

HANSFORD

ECONOMIC CONSULTING LLC

Donner Summit Public Utility District

2021 Utility Rates Study

DRAFT

March 12, 2021

HEC No. 200336

The following report was prepared by Hansford Economic Consulting LLC.

The analyses and findings contained within this report are based on primary data provided by the Donner Summit Public Utility District, as well as additional secondary sources of data available as of the date of this report. Updates to information used in this report could change or invalidate the findings contained herein. While it is believed that the primary and secondary sources of information are accurate, this is not guaranteed.

Every reasonable effort has been made in order that the data contained in this study reflect the most accurate and timely information possible. No responsibility is assumed for inaccuracies in reporting by the client, its consultants and representatives, or any other data source used in the preparation of this study. No warranty or representation is made that any of the projected values or results contained in this study will actually be achieved. There will usually be differences between forecasted or projected results and actual results due to changes in events and circumstances.

Changes in economic and social conditions due to events including, but not limited to, major recessions, droughts, major environmental problems or disasters that would negatively affect operations, expenses and revenues may affect the result of the findings in this study. In addition, other factors not considered in the study may influence actual revenues achieved. Any applications for financing, or bond sales analyses, should re-evaluate the financial health and projection of revenues and expenses at the time of the application or preparation for bond sale.

TABLE OF CONTENTS

SECTION	PAGE
1. INTRODUCTION AND SUMMARY OF FINDINGS	1
1.1 Purpose of the Study	1
1.2 Background	2
1.3 Rate Setting Principles and Report Organization	2
1.4 Water Fees Findings	3
1.5 Wastewater Fees Findings	3
1.6 Combined Utilities Impacts	5
2. DISTRICT REVENUES AND EXPENSES	8
2.1 District Revenues	8
2.2 District Expenses	10
3. WATER FEE CALCULATIONS	14
3.1 DSPUD Water Systems	14
3.2 Water Revenue Requirement	14
3.3 Water Rate Calculations	16
3.4 Projected Water Cash Flow	17
4. WASTEWATER FEE CALCULATIONS	19
4.1 DSPUD Wastewater System and Customers	19
4.2 Wastewater Revenue Requirement	19
4.3 Wastewater Rate Calculations	21
4.4 Projected Wastewater Cash Flow	25
5. DISTRICT AND CUSTOMER IMPACTS	28
5.1 District Financial Impacts	28
5.2 Customer Bill Impacts	29

LIST OF TABLES

PAGE

SECTION 1 – SUMMARY OF FINDINGS

1	Calculated Five-Year Water Fee Schedule	3
2	Calculated Five-Year Wastewater Fee Schedule	4
3	Combined Utility Bill Impact	6

SECTION 2 – DISTRICT FINANCIAL HEALTH AND CURRENT FEES TABLES

4	Current Water Rates (Soda Springs and Sugar Bowl areas)	9
5	Big Bend Water Rates	9
6	Current Wastewater Rates	10
7	Annual Change in DSPUD Operating Costs by Expense Item	11
8	Fiscal Year 2021 Budget	12
9	Depreciation of District Assets	13

SECTION 3- WATER FEE TABLES

10	Projected Water Operations Revenue Requirements	15
11	Calculated Water Rates for a Typical Home	17
12	Calculated Water Fees Schedule	17
13	Projected Cash Flow for Water	18

SECTION 4 - WASTEWATER FEE TABLES

14	Projected Wastewater Operations Revenue Requirement	20
15	Calculated Monthly Rates per EDU (All Customers)	22
16	Debt Service Allocation Inside and Outside CFD No. 1	22
17	Share of CFD No. 1 Debt Service Paid by Rates	23
18	Calculated Additional Monthly Rates per EDU for SRF Debt Service	24
19	Calculated Wastewater Fees Schedule	24
20	Projected Cash Flow for Wastewater	25
21	CIP for the Wastewater System	26

SECTION 5 – DISTRICT AND CUSTOMER IMPACTS TABLES

22	Estimated District Cash Balances	28
23	Projected Typical Home DSPUD Utilities Bill	29
24	Utility Rates Affordability	31

