</b>	<b>\$988,800</b>	<b>\$1,021,500</b>	<b>\$1,050,500</b>	<b>\$1,085,700</b>
		<b>2018-19</b>	<b>2019-20</b>	<b>Projection</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
	<b>Appropriations for Contingency</b>								
55011	Appropriations for Contingency	\$5,000	\$5,000	0.0%	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
	<b>Total Services &amp; Supplies</b>	<b>\$5,000</b>	<b>\$5,000</b>		<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>
<b>TOTAL EXPENDITURES</b>		<b>\$810,100</b>	<b>\$1,090,000</b>		<b>\$1,067,200</b>	<b>\$993,800</b>	<b>\$1,026,500</b>	<b>\$1,055,500</b>	<b>\$1,090,700</b>

1 - Expense projection based on Operations Services CPI, LRF Draft 9/9/19

Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRF Draft via email 9/9/2019

**Table B4: Capital Improvement Plan**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**PENNGROVE SANITARY ZONE**

## Capital Improvement Plan

CIP	Long Range Financial Plan 12-20-19							Total Through FY 2028-29
	Project Title	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	
	Replace Lift Station Pumps	\$0						\$0
P0038	Lift Station Upgrade - Flood Protection	\$983,605	\$114,140					\$1,097,745
	Future Capital Projects (tbd)	\$0	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$270,000
	Misc Building/Improvements	\$0						\$0
	Sewer Reline Project	\$0						\$0
P0022	Pump Station Replacement Order	\$0						\$0
	Sewer Rehab (formerly L pipe)	\$0						\$0
	Miscellaneous Expense	\$0						\$0
<b>Total</b>		<b>\$983,605</b>	<b>\$144,140</b>	<b>\$30,000</b>	<b>\$30,000</b>	<b>\$30,000</b>	<b>\$30,000</b>	<b>\$1,367,745</b>

*Source: Sonoma Water/Lynne Rosselli, Long Range Financial Plan, via email 9/09/2019*

**Table B5: Debt Service**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**PENNGROVE SANITARY ZONE**

## Debt Service

Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>OUTSTANDING LOANS/BONDS</u></b>							
None							
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b><u>PROPOSED LOANS/BONDS</u></b>							
			1	2	3	4	5
Rate Study Year Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Loan 1				\$0	\$0	\$0	\$0
Loan 2				\$0	\$0	\$0	\$0
Bond 1				\$0	\$0	\$0	\$0
Bond 2				\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Debt Service</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b><u>PROPOSED DEBT DETAIL</u></b>							
	<b>Loan 1</b>		<b>Loan 2</b>		<b>Bond 1</b>		<b>Bond 2</b>
Rate Study Iss. Year <sup>1</sup>	1		1		1		1
Issuance Amount	\$0		\$0		\$0		\$0
Proceeds for Construction	\$0		\$0		\$0		\$0
Interest Rate	4%		4%				
Iss. Costs	<b>\$165,500</b>		<b>\$165,500</b>		<b>\$100,000</b>		<b>\$100,000</b>
Maturity	20		20		15		15
<b>Net Annual Payment</b>	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>		<b>\$0</b>

1 - Payment begins 1 year after issuance

*Proposed Debt Estimates provided by Bartle Wells Associates, pending review from Sonoma Water*

*Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRF Draft via email 9/9/2019*

## Fund Balance & Policies

### Undes/Unreserved Beginning Fund Balance 7/1/2019

33120100 Penngrove Operations	\$94,034
33120300 Penngrove GO Bonds 1977	\$11,221
33120200 Penngrove Construction	\$332,080
<b>Total</b>	<b>\$437,335</b>

### 1. Fund Balance Policy

Operations Fund Target - at least 6 months budgeted Operating Expenses  
Construction Fund Target - 3% Asset Value

### 2. Debt Service Coverage Policy

Coverage Requirement - 1.2x net operating expenses

### 3. Growth Estimates

Estimated 1 user per Fiscal Year, 1.0 ESDs  
Connection fee revenue estimated based on 3% per year CPI adjustment to current capacity fee

### 3. Rate Structure

Water data unavailable - expenses are equally divided among all ESDs and billed on the tax roll

Source: Sonoma Water/Lynne Rosselli, LRF Draft via email 9/9/2019

**Table B7: Cash Flow**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**PENNGROVE SANITARY ZONE**

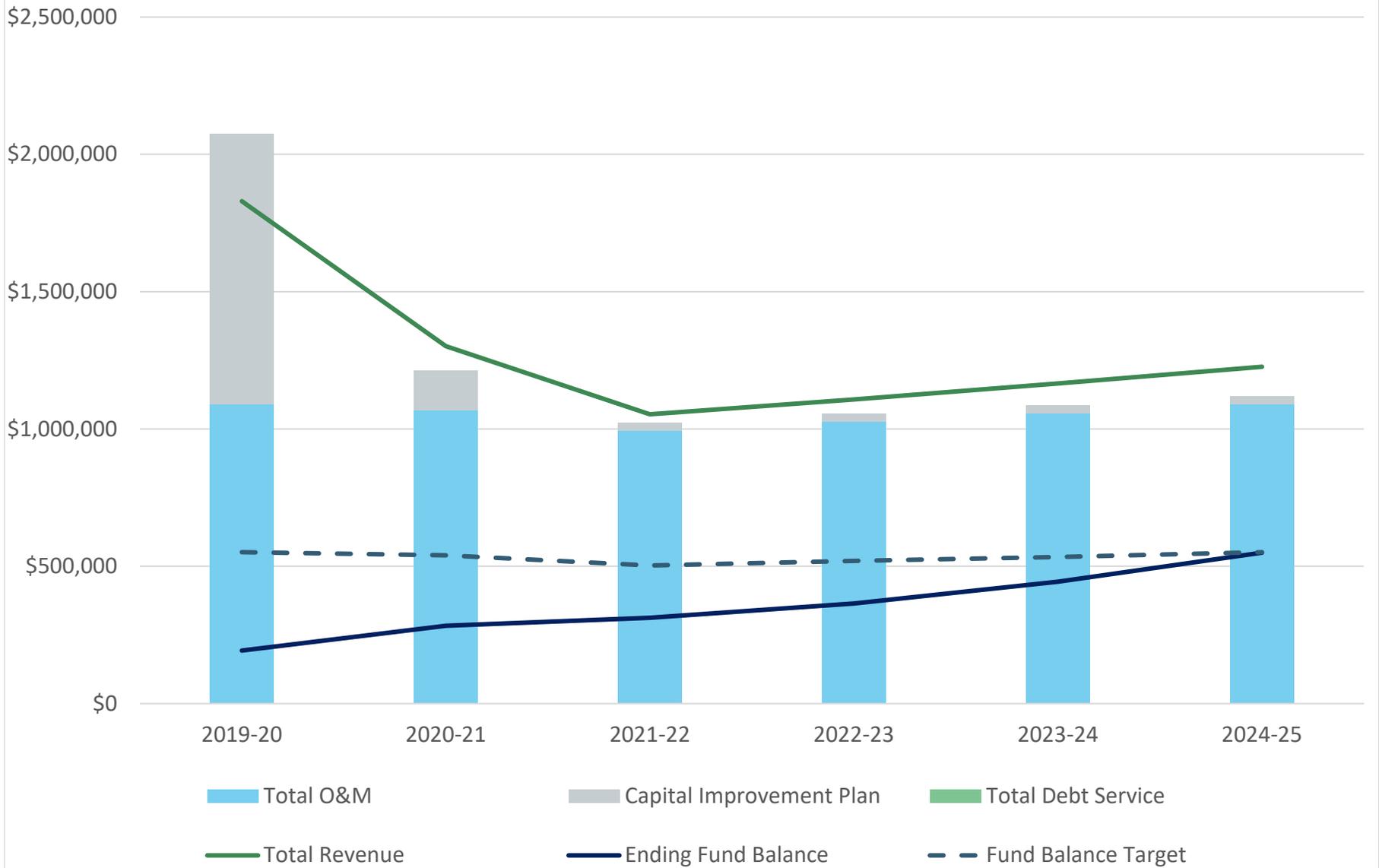
## Cash Flow

Five-Year Projection Fiscal Year	Reference	Budget 2019-20	1 2020-21	2 2021-22	3 2022-23	4 2023-24	5 2024-25
Proposed Rate Increase			5.5%	5.5%	5.5%	5.5%	5.5%
Growth			0.2%	0.2%	0.2%	0.2%	0.2%
Annual Rate - \$/ESD		\$1,543	\$1,628	\$1,717	\$1,812	\$1,912	\$2,017
Beginning Fund Balance	Table 5	\$437,335	\$193,142	\$283,276	\$312,923	\$364,144	\$443,924
<b><u>REVENUE</u></b>							
Sanitation Charges - Calc.	Table 2	\$845,873	\$894,023	\$944,915	\$998,704	\$1,055,555	\$1,115,642
Connection Fees	LRFP	\$0	\$4,519	\$4,700	\$4,888	\$5,083	\$5,286
Penalties/Costs on Taxes	LRFP	\$900	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Interest on Pooled Cash <sup>1</sup>	LRFP	\$4,373	\$1,931	\$2,833	\$3,129	\$3,641	\$4,439
Transfer from General Fund	LRFP	\$450,000	\$400,000	\$100,000	\$100,000	\$100,000	\$100,000
Grant/Reimb Funding	LRFP	\$528,266	\$0	\$0	\$0	\$0	\$0
Proposed Debt Proceeds	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Revenue</b>		<b>\$1,829,412</b>	<b>\$1,301,474</b>	<b>\$1,053,448</b>	<b>\$1,107,721</b>	<b>\$1,165,279</b>	<b>\$1,226,367</b>
<b><u>EXPENDITURES</u></b>							
Total O&M	Table 3	\$1,090,000	\$1,067,200	\$993,800	\$1,026,500	\$1,055,500	\$1,090,700
Capital Improvement Plan	Table 4 <sup>2</sup>	\$983,605	\$144,140	\$30,000	\$30,000	\$30,000	\$30,000
Total Debt Service	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Expenditures</b>		<b>\$2,073,605</b>	<b>\$1,211,340</b>	<b>\$1,023,800</b>	<b>\$1,056,500</b>	<b>\$1,085,500</b>	<b>\$1,120,700</b>
Net Revenue		(\$244,193)	\$90,134	\$29,648	\$51,221	\$79,779	\$105,667
Ending Fund Balance		<b>\$193,142</b>	<b>\$283,276</b>	<b>\$312,923</b>	<b>\$364,144</b>	<b>\$443,924</b>	<b>\$549,591</b>
<i>Fund Balance Target</i>		<i>\$551,000</i>	<i>\$539,600</i>	<i>\$502,900</i>	<i>\$519,250</i>	<i>\$533,750</i>	<i>\$551,350</i>
Debt Service Coverage							

1 - 1% earnings on beginning fund balance

2 - CIP Value 2019-20 equal to total capital expenditures less change in encumbrances/adjustments, LRFP DRAFT 9/9/2019

## Five-Year Cash Flow Projection - Proposed Rate Increases



**Table B8: Proposed Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**PENNGROVE SANITARY ZONE**

## Proposed Rates

<b>Five-Year Projection</b>	<b>Current</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Fiscal Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Proposed Increase</b>		5.5%	5.5%	5.5%	5.5%	5.5%
<b>Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)</b>						
Annual - tax roll	\$1,543	\$1,628	\$1,717	\$1,812	\$1,912	\$2,017
Monthly	\$128.58	\$135.66	\$143.12	\$150.99	\$159.29	\$168.05



**Sonoma  
Water**

**Sea Ranch Sanitation Zone  
Wastewater Rate Study**

**Final Report  
May 5, 2020**



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May 5, 2020

Lynne Rosselli  
Finance Manager  
Sonoma Water  
404 Aviation Blvd  
Santa Rosa, CA 95403

Re: Sea Ranch Sanitation Zone 2020 Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to Sonoma Water the attached 2020 Wastewater Rate Study for Sea Ranch Sanitation Zone (Zone).

This study presents BWA's analysis of the operating and non-operating expenses of the Zone's wastewater enterprise and provides updated five-year cash flow projections and rates for FY 2020. The primary purpose of this study is to assess the long-term financial condition of the Zone and provide recommendations to recover the cost of wastewater service equitably between ratepayers.

The enclosed report recommends increasing wastewater rates to recover the increasing cost of operations and capital improvement. Recommendations were developed with substantial input from Agency staff and engineering subconsultant Woodard & Curran. BWA finds that the rates and charges proposed in this report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. Financial projections generally align with Sonoma Water's internal long-range financial plan for the Zone. BWA can confirm that the proposed rates are fair and reasonable to the Zone's customers.

We have enjoyed working with Sonoma Water on this rate study. Please contact us with any future questions about this study and the recommended rates.

Sincerely,

Doug Dove, CIPMA  
Principal

Abigail Seaman  
Consultant

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- Appendix A: Proposed 2021 Exhibit A
- Appendix B: Wastewater Rate Study Supplementary Tables

# 1 Executive Summary

## 1.1 Background

Sea Ranch Sanitation Zone (Zone), managed by Sonoma Water (Agency), provides wastewater service to approximately 600 accounts within a 4,600-acre service area. The Zone's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from fixed annual wastewater rates) aim to recover the cost to operate and maintain the wastewater system. The Zone faces ongoing increases to operations costs and annual capital project costs to repair and replace aging infrastructure.

Sonoma Water has retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update for FY 2021 which examines any changes in current and projected costs and determines cost-of-service based rates that distribute costs equally among ratepayers. Basic objectives of the rate study include:

- Identify rate setting principles.
- Update long-term financial projections to determine future annual wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service

Based on input from Sonoma Water staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for operations and capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws

## 1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require Sonoma Water's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** Sonoma Water must mail a notice of proposed rate increases to all affected property owners in the Zone. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The Sonoma Water must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

### 1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed charges levied on each customer based on an assigned equivalent single-family dwelling unit (ESD). Rates recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing wastewater rates, charges, and fees. In developing wastewater rates, it is important to note that there is no “one-size-fits-all” approach for establishing cost-based wastewater rates.

BWA used the following criteria when developing recommendations for the Zone’s wastewater rates and finances:

- 1) *Revenue Sufficiency*: Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact*: While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable*: Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical*: Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

### 1.4 Wastewater System Overview

The Zone serves 604 ESDs within a 4,600-acre service area shown **Figure 1** below.

**Figure 1: Sea Ranch Service Area Map**



Zone services include collection and distribution of wastewater. Tertiary treatment is performed by the Petaluma Ellis Creek Water Recycling Facility. The Zone’s main source of wastewater revenue is annual wastewater rates on each customer’s property tax bill. Rates were last increased on July 1, 2019 and will need small annual increases over the next 5 years to keep up with wastewater system expenses.

### 1.5 Factors Driving Rate Increases

The primary wastewater cost factors affecting the Zone include ongoing operations and maintenance cost increases and the Capital Improvement Plan which will address ongoing maintenance, repair and replacement needs.

### 1.6 Current Wastewater Rates

The Zone’s current wastewater rates are shown in Table 1 below. Wastewater charges are billed annually on the property tax roll according to Sonoma Water’s evaluation of each customer’s Equivalent Single-Family Dwelling (ESD). ESDs are evaluated according to the Zone’s Exhibit A document, which provides the latest flow and strength estimates for common residential and commercial customer classes. The FY 2021 Proposed Exhibit A is provided in the appendix of this report.

**Table 1 Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Annual Fixed Charge

All Customers per ESD per year	\$1,200
per month	\$100.00

Revenue from current rates will not be sufficient to fund rising operations and capital costs over the next five years without small annual increases to the rate revenue.

### 1.7 Proposed Wastewater Rates

Table 2 shows the proposed wastewater rates which reflect a 3.5% rate revenue increase.

**Table 2 Proposed Wastewater Rates**

Wastewater rates effective July 1, 2020

Annual Fixed Charge

All Customers per ESD per year	\$1,242
per month	\$103.50

## 2 Wastewater Financial Projections and Rates

### 2.1 Wastewater Financial Overview

BWA conducted an independent evaluation of the Zone’s wastewater enterprise finances. Key observations include the following:

- Wastewater rates have increased an average of 3.8% per year for the last 10 years. This has allowed the Zone to keep up with operations cost increases and capital improvement needs.
- The wastewater enterprise has no debt service obligations.
- The current Capital Improvement Plan totals \$1 million and addresses ongoing maintenance, repair and replacement needs.
- Projected wastewater expenses were determined based on input from Sonoma Water Staff. Projections based on the average annual change in CPI (3.0% per year) and cost projections provided by Staff.
- The current wastewater rate structure equitably distributes costs among ratepayers. Since no water data is available, water use is estimated using typical flow and strength data in Exhibit A.

### 2.2 Current Monthly Wastewater Rates

Current rates (as shown on Table 1) are determined by Equivalent Single-Family Dwelling (ESD) using an ESD assignment schedule based on customer class and size. Rates have increased an average of 3.8% annually over the last 10 years.

### 2.3 Current Wastewater Accounts

The Zone serves 1,520 wastewater accounts, the majority of which are single family residential. A current customer listing is provided in Table 3 below.

**Table 3 Sea Ranch Sanitation Zone – Customer Listing**

Customer Class	Parcels	ESDs
Residential	600	603.7
Single Family Dwelling	594	594.8
Multi Family	6	8.9
Mobile Home	0	0.0
Commercial	0	0.0
Industrial	0	0.0
Recreational	1	2.0
Institutional	0	0.0
Miscellaneous	0	0.0
Governmental	0	0.0
<b>Total</b>	<b>601</b>	<b>605.7</b>

Sea Ranch Sanitation Zone is a relatively slow-growth community. The Zone can conservatively expect 0.2% wastewater revenue growth per year as a result of new sewer connections or increased demand.

## 2.4 Factors Affecting 5-Year Financial Plan

The Zone will need annual rate increases to address annual cost inflation and the current Capital Improvement Plan. Key cost components over the next five years are summarized as follows.

### 2.4.1 Ongoing Operating Cost Inflation

The Zone's wastewater operations budget totals approximately \$600,000 for FY 2019/20. The Zone's largest expenses include maintenance, operations and contract services for wastewater treatment. Most operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI.

### 2.4.2 Debt Obligations

The Zone has no current debt obligations as shown on Table 4.

**Table 4: Debt Obligations**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total Debt Service	\$0	\$0	\$0	\$0	\$0	\$0

### 2.4.3 Current Wastewater Capital Plan

The Zone's Wastewater Capital Improvement Plan totals \$1.1 million through 2024/25 and addresses aging infrastructure and other necessary improvements. Costs are provided in Table 5 based on engineering estimates as of 2019/20. A full schedule of projects is provided in the Appendix.

**Table 5: Capital Improvement Plan Summary**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CIP	\$125,000	\$150,000	\$505,000	\$100,000	\$100,000	\$100,000

## 2.5 Wastewater Enterprise Revenue Requirements

The wastewater cash flow projection incorporates the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

### **Growth & Water Demand Assumptions**

- The Zone is a relatively slow-growth community and BWA has conservatively assumed 0.2% growth in new connections or increased demand, which will contribute to rate revenue.
- Wastewater system demand (estimated with ESD ratings) is assumed to stay constant from FY 2019/20

### **Revenue Assumptions**

- Rate revenue will increase according to the proposed rate increases assuming a relatively static number of customers and water consumption with the exception of growth projections.
- Other revenues are projected to remain stagnant from 2019/20 budget amounts.
- Annual interest earnings are estimated at 1% of beginning fund balance

**Expense Assumptions**

- Operations and maintenance costs are based on the 2019/20 budget and escalate at an annual rate of approximately 3.0% to account for future cost inflation.
- Capital expenditures include \$1.1 million in projects through FY 2024/25

Based on the assumptions above, BWA created a cash flow projection that determined 3.5% annual wastewater rate increases are needed for the next 5 years. The proposed schedule is shown on Table 6 below.

**Table 6: Proposed Wastewater Rate Increases**

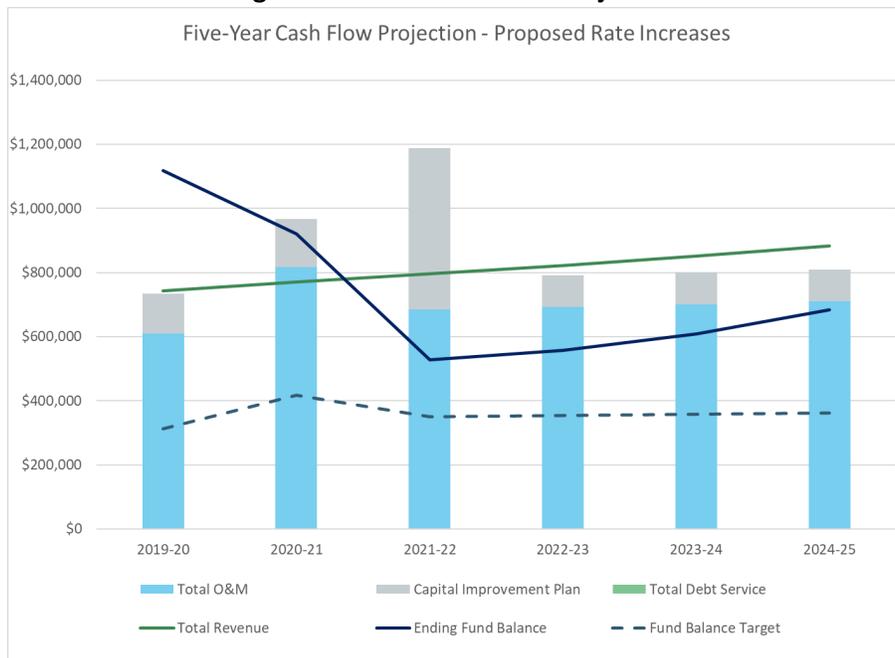
	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increases	3.5%	3.5%	3.5%	3.5%	3.5%

The proposed annual wastewater rate revenue increases accomplish the following:

- Projected operations and Capital Improvement Plan funding
- Minimum operations fund balance of 6 months operating costs
- Minimum construction fund balance of 3% current Asset value

Figure 2 illustrates BWA’s 5-year cash flow projection with proposed rate revenue.

**Figure 2: 5-Year Cash Flow Projection**



The Zone would need to mail a Proposition 218 notice to notify ratepayers of the proposed wastewater rate increases before adoption. Rates would be effective following a mailed Proposition 218 notice and successful public hearing.

## 2.6 Cost of Service Study

Bartle Wells Associates conducted an independent analysis of the Zone’s current sewer rate structure. Based on an evaluation of rate alternatives and input from Staff, no major modifications are recommended to the Zone’s sewer rate structure. Rate revenue is 100% fixed based on ESDs assigned to each customer based on Exhibit A. Table 7 shows the total rate revenue requirement (including proposed rate increase) divided by projected 2020 ESDs.

2020-21 Revenue Requirement <sup>1</sup>	\$753,571
Projected ESDs <sup>2</sup>	607
<b>Proposed Rate - Fixed \$/ESD</b>	<b>\$1,242</b>

*1 – FY 2020 Calculated rate revenue plus FY 2021 proposed rate increase*  
*2 – 2020 ESDs plus FY 2021 growth projection*

## 2.7 Rate Structure Recommendations

BWA recommends that the Zone increase rate revenue according to the proposed annual rate increases shown on Table 6. We also recommend that the Zone continue to collect annual fixed charges based on ESD evaluations in Exhibit A, since customer-level water data is not available. Future ESD evaluations should be made from the latest flow and strength estimates in the proposed 2021 Exhibit A (attached).

The proposed fixed charge per ESD for 2020-21 is shown on Table 8 below.

All Customers per ESD per year	\$1,242
per month	\$103.50

*Equivalent Single-Family Dwelling (ESD) assigned per parcel based on probable quantity and quality of sewage effluent generated.*

## 2.8 Exhibit A Recommendations

Bartle Wells partnered with engineering consultant Woodard & Curran (W&C) to review and update Exhibit A. W&C reviewed the latest Sonoma Water data, relevant neighboring community data, and California Government Code to recommend updated Exhibit A values for 2021. W&C analyzed wastewater treatment plant and monitored neighborhood sewer flow and load data where available to determine recent trends and update sewer flow and loading estimates for all customer classes. New categories were added for new/emerging commercial and industrial sewer uses (e.g. high-tech medical manufacturing, online vacation rentals). Accessory dwelling units and junior accessory dwelling unit factors were updated to reflect recent California legislation. The 2021 proposed Exhibit A will be used to evaluate ESDs for new sewer connections and capacity charges in the future.

### 3 Conclusion and Recommendations

This water and wastewater rate study presents a comprehensive review of Sea Ranch Sanitation Zone's wastewater revenue requirements and rate structure. Since the last rate increase for FY 2021, the Zone has identified necessary capital improvements and increases in ongoing operations costs. These factors were considered in the rate study to develop equitable rates for customers that recover the cost of wastewater service.

#### 3.1 Conclusion

The Zone practices sound financial planning that has provided for the general financial health of the wastewater enterprise given current cost estimates. Unfortunately, operations costs continue to increase, and the Zone also faces capital replacement needs and debt service obligations. The Zone will need small annual rate increases to keep up with these costs. These factors have been considered in this comprehensive wastewater rate study and are reflected in the above proposed rates. Adoption of these rates reflect the Zone's commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future.

#### 3.2 Recommendations

BWA recommends that the Agency adopt the rates shown in this report. Rates were developed as part of a collaborative process that included extensive review by Sonoma Water, Woodard & Curran Engineering, and Agency Staff.

At minimum, BWA recommends that the Zone review and update its water and wastewater rate study every five years and/or concurrent with Master Plan Updates. Rates should be noticed and adopted on an annual basis per Zone policy according to the 5-year schedule of annual rate increases. There is no proposed change to the current wastewater rate structure. New connections should be given an ESD evaluation based on the proposed 2021 Exhibit A, which reflects the latest sewer flow and strength factors for the Zone.

Please find the complete Final Draft Tables as of 4/20/2020 and 2021 proposed Exhibit A attached to this report.

## **Appendix A: 2021 Proposed Exhibit A**

# EXHIBIT A

## EQUIVALENT SINGLE-FAMILY DWELLING BILLING UNIT FOR SEA RANCH SANITATION ZONE

Use Category		Billing Basis			2020-2021	
		Flow gallons	BOD mg/l	TSS mg/l	Use	ESD
<b>Residential</b>	Single-Family	200			connections	1.0
	JADU	-			units	0.00
	ADU, under 751 sq ft*	80			units	0.40
	ADU, 751-900 sq ft*	160			units	0.80
	ADU, over 900 sq ft*	200			units	1.00
<b>Commercial</b>		see note 1 below				
ALL COMMERCIAL ESDs TO BE DETERMINED BY THE GENERAL MANAGER USING THE FOLLOWING FORMULA: $ESD = ( TSS \times FLOW \times 0.33 ) / ( SFD \ TSS \times SFD \ FLOW ) + ( BOD \times FLOW \times 0.33 ) / ( SFD \ BOD \times SFD \ FLOW ) + ( FLOW \times ( 0.34 / SFD \ FLOW ) )$						
Note 1: For non-standard uses, warehouses and when agreement on a use category cannot be reached, the General Manager, in his or her sole discretion, may a) base charges on the user's actual or estimated contribution of wastewater into the District's facilities in terms of flow, biological oxygen demand (BOD), and total suspended solids (TSS), and b) calculate the user's charge using the above Charge Formula. The user shall provide verifiable data, as requested by the General Manager, for the charge to be determined.						
Definitions	Flow = Gallons per Day	TSS = Total Suspended Solids				
	BOD = Biological Oxygen Demand	DW = dishwasher				
	ESD = Equivalent Single Family Dwelling	disp. = disposal				
* Note that no Capacity Charge is assessed when existing structures are converted in accordance with CGC 65852.2 (e)(1)(A) as determined by the County of Sonoma.						

**Appendix B: Wastewater Rate Study  
Supplementary Tables**



## SEA RANCH SANTARY ZONE Wastewater COS Rate Study 2020

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### Supplementary Tables

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Table B4	Capital Improvement Plan
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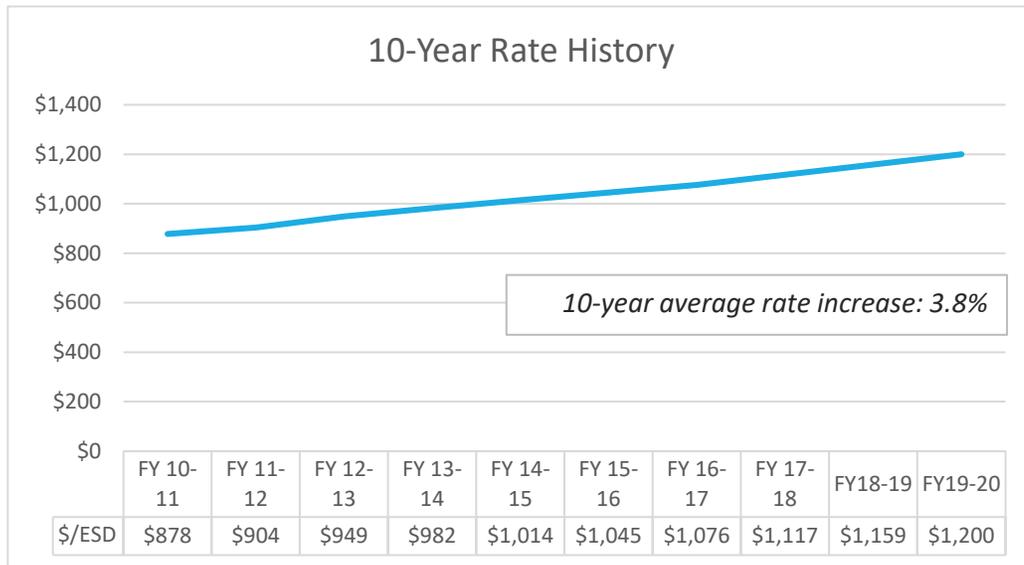
**Table B1: Current Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SEA RANCH SANTARY ZONE**

## Current Rates

**Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)**

\$1,200 annual - tax roll

\$100.00 monthly



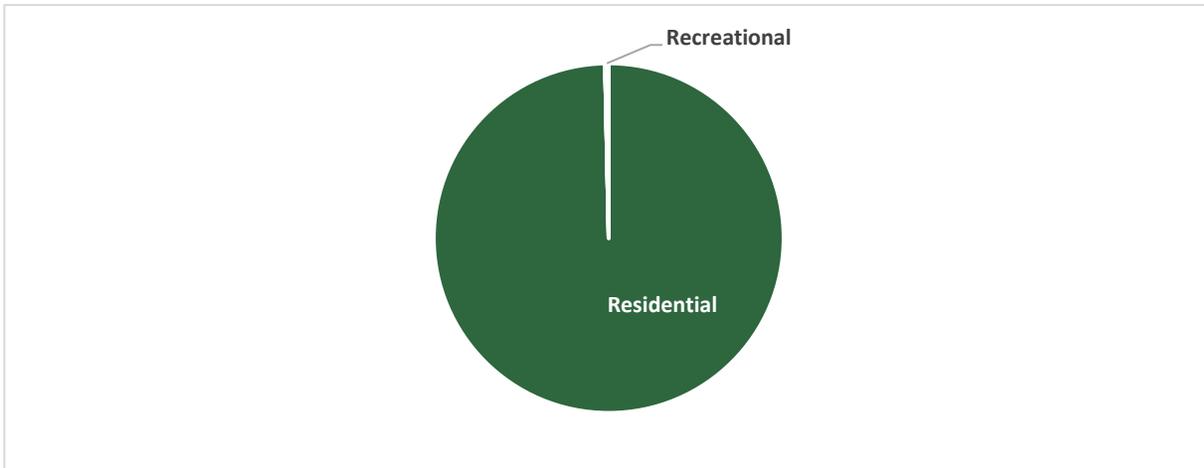
Source: Sonoma Water/Lynne Rosselli, District and Zones\_annual rates\_summary, via email 9/9/19

**Table B2: Customer Information**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SEA RANCH SANTARY ZONE**

## Customer Information

### FY 2019-20 Customer Master List

Customer Class	Parcels	ESDs	2019-20 Revenue	% total
Residential	600	603.7	\$724,488	99.7%
Single Family Dwelling	594	594.8		
Multi Family	6	8.9		
Mobile Home	0	0.0		
Commercial	0	0.0	\$0	0.0%
Industrial	0	0.0	\$0	0.0%
Recreational	1	2.0	\$2,400	0.3%
Institutional	0	0.0	\$0	0.0%
Miscellaneous	0	0.0	\$0	0.0%
Governmental	0	0.0	\$0	0.0%
<b>Total</b>	<b>601</b>	<b>605.7</b>	<b>\$726,888</b>	



Source: Sonoma Water/Lynne Rosselli, SRSZ Dist04 FY 19-20, 9/9/19

**Table B3: O&M Expense Projection**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SEA RANCH SANTARY ZONE**

## O&M Expense Projection

Budget (FY)	2018-19	2019-20	Projection <sup>1</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>EXPENDITURES</u></b>								
<b>Services and Supplies</b>								
51061 Maintenance - Equipment	\$5,000	\$800	3.0%	\$824	\$849	\$874	\$900	\$927
51201 Administration Services	\$5,500	\$5,300	3.0%	\$5,459	\$5,623	\$5,791	\$5,965	\$6,144
51211 Legal Services	\$3,000	\$1,500	3.0%	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
51241 Outside Printing & Binding	\$1,500	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
51244 Permits/License/Fees	\$30,000	\$25,000	3.0%	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982
51803 Other Contract Services	\$550,000	\$475,000	Varies	\$679,010	\$540,800	\$544,867	\$549,207	\$553,817
51902 Telecommunications Usage	\$3,300	\$3,500	3.0%	\$3,605	\$3,713	\$3,825	\$3,939	\$4,057
51917 District Operations Charges	\$105,000	\$86,000	3.0%	\$88,580	\$91,237	\$93,975	\$96,794	\$99,698
51921 Equipment Usage Charges	\$1,030	\$600	3.0%	\$618	\$637	\$656	\$675	\$696
52171 Water Conservation Program	\$1,500	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
52191 Utilities	\$8,000	\$7,300	3.0%	\$7,519	\$7,745	\$7,977	\$8,216	\$8,463
<b>Total Services &amp; Supplies</b>	<b>\$713,830</b>	<b>\$608,000</b>		<b>\$816,000</b>	<b>\$681,900</b>	<b>\$690,200</b>	<b>\$698,900</b>	<b>\$708,000</b>
	<b>2018-19</b>	<b>2019-20</b>	<b>Projection</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Appropriations for Contingency</b>								
55011 Appropriations for Contingency	\$2,000	\$2,000	0.0%	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
<b>Total Services &amp; Supplies</b>	<b>\$2,000</b>	<b>\$2,000</b>		<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>
<b>TOTAL EXPENDITURES</b>	<b>\$715,830</b>	<b>\$610,000</b>		<b>\$818,000</b>	<b>\$683,900</b>	<b>\$692,200</b>	<b>\$700,900</b>	<b>\$710,000</b>

1 - Expense projection based on Operations Services CPI, LRFP Draft 12/11/19  
Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRFP Draft via email 12/11/19

Table B4: Capital Improvement Plan  
 Sonoma Water  
 Wastewater COS Rate Study 2020  
 SEA RANCH SANTARY ZONE

## Capital Improvement Plan

CIP	Long Range Financial Plan 12-20-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total Through FY 2028-29
	<b>Project Title</b>							
	Creek Crossing	\$0	\$50,000	\$405,000	\$0	\$0	\$0	\$455,000
	Future Capital Replacements	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$900,000
	Helms Lift Staon Control Panel Replacement	\$125,000						\$125,000
	<b>Total</b>	<b>\$125,000</b>	<b>\$150,000</b>	<b>\$505,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$1,480,000</b>

Source: Sonoma Water LRF, via email 12/11/2019

**Table B5: Debt Service**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SEA RANCH SANTARY ZONE**

## Debt Service

Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>OUTSTANDING LOANS/BONDS</u></b>							
None	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>						
<b><u>PROPOSED LOANS/BONDS</u></b>							
			1	2	3	4	5
Rate Study Year Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Loan 1				\$0	\$0	\$0	\$0
Loan 2				\$0	\$0	\$0	\$0
Bond 1				\$0	\$0	\$0	\$0
Bond 2				\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>						
<b>Total Debt Service</b>	<b>\$0</b>						

*Proposed Debt Estimates provided by Bartle Wells Associates, pending review from Sonoma Water  
Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRFDP Draft via email 9/9/2019*

## Fund Balance & Policies

### Undes/Unreserved Beginning Fund Balance 7/1/2019

33130100 Sea Ranch Operations	\$775,528
33130200 Sea Ranch Construction	\$333,628
<b>Total</b>	<b>\$1,109,156</b>

### 1. Fund Balance Policy

Operations Fund Target - at least 6 months budgeted Operating Expenses

Construction Fund Target - 3% Asset Value

### 2. Debt Service Coverage Policy

Coverage Requirement - 1.2x net operating expenses

### 3. Growth Estimates

Estimated 1 new user per Fiscal Year, 1.0 ESDs

Connection fee revenue estimated based on 3% per year CPI adjustment to current capacity fee

### 3. Rate Structure

Water data unavailable - expenses are equally divided among all ESDs and billed on the tax roll

