

BODEGA BAY PUBLIC UTILITY DISTRICT

2021 Wastewater Financial Plan and Rate Study Update



FINAL DRAFT REPORT
December 1, 2021



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December 1, 2021

Janet Ames
District Manager
Bodega Bay Public Utility District
PO Box 70
Bodega Bay, CA 94923

Re: 2021 Wastewater Financial Plan and Rate Study Update

Bartle Wells Associates (BWA) is pleased to submit to the Bodega Bay Public Utility District (District) the attached 2021 Wastewater Financial Plan and Rate Study Update

This study presents BWA's updated analysis of the operating and non-operating expenses of the District's wastewater fund. The primary purpose of this study was to analyze the District's wastewater enterprise fund capital and operating costs and make recommendations that achieve financial sustainability. Another important purpose of this study was to review rates to ensure that they adhere to the State's legal requirements. The results of our study include five-year cash flow projections and rate recommendations.

BWA recommends updating the District's wastewater rates to include a capital surcharge to fund the District's 2022 Sewer Rehabilitation Project, which will repair and replace approximately 21,000 feet of aging sewer pipelines. The capital surcharge was developed to fund annual debt service payments to finance this project. Our recommendations were developed with substantial input from District staff and Board members. BWA finds that the rates and charges proposed in our 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. BWA believes that the proposed rates are fair and reasonable to the District's customers.

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

Sincerely,

Doug Dove, PE, CIPMA
Principal

Abigail Seaman
Consultant

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1 EXECUTIVE SUMMARY

1.1 Rate Study Background

Bodega Bay Public Utility District (District) provides municipal water and wastewater utility service to about 1,127 accounts, serving a population of approximately 2,600 in the coastal community of Bodega Bay, California. Key components of the wastewater system include facilities for the collection, storage, treatment, and disposal of wastewater. The District's sewer system includes over 15 miles of aging sewer lines.

The District's wastewater system is a self-sustaining enterprise, meaning revenues (mostly sourced from wastewater rates) must cover the cost to operate and maintain the wastewater system. Primary cost factors include annual debt service obligations, increasing operating costs and significant capital improvements to the wastewater system needed over the next five years.

The District retained Bartle Wells Associates (BWA) to conduct a wastewater rate study update which examines the latest costs facing the wastewater enterprise and recommends wastewater rates that align with the updated cost of service. Basic objectives of the rate study update include:

- Examine current wastewater rates and annual rate revenues.
- Update financial projections to determine future annual wastewater enterprise revenue requirements over the next 5 years.
- Evaluate rate alternatives and recommend wastewater rates designed to equitably recover the costs of providing service.

Based on input from District staff, key guiding principles include developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for 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 the District'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:** The District must mail a notice of proposed rate increases to all affected property owners. 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 District 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 a majority 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 that 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.

BWA used the following criteria when developing our updated 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) *Equitability:* Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practicality:* 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 owns and operates a wastewater enterprise which serves 1,127 connections. The District's wastewater system includes:

- Wastewater treatment facility
- Holding ponds
- 8 lift stations
- 15 miles of sewer lines
- Secondary/tertiary wastewater treatment for irrigation

The District's main source of wastewater revenue is bi-monthly wastewater rates, which have not been increased since July 1, 2019. The wastewater enterprise is in good financial health and rates are currently sufficient to fund current operating and debt expenses. However, the current rates will not meet funding needs for the 2022 Sewer Rehabilitation Project. Therefore, a rate increase is needed to fund the 2022 Project.

2 WASTEWATER FINANCIAL PROJECTIONS

2.1 Wastewater Fund Overview

Bartle Wells Associates conducted an independent, updated evaluation of the District's wastewater enterprise finances. Key observations include:

- Wastewater rate revenues have remained relatively constant with no rate increases since 2019.
- The wastewater enterprise has ongoing debt service requirements of approximately \$138,000 per year.
- The current Capital Improvement Plan (shown in the Appendix) which addresses aging infrastructure and Regional Water Quality Control Board requirements can be funded using a combination of debt, wastewater revenue and fund balance.
- Projected expenses and minimum reserve fund targets were used to develop annual rate revenue requirements. Wastewater expenses were escalated using the average annual change in CPI, approximately 3%. The fund balance minimum target is at least 2 months annual operating expenses plus annual depreciation (approximately 3% of current wastewater asset value).

- Current wastewater rate revenues are not sufficient to cover the 2022 Rehab Project costs. BWA proposes that the District finance this project. We recommend that the District recover revenue for the annual debt service payments from a capital surcharge.

2.2 Current Wastewater Rates

The District’s bimonthly wastewater rates include a fixed charge for Single Family Residential users and a volumetric charge for all other users (Multi Family and Commercial). Volumetric rates are charged per hundred cubic feet (hcf) of water use (748 gallons) and are subject to a minimum charge based on water meter size.

Table 1 - Current Bimonthly Wastewater Rates

Bimonthly Wastewater Rates Effective		1/1/2019
Single Family Residences - Flat Charge Bimonthly		\$122.20
All Other Users - Volumetric Charge per hcf		\$14.72
Bimonthly Minimum Volumetric Charge		\$/meter
5/8" or 3/4"		\$122.20
1"		\$204.07
1.5"		\$406.92
2"		\$651.32
3"		\$1,303.87
Units Included in Minimum		hcf bimonthly
5/8" or 3/4"		8
1"		14
1.5"		28
2"		44
3"		89

2.3 Current Wastewater Accounts

The District serves 1,127 wastewater accounts, the majority of which are single family residential. Table 3 shows current number of customers by meter size (several of which are billed to the same account).