LIST OF FIGURES

PAGE

SECTION 1 – SUMMARY OF FINDINGS

1	Historical and Projected Cash Balance	5
2	Projected Quarterly Bill for a Typical Home	7

SECTION 2 – DISTRICT FINANCIAL HEALTH AND CURRENT FEES

3	Sources of Revenue	8
4	District Operating Expenses	11

SECTION 3 - WATER RATE STUDY FIGURES

5	Components of Water Revenue Requirement	16
---	-----------------------------------------	----

SECTION 4 - WASTEWATER RATE STUDY FIGURES

6	Components of Wastewater Revenue Requirement	21
7	Projected Wastewater Revenue Sources	27

SECTION 5 – DISTRICT AND CUSTOMER IMPACTS FIGURES

8	District Unrestricted Cash Projection	29
9	Projected Quarterly Bill for a Typical Home	30

Section 1: INTRODUCTION AND SUMMARY OF FINDINGS

1.1 PURPOSE OF THE STUDY

The Donner Summit Public Utility District (District or DSPUD) provides water, wastewater, and recycled water utility services to residents and businesses along the I-80 corridor, the communities of Soda Springs and Sugar Bowl, and several ski resorts. The District’s service territory comprises approximately 13 square miles, with customers located within both Nevada and Placer counties. The District also provides wastewater treatment services to the Sierra Lakes County Water District (SLCWD) by way of agreement, and treated water services to the community of Big Bend.

The purpose of this Utilities Rate Study (Study) is to determine the level of funding required over the next five years to adequately fund the District so that it can safely operate both utility systems meeting State and Federal regulatory requirements, and to determine a schedule of property-related fees to support that level of funding.

This report provides an explanation and justification of the calculated water and wastewater utility rates for the next five years and it documents adherence to the law regarding setting of rates by a special district. Per California Constitution Article 13D, these types of utility rates shall not be extended, imposed, or increased by any agency unless it meets all of the following requirements:

- (1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- (2) 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.
- (3) 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.
- (4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted.
- (5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library, services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The utility financial models presented in this report project revenues and expenses and calculate rates for the next five fiscal years with the first change in utility rates implemented with the first quarter billing statement (July through September 2021).

1.2 BACKGROUND

The District last conducted a water utility rate study in 2016, a Big Bend only water fees study in 2018, and a wastewater utility rate study in 2018. Water and wastewater rate updates are necessary at this time to a) ensure revenue sufficiency of the utility systems for the next five years, and b) demonstrate the District's ability to repay existing and planned future debts. No changes are proposed to the Big Bend water fees schedule adopted in 2018.

Rate studies are typically conducted every three to five years to ensure revenue sufficiency. As part of the regular periodic review of the rates, best practices include maintaining financially self-sustaining utilities, setting policies or guidelines on appropriate reserve levels, including depreciation in the rates, and continual customer outreach to educate on the value of the services provided.

This report presents the results of the analysis and calculated rates for the next five fiscal years (2022 through 2026).

1.3 RATE SETTING PRINCIPLES AND REPORT ORGANIZATION

This report was prepared using the principles established by the American Water Works Association (AWWA), the Water Environment Federation (WEF), and Government Finance Officers Association (GFOA).

The AWWA "Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1 (the "M1 Manual") establishes commonly accepted professional standards for water cost-of-service studies. This manual is referenced in the water rate study.

The wastewater rate study uses standard industry practices outlined in the WEF Manual of Practice No. 27 and guidelines prepared by the California State Water Resources Control Board for State Revolving Fund financing.

The GFOA publishes guidelines on sufficient cash balances for enterprise funds. Minimum cash balance targets for each utility fund in this Study are based on the GFOA guidelines.

The Study is presented in five sections. Following this introduction and summary of findings, Section 2 describes the historical and financial health of the District; its sources of revenues and major expense categories. Section 3 provides the water fees methodology and calculations. Section 4 provides the wastewater fees methodology and calculations. Section 5 provides a summary of the impact of the calculated five-year projection of rates on the District's financial health and provides a bill impact analysis for customers of the District.

Appendix A includes support tables for the water and wastewater rate calculations. **Appendix B** includes supporting calculations for a scenario under which two neighborhoods in Sugar Bowl convert from septic to municipal wastewater service.