Source: Sonoma Water/Lynne Rosselli, LRF Draft via email 9/9/2019

**Table B7: Cash Flow**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SEA RANCH SANTARY ZONE**

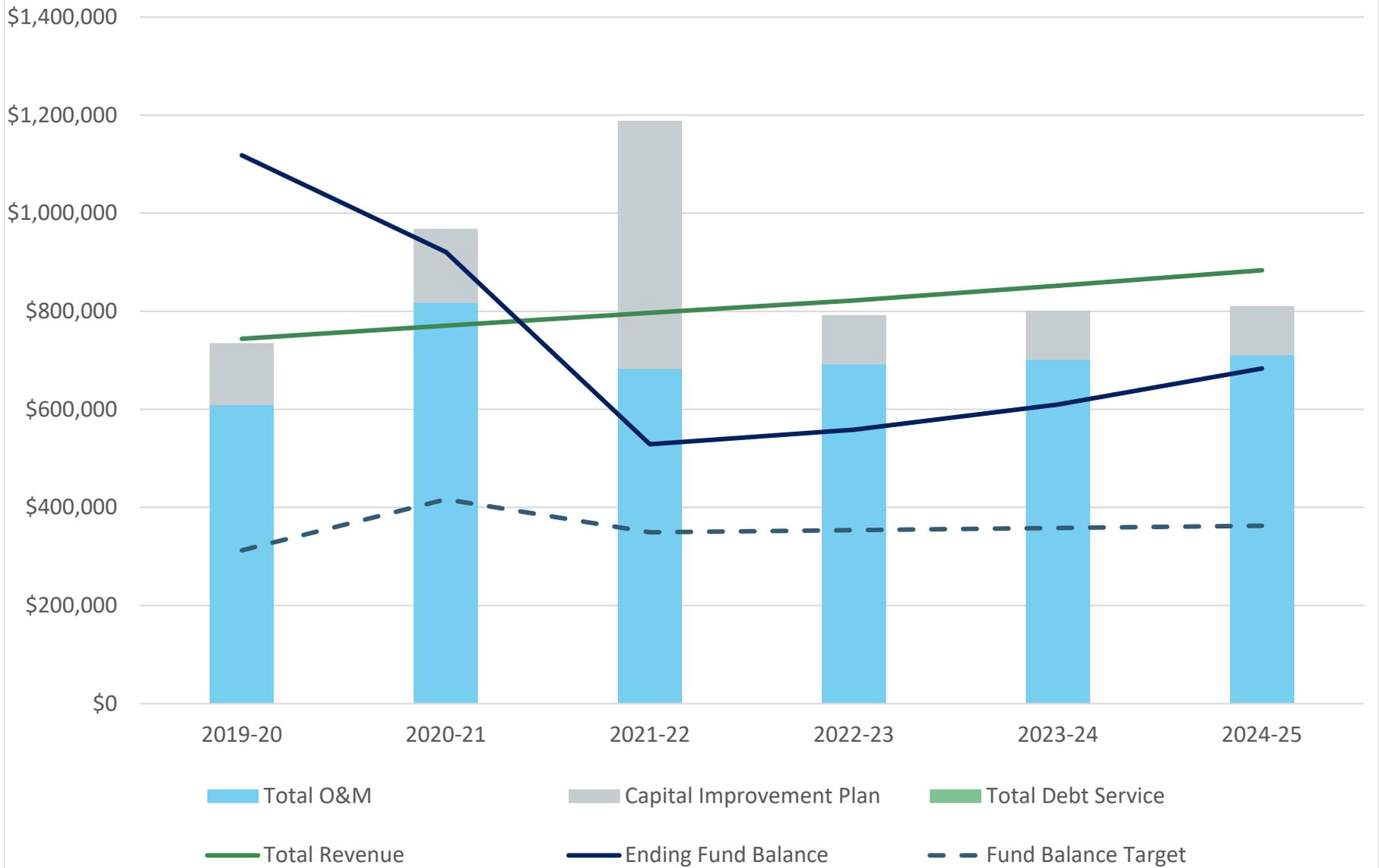
## Cash Flow

Five-Year Projection Fiscal Year	Reference	Budget 2019-20	1 2020-21	2 2021-22	3 2022-23	4 2023-24	5 2024-25
Proposed Rate Increase			3.5%	3.5%	3.5%	3.5%	3.5%
Growth			0.2%	0.2%	0.2%	0.2%	0.2%
Annual Rate - \$/ESD		\$1,200	\$1,242	\$1,285	\$1,330	\$1,377	\$1,425
Beginning Fund Balance	Table 5	\$1,109,156	\$1,118,066	\$920,966	\$528,883	\$558,493	\$609,673
<b><u>REVENUE</u></b>							
Sanitation Charges - Calc.	Table 2	\$726,888	\$753,571	\$781,234	\$809,912	\$839,642	\$870,465
Connection Fees	LRFP	\$5,431	\$5,648	\$5,874	\$6,109	\$6,353	\$6,607
Penalties/Costs on Taxes	LRFP	\$500	\$500	\$500	\$500	\$500	\$500
Interest on Pooled Cash <sup>1</sup>	LRFP	\$11,092	\$11,181	\$9,210	\$5,289	\$5,585	\$6,097
Misc. Revenue	LRFP	\$0	\$0	\$0	\$0	\$0	\$0
Proposed Debt Proceeds	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Revenue</b>		<b>\$743,910</b>	<b>\$770,900</b>	<b>\$796,817</b>	<b>\$821,809</b>	<b>\$852,081</b>	<b>\$883,669</b>
<b><u>EXPENDITURES</u></b>							
Total O&M	Table 3	\$610,000	\$818,000	\$683,900	\$692,200	\$700,900	\$710,000
Capital Improvement Plan	Table 4 <sup>2</sup>	\$125,000	\$150,000	\$505,000	\$100,000	\$100,000	\$100,000
Total Debt Service	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Expenditures</b>		<b>\$735,000</b>	<b>\$968,000</b>	<b>\$1,188,900</b>	<b>\$792,200</b>	<b>\$800,900</b>	<b>\$810,000</b>
Net Revenue		\$8,910	(\$197,100)	(\$392,083)	\$29,609	\$51,181	\$73,669
Ending Fund Balance		<b>\$1,118,066</b>	<b>\$920,966</b>	<b>\$528,883</b>	<b>\$558,493</b>	<b>\$609,673</b>	<b>\$683,342</b>
<i>Fund Balance Target</i>		<i>\$312,500</i>	<i>\$416,500</i>	<i>\$349,450</i>	<i>\$353,600</i>	<i>\$357,950</i>	<i>\$362,500</i>
Debt Service Coverage							

1 - 1% earnings on beginning fund balance

2 - CIP Value 2019-20 equal to total capital expenditures less change in encumbrances/adjustments, LRFP DRAFT 9/9/2019

## Five-Year Cash Flow Projection - Proposed Rate Increases



**Table B8: Proposed Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SEA RANCH SANTARY ZONE**

## Proposed Rates

<b>Five-Year Projection</b>	<b>Current</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Fiscal Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Proposed Increase</b>		<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>
<b>Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)</b>						
Annual - tax roll	\$1,200	\$1,242	\$1,285	\$1,330	\$1,377	\$1,425
Monthly	\$100.00	\$103.50	\$107.12	\$110.87	\$114.75	\$118.77



**Sonoma  
Water**

**Occidental County  
Sanitation District  
Wastewater Rate Study**

**Final Report  
May 5, 2020**



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May 5, 2020

Lynne Rosselli  
Finance Manager  
Sonoma Water  
404 Aviation Blvd  
Santa Rosa, CA 95403

Re: Occidental County Sanitation District 2020 Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to Sonoma Water the attached 2020 Wastewater Rate Study for Occidental County Sanitation District (District).

This study presents BWA's analysis of the operating and non-operating expenses of the District's wastewater enterprise and provides updated five-year cash flow projections and rates for FY 2020. The primary purpose of this study is to assess the long-term financial condition of the District and provide recommendations to recover the cost of wastewater service equitably between ratepayers.

The enclosed report recommends increasing wastewater rates to recover the increasing cost of operations and capital improvement. Recommendations were developed with substantial input from Agency staff and engineering subconsultant Woodard & Curran. BWA finds that the rates and charges proposed in this report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. Financial projections generally align with Sonoma Water's internal long-range financial plan for the District. BWA can confirm that the proposed rates are fair and reasonable to the District's customers.

We have enjoyed working with Sonoma Water on this rate study. Please contact us with any future questions about this study and the recommended rates.

Sincerely,

Doug Dove, CIPMA  
Principal

Abigail Seaman  
Consultant

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# 1 Executive Summary

## 1.1 Background

Occidental County Sanitation District (District), managed by Sonoma Water (Agency), provides wastewater service to approximately 100 accounts within a 55-acre service area. The District's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from fixed annual wastewater rates) aim to recover the cost to operate and maintain the wastewater system. The District faces ongoing increases to operations costs and annual capital project costs to repair and replace aging infrastructure.

Sonoma Water has retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update for FY 2021 which examines any changes in current and projected costs and determines cost-of-service based rates that distribute costs equally among ratepayers. Basic objectives of the rate study include:

- Identify rate setting principles.
- Update long-term financial projections to determine future annual wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service

Based on input from Sonoma Water staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for operations and capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws

## 1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require Sonoma Water's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** Sonoma Water must mail a notice of proposed rate increases to all affected property owners in the District. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The Sonoma Water must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

### 1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed charges levied on each customer based on an assigned equivalent single-family dwelling unit (ESD). Rates recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing wastewater rates, charges, and fees. In developing wastewater rates, it is important to note that there is no “one-size-fits-all” approach for establishing cost-based wastewater rates.

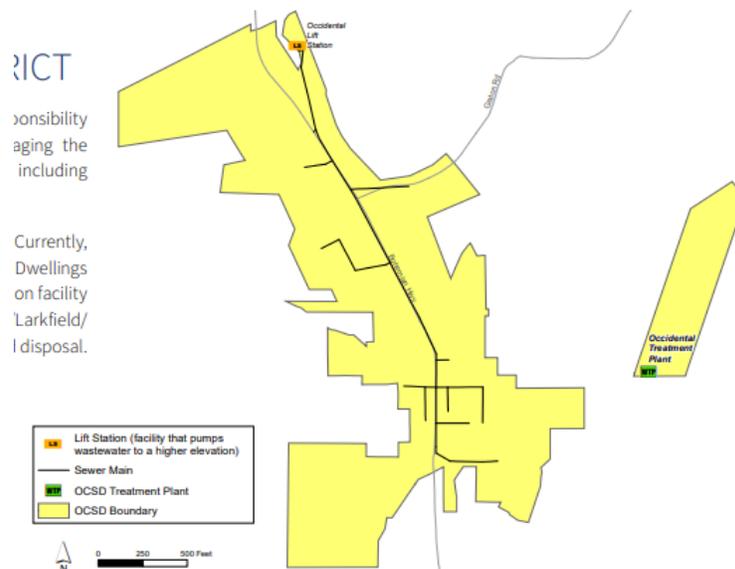
BWA used the following criteria when developing recommendations for the District’s wastewater rates and finances:

- 1) *Revenue Sufficiency*: Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact*: While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable*: Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical*: Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

### 1.4 Wastewater System Overview

The District serves 273 ESDs within a 55-acre service area shown **Figure 1** below.

**Figure 1: Occidental Service Area Map**



The District collects and distributes wastewater before trucking all waste to the Airport Larkfield Wikiup Treatment Plant for treatment and disposal. District services also include the regular operations, maintenance, and replacement of wastewater infrastructure. The District’s main source of wastewater revenue is annual wastewater rates on each customer’s property tax bill. Rates were last increased on July 1, 2019 and will need small annual increases over the next 5 years to keep up with wastewater system expenses.

### 1.5 Factors Driving Rate Increases

The primary wastewater cost factors affecting the District include the need to address the current operating deficit, ongoing operations and maintenance cost increases and the Capital Improvement Plan which will address ongoing maintenance, repair and replacement needs.

### 1.6 Current Wastewater Rates

The District’s current wastewater rates are shown in Table 1 below. Wastewater charges are billed annually on the property tax roll according to Sonoma Water’s evaluation of each customer’s Equivalent Single-Family Dwelling (ESD). ESDs are evaluated according to the District’s Exhibit A document, which provides the latest flow and strength estimates for common residential and commercial customer classes. The FY 2021 Proposed Exhibit A is provided in the appendix of this report.

**Table 1 Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Annual Fixed Charge

All Customers per ESD per year	\$2,387
per month	\$198.92

Revenue from current rates will not be sufficient to fund rising operations and capital costs over the next five years without small annual increases to the rate revenue.

### 1.7 Proposed Wastewater Rates

Table 2 shows the proposed wastewater rates which reflect a 4.9% rate revenue increase.

**Table 2 Proposed Wastewater Rates**

Wastewater rates effective July 1, 2020

Annual Fixed Charge

All Customers per ESD per year	\$2,504
per month	\$208.66

## 2 Wastewater Financial Projections and Rates

### 2.1 Wastewater Financial Overview

BWA conducted an independent evaluation of the District’s wastewater enterprise finances. Key observations include the following:

- Wastewater rates have increased an average of 5.5% per year for the last 10 years. This has allowed the District to keep up with operations cost increases and capital improvement needs.
- The wastewater enterprise has no debt service obligations.
- The current Capital Improvement Plan totals \$997,000 and addresses ongoing maintenance, repair and replacement needs.
- Projected wastewater expenses were determined based on input from Sonoma Water Staff. Projections based on the average annual change in CPI (3.0% per year) and cost projections provided by Staff.
- The current wastewater rate structure equitably distributes costs among ratepayers. Since no water data is available, water use is estimated using typical flow and strength data in Exhibit A.

### 2.2 Current Monthly Wastewater Rates

Current rates (as shown on Table 1) are determined by Equivalent Single-Family Dwelling (ESD) using an ESD assignment schedule based on customer class and size. Rates have increased an average of 3.9% annually over the last 10 years.

### 2.3 Current Wastewater Accounts

The District serves 99 wastewater accounts, the majority of which are single family residential. A current customer listing is provided in Table 3 below.

**Table 3 Occidental County SD – Customer Listing**

<b>Customer Class</b>	<b>Parcels</b>	<b>ESDs</b>
Residential	62	97.8
Single Family Dwelling	28	28.8
Multi Family	34	69.0
Mobile Home	0	0.0
Commercial	29	154.0
Industrial	1	3.2
Recreational	1	2.7
Institutional	2	5.6
Miscellaneous	1	1.0
Governmental	3	8.8
<b>Total</b>	<b>99</b>	<b>273.2</b>

Occidental County Sanitation District has no capacity for growth. The District has assumed 0.0% revenue growth per year as a result of new sewer connections or increased demand.

## 2.4 Factors Affecting 5-Year Financial Plan

The District will need annual rate increases to alleviate the District’s ongoing operations deficit, annual cost inflation and the current Capital Improvement Plan. Key cost components over the next five years are summarized as follows.

### 2.4.1 Operating Deficit / Ongoing Operating Cost Inflation

The District’s wastewater rate revenue is not sufficient to cover current operating costs. Rising operating costs will exacerbate the deficit without rate increases and General Fund transfers from Sonoma Water. The District’s wastewater operations budget totals approximately \$1.37 million for FY 2019/20. The District’s largest expenses include maintenance, operations and contract services for wastewater treatment and disposal. Most operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI.

### 2.4.2 Debt Obligations

The District has no current debt obligations as shown on Table 4.

**Table 4: Debt Obligations**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total Debt Service	\$0	\$0	\$0	\$0	\$0	\$0

### 2.4.3 Current Wastewater Capital Plan

The District’s Wastewater Capital Improvement Plan totals \$977,000 through 2024/25 and addresses aging infrastructure and other necessary improvements. Costs are provided in Table 5 based on engineering estimates as of 2019/20. A full schedule of projects is provided in the Appendix.

**Table 5: Capital Improvement Plan Summary**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CIP	\$526,007	\$51,000	\$100,000	\$100,000	\$100,000	\$100,000

## 2.5 Wastewater Enterprise Revenue Requirements

The wastewater cash flow projection incorporates the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

### Growth & Water Demand Assumptions

- The District has no capacity for growth and estimates 0.0% revenue growth as a result of new connections or increased demand.
- Wastewater system demand (estimated with ESD ratings) is assumed to stay constant from FY 2019/20 (excluding estimated growth of 0.3% per year)

### Revenue Assumptions

- Rate revenue will increase according to the proposed rate increases assuming a relatively static number of customers and water consumption with the exception of growth projections.

- Rate revenue will be subsidized by approximately \$4.2 million in General Fund transfers over the next five years.
- Other revenues are projected to remain stagnant from 2019/20 budget amounts.
- Annual interest earnings are estimated at 1% of beginning fund balance

**Expense Assumptions**

- Operations and maintenance costs are based on the 2019/20 budget and escalate at an annual rate of approximately 3.0% to account for future cost inflation.
- Capital expenditures include \$997,000 in projects through FY 2024/25

Based on the assumptions above, BWA created a cash flow projection that determined 4.9% annual wastewater rate increases are needed for the next 5 years. The proposed schedule is shown on Table 6 below.

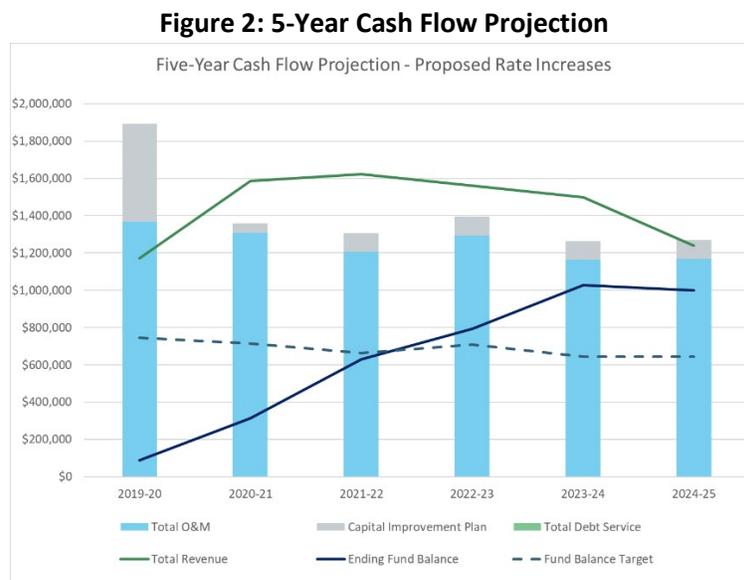
**Table 6: Proposed Wastewater Rate Increases**

	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increases	4.9%	4.9%	4.9%	4.9%	4.9%

The proposed annual wastewater rate revenue increases accomplish the following:

- Projected operations and Capital Improvement Plan funding
- Minimum operations fund balance of 6 months operating costs

Figure 2 illustrates BWA’s 5-year cash flow projection with proposed rate revenue and general fund contributions.



The District would need to mail a Proposition 218 notice to notify ratepayers of the proposed wastewater rate increases before adoption. Rates would be effective following a mailed Proposition 218 notice and successful public hearing.

## 2.6 Cost of Service Study

Bartle Wells Associates conducted an independent analysis of the District’s current sewer rate structure. Based on an evaluation of rate alternatives and input from Staff, no major modifications are recommended to the District’s sewer rate structure. Rate revenue is 100% fixed based on ESDs assigned to each customer based on Exhibit A. Table 7 shows the total rate revenue requirement (including proposed rate increase) divided by projected 2020 ESDs.

**Table 7 Cost of Service Rate Calculation**

2020-21 Revenue Requirement <sup>1</sup>	\$683,957
Projected ESDs <sup>2</sup>	273
<b>Proposed Rate - Fixed \$/ESD</b>	<b>\$2,504</b>

*1 – FY 2020 Calculated rate revenue plus FY 2021 proposed rate increase*

*2 – 2020 ESDs plus FY 2021 growth projection*

## 2.7 Rate Structure Recommendations

BWA recommends that the District increase rate revenue according to the proposed annual rate increases shown on Table 6. We also recommend that the District continue to collect annual fixed charges based on ESD evaluations in Exhibit A, since customer-level water data is not available. Future ESD evaluations should be made from the latest flow and strength estimates in the proposed 2021 Exhibit A (attached).

The proposed fixed charge per ESD for 2020-21 is shown on Table 8 below.

**Table 8: Proposed Rates**

*Wastewater rate effective July 1, 2020*

All Customers per ESD per year	\$2,504
per month	\$208.66

*Equivalent Single-Family Dwelling (ESD) assigned per parcel based on probable quantity and quality of sewage effluent generated.*

## 2.8 Exhibit A Recommendations

Bartle Wells partnered with engineering consultant Woodard & Curran (W&C) to review and update Exhibit A. W&C reviewed the latest Sonoma Water data, relevant neighboring community data, and California Government Code to recommend updated Exhibit A values for 2021. W&C analyzed wastewater treatment plant and monitored neighborhood sewer flow and load data where available to determine recent trends and update sewer flow and loading estimates for all customer classes. New categories were added for new/emerging commercial and industrial sewer uses (e.g. high-tech medical manufacturing, online vacation rentals). Accessory dwelling units and junior accessory dwelling unit factors were updated to reflect recent California legislation. The 2021 proposed Exhibit A will be used to evaluate ESDs for new sewer connections and capacity charges in the future.

### 3 Conclusion and Recommendations

This water and wastewater rate study presents a comprehensive review of Occidental County Sanitation District's wastewater revenue requirements and rate structure. Since the last rate increase for FY 2020, the District has identified necessary capital improvements and increases in ongoing operations costs. These factors were considered in the rate study to develop equitable rates for customers that recover the cost of wastewater service.

#### 3.1 Conclusion

The District faces an ongoing operations deficit and necessary capital improvements. Rate revenue is partially subsidized by general fund transfers from Sonoma Water. The District will need to continue imposing annual rate increases to keep up with rising costs. These factors have been considered in this comprehensive wastewater rate study and are reflected in the above proposed rates. Adoption of these rates reflect the District's commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future.

#### 3.2 Recommendations

BWA recommends that the Agency adopt the rates shown in this report. Rates were developed as part of a collaborative process that included extensive review by Sonoma Water, Woodard & Curran Engineering, and Agency Staff.

At minimum, BWA recommends that the District review and update its water and wastewater rate study every five years and/or concurrent with Master Plan Updates. Rates should be noticed and adopted on an annual basis per District policy according to the 5-year schedule of annual rate increases. There is no proposed change to the current wastewater rate structure. New connections should be given an ESD evaluation based on the proposed 2021 Exhibit A, which reflects the latest sewer flow and strength factors for the District.

Please find the complete Final Draft Tables as of 5/6/2020 and 2021 proposed Exhibit A attached to this report.

## **Appendix A: 2021 Proposed Exhibit A**

# EXHIBIT A

## EQUIVALENT SINGLE-FAMILY DWELLING BILLING UNIT FOR OCCIDENTAL CSD

Use Category	Billing Basis			2020-2021	
	Flow gallons	BOD mg/l	TSS mg/l	Use	ESD
<b>Residential</b>					
Single-Family	66	250	250	connections	1.00
Condominium (Over 900 square ft)	66	250	250	dwelling units	1.00
Condominium (Under 900 square ft)	52.8	250	250	dwelling units	0.80
Multiple-Family (Apts,Duplex/Triplex)	52.8	250	250	dwelling units	0.80
Mobile home park	52.8	250	250	spaces	0.80
Mobile home (Individual)	52.8	250	250	units	0.80
JADU	-	250	250	units	0.00
ADU, under 751 sq ft*	26.4	250	250	units	0.40
ADU, 751-900 sq ft*	52.8	250	250	units	0.80
ADU, over 900 sq ft*	66	250	250	units	1.00
<b>Commercial</b>					
Appliance repair	190	200	200	1,000 sq. ft.	2.50
Art gallery	190	200	200	1,000 sq. ft.	2.50
Auto dealers					
With service facilities	190	180	280	connection	2.73
With service facilities	38	180	280	add per service bay	0.55
Without service facilities	190	200	200	connection	2.50
Auto repair	38	325	325	per service bay	0.69
Bakery	190	1000	600	1,000 sq. ft.	7.06
Beer Making/Brewery					
Butcher					
Banks & financial institutions	190	130	80	1,000 sq. ft.	1.78
Barber shop	19	130	80	per chair	0.18
Beauty shop	38	130	80	per chair	0.36
Bars & taverns	20	200	200	per seat	0.26
Camp ground or RV park					
with hookups	125	200	200	site	1.64
without hookups	75	200	200	site	0.99
Cannabis production/manufacturing					
Car washes					
manual	190	20	150	per bay	1.62
automatic	125	228	228	per bay	1.78
Cheese Maker					
Churches, hall & lodges	2	200	200	per seat	0.03
Coffee shops with some food service	6	1000	600	per seat	0.22
Dry cleaners	285	150	110	1,000 sq. ft.	2.95
Fire stations					
with sleeping quarters and kitchens	220	325	325	1,000 sq. ft.	3.99
without sleeping quarters and kitchens	190	228	228	1,000 sq. ft.	2.71
Garages	95	180	280	per service bay	1.36
Gas Stations (no other automotive services)					
with convenience store	70	520	520	1,000 sq. ft.	1.82
without convenience store	38	228	228	1,000 sq. ft.	0.54
Gym					
with shower	400	325	325	1,000 sq. ft.	7.26
without shower	50	228	228	1,000 sq. ft.	0.71
High Tech Medical Manufacturing					
Hospitals					
Convalescent	125	250	100	per bed	1.52
General	175	250	100	per bed	2.13
Veterinarian	6	250	100	per cage	0.07
Hotels/motels					
without restaurant	100	310	120	sleeping rooms	1.38
B&B/Online Rentals/Vacation Rental homes	100	325	325	per occupant	1.82
Hydroponic Cultivation (including cannabis)	1.2	228	228	per plant	0.02
Laundromats					
High efficiency washers	250	228	228	washing machines	3.57
Regular washers	500	150	110	washing machines	5.18
Library	190	200	200	1,000 sq. ft.	2.50
Machine shops	152	180	280	1,000 sq. ft.	2.18
Markets	38	800	800	1,000 sq. ft.	1.41
Nail Salon	10	228	228	per seat	0.14
Offices					
Business	76	130	80	1,000 sq. ft.	0.71
Chiropractic Office	190	228	228	Exam. room	2.71
Dental	190	130	80	Exam. room	1.78
Medical (clinic)					
with central handwashing stations	175	325	325	Exam. room	3.18
with office, surgery, lab and treatment rooms	190	325	325	Exam. room	3.45
offices with sink	125	325	325	Exam. room	2.27
offices without sink	100	325	325	Exam. room	1.82
Veterinarian					
with office, surgery, and treatment rooms	130	325	325	Exam. room	2.36
Pet Groomers	260	228	228	1,000 sq. ft.	3.71
Post office	190	130	80	1,000 sq. ft.	1.78
Resort					

see note 1 below

Restaurants						
Dine-in						
With DW & garbage disp.	6	1000	600	per seat		<b>0.22</b>
With DW or garbage disp.	6	619	371	per seat		<b>0.15</b>
Without DW & garbage disp.	6	238	143	per seat		<b>0.08</b>
Take-out	475	238	143	1,000 sq. ft.		<b>6.07</b>
Rest homes	125	250	100	per bed		<b>1.52</b>
Retail stores	38	150	150	1,000 sq. ft.		<b>0.42</b>
Schools						
Elementary	9	130	100	per student day		<b>0.09</b>
High	14	130	100	per student day		<b>0.14</b>
with entertainment facilities	19	325	325	per student day		<b>0.34</b>
Service stations	380	180	280	set of gas pumps		<b>5.45</b>
	38	180	280	add per service bay		<b>0.55</b>
Shoe repair	190	200	200	1,000 sq. ft.		<b>2.50</b>
Spa with various beauty treatments	38	325	325	per chair		<b>0.69</b>
Supermarkets	76	325	325	1,000 sq. ft.		<b>1.38</b>
Tasting Rooms						
Ale, Winery (no food)	120	228	228	1,000 sq. ft.		<b>1.71</b>
Ale, Winery (with food)	240	520	520	1,000 sq. ft.		<b>6.23</b>
Theaters	2	200	200	per seat		<b>0.03</b>
Trash Enclosures				see note 1 below		
Warehouse				see note 1 below		
Winery				see note 1 below		
Others as determined by the Engr.				see note 1 below		
<b>ALL COMMERCIAL ESDs TO BE DETERMINED BY THE GENERAL MANAGER USING THE FOLLOWING FORMULA:</b>						
<b>ESD = ( TSS x FLOW x 0.33 ) / ( SFD TSS x SFD FLOW ) + ( BOD x FLOW x 0.33 ) / ( SFD BOD x SFD FLOW ) + ( FLOW x ( 0.34 / SFD FLOW ) )</b>						
<p>Note 1: For non-standard uses, warehouses and when agreement on a use category cannot be reached, the General Manager, in his or her sole discretion, may</p> <p>a) base charges on the user's actual or estimated contribution of wastewater into the District's facilities in terms of flow, biological oxygen demand (BOD), and total suspended solids (TSS), and</p> <p>b) calculate the user's charge using the above Charge Formula. The user shall provide verifiable data, as requested by the General Manager, for the charge to be determined.</p> <p>Note 2: In general, users with annual average TSS and/or BOD over 1,000 mg/L and users with annual average Flow greater than 5,000 gallons per day should be considered Monitored Users and use the Monitored User Charge Formula.</p>						
Definitions	Flow = Gallons per Day	TSS = Total Suspended Solids				
	BOD = Biological Oxygen Demand	DW = dishwasher				
	ESD = Equivalent Single Family Dwelling	disp. = disposal				
* Note that no Capacity Charge is assessed when existing structures are converted in accordance with CGC 65852.2 (e)(1)(A) as determined by the County of Sonoma.						

**Appendix B: Wastewater Rate Study  
Supplementary Tables**



## OCcidental CSD

# Wastewater COS Rate Study 2020

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### Supplementary Tables

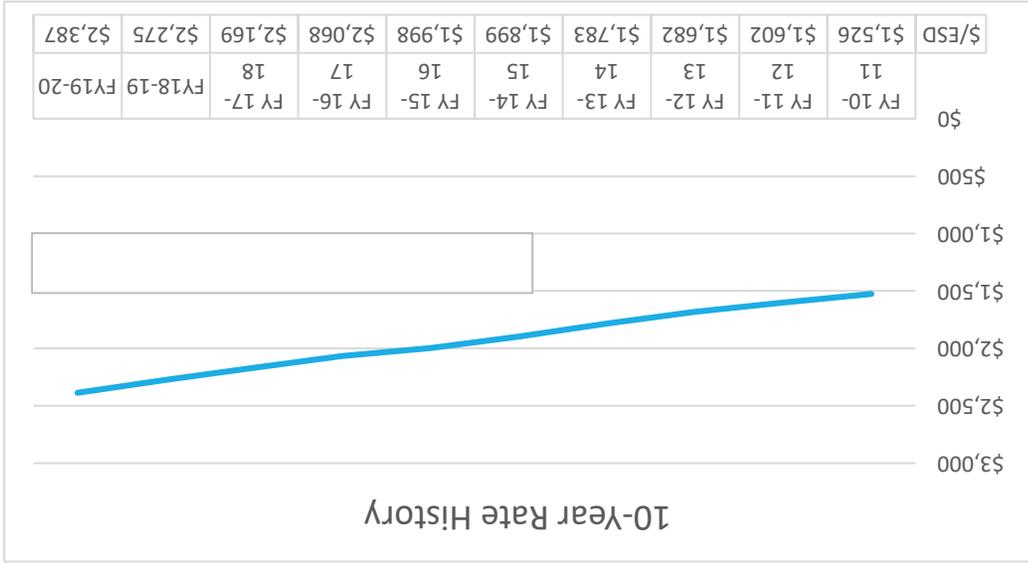
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Table B4	Capital Improvement Plan
Table B5	Debt Service
Table B6	Fund Balance & Policies
Table B7	Cash Flow
Table B8	Proposed Rates



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

## Current Rates

Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)  
 \$2,387 annual - tax roll  
 \$198.92 monthly



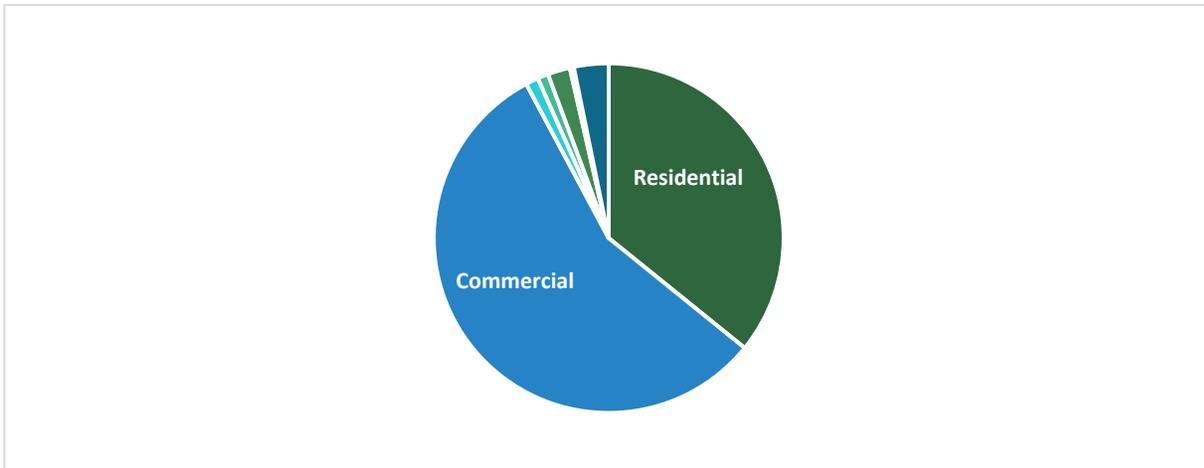
Source: Sonoma Water/Lynee Rosselli, District and Zones - annual rates - summary, via email 9/9/19

**Table B2: Customer Information**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**OCCIDENTAL CSD**

## Customer Information

### FY 2019-20 Customer Master List

Customer Class	Parcels	ESDs	2019-20 Revenue	% total
Residential	62	97.8	\$233,544	35.8%
Single Family Dwelling	28	28.8		
Multi Family	34	69.0		
Mobile Home	0	0.0		
Commercial	29	154.0	\$367,550	56.4%
Industrial	1	3.2	\$7,638	1.2%
Recreational	1	2.7	\$6,517	1.0%
Institutional	2	5.6	\$13,463	2.1%
Miscellaneous	1	1.0	\$2,387	0.4%
Governmental	3	8.8	\$20,910	3.2%
<b>Total</b>	<b>99</b>	<b>273.2</b>	<b>\$652,009</b>	



Source: Sonoma Water/Lynne Rosselli

**Table B3: O&M Expense Projection**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**OCCIDENTAL CSD**

## O&M Expense Projection

	Budget (FY)	2018-19	2019-20	Projection <sup>1</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
<b>EXPENDITURES</b>									
<b>Services and Supplies</b>									
51061 Maintenance - Equipment		\$35,000	\$280,000	3.0%	\$288,400	\$297,052	\$305,964	\$315,142	\$324,597
51201 Administration Services		\$5,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51206 Accounting/Auditing Services		\$9,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51211 Legal Services		\$9,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51231 Testing/Analysis		\$40,000	\$3,000	3.0%	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
51241 Outside Printing & Binding		\$500	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51244 Permits/License/Fees		\$10,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51401 Rents& Leases-Equipment		\$4,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51421 Rents&Leases-Bldg/Imp		\$25,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51803 Other Contract Services <sup>2</sup>		\$1,734,000	\$461,600	Varies	\$377,516	\$246,019	\$306,686	\$146,091	\$119,807
51902 Telecommunication Usage		\$500	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51916 County Services		\$5,500	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51917 District Operations Chgs		\$500,000	\$600,000	3.0%	\$618,000	\$636,540	\$655,636	\$675,305	\$695,564
51921 Equipment Usage Charges		\$25,000	\$12,000	3.0%	\$12,360	\$12,731	\$13,113	\$13,506	\$13,911
52072 Chemicals		\$15,000	\$5,800	3.0%	\$5,974	\$6,153	\$6,338	\$6,528	\$6,724
52081 Medical/Laboratory Supplies		\$2,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
52111 Office Supplies		\$3,300	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
52141 Minor Equipment/Small Tools		\$2,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
52171 Water Conservation Prog		\$1,000	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
52193 Utilities-Power		\$20,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
<b>Total Services &amp; Supplies</b>		<b>\$2,445,800</b>	<b>\$1,364,400</b>		<b>\$1,307,400</b>	<b>\$1,203,800</b>	<b>\$1,293,200</b>	<b>\$1,162,200</b>	<b>\$1,166,400</b>
		<b>2018-19</b>	<b>2019-20</b>	<b>Projection</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Appropriations for Contingency</b>									
55011 Appropriations for Contingency		\$2,000	\$2,000	0.0%	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
<b>Total Services &amp; Supplies</b>		<b>\$2,000</b>	<b>\$2,000</b>		<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>
<b>TOTAL EXPENDITURES</b>		<b>\$2,447,800</b>	<b>\$1,366,400</b>		<b>\$1,309,400</b>	<b>\$1,205,800</b>	<b>\$1,295,200</b>	<b>\$1,164,200</b>	<b>\$1,168,400</b>