Table 2 - Proposed Bimonthly Surcharges

Account Listing by Customer Class	# Customers
Single Family (1" or less)	1,059
Commercial	
3/4"	34
1"	11
1.5"	12
2"	6
3"	5
Total Commercial	68
Total	1,127

BWA has conservatively assumed that the number of accounts will remain constant over the next 5 years.

2.4 Current Sewer Flow

The wastewater rate study conservatively estimates that future sewer flow will be approximately equal to the 2019-2021 average flow, as shown in Table 4 below in hundred cubic foot (hcf) units.

Table 3 - Current Estimated Sewer Flow

Customer Accounts	Average Flow	
	CY 2019-2021 (hcf)	% total
Single Family	55,240	60%
Commercial		
3/4"	5,454	6%
1"	16,555	18%
1.5"	8,436	9%
2"	3,809	4%
3"	2,892	3%
Total Commercial	37,146	40%
Total	92,386	100%

Single Family Residential customers make up the majority of wastewater generated in the District, about 60% of the total. Single Family wastewater flow typically reflects indoor water use only, as outdoor irrigation does not impact the wastewater system during the summertime. Indoor water use is estimated based on average winter water consumption.

2.5 Factors Affecting 5-Year Financial Plan

The District's wastewater enterprise is in good financial health and would meet all projected operations, maintenance, and current debt service expenses over the next five years using current annual rate revenue and existing fund balance. The 2022 Sewer Rehabilitation Project will need additional funding from ratepayers, proposed to be generated through a capital surcharge.

Current Revenues and Ongoing Operating Cost Inflation

The District's wastewater operations budget totals approximately \$974,000 for FY 2020/21 including wastewater treatment and collection costs. All operations expenses are projected to increase 3% per year according to the average yearly percentage change CPI. FY 2021/22 budget revenue is projected to be \$1.61 million, which creates a net operating revenue surplus after including capital expenses. As costs continue to rise, the District will still meet its basic projected expenses using rate revenue.

2022 Sewer Rehabilitation Project

The District is responsible for operating and maintaining 15.6 miles of sewer mains, most of which were constructed in the late 1970s. Many of these assets are beginning to reach the end of their 50-year design life. In recent years, portions of the sewer collection system have required significant emergency repairs, and an inspection of the entire system has revealed that sections are at risk of potential failure. Additionally, the District has noticed increasing levels of inflow and infiltration (I/I) of surface water into the sewer collection system.

The District is planning to start construction on the 2022 Sewer Rehabilitation Project to repair or replace approximately 21,000 feet of aging sewer pipelines throughout the District. Repairing the sewer collection system is expected to reduce I/I, reduce failures, and improve the long-term condition of the sewer collection system. The project is estimated to cost about \$5.1 million.

Costs are itemized in detail in Appendix Table S-4.

2.6 Current and Proposed Debt Obligations

In addition to operating costs, the District pays semi-annual debt service payments on two loans split equally between water and wastewater funds. The District also makes regular annual payments on one inter-fund loan from the District's Water Fund for sewer capital improvements in FY 2020. The inter-fund loan of \$750,000 will be paid back over 10 years.

The District is pursuing low-interest financing for the 2022 Sewer Rehabilitation Project to smooth costs over time and minimize the bimonthly bill impact on ratepayers. The estimated annual debt service on the proposed debt for the Project is \$321,000.

A schedule of debt service payments, including the new proposed debt service for the 2022 Rehab Project, is shown on Table 4.

Table 4 – Current and Proposed Debt Service

Debt Service Payments	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Loan 1 2015	\$53,249	\$53,249	\$53,249	\$53,249	\$53,249	\$53,249
Loan 2 2015	\$85,068	\$85,068	\$85,068	\$85,068	\$85,068	\$85,068
Water Interfund Loan		\$83,495	\$83,495	\$83,495	\$83,495	\$83,495
Sewer Rehab Project			\$321,000	\$321,000	\$321,000	\$321,000
Total Annual Payments	\$138,317	\$221,812	\$542,812	\$542,812	\$542,812	\$542,812

2.7 5-Year Wastewater Cash Flow Projection

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

Growth & Water Demand Assumptions

- BWA has conservatively assumed no growth in new connections contributing to rate revenue.
- Wastewater flows are assumed to stay constant from FY 2020/21 given the latest conservation trends following the 2015 and 2021 droughts.

Revenue Assumptions

- Wastewater rate revenue is assumed to remain stable, assuming a stable number of customers and water consumption over the next 5 years.
- Other revenues (investment earnings, late charges, taxes, and Cell Site lease revenue) are projected to remain constant from 2020/21 budget amounts.

Expense Assumptions

- Operations and maintenance costs are based on the 2020/21 budget and escalate at the annual rate of 3.0% to account for future cost inflation.
- Capital improvement costs over the next five years include the 2022 Rehab Project and annual depreciation rehab/repair

Based on the assumptions above, BWA updated the 5-year wastewater cash flow projection and determined the annual rate revenue requirements necessary to meet projected expenses. The annual wastewater revenue requirement includes funding for:

- Annual Operations and Maintenance cost
- Debt service coverage requirements: net operating revenues equal to at least 120% of total annual debt service
- Operating Reserves equal to at least 2 months operations and maintenance costs over the next 5 years
- Capital Replacement Reserve Funds equal to 3% of current asset value

The 5-year Wastewater Cash Flow projection is shown on Table 5 below.