1.4 WATER FEES FINDINGS

The updated water rate schedule is provided in **Table 1** below. There is no proposed change to the District’s water rate structure but rates are increased to keep pace with inflation, keep up with needed system rehabilitation costs, and to increase cash in the water fund to a prudent level as recommended by GFOA.

Table 1
Calculated Five-Year Water Fee Schedule

Meter Size	Base Monthly Allowance	Current	Calculated WATER Rates Next Five Years				
			7/1/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Monthly Fee							
3/4"	10,000	\$72.98	\$86.25	\$98.60	\$107.27	\$112.30	\$117.65
1"	18,500	\$135.01	\$159.57	\$182.40	\$198.45	\$207.74	\$217.66
1.5"	25,000	\$182.44	\$215.62	\$246.48	\$268.16	\$280.73	\$294.12
2"	40,000	\$291.91	\$345.00	\$394.37	\$429.07	\$449.17	\$470.60
3"	65,000	\$474.35	\$560.63	\$640.85	\$697.23	\$729.90	\$764.72
4"	175,000	\$1,277.11	\$1,509.39	\$1,725.37	\$1,877.17	\$1,965.13	\$2,058.90
6"	262,000	\$1,912.01	\$2,259.77	\$2,583.12	\$2,810.38	\$2,942.08	\$3,082.45
8"	350,000	\$2,554.21	\$3,018.77	\$3,450.73	\$3,754.32	\$3,930.25	\$4,117.78
per thousand gallons							
Overage Charge		\$7.298	\$8.625	\$9.860	\$10.727	\$11.230	\$11.765
Percentage Increase in Rates			18%	14%	9%	5%	5%

Source: HEC 2021 Rate Study.

sum water

1.5 WASTEWATER FEES FINDINGS

As with water, there is no proposed change to the wastewater rate structure; rates are increased to account for the following key factors: (1) decrease in costs paid for by SLCWD per interlocal agreement, which divides expenses between the two districts based on the percentage of flow each one contributes into the plant, (2) less than anticipated growth in number of customers that was built into the 2018 wastewater rate study, and (3) need to increase annual revenue receipts to satisfy State loan debt service coverage requirements.

The updated wastewater rate schedule is provided in **Table 2** on the next page. Scenario (A) presents the increased rates assuming there are no new customers added to the wastewater system (or that buy a share of capacity into the wastewater treatment plant). Scenario (B) presents the increased rates assuming homes in two neighborhoods in Sugar Bowl (West Village and East Village) become wastewater customers of the District and convert from septic to municipal wastewater service. Under this scenario, improvements to serve the new customers will be borne by those customers, most likely via a land-secured special financing district.

It is recommended that the DSPUD Board of Directors (Board) adopt rates under Scenario A as these are maximum authorized rates; in the event that the Sugar Bowl septic conversion project is completed and the additional customers connect, wastewater rates can be revisited, and if prudent, frozen or lowered.

Table 2
Calculated Five-Year Wastewater Fee Schedule

Scenario (A) – No new customers

Rates by Customer	Current	Calculated WASTEWATER Rates Next 5 Years				
		7/1/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Existing Customers		Monthly Fee per EDU				
Inside CFD No. 1	\$131.44	\$155.25	\$163.23	\$171.78	\$180.93	\$190.75
Outside CFD No. 1	\$180.86	\$204.67	\$212.65	\$221.20	\$230.35	\$240.16
CalTrans	\$120.59	\$142.72	\$150.71	\$159.25	\$168.41	\$178.22
Future Customers						
Inside CFD No. 1	\$69.39	\$83.89	\$87.88	\$92.15	\$96.73	\$101.64
Outside CFD No. 1	\$118.81	\$133.30	\$137.30	\$141.57	\$146.15	\$151.05
		Special Taxes per EDU				
Inside CFD No. 1 - All EDUs	\$49.42	\$49.42	\$49.42	\$49.42	\$49.42	\$49.42

Source: HEC 2021 rate study.

sum ww

Scenario (B) – Addition of Sugar Bowl Septic Conversions

Rates by Customer	Current	Calculated WASTEWATER Rates Next 5 Years				
		7/1/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Existing Customers		Monthly Fee per EDU				
Inside CFD No. 1	\$131.44	\$155.25	\$158.13	\$166.89	\$174.12	\$182.26
Outside CFD No. 1	\$180.86	\$204.67	\$207.54	\$216.31	\$223.54	\$231.68
CalTrans	\$120.59	\$142.72	\$147.88	\$156.65	\$163.88	\$172.02
Future Customers						
Inside CFD No. 1	\$69.39	\$83.89	\$84.19	\$88.57	\$92.18	\$96.25
Outside CFD No. 1	\$118.81	\$133.30	\$133.60	\$137.99	\$141.60	\$145.67
		Special Taxes per EDU				
Inside CFD No. 1 - All EDUs	\$49.42	\$49.42	\$49.42	\$49.42	\$49.42	\$49.42

Source: HEC 2021 rate study.