1 - Expense projection based on Operations Services CPI, LRF Draft 12/23/2019

2 - True-up category between Budget & LRF

Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRF Draft via email 9/9/2019

**Table B4: Capital Improvement Plan**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**OCCIDENTAL CSD**

## Capital Improvement Plan

CIP	Long Range Financial Plan 12-20-19 Project Title	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total Through FY 2028-29
7020	Capital Replace (Collection Sys Repl)	\$0						\$0
7404	Wastewater & Reclamation	\$0						\$0
00027	NPDES Permit Compliance	\$0						\$0
00043	Truck Fill Station	\$0						\$0
00053	Automation Project	\$526,007	\$51,000					\$577,007
tbd	Lift Station Control Panel Replacement	\$0						\$0
tbd	Force Main Replacement	\$0	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$800,000
7700	Lift Station Upgrade	\$0						\$0
Syntac	Reclamation Project	\$0						\$0
Misc	Miscellaneous Expense	\$0						\$0
<b>Total</b>		<b>\$526,007</b>	<b>\$51,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$577,007</b>

1 - already own materials

Source: Sonoma Water/Scott Carter, OCSD Projects for Rate Study 10152019, via email 10/15/2019

**Table B5: Debt Service**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**OCCIDENTAL CSD**

## Debt Service

Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>OUTSTANDING LOANS/BONDS</u></b>							
None							
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b><u>PROPOSED LOANS/BONDS</u></b>							
Rate Study Year			1	2	3	4	5
Payment Schedule (FY) <th>2018-19</th> <th>2019-20</th> <th>2020-21</th> <th>2021-22</th> <th>2022-23</th> <th>2023-24</th> <th>2024-25</th>	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Loan 1				\$0	\$0	\$0	\$0
Loan 2						\$0	\$0
Bond 1				\$0	\$0	\$0	\$0
Bond 2				\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROPOSED DEBT DETAIL**

<b><u>Option 1 Only</u></b>	<b>Loan 1</b>	<b>Loan 2</b>	<b>Bond 1</b>	<b>Bond 2</b>
Rate Study Iss. Year <sup>1</sup>	1	3	1	1
Issuance Amount		\$0	\$0	\$0
Proceeds for Construction	\$0	\$0	\$0	\$0
Interest Rate	4%	4%		
Iss. Costs	\$165,500	\$165,500	\$100,000	\$100,000
Maturity	20	20	15	15
<b>Net Annual Payment</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

1 - Payment begins 1 year after issuance

*Proposed Debt Estimates provided by Bartle Wells Associates, pending review from Sonoma Water*

*Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRFDP Draft via email 9/9/2019*

## Fund Balance & Policies

### Undes/Unreserved Beginning Fund Balance 7/1/2019

33060100 Occidental CSD	\$470,075
33060200 Occidental CSD Expansion	\$338,478
<b>Total</b>	<b>\$808,553</b>

### 1. Fund Balance Policy

Operations Fund Target - at least 6 months budgeted Operating Expenses  
Construction Fund - 3% Current Asset Value

### 2. Debt Service Coverage Policy

Coverage Requirement - 1.2x net operating expenses

### 3. Growth Estimates

Estimated 0 new users per Fiscal Year  
Connection fee revenue estimated based on 3% per year CPI adjustment to current capacity fee

### 3. Rate Structure

Water data unavailable - expenses are equally divided among all ESDs and billed on the tax roll

Source: Sonoma Water/Lynne Rosselli, LRF Draft via email 9/9/2019

**Table B7: Cash Flow**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**OCCIDENTAL CSD**

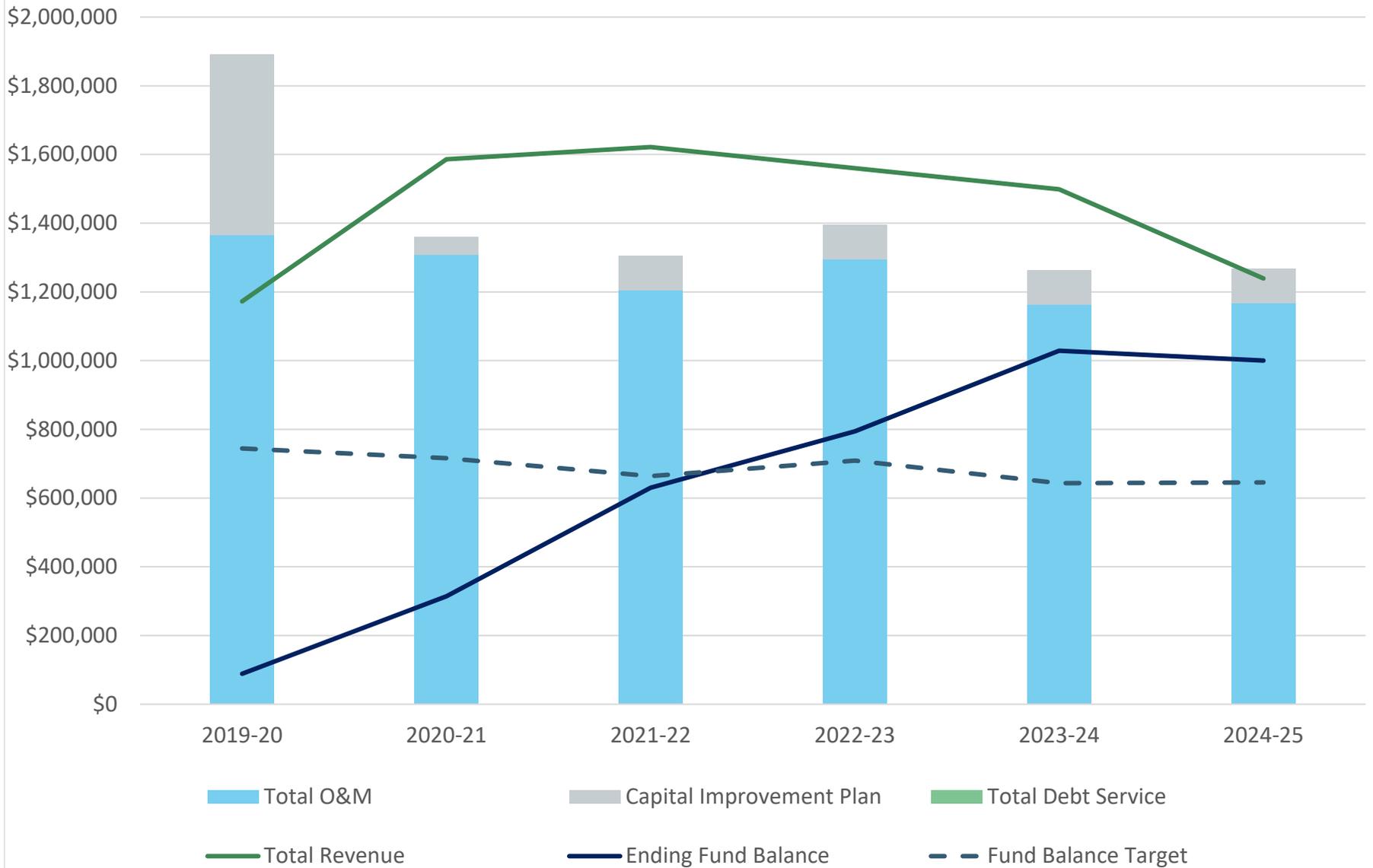
## Cash Flow

Five-Year Projection		Budget	1	2	3	4	5
Fiscal Year	Reference	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increase			4.9%	4.9%	4.9%	4.9%	4.9%
Growth			0.0%	0.0%	0.0%	0.0%	0.0%
Annual Rate - \$/ESD		\$2,387	\$2,504	\$2,627	\$2,755	\$2,890	\$3,032
Beginning Fund Balance	Table 5	\$808,553	\$88,587	\$314,030	\$629,842	\$794,568	\$1,028,819
<b>REVENUE</b>		<b>Budget Rev.</b>	<b>Calculated Revenue</b>				
Sanitation Charges - Calc.	Table 2	\$670,230	\$683,957	\$717,471	\$752,628	\$789,506	\$828,192
Connection Fees	LRFP	\$0	\$0	\$0	\$0	\$0	\$0
Penalties/Costs on Taxes	LRFP	\$600	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Interest on Pooled Cash <sup>1</sup>	LRFP	\$8,086	\$886	\$3,140	\$6,298	\$7,946	\$10,288
Transfers from General Fund	LRFP	\$492,400	\$900,000	\$900,000	\$800,000	\$700,000	\$400,000
Misc. Revenue	LRFP	\$1,125	\$0	\$0	\$0	\$0	\$0
Proposed Debt Proceeds	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Revenue</b>		<b>\$1,172,441</b>	<b>\$1,585,843</b>	<b>\$1,621,612</b>	<b>\$1,559,926</b>	<b>\$1,498,452</b>	<b>\$1,239,480</b>
<b>EXPENDITURES</b>							
Total O&M	Table 3	\$1,366,400	\$1,309,400	\$1,205,800	\$1,295,200	\$1,164,200	\$1,168,400
Capital Improvement Plan	Table 4 <sup>2</sup>	\$526,007	\$51,000	\$100,000	\$100,000	\$100,000	\$100,000
Total Debt Service	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Expenditures</b>		<b>\$1,892,407</b>	<b>\$1,360,400</b>	<b>\$1,305,800</b>	<b>\$1,395,200</b>	<b>\$1,264,200</b>	<b>\$1,268,400</b>
Net Revenue		(\$719,966)	\$225,443	\$315,812	\$164,726	\$234,252	(\$28,920)
Ending Fund Balance		\$88,587	\$314,030	\$629,842	\$794,568	\$1,028,819	\$999,900
Fund Balance Target		\$744,400	\$715,900	\$664,100	\$708,800	\$643,300	\$645,400
Debt Service Coverage							

1 - 1% earnings on beginning fund balance

2 - CIP Value 2019-20 equal to total capital expenditures less change in encumbrances/adjustments, LRFP DRAFT 9/9/2019

## Five-Year Cash Flow Projection - Proposed Rate Increases



**Table B8: Proposed Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**OCCIDENTAL CSD**

## Proposed Rates

<b>Five-Year Projection</b>	<b>Current</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Fiscal Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Proposed Increase Option 1</b>		<b>4.9%</b>	<b>4.9%</b>	<b>4.9%</b>	<b>4.9%</b>	<b>4.9%</b>
<b>Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)</b>						
Annual - tax roll	\$2,387	\$2,504	\$2,627	\$2,755	\$2,890	\$3,032
Monthly	\$198.92	\$208.66	\$218.89	\$229.61	\$240.86	\$252.67



**Sonoma  
Water**

**Russian River  
County Sanitation District  
Wastewater Rate Study**

**Final Report  
May 5, 2020**



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May 5, 2020

Lynne Rosselli  
Finance Manager  
Sonoma Water  
404 Aviation Blvd  
Santa Rosa, CA 95403

Re: Russian River County Sanitation District 2020 Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to Sonoma Water the attached 2020 Wastewater Rate Study for Russian River County Sanitation District (District).

This study presents BWA's analysis of the operating and non-operating expenses of the District's wastewater enterprise and provides updated five-year cash flow projections and rates for FY 2020. The primary purpose of this study is to assess the long-term financial condition of the District and provide recommendations to recover the cost of wastewater service equitably between ratepayers.

The enclosed report recommends increasing wastewater rates to recover the increasing cost of operations and capital improvement. Recommendations were developed with substantial input from Agency staff and engineering subconsultant Woodard & Curran. BWA finds that the rates and charges proposed in this report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. Financial projections generally align with Sonoma Water's internal long-range financial plan for the District. BWA can confirm that the proposed rates are fair and reasonable to the District's customers.

We have enjoyed working with Sonoma Water on this rate study. Please contact us with any future questions about this study and the recommended rates.

Sincerely,

Doug Dove, CIPMA  
Principal

Abigail Seaman  
Consultant

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- Appendix A: Proposed 2021 Exhibit A
- Appendix B: Wastewater Rate Study Supplementary Tables

# 1 Executive Summary

## 1.1 Background

Russian River County Sanitation District (District), managed by Sonoma Water (Agency), provides wastewater service to approximately 2,500 accounts within a 2,700-acre service area. The District's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from fixed annual wastewater rates) aim to recover the cost to operate and maintain the wastewater system. The District faces ongoing increases to operations costs and annual capital project costs to repair and replace aging infrastructure.

Sonoma Water has retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update for FY 2021 which examines any changes in current and projected costs and determines cost-of-service based rates that distribute costs equally among ratepayers. Basic objectives of the rate study include:

- Identify rate setting principles.
- Update long-term financial projections to determine future annual wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service

Based on input from Sonoma Water staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for operations and capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws

## 1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require Sonoma Water's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** Sonoma Water must mail a notice of proposed rate increases to all affected property owners in the District. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The Sonoma Water must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

### 1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed charges levied on each customer based on an assigned equivalent single-family dwelling unit (ESD). Rates recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing wastewater rates, charges, and fees. In developing wastewater rates, it is important to note that there is no “one-size-fits-all” approach for establishing cost-based wastewater rates.

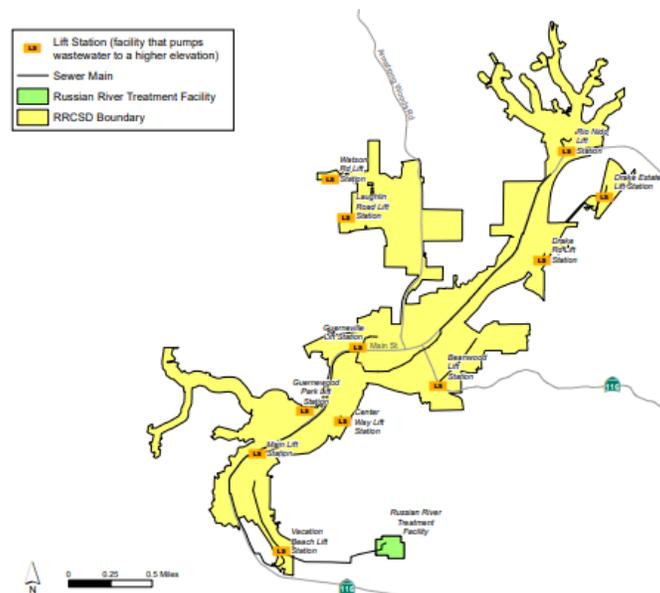
BWA used the following criteria when developing recommendations for the District’s wastewater rates and finances:

- 1) *Revenue Sufficiency*: Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact*: While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable*: Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical*: Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

### 1.4 Wastewater System Overview

The District serves 3,200 ESDs within 2,700-acre service area shown **Figure 1** below.

**Figure 1: Russian River Service Area Map**



District services include collection, distribution, and treatment of wastewater. The District’s main source of wastewater revenue is annual wastewater rates on each customer’s property tax bill. Rates were last increased on July 1, 2019 and will need annual increases over the next 5 years to keep up with wastewater system expenses.

### 1.5 Factors Driving Rate Increases

The primary wastewater cost factors affecting the District include ongoing operations and maintenance cost increases and the Capital Improvement Plan which will address ongoing maintenance, repair and replacement needs.

### 1.6 Current Wastewater Rates

The District’s current wastewater rates are shown in Table 1 below. Wastewater charges are billed annually on the property tax roll according to Sonoma Water’s evaluation of each customer’s Equivalent Single-Family Dwelling (ESD). ESDs are evaluated according to the District’s Exhibit A document, which provides the latest flow and strength estimates for common residential and commercial customer classes. The FY 2021 Proposed Exhibit A is provided in the appendix of this report.

**Table 1 Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Annual Fixed Charge

All Customers per ESD per year	\$1,625
per month	\$135.42

Revenue from current rates will not be sufficient to fund rising operations and capital costs over the next five years without small annual increases to the rate revenue.

### 1.7 Proposed Wastewater Rates

Table 2 shows the proposed wastewater rates which reflect a 5.5% rate revenue increase.

**Table 2 Proposed Wastewater Rates**

Wastewater rates effective July 1, 2020

Annual Fixed Charge

All Customers per ESD per year	\$1,714
per month	\$142.86

## 2 Wastewater Financial Projections and Rates

### 2.1 Wastewater Financial Overview

BWA conducted an independent evaluation of the District’s wastewater enterprise finances. Key observations include the following:

- Wastewater rates have increased an average of 4.6% per year for the last 10 years. This has allowed the District to keep up with operations cost increases and capital improvement needs.
- The wastewater enterprise has one debt service obligation totaling \$120,750 per year
- The current Capital Improvement Plan totals \$17.7 million and addresses ongoing maintenance, repair and replacement needs.
- Projected wastewater expenses were determined based on input from Sonoma Water Staff. Projections based on the average annual change in CPI (3.0% per year) and cost projections provided by Staff.
- The current wastewater rate structure equitably distributes costs among ratepayers. Since no water data is available, water use is estimated using typical flow and strength data in Exhibit A.

### 2.2 Current Monthly Wastewater Rates

Current rates (as shown on Table 1) are determined by Equivalent Single-Family Dwelling (ESD) using an ESD assignment schedule based on customer class and size. Rates have increased an average of 4.6% annually over the last 10 years.

### 2.3 Current Wastewater Accounts

The District serves 2,499 wastewater accounts, the majority of which are single family residential. A current customer listing is provided in below.

**Table 3 Russian River Sanitation District – Customer Listing**

Customer Class	Parcels	ESDs
Residential	2,403	2,967.4
Single Family Dwelling	1,993	2,027.8
Multi Family	409	929.2
Mobile Home	1	10.4
Commercial	64	191.1
Industrial	3	3.3
Recreational	7	9.8
Institutional	11	13.9
Miscellaneous	2	1.1
Governmental	9	30.4
<b>Total</b>	<b>2,499</b>	<b>3,217.0</b>

Russian River County Sanitation District has no capacity for growth. The District has assumed 0.0% revenue growth per year as a result of new sewer connections or increased demand.

## 2.4 Factors Affecting 5-Year Financial Plan

The District will need annual rate increases to alleviate the District’s ongoing operations deficit, annual cost inflation and the current Capital Improvement Plan. Key cost components over the next five years are summarized as follows.

### 2.4.1 Operating Deficit / Ongoing Operating Cost Inflation

The District’s wastewater rate revenue is not sufficient to cover current operating costs. Rising operating costs will exacerbate the deficit without rate increases and General Fund transfers from Sonoma Water. The District’s wastewater operations budget totals approximately \$5 million for FY 2019/20. The District’s largest expenses include maintenance, operations and contract services for wastewater treatment. Most operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI.

### 2.4.2 Debt Obligations

In addition to operating costs, the District pays annual debt service payments on one debt issuance according to the schedule shown on Table 4.

**Table 4: Debt Obligations**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Revenue Bond Repayment	\$120,750	\$120,750	\$120,750	\$120,750	\$120,750	\$120,750

### 2.4.3 Current Wastewater Capital Plan

The District’s Wastewater Capital Improvement Plan totals \$17.7 million through 2024/25 and addresses aging infrastructure and other necessary improvements. Costs are provided in Table 5 based on engineering estimates as of 2019/20. A full schedule of projects is provided in the Appendix.

**Table 5: Capital Improvement Plan Summary**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CIP	\$3,857,000	\$2,654,591	\$2,126,278	\$5,069,863	\$600,000	\$3,400,000

## 2.5 Wastewater Enterprise Revenue Requirements

The wastewater cash flow projection incorporates the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

### Growth & Water Demand Assumptions

- Russian River County Sanitation District has no capacity for growth. The District has assumed 0.0% revenue growth per year as a result of new sewer connections or increased demand.
- Wastewater system demand (estimated with ESD ratings) is assumed to stay constant from FY 2019/20

### Revenue Assumptions

- Rate revenue will increase according to the proposed rate increases assuming a relatively static number of customers and water consumption.

- Rate revenue will be subsidized by \$550,000 in General Fund transfers over the next five years.
- Other revenues are projected to remain stagnant from 2019/20 budget amounts.
- Annual interest earnings are estimated at 1% of beginning fund balance

**Expense Assumptions**

- Operations and maintenance costs are based on the 2019/20 budget and escalate at an annual rate of approximately 3.0% to account for future cost inflation.
- Capital expenditures include \$17.7 million in projects through FY 2024/25

Based on the assumptions above, BWA created a cash flow projection that determined 5.5% annual wastewater rate increases are needed for the next 5 years. The proposed schedule is shown on Table 6 below.

**Table 6: Proposed Wastewater Rate Increases**

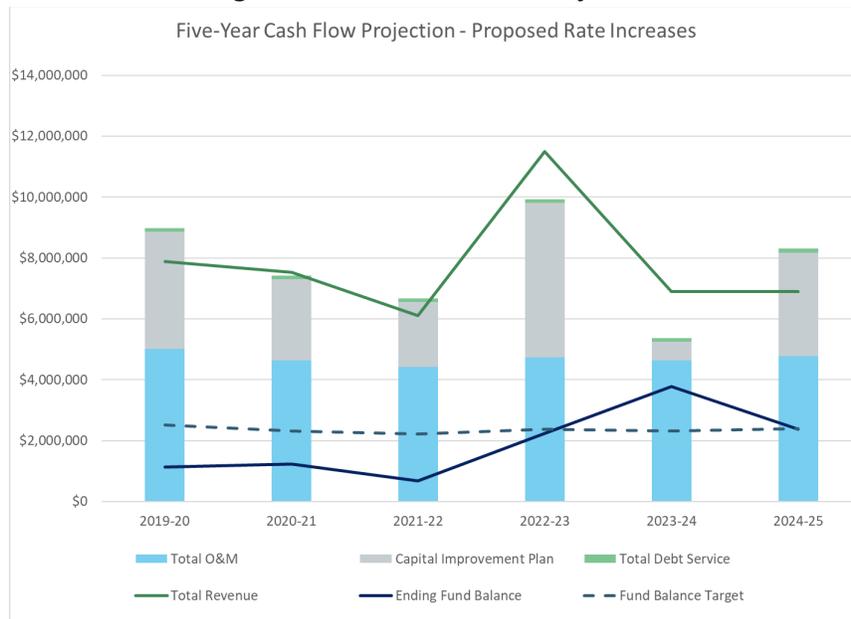
	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increases	5.5%	5.5%	5.5%	5.5%	5.5%

The proposed annual wastewater rate revenue increases accomplish the following:

- Projected operations and Capital Improvement Plan funding
- Minimum operations fund balance of 6 months operating costs
- Minimum construction fund balance of 3% current Asset value

Figure 2 illustrates BWA’s 5-year cash flow projection with proposed rate revenue and General Fund contributions.

**Figure 2: 5-Year Cash Flow Projection**



The District would need to mail a Proposition 218 notice to notify ratepayers of the proposed wastewater rate increases before adoption. Rates would be effective following a mailed Proposition 218 notice and successful public hearing.

## 2.6 Cost of Service Study

Bartle Wells Associates conducted an independent analysis of the District’s current sewer rate structure. Based on an evaluation of rate alternatives and input from Staff, no major modifications are recommended to the District’s sewer rate structure. Rate revenue is 100% fixed based on ESDs assigned to each customer based on Exhibit A. Table 7 shows the total rate revenue requirement (including proposed rate increase) divided by projected 2020 ESDs.

**Table 7 Cost of Service Rate Calculation**

2020-21 Revenue Requirement <sup>1</sup>	\$5,515,076
Projected ESDs <sup>2</sup>	3,217
<b>Proposed Rate - Fixed \$/ESD</b>	<b>\$1,714</b>

*1 – FY 2020 Calculated rate revenue plus FY 2021 proposed rate increase*  
*2 – 2020 ESDs*

## 2.7 Rate Structure Recommendations

BWA recommends that the District increase rate revenue according to the proposed annual rate increases shown on Table 6. We also recommend that the District continue to collect annual fixed charges based on ESD evaluations in Exhibit A, since customer-level water data is not available. Future ESD evaluations should be made from the latest flow and strength estimates in the proposed 2021 Exhibit A (attached).

The proposed fixed charge per ESD for 2020-21 is shown on Table 8 below.

**Table 8: Proposed Rates**  
*Wastewater rate effective July 1, 2020*

All Customers per ESD per year	\$1,714
per month	\$142.86

*Equivalent Single-Family Dwelling (ESD) assigned per parcel based on probable quantity and quality of sewage effluent generated.*

## 2.8 Exhibit A Recommendations

Bartle Wells partnered with engineering consultant Woodard & Curran (W&C) to review and update Exhibit A. W&C reviewed the latest Sonoma Water data, relevant neighboring community data, and California Government Code to recommend updated Exhibit A values for 2021. W&C analyzed wastewater treatment plant and monitored neighborhood sewer flow and load data where available to determine recent trends and update sewer flow and loading estimates for all customer classes. New categories were added for new/emerging commercial and industrial sewer uses (e.g. high-tech medical manufacturing, online vacation rentals). Accessory dwelling units and junior accessory dwelling unit factors were updated to reflect recent California legislation. The 2021 proposed Exhibit A will be used to evaluate ESDs for new sewer connections and capacity charges in the future.

### 3 Conclusion and Recommendations

This water and wastewater rate study presents a comprehensive review of Russian River County Sanitation District's wastewater revenue requirements and rate structure. Since the last rate increase for FY 2021, the District has identified necessary capital improvements and increases in ongoing operations costs. These factors were considered in the rate study to develop equitable rates for customers that recover the cost of wastewater service.

#### 3.1 Conclusion

The District faces an ongoing operations deficit and necessary capital improvements. Rate revenue is partially subsidized by general fund transfers from Sonoma Water. The District will need to continue imposing annual rate increases to keep up with rising costs. These factors have been considered in this comprehensive wastewater rate study and are reflected in the above proposed rates. Adoption of these rates reflect the District's commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future.

#### 3.2 Recommendations

BWA recommends that the Agency adopt the rates shown in this report. Rates were developed as part of a collaborative process that included extensive review by Sonoma Water, Woodard & Curran Engineering, and Agency Staff.

At minimum, BWA recommends that the District review and update its water and wastewater rate study every five years and/or concurrent with Master Plan Updates. Rates should be noticed and adopted on an annual basis per District policy according to the 5-year schedule of annual rate increases. There is no proposed change to the current wastewater rate structure. New connections should be given an ESD evaluation based on the proposed 2021 Exhibit A, which reflects the latest sewer flow and strength factors for the District.

Please find the complete Final Draft Tables as of 5/6/2020 and 2021 proposed Exhibit A attached to this report.

## **Appendix A: 2021 Proposed Exhibit A**

# EXHIBIT A

## EQUIVALENT SINGLE-FAMILY DWELLING BILLING UNIT FOR RUSSIAN RIVER CSD

Use Category	Billing Basis			2020-2021	
	Flow gallons	BOD mg/l	TSS mg/l	Use	ESD
<b>Residential</b>					
Single-Family	120	200	200	connections	1.00
Condominium (Over 900 square ft)	120	200	200	dwelling units	1.00
Condominium (Under 900 square ft)	96	200	200	dwelling units	0.80
Multiple-Family (Apts,Duplex/Triplex)	96	200	200	dwelling units	0.80
Mobile home park	96	200	200	spaces	0.80
Mobile home (Individual)	96	200	200	units	0.80
JADU	-	200	200	units	0.00
ADU, under 751 sq ft*	48	200	200	units	0.40
ADU, 751-900 sq ft*	96	200	200	units	0.80
ADU, over 900 sq ft*	120	200	200	units	1.00
<b>Commercial</b>					
Appliance repair	190	200	200	1,000 sq. ft.	1.58
Art gallery	190	200	200	1,000 sq. ft.	1.58
Auto dealers					
With service facilities	190	180	280	connection	1.74
With service facilities	38	180	280	add per service bay	0.35
Without service facilities	190	200	200	connection	1.58
Auto repair	38	325	325	per service bay	0.45
Bakery	190	1000	600	1,000 sq. ft.	4.72
Beer Making/Brewery				see note 1 below	
Butcher				see note 1 below	
Banks & financial institutions	190	130	80	1,000 sq. ft.	1.09
Barber shop	19	130	80	per chair	0.11
Beauty shop	38	130	80	per chair	0.22
Bars & taverns	20	200	200	per seat	0.17
Camp ground or RV park					
with hookups	125	200	200	site	1.04
without hookups	75	200	200	site	0.63
Cannabis production/manufacturing				see note 1 below	
Car washes					
manual	190	20	150	per bay	0.98
automatic	125	228	228	per bay	1.14
Cheese Maker				see note 1 below	
Churches, hall & lodges	2	200	200	per seat	0.02
Coffee shops with some food service	6	1000	600	per seat	0.15
Dry cleaners	285	150	110	1,000 sq. ft.	1.83
Fire stations					
with sleeping quarters and kitchens	220	325	325	1,000 sq. ft.	2.59
without sleeping quarters and kitchens	190	228	228	1,000 sq. ft.	1.73
Garages	95	180	280	service bays	0.87
Gas Stations (no other automotive services)					
with convenience store	70	520	520	1,000 sq. ft.	1.20
without convenience store	38	228	228	1,000 sq. ft.	0.35
Gym					
with shower	400	325	325	1,000 sq. ft.	4.71
without shower	50	228	228	1,000 sq. ft.	0.46
High Tech Medical Manufacturing				see note 1 below	
Hospitals					
Convalescent	125	250	100	per bed	0.96
General	175	250	100	per bed	1.34
Veterinarian	6	250	100	per cage	0.05
Hotels/motels	100	310	120	sleeping rooms	0.87
without restaurant	100	310	120	sleeping rooms	0.87
B&B/Online Rentals/Vacation Rental homes	100	325	325	per occupant	1.18
Hydroponic Cultivation (including cannabis)	1.2	228	228	per plant	0.01
Laundromats					
High efficiency washers	250	228	228	washing machines	2.28
Regular washers	500	150	110	washing machines	3.20
Library	190	200	200	1,000 sq. ft.	1.58
Machine shops	152	180	280	1,000 sq. ft.	1.39
Markets	38	800	800	1,000 sq. ft.	0.94
Nail Salon	10	228	228	per seat	0.09
Offices					
Business	76	130	80	1,000 sq. ft.	0.43
Chiropractic Office	190	228	228	Exam. room	1.73
Dental	190	130	80	Exam. room	1.09
Medical (clinic)					
with central handwashing stations	175	325	325	Exam. room	2.06
with office, surgery, lab and treatment rooms	190	325	325	Exam. room	2.24
offices with sink	125	325	325	Exam. room	1.47
offices without sink	100	325	325	Exam. room	1.18
Veterinarian					
with office, surgery, and treatment rooms	130	325	325	Exam. room	1.53
Pet Groomers	260	228	228	1,000 sq. ft.	2.37

Post office	190	130	80	1,000 sq. ft.	1.09
Resort	see note 1 below				
Restaurants					
Dine-in					
With DW & garbage disp.	6	1000	600	per seat	0.15
With DW or garbage disp.	6	619	371	per seat	0.10
Without DW & garbage disp.	6	238	143	per seat	0.05
Take-out	475	238	143	1,000 sq. ft.	3.83
Rest homes	125	250	100	per bed	0.96
Retail stores	38	150	150	1,000 sq. ft.	0.26
Schools					
Elementary	9	130	100	per student day	0.05
High	14	130	100	per student day	0.08
with entertainment facilities	19	325	325	per student day	0.22
Service stations	380	180	280	set of gas pumps	3.48
	38	180	280	add per service bay	0.35
Shoe repair	190	200	200	1,000 sq. ft.	1.58
Spa with various beauty treatments	38	325	325	per chair	0.45
Supermarkets	76	325	325	1,000 sq. ft.	0.89
Tasting Rooms					
Ale, Winery (no food)	120	228	228	1,000 sq. ft.	1.09
Ale, Winery (with food)	240	520	520	1,000 sq. ft.	4.11
Theaters	2	200	200	per seat	0.02
Trash Enclosures	see note 1 below				
Warehouse	see note 1 below				
Winery	see note 1 below				
Others as determined by the Engr.	see note 1 below				

ALL COMMERCIAL ESDs TO BE DETERMINED BY THE GENERAL MANAGER USING THE FOLLOWING FORMULA:  
 $ESD = ( TSS \times FLOW \times 0.33 ) / ( SFD TSS \times SFD FLOW ) + ( BOD \times FLOW \times 0.33 ) / ( SFD BOD \times SFD FLOW ) + ( FLOW \times ( 0.34 / SFD FLOW ) )$

Note 1: For non-standard uses, warehouses and when agreement on a use category cannot be reached, the General Manager, in his or her sole discretion, may  
a) base charges on the user's actual or estimated contribution of wastewater into the District's facilities in terms of flow, biological oxygen demand (BOD), and total suspended solids (TSS), and  
b) calculate the user's charge using the above Charge Formula. The user shall provide verifiable data, as requested by the General Manager, for the charge to be determined.  
Note 2: In general, users with annual average TSS and/or BOD over 1,000 mg/L and users with annual average Flow greater than 5,000 gallons per day should be considered Monitored Users and use the Monitored User Charge Formula.

Definitions	Flow = Gallons per Day				
	BOD = Biological Oxygen Demand	DW = dishwasher			
	ESD = Equivalent Single Family Dwelling	disp. = disposal			

\* Note that no Capacity Charge is assessed when existing structures are converted in accordance with CGC 65852.2 (e)(1)(A) as determined by the County of Sonoma.