Table 5 – 5-Year Cash Flow Projection

Projection Year	Current	1	2	3	4	5
Fiscal Year	2020-21	2021-22	2022-23	2023-24	2022-25	2022-26
Effective Date		2/1/22	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Rate Revenue Increase		0%	0%	0%	0%	0%
SFR Surcharge (\$/Account)		\$30.31	\$30.31	\$30.31	\$30.31	\$30.31
SFR Flat Bimonthly Charge	\$122.20	\$122.20	\$122.20	\$122.20	\$122.20	\$122.20
Total SFR Bimonthly Cost	\$122.20	\$152.51	\$152.51	\$152.51	\$152.51	\$152.51
Beginning Fund Balance	\$854,614	\$999,932	\$3,217,454	\$643,346	\$549,269	\$424,322
Operating Revenue						
Sewer Charges - Residential	\$ 736,000	\$736,000	\$736,000	\$736,000	\$736,000	\$736,000
Sewer Charges - Commercial	\$ 675,000	\$675,000	\$675,000	\$675,000	\$675,000	\$675,000
Proposed Capital Surcharge	\$ 0	\$ 160,500	\$ 321,000	\$ 321,000	\$ 321,000	\$ 321,000
Total Operating Revenue	\$ 1,411,000	\$ 1,571,500	\$ 1,732,000	\$ 1,732,000	\$ 1,732,000	\$ 1,732,000
Non-Operating Revenues						
Other Revenues	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250
Loan Fund Distribution		\$ 4,890,000				
Total Non-Rate Revenues	\$ 250,250	\$ 5,140,250	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250
TOTAL REVENUES	\$ 1,661,250	\$ 6,711,750	\$ 1,982,250	\$ 1,982,250	\$ 1,982,250	\$ 1,982,250
Total Operating Expenses	\$697,468	\$969,900	\$998,997	\$1,028,967	\$1,059,836	\$1,091,631
Non-Operating Expenses						
Capital Improvement Program	\$0	\$3,164,200	\$2,876,232	\$366,232	\$366,232	\$366,232
Current Debt Service	\$138,317	\$221,812	\$221,812	\$221,812	\$221,812	\$221,812
2022 Rehab Project Debt Service	\$0	\$0	\$321,000	\$321,000	\$321,000	\$321,000
Total Non-Operating Expenses	\$138,317	\$3,386,012	\$3,419,044	\$909,044	\$909,044	\$909,044
TOTAL EXPENSES	\$835,785	\$4,355,912	\$4,418,041	\$1,938,011	\$1,968,880	\$2,000,675
Ending Fund Balance - Operating Reserve	\$999,932	\$3,355,770	\$919,979	\$964,219	\$977,589	\$959,164
Capital Replacement Reserve	\$0	\$0	\$366,232	\$732,464	\$1,098,696	\$1,464,928
<i>% Annual Exp in Operating Reserves (min 25%)</i>	143%	346%	92%	94%	92%	88%
<i>Debt Service Coverage (min 1.2x)</i>	6.97	3.84	1.81	1.76	1.70	1.64

3 WASTEWATER RATE RECOMMENDATIONS

3.1 Rate Revenue Requirements

The wastewater enterprise is in good financial health and bimonthly wastewater rates are currently sufficient to fund current operating and debt expenses. However, the current rates will not be sufficient to fund the Rehabilitation Project. BWA recommends that the District recover capital and debt expenditures associated with the project through a bimonthly capital surcharge for all ratepayers.

The proposed rate revenue requirements are shown in Table 6.

Table 7 – Rate Revenue Requirements

Fiscal Year		2021-22	2022-23	2023-24	2024-25	2025-26
Adoption Date	(Current)	2/1/2022	1/1/2023	1/1/2024	1/1/2025	1/1/2026
Rate Revenue Requirement						
Sewer Charges - Residential	\$ 736,000	\$736,000	\$736,000	\$736,000	\$736,000	\$736,000
Sewer Charges - Commercial	\$ 675,000	\$675,000	\$675,000	\$675,000	\$675,000	\$675,000
Proposed Capital Surcharge [1]	\$ 0	\$ 160,500	\$ 321,000	\$ 321,000	\$ 321,000	\$ 321,000
Total Rate Revenues	\$1,411,000	\$1,571,500	\$1,732,000	\$1,732,000	\$1,732,000	\$1,732,000

1. Surcharge revenues recover annual debt service payment on proposed loans for 2022 Rehab Project

3.2 Rate Structure Recommendations

3.3 Single Family Capital Surcharge Calculation

BWA recommends that the District charge a fixed bimonthly surcharge for all single-family wastewater customers. The surcharge reflects the Single-Family customer class contribution of 60% of sewer flow and the number of Single-Family Residential accounts in the District’s service area. The surcharge for single family residential customers is shown on Table 6 below.

Table 6 – Single Family Surcharge Calculation

Proposed Capital Surcharges	
Estimated Annual Debt Service Payment	\$321,000
% Residential Cost Share [1]	60%
Residential Cost Share of Annual Debt	\$192,600
Residential # Accounts	1,059
Proposed Single Family Capital Surcharge (Fixed \$/Account)	\$30.31

[1] Cost share estimated using percent of total annual sewer flow, average 2019-2021 (Table 3)

3.4 Commercial and Multi-Family Capital Surcharge Calculation

BWA recommends that the District charge a volumetric surcharge on Commercial and Multi Family customers (All Other Users) based on actual bimonthly water use. The surcharge calculation for All Other Users is shown on Table 7 below.