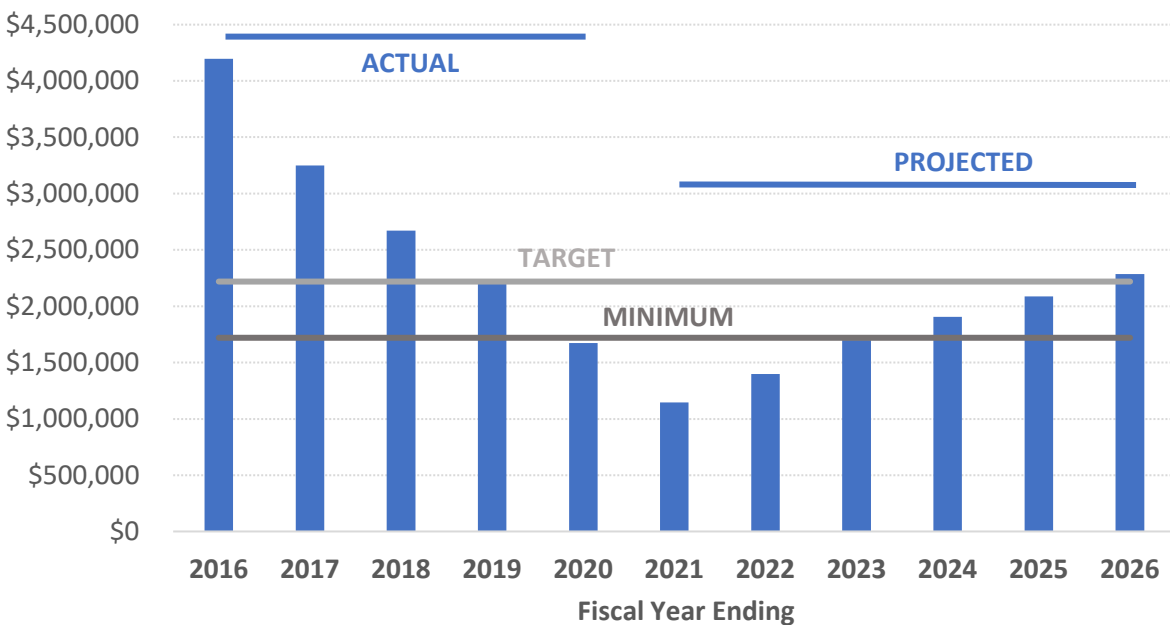
sum ww

1.6 COMBINED UTILITIES IMPACTS

District. The impact of adopting the proposed water and wastewater Scenario (A) rates would be to improve the financial health of the District. **Figure 1** below shows the actual change in the District’s total cash balance between fiscal year 2016 and fiscal year 2020. During this period, cash was drawn down from approximately \$4.2 million to approximately \$1.7 million. At the end of fiscal year 2020, the District’s cash fell below the minimum advisable cash balance, per GFOA guidelines. In addition, the wastewater debt service coverage fell below the State’s requirement.

The proposed increased water and wastewater rates would bring the District back into full compliance with State loan requirements within the first fiscal year, and would gradually increase cash reserves back to recommended levels.