**Appendix B: Wastewater Rate Study  
Supplementary Tables**



## RUSSIAN RIVER CSD

# Wastewater COS Rate Study 2020

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### Supplementary Tables

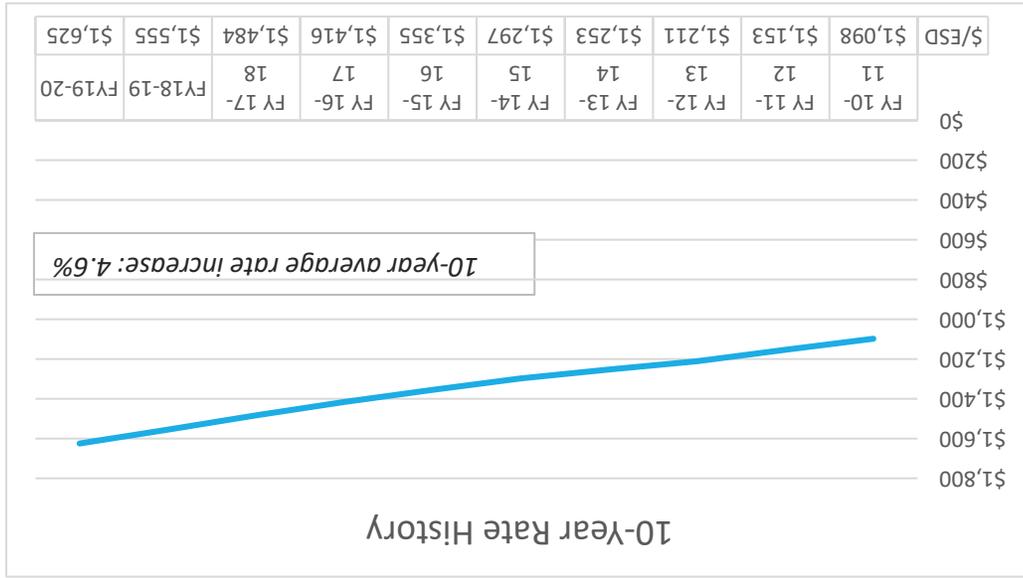
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Table B4	Capital Improvement Plan
Table B5	Debt Service
Table B6	Fund Balance & Policies
Table B7	Cash Flow
Table B8	Proposed Rates



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

## Current Rates

Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)  
 \$1,625 annual - tax roll  
 \$135.42 monthly



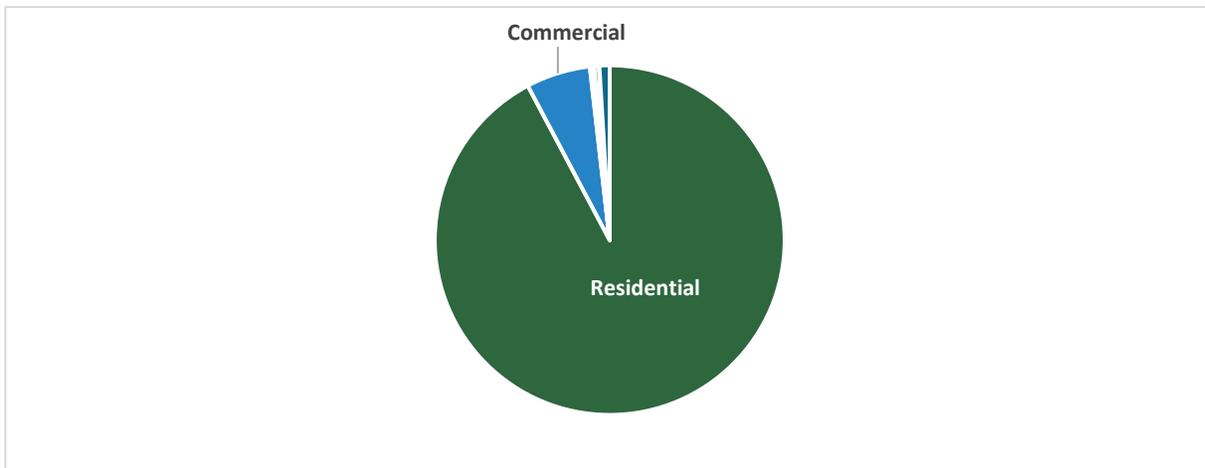
Source: Sonoma Water/Lynne Rosselli, District and Zones Annual Rates Summary, via email 9/9/19

**Table B2: Customer Information**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**RUSSIAN RIVER CSD**

## Customer Information

### FY 2019-20 Customer Master List

Customer Class	Parcels	ESDs	2019-20 Revenue	% total
Residential	2,403	2,967.4	\$4,822,025	92.2%
Single Family Dwelling	1,993	2,027.8		
Multi Family	409	929.2		
Mobile Home	1	10.4		
Commercial	64	191.1	\$310,570	5.9%
Industrial	3	3.3	\$5,281	0.1%
Recreational	7	9.8	\$15,925	0.3%
Institutional	11	13.9	\$22,506	0.4%
Miscellaneous	2	1.1	\$1,788	0.0%
Governmental	9	30.4	\$49,465	0.9%
<b>Total</b>	<b>2,499</b>	<b>3,217.0</b>	<b>\$5,227,560</b>	



Source: Sonoma Water/Lynne Rosselli

**Table B3: O&M Expense Projection**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**RUSSIAN RIVER CSD**

## O&M Expense Projection

Budget (FY)	2018-19	2019-20	Projection <sup>1</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
<b>EXPENDITURES</b>								
<b>Services and Supplies</b>		<b>Adj. Budget</b>						
51061 Maintenance - Equipment	\$200,000	\$318,297	3.0%	\$327,846	\$337,681	\$347,812	\$358,246	\$368,994
51201 Administration Services	\$40,000	\$30,000	3.0%	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778
51206 Accounting/Auditing Services	\$8,000	\$7,000	3.0%	\$7,210	\$7,426	\$7,649	\$7,879	\$8,115
51211 County Counsel - Legal Advice	\$5,500	\$7,000	3.0%	\$7,210	\$7,426	\$7,649	\$7,879	\$8,115
51231 Testing/Analysis	\$250,000	\$461,155	3.0%	\$474,990	\$489,239	\$503,917	\$519,034	\$534,605
51244 Permits/License/Fees	\$15,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51401 Rents and Leases - Equipment	\$10,000	\$10,000	3.0%	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
51803 Other Contract Services	\$292,000	\$884,198	Varies	\$388,786	\$42,811	\$237,063	\$0	\$0
51902 Telecommunication Usage	\$9,000	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
51916 County Services Chgs	\$18,000	\$15,000	3.0%	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389
51917 District Operations Chgs	\$2,800,000	\$2,949,900	3.0%	\$3,038,397	\$3,129,549	\$3,223,435	\$3,320,138	\$3,419,743
51921 Equipment Usage Charges	\$195,700	\$40,000	3.0%	\$41,200	\$42,436	\$43,709	\$45,020	\$46,371
52071 Materials and Supplies Expense	\$500	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
52072 Chemicals	\$11,000	\$10,000	3.0%	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
52081 Medical/Laboratory Supplies	\$7,000	\$10,000	3.0%	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
52111 Office Supplies	\$7,000	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
52141 Minor Equipment/Small Tools	\$20,000	\$20,000	3.0%	\$20,600	\$21,218	\$21,855	\$22,510	\$23,185
52171 Water Conservation Program	\$2,000	\$64,438	3.0%	\$66,371	\$68,362	\$70,413	\$72,525	\$74,701
52191 Utilities Expense	\$2,500	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
52193 Utilities - Electric	\$170,000	\$150,000	3.0%	\$154,500	\$159,135	\$163,909	\$168,826	\$173,891
Misc <sup>2</sup>	\$156,800	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
<b>Total Services &amp; Supplies</b>	<b>\$4,220,000</b>	<b>\$4,985,988</b>		<b>\$4,613,630</b>	<b>\$4,394,400</b>	<b>\$4,719,200</b>	<b>\$4,616,601</b>	<b>\$4,755,099</b>
	<b>2018-19</b>	<b>2019-20</b>	<b>Projection</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Appropriations for Contingency</b>								
55011 Appropriations for Contingency	\$25,000	\$25,000	0.0%	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
<b>Total Services &amp; Supplies</b>	<b>\$25,000</b>	<b>\$25,000</b>		<b>\$25,000</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$25,000</b>
<b>TOTAL EXPENDITURES</b>	<b>\$4,245,000</b>	<b>\$5,010,988</b>		<b>\$4,638,630</b>	<b>\$4,419,400</b>	<b>\$4,744,200</b>	<b>\$4,641,601</b>	<b>\$4,780,099</b>

1 - Expense projection based on Operations Services CPI, LRFP Draft 9/9/19

2 - 2018-19 Budget true-up value - budgeted \$0 in 2019-20

Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRFP Draft via email 9/9/2019

**Table B4: Capital Improvement Plan**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**RUSSIAN RIVER CSD**

## Capital Improvement Plan

CIP	Long Range Financial Plan 12-20-19 Project Title	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total Through FY 2028-29
R0104	Tertiary Filter Replacement	\$0						
R0105	Force Main Improvements at Main Lift	\$0						\$0
R0108	Seismic Retrofit of Secondary Clarifier	\$3,437,000	\$0					\$3,437,000
PH2	Headworks, Lift Station, and Force Main Project	\$0	\$222,604	\$850,000	\$5,000,000	\$500,000	\$3,000,000	\$9,572,604
FP-285	Mays Canyon Road Slide	\$245,000	\$1,540,000	\$210,000				\$1,995,000
tbd	ACL Compliance Project	\$175,000	\$325,000					\$620,000
tbd	Electrical Service Replacement - 3 Lift Stations		\$300,000	\$408,000				\$708,000
USDA-RD	Lift Station Electrical Resiliency Project at Vacation Beach		\$266,987	\$658,278	\$69,863			\$995,128
tbd	Underground Storage Tank Removal					\$100,000	\$400,000	\$500,000
tbd	LHMP Mitigation Project	\$0	\$0	\$0	tbd	tbd	tbd	\$0
57011	Operating Transfer: Reserve Fund	\$0						\$0
<b>Total</b>		<b>\$3,857,000</b>	<b>\$2,654,591</b>	<b>\$2,126,278</b>	<b>\$5,069,863</b>	<b>\$600,000</b>	<b>\$3,400,000</b>	<b>\$14,390,732</b>

Source: Sonoma Water/Scott Carter, ALWSZ Projects for Rate Study 10152019, via email 12/11/2019

**Table B5: Debt Service**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**RUSSIAN RIVER CSD**

## Debt Service

Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>OUTSTANDING LOANS/BONDS</u></b>							
Revenue Bond Repayment	\$294,502	\$120,750	\$120,750	\$120,750	\$120,750	\$120,750	\$120,750
<b>Total</b>	<b>\$294,502</b>	<b>\$120,750</b>	<b>\$120,750</b>	<b>\$120,750</b>	<b>\$120,750</b>	<b>\$120,750</b>	<b>\$120,750</b>

<b><u>PROPOSED LOANS/BONDS</u></b>								
	Rate Study Year		1	2	3	4	5	
	Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Loan 1					\$0	\$0	\$0	\$0
Loan 2					\$0	\$0	\$0	\$0
Bond 1					\$0	\$0	\$0	\$0
Bond 2					\$0	\$0	\$0	\$0
<b>Total</b>		<b>\$0</b>						

<b>Total Debt Service</b>	<b>\$294,502</b>	<b>\$120,750</b>	<b>\$120,750</b>	<b>\$120,750</b>	<b>\$120,750</b>	<b>\$120,750</b>	<b>\$120,750</b>
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<b><u>PROPOSED DEBT DETAIL</u></b>	Loan 1	Loan 2	Bond 1	Bond 2
Rate Study Iss. Year <sup>1</sup>	1	1	1	1
Issuance Amount	\$0	\$0	\$0	\$0
Proceeds for Construction	\$0	\$0	\$0	\$0
Interest Rate	4%	4%		
Iss. Costs	<b>\$165,500</b>	<b>\$165,500</b>	<b>\$100,000</b>	<b>\$100,000</b>
Maturity	20	20	15	15
<b>Net Annual Payment</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

1 - Payment begins 1 year after issuance

*Proposed Debt Estimates provided by Bartle Wells Associates, pending review from Sonoma Water*

*Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRF Draft via email 9/9/2019*

## Fund Balance & Policies

### Undes/Unreserved Beginning Fund Balance 7/1/2019

33070100 Russian River CSD	\$1,565,317
33070400 Russian River - Rev. Bonds	\$287,828
33070200 Russian River - Expansion	\$203,589
33070300 Russian River Bonds	\$50,152
33070600 Russian River - Rev Bonds Res	\$121,250
33070500 Russian River - State Loan Res	\$0
33070700 RRCSD 3rd Unit WCRF	\$0
<b>Total</b>	<b>\$2,228,136</b>

### 1. Fund Balance Policy

Operations Fund Target - at least 6 months budgeted Operating Expenses

### 2. Debt Service Coverage Policy

Coverage Requirement - 1.2x net operating expenses

### 3. Growth Estimates

Estimated 0 new users per Fiscal Year

Connection fee revenue estimated based on 3% per year CPI adjustment to current capacity fee

### 3. Rate Structure

Water data unavailable - expenses are equally divided among all ESDs and billed on the tax roll

Source: Sonoma Water/Lynne Rosselli, LRF Draft via email 9/9/2019

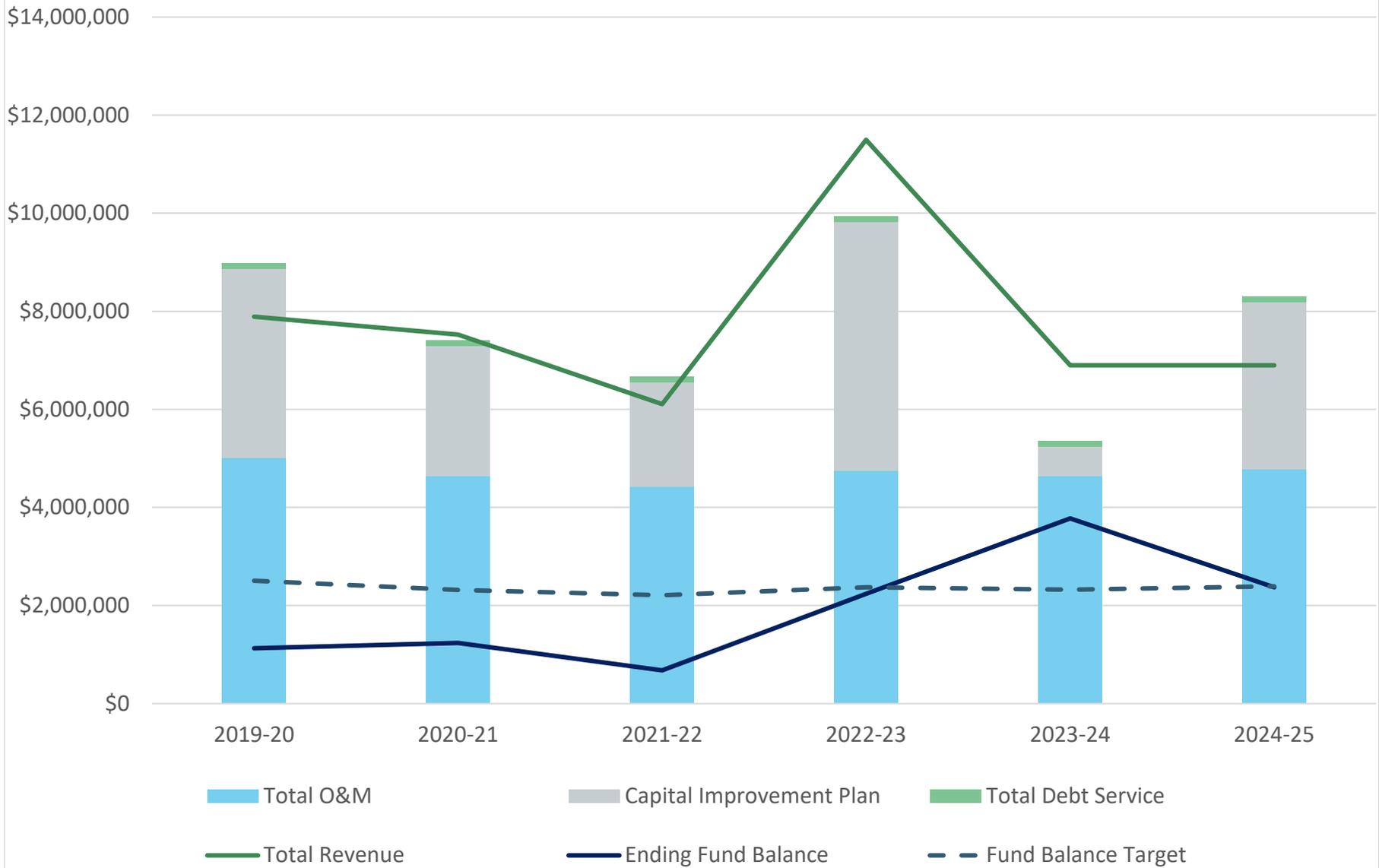
**Table B7: Cash Flow**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**RUSSIAN RIVER CSD**

## Cash Flow

Five-Year Projection Fiscal Year	Reference	Budget 2019-20	1 2020-21	2 2021-22	3 2022-23	4 2023-24	5 2024-25
Proposed Rate Increase			5.5%	5.5%	5.5%	5.5%	5.5%
Growth			0.0%	0.0%	0.0%	0.0%	0.0%
Annual Rate - \$/ESD		\$1,625	\$1,714	\$1,809	\$1,908	\$2,013	\$2,124
Beginning Fund Balance	Table 5	\$2,228,136	\$1,128,781	\$1,237,487	\$677,839	\$2,239,221	\$3,776,293
<b><u>REVENUE</u></b>							
Sanitation Charges - Calc.	Table 2	\$5,227,560	\$5,515,076	\$5,818,405	\$6,138,417	\$6,476,030	\$6,832,212
Connection Fees	LRFP	\$26,140	\$0	\$0	\$0	\$0	\$0
Penalties/Costs on Taxes	LRFP	\$25,000	\$26,000	\$26,000	\$26,000	\$26,000	\$26,000
Interest on Pooled Cash <sup>1</sup>	LRFP	\$22,281	\$11,288	\$12,375	\$6,778	\$22,392	\$37,763
State Loan/Other Funding	LRFP	\$2,238,402	\$1,870,313	\$150,000	\$5,325,000	\$375,000	\$0
Transfers from Gen. Fund	LRFP	\$350,000	\$100,000	\$100,000			
Proposed Debt Proceeds	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Revenue</b>		<b>\$7,889,383</b>	<b>\$7,522,677</b>	<b>\$6,106,780</b>	<b>\$11,496,196</b>	<b>\$6,899,422</b>	<b>\$6,895,975</b>
<b><u>EXPENDITURES</u></b>							
Total O&M	Table 3	\$5,010,988	\$4,638,630	\$4,419,400	\$4,744,200	\$4,641,601	\$4,780,099
Capital Improvement Plan	Table 4	\$3,857,000	\$2,654,591	\$2,126,278	\$5,069,863	\$600,000	\$3,400,000
Total Debt Service	Table 5	\$120,750	\$120,750	\$120,750	\$120,750	\$120,750	\$120,750
<b>Total Expenditures</b>		<b>\$8,988,738</b>	<b>\$7,413,971</b>	<b>\$6,666,428</b>	<b>\$9,934,813</b>	<b>\$5,362,351</b>	<b>\$8,300,849</b>
Net Revenue		(\$1,099,355)	\$108,706	(\$559,648)	\$1,561,383	\$1,537,072	(\$1,404,874)
Ending Fund Balance		<b>\$1,128,781</b>	<b>\$1,237,487</b>	<b>\$677,839</b>	<b>\$2,239,221</b>	<b>\$3,776,293</b>	<b>\$2,371,419</b>
<i>Fund Balance Target</i>		<i>\$2,505,494</i>	<i>\$2,319,315</i>	<i>\$2,209,700</i>	<i>\$2,372,100</i>	<i>\$2,320,800</i>	<i>\$2,390,049</i>
Debt Service Coverage		23.8	23.9	14.0	55.9	18.7	17.5

*1 - 1% earnings on beginning fund balance*

## Five-Year Cash Flow Projection - Proposed Rate Increases



**Table B8: Proposed Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**RUSSIAN RIVER CSD**

## Proposed Rates

<b>Five-Year Projection</b>	<b>Current</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Fiscal Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Proposed Increase</b>		5.5%	5.5%	5.5%	5.5%	5.5%
<b>Fixed Rate - \$/Equivalent Single-Family Dwelling (ESD)</b>						
Annual - tax roll	\$1,625	\$1,714	\$1,809	\$1,908	\$2,013	\$2,124
Monthly	\$135.42	\$142.86	\$150.72	\$159.01	\$167.76	\$176.98



**Sonoma  
Water**

**Sonoma Valley  
County Sanitation District  
Wastewater Rate Study**

**Final Report  
May 5, 2020**



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May 5, 2020

Lynne Rosselli  
Finance Manager  
Sonoma Water  
404 Aviation Blvd  
Santa Rosa, CA 95403

Re: Sonoma Valley County Sanitation District 2020 Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to Sonoma Water the attached 2020 Wastewater Rate Study for Sonoma Valley County Sanitation District (District).

This study presents BWA's analysis of the operating and non-operating expenses of the District's wastewater enterprise and provides updated five-year cash flow projections and rates for FY 2020. The primary purpose of this study is to assess the long-term financial condition of the District and provide recommendations to recover the cost of wastewater service equitably between ratepayers.

The enclosed report recommends increasing wastewater rates to recover the increasing cost of operations and capital improvement. Recommendations were developed with substantial input from Agency staff and engineering subconsultant Woodard & Curran. BWA finds that the rates and charges proposed in this report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. Financial projections generally align with Sonoma Water's internal long-range financial plan for the District. BWA can confirm that the proposed rates are fair and reasonable to the District's customers.

We have enjoyed working with Sonoma Water on this rate study. Please contact us with any future questions about this study and the recommended rates.

Sincerely,

Doug Dove, CIPMA  
Principal

Abigail Seaman  
Consultant

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Appendix A: Proposed 2021 Exhibit A

Appendix B: Wastewater Rate Study Supplementary Tables

# 1 Executive Summary

## 1.1 Background

Sonoma Valley County Sanitation District (District), managed by Sonoma Water, provides wastewater service to approximately 10,300 accounts within a 4,500 acre service area. The District's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from annual wastewater rates) aim to recover the cost to operate and maintain the wastewater system. The District faces ongoing increases to operations costs and annual capital project costs to repair and replace aging infrastructure.

Sonoma Water has retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update for FY 2021 which examines any changes in current and projected costs and determines cost-of-service based rates that distribute costs equally among ratepayers. Basic objectives of the rate study include:

- Identify rate setting principles.
- Update long-term financial projections to determine future annual wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service

Based on input from Sonoma Water staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for operations and capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws

## 1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require Sonoma Water's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** Sonoma Water must mail a notice of proposed rate increases to all affected property owners in the District. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The Sonoma Water must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

### 1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed and variable charges levied on each customer based on an assigned equivalent single family dwelling units (ESDs) and water use data. Rates recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing wastewater rates, charges, and fees. In developing wastewater rates, it is important to note that there is no “one-size-fits-all” approach for establishing cost-based wastewater rates.

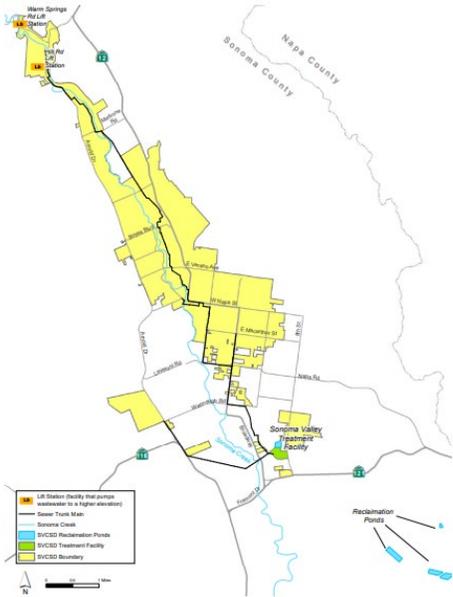
BWA used the following criteria when developing recommendations for the District’s wastewater rates and finances:

- 1) *Revenue Sufficiency:* Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact:* While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable:* Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical:* Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

### 1.4 Wastewater System Overview

The District serves 17,300 ESDs within a 4,500-acre service area shown **Figure 1** below.

**Figure 1: Sonoma Valley Service Area Map**



District Services include collection, distribution and tertiary treatment of wastewater, as well as regular operations, maintenance, and replacement of wastewater infrastructure. The District’s main source of wastewater revenue is annual wastewater rates on each customer’s property tax bill. Rates were last increased on July 1, 2019 and will need small annual increases over the next 5 years to keep up with wastewater system expenses.

## 1.5 Factors Driving Rate Increases

The primary wastewater cost factors affecting the District are ongoing operations cost increases and the \$57.2 million Capital Improvement Plan which will address ongoing maintenance, repair and replacement needs.

## 1.6 Current Wastewater Rates

The District’s current wastewater rates are shown in Table 1 below. Wastewater charges are billed annually on the property tax roll by customer class. Residential customers with a public water connection are charged a combination of fixed and variable rates while all other users receive 100% fixed bills.

**Table 1 Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Residential with Public Water Connection

Annual Fixed Rate - \$/ESD	\$740
per month	\$61.67
Volumetric Charge \$/1000 gal	\$5.99

Residential without Public Water Connection & Commercial

Annual Fixed Rate - \$/ESD	\$1,057.00
per month	\$88.08

Fixed rates are billed according to Sonoma Water’s evaluation of each customer’s Equivalent Single-Family Dwelling (ESD). ESDs are evaluated according to the District’s Exhibit A document, which provides the latest flow and strength estimates for common residential and commercial customer classes. The FY 2021 Proposed Exhibit A is provided in the appendix of this report. Volume rates are charged based on winter water use to estimate sewer demand. Demand is estimated using the lowest winter water use billed in the prior fiscal year, multiplied by 12 months to derive the annual use.

Revenue from current rates will not be sufficient to fund rising operations and capital costs over the next five years without small annual increases to the rate revenue.

# 1.7 Proposed Wastewater Rates

shows the proposed wastewater rates which reflect a 3.5% rate revenue increase.

**Table 2 Proposed Wastewater Rates**

Wastewater rates effective July 1, 2020

Residential with Public Water Connection

Annual Fixed Rate - \$/ESD	\$766
per month	\$63.83
Volumetric Charge \$/1000 gal	\$6.20

Residential without Public Water Connection & Commercial

Annual Fixed Rate - \$/ESD	\$1,094
per month	\$91.17

## 2 Wastewater Financial Projections and Rates

### 2.1 Wastewater Financial Overview

BWA conducted an independent evaluation of the District’s wastewater enterprise finances. Key observations include the following:

- Wastewater rates have increased an average of 5% per year for the last 10 years. This has allowed the District to keep up with operations cost increases and capital improvement needs.
- The wastewater enterprise has debt service obligations totaling approximately \$2.4 million per year.
- The current Capital Improvement Plan totals \$57.2 million and addresses ongoing maintenance, repair and replacement needs. \$2.7 million will be funded by federal capital grants.
- Projected wastewater expenses were determined based on input from Sonoma Water Staff. Projections are based on the average annual change in CPI (3.0% per year)
- The current wastewater rate structure equitably distributes costs among ratepayers. BWA proposes no change to the existing wastewater rate structure.

### 2.2 Current Monthly Wastewater Rates

Current rates (as shown on Table 1) are determined using a combination of fixed and variable rates. The District’s current rate structure was implemented following a Volumetric Feasibility Study and Pilot Program in 2012.

Residential customers with a public water connection to the City of Sonoma or Valley of the Moon Water District are billed a fixed rate per ESD and a volume rate per 1000 gallons of estimated sewer demand. Demand is estimated using the lowest winter water use billed in the prior fiscal year, multiplied by 12 months to derive the annual use. Sewer demand is capped at 20,000 gallons per month per ESD assuming that any usage above 20,000 gallons is for outdoor use and is not returned to the system as wastewater.

## 2.3 Wastewater Customer Information

The District serves 10,299 wastewater accounts, the majority of which are single family residential. A current customer listing is provided in Table 3 below.

**Table 3 Sonoma Valley CSD – Customer Listing**

Customer Class	Parcels	ESDs
Residential	9,654	13,113.1
Single Family Dwelling	8,472	8,673
Multi Family	1,172	3,525
Mobile Home	10	915
Commercial	514	1,756.9
Industrial	33	887.3
Irrigated Farm	14	18.2
Dry Farm	3	6.2
Recreational	10	85.5
Institutional	36	366.3
Miscellaneous	5	8.3
Governmental	30	1,056.8
<b>Total</b>	<b>10,299</b>	<b>17,298.7</b>

A majority of accounts are residential users with a public water connection to the City of Sonoma or Valley of the Moon Water District. Customers in this category are charged volumetric rates based on the lowest winter water bill multiplied by the number of annual billing periods (billable units in 1000 gal increments). Usage data for these customers is summarized in Table 4.

**Table 4 2019-20 Residential Sewer Use**

	Parcels	ESDs	Billable units (kgals)
Single Family Dwelling	8,400	8959.3	352,440
Multi Family	10	914.6	33,234
Mobile Home	232	1457.4	52,398
<b>Total</b>	<b>8,642</b>	<b>11,331.3</b>	<b>438,072</b>

Sonoma Valley County Sanitation District is a relatively slow-growth community. The District can conservatively expect 0.2% wastewater revenue growth per year as a result of new sewer connections or increased demand.

## 2.4 Factors Affecting 5-Year Financial Plan

The District will need annual rate increases to keep up with ongoing operating cost inflation and the current Capital Improvement Plan. Key cost components over the next five years are summarized as follows.

### 2.4.1 Ongoing Operating Cost Inflation

The District’s wastewater operations budget totals approximately \$11.5 million for FY 2019/20. The District’s largest expenses include maintenance, utilities, and District operations charges for Sonoma Water oversight and equipment. All operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI.

### 2.4.2 Debt Obligations

In addition to operating costs, the District pays annual debt service payments on four debt issuances summarized in Table 5. A detailed payment schedule is available in the appendix.

**Table 5: Debt Obligations**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total Debt Service	\$2,388,078	\$2,391,555	\$2,385,455	\$2,387,355	\$2,387,055	\$1,585,855

### 2.4.3 Current Wastewater Capital Plan

The District’s Wastewater Capital Improvement Plan totals \$57.2 million through 2024/25 and addresses aging infrastructure and other necessary improvements. The District will receive \$2.4 million in federal capital grants to cover projects in 2020-21. Costs are provided in Table 6 based on engineering estimates as of 2019/20. A full schedule of projects is provided in the Appendix.

**Table 6: Capital Improvement Plan Summary**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CIP	\$20,137,083	\$8,824,000	\$11,106,000	\$7,599,000	\$4,775,000	\$4,800,000

## 2.5 Wastewater Enterprise Revenue Requirements

The wastewater cash flow projection incorporates the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

#### Growth & Water Demand Assumptions

- The District is a relatively slow-growth community and BWA has conservatively assumed 0.2% growth in new connections or increased demand, which will contribute to rate revenue.
- Wastewater system demand (estimated using ESD ratings and residential winter water use) is assumed to stay constant from FY 2019/20

#### Revenue Assumptions

- Rate revenue will increase according to the proposed rate increases assuming a relatively static number of customers and water consumption with the exception of growth projections.
- Other revenues are projected to remain stagnant from 2019/20 budget amounts.
- Annual interest earnings are estimated at 1% of beginning fund balance

**Expense Assumptions**

- Operations and maintenance costs are based on the 2019/20 budget and escalate at the annual rate of 3.0% to account for future cost inflation.
- Capital expenditures include \$57.2 million in projects through FY 2024/25

Based on the assumptions above, BWA created a cash flow projection that determined 3.5% annual wastewater rate increases are needed for the next 5 years. The proposed schedule is shown on Table 7 below.

**Table 7: Proposed Wastewater Rate Increases**

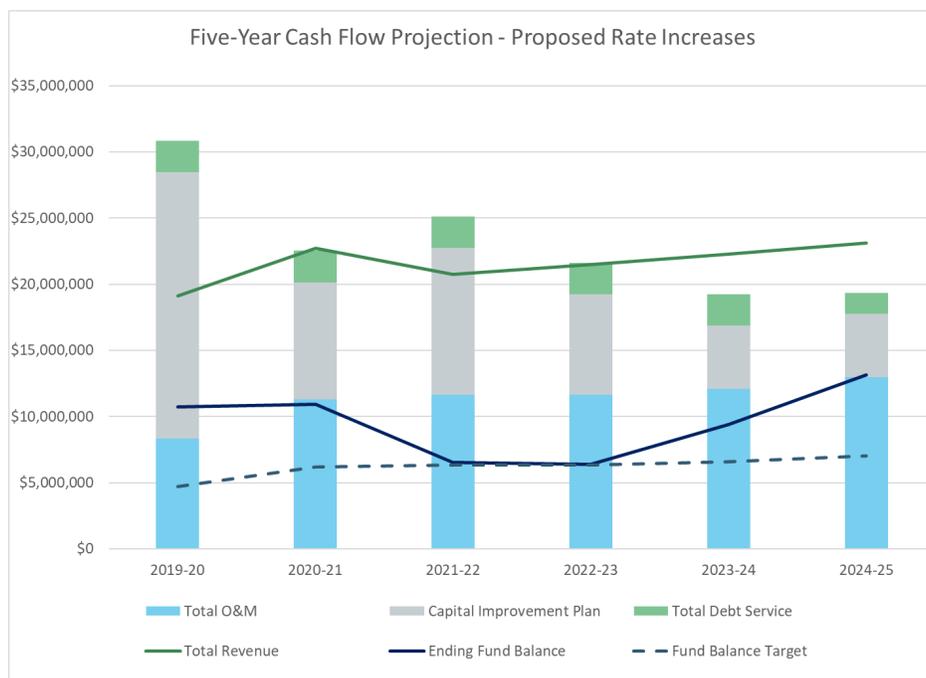
	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increases	3.5%	3.5%	3.5%	3.5%	3.5%

The proposed annual wastewater rate revenue increases accomplish the following:

- Projected operations and Capital Improvement Plan funding
- Minimum debt service coverage of 1.2x net operating revenues over the next 5 years
- Minimum operations fund balance of 6 months operating costs
- Minimum construction fund balance of 3% asset value

Figure 2 illustrates BWA’s 5-year cash flow projection with proposed rate revenue and federal grant funding.

**Figure 2: 5-Year Cash Flow Projection**



The District would need to mail a Proposition 218 notice to notify ratepayers of the proposed wastewater rate structure changes as outlined in the next section. Rates would be effective following a mailed Proposition 218 notice and successful public hearing.

## 2.6 Cost of Service Study

Wastewater utilities can recover costs from a combination of fixed and variable charges. The percentage of revenues derived from the fixed and variable charges varies for each agency and should be proportional to each system’s expenditures. The more costs that are recovered through fixed charges, the more secure the Agency’s revenue stream because the level of revenue is predictable and not subject to variability as water use fluctuates.

To determine how costs should be recovered, BWA evaluated the line-item expenditures for Sonoma Valley CSD including operations and debt service and then allocated the 2019/20 budget between fixed and variable costs using industry standards and input from Agency staff. Ultimately BWA recommends no change to the existing cost allocation which is 70% fixed and 30% variable.

Currently, volumetric billing is implemented for residential customers with a public water connection only. Billing for commercial users and residential users with no public water connection is 100% fixed per ESD until further research and a sensitivity analysis can be conducted.

## 2.7 Rate Structure Recommendations

BWA recommends that the District increase rate revenue according to the proposed annual rate increases shown on Table 7. We recommend no change to the current wastewater cost allocation and rate structure. The District should continue billing a 70% fixed rate and 30% volumetric rate to residential users with a public water connection and evaluate the impact of implementing volume-based rates for all other users in the future. Future ESD evaluations should be made from the latest flow and strength estimates in the proposed 2020 Exhibit A (Appendix A)

The proposed rates for 2020-21 are shown on Table 8 below. Detailed rate calculations are provided in Appendix B.

### Table 8 Proposed Rates

Wastewater rates effective July 1, 2019

#### Residential with Public Water Connection

Annual Fixed Rate - \$/ESD	\$766
per month	\$63.83
Volumetric Charge \$/1000 gal	\$6.20

#### Residential without Public Water Connection & Commercial

Annual Fixed Rate - \$/ESD	\$1,094
per month	\$91.17

## 2.8 Exhibit A Recommendations

Bartle Wells partnered with engineering consultant Woodard & Curran (W&C) to review and update Exhibit A. W&C reviewed the latest Sonoma Water data, relevant neighboring community data, and California Government Code to recommend updated Exhibit A values for 2021. W&C analyzed wastewater treatment plant and monitored neighborhood sewer flow and load data where available to determine recent trends and update sewer flow and loading estimates for all customer classes. New categories were added for new/emerging commercial and industrial sewer uses (e.g. high tech medical manufacturing, online vacation rentals). Accessory dwelling units and junior accessory dwelling unit factors were updated to reflect recent California legislation. The 2021 proposed Exhibit A will be used to evaluate ESDs for new sewer connections and capacity charges in the future.

## 3 Conclusion and Recommendations

This water and wastewater rate study presents a comprehensive review of Sonoma Valley County Sanitation District's wastewater revenue requirements and rate structure. Since the last rate increase for FY 2020, the District has identified needed capital improvements and increases in ongoing operations costs. These factors were considered in the rate study to develop equitable rates for customers.

### 3.1 Conclusion

The District practices sound financial planning that has provided for the general financial health of the wastewater enterprise given current cost estimates. Unfortunately, operations costs continue to increase. The District also faces debt service obligations and substantial capital replacement needs. Small annual rate increases to keep up with these costs. These factors have been considered in this comprehensive wastewater rate study and are reflected in the above proposed rates. Adoption of these rates reflect the District's commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future.

### 3.2 Recommendations

BWA recommends that the Agency adopt the rates shown in this report. Rates were developed as part of a collaborative process that included extensive review by Sonoma Water, Woodard & Curran Engineering, and Agency Staff.

At minimum, BWA recommends that the District review and update its water and wastewater rate study every five years and/or concurrent with Master Plan Updates. Rates should be noticed and adopted on an annual basis per District policy according to the 5-year schedule of annual rate increases. There is no proposed change to the current wastewater rate structure. New connections should be given an ESD evaluation based on the proposed 2021 Exhibit A, which reflects the latest sewer flow and strength factors for the District.

Please find the complete Final Draft Tables as of 5/6/2020 and 2021 proposed Exhibit A attached to this report.