Table 7 –Commercial and MF Surcharge Calculation

Commercial Capital Surcharges	Proposed
Estimated Annual Debt Service Payment	\$321,000
<i>% Commercial Cost Share [1]</i>	<i>40%</i>
Commercial Cost Share of Annual Debt	\$128,400
Estimated Commercial Water Use (hcf)	37,146
Commercial Surcharge \$/hcf (All Water Use)	\$3.46
[1] Cost share estimated using percent of total annual sewer flow, average 2019-2021 (Table 3)	

3.5 Surcharge Revenue Projection

Wastewater capital surcharges are designed to generate revenue sufficient to make annual debt service payments (estimated to be \$321,000) on new debt issued for the 2022 Sewer Rehabilitation Project.

Capital surcharge revenue from Commercial users is based on their total bimonthly volumetric water consumption times the surcharge rate of \$3.46 per hcf. Capital surcharge revenue projections are shown in Table 8 below.

Table 8 – Capital Surcharge Revenue Projection

Fiscal Year	2021-22	2022-23	2023-24	2024-25	2025-26
Adoption Date		2/1/2022	1/1/2023	1/1/2024	1/1/2025
Single Family Surcharge Revenues		\$96,300	\$192,600	\$192,600	\$192,600
Commercial + MF Surcharge Revenues		64,200	\$128,400	\$128,400	\$128,400
Total Surcharge Revenues		\$160,500	\$321,000	\$321,000	\$321,000

4 CONCLUSION AND RECOMMENDATIONS

This wastewater rate study update presents a comprehensive review of the Bodega Bay Public Utility District's wastewater revenue requirements, cost allocations, and rate structure. Since the last comprehensive cost of service review in 2017, the District has identified much needed capital improvements and is planning to begin construction for the 2022 Sewer Rehabilitation Project. Current rates are sufficient to fund the annual operating costs of the system but are not sufficient to fund capital improvement costs. The 2022 Project is recommended to be funded with a surcharge that recovers the debt service payments from ratepayers over the project financing period. These factors were considered in the rate study to develop equitable rates for customers.

4.1 Conclusion

The District practices sound financial planning that has provided for the financial health of the wastewater enterprise. In the future, current rates will not be sufficient to fund the 2022 Sewer Rehabilitation Project expenditures. Wastewater rate revenues need to be increased to address the planned capital improvements. These factors were carefully considered in this wastewater rate study update and are reflected in the above proposed surcharges. Adopting the proposed surcharges reflects the District's commitment to stewarding a financially sound wastewater utility and providing reliable, high-quality wastewater service that will benefit the community many years into the future. If the debt service cost for the 2022 Project comes in lower than the estimates used, the surcharge can be reduced to reflect the actual costs.

4.2 Recommendations

BWA recommends that the District adopt the proposed capital surcharges calculated in this report. Detailed calculations are provided in the Appendix following this report. Rates were developed as part of a collaborative process that included extensive review of Board members and Staff.

BWA recommends that the District review and update its wastewater rate study approximately every five years, concurrent with any significant changes to the Wastewater System Master Plan. Proposition 218 allows public agencies to adopt rates over a five-year planning period. Any further rate increases must be supported by a comprehensive rate study.

Please find the detailed Surcharge Calculation Tables as of 12/1/2021 attached as an Appendix following this report.



Bodega Bay Public Utility District Wastewater Rate Study Update

Appendix: Surcharge Calculation Tables



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

Current Wastewater Rates

Fiscal Year 2019/20
Adoption Date 1-Jul-19

Single Family Residences - Flat Charge Bimonthly \$122.20
All Other Users - Volumetric Charge per hcf \$14.72

Bimonthly Minimum Volumetric Charge \$/meter

5/8" or 3/4"	\$122.20
1"	\$204.07
1.5"	\$406.92
2"	\$651.32
3"	\$1,303.87

Units Included in Minimum	hcf bimonthly
5/8" or 3/4"	8
1"	14
1.5"	28
2"	44
3"	89

Current Wastewater Customers & Average Flow

# Accounts	Current		Max Flow (gpm)	Meter Equivalent Units		% Average Flow CY 2019-2021 (ccf)
	# Accounts			3/4" Base	1" Base	
Single Family	1,059	94%	30	1,059	1,059	60%
Commercial						
3/4"	34	3%	30	34	34	6%
1"	11	1%	50	18	11	18%
1.5"	12	1%	100	40	12	9%
2"	6	1%	160	32	6	4%
3"	5	0%	1,600	267	5	3%
Total Commercial	68	6%		391	68	40%
Total	1,127			1,450	1,127	

** Total Volume Source = CY 2016 Water Demand from 2017 Wastewater Rate Study (Placeholder)

% Volume by Customer Class - Sewer Rate Study – Surcharge Fee Assessment, Coastland Engineering

Current Wastewater Revenues

	FY 2020-21 Total	% WW	FY 2020-21 Wastewater Fund
Operating Revenues			
31010-Sewer Charges - Resident	\$736,000	100%	\$736,000
31011-Sewer Charges - Business	\$675,000	100%	\$675,000
Total Operating Revenues	\$1,411,000		\$1,411,000
Non-Operating Revenues			
31020-Permit & Inspections	\$0		\$0
31030-Sewer Connection Fee	\$15,000	100%	\$15,000
31041-BHHO Effluent	\$10,000	100%	\$10,000
41000-Late Charges	\$10,000	50%	\$5,000
49200-Interest	\$25,000	50%	\$12,500
49300-Taxes	\$375,000	50%	\$187,500
49901-Cell Site Lease Payments	\$40,500	50%	\$20,250
Total Non-Operating Revenues	\$475,500		\$250,250
Total Income	\$1,886,500		\$1,661,250