Figure 1
Historical and Projected Cash Balance



As a best management practice, service utilities need sufficient cash balance to:

- Serve cash flow needs
- Pay for emergency and unplanned necessary repairs
- Accumulate for system rehabilitation (planned improvements)
- Provide rate stabilization

While each utility needs to assess its risks on an individual basis using knowledge of the current status of infrastructure, regulatory requirements, cash flow “bumps” and so forth, there are some general guidelines to measure what a prudent reserve would be for the utility. The GFOA best

practice is to start with a baseline of 90 days of operating expenses and adjust depending on local circumstance. GFOA guidelines to adjust the target for local circumstances include:

- Frequency of revenue collection - DSPUD has predictable, steady revenues – this lowers the cash flow concern.
- Diversity of the customer base – timely payments and cash flow is less of a concern with a diverse customer base. DSPUD has a mostly residential database and a few large corporate customers (Boreal, Soda Springs, Donner Ski Ranch and Sugar Bowl ski resorts).
- Unpredictable weather events – large weather events can cause need for costly emergency work. Donner Summit does experience snow and flood events, which should be considered.
- Ever-increasing California environmental standards / requirements for wastewater and water treatment – may require new infrastructure and/or monitoring expenses. The District has been subject to large increased costs due to environmental concerns in the past.
- Rate stabilization – raising rates is unappealing; especially with a small customer base such as DSPUD’s. When there are sufficient reserves, more gradual rate increases can be introduced.

Given the above GFOA guidelines, it is recommended that the District have an overall target (water and wastewater combined) unrestricted cash balance of six months (180 days) of projected operating expenses, with a minimum of four months (120 days) of projected operating expenses.

Customers. District residents receive quarterly utility bills that include charges for water and wastewater services; therefore, it is important to look at the combined impact of increases on customer bills. **Table 3** shows the total quarterly bill impact to a typical home in Soda Springs and Sugar Bowl using less than 10,000 gallons per month under Scenario (A). *All of the tables for the remainder of this report are prepared under Scenario (A).*

Table 3
Combined Utility Bill Impact for a Soda Springs and Sugar Bowl Home

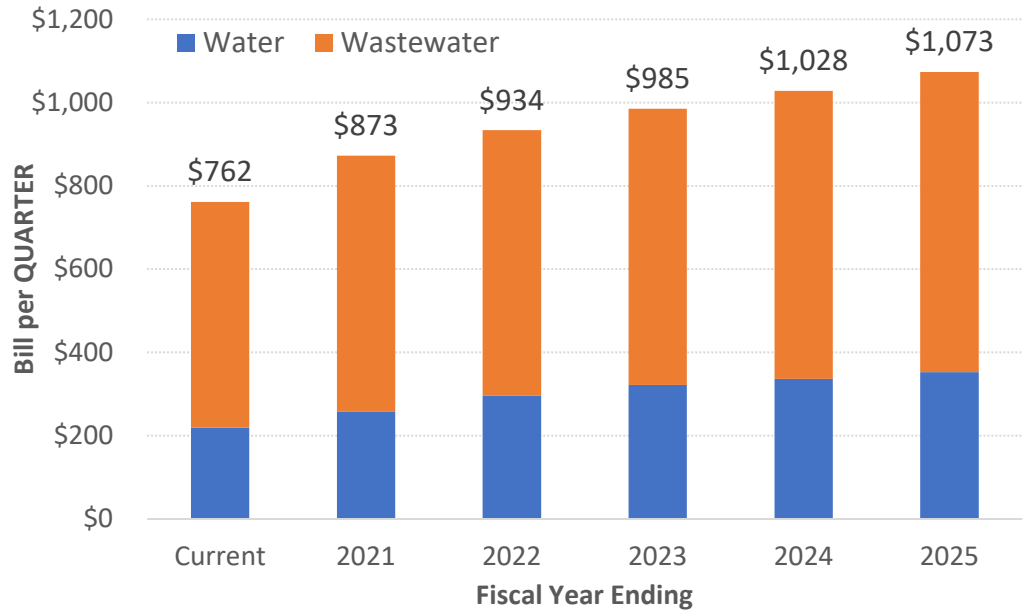
Utility	Current	Beginning July 1				
		2021	2022	2023	2024	2025
Quarterly Bill (3 Months)						
Water	\$219	\$259	\$296	\$322	\$337	\$353
Wastewater	\$543	\$614	\$638	\$664	\$691	\$720
Total	\$762	\$873	\$934	\$985	\$1,028	\$1,073
Increase per Quarter per Year		\$111	\$61	\$52	\$43	\$46
Annual Increase		\$445	\$244	\$207	\$170	\$182

Source: HEC 2021 rate study.

sf

Figure 2 illustrates the total quarterly bill increase for a typical home.