## **Appendix A: 2021 Proposed Exhibit A**

# EXHIBIT A

## EQUIVALENT SINGLE-FAMILY DWELLING BILLING UNIT FOR SONOMA VALLEY CSD

Use Category		Billing Basis 2020-2021				
		Flow gallons	BOD mg/l	TSS mg/l	Use	ESD
<b>Residential</b>						
	Single-Family	200	200	200	connections	1.00
	Condominium (Over 900 square ft)	200	200	200	dwelling units	1.00
	Condominium (Under 900 square ft)	160	200	200	dwelling units	0.80
	Multiple-Family (Apts,Duplex/Triplex)	160	200	200	dwelling units	0.80
	Mobile home park	160	200	200	spaces	0.80
	Mobile home (Individual)	160	200	200	units	0.80
	JADU	-	200	200	units	0.00
	ADU, under 751 sq ft*	80	200	200	units	0.40
	ADU, 751-900 sq ft*	160	200	200	units	0.80
	ADU, over 900 sq ft*	200	200	200	units	1.00
<b>Commercial</b>						
	Appliance repair	190	200	200	1,000 sq. ft.	0.95
	Art gallery	190	200	200	1,000 sq. ft.	0.95
	Auto dealers					
	With service facilities	190	180	280	connection	1.04
	With service facilities	38	180	280	add per service bay	0.21
	Without service facilities	190	200	200	connection	0.95
	Auto repair	38	275	275	per service bay	0.24
	Bakery	190	1,000	600	1,000 sq. ft.	2.83
	Banks & financial institutions	190	130	80	1,000 sq. ft.	0.65
	Barber shop	19	130	80	per chair	0.07
	Bars & taverns	20	200	200	per seat	0.10
	Beauty shop	38	130	80	per chair	0.13
	Beer Making/Brewery				see note 1 below	
	Butcher				see note 1 below	
	Camp ground or RV park					
	with hookups	125	200	200	per site	0.63
	without hookups	75	200	200	per site	0.38
	Cannabis production/manufacturing				see note 1 below	
	Car washes					
	manual	190	20	150	per bay	0.59
	automatic	125	193	193	per bay	0.61
	Cheese Maker				see note 1 below	
	Churches, hall & lodges	2	200	200	per seat	0.01
	Coffee shops with some food service	6	1,000	600	per seat	0.09
	Dry cleaners	285	150	110	1,000 sq. ft.	1.10
	Fire stations					
	with sleeping quarters and kitchens	220	275	275	1,000 sq. ft.	1.37
	without sleeping quarters and kitchens	190	193	193	1,000 sq. ft.	0.93
	Garages	95	180	280	per service bay	0.52
	Gas Stations (no other automotive services)					
	with convenience store	70	440	440	1,000 sq. ft.	0.63
	without convenience store	38	193	193	1,000 sq. ft.	0.19
	Gym					
	with shower	400	275	275	1,000 sq. ft.	2.50
	without shower	50	193	193	1,000 sq. ft.	0.24
	Hauled Waste				see note 1 below	
	High Tech Medical Manufacturing				see note 1 below	
	Hospitals					
	Convalescent	125	250	100	per bed	0.57
	General	175	250	100	per bed	0.80
	Veterinarian	6	250	100	per cage	0.03
	Hotels/Motels					
	without restaurant	100	426	165	sleeping rooms	0.66
	B&B/Online Rentals/Vacation Rental homes	100	275	275	per occupant	0.62
	Hydroponic Cultivation (including cannabis)	1.2	193	193	per plant	0.01
	Laundromats					
	High efficiency washers	250	193	193	washing machines	1.22
	Regular washers	500	206	151	washing machines	2.32
	Library	190	200	200	1,000 sq. ft.	0.95
	Machine shops	152	180	280	1,000 sq. ft.	0.84
	Markets	38	800	800	1,000 sq. ft.	0.57
	Nail salon	10	193	193	Seat	0.05
	Offices					
	Business	76	130	80	1,000 sq. ft.	0.26
	Chiropractic Office	190	130	80	Exam. room	0.65
	Dental	190	130	80	Exam. room	0.65
	Medical (clinic)					
	with central handwashing stations	175	275	275	Exam. room	1.09
	with office, surgery, lab and treatment rooms	190	275	275	Exam. room	1.19
	offices with sink	125	275	275	Exam. room	0.78
	offices without sink	100	275	275	Exam. room	0.62
	Veterinarian					
	with office, surgery, and treatment rooms	130	275	275	Exam. room	0.81
	Pet Groomers	260	193	193	1,000 sq. ft.	1.27
	Post office	190	130	80	1,000 sq. ft.	0.65
	Resort				see note 1 below	

Restaurants						
Dine-in						
With DW & garbage disp.	6	1,000	600	per seat		0.09
With DW or garbage disp.	6	619	371	per seat		0.06
Without DW & garbage disp.	6	238	143	per seat		0.03
Take-out	475	238	143	1,000 sq. ft.		2.30
Rest homes	125	250	100	per bed		0.57
Retail stores	38	150	150	1,000 sq. ft.		0.16
Schools						
Elementary	9	130	100	per student day		0.03
High	14	130	100	per student day		0.05
with entertainment facilities	19	275	275	per student day		0.12
Service stations	380	180	280	set of gas pumps		2.09
	38	180	280	add per service bay		0.21
Shoe repair	190	200	200	1,000 sq. ft.		0.95
Spa with various beauty treatments	38	275	275	per chair		0.24
Supermarkets	76	275	275	1,000 sq. ft.		0.47
Tasting Rooms						
Ale, Winery (no food)	120	193	193	1,000 sq. ft.		0.59
Ale, Winery (with food)	240	440	440	1,000 sq. ft.		2.15
Theaters	2	200	200	per seat		0.01
Trash Enclosures				see note 1 below		
Warehouse				see note 1 below		
Winery				see note 1 below		
Others as determined by the General Manager				see note 1 below		
<b>ESD Formula:</b>						
ALL COMMERCIAL ESDs TO BE DETERMINED BY THE GENERAL MANAGER USING THE FOLLOWING FORMULA:						
ESD = ( TSS x FLOW x 0.33 ) / ( SFD TSS x SFD FLOW ) + ( BOD x FLOW x 0.33 ) / ( SFD BOD x SFD FLOW ) + ( FLOW x ( 0.34 / SFD FLOW ) )						
<b>Monitored User Charge Formula:</b>						
Charge Formula: Sum of the following:						
	Flow	\$ 0.01306		per gallon/day (gpd) multiplied by 365 days or the number of days in the billing period		
	BOD	\$ 0.75671		per pound/day (lb/day) multiplied by 365 days or the number of days in the billing period		
	TSS	\$ 0.12986		per pound/day (lb/day) multiplied by 365 days or the number of days in the billing period		
<p>Note 1: For non-standard uses, warehouses and when agreement on a use category cannot be reached, the General Manager, in his or her sole discretion, may</p> <p>a) base charges on the user's actual or estimated contribution of wastewater into the District's facilities in terms of flow, biological oxygen demand (BOD), and total suspended solids (TSS), and</p> <p>b) calculate the user's charge using the above Charge Formula. The user shall provide verifiable data, as requested by the General Manager, for the charge to be determined.</p> <p>Note 2: In general, users with annual average TSS and/or BOD over 1,000 mg/L and users with annual average Flow greater than 5,000 gallons per day should be</p>						
<b>Definitions</b>	Flow = Gallons per Day		TSS = Total Suspended Solids			
	BOD = Biological Oxygen Demand		DW = dishwasher			
	ESD = Equivalent Single Family Dwelling		disp. = disposal			
* Note that no Capacity Charge is assessed when existing structures are converted in accordance with CGC 65852.2 (e)(1)(A) as determined by the County of Sonoma.						

**Appendix B: Wastewater Rate Study  
Supplementary Tables**



## SONOMA VALLEY CSD

# Wastewater COS Rate Study 2020

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### Supplementary Tables

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Table B5	Debt Service
Table B6	Fund Balance & Policies
Table B7	Cash Flow
Table B8	Rate Calculation
Table B9	Proposed Rate Summary



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

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**Table B1: Current Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SONOMA VALLEY CSD**

## Current Rates

**Residential with Public Water Connection**

<b>Annual Fixed Charge - \$/ESD</b>	\$740.00
per month	\$61.67

**Volumetric Charge - \$/1000 gal**

Residential	\$5.99
-------------	--------

*Applies to Residential customers with a City of Sonoma Water District water bill*

**Residential Without Public Water Connection & Commercial**

**Annual Fixed Charge - \$/ESD**

All Customers per ESD per year	\$1,057.00
per month	\$88.08

*Source: Sonoma Water/Lynne Rosselli, District and Zones\_annual rates\_summary, via email 9/9/19*

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**Table B2: Customer Information**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SONOMA VALLEY CSD**

## Customer Information

### FY 2019-20 Customer Master List

Customer Class	Parcels	ESDs	2019-20 Revenue
Residential	9,654	13,113.1	\$12,956,838
Single Family Dwelling	8,472	8,673	
Multi Family	1,172	3,525	
Mobile Home	10	915	
Commercial	514	1,756.9	\$1,841,999
Industrial	33	887.3	\$796,961
Irrigated Farm	14	18.2	\$19,244
Dry Farm	3	6.2	\$6,553
Recreational	10	85.5	\$90,405
Institutional	36	366.3	\$374,892
Miscellaneous	5	8.3	\$8,741
Governmental	30	1,056.8	\$535,951
<b>Total</b>	<b>10,299</b>	<b>17,298.7</b>	<b>\$16,631,585</b>

### FY 2019-20 Residential Consumption

	# accounts	#ESDs	Billable Units (kgal) <sup>1</sup>
Single Family Dwelling	8,400	8959.3	352,440
Multi Family	10	914.6	33,234
Mobile Home	232	1457.4	52,398
<b>Total</b>	<b>8,642</b>	<b>11,331.3</b>	<b>438,072</b>

1 - Billable units calculated using lowest winter water bill (Nov - March) times number of annual billing periods

Budget Revenue Contingency/Delinquency Factor -4%

Source: Sonoma Water/Lynne Rosselli

**Table B3: O&M Expense Projection**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SONOMA VALLEY CSD**

## O&M Expense Projection

	2018-19	2019-20	Projection <sup>1</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
		Adj. Dec LRF						
<b>EXPENDITURES</b>								
<b>Services and Supplies</b>								
51032 Janitorial Services	\$4,000	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
51061 Maintenance - Equipment	\$500,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51076 Maint - FACOPS	\$1,073,000	\$2,140,900	3.0%	\$2,205,127	\$2,271,281	\$2,339,419	\$2,409,602	\$2,481,890
51201 Administration Costs	\$115,000	\$110,000	3.0%	\$113,300	\$116,699	\$120,200	\$123,806	\$127,520
51206 Accounting/Auditing Services	\$12,000	\$7,000	3.0%	\$7,210	\$7,426	\$7,649	\$7,879	\$8,115
51211 Legal Services	\$35,000	\$25,000	3.0%	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982
51231 Testing/Analysis	\$100,000	\$45,000	3.0%	\$46,350	\$47,741	\$49,173	\$50,648	\$52,167
51241 Outside Printing & Binding	\$15,000	\$12,000	3.0%	\$12,360	\$12,731	\$13,113	\$13,506	\$13,911
51244 Permits/License/Fees	\$50,000	\$55,000	3.0%	\$56,650	\$58,350	\$60,100	\$61,903	\$63,760
51401 Rents & Leases-Equipment	\$50,000	\$13,000	3.0%	\$13,390	\$13,792	\$14,205	\$14,632	\$15,071
51602 Business Travel/Mileage	\$3,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51803 Other Contract Services	\$1,429,000	\$788,367	3.0%	\$812,018	\$836,379	\$861,470	\$887,314	\$913,933
51902 Telecommunication Usage	\$10,000	\$8,000	3.0%	\$8,240	\$8,487	\$8,742	\$9,004	\$9,274
51916 County Services	\$75,000	\$65,000	3.0%	\$66,950	\$68,959	\$71,027	\$73,158	\$75,353
51917 District Operations Chgs	\$6,400,000	\$6,861,745	Varies	\$6,516,297	\$6,692,458	\$6,550,510	\$6,857,419	\$7,559,601
51921 Equipment Usage Charges	\$443,300	\$430,000	3.0%	\$442,900	\$456,187	\$469,873	\$483,969	\$498,488
52061 Fuel/Gas/Oil	\$12,000	\$7,000	3.0%	\$7,210	\$7,426	\$7,649	\$7,879	\$8,115
52072 Chemicals	\$380,000	\$350,000	3.0%	\$360,500	\$371,315	\$382,454	\$393,928	\$405,746
52081 Medical/Laboratory Supplies	\$35,000	\$30,000	3.0%	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778
52091 Memberships/Certifications	\$25,000	\$20,000	3.0%	\$20,600	\$21,218	\$21,855	\$22,510	\$23,185
52111 Office Supplies	\$15,000	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
52117 Mail and Postage Supplies	\$2,000	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
52141 Minor Equipment/Small Tools	\$30,000	\$22,000	3.0%	\$22,660	\$23,340	\$24,040	\$24,761	\$25,504
52142 Computer Equip/Accessories	\$18,000	\$8,500	3.0%	\$8,755	\$9,018	\$9,288	\$9,567	\$9,854
52143 Software/Licensing Fees	\$10,000	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
52171 Water Conservation Program	\$0	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
52191 Utilities	\$1,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
52193 Utilities-Power	\$650,000	\$500,000	3.0%	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637
<b>Total</b>	<b>\$11,492,300</b>	<b>\$11,516,512</b>		<b>\$11,310,707</b>	<b>\$11,630,700</b>	<b>\$11,636,900</b>	<b>\$12,096,400</b>	<b>\$12,955,752</b>
	<b>2018-19</b>	<b>2019-20</b>	<b>Projection</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
Change in Encumbrance/Adjustment	(\$3,184,356)	(\$3,184,356)						
<b>Total</b>	<b>(\$3,184,356)</b>	<b>(\$3,184,356)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL EXPENDITURES</b>	<b>\$8,307,944</b>	<b>\$8,332,156</b>		<b>\$11,310,707</b>	<b>\$11,630,700</b>	<b>\$11,636,900</b>	<b>\$12,096,400</b>	<b>\$12,955,752</b>
% fixed		70%						
% volumetric		30%						

1 - Expense projection based on Operations Services CPI, LRF Draft 9/9/19  
Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRF Draft via email 12/2019

**Table B4: Capital Improvement Plan**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SONOMA VALLEY CSD**

## Capital Improvement Plan

CIP	Long Range Financial Plan 12-20-19 Project Title	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total Through FY 2028-29
V0073	Agua Caliente Pipeline Crk Crossing	\$88,747		\$26,000				\$114,747
V0081	Reline EQ Basins	\$3,160,144						\$3,160,144
V0091	WWTP Pump/Piping Upgrade	\$0						\$0
V0093	Chase St. Bridge Sewer Replace	\$19,347			\$9,000			\$28,347
V0064	Trunk Main Replacement Phase 4A	\$6,908,922						\$6,908,922
#####	Trunk Main Replacement Phase 4B 1	\$90,000						\$90,000
V0139/140	Trunk Main Replacement Phase 4B 2	\$4,715,259	\$286,000					\$5,001,259
V0142/0143	Trunk Main Replacement Phase 4C	\$397,000	\$5,333,000	\$270,000				\$6,000,000
Vi164/165	Trunk Main Replacement Phase 5	\$1,307,664	\$55,000	\$7,315,000	\$7,310,000	\$235,000		\$16,222,664
V0154	TP Electrical Resiliency	\$2,000,000	\$315,000	\$145,000				\$2,460,000
V0171	Recycled Water Pipeliune Easement Ricci P	\$0						\$0
V0175	Headworks Rehabilitation	\$400,000	\$2,575,000	\$20,000				\$2,995,000
tbd	Future Sewer Trunk/Collection System Rep	\$0				\$4,250,000	\$4,500,000	\$8,750,000
tbd	LHMP Mitigation Projects	\$250,000	\$260,000	\$270,000	\$280,000	\$290,000	\$300,000	\$1,650,000
tbd	Outfall Line Relining							\$0
tbd	Clarifiers Seismic Retrofit	\$800,000	\$0	\$3,060,000				\$3,860,000
190841	Assets Equipment & Intg	\$0						\$0
	Miscellaneous Expenditures	\$0						\$0
								\$0
	<b>Total</b>	<b>\$20,137,083</b>	<b>\$8,824,000</b>	<b>\$11,106,000</b>	<b>\$7,599,000</b>	<b>\$4,775,000</b>	<b>\$4,800,000</b>	<b>\$57,241,083</b>

**Table B5: Debt Service**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SONOMA VALLEY CSD**

## Debt Service

Payment Schedule (FY)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>OUTSTANDING LOANS/BONDS</u></b>							
1998/2005/2013 Rev Bonds	\$1,582,613	\$1,605,565	\$1,599,350	\$1,593,250	\$1,595,150	\$1,594,850	\$793,650
2013 Rev Bond Project Fund	\$437,702	\$437,782	\$442,972	\$442,972	\$442,972	\$442,972	\$442,972
State Loan: Tertiary Upgrade	\$145,459	\$145,523	\$147,121	\$147,121	\$147,121	\$147,121	\$147,121
State Loan: Biosolids	\$199,281	\$199,208	\$202,112	\$202,112	\$202,112	\$202,112	\$202,112
<b>Total</b>	<b>\$2,365,055</b>	<b>\$2,388,078</b>	<b>\$2,391,555</b>	<b>\$2,385,455</b>	<b>\$2,387,355</b>	<b>\$2,387,055</b>	<b>\$1,585,855</b>

*Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRF Draft via email 9/9/2019*

## Fund Balance & Policies

### Undes/Unreserved Beginning Fund Balance 7/1/2019

33080100	Sonoma Valley CSD	\$4,359,930
33080200	Sonoma Valley Expansion	\$15,739,766
33080300	Sonoma Valley Revenue Bonds	\$1,328,707
33080500	Sonoma Valley SRF Loan	\$181,392
33080600	Sonoma Valley SRF Loan Res	\$379,266
33080700	Sonoma Valley State Loan Res	\$163,244
33081000	Sonoma Valley Wet Wtr Mit	\$313,436
	<b>Total</b>	<b>\$22,465,741</b>

### 1. Fund Balance Policy

Operations Fund Target - at least 6 months budgeted Operating Expenses

Construction Fund Target - 3% asset value

### 2. Debt Service Coverage Policy

Coverage Requirement - 1.2x net operating expenses

### 3. Growth Estimates

Estimated 5 new users per Fiscal Year, 1.0 ESDs

Connection fee revenue estimated based on 3% per year CPI adjustment to current capacity fee

### 3. Rate Structure

Residential customers with public water connection - 70% Fixed, 30% Volumetric Rate Structure

All others - 100% fixed rate

Source: Sonoma Water/Lynne Rosselli, LRF Draft via email 9/9/2019

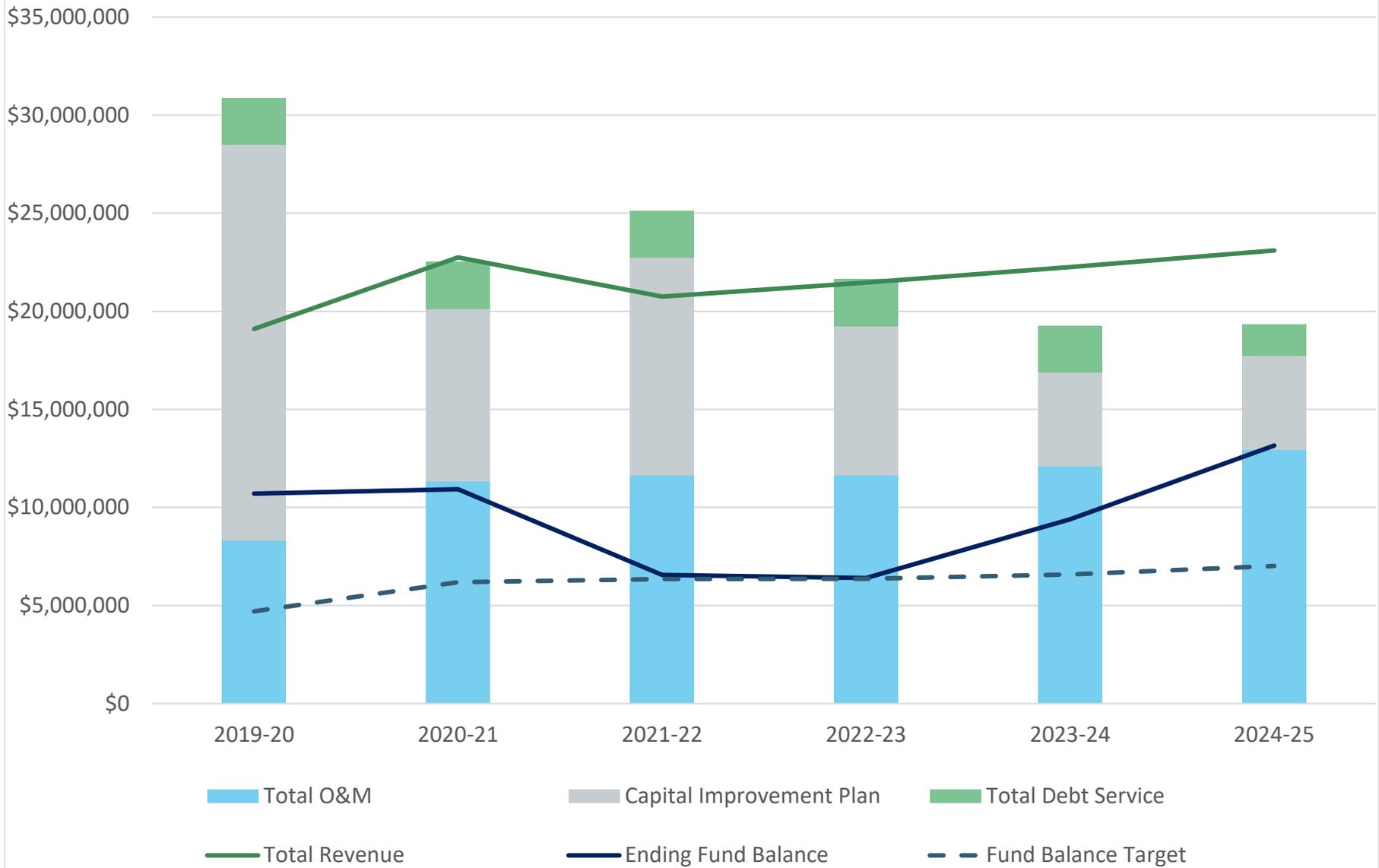
**Table B7: Cash Flow**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SONOMA VALLEY CSD**

## Cash Flow

Five-Year Projection Fiscal Year	Reference	Budget 2019-20	1 2020-21	2 2021-22	3 2022-23	4 2023-24	5 2024-25
Proposed Rate Increase			3.5%	3.5%	3.5%	3.5%	3.5%
Growth			0.2%	0.2%	0.2%	0.2%	0.2%
Beginning Fund Balance	Table 5	\$22,465,741	\$10,708,455	\$10,925,508	\$6,556,915	\$6,402,311	\$9,397,690
<b><u>REVENUE</u></b>							
Sanitation Charges on Tax Roll	Table 2	\$16,631,585	\$17,246,058	\$17,883,233	\$18,543,949	\$19,229,076	\$19,939,516
Sanitation Charges Billed	LRFP	\$2,202,788	\$2,284,172	\$2,368,564	\$2,456,073	\$2,546,815	\$2,640,910
Recycled Water Sales	LRFP	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Connection Fees	LRFP	\$0	\$341,000	\$351,510	\$362,060	\$372,920	\$384,110
Interest on Pooled Cash <sup>1</sup>		\$224,657	\$107,085	\$109,255	\$65,569	\$64,023	\$93,977
Federal Capital Grants	LRFP		\$2,724,000				
Rent from PV Facilities	LRFP	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
Proposed Debt Proceeds	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Revenue</b>		<b>\$19,100,031</b>	<b>\$22,743,315</b>	<b>\$20,753,562</b>	<b>\$21,468,651</b>	<b>\$22,253,834</b>	<b>\$23,099,513</b>
<b><u>EXPENDITURES</u></b>							
Total O&M	Table 3	\$8,332,156	\$11,310,707	\$11,630,700	\$11,636,900	\$12,096,400	\$12,955,752
Capital Improvement Plan	Table 4	\$20,137,083	\$8,824,000	\$11,106,000	\$7,599,000	\$4,775,000	\$4,800,000
Total Debt Service	Table 5	\$2,388,078	\$2,391,555	\$2,385,455	\$2,387,355	\$2,387,055	\$1,585,855
<b>Total Expenditures</b>		<b>\$30,857,317</b>	<b>\$22,526,262</b>	<b>\$25,122,155</b>	<b>\$21,623,255</b>	<b>\$19,258,455</b>	<b>\$19,341,607</b>
Net Revenue		(\$11,757,286)	\$217,053	(\$4,368,593)	(\$154,604)	\$2,995,379	\$3,757,906
Ending Fund Balance		<b>\$10,708,455</b>	<b>\$10,925,508</b>	<b>\$6,556,915</b>	<b>\$6,402,311</b>	<b>\$9,397,690</b>	<b>\$13,155,596</b>
<i>Fund Balance Target</i>		<i>\$4,704,547</i>	<i>\$6,193,823</i>	<i>\$6,353,819</i>	<i>\$6,356,919</i>	<i>\$6,586,669</i>	<i>\$7,016,345</i>
Debt Service Coverage		4.5	4.8	3.8	4.1	4.3	6.4

*1 - 1% earnings on beginning fund balance*

## Five-Year Cash Flow Projection - Proposed Rate Increases



**Table B8: Rate Calculation**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SONOMA VALLEY CSD**

## Rate Calculation

<b>Total Revenue Requirement</b>		<b>\$17,246,058</b>
 <b><u>Residential Without Public Water Connection &amp; Commercial</u></b>		
Annual Fixed Charge - \$/ESD		\$1,094
# ESDs <sup>1</sup>	Table 2	5,328
Rate Revenue		\$5,828,793
 <b><u>Residential with Public Water Connection</u></b>		
Annual Fixed Charge - \$/ESD	70%	\$766.00
# ESDs <sup>1</sup>	Table 2	11,353
Rate Revenue		\$8,696,112
 Volumetric Charge - \$/1000 gal	 30%	 \$6.20
Billable water use <sup>2</sup>	Table 2	438,896
Rate Revenue		\$2,721,153
 <b>Total Rate Revenue</b>		 <b>\$17,246,058</b>

1 - Includes delinquency factor and growth rate

2 - Includes growth rate

**Table B9: Proposed Rate Summary**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SONOMA VALLEY CSD**

## Proposed Rate Summary

Five-Year Projection	Current	1	2	3	4	5
Fiscal Year	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Increase		3.5%	3.5%	3.5%	3.5%	3.5%
<b>Residential with Public Water Connection</b>						
Annual Fixed Charge - \$/ESD (70% Fixed)	\$740	\$766	\$793	\$820	\$849	\$879
per month	\$61.67	\$63.83	\$66.06	\$68.37	\$70.76	\$73.24
Volumetric Charge - \$/1000 gal (30% Volumetric)	\$5.99	\$6.20	\$6.42	\$6.64	\$6.87	\$7.11
<i>Applies to Residential customers with City of Sonoma or Valley of the Moon Water District water bill</i>						
<b>Residential Without Public Water Connection &amp; Commercial</b>						
Annual Fixed Charge - \$/ESD						
All Customers per ESD per year	\$1,057	\$1,094	\$1,132	\$1,172	\$1,213	\$1,255
per month	\$88.08	\$91.17	\$94.36	\$97.66	\$101.08	\$104.62



**Sonoma  
Water**

**South Park  
County Sanitation District  
Wastewater Rate Study**

**Final Report  
May 5, 2020**



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May 5, 2020

Lynne Rosselli  
Finance Manager  
Sonoma Water  
404 Aviation Blvd  
Santa Rosa, CA 95403

Re: South Park County Sanitation District 2020 Wastewater Rate Study

Bartle Wells Associates (BWA) is pleased to submit to Sonoma Water the attached 2020 Wastewater Rate Study for South Park County Sanitation District (District).

This study presents BWA's analysis of the operating and non-operating expenses of the District's wastewater enterprise and provides updated five-year cash flow projections and rates for FY 2020. The primary purpose of this study is to assess the long-term financial condition of the District and provide recommendations to recover the cost of wastewater service equitably between ratepayers.

The enclosed report recommends increasing wastewater rates to recover the increasing cost of operations and capital improvement. Recommendations were developed with substantial input from Agency staff and engineering subconsultant Woodard & Curran. BWA finds that the rates and charges proposed in this report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. Financial projections generally align with Sonoma Water's internal long-range financial plan for the District. BWA can confirm that the proposed rates are fair and reasonable to the District's customers.

We have enjoyed working with Sonoma Water on this rate study. Please contact us with any future questions about this study and the recommended rates.

Sincerely,

Doug Dove, CIPMA  
Principal

Abigail Seaman  
Consultant

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- Appendix A: Proposed 2021 Exhibit A
- Appendix B: Wastewater Rate Study Supplementary Tables
- Appendix C: City of Santa Rosa Ordinance No. 4034

# 1 Executive Summary

## 1.1 Background

South Park County Sanitation District (District), operated by Sonoma Water, provides wastewater service to approximately 2,000 accounts, serving over 4,000 residences in the unincorporated area of South Santa Rosa. The District's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from annual wastewater rates) aim to recover the cost to operate and maintain the wastewater system. The District faces ongoing increases to operations costs and annual capital project costs to repair and replace aging infrastructure. The District is also preparing to be annexed to the City of Santa Rosa (City)'s wastewater enterprise, which currently charges its wastewater customers monthly fixed and volumetric rates. In order to smooth this transition and encourage conservation, the District has implemented a plan to gradually begin basing a portion of its bills on volumetric sewer use. The first year of the implementation plan was successfully implemented in FY 2019 and the District collected 20% of its rate revenue from volumetric rates. Fiscal year 2021 marks the third year of the implementation schedule, in which 60% of rate revenue will be collected by volumetric rates.

Sonoma Water has retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update for FY 2021 which examines any changes in current and projected costs and determines cost-of-service based rates that distribute costs equally among ratepayers. Basic objectives of the rate study include:

- Identify rate setting principles.
- Update long-term financial projections to determine future annual wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service

Based on input from Sonoma Water staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for operations and capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws

## 1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require Sonoma Water's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** Sonoma Water must mail a notice of proposed rate increases to all affected property owners in the District. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The Sonoma Water must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

### 1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed and variable charges levied on each customer based on an assigned equivalent single family dwelling unit (ESD). Rates recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing wastewater rates, charges, and fees. In developing wastewater rates, it is important to note that there is no “one-size-fits-all” approach for establishing cost-based wastewater rates.

BWA used the following criteria when developing recommendations for the District’s wastewater rates and finances:

- 1) *Revenue Sufficiency:* Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact:* While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable:* Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical:* Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

### 1.4 Wastewater System Overview

The District serves 4,267 ESDs within a 1,460-acre service area shown **Figure 1** below.

**Figure 1:South Park Service Area Map**



The wastewater collection system includes all residential and commercial customers within the District. The District’s main source of wastewater revenue is annual wastewater rates on each customer’s property tax bill. Rates were last increased on July 1, 2019. Rates should be increased to keep up with cost increases and the current rate structure should be updated to reflect the cost of wastewater service for each customer class. In the next few years, the City will assume administrative oversight over the District and begin billing the District’s residents for wastewater use based on the City’s wastewater rates.

### 1.5 Factors Driving Rate Increases

The primary wastewater cost factors affecting the District are ongoing operations cost increases and the \$2 million Capital Improvement Plan which will address ongoing maintenance, repair, and replacement needs.

### 1.6 Current Wastewater Rates – SPCSD

The District’s current wastewater rates are billed on the property tax bill according to the Sonoma Water’s evaluation of each customer’s Equivalent Single-Family Dwelling (ESD). The District has adopted rates for two years of the 5-year plan to adjust rates for South Park CSD. The District’s current wastewater rates are shown in Table 1 below.

**Table 1 Sonoma Water - South Park CSD Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Annual Fixed Charge

All Customers per ESD per year	\$546
per month	\$45.50

*Equivalent Single Family Dwelling (ESD) assigned per parcel based on probable quantity and quality of sewage effluent generated.*

Annual Volumetric Charge (per 1,000 gallons)

Residential (Standard Strength)	\$9.95
---------------------------------	--------

Non-Residential	
Low Strength	\$8.27
Standard Strength	\$9.95
Medium Strength	\$11.03
High Strength	\$13.63

The District currently collects 60% of its revenue from fixed charges and 40% of its revenue from variable charges

When the City assumes control over the District, all customers will begin paying the City’s wastewater rates. The City’s current rates are shown in Table 2.

**Table 2 Current Wastewater Rates – City of Santa Rosa**

*Wastewater rates effective July 1, 2019*

Monthly Service Charge

Single Family	\$25.23
---------------	---------

Multi Family and Commercial	
5/8" and 3/4"	\$25.23
1"	\$60.74
1.5"	\$119.91
2"	\$190.95
3"	\$356.66
4"	\$593.40
6"	\$1,185.26

Monthly Usage Charge (per 1,000 gallons)

Low Strength Commercial	\$12.05
Standard Strength Residential/Commercial	\$14.50
Medium Strength Commercial	\$16.08
High Strength Commercial	\$19.86

The City bills monthly for wastewater service. Single family and Duplex users pay a fixed fee per residence and a volumetric fee based on a “sewer cap” – the lowest winter water use month of the previous year. Each month, single family users are billed either for their actual water usage or the sewer cap, whichever is less. Multi-Family and Commercial users pay a fixed fee by water meter size regardless of water use and are billed for total monthly water usage (no cap) based on strength factor. The City currently collects 20% of its revenue from fixed charges and 80% of its revenue from variable charges.

An abrupt shift to from the District’s rate structure to the City’s would change user bills dramatically. Instead, BWA recommends that the District begin charging a small portion of the total charge based on water consumption and increase the portion of volumetric revenue each year until it is comparable to the City’s structure.

## 1.7 Proposed Wastewater Rates

Table 3 shows the proposed wastewater rates which reflect a 3.5% rate revenue increase, 40% fixed rate revenue collection and 60% volume rate revenue collection.

**Table 3 2020-21 Proposed Wastewater Rates**

*Wastewater rates effective July 1, 2019*

Fixed Rate - All Customers per ESD per year	\$546
per month	\$45.50
<u>Volumetric Rate (per 1000 gallons)</u>	
Low Strength Commercial	\$6.90
Standard Strength Residential/Commercial	\$8.32
Medium Strength Commercial	\$9.23
High Strength Commercial	\$11.39

## 2 Wastewater Financial Projections and Rates

### 2.1 Wastewater Financial Overview

BWA conducted an independent evaluation of the District's wastewater enterprise finances. Key observations include the following:

- Wastewater rates have increased an average of 3% per year for the last 10 years. This has allowed the District to keep up with operations cost increases and capital improvement needs.
- The wastewater enterprise has debt service requirements totaling approximately \$220,000 per year.
- The current Capital Improvement Plan totals \$7.2 million and addresses ongoing maintenance, repair and replacement needs.
- Projected wastewater expenses were determined based on input from Sonoma Water Staff. Projections are based on the average annual change in CPI (3.0% per year)
- The current wastewater rate structure can be adjusted to give customers more control over their bills while preparing to be billed by the City's wastewater rates. This will accurately and equitably recover the cost of the District's wastewater service while allowing for this smoothed transition.

### 2.2 Current Monthly Wastewater Rates

Current rates (as shown on Table 1) are determined by Equivalent Single-Family Dwelling (ESD) using an ESD assignment schedule based on customer class and size. The annual charge for each customer is calculated using the fixed charge plus the volume charge multiplied by annual billable water usage.

Many of the District's customers are billed for water use by the City of Santa Rosa. Water use data from the City will determine the basis of volumetric charges each year for those customers. Residential users pay a fixed fee per ESD regardless of water use and a volumetric charge based on sewer demand using the minimum between actual water use and the prior year sewer cap established by the City. Multi-Family and Commercial users pay a fixed fee by water meter size regardless of water use and are billed for total annual water usage (no cap) based on strength factor.

Customers who do not receive water bills from the City are considered sewer-only accounts and are billed based on comparable water usage for their customer class. Residential sewer only accounts are billed based on number of residents (estimated by number of bedrooms +1). Non-Residential sewer-only accounts are evaluated for estimated sewer impact based on square footage and City of Santa Rosa Ordinance No. 4034 (Appendix C).

## Current Wastewater Accounts

The District serves 2,100 wastewater accounts, the majority of which are single family residential. A current customer listing is provided in Table 4 below.

**Table 4 South Park CSD – Customer Listing**

Customer Class	Parcels	ESDs
Residential	1,946	3,694.3
Single Family Dwelling	1,574	1,606.7
Multi Family	357	1,241.5
Mobile Home	15	846.1
Commercial	101	390.3
Industrial	53	145.3
Institutional	5	18.1
Miscellaneous	1	1.8
Governmental	6	41.8
<b>Total</b>	<b>2,112</b>	<b>4,291.6</b>

South Park CSD is a relatively slow-growth community. The District can conservatively expect 0.1% wastewater revenue growth per year as a result of new sewer connections or increased demand.

## 2.3 Current Wastewater Flow

The wastewater rate study references 2019-20 water use data from the City for the calculation of rates and charges on the 2020-21 property tax roll. Consumption is shown by customer class according to Table 5 below.

**Table 5: South Park CSD Wastewater Usage**

Customer Type	Estimated Wastewater Usage (kgals)
Residential	165,561
Commercial Low Strength	772
Commercial Stan Strength	38,046
Commercial Med Strength	11,272
Commercial High Strength	2,135
<b>Total</b>	<b>217,786</b>

## 2.4 Factors Affecting 5-Year Financial Plan

The District will need annual rate increases to keep up with ongoing operating cost inflation and the current Capital Improvement Plan. Key cost components over the next five years are summarized as follows.

### 2.4.1 Ongoing Operating Cost Inflation

The District’s wastewater operations budget totals approximately \$2.6 million for FY 2019/20. The District’s largest expense is the Santa Rosa Subregional Sewage System Capacity Charges, totaling \$1.8 million. All operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI except for the Santa Rosa Capacity Charges, which are projected to increase approximately 5% per year over the next five years.

## 2.4.2 Debt Obligations

In addition to operating costs, the District pays annual debt service payments on one debt issuance according to the schedule shown on Table 6.

**Table 6: Debt Obligations**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Revenue Bond Repayment	\$232,170	\$226,295	\$226,295	\$226,295	\$226,295	\$226,295

## 2.4.3 Current Wastewater Capital Plan

The District’s Wastewater Capital Improvement Plan totals \$7.2 million through 2024/25 and addresses aging infrastructure and other necessary improvements. Costs are provided in Table 7 based on engineering estimates as of 2019/20. A full schedule of projects is provided in the Appendix tables.

**Table 7: Capital Improvement Plan Summary**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CIP	\$375,000	\$375,000	\$2,500,000	\$750,000	\$2,500,000	\$750,000

## 2.5 Wastewater Enterprise Revenue Requirements

The wastewater cash flow projection incorporates the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

### **Growth & Water Demand Assumptions**

- The District is a relatively slow-growth community and BWA has conservatively assumed 0.2% growth in new connections or increased demand, which will contribute to rate revenue.
- Wastewater system demand (estimated with ESD ratings) is assumed to stay constant from FY 2019/20 (excluding estimated growth of 0.2% per year)

### **Revenue Assumptions**

- Rate revenue will increase according to the proposed rate increases assuming a relatively static number of customers and water consumption with the exception of growth projections.
- Other revenues are projected to remain stagnant from 2019/20 budget amounts.
- Annual interest earnings are estimated at 1% of beginning fund balance

### **Expense Assumptions**

- Operations and maintenance costs are based on the 2019/20 budget and most costs escalate at the annual rate of 3.0% to account for future cost inflation.
- Capital expenditures include \$7.2 million in projects through FY 2024/25

Based on the assumptions above, BWA created a cash flow projection that determined 3.5% annual wastewater rate increases are needed for the next 5 years. The proposed schedule is shown on Table 8 below.