Current & Projected Wastewater Operating Expenses

Rate Study Year Fiscal Year	2020-21 YTD Actual	1 2021-22 Budget	Cost Escalator	2 2022-23	3 2023-24	4 2024-25	5 2025-26
	50%	50%		Projection			
Wastewater Share of O&M Expenditures							
Salaries & Wages							
56010-Office Wages	\$ 76,711	\$ 104,500	3.0%	\$107,635	\$110,864	\$114,190	\$117,616
56015-Field Wages (Includes Overtime)	\$ 176,407	\$ 275,500	3.0%	\$283,765	\$292,278	\$301,046	\$310,078
Employee Benefits							
56021-Health	\$ 59,707	\$ 83,000	3.0%	\$85,490	\$88,055	\$90,696	\$93,417
56022-Dental	\$ 3,099	\$ 4,000	3.0%	\$4,120	\$4,244	\$4,371	\$4,502
56023- Life	\$ 1,415	\$ 1,750	3.0%	\$1,803	\$1,857	\$1,912	\$1,970
56024-Vision	\$ 911	\$ 1,250	3.0%	\$1,288	\$1,326	\$1,366	\$1,407
56025-Social Security/Medicare	\$ 19,943	\$ 29,750	3.0%	\$30,643	\$31,562	\$32,509	\$33,484
56026-Retirement 401 (k)	\$ 12,079	\$ 17,400	3.0%	\$17,922	\$18,460	\$19,013	\$19,584
56027-Post Retirement Medical	\$ 15,000	\$ 18,000	3.0%	\$18,540	\$19,096	\$19,669	\$20,259
56029-Retirement Health	\$ 29,697	\$ 43,500	3.0%	\$44,805	\$46,149	\$47,534	\$48,960
Total Salaries & Wages	\$ 394,969	\$ 578,650		\$ 596,010	\$ 613,890	\$ 632,306	\$ 651,276
All Other Expenditures							
56030-Directors Fee's	\$ 2,450	\$ 3,000	3.0%	\$3,090	\$3,183	\$3,278	\$3,377
56055-Gas - Trucks	\$ 3,525	\$ 5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628
56060-Gas - Equipment	\$ 408	\$ 2,500	3.0%	\$2,575	\$2,652	\$2,732	\$2,814
56070-Insurance	\$ 22,938	\$ 25,000	3.0%	\$25,750	\$26,523	\$27,318	\$28,138
56080-Memberships	\$ 10,599	\$ 11,000	3.0%	\$11,330	\$11,670	\$12,020	\$12,381
56085-Permits, Licenses & Fees	\$ 22,483	\$ 25,000	3.0%	\$25,750	\$26,523	\$27,318	\$28,138
56090-Office Supplies	\$ 6,022	\$ 8,750	3.0%	\$9,013	\$9,283	\$9,561	\$9,848
56100-Chemicals	\$ 16,898	\$ 20,000	3.0%	\$20,600	\$21,218	\$21,855	\$22,510
56105-Vehicle Maintenance	\$ 1,398	\$ 2,500	3.0%	\$2,575	\$2,652	\$2,732	\$2,814
56106-Generator Maintenance	\$ 29	\$ 1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126
56120-Professional Services	\$ 65,000	\$ 65,000	3.0%	\$66,950	\$68,959	\$71,027	\$73,158
56130-Printing	\$ 0	\$ 0	3.0%	\$ 0	\$ 0	\$ 0	\$ 0
56150-Repairs & Maintenance	\$ 9,500	\$ 75,000	3.0%	\$77,250	\$79,568	\$81,955	\$84,413
56155-Small Tools	\$ 2,500	\$ 2,500	3.0%	\$2,575	\$2,652	\$2,732	\$2,814
56160-Research & Monitoring	\$ 25,000	\$ 25,000	3.0%	\$25,750	\$26,523	\$27,318	\$28,138
56165-Safety Training & Equipment	\$ 5,000	\$ 5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628
56170-Professional Development	\$ 2,500	\$ 2,500	3.0%	\$2,575	\$2,652	\$2,732	\$2,814
56191-PG & E	\$ 100,000	\$ 105,000	3.0%	\$108,150	\$111,395	\$114,736	\$118,178
56192-Cell Phones	\$ 500	\$ 750	3.0%	\$773	\$796	\$820	\$844
56193-Voice & Internet (Phone)	\$ 5,000	\$ 6,000	3.0%	\$6,180	\$6,365	\$6,556	\$6,753
56195-Propane	\$ 500	\$ 500	3.0%	\$515	\$530	\$546	\$563
56200-Other	\$ 250	\$ 250	3.0%	\$258	\$265	\$273	\$281
Total All Other Expenditures	\$ 302,499	\$ 391,250		\$ 402,988	\$ 415,077	\$ 427,529	\$ 440,355
Total Expenses	\$ 697,468	\$ 969,900		\$ 998,997	\$ 1,028,967	\$ 1,059,836	\$ 1,091,631

Total does not include Depreciation, Loan Payments, or Loan Interest
Source: BBPUD Budget 20-21 & 2021-22