Figure 2
Projected Quarterly Bill for a Typical Home

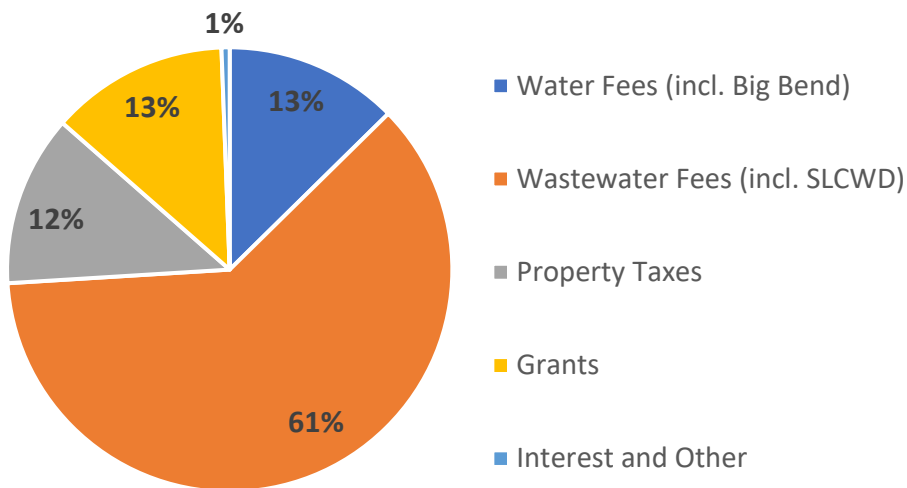


Section 2: DISTRICT REVENUES AND EXPENSES

2.1 DISTRICT REVENUES

The District's sources of revenue for the past five years are illustrated in **Figure 3**. The majority of revenue has been from wastewater fees (including fees from SLCWD for treatment of their wastewater). In recent years the District has been very successful in securing grants to complete projects for water projects, and the remaining revenues have come from water fees (including those from the Big Bend service area), property taxes, interest and other (such as late payments).

Figure 3
Sources of Revenue



More than 65% of total revenues are generated by quarterly water and wastewater fees paid by DSPUD customers. Collection of these fees is based on the authorized rate schedules adopted by the Board.

The current water rate schedules are shown in **Tables 4** and **5** on the following page. Soda Springs and Sugar Bowl service areas pay the schedule shown in **Table 4**, and Big Bend customers pay the schedule shown in **Table 5**. Note, Big Bend customers only receive water service from the District.

Table 4
Current Water Rates (Soda Springs and Sugar Bowl areas)

Meter Size	Gallons Allowed per Month	Rate per Month
3/4"	10,000	\$72.98
1"	18,500	\$135.01
1.5"	25,000	\$182.44
2"	40,000	\$291.91
3"	65,000	\$474.35
4"	175,000	\$1,277.11
6"	262,000	\$1,912.01
8"	350,000	\$2,554.21
Overage Charge per Thousand Gallons		\$7.298

Source: DSPUD Ordinance 03-2016. water

Table 5
Big Bend Water Rates

Property Type	Fees as of January 1, 2021		
	Operations [1]	Debt	Total
<i>Quarterly Fees</i>			
Project Prepaid Cabins	\$261.56	\$0.00	\$261.56
Debt Service Cabins	\$261.56	\$185.46	\$447.02

Source: Public Hearing notice, October 1, 2018. bigb

[1] Operations quarterly fees increase 3% per year every January 1, with the last authorized increase Jan 1, 2023.

Current wastewater rates are shown in **Table 6** on the next page. Existing customers include those customers that have paid for capacity in the wastewater treatment plant and are connected to the wastewater system. Future customers include those customers that have paid for capacity in the wastewater treatment plant but are not yet connected to the wastewater system.

In 2015, the District formed Community Facilities District (CFD) No. 1, with three areas that had the opportunity to approve or disapprove a new special tax to pay for the wastewater treatment plant upgrade and expansion. Two of the areas voted for the new tax. One area did not approve the new special tax. As a result, wastewater rates are different for customers inside and outside CFD No. 1. Customers outside CFD No. 1 pay for debt service associated with the treatment plant upgrade and expansion in their rates, whereas customers inside CFD No. 1 pay for the majority of their share of

debt service as a special tax, and a small portion of their share of debt service in their rates. In total, all existing customers pay the same (with the exception of CalTrans), and all future customers pay the same. CalTrans paid for their share of the treatment plant upgrade and expansion in one lump sum and are not obligated to make any additional payments for the project.