**Table 8: Proposed Wastewater Rate Increases**

	2020-21	2021-22	2022-23	2023-24	2024-25
Proposed Rate Increases	3.5%	3.5%	3.5%	3.5%	3.5%

The proposed annual wastewater rate revenue increases accomplish the following:

- Projected operations and Capital Improvement Plan funding
- Minimum debt service coverage of 1.2x net operating revenues over the next 5 years
- Minimum operations fund balance of 6 months operating costs
- Minimum construction fund balance of 3% asset value

The District would need to mail a Proposition 218 notice to notify ratepayers of the proposed wastewater rate structure changes as outlined in the next section. Rates would be effective following a mailed Proposition 218 notice and successful public hearing.

## 2.6 2019-20 Wastewater Rate Structure Recommendations

In addition to the proposed rate increases, BWA recommends a wastewater rate structure change in 2020-21 to align with the cost of wastewater service while allowing customers more control over their bill. Proposed rates follow the implementation schedule to prepare the District to be billed monthly by the City of Santa Rosa’s rates, which include a fixed portion and a volumetric portion. Each year, the District will evaluate the impact of the previous year’s rates on the community and its revenues, then evaluate whether it is appropriate to collect more revenue from variable charges and issue a new 218 notice.

The proposed fixed charge per ESD for 2020-21 is shown on Table 9 below. The District is projected to collect 40% of rate revenue from fixed charges.

**Table 9: Proposed Fixed Rates**

*Wastewater rate effective July 1, 2020*

All Customers per ESD per year	\$396
per month	\$45.50

*Equivalent Single-Family Dwelling (ESD) assigned per parcel based on probable quantity and quality of sewage effluent generated.*

Proposed volumetric rates for 2020-21 are shown on Table 10. The District is projected to collect 60% of revenue from variable charges.

**Table 10: Proposed Volumetric Rates**

*Wastewater rate effective July 1, 2020*

Volumetric Rate (per 1,000 gallons)

Low Strength Commercial	\$6.90
Standard Strength Residential/Commercial	\$8.32
Medium Strength Commercial	\$9.23
High Strength Commercial	\$11.39

The fixed charge plus the variable charge will equal the total charge billable to each customer.

## 2.7 Commercial Customer Classes

Commercial customers will be billed based on strength factor using comparable customer classes to the City of Santa Rosa, which BWA believes to be a reasonable and equitable assessment of wastewater strength. Example strengths are shown on Table 11.

**Table 11: Commercial Strength Class Examples**

Low Strength	Car Wash Glass Products Groundwater
Standard/Domestic Strength	Residential - All Electronics Manufacturer General Commercial/Industrial Newspaper Water Purifier
Medium Strength	Combined General/Commercial/Food Hotel/Motel with Restaurant
High Strength	Bakery-Commercial Food Processor Meat Cutter Miller Mortuary Restaurant Supermarket

## 2.8 2020-21 Billing Strategy

The billing strategy for each customer class is as follows:

Customer Class # Customers	Residential	
Breakdown	Residential Sewer and Water (On City Water)	Residential Sewer Only
Fixed Charge	<ul style="list-style-type: none"> <li>• Fixed Rate - rate per ESD (40% total expenses)</li> <li>• Volumetric Rate - bill based on water usage and water cap from City of Santa Rosa (60% total expenses)</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed Rate - rate per ESD (40% total expenses)</li> <li>• Volumetric Rate - bill based on estimated water cap (household size) (60% total expenses)</li> </ul>
Variable Charge	<ul style="list-style-type: none"> <li>• Sewer cap calculated using winter water usage (November - March average) for the prior year</li> <li>• Total annual water use based on minimum monthly usage between sewer cap and actual water use</li> </ul>	<ul style="list-style-type: none"> <li>• Use Santa Rosa City-Wide Average Cap for New and Sewer Only Accounts to estimate sewer cap based on number of residents (# bedrooms + 1)</li> <li>• Mobile Home parks use sewer cap of 3.4 per dwelling unit consistent with current Santa Rosa practice</li> </ul>

Customer Class	Commercial	
Breakdown	Commercial Sewer and Water (On City Water)	Commercial Sewer Only
Fixed Charge	<ul style="list-style-type: none"> <li>• Fixed Rate - rate per ESD (40% total expenses)</li> <li>• Volumetric Rate - Bill based on type of use and total annual water use from City of Santa Rosa (year round, no cap) (60% total expenses)</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed Rate - rate per ESD (40% total expenses)</li> <li>• Volumetric Rate - Bill based on type of use and estimated sewer demand (square feet) (60% total expenses)</li> </ul>
Variable Charge		<ul style="list-style-type: none"> <li>• Use Santa Rosa City-Wide Average Cap for New and Sewer Only Accounts to estimate sewer demand. Commercial accounts use a sewer cap of 4.9 per 2,500 sqft area based on usage from a typical single family dwelling</li> <li>• Bill volume based on strength class from City of Santa Rosa (low, standard, medium high)</li> </ul>

## 2.9 Single Family Bill Impact

The new wastewater rate structure will provide customers with more control over their bills since more rate revenue is dependent on volumetric use. The proposed rate re-structure would lower bills for low and medium users and raise bills for high users. This is shown on Table 12 below.

**Table 12: Single Family Bill Impact**

(Assumes 1 ESD)

	Annual Units (1,000 gallons)	<b>Current 2019-20</b>	<b>Proposed 2020-21</b>
Low User	35	\$837.09	\$802.40
	\$ monthly	\$69.76	\$66.87
Medium User	45	\$993.75	\$918.40
	\$ monthly	\$82.81	\$76.53
High User	60	\$1,045.02	\$1,092.40
	\$ monthly	\$87.08	\$91.40

## 2.10 Exhibit A Recommendations

Bartle Wells partnered with engineering consultant Woodard & Curran (W&C) to review and update Exhibit A. W&C reviewed the latest Sonoma Water data, relevant neighboring community data, and California Government Code to recommend updated Exhibit A values for 2021. W&C analyzed wastewater treatment plant and monitored neighborhood sewer flow and load data where available to determine recent trends and update sewer flow and loading estimates for all customer classes. New categories were added for new/emerging commercial and industrial sewer uses (e.g. high tech medical manufacturing, online vacation rentals). Accessory dwelling units and junior accessory dwelling unit factors were updated to reflect recent California legislation. The 2021 proposed Exhibit A will be used to evaluate ESDs for new sewer connections and capacity charges in the future.

### 3 Conclusion and Recommendations

This water and wastewater rate study presents a comprehensive review of South Park County Sanitation District's wastewater revenue requirements and rate structure. Since the last rate increase for FY 2020, the District has identified needed capital improvements and increases in ongoing operations costs.

Current rates can be modified to incentivize indoor conservation, give customers more control over their bills, and prepare for the City to take over the District's wastewater billing with monthly fixed and volumetric rates. These factors were considered in the rate study to fairly develop rates for customers.

#### 3.1 Conclusion

The District practices sound financial planning that has provided for the general financial health of the wastewater enterprise given current cost estimates. Unfortunately, operations costs continue to increase, and the District has ongoing capital and debt service requirements. The District will need small but regular annual rate increases to keep up with these costs. The wastewater rate structure can be updated to recover the cost of service equitably from each customer class and give customers more control over their bill by increasing the portion of revenue collected by a variable rate per 1,000 gallons of sewer flow. These factors have been considered in this comprehensive wastewater rate study and are reflected in the above proposed rates. Adoption of these rates reflect the District's commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future.

#### 3.2 Recommendations

BWA recommends that the District adopt the rates shown in this report. Rates were developed as part of a collaborative process that included extensive review by Sonoma Water and City Staff.

At minimum, BWA recommends that the District review and update its water and wastewater financial plan every five years and/or concurrent with Master Plan Updates. The District's rate structure should be re-evaluated each year in order to gradually transition the District to the City's wastewater billing structure.

Please find the complete Final Draft Tables as of 5/6/2020 attached following this report.

## **Appendix A: 2021 Proposed Exhibit A**

# EXHIBIT A

## EQUIVALENT SINGLE-FAMILY DWELLING BILLING UNIT FOR SOUTH PARK CSD

Use Category	Billing Basis			2020-2021	
	Flow gallons	BOD mg/l	TSS mg/l	Use	ESD
<b>Residential</b>					
Single-Family	233	237	237	connections	1.00
Condominium (Over 900 square ft)	233	237	237	dwelling units	1.00
Condominium (Under 900 square ft)	186.4	237	237	dwelling units	0.80
Multiple-Family (Apts, Duplex/Triplex)	186.4	237	237	dwelling units	0.80
Mobile home park	186.4	237	237	spaces	0.80
Mobile home (Individual)	186.4	237	237	units	0.80
JADU	-	237	237	units	0.00
ADU, under 751 sq ft*	93.2	237	237	units	0.40
ADU, 751-900 sq ft*	186.4	237	237	units	0.80
ADU, over 900 sq ft*	233	237	237	units	1.00
<b>Commercial</b>					
Appliance repair	190	200	200	1,000 sq. ft.	0.73
Art gallery	190	200	200	1,000 sq. ft.	0.73
Auto dealers					
With service facilities	190	180	280	connection	0.80
With service facilities	38	180	280	add per service bay	0.16
Without service facilities	190	200	200	connection	0.73
Auto repair	38	248	248	per service bay	0.17
Bakery	190	1000	600	1,000 sq. ft.	2.09
Beer Making/Brewery				see note 1 below	
Butcher				see note 1 below	
Banks & financial institutions	190	130	80	1,000 sq. ft.	0.52
Barber shop	19	130	80	per chair	0.05
Beauty shop	38	130	80	per chair	0.10
Bars & taverns	20	200	200	per seat	0.08
Car washes, self service	190	20	150	per stall	0.47
Camp ground or RV park					
with hookups	125	200	200	site	0.48
without hookups	75	200	200	site	0.29
Cannabis production/manufacturing				see note 1 below	
Car washes					
manual	190	20	150	per bay	0.47
automatic	125	174	174	per bay	0.44
Cheese Maker				see note 1 below	
Churches, hall & lodges	2	200	200	per seat	0.01
Coffee shops with some food service	6	1000	600	per seat	0.07
Dry cleaners	285	150	110	1,000 sq. ft.	0.86
Fire stations	190	200	200	1,000 sq. ft.	0.73
with sleeping quarters and kitchens	220	248	248	1,000 sq. ft.	0.97
without sleeping quarters and kitchens	190	174	174	1,000 sq. ft.	0.67
Garages	95	180	280	per service bay	0.40
Gas Stations					
with convenience store	70	397	397	1,000 sq. ft.	0.43
without convenience store	38	174	174	1,000 sq. ft.	0.13
Gym					
with shower	400	248	248	1,000 sq. ft.	1.77
without shower	50	174	174	1,000 sq. ft.	0.18
High Tech Medical Manufacturing				see note 1 below	
Hospitals					
Convalescent	125	250	100	per bed	0.44
General	175	250	100	per bed	0.62
Veterinarian	6	250	100	per cage	0.02
Hotels/motels					
without restaurant	100	310	120	sleeping rooms	0.40
B&B/Online Rentals/Vacation Rental homes	100	248	248	per occupant	0.44
Hydroponic Cultivation (including cannabis)	1.2	174	174	per plant	0.00
Laundromats					
High efficiency washers	250	174	174	washing machines	0.88
Regular washers	500	150	110	washing machines	1.51
Library	190	200	200	1,000 sq. ft.	0.73
Machine shops	152	180	280	1,000 sq. ft.	0.64
Markets	38	800	800	1,000 sq. ft.	0.42
Nail Salon	10	174	174	per seat	0.04
Offices					
Business	76	130	80	1,000 sq. ft.	0.21
Chiropractic Office	190	174	174	Exam. room	0.67
Dental	190	130	80	Exam. room	0.52
Medical (clinic)					
with central handwashing stations	175	248	248	Exam. room	0.77
with office, surgery, lab and treatment rooms	190	248	248	Exam. room	0.84
offices with sink	125	248	248	Exam. room	0.55
offices without sink	100	248	248	Exam. room	0.44
Veterinarian					
with office, surgery, and treatment rooms	130	248	248	Exam. room	0.58
Pet Groomers	260	174	174	1,000 sq. ft.	0.92
Post office	190	130	80	1,000 sq. ft.	0.52
Resort				see note 1 below	

Restaurants						
Dine-in						
With DW & garbage disp.	6	1000	600	per seat		0.07
With DW or garbage disp.	6	619	371	per seat		0.04
Without DW & garbage disp.	6	238	143	per seat		0.02
Take-out	475	238	143	1,000 sq. ft.		1.77
Rest homes	125	250	100	per bed		0.44
Retail stores	38	150	150	1,000 sq. ft.		0.12
Schools						
Elementary	9	130	100	per student day		0.03
High	14	130	100	per student day		0.04
with entertainment facilities	19	248	248	per student day		0.08
Service stations	380	180	280	set of gas pumps		1.60
	38	180	280	add per service bay		0.16
Shoe repair	190	200	200	1,000 sq. ft.		0.73
Spa with various beauty treatments	38	248	248	per chair		0.17
Supermarkets	76	248	248	1,000 sq. ft.		0.34
Tasting Rooms						
Ale, Winery (no food)	120	174	174	1,000 sq. ft.		0.42
Ale, Winery (with food)	240	397	397	1,000 sq. ft.		1.49
Theaters	2	200	200	per seat		0.01
Trash Enclosures				see note 1 below		
Warehouse				see note 1 below		
Winery				see note 1 below		
Others as determined by the Engr.				see note 1 below		

ALL COMMERCIAL ESDs TO BE DETERMINED BY THE GENERAL MANAGER USING THE FOLLOWING FORMULA:

$$ESD = ( TSS \times FLOW \times 0.33 ) / ( SFD \ TSS \times SFD \ FLOW ) + ( BOD \times FLOW \times 0.33 ) / ( SFD \ BOD \times SFD \ FLOW ) + ( FLOW \times ( 0.34 / SFD \ FLOW ) )$$

Note 1: For non-standard uses, warehouses and when agreement on a use category cannot be reached, the General Manager, in his or her sole discretion, may

a) base charges on the user's actual or estimated contribution of wastewater into the District's facilities in terms of flow, biological oxygen demand (BOD), and total suspended solids (TSS), and

b) calculate the user's charge using the above Charge Formula. The user shall provide verifiable data, as requested by the General Manager, for the charge to be determined.

Note 2: In general, users with annual average TSS and/or BOD over 1,000 mg/L and users with annual average Flow greater than 5,000 gallons per day should be considered Monitored Users and use the Monitored User Charge Formula.

Definitions	Flow = Gallons per Day	TSS = Total Suspended Solids		
	BOD = Biological Oxygen Demand	DW = dishwasher		
	ESD = Equivalent Single Family Dwelling	disp. = disposal		

\* Note that no Capacity Charge is assessed when existing structures are converted in accordance with CGC 65852.2 (e)(1)(A) as determined by the County of Sonoma.

## **Appendix B: Wastewater Rate Study Supplementary Tables**



## SOUTH PARK CSD

# Wastewater COS Rate Study 2020

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### Supplementary Tables

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Table B12	Rate Calculation
Table B13	Proposed Rate Summary



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

**Table B1: Current Rates**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## Current Rates

**Sonoma County Water Agency - South Park CSD Current Wastewater Rates<sup>1</sup>**

Wastewater rates effective July 1, 2019

Annual Fixed Rate - \$/ESD

\$546 annual - tax roll  
 \$45.50 monthly

Annual Volumetric Charge (per 1000 gallons)

Residential (Standard Strength)	\$9.95
Commercial	
Low Strength	\$8.27
Standard Strength	\$9.95
Medium Strength	\$11.03
High Strength	\$13.63

**City of Santa Rosa Current Wastewater Rates**

Wastewater rates effective July 1, 2019

Monthly Service Charge

Single Family	\$25.23
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Multi Family and Commercial	
5/8" and 3/4"	\$25.23
1"	\$60.74
1.5"	\$119.91
2"	\$190.95
3"	\$356.66
4"	\$593.40
6"	\$1,185.26

Monthly Usage Charge (per 1000 gallons)

Residential (Standard Strength)	\$14.50
---------------------------------	---------

*All residential accounts pay wastewater usage charges based on the lesser of the individual sewer cap or actual water use each billing period. Sewer cap is determined annually for each customer based on average water use from November through March.*

Non-Residential	
Low Strength	\$12.05
Standard Strength	\$14.50
Medium Strength	\$16.08
High Strength	\$19.86

*All Commercial accounts pay wastewater usage charges based on total water use*

<sup>1</sup> - see Rate Plan for detail

**Table B2: Customer Information**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## Customer Information

FY 2019-20 Customer Master List				
Customer Class	Parcels	ESDs	2019-20 Revenue	% total
Residential	1,946	3,694.3	\$3,474,687	84.9%
Single Family Dwelling	1,574	1,606.7		
Multi Family	357	1,241.5		
Mobile Home	15	846.1		
Commercial	101	390.3	\$383,810	9.4%
Industrial	53	145.3	\$176,325	4.3%
Institutional	5	18.1	\$16,621	0.4%
Miscellaneous	1	1.8	\$3,242	0.1%
Governmental	6	41.8	\$39,167	1.0%
<b>Total</b>	<b>2,112</b>	<b>4,291.6</b>	<b>\$4,093,851</b>	
SPCSD Sewer Only Accounts	66			

### Number of Meters - SCWA Customers Only

Meter Size	Meters	Factor based on 5/8" <sup>1</sup>	Meter Equivalent Units
5/8" or 3/4"	1,924	1.0	1,924
1"	78	2.4	188
1 1/2"	15	4.8	71
2"	22	7.6	169
3"	6	14.1	88
4"	0	23.5	0
6"	0	47.0	0
<b>Total</b>	<b>2,046</b>		<b>2,440</b>

Source: SCWA, City of Santa Rosa. Does not include fireline or irrigation meters.

1 - Current Santa Rosa Meter Charge Factors

Source: Sonoma Water/Lynne Rosselli

Table B3: O&M Expense Projection  
 Sonoma Water  
 Wastewater COS Rate Study 2020  
 SOUTH PARK CSD

## O&M Expense Projection

Budget (FY)	2018-19	2019-20	Projection <sup>1</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
<b>EXPENDITURES</b>			<b>Adj. Budget</b>					
<b>Services and Supplies</b>								
51061 Maintenance - Equipment	\$10,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51201 Administration Costs	\$31,000	\$22,000	3.0%	\$22,660	\$23,340	\$24,040	\$24,761	\$25,504
51206 Accounting/Auditing Services	\$8,000	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
51209 Info Tech Svs (Non ISD)	\$1,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51211 Legal Services	\$5,500	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
51241 Outside Printing & Binding	\$3,000	\$800	3.0%	\$824	\$849	\$874	\$900	\$927
51244 Permits/License/Fees	\$3,000	\$800	3.0%	\$824	\$849	\$874	\$900	\$927
51502 Sewer Capacity Charges	\$1,751,000	\$1,803,900	Varies	\$1,261,142	\$1,301,501	\$1,331,957	\$1,374,589	\$1,418,875
51803 Other Contract Services	\$570,000	\$650,000	3.0%	\$669,500	\$689,585	\$710,273	\$731,581	\$753,528
51916 County Services	\$3,000	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
51917 District Operations Chgs	\$95,000	\$75,000	3.0%	\$77,250	\$79,568	\$81,955	\$84,413	\$86,946
Misc <sup>2</sup>		\$500	3.0%	\$0	\$0	\$0	\$0	\$0
<b>Total Services &amp; Supplies</b>	<b>\$2,480,500</b>	<b>\$2,563,000</b>		<b>\$2,042,500</b>	<b>\$2,106,300</b>	<b>\$2,160,900</b>	<b>\$2,228,400</b>	<b>\$2,298,300</b>
	<b>2018-19</b>	<b>2019-20</b>	<b>Projection</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
<b>Appropriations for Contingency</b>								
55011 Appropriations for Contingency	\$20,000	\$20,000	0.0%	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
<b>Total Services &amp; Supplies</b>	<b>\$20,000</b>	<b>\$20,000</b>		<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>
<b>TOTAL EXPENDITURES</b>	<b>\$2,500,500</b>	<b>\$2,583,000</b>		<b>\$2,062,500</b>	<b>\$2,126,300</b>	<b>\$2,180,900</b>	<b>\$2,248,400</b>	<b>\$2,318,300</b>
% fixed expenses		40%						
% volume expenses		60%						

1 - Expense projection based on Operations Services CPI, LRFDP Draft 9/9/19

2 - 2018-19 Budget true-up value

Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRFDP Draft

Table B4: Capital Improvement Plan  
 Sonoma Water  
 Wastewater COS Rate Study 2020  
 SOUTH PARK CSD

## Capital Improvement Plan

CIP	Long Range Financial Plan 12-20-19 Project Title	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total Through FY 2024-25
S0021	Tertiary Filter Replacement	\$0						
S0022	Force Main Improvements at Main Lift	\$0						\$0
tbd	Future Capital Projects	\$375,000	\$375,000	\$2,500,000	\$750,000	\$2,500,000	\$750,000	\$7,250,000
<b>Total</b>		<b>\$375,000</b>	<b>\$375,000</b>	<b>\$2,500,000</b>	<b>\$750,000</b>	<b>\$2,500,000</b>	<b>\$750,000</b>	<b>\$7,250,000</b>

Source: Sonoma Water/Scott Carter

**Table B5: Debt Service**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## Debt Service

Payment Schedule (FY)	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b><u>OUTSTANDING LOANS/BONDS</u></b>						
Revenue Bond Repayment	\$232,170	\$226,295	\$226,295	\$226,295	\$226,295	\$226,295
<b>Total</b>	<b>\$232,170</b>	<b>\$226,295</b>	<b>\$226,295</b>	<b>\$226,295</b>	<b>\$226,295</b>	<b>\$226,295</b>
<b><u>PROPOSED LOANS/BONDS</u></b>						
		1	2	3	4	5
Rate Study Year Payment Schedule (FY)	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Loan 1			\$0	\$0	\$0	\$0
Loan 2			\$0	\$0	\$0	\$0
Bond 1			\$0	\$0	\$0	\$0
Bond 2			\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Debt Service</b>	<b>\$232,170</b>	<b>\$226,295</b>	<b>\$226,295</b>	<b>\$226,295</b>	<b>\$226,295</b>	<b>\$226,295</b>
<b><u>PROPOSED DEBT DETAIL</u></b>						
	<b>Loan 1</b>	<b>Loan 2</b>		<b>Bond 1</b>		<b>Bond 2</b>
Rate Study Iss. Year <sup>1</sup>	1	1		1		1
Issuance Amount	\$0	\$0		\$0		\$0
Proceeds for Construction	\$0	\$0		\$0		\$0
Interest Rate	4%	4%				
Iss. Costs	<b>\$165,500</b>	<b>\$165,500</b>		<b>\$100,000</b>		<b>\$100,000</b>
Maturity	20	20		20		20
<b>Net Annual Payment</b>	<b>\$0</b>	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>

1 - Payment begins 1 year after issuance

*Proposed Debt Estimates provided by Bartle Wells Associates, pending review from Sonoma Water*

*Source: Sonoma Water/Lynne Rosselli, Budget FY 19-20 & LRF Draft via email 9/9/2019*

## Fund Balance & Policies

### Undes/Unreserved Beginning Fund Balance 7/1/2019

33090100	South Park CSD	\$1,565,317
33090200	South Park - Expansion	\$2,169,158
33090300	South Park - 2000 Revenue Bonds	\$237,146
	<b>Total</b>	<b>\$3,971,621</b>

#### 1. Fund Balance Policy

Operations Fund Target - at least 6 months budgeted Operating Expenses

#### 2. Debt Service Coverage Policy

Coverage Requirement - 1.2x net operating expenses

#### 3. Growth Estimates

Estimated 0 new users per Fiscal Year

Connection fee revenue estimated based on 3% per year CPI adjustment to current capacity fee

#### 3. Rate Structure

Water data unavailable - expenses are equally divided among all ESDs and billed on the tax roll

Source: Sonoma Water/Lynne Rosselli, LRF Draft via email 9/9/2019

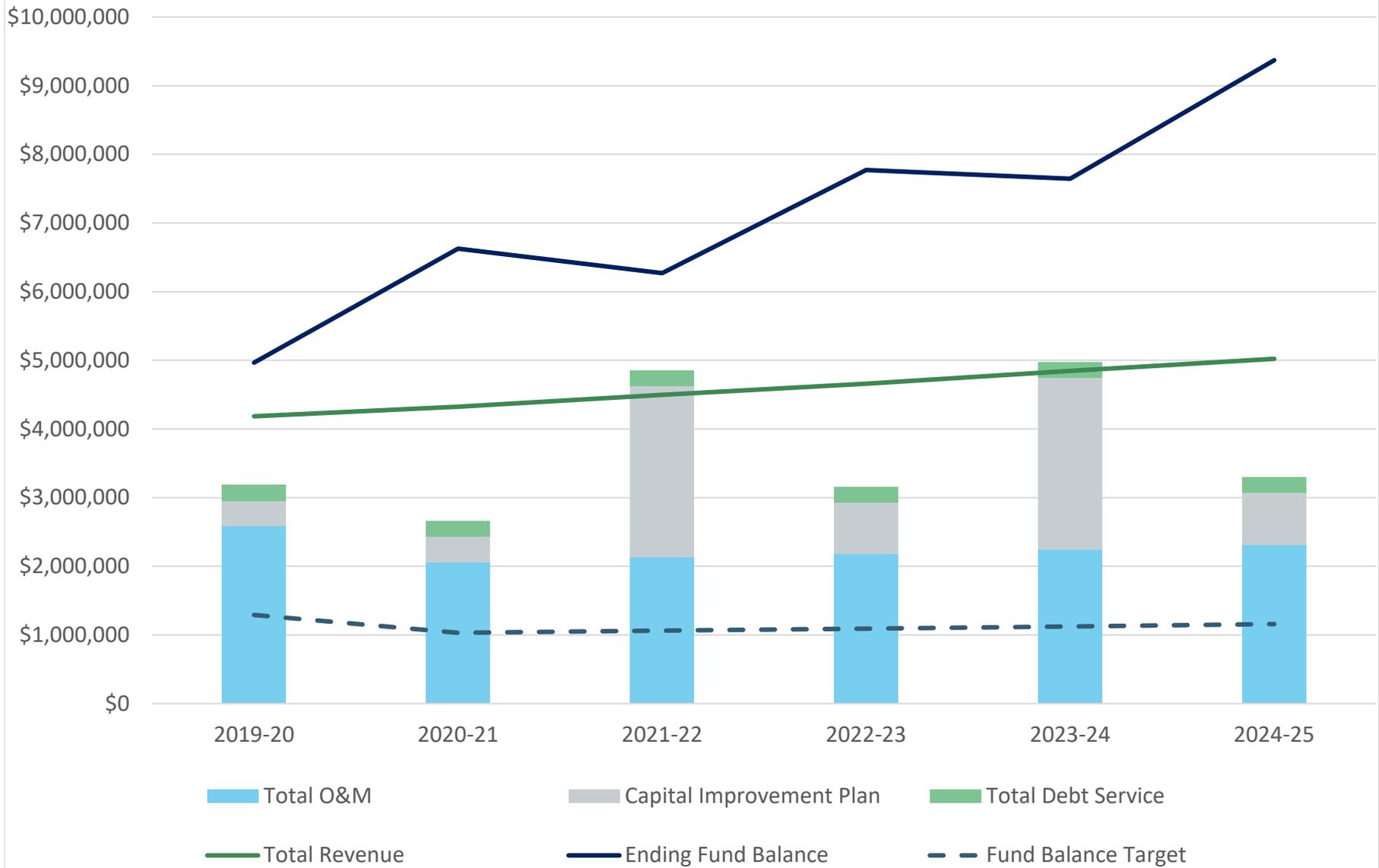
**Table B7: Cash Flow**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## Cash Flow

Five-Year Projection Fiscal Year	Reference	Budget 2019-20	1 2020-21	2 2021-22	3 2022-23	4 2023-24	5 2024-25
Proposed Rate Increase			3.5%	3.5%	3.5%	3.5%	3.5%
Growth			0.2%	0.2%	0.2%	0.2%	0.2%
Beginning Fund Balance	Table 5	\$3,971,621	\$4,966,158	\$6,625,034	\$6,270,586	\$7,772,826	\$7,643,587
<b><u>REVENUE</u></b>							
Sanitation Charges - Calc.	Table 2	\$4,093,851	\$4,247,009	\$4,405,897	\$4,570,729	\$4,741,728	\$4,919,124
Connection Fees	LRFP	\$26,140	\$0	\$0	\$0	\$0	\$0
Penalties/Costs on Taxes	LRFP	\$25,000	\$26,000	\$26,000	\$26,000	\$26,000	\$26,000
Interest on Pooled Cash <sup>1</sup>	LRFP	\$39,716	\$49,662	\$66,250	\$62,706	\$77,728	\$76,436
Proposed Debt Proceeds	Table 5	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Revenue</b>		<b>\$4,184,707</b>	<b>\$4,322,671</b>	<b>\$4,498,147</b>	<b>\$4,659,435</b>	<b>\$4,845,456</b>	<b>\$5,021,559</b>
<b><u>EXPENDITURES</u></b>							
Total O&M	Table 3	\$2,583,000	\$2,062,500	\$2,126,300	\$2,180,900	\$2,248,400	\$2,318,300
Capital Improvement Plan	Table 4	\$375,000	\$375,000	\$2,500,000	\$750,000	\$2,500,000	\$750,000
Total Debt Service	Table 5	\$232,170	\$226,295	\$226,295	\$226,295	\$226,295	\$226,295
<b>Total Expenditures</b>		<b>\$3,190,170</b>	<b>\$2,663,795</b>	<b>\$4,852,595</b>	<b>\$3,157,195</b>	<b>\$4,974,695</b>	<b>\$3,294,595</b>
Net Revenue		\$994,537	\$1,658,876	(\$354,448)	\$1,502,240	(\$129,239)	\$1,726,964
Ending Fund Balance		<b>\$4,966,158</b>	<b>\$6,625,034</b>	<b>\$6,270,586</b>	<b>\$7,772,826</b>	<b>\$7,643,587</b>	<b>\$9,370,551</b>
<i>Fund Balance Target</i>		<i>\$1,291,500</i>	<i>\$1,031,250</i>	<i>\$1,063,150</i>	<i>\$1,090,450</i>	<i>\$1,124,200</i>	<i>\$1,159,150</i>
Debt Service Coverage		6.9	10.0	10.5	11.0	11.5	11.9

1 - 1% earnings on beginning fund balance

## Five-Year Cash Flow Projection - Proposed Rate Increases



**Table B8: Rate Plan**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## Rate Plan

Customer Class Breakdown	Residential		Commercial	
	Residential Sewer and Water (On City Water)	Residential Sewer Only	Commercial Sewer and Water (On City Water)	Commercial Sewer Only
2020/21 Rate Plan	<ul style="list-style-type: none"> <li>• Fixed Rate - rate per ESD (40% total expenses)</li> <li>• Volumetric Rate - bill based on water usage and water cap from City of Santa Rosa (40% total expenses)</li> <li>• Sewer cap calculated using winter water usage (November - March average) for the prior year</li> <li>• Total annual water use based on minimum monthly usage between sewer cap and actual water use</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed Rate - rate per ESD (40% total expenses)</li> <li>• Volumetric Rate - bill based on estimated water cap (household size) (40% total expenses)</li> <li>• Use Santa Rosa City-Wide Average Cap for New and Sewer Only Accounts to estimate sewer cap based on number of residents (# bedrooms + 1)</li> <li>• Mobile Home parks use sewer cap of 3.4 per dwelling unit consistent with current Santa Rosa practice</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed Rate - rate per ESD (60% total expenses)</li> <li>• Volumetric Rate - Bill based on type of use and total annual water use from City of Santa Rosa (year round, no cap) (60% total expenses)</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed Rate - rate per ESD (60% total expenses)</li> <li>• Volumetric Rate - Bill based on type of use and estimated sewer demand (square feet) (60% total expenses)</li> <li>• Use Santa Rosa City-Wide Average Cap for New and Sewer Only Accounts to estimate sewer demand. Commercial accounts use a sewer cap of 4.9 per 2,500 sqft area based on usage from a typical single family dwelling</li> <li>• Bill volume based on strength class from City of Santa Rosa (low, standard, medium high)</li> </ul>

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**Table B9: City Wide Average Caps**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## City Wide Average Caps

Number of Residents	City-Wide Average Sewer Cap 1-unit Single Family	City-Wide Average Sewer Cap 2-units Multi-Family
1	2	3.6
2	2.9	4.3
3	3.7	5
4	4.4	6.1
5	5.1	6.7
6	5.7	7.6

Above 6 Residents, add 700 gallons per resident

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**Table B10: Strength Classifications**  
Sonoma Water  
Wastewater COS Rate Study 2020  
SOUTH PARK CSD

## Strength Classifications

<b>Low Strength</b>	Car Wash Glass Products Groundwater
<b>Standard/Domestic Strength</b>	Residential - All Electronics Manufacturer General Commercial/Industrial Newspaper Water Purifier
<b>Medium Strength</b>	Combined General/Commercial/Food Hotel/Motel with Restaurant
<b>High Strength</b>	Bakery-Commercial Food Processor Meat Cutter Miller Mortuary Restaurant Supermarket

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**Table B11: Consumption Summary**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## Consumption Summary

Strength Class	Billable Consumption <sup>1</sup>	Strength Factor <sup>2</sup>	Billable Consumption w/Strength Factor
Residential	165,561	1.00	165,561
Commercial Low Strength	772	0.83	642
Commercial Stan Strength	38,046	1.00	38,046
Commercial Med Strength	11,272	1.11	12,501
Commercial High Strength	2,135	1.37	2,924
<b>Total</b>	<b>217,786</b>		<b>219,673</b>

1 - Total Billable Wastewater Consumption FY 2019/20 - minimum between sewer cap and actual water use for Single Family Residential Users, actual water use for commercial users. Includes growth projection and estimated usage from Sewer Only Accounts according to Table 9. Excludes Fireline/Irrigation Usage. Estimated Delinquency factor 3%

2 - Strength Factor based on City of Santa Rosa wastewater rates as indicator of typical usage factors in area

**Table B12: Rate Calculation**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## Rate Calculation

<b>Total Revenue Requirement</b>		<b>\$4,247,009</b>
<b>Fixed Rate Calculation</b>		
Fixed Revenue Requirement	<b>40%</b>	\$1,698,804
Dividing Factor - ESDs <sup>1</sup>		4,285.6
<b>Annual Fixed Rate - \$/ESD (rounded)</b>		<b>\$396.40</b>
<b>Volume Rate Calculation</b>		
Volume Revenue Requirement	60%	\$2,548,205
Dividing Factor- Billable Water Use 2019/20 <sup>2</sup>		219,673
Standard Strength Wastewater Rate per 1000 gals.		\$11.60
Standard Strength	1.00	\$11.60
Low Strength	0.83	\$9.64
Medium Strength	1.00	\$11.60
High Strength	1.11	\$12.86

1 - Estimate includes 2019-20 ESDs, growth projection and delinquency factor

2 - see Table 11

**Table B13: Proposed Rate Summary**  
**Sonoma Water**  
**Wastewater COS Rate Study 2020**  
**SOUTH PARK CSD**

## Proposed Rate Summary

Proposed Wastewater Rates effective July 1, 2020

Annual Fixed Rate - \$/ESD

\$396 annual - tax roll  
 \$45.50 monthly

Annual Volumetric Charge (per 1000 gallons)

Residential (Standard Strength)	\$11.60
Commercial	
Low Strength	\$11.60
Standard Strength	\$9.64
Medium Strength	\$11.60
High Strength	\$12.86

Single Family Estimated Bill Impact (1 ESD)

	sewer demand (1,000 gal)	
Low User	35	\$802.40
\$ monthly		\$66.87
Medium User	45	\$918.40
\$ monthly		\$76.53
High User	60	\$1,092.40
\$ monthly		\$396.40

**Appendix C: City of Santa Rosa Ordinance  
No. 4034**

ORDINANCE NO. 4034

ORDINANCE OF THE COUNCIL OF THE CITY OF SANTA ROSA AMENDING TITLE 15 (SEWERS) OF THE SANTA ROSA CITY CODE

THE PEOPLE OF THE CITY OF SANTA ROSA DO ENACT AS FOLLOWS:

Section 1. City Code Section 15-16.030 of the Santa Rosa City Code is amended as follows:

**"15-16.030 Connection generally – Demand fees.**

(A) Connection may be made to the City’s sewer trunk line systems in locations approved by and subject to the regulations of the Board of Public Utilities and City Council, upon payment to the City of the demand fees specified below and the other specifications hereinafter indicated. The Board of Public Utilities shall have the authority to define and determine what constitutes a sewer connection. Additional requirements or conditions for connection to the various sewer lines within the City’s sewer service systems are specified below.