2021 Sewer Rehabilitation Project - Project Cost Summary

Item #	Item Description	Quantity	Unit	\$/Unit	Item Total
1	Traffic Control	1	LS	\$90,000	\$90,000
2	Sewer Bypass Pumping	1	LS	\$250,000	\$250,000
3	Cured-in-place Pipe Lining - 6" SS	9,430	LF	\$80	\$754,400
4	Cured-in-place Pipe Lining - 8" SS	654	LF	\$100	\$65,400
5	Cured-in-place Pipe Lining - 10" SS	3,213	LF	\$125	\$401,625
6	Cured-in-place Pipe Lining - 12" SS	5,633	LF	\$150	\$844,950
7	Reinstate Lateral and Install Cured-in-place Top Hat	59	EA	\$1,800	\$106,200
8	Cured-in-place Point Repair, 6" SS, 4' long	20	EA	\$1,000	\$20,000
9	Cured-in-place Point Repair, 6" SS, length varies 6-30'	5	EA	\$2,000	\$10,000
10	Replace 6" SS with 6" HDPE Pipe via Pipe-Bursting	1,680	LF	\$195	\$327,600
11	Reconnect Laterals to new 8" SS via HDPE Fused Saddles	17	EA	\$1,500	\$25,500
12	Remove and Replace 6" SS with 6" PVC Pipe	889	LF	\$180	\$160,020
13	Remove and Replace 8" SS with 8" PVC Pipe	663	LF	\$200	\$132,600
14	Reconnect Laterals to new 6" SS or 8" SS via PVC Sewer Wye	20	EA	\$500	\$10,000
15	Open-cut Point Repair of 6" SS, length varies 4-12'	5	EA	\$25,000	\$125,000
16	Sewer Manhole Rehabilitation	7	EA	\$5,000	\$35,000
17	Remove and Replace External Manhole Drop Piping	2	EA	\$10,000	\$20,000
18	Sewer Cleanout Replacement	1	EA	\$3,000	\$3,000
19	Asphalt Concrete Trench Paving	400	Tons	\$300	\$120,000
20	Trench Shoring & Bracing	1	LS	\$100,000	\$100,000
21	Mobilization	1	LS	\$180,000	\$180,000
Subtotal					\$3,781,000
15% Contingency					\$567,000
Total Construction Cost					\$4,348,000
Construction Management + Inspection (15%)					\$652,000
Final Engineering Design					\$145,000
CEQA Documentation					\$19,000
Total Estimated Project Cost					\$5,164,000

Source: BBPUD Sewer Rehabilitation Project, Engineers Estimate, 50% Submittal May 2021

Five Year Wastewater Capital Improvement Program

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Total
Wastewater Collection							
WWC-002 Sewer Rehabilitation Project		\$2,664,000	\$2,500,000				\$5,164,000
WWC-003 Sewer Pump Station Rehabilitation		\$374,000					\$374,000
Wastewater Treatment							
WWT-002 Defused Air for Aeration Tanks		\$50,000					\$50,000
WWT-005 Change in Disinfection			\$10,000				\$10,000
WWT-007 Influent Meters		\$70,200					\$70,200
WWT-008 Standby Feeders		\$6,000					\$6,000
Total Sewer CIP - All Projects	\$0	\$3,164,200	\$2,510,000	\$0	\$0	\$0	\$5,674,200
<i>Annual Depreciation Funding - Wastewater Share</i>			\$366,232	\$366,232	\$366,232	\$366,232	\$1,464,928
Sewer CIP with Depreciation Funding	\$0	\$3,164,200	\$2,876,232	\$366,232	\$366,232	\$366,232	\$7,139,128
Alternate Scenario - High Bid							
HIGH BID Sewer Rehabilitation Project		\$3,164,000	\$3,000,000				\$6,164,000
Sewer CIP with Depreciation Funding (High Bid)	\$0	\$3,664,200	\$3,376,232	\$366,232	\$366,232	\$366,232	\$8,139,128

*Depreciation Source: BBPUD Estimate 3% Asset Value provided 11/20/19
 Unspent depreciation funds accumulate in Capital Reserve to pay for next phase of sewer rehab project
 Source: Draft CIP 2021-2025

2021 Sewer Rehabilitation Project - Estimated Debt Service

	Proposed 20 yr Bank Loan	High Bid 30 yr Bond
2020 Sewer Rehabilitation Project	\$5,164,000	\$6,164,000
Proposed Debt Issuance	\$5,000,000	\$6,291,667
Issuance Costs		
Financial Advisor	\$30,000	\$40,000
Bond Counsel	30,000	40,000
Placement Agent	25,000	
Disclosure Counsel		20,000
Trustee		2,000
Ratings		25,000
<u>Misc/computer/legal review</u>	<u>10,000</u>	<u>10,000</u>
Total Costs of Issuance	\$95,000	\$137,000
Underwriter's Discount/Bank Fee (\$	<u>\$15,000</u>	<u>\$62,900</u>
Total All Costs	\$110,000	\$199,900
Cash Reserve Fund [2]		\$321,000
Proceeds For Construction	\$4,890,000	\$5,770,767
Principal Maturities	20	30
Assumed Avg Interest Rate	2.5%	3.0%
Average Annual Payment	\$321,000	\$321,000
Net annual Payment	\$321,000	\$321,000
Total of All Payments	\$6,420,000	\$9,309,000
Present Value of Payments [1]	\$5,004,000	\$6,292,000
<i>Total Costs as % of Issue</i>	2.2%	3.2%
	20 yr Bank Loan Proposed	30 yr Bond High Bid

[1] Discounted at assumed borrowing rate.