Table 6
Current Wastewater Rates

Rates by Customer	Current	Approved Rates	
		7/1/2021	7/1/2022
Existing Customers			
	Monthly Charge per EDU		
Inside CFD No. 1	\$131.44	\$134.33	\$137.40
Outside CFD No. 1	\$180.86	\$183.74	\$186.82
CalTrans	\$120.59	\$123.47	\$126.55
Future Customers			
Inside CFD No. 1	\$69.39	\$70.79	\$72.29
Outside CFD No. 1	\$118.81	\$120.21	\$121.70
	Special Taxes per EDU		
Inside CFD No. 1 - All EDUs	\$49.42	\$49.42	\$49.42
Recycled Water Rate [1]	\$17.39 per 1,000 gallons		

Source: HEC Wastewater Rate Study, March 29, 2018.

ww

[1] Ordinance 2-2020.

2.2 DISTRICT EXPENSES

DSPUD operating expenses include costs for personnel (salaries, wages, and benefits), power, gas and other utilities, chemicals, lab supplies, routine maintenance of infrastructure, office supplies, fleet costs, and other miscellaneous costs as illustrated in **Figure 4** on the next page. The largest cost category is for personnel, which costs make up about half of all operating costs.

The District has been successful in keeping its annual operating costs in check, with an average annual increase of 3.6% of the past five years. One cost category that is not included in the annual average increase is wastewater treatment plant costs; since maintenance costs are susceptible to unpredictable conditions, this cost category was excluded. Some cost categories have had greater than typical increases in the last five years, in particular insurance costs and benefits (which also affects Board expenses). **Table 7** on the next page shows average annual percentage increases by cost category and it compares the increases with two consumer prices indexes. The District's average annual cost increase of 3.6% is close to the average annual cost index of the San Francisco consumer price index (3.1%) and the Engineering News Record Construction Cost Index for San Francisco (3.0%).

Figure 4
District Operating Expenses

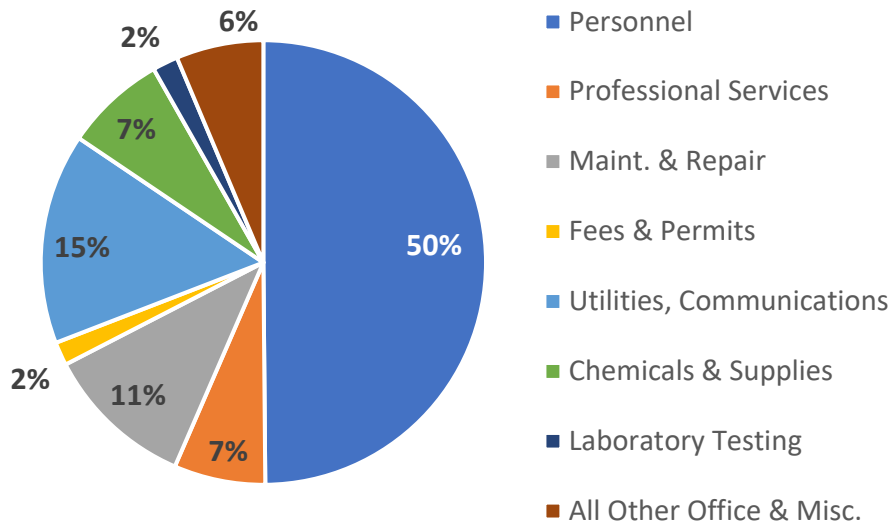


Table 7
Annual Change in DSPUD Operating Costs by Expense Item

Operating Costs	Fiscal Year Ending					Total Change	Avg. Annual % Change
	2016	2017	2018	2019	2020		
Personnel	\$1,064,816	\$1,175,799	\$1,306,165	\$1,331,283	\$1,351,195	\$286,379	6.1%
Professional Services	\$203,998	\$260,451	\$132,690	\$137,432	\$95,704	(\$108,294)	-17.2%
Maint. & Repair