(B) The sewer demand fees shall be as follows:

(1) Residential:

**Type of Connection Demand Fee**

Very Large Lot SFD (over 1 acre)	\$7,416
Large/Medium Lot SFD (over 6000 sf to 1 acre)	\$6,375
Small Lot SFD (6000 sf and under)	\$5,594
Condominiums, Apartments, Mobile Homes	\$6,245
Second or Senior Units	\$4,684

(2) The sewer demand fee for nonresidential and industrial customers shall be based on:

(a) A nonresidential wastewater demand fee rate of \$1,301 per thousand gallons per month (TGM); and

(b) The estimated monthly wastewater flow quantity for the type of use based upon the

factors in Table 15-1: Nonresidential or Industrial Demand Factors - Typical Parameters, with the following requirements: the minimum flow quantity that must be purchased for nonresidential uses is 1,000 TGM, and purchases must be made in increments of 1,000 TGM. The Director of Utilities/City Engineer may periodically review the water/wastewater usage of nonresidential and industrial customers. If the actual usage (flow quantity) exceeds the capacity purchased, the payment of additional demand fees at the rates currently in effect will be required.

Effective January 1, 2008 and continuing thereafter, demand fees shall be adjusted as follows: The dollar amounts shown in §15-16.030 (B) shall be increased (or decreased) on January 1 of each calendar year by a percentage equal to the percentage change in the "Engineering News Record 20 Cities Construction Cost Index" for the 12-month period ending November 30 of the prior calendar year.

(3) The fee per thousand gallons per month shall be adjusted annually on January 1 of each year based on the Engineering New Report's 20-City Construction Cost Index, excepting that the fee per thousand gallons per month will be reviewed at least every 5 years and be increased or decreased to take actual changes in the City's General Plan or Department Master Plans into consideration.

Category	**Type of Uses	Average Monthly Flow (gallons per month per 1000 square feet)	Average Daily Flow (gallons per day per 1000 square feet)
1	Warehouse	260	9
2	Retail; Schools; Office; Church; Playhouses; Gym without shower; Self Serve Frozen Yogurt	960	32
3	Auto Repair	1,390	46
4	Dental Office	1,750	58
5	Auto Sales	2,360	78
6	Halls	2,440	81
7	Movie Theaters	2,590	86
8	Surgery Centers	2,600	87

9	Convenience Store; Grocery without food preparation; Gas Station (car wash calculated separately)	3,020	100
10	Barber; Beauty Salon	4,500	150
11	Bakery	4,690	156
12	Deli; Grocery with food preparation	5,180	173
13	Veterinary Clinic	5,440	181
14	Motels; Hotels (restaurant and conference center areas calculated separately)	6,900	230
15	Gym with showers	8,100	270
16	Hospital	8,596	286
17	Bar	11,610	387
18	Coffee shop	12,110	403
19	Restaurant (chain restaurants will be based on comparable uses)	12,640	421
	<b>**Types of Uses</b>	<b>Factors other than square footage</b>	<b>Notes</b>
20	Skill Nursing; Assisted Living; Residential Care	3,177 gallons per month, per bed	
21	Commercial Laundry	70% of water use	Based on comparable operations
22	Car wash	40% of water use	Based on comparable operations

\*\* The usage for categories not shown in this table, such as coin laundry facilities, wineries, breweries and distilleries, will be determined based on comparable uses and data submitted by applicant.

(C) Except as provided below, the demand fees to be paid for a sewer connection shall be as set forth in this title and shall be calculated and paid at or before the time a building permit is issued by the City, or no later than the time of final inspection per the terms of a written agreement with the City, or per the terms of a fee deferral agreement made pursuant to Chapter 21-01 of this Code.

(D) Demand fees may not be prepaid (credited as paid in full) for more than two years in advance of the actual commencement of permanent sewer service. The two-year period shall begin to run on (and shall include) the day on which payment of the demand fees is received and shall expire at midnight on that day of the second calendar year which immediately precedes the second anniversary date of the payment. If the two-year period expires without permanent sewer service having commenced, all fees received shall be considered as a credit against the actual fees that will have to be paid to acquire sewer service. Alternatively, an expired prepayment of fees will be refunded upon the written request of the person making the payment.

For applications made for which payments were received prior to July 1, 1981, the two-year period shall not apply and fees paid will be good until connected, provided no changes in size or other recalculations are required. If changes in size or other recalculations are required, the demand fee due shall be recalculated based upon the demand fees currently in effect and the fee due shall be the difference between the prepaid fee and the current demand fee in effect for the size connection required; this provision shall remain in effect until the Council establishes a specific date terminating said grandfather provision. Should questions arise under this title the City's Director of Utilities shall make the determination as to whether permanent sewer service has or has not commenced to a structure as of any given date.

Notwithstanding the two-year period under this section, once a building permit is issued within the two year expiration period for a project for which: (1) the appropriate sewer demand fees have been paid, and (2) building construction above the foundation has commenced on the project; no additional sewer demand fees will be due for the project irrespective of the date of completion of the project and the date that permanent sewer service is established.

(E) Demand fees shall only be collected for specific connections to the sewer system and shall be valid only when the location and type of connection are described on an engineering drawing or other documentation approved by the City Engineer. Connection approvals are not transferable to any other property. Connection approvals cannot be transferred by sale, assignment or hypothecation to a new owner of the property to which they relate without the written consent of the City.

(F) Persons or entities paying demand fees for a sewer connection during the time period beginning on August 7, 2014, and ending on November 8, 2014, may apply to the Director of Utilities for an administrative adjustment of the fees paid to be recalculated in accordance with the fees established by this adopted ordinance. Any such application must be made in writing and received by the Director of Utilities no later than February 7, 2015."

Section 2. City Code Section 15-16.050 of the Santa Rosa City Code is amended as follows:

**"15-16.050 Demand fees – Computation - Time of payment.**

All fees set forth in Section 15-16.030 shall be computed by the Director of Utilities and shall be paid prior to the actual issuance of the building permit for the structure, work or improvement proposed to be connected to the sewer system, or no later than the time of final inspection per the terms of a written agreement with the City, or per the terms of a fee deferral agreement made pursuant to Chapter 21-01 of this Code. For the purposes of this section, a mobile home is a structure."

Section 3. Environmental Determination. The Council finds that the adoption and implementation of this ordinance are exempt from the provisions of the California Environmental Quality Act in that the Council finds there is no possibility that the implementation of this ordinance may have significant effects on the environment.

Section 4. Severability. If any section, subsection, sentence, clause, phrase or word of this ordinance is for any reason held to be invalid and/or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance.

Section 5. Effective Date. This ordinance shall take effect on the 61st day following adoption by the City Council.

IN COUNCIL DULY PASSED AND ADOPTED this 16th day of September, 2014

AYES: (5) Mayor Bartley, Vice Mayor Swinth, Council Members Combs, Olivares, Ours

NOES: (2) Council Members Carlstrom, Wysocky

ABSENT: (0)

ABSTAIN: (0)

ATTEST: Deirdre Aguin APPROVED: [Signature]  
City Clerk 9/18/14 Mayor

APPROVED AS TO FORM:

[Signature]  
City Attorney



CERTIFICATION  
SANTA ROSA CITY COUNCIL ORDINANCE NO. 4034

STATE OF CALIFORNIA )  
COUNTY OF SONOMA ) ss.  
CITY OF SANTA ROSA )

I, STEPHANIE A. WILLIAMS, Deputy City Clerk of the City of Santa Rosa, California, do hereby certify that the foregoing ordinance, published and posted in compliance with State law and Santa Rosa City Charter Section 8, was duly introduced on August 26, 2014, and adopted by the City Council of the City of Santa Rosa at a regular meeting of said Council held on September 16, 2014, by the following vote:

AYES: (5) Mayor Bartley, Vice Mayor Swinth, Council Members Combs, Olivares, Ours

NOES: (2) Council Members Carlstrom, Wysocky

ABSENT: (0)

ABSTAIN: (0)

*Stephanie A. Williams*

Stephanie A. Williams, Deputy City Clerk  
City of Santa Rosa, California

## 2022 Wastewater Rate Study Addenda

<b>Sanitation Zone or District</b>	<b>PDF Page</b>
Airport-Larkfield-Wikiup Sanitation Zone	A-2
Geyserville Sanitation Zone	A-6
Penngrove Sanitation Zone	A-10
Sea Ranch Sanitation Zone	A-14
Russian River County Sanitation District	A-18
Sonoma Valley County Sanitation District	A-22

Note: Addenda were not prepared for Occidental County Sanitation District or South Park County Sanitation District as there were no updates to the 2020 Wastewater Rate Studies for these two districts.



# Sonoma Water

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## **ADDENDUM TO 2020 AIRPORT-LARKFIELD WIKIUP SANITATION ZONE WASTEWATER RATE STUDY**

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**DATE:** May 2, 2022

**TO:** Sonoma Water Management

**FROM:** Lynne Rosselli, Administrative Services Division Manager

**SUBJECT: ADDENDUM TO 2020 AIRPORT-LARKFIELD-WIKIUP SANITATION ZONE WASTEWATER RATE STUDY**

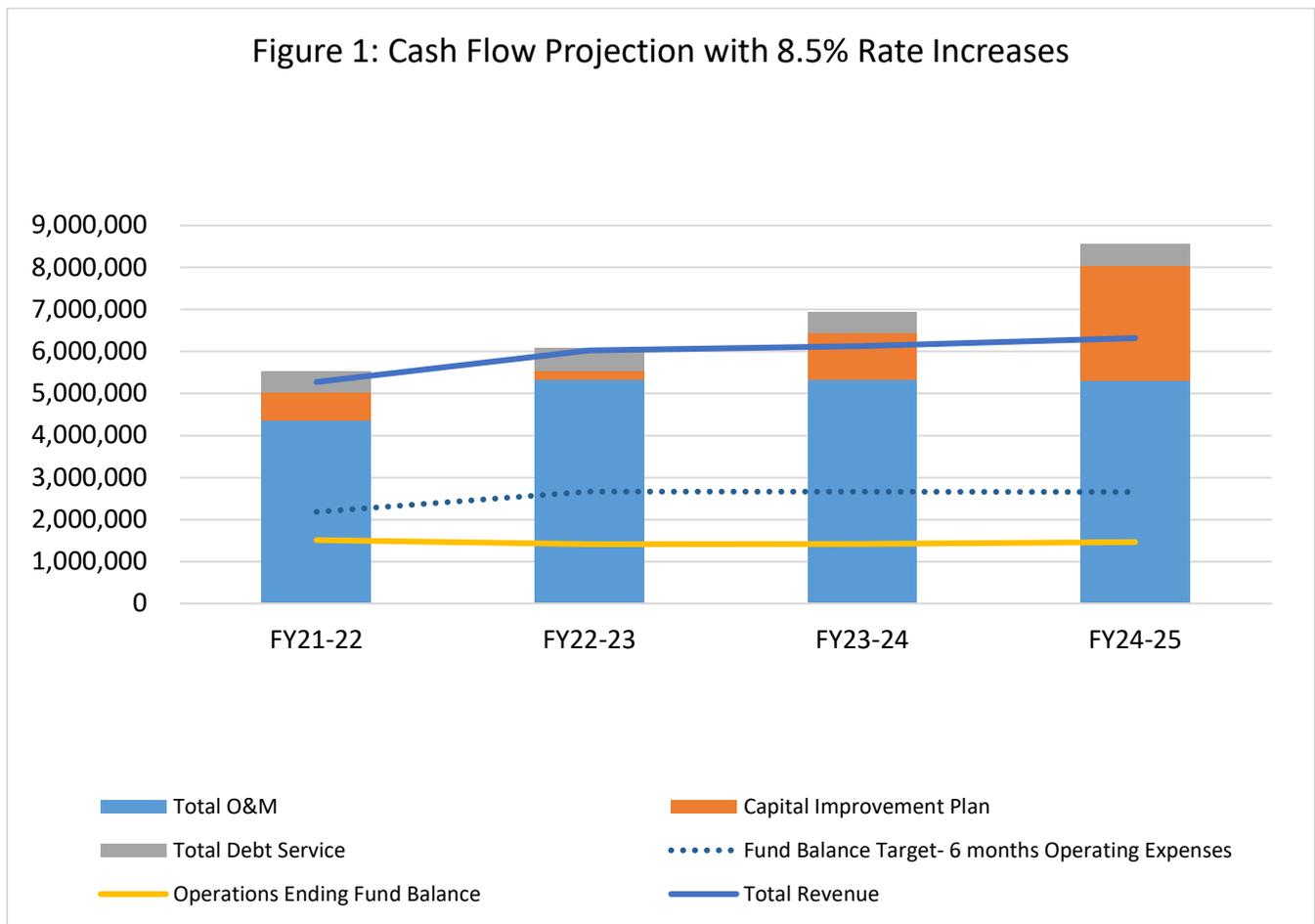
Sonoma Water retained Bartle Wells Associates (BWA) to conduct a wastewater rate study in 2020 for the Airport-Larkfield-Wikiup Sanitation Zone (Zone). The purpose of this Addendum is to update current and projected costs and cost-of-service based rates. Key guiding principles include developing rates that are fair and equitable to all customer classes, distributing costs equally among ratepayers, and complying with the legal requirements of Proposition 218 and other California laws. Figure 1 below demonstrates the challenge that the Zone faces in recovering the costs of providing service, and generating adequate funding for operations, maintenance, capital infrastructure upgrades, and debt service due to its small customer base.

The 2020 wastewater rate study projected 4.0% rate increases annually from FY20-21 through FY24-25. This cost of service study addendum projects 8.5% rate increases annually from FY22-23 through FY24-25. The proposed rate increases are necessary to offset 31% to 76% increases in expenditures net of grant revenue compared to the 2020 Wastewater Rate Study. Revenue from sewer service charges comprises approximately 77% to 90% of the total revenue needed to provide service.

After completion of the 2020 Wastewater Rate Study, costs were incurred and are projected to increase over the planning period shown in Figure 1 below. The increased costs are for a) new projects to upgrade aging infrastructure including Main Breaker and Switchgear for Entire Treatment Plant Electrical Feed, Treatment Plant Equalization Basin, Treatment Plant Headworks, Meter, Piping and Chlorine Improvements, Recycled Water Pipeline Improvements, Aeration Basin Upgrade Analysis, and SCADA Upgrades, and b) new projects arising from developing regulatory requirements including a Collection System Evaluation and Capacity Assurance Plan. There are also increasing costs for a) operation and maintenance to address deferred maintenance backlogs and comply with regulatory requirements; b) equipment, supplies, and fuel due to the COVID Pandemic, and c) supply chain issues and rising inflation.

The Zone faces an ongoing operations deficit and critical need for infrastructure improvements and upgrades. Rate revenue is currently subsidized by general fund transfers from Sonoma Water. The Zone will need to continue imposing annual rate increases to keep up with rising costs. The Zone will return to the Board annually to adopt rate increases. Adoption of these rates reflect the Zone’s commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future. Figure 1 and Table 1 below provide documentation in support of the proposed 8.5% rate increases.

Figure 1: Cash Flow Projection with 8.5% Rate Increases



**Table 1: Cash Flow Projection and Revenue Requirement**

<b>Fiscal Year</b>	<b>Estimated FY21-22</b>	<b>Projected FY22-23</b>	<b>Projected FY23-24</b>	<b>Projected FY24-25</b>
Proposed Rate Increase	4.0%	8.5%	8.5%	8.5%
Rate	1,058	1,148	1,245	1,351
Equivalent Single Family Dwellings	4,047	4,082	4,087	4,092
BEGINNING FUND BALANCE	3,621,582	3,457,454	3,404,420	2,608,111
<b><u>REVENUE</u></b>				
Sanitation Charges	4,052,145	4,814,957	5,208,057	5,635,457
Interest on Pooled Cash	28,000	32,428	31,584	23,578
State/Federal Grants <sup>1</sup>	33,000	30,000	0	0
Transfers from General Fund	930,000	838,000	730,000	500,000
Rent/Disposal Fees from OCSD	232,000	310,000	160,000	160,000
<b>Total Revenue</b>	<b>5,275,145</b>	<b>6,025,385</b>	<b>6,129,641</b>	<b>6,319,035</b>
<b><u>EXPENDITURES</u></b>				
Total O&M	4,362,750	5,332,300	5,330,800	5,308,500
Capital Improvement Plan	667,287	203,620	1,103,563	2,721,313
Total Debt Service	495,588	541,588	491,588	531,588
<b>Total Expenditures</b>	<b>5,525,625</b>	<b>6,077,508</b>	<b>6,925,951</b>	<b>8,561,401</b>
Net Revenue	(250,480)	(52,123)	(796,309)	(2,242,366)
Ending Fund Balance - All Funds				
- Proposed 8.5% Rate Increase	3,211,543	3,404,420	2,608,111	365,745
Operations Ending Fund Balance	1,511,791	1,412,503	1,416,815	1,462,827
<i>Fund Balance Target- 6 months Operating Expenses</i>	<i>2,181,000</i>	<i>2,666,000</i>	<i>2,665,000</i>	<i>2,654,000</i>

Note:

1. State and Federal Grants represent a proposed FEMA grant application to fund the Local Hazard Mitigation Plan Update.
2. Additional outside funding may be needed if projected projects remain on schedule.

The proposed rate increase for the Equivalent Single Family Dwelling (ESD) value relies upon the Zone obtaining additional revenues from other sources of funding such as loans and grants. The total expenditures budget divided by ESDs, the total expenditures budget minus grant/loan revenue divided by ESDs, and the proposed ESD rate are shown in the table below. The proposed rate is the lowest the rate can be set given the need to maintain reserves, the structural deficit of the Zone, and the risks and uncertainties associated with receiving other sources of funding.

	<b>Estimated</b>	<b>Projected</b>	<b>Projected</b>	<b>Projected</b>
<b>Fiscal Year</b>	<b>FY21-22</b>	<b>FY22-23</b>	<b>FY23-24</b>	<b>FY24-25</b>
Total Expenditures Budget Divided by ESDs	1,365	1,489	1,695	2,092
Total Expenditures Budget minus Grant/Loan Revenue divided by ESDs	1,357	1,482	1,695	2,092
Proposed ESD Rate	1,058	1,148	1,245	1,351



# Sonoma Water

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## ADDENDUM TO 2020 GEYSERVILLE SANITATION ZONE WASTEWATER RATE STUDY

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**DATE:** May 2, 2022

**TO:** Sonoma Water Management

**FROM:** Lynne Rosselli, Administrative Services Division Manager

**SUBJECT: ADDENDUM TO 2020 GEYSERVILLE SANITATION ZONE WASTEWATER RATE STUDY**

Sonoma Water retained Bartle Wells Associates (BWA) to conduct a wastewater rate study in 2020 for the Geyserville Sanitation Zone (Zone). The purpose of this Addendum is to update current and projected costs and cost-of-service based rates. Key guiding principles include developing rates that are fair and equitable to all customer classes, distributing costs equally among ratepayers, and complying with the legal requirements of Proposition 218 and other California laws. Figure 1 below demonstrates the challenge that the Zone faces in recovering the costs of providing service, and generating adequate funding for operations, maintenance, and capital infrastructure upgrades due to its small customer base.

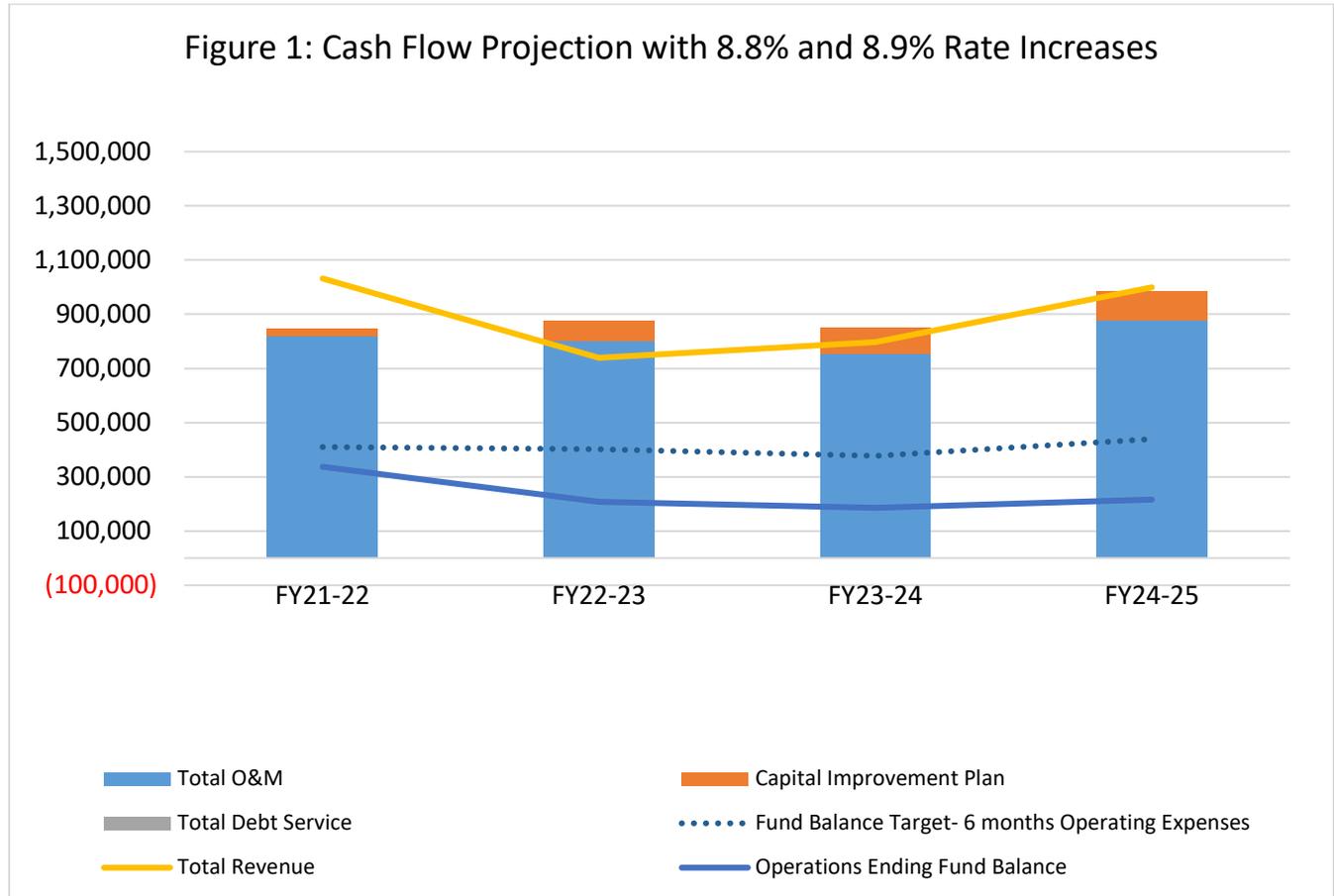
The 2020 wastewater rate study projected 5.5% rate increases annually from FY20-21 through FY24-25. The Zone raised rates 4% in FY21-22 due to the financial impacts of the COVID pandemic on the community. This cost of service study addendum projects an 8.8% rate increase in FY22-23 and 8.9% rate increase annually from FY22-23 through FY24-25. The proposed rate increases are necessary to offset 53% to 71% increases in expenditures net of grant revenue compared to the 2020 Wastewater Rate Study. Revenue from sewer service charges comprises approximately 40% to 60% of the total revenue needed to provide service.

After completion of the 2020 Wastewater Rate Study, costs were incurred and are projected to increase over the planning period shown in Figure 1 below. The increased costs are for a new Force Main Replacement, and new projects arising from developing regulatory requirements including a Collection System Evaluation and Capacity Assurance Plan, Collection System Capacity Study and Groundwater Study. There are also increasing costs for operation and maintenance to address deferred maintenance backlogs and comply with regulatory requirements; and equipment, supplies, and fuel due to the COVID Pandemic and resulting supply chain issues and rising inflation.

The Zone faces an ongoing operations deficit and critical need for infrastructure improvements and upgrades. Rate revenue is currently subsidized by general fund transfers from Sonoma Water. The Zone

will need to continue imposing annual rate increases to keep up with rising costs. The Zone will return to the Board annually to adopt rate increases. Adoption of these rates reflect the Zone’s commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future. Figure 1 and Table 1 below provide documentation in support of the proposed 8.8% and 8.9% rate increases.

Figure 1: Cash Flow Projection with 8.8% and 8.9% Rate Increases



**Table 1: Cash Flow Projection and Revenue Requirement**

<b>Fiscal Year</b>	<b>Estimated FY21-22</b>	<b>Projected FY22-23</b>	<b>Projected FY23-24</b>	<b>Projected FY24-25</b>
Proposed Rate Increase	4.0%	8.8%	8.9%	8.9%
Rate	1,204	1,310	1,426	1,553
Equivalent Single Family Dwellings	361	365	367	368
BEGINNING FUND BALANCE	206,002	391,824	254,953	201,514
<b><u>REVENUE</u></b>				
Sanitation Charges	416,740	445,200	470,000	496,900
Interest on Pooled Cash	2,100	3,950	2,570	2,060
State/Federal Grants <sup>1</sup>	38,000	15,000	0	0
Transfers from General Fund	575,000	275,000	325,000	500,000
<b>Total Revenue</b>	<b>1,031,840</b>	<b>739,150</b>	<b>797,570</b>	<b>998,960</b>
<b><u>EXPENDITURES</u></b>				
Total O&M	819,600	802,700	754,500	878,500
Capital Improvement Plan	26,418	73,321	96,509	105,946
Total Debt Service	0	0	0	0
<b>Total Expenditures</b>	<b>846,018</b>	<b>876,021</b>	<b>851,009</b>	<b>984,446</b>
Net Revenue	185,822	(136,871)	(53,439)	14,514
Ending Fund Balance - Proposed 8.8% - 8.9% Rate Increase	391,824	254,953	201,514	216,028
Operations Ending Fund Balance	337,073	207,973	185,573	215,873
<i>Fund Balance Target- 6 months Operating Expenses</i>	<i>409,800</i>	<i>401,350</i>	<i>377,250</i>	<i>439,250</i>

Note:

1. State and Federal Grants represent a proposed FEMA grant application to fund the Local Hazard Mitigation Plan Update.
2. Additional outside funding may be needed if projected projects remain on schedule.

The proposed rate increase for the Equivalent Single Family Dwelling (ESD) value relies upon the Zone obtaining additional revenues from other sources of funding such as loans and grants. The total expenditures budget divided by ESDs, the total expenditures budget minus grant/loan revenue divided

by ESDs, and the proposed ESD rate are shown in the table below. The proposed ESD rate is the lowest the rate can be set given the need to maintain reserves, the structural deficit of the Zone, and the risks and uncertainties associated with receiving other sources of funding.

	<b>Estimated</b>	<b>Projected</b>	<b>Projected</b>	<b>Projected</b>
<b>Fiscal Year</b>	<b>FY21-22</b>	<b>FY22-23</b>	<b>FY23-24</b>	<b>FY24-25</b>
Total Expenditures Budget Divided by ESDs	2,344	2,400	2,319	2,675
Total Expenditures Budget minus Grant/Loan Revenue divided by ESDs	2,238	2,359	2,319	2,675
Proposed ESD Rate	1,204	1,310	1,426	1,553



# Sonoma Water

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## ADDENDUM TO 2020 PENNGROVE SANITATION ZONE WASTEWATER RATE STUDY

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**DATE:** May 6, 2023

**TO:** Sonoma Water Management

**FROM:** Lynne Rosselli, Administrative Services Division Manager

**SUBJECT: ADDENDUM TO 2020 PENNGROVE SANITATION ZONE WASTEWATER RATE STUDY**

Sonoma Water retained Bartle Wells Associates (BWA) to conduct a wastewater rate study in 2020 for the Penggrove Sanitation Zone (Zone). The purpose of this Addendum is to update current and projected costs and cost-of-service based rates. Key guiding principles include developing rates that are fair and equitable to all customer classes, distributing costs equally among ratepayers, and complying with the legal requirements of Proposition 218 and other California laws. Figure 1 below demonstrates the challenge that the Zone faces in recovering the costs of providing service, and generating adequate funding for operations, maintenance, and capital infrastructure upgrades due to its small customer base.

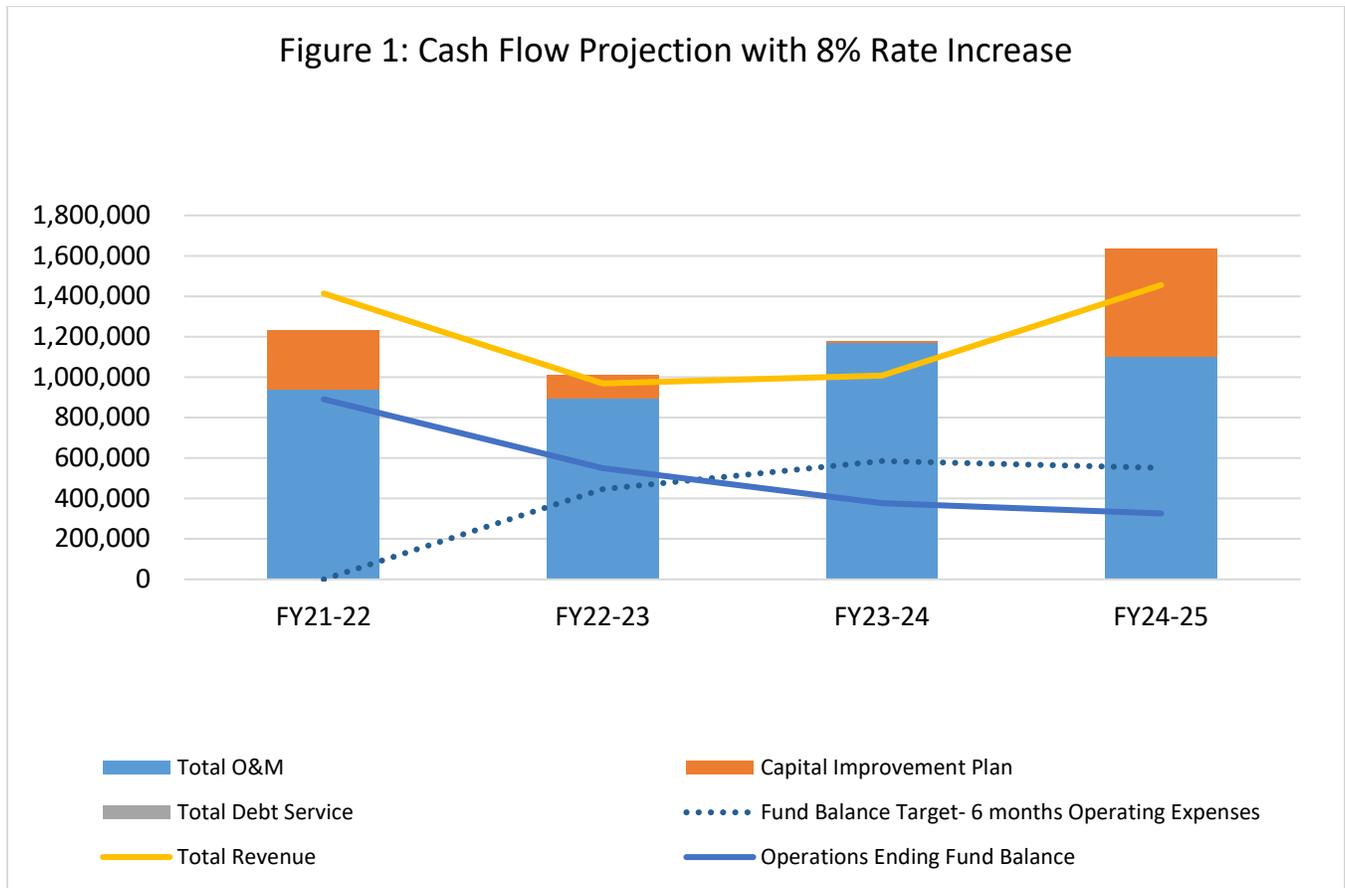
The 2020 wastewater rate study projected 5.5% rate increases annually from FY20-21 through FY24-25. The Zone raised rates 4% in FY21-22 due to the financial impacts of the COVID pandemic on the community. This cost of service study addendum projects an 8.0% rate increase annually from FY22-23 through FY24-25. The cost of service study performed in FY 22-23 projected a rate increase in FY23-24 of 7.5%. The proposed 8% rate increases are necessary to offset 8% to 71% increases in expenditures net of grant revenue compared to the 2020 Wastewater Rate Study. Revenue from sewer service comprises approximately 90% of the total revenue needed to provide service.

After completion of the 2020 Wastewater Rate Study, costs were incurred and are projected to increase over the planning period shown in Figure 1 below. The increased costs are for a new project to upgrade aging infrastructure including the Force Main Replacement/Upsizing and Lift Station Pumping Capacity Project, and b) projects with increased costs including the Lift Station Flood Hazard Mitigation Project. The Force Main Replacement/Upsizing Project estimated costs increased from \$2.4 million over the next two years to \$12.9 million over the next five years. Increased costs are attributable to modifications to the structural and mechanical design criteria and site conditions, and equipment costs and construction bids higher than the engineer's estimate due to the COVID Pandemic and resulting supply chain issues and rising inflation. The Force Main Replacement/Upsizing Project was initially planned to begin in FY 23-24 but due to the increased scope and cost of the project, the start has been delayed to allow time

to build reserves and apply for grant funding. The 8% rate increase is needed to build reserves to fund the capital improvement program over the next five years. Estimated offsetting revenue from grants is included in the cost of service study.

The Zone faces an ongoing operations deficit and critical need for infrastructure improvements and upgrades. Rate revenue over the past 5 years has been subsidized by more than \$1 million in general fund transfers from Sonoma Water. The Zone will need to continue imposing annual rate increases to keep up with rising costs. The Zone will return to the Board annually to adopt rate increases. Adoption of these rates reflect the Zone’s commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future. Figure 1 and Table 1 below provide documentation in support of the proposed 8.0% rate increases.

Figure 1: Cash Flow Projection with 8% Rate Increase



**Table 1: Cash Flow Projection and Revenue Requirement**

<b>Fiscal Year</b>	<b>Actuals FY21-22</b>	<b>Estimated FY22-23</b>	<b>Projected FY23-24</b>	<b>Projected FY24-25</b>
Proposed Rate Increase	4.0%	8.0%	8.0%	8.0%
Rate	1,692	1,828	1,974	2,132
Equivalent Single Family Dwellings	553	556	557	558
BEGINNING FUND BALANCE	1,043,925	1,239,906	1,198,604	1,030,204
<b><u>REVENUE</u></b>				
Sanitation Charges	956,981	949,600	999,900	1,052,800
Interest on Pooled Cash	8,108	4,344	7,200	6,200
State/Federal Grants <sup>1</sup>	449,163	15,000	0	396,525
Transfers from General Fund	0	0	0	0
<b>Total Revenue</b>	<b>1,414,310</b>	<b>968,944</b>	<b>1,007,100</b>	<b>1,455,525</b>
<b><u>EXPENDITURES</u></b>				
Total O&M	941,917	893,600	1,170,500	1,101,600
Capital Improvement Plan	290,148	116,646	5,000	533,700
Total Debt Service	0	0	0	0
<b>Total Expenditures</b>	<b>1,232,065</b>	<b>1,010,246</b>	<b>1,175,500</b>	<b>1,635,300</b>
Net Revenue	182,245	(41,302)	(168,400)	(179,775)
Ending Fund Balance - Proposed 8.0%	1,239,906	1,198,604	1,030,204	850,429
Operations Ending Fund Balance	890,865	549,961	377,661	326,161
<i>Fund Balance Target- 6 months Operating Expenses</i>		<i>- 446,800</i>	<i>585,250</i>	<i>550,800</i>

Note:

1. State and Federal Grants represent awarded and obligated FEMA Flood Hazard Mitigation Funds and a proposed FEMA grant application to fund the Local Hazard Mitigation Plan Update.

The proposed rate increase for the Equivalent Single Family Dwelling (ESD) value relies upon the Zone obtaining additional revenues from other sources of funding such as loans and grants. The total expenditures budget divided by ESDs, the total expenditures budget minus grant/loan revenue divided by ESDs, and the proposed ESD rate are shown in the table below. The proposed rate is the lowest the rate can be set given the need to maintain reserves, the structural deficit of the Zone, and the risks and uncertainties associated with receiving other sources of funding.

	<b>Actuals</b>	<b>Estimated</b>	<b>Projected</b>	<b>Projected</b>
<b>Fiscal Year</b>	<b>FY21-22</b>	<b>FY22-23</b>	<b>FY23-24</b>	<b>FY24-25</b>
Total Expenditures Divided by ESDs	2,229	1,818	2,112	2,933
Expenditures budget minus grant/loan revenue divided by ESDs	1,417	1,791	2,112	2,222
Proposed ESD Rate	1,692	1,828	1,974	2,132



# Sonoma Water

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## ADDENDUM TO 2020 PENNGROVE SANITATION ZONE WASTEWATER RATE STUDY

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**DATE:** May 2, 2022

**TO:** Sonoma Water Management

**FROM:** Lynne Rosselli, Administrative Services Division Manager

**SUBJECT: ADDENDUM TO 2020 PENNGROVE SANITATION ZONE WASTEWATER RATE STUDY**

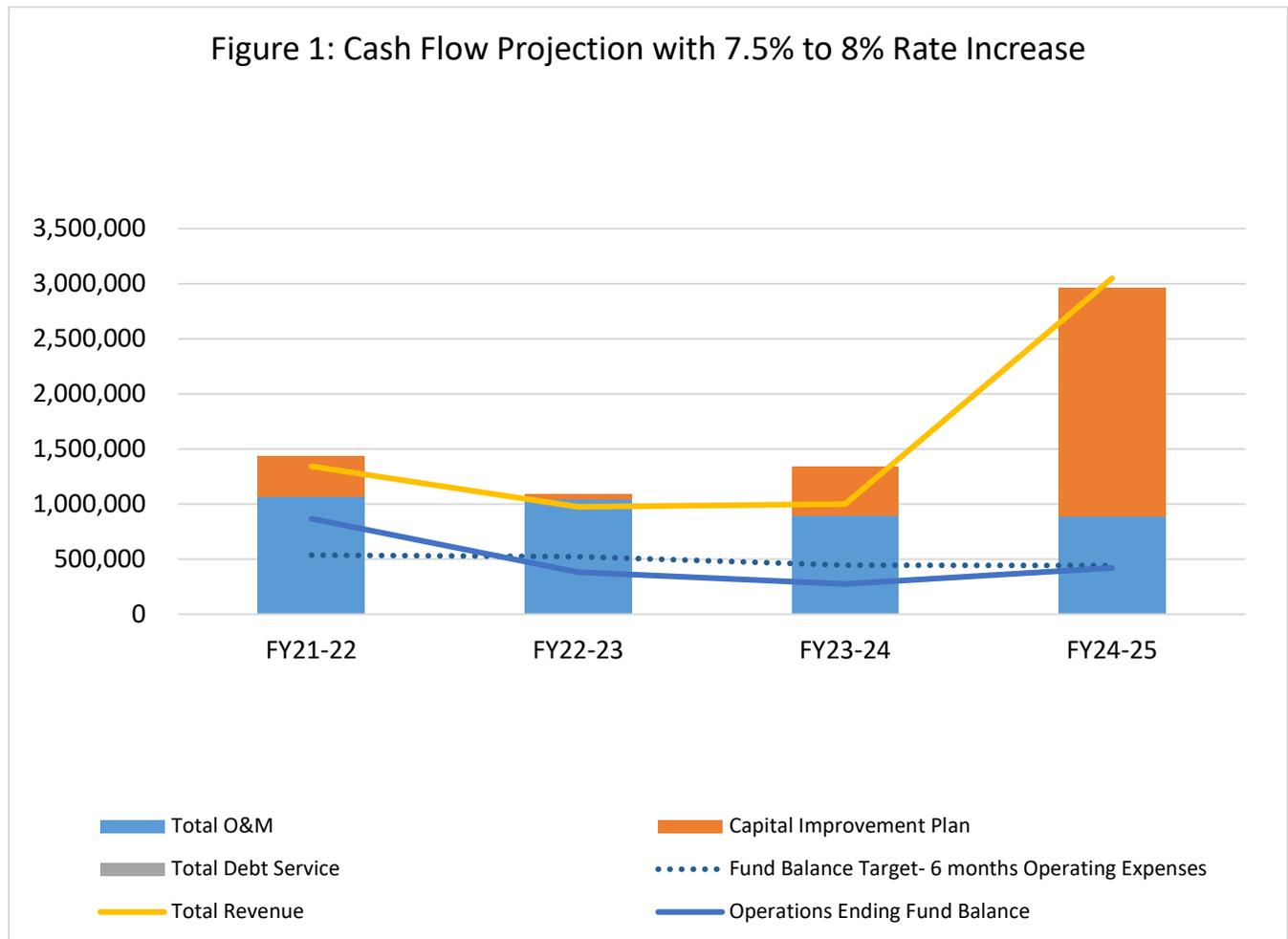
Sonoma Water retained Bartle Wells Associates (BWA) to conduct a wastewater rate study in 2020 for the Penggrove Sanitation Zone (Zone). The purpose of this Addendum is to update current and projected costs and cost-of-service based rates. Key guiding principles include developing rates that are fair and equitable to all customer classes, distributing costs equally among ratepayers, and complying with the legal requirements of Proposition 218 and other California laws. Figure 1 below demonstrates the challenge that the Zone faces in recovering the costs of providing service, and generating adequate funding for operations, maintenance, and capital infrastructure upgrades due to its small customer base.

The 2020 wastewater rate study projected 5.5% rate increases annually from FY20-21 through FY24-25. The Zone raised rates 4% in FY21-22 due to the financial impacts of the COVID pandemic on the community. This cost of service study addendum projects an 8.0% rate increase in FY 22-23 and 7.5% annually from FY23-24 through FY24-25. The proposed rate increases are necessary to offset 3% to 164% increases in expenditures net of grant revenue compared to the 2020 Wastewater Rate Study. Revenue from sewer service comprises approximately 34% to 100% of the total revenue needed to provide service.

After completion of the 2020 Wastewater Rate Study, costs were incurred and are projected to increase over the planning period shown in Figure 1 below. The increased costs are for a) new projects to upgrade aging infrastructure including the Force Main Replacement/Upsizing and Lift Station Pumping Capacity Project, and b) projects with increased costs including the Lift Station Flood Hazard Mitigation Project. Increased costs are attributable to modifications to the structural and mechanical design criteria and site conditions, and equipment costs and construction bids higher than the engineer's estimate due to the COVID Pandemic and resulting supply chain issues and rising inflation.

The Zone faces an ongoing operations deficit and critical need for infrastructure improvements and upgrades. Rate revenue is currently subsidized by general fund transfers from Sonoma Water. The Zone will need to continue imposing annual rate increases to keep up with rising costs. The Zone will return to the Board annually to adopt rate increases. Adoption of these rates reflect the Zone’s commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future. Figure 1 and Table 1 below provide documentation in support of the proposed 8.0% followed by 7.5% rate increases.

Figure 1: Cash Flow Projection with 7.5% to 8% Rate Increase



**Table 1: Cash Flow Projection and Revenue Requirement**

<b>Fiscal Year</b>	<b>Estimated FY21-22</b>	<b>Projected FY22-23</b>	<b>Projected FY23-24</b>	<b>Projected FY24-25</b>
Proposed Rate Increase	4.0%	8.0%	7.5%	7.5%
Rate	1,692	1,828	1,965	2,112
Equivalent Single Family Dwellings	550	553	555	556
BEGINNING FUND BALANCE	1,043,982	946,390	832,259	495,304
<b><u>REVENUE</u></b>				
Sanitation Charges	900,690	949,600	995,200	1,043,000
Interest on Pooled Cash	7,400	9,869	4,590	7,202
State/Federal Grants <sup>1</sup>	258,969	15,000	0	0
Transfers from General Fund	175,000	0	0	2,000,000
<b>Total Revenue</b>	<b>1,342,059</b>	<b>974,469</b>	<b>999,790</b>	<b>3,050,202</b>
<b><u>EXPENDITURES</u></b>				
Total O&M	1,072,800	1,043,600	891,400	884,000
Capital Improvement Plan	366,794	45,000	445,345	2,076,075
Total Debt Service	0	0	0	0
<b>Total Expenditures</b>	<b>1,439,594</b>	<b>1,088,600</b>	<b>1,336,745</b>	<b>2,960,075</b>
Net Revenue	(97,535)	(114,131)	(336,955)	90,127
Ending Fund Balance - Proposed 8.0% - 7.5% Rate Increase	946,447	832,259	495,304	585,431
Operations Ending Fund Balance	867,370	382,070	274,670	421,370
<i>Fund Balance Target- 6 months Operating Expenses</i>	<i>536,400</i>	<i>521,800</i>	<i>445,700</i>	<i>442,000</i>

Note:

1. State and Federal Grants represent awarded and obligated FEMA Flood Hazard Mitigation Funds and a proposed FEMA grant application to fund the Local Hazard Mitigation Plan Update.

The proposed rate increase for the Equivalent Single Family Dwelling (ESD) value relies upon the Zone obtaining additional revenues from other sources of funding such as loans and grants. The total expenditures budget divided by ESDs, the total expenditures budget minus grant/loan revenue divided by ESDs, and the proposed ESD rate are shown in the table below. The proposed rate is the lowest the

rate can be set given the need to maintain reserves, the structural deficit of the Zone, and the risks and uncertainties associated with receiving other sources of funding.

	<b>Estimated</b>	<b>Projected</b>	<b>Projected</b>	<b>Projected</b>
<b>Fiscal Year</b>	<b>FY21-22</b>	<b>FY22-23</b>	<b>FY23-24</b>	<b>FY24-25</b>
Total Expenditures Budget Divided by ESDs	2,617	1,969	2,409	5,324
Total Expenditures Budget minus Grant/Loan Revenue divided by ESDs	2,147	1,941	2,409	5,324
Proposed ESD Rate	1,692	1,828	1,965	2,112



# Sonoma Water

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## ADDENDUM TO 2020 SEA RANCH SANITATION ZONE WASTEWATER RATE STUDY

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**DATE:** May 2, 2022

**TO:** Sonoma Water Management

**FROM:** Lynne Rosselli, Administrative Services Division Manager

**SUBJECT: ADDENDUM TO 2020 SEA RANCH SANITATION ZONE WASTEWATER RATE STUDY**

Sonoma Water retained Bartle Wells Associates (BWA) to conduct a wastewater rate study in 2020 for the Sea Ranch Sanitation Zone (Zone). The purpose of this Addendum is to update current and projected costs and cost-of-service based rates. Key guiding principles include developing rates that are fair and equitable to all customer classes, distributing costs equally among ratepayers, and complying with the legal requirements of Proposition 218 and other California laws. Figure 1 below demonstrates the challenge that the Zone faces in recovering the costs of providing service, and generating adequate funding for operations, maintenance, and capital infrastructure upgrades due to its small customer base.

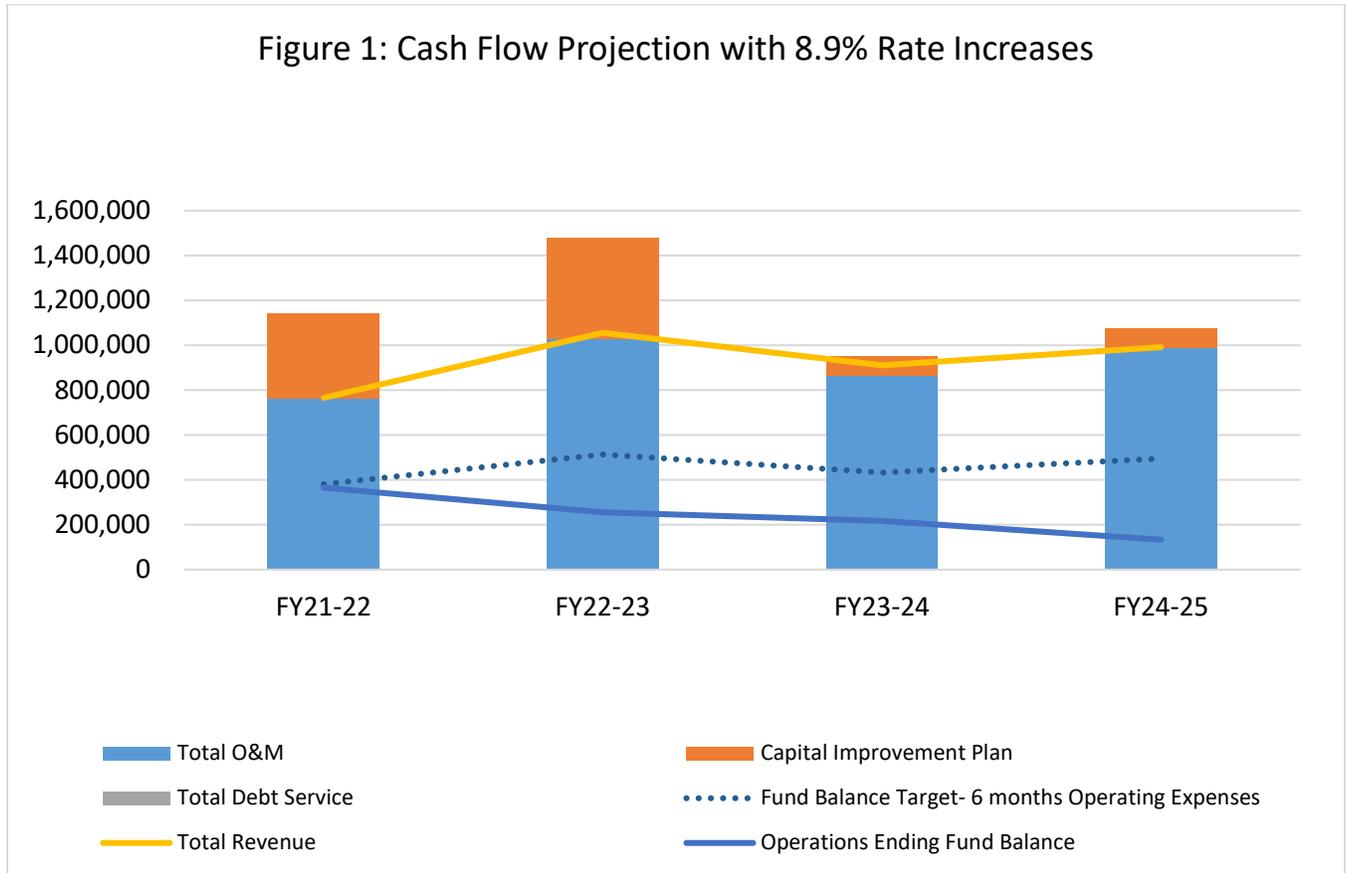
The 2020 wastewater rate study projected 3.5% rate increases annually from FY20-21 through FY24-25. This cost of service study addendum projects an 8.9% rate increase annually from FY22-23 through FY24-25. The proposed rate increases are necessary to offset 18.6% to 88% increases in expenditures net of grant revenue compared to the 2020 Wastewater Rate Study. Revenue from sewer service charges comprises approximately 79% to 100% of the total revenue needed to provide service.

After completion of the 2020 Wastewater Rate Study, costs were incurred and are projected to increase over the planning period shown in Figure 1 below. The increased costs are for the Creek Crossing Carrier Pipe Replacement Project for design modifications, based on geotechnical studies, and higher than anticipated costs for environmental review and permitting associated with a pipeline creek crossing replacement project. Operation and maintenance costs to address deferred maintenance backlogs and comply with regulatory requirements, and construction costs are also climbing due to the COVID Pandemic and supply chain issues, inflation, and higher fuel costs.

The Zone faces an ongoing operations deficit and critical need for infrastructure improvements and upgrades. Rate revenue is currently subsidized by general fund transfers from Sonoma Water. The Zone will need to continue imposing annual rate increases to keep up with rising costs. The Zone will return to the Board annually to adopt rate increases. Adoption of these rates reflect the Zone's commitment to

stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future. Figure 1 and Table 1 below provide documentation in support of the proposed 8.9% rate increases.

Figure 1: Cash Flow Projection with 8.9% Rate Increases



**Table 1: Cash Flow Projection and Revenue Requirement**

<b>Fiscal Year</b>	<b>Estimated FY21-22</b>	<b>Projected FY22-23</b>	<b>Projected FY23-24</b>	<b>Projected FY24-25</b>
Proposed Rate Increase	3.5%	8.9%	8.9%	8.9%
Rate	1,286	1,400	1,525	1,661
Equivalent Single Family Dwellings	611	614	614	614
 BEGINNING FUND BALANCE	 1,054,114	 678,054	 257,154	 217,954
 <b>REVENUE</b>				
Sanitation Charges	757,190	833,800	908,200	989,200
Interest on Pooled Cash	8,750	6,800	2,600	2,200
State/Federal Grants <sup>1</sup>	0	15,000	0	0
Transfers from General Fund	0	200,000	0	0
<b>Total Revenue</b>	<b>765,940</b>	<b>1,055,600</b>	<b>910,800</b>	<b>991,400</b>
 <b>EXPENDITURES</b>				
Total O&M	762,000	1,026,500	865,000	990,000
Capital Improvement Plan	380,000	450,000	85,000	85,000
Total Debt Service	0	0	0	0
<b>Total Expenditures</b>	<b>1,142,000</b>	<b>1,476,500</b>	<b>950,000</b>	<b>1,075,000</b>
 Net Revenue	 (376,060)	 (420,900)	 (39,200)	 (83,600)
 Ending Fund Balance - Proposed 8.9% Rate Increase	 678,054	 257,154	 217,954	 134,354
Operations Ending Fund Balance	365,057	256,057	216,857	133,257
<i>Fund Balance Target- 6 months Operating Expenses</i>	<i>381,000</i>	<i>513,250</i>	<i>432,500</i>	<i>495,000</i>

Note:

1. State and Federal Grants represent a proposed FEMA grant application to fund the Local Hazard Mitigation Plan Update.

The proposed rate increase for the Equivalent Single Family Dwelling (ESD) value relies upon the Zone obtaining additional revenues from other sources of funding such as loans and grants. The total expenditures budget divided by ESDs, the total expenditures budget minus grant/loan revenue divided by ESDs, and the proposed ESD rate are shown in the table below. The proposed rate is the lowest the rate can be set given the need to maintain reserves, the structural deficit of the Zone, and the risks and uncertainties associated with receiving other sources of funding.

	<b>Estimated</b>	<b>Projected</b>	<b>Projected</b>	<b>Projected</b>
<b>Fiscal Year</b>	<b>FY21-22</b>	<b>FY22-23</b>	<b>FY23-24</b>	<b>FY24-25</b>
Total Expenditures Budget Divided by ESDs	1,869	2,405	1,547	1,751
Total Expenditures Budget minus Grant/Loan Revenue divided by ESDs	1,869	2,380	1,547	1,751
Proposed ESD Rate	1,286	1,400	1,525	1,661



# Sonoma Water

## **ADDENDUM TO 2020 RUSSIAN RIVER COUNTY SANITATION DISTRICT WASTEWATER RATE STUDY**

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**DATE:** May 2, 2022

**TO:** Sonoma Water Management

**FROM:** Lynne Rosselli, Administrative Services Division Manager

**SUBJECT: ADDENDUM TO 2020 RUSSIAN RIVER COUNTY SANITATION DISTRICT WASTEWATER RATE STUDY**

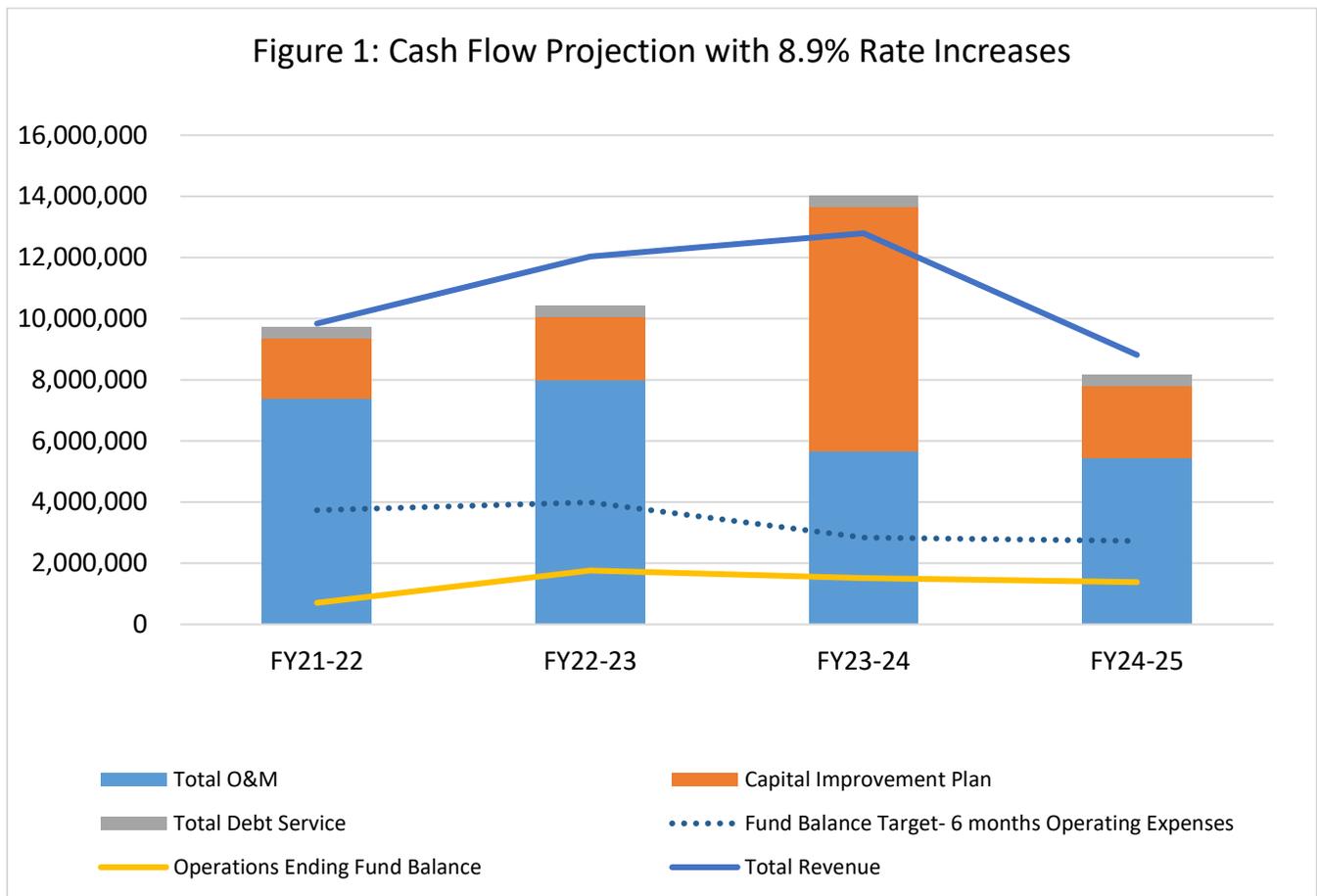
Sonoma Water retained Bartle Wells Associates (BWA) to conduct a wastewater rate study in 2020 for the Russian River County Sanitation District (District). The purpose of this Addendum is to update current and projected costs and cost-of-service based rates. Key guiding principles include developing rates that are fair and equitable to all customer classes, distributing costs equally among ratepayers, and complying with the legal requirements of Proposition 218 and other California laws. Figure 1 below demonstrates the challenge that the District faces in recovering the costs of providing service, and generating adequate funding for operations, maintenance, capital infrastructure upgrades, and debt service due to its small customer base.

The 2020 wastewater rate study projected 5.5% rate increases annually from FY20-21 through FY24-25. The District raised rates 4% in FY21-22 due to the financial impacts of the COVID pandemic on the community. This cost of service study addendum projects 8.9% rate increases annually from FY22-23 through FY24-25. The proposed rate increases are necessary to offset 3% to 94% increases in expenditures net of grant revenue compared to the 2020 Wastewater Rate Study. Revenue from sewer service charges comprises approximately 50% to 80% of the total revenue needed to provide service.

After completion of the 2020 Wastewater Rate Study, costs were incurred and are projected to increase over the planning period shown in Figure 1 below. The increased costs are for a) new projects to upgrade aging infrastructure including Force Main Replacement/Upsizing and Lift Station Pumping Capacity, SCADA Upgrades, Drakes Estates Lift Station Collection System Raising Project, and Ultraviolet Disinfection System Upgrade, b) new projects arising from developing regulatory requirements including a Collection System Evaluation and Capacity Assurance Plan, Collection System Operations and Maintenance Plan Update, Recycled Water Truck Fill Station, Emergency Flood Water Treatment Project, and Main Lift Station Bypass Pumping Project, and c) projects with increased costs including Main Lift Station Underground Diesel Tank Replacement, and Lift Station Electrical Resiliency Project at Vacation

Beach. Increased costs are attributable to changes to the scope of work and design basis of projects, newly identified field conditions, and environmental and permitting requirements. There are also increasing costs for operation and maintenance to address deferred maintenance backlogs and comply with regulatory requirements; and equipment, supplies, and fuel due to the COVID Pandemic and resulting supply chain issues and rising inflation.

The District faces an ongoing operations deficit and critical need for infrastructure improvements and upgrades. Rate revenue is currently subsidized by general fund transfers from Sonoma Water. The District will need to continue imposing annual rate increases to keep up with rising costs. The District will return to the Board annually to adopt rate increases. Adoption of these rates reflect the District’s commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future. Figure 1 and Table 1 below provide documentation in support of the proposed 8.9% rate increases.



**Table 1: Cash Flow Projection and Revenue Requirement**

<b>Fiscal Year</b>	<b>Estimated FY21-22</b>	<b>Projected FY22-23</b>	<b>Projected FY23-24</b>	<b>Projected FY24-25</b>
Proposed Rate Increase	4.0%	8.9%	8.9%	8.9%
Rate	1,774	1,932	2,104	2,292
Equivalent Single Family Dwellings	3,214	3,214	3,214	3,214
 BEGINNING FUND BALANCE	 1,051,856	 1,160,173	 2,768,706	 1,542,306
<b><u>REVENUE</u></b>				
Sanitation Charges	5,474,339	5,945,600	6,473,900	7,049,200
Interest on Pooled Cash	8,000	11,500	27,600	15,300
State/Federal Grants <sup>1</sup>	3,008,043	812,500	3,525,000	600,000
Transfers from General Fund	1,350,000	4,607,000	1,350,000	850,000
Loans <sup>1</sup>	0	655,184	1,416,964	300,000
<b>Total Revenue</b>	<b>9,840,382</b>	<b>12,031,784</b>	<b>12,793,464</b>	<b>8,814,500</b>
<b><u>EXPENDITURES</u></b>				
Total O&M	7,380,927	7,980,000	5,681,275	5,455,900
Capital Improvement Plan	1,983,071	2,075,184	7,970,522	2,331,238
Total Debt Service	368,067	368,067	368,067	368,067
<b>Total Expenditures</b>	<b>9,732,065</b>	<b>10,423,251</b>	<b>14,019,864</b>	<b>8,155,205</b>
 Net Revenue	 108,317	 1,608,533	 (1,226,400)	 659,295
 Ending Fund Balance - Proposed 8.9% Rate Increase	 1,160,173	 2,768,706	 1,542,306	 2,201,601
Operations Ending Fund Balance	703,104	1,760,637	1,508,795	1,380,028
<i>Fund Balance Target- 6 months Operating Expenses</i>	<i>3,731,000</i>	<i>3,990,000</i>	<i>2,841,000</i>	<i>2,728,000</i>

Note:

1. State and Federal Grants and Loans: Of the nearly \$8 million in grant and loan revenue between FY21-22 and FY24-25, \$3 million are awarded and obligated, and \$5 million represent funding needs for future capital projects.

The proposed rate increase for the Equivalent Single Family Dwelling (ESD) value relies upon the District obtaining additional revenues from other sources of funding such as loans and grants. The total expenditures budget divided by ESDs, the total expenditures budget minus grant/loan revenue divided by ESDs, and the proposed ESD rate are shown in the table below. The proposed rate is the lowest the rate can be set given the need to maintain reserves, the structural deficit of the District, and the risks and uncertainties associated with receiving other sources of funding.

	<b>Estimated</b>	<b>Projected</b>	<b>Projected</b>	<b>Projected</b>
<b>Fiscal Year</b>	<b>FY21-22</b>	<b>FY22-23</b>	<b>FY23-24</b>	<b>FY24-25</b>
Total Expenditures Budget Divided by ESDs	3,028	3,243	4,362	2,537
Total Expenditures Budget minus Grant/Loan Revenue divided by ESDs	2,092	2,786	2,824	2,257
Proposed ESD Rate	1,774	1,932	2,104	2,292



# Sonoma Water

## ADDENDUM TO 2020 SONOMA VALLEY COUNTY SANITATION DISTRICT WASTEWATER RATE STUDY

**DATE:** May 2, 2022

**TO:** Sonoma Water Management

**FROM:** Lynne Rosselli, Administrative Services Division Manager

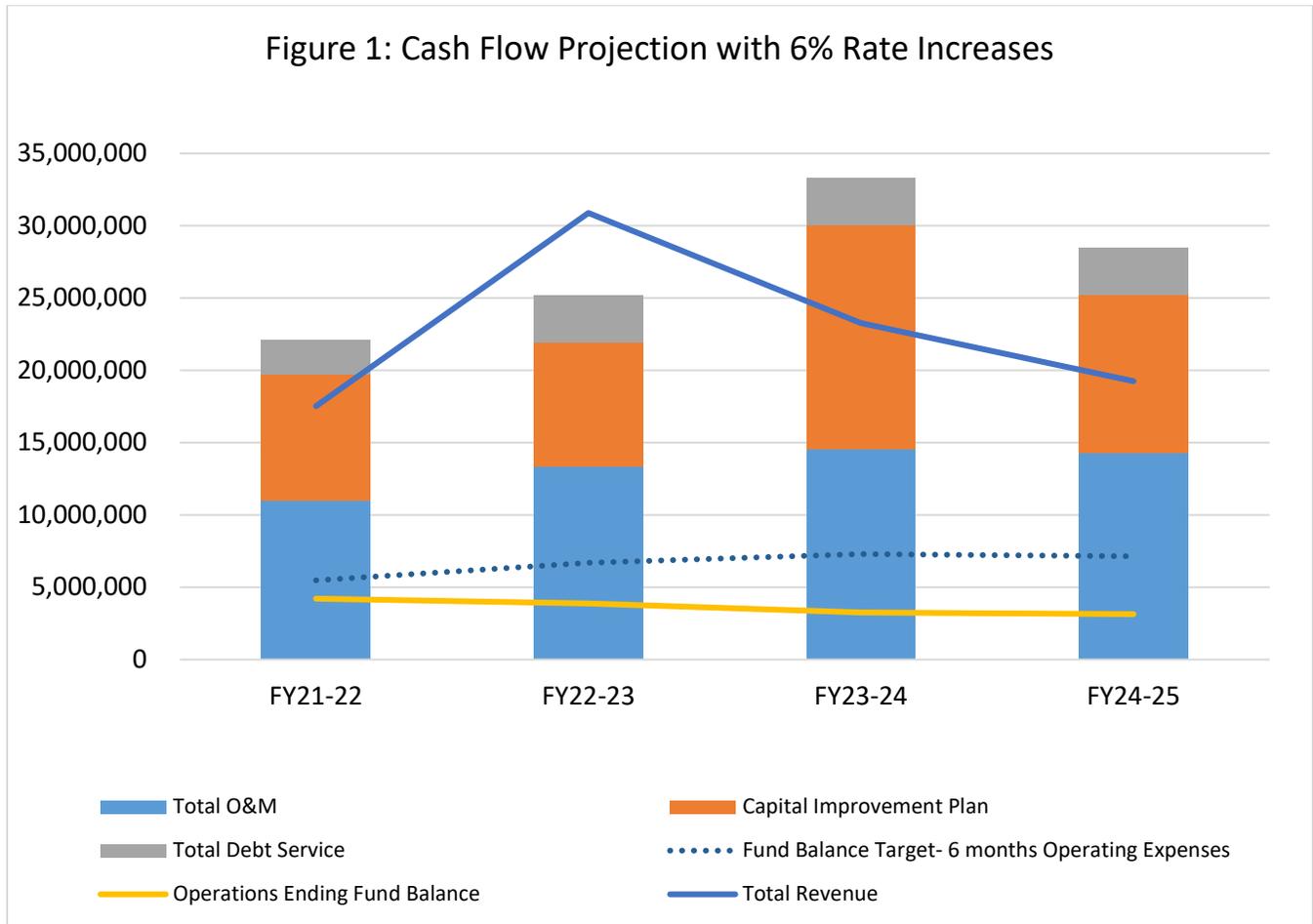
**SUBJECT: ADDENDUM TO 2020 SONOMA VALLEY COUNTY SANITATION DISTRICT WASTEWATER RATE STUDY**

Sonoma Water retained Bartle Wells Associates (BWA) to conduct a wastewater rate study in 2020 for the Sonoma Valley County Sanitation District (District). The purpose of this Addendum is to update current and projected costs and cost-of-service based rates. Key guiding principles include developing rates that are fair and equitable to all customer classes, distributing costs equally among ratepayers, and complying with the legal requirements of Proposition 218 and other California laws. Figure 1 below demonstrates the challenge that the District faces in recovering the costs of providing service, and generating adequate funding for operations, maintenance, capital infrastructure upgrades, and debt service.

The 2020 wastewater rate study projected 3.5% rate increases annually from FY20-21 through FY24-25. This cost of service study addendum projects 6.0% rate increases annually from FY22-23 through FY24-25. The proposed rate increases are necessary to offset 19% to 75% increases in expenditures net of grant and bond revenue compared to the 2020 Wastewater Rate Study. Revenue from sewer service charges comprises approximately 58% to 99% of the total revenue needed to provide service.

After completion of the 2020 Wastewater Rate Study, costs were incurred and are projected to increase over the planning period shown in Figure 1 below. The increased costs are for a) new projects to upgrade aging infrastructure including Influent/Effluent Pumping and Piping Upgrades, Sonoma Creek Bank Repair, Trunk Main Seismic Hazard Mitigation, and SCADA Upgrades, and b) projects with increased costs including Trunk Main Replacements, Treatment Plant Headworks Rehabilitation, and Clarifiers Seismic Retrofit. Increased costs are attributable to changes to the scope of work and design basis of projects, newly identified field conditions, and environmental and permitting requirements. There are also increasing costs for a) operation and maintenance to address deferred maintenance backlogs and comply with regulatory requirements; b) equipment, supplies, and fuel due to the COVID Pandemic, and c) supply chain issues and rising inflation.

The District faces an ongoing operations deficit and critical need for infrastructure improvements and upgrades. The District will need to continue imposing annual rate increases to keep up with rising costs. The District will return to the Board annually to adopt rate increases. Adoption of these rates reflect the District’s commitment to stewarding financially sound utilities and providing reliable, high quality wastewater service that will benefit the community many years into the future. Figure 1 and Table 1 below provide documentation in support of the proposed 6.0% rate increases.



Note: Total Revenue in FY22-23 and FY23-24 includes \$15 million in bond proceeds.

**Table 1: Cash Flow Projection and Revenue Requirement**

<b>Fiscal Year</b>	<b>Estimated FY21-22</b>	<b>Projected FY22-23</b>	<b>Projected FY23-24</b>	<b>Projected FY24-25</b>
Proposed Rate Increase	3.5%	6.0%	6.0%	6.0%
Rate	1,132	1,200	1,272	1,348
Equivalent Single Family Dwellings	17,771	17,776	17,781	17,786
BEGINNING FUND BALANCE	15,972,610	11,365,845	17,032,010	5,156,933
<b><u>REVENUE</u></b>				
Sanitation Charges	17,275,838	17,999,000	18,380,850	19,112,720
Interest on Pooled Cash	50,070	87,159	143,950	38,599
State/Federal Grants <sup>1</sup>	0	12,708,700	4,645,300	0
Transfers from General Fund	0	0	0	0
Miscellaneous Revenue	201,000	91,000	91,000	91,000
<b>Total Revenue</b>	<b>17,526,908</b>	<b>30,885,859</b>	<b>23,261,100</b>	<b>19,242,319</b>
<b><u>EXPENDITURES</u></b>				
Total O&M	10,955,652	13,395,600	14,591,249	14,294,537
Capital Improvement Plan	8,731,372	8,507,296	15,442,497	10,929,271
Total Debt Service	2,394,172	3,259,121	3,259,121	3,259,121
<b>Total Expenditures</b>	<b>22,081,196</b>	<b>25,162,017</b>	<b>33,292,867</b>	<b>28,482,930</b>
Net Revenue	(4,554,288)	5,723,842	(10,031,767)	(9,240,611)
Ending Fund Balance - All Funds - Proposed 6.0% Rate Increase	11,365,845	17,032,010	6,957,933	(4,083,678)
Operations Ending Fund Balance	4,210,999	3,871,178	3,247,007	3,139,848
<i>Fund Balance Target- 6 months</i>				
<i>Operating Expenses</i>	<i>5,478,000</i>	<i>6,698,000</i>	<i>7,296,000</i>	<i>7,147,000</i>

Notes:

1. State and Federal Grants, Bonds/Loans: of the \$18 million in funds, \$15 million are bond funds to be received in July and the remaining \$3 million in future grant applications.
2. Additional funds may be needed if budgeted expenditures are incurred according to the schedule shown in the projection.

The proposed rate increase for the Equivalent Single Family Dwelling (ESD) value relies upon the District obtaining additional revenues from other sources of funding such as loans and grants. The total expenditures budget divided by ESDs, the total expenditures budget minus grant/bond revenue divided by ESDs, and the proposed ESD rate are shown in the table below. The proposed rate is the lowest the rate can be set given the need to maintain reserves, the structural deficit of the District, and the risks and uncertainties associated with receiving other sources of funding.

	<b>Estimated</b>	<b>Projected</b>	<b>Projected</b>	<b>Projected</b>
<b>Fiscal Year</b>	<b>FY21-22</b>	<b>FY22-23</b>	<b>FY23-24</b>	<b>FY24-25</b>
Total Expenditures Budget Divided by ESDs	1,243	1,416	1,872	1,601
Total Expenditures Budget minus Grant/Bond Revenue divided by ESDs	1,231	695 <sup>1</sup>	1,606 <sup>1</sup>	1,596
Proposed ESD Rate	1,132	1,200	1,272	1,348

Note 1. \$15 million in bond proceeds are deducted from expenditures.