[2] One year of payments held in reserves.

Debt Service Schedule

			1	2	3	4	5	
Existing Debt Service	% WW Share	Annual Payment	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
2015 Existing Loan 1	50%	\$53,249	\$53,249	\$53,249	\$53,249	\$53,249	\$53,249	\$53,249
2015 Existing Loan 2	50%	\$53,249	\$53,249	\$53,249	\$53,249	\$53,249	\$53,249	\$53,249
Interfund Loan from Water [1]		\$83,495		\$83,495	\$83,495	\$83,495	\$83,495	\$83,495
Total Existing Debt			\$106,499	\$189,994	\$189,994	\$189,994	\$189,994	\$189,994
Proposed Debt Service Options								
	Issuance Amount	Annual Payment	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
A. Sewer Rehab 20 Year Loan 1 [2]	\$5,000,000	\$359,000			\$321,000	\$321,000	\$321,000	\$321,000
Total Existing plus Proposed Loan			\$106,499	\$189,994	\$510,994	\$510,994	\$510,994	\$510,994
B. Sewer Rehab 30 Year Bond (HIGH BID) [2]	\$6,291,667	\$321,000			\$321,000	\$321,000	\$321,000	\$321,000
Total Existing plus HIGH BID Bond			\$106,499	\$189,994	\$510,994	\$510,994	\$510,994	\$510,994

1 - \$750,000 loan from Water Fund to Sewer Fund in FY 2020-21, paid back over 10 years at 2% interest starting FY 2021-22

2 - Proposed financing payments assumed to begin after construction, FY 2023-24

Capital Improvement Surcharge Calculation

	Proposed 20 yr Bank Loan	Alternative 30 yr Bond (High Bid)
Estimated Debt Service - Table 8	\$321,000	\$321,000
Proposed Capital Surcharge Calculation		
Residential Surcharge per Account		
<i>% Residential Total Use</i>	60%	60%
Residential DS Cost Share	\$192,600	\$192,600
Residential # Accounts	1,059	1,059
Residential Bimonthly Surcharge \$/Account	\$30.31	\$30.31
Commerical Surcharge per ccf Water Use		
<i>Cost Share % Total Use</i>	40%	40%
Commercial DS Cost Share	\$128,400	\$128,400
Commercial Flow [1]	37,146	37,146
Commercial Surcharge \$/ccf (All Water Use)	\$3.46	\$3.46

[1] Total Annual Average Commercial Flow 2019-2021. See Table 3.

Wastewater Fund Balance & Reserve Requirements

	FY 2020-21 Total	% WW	FY 2020-21 Wastewater Fund
Unrestricted Funds			
General Cash Account	\$121,224	50%	\$60,612
Sewer Facility Reserve/AWT	\$401,502	100%	\$401,502
Operation Reserve	\$785,000	50%	\$392,500
Total Unrestricted Fund Balance	\$1,307,726		\$854,614
Minimum Reserve Fund Policy			
WW Operations Reserve	3 months O&M Cost	25%	FY 2020-21 \$174,367

Cash Flow Scenario A (20 Year Loan with Surcharge)

20 year bank loan, all CIP projects plus depreciation, funded with surcharge

	Projection Year Fiscal Year	Current 2020-21	1 2021-22	2 2022-23	3 2023-24	4 2022-25	5 2022-26
Effective Date			2/1/22	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Rate Revenue Increase			0%	0%	0%	0%	0%
SFR Surcharge (\$/Account)			\$30.31	\$30.31	\$30.31	\$30.31	\$30.31
SFR Flat Bimonthly Charge		\$122.20	\$122.20	\$122.20	\$122.20	\$122.20	\$122.20
Total SFR Bimonthly Cost		\$122.20	\$152.51	\$152.51	\$152.51	\$152.51	\$152.51
Beginning Fund Balance		\$854,614	\$999,932	\$3,387,588	\$983,615	\$1,059,673	\$1,104,861
Operating Revenue							
31010-Sewer Charges - Resident		\$ 736,000	\$736,000	\$736,000	\$736,000	\$736,000	\$736,000
31011-Sewer Charges - Business		\$ 675,000	\$675,000	\$675,000	\$675,000	\$675,000	\$675,000
Surcharge Revenues		\$ 0	\$ 160,500	\$ 321,000	\$ 321,000	\$ 321,000	\$ 321,000
Total Operating Revenue		\$ 1,411,000	\$ 1,571,500	\$ 1,732,000	\$ 1,732,000	\$ 1,732,000	\$ 1,732,000
Non-Operating Revenues							
Other Revenues		\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250
Loan Fund Distribution			\$ 4,890,000				
Total Non-Rate Revenues		\$ 250,250	\$ 5,140,250	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250
TOTAL REVENUES		\$ 1,661,250	\$ 6,711,750	\$ 1,982,250	\$ 1,982,250	\$ 1,982,250	\$ 1,982,250
Operating Expenses							
Total Operating Expenses		\$697,468	\$969,900	\$998,997	\$1,028,967	\$1,059,836	\$1,091,631
Non-Operating Expenses							
Capital Improvement Program		\$0	\$3,164,200	\$2,876,232	\$366,232	\$366,232	\$366,232
Current Debt Service		\$106,499	\$189,994	\$189,994	\$189,994	\$189,994	\$189,994
Loan Debt Service		\$0	\$0	\$321,000	\$321,000	\$321,000	\$321,000
Total Non-Operating Expenses		\$106,499	\$3,354,194	\$3,387,226	\$877,226	\$877,226	\$877,226
TOTAL EXPENSES		\$803,967	\$4,324,094	\$4,386,223	\$1,906,193	\$1,937,062	\$1,968,857
Ending Fund Balance - Operating Reserve		\$999,932	\$3,387,588	\$983,615	\$1,059,673	\$1,104,861	\$1,118,254
Capital Replacement Reserve		\$0	\$0	\$366,232	\$732,464	\$1,098,696	\$1,464,928
<i>% Annual Exp in Operating Reserves (min 25%, Debt Service Coverage (min 1.2x)</i>		143%	349%	98%	103%	104%	102%
		9.05	4.48	1.92	1.87	1.81	1.74

Cash Flow Scenario B (30 year Bond HIGH BID with Surcharge)

30 year bond, high bid CIP projects plus depreciation, funded with surcharge

	Projection Year Fiscal Year	Current 2020-21	1 2021-22	2 2022-23	3 2023-24	4 2022-25	5 2022-26
Effective Date			2/1/22	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Rate Revenue Increase			0%	0%	0%	0%	0%
SFR Surcharge (\$/Account)			\$30.31	\$30.31	\$30.31	\$30.31	\$30.31
SFR Sewer Service Charge		\$122.20	\$122.20	\$122.20	\$122.20	\$122.20	\$122.20
Total SFR Bimonthly Cost		\$122.20	\$152.51	\$152.51	\$152.51	\$152.51	\$152.51
Beginning Fund Balance		\$854,614	\$999,932	\$3,768,355	\$864,382	\$940,439	\$985,628
Operating Revenue							
31010-Sewer Charges - Resident		\$ 736,000	\$736,000	\$736,000	\$736,000	\$736,000	\$736,000
31011-Sewer Charges - Business		\$ 675,000	\$675,000	\$675,000	\$675,000	\$675,000	\$675,000
Sewer Rehabilitation Surcharge Revenues		\$ 0	\$160,500	\$321,000	\$321,000	\$321,000	\$321,000
Total Operating Revenue		\$ 1,411,000	\$ 1,571,500	\$ 1,732,000	\$ 1,732,000	\$ 1,732,000	\$ 1,732,000
Non-Operating Revenues							
Other Revenues		\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250
Bond Fund Distribution			\$5,770,767				
Total Non-Rate Revenues		\$ 250,250	\$ 6,021,017	\$ 250,250	\$ 250,250	\$ 250,250	\$ 250,250
TOTAL REVENUES		\$ 1,661,250	\$ 7,592,517	\$ 1,982,250	\$ 1,982,250	\$ 1,982,250	\$ 1,982,250
Operating Expenses							
Total Operating Expenses		\$697,468	\$969,900	\$998,997	\$1,028,967	\$1,059,836	\$1,091,631
Non-Operating Expenses							
Capital Improvement Program		\$0	\$3,664,200	\$3,376,232	\$366,232	\$366,232	\$366,232
Current Debt Service		\$106,499	\$189,994	\$189,994	\$189,994	\$189,994	\$189,994
Bond Debt Service		\$0	\$0	\$321,000	\$321,000	\$321,000	\$321,000
Total Non-Operating Expenses		\$106,499	\$3,854,194	\$3,887,226	\$877,226	\$877,226	\$877,226
TOTAL EXPENSES		\$803,967	\$4,824,094	\$4,886,223	\$1,906,193	\$1,937,062	\$1,968,857
Ending Fund Balance - Operating Reserve		\$999,932	\$3,768,355	\$864,382	\$940,439	\$985,628	\$999,021
Capital Replacement Reserve		\$0	\$0	\$366,232	\$732,464	\$1,098,696	\$1,464,928
% Annual Exp in Operating Reserves (min 25%)		143%	389%	87%	91%	93%	92%
Debt Service Coverage (min 1.2x)		9.05	4.48	1.92	1.87	1.81	1.74

Cash Flow Scenario Summary

Projection Year	Current	1	2	3	4	5
Fiscal Year	2020-21	2021-22	2022-23	2022-23	2023-24	2024-25
Effective Date		TBD	7/1/2022	7/1/2023	7/1/2024	7/1/2025

PROPOSED CAPITAL SURCHARGE - 20 YEAR BANK LOAN OR 30 YEAR BOND (HIGH BID)

20 year bank loan, all CIP projects plus depreciation, funded with surcharge

Rate Revenue Increase		0.0%	0.0%	0.0%	0.0%	0.0%
SFR Flat Bimonthly Charge	\$122.20	\$122.20	\$122.20	\$122.20	\$122.20	\$122.20
SFR Capital Surcharge	\$30.31	\$30.31	\$30.31	\$30.31	\$30.31	\$30.31
Total Bimonthly SFR Bill	\$122.20	\$152.51	\$152.51	\$152.51	\$152.51	\$152.51
Commercial Example Bill (50 hcf, 1" meter)	\$735.82	\$735.82	\$735.82	\$735.82	\$735.82	\$735.82
Commercial Example Surcharge	\$3.46	\$172.83	\$172.83	\$172.83	\$172.83	\$172.83
Total Bimonthly Comm Bill	\$735.82	\$908.65	\$908.65	\$908.65	\$908.65	\$908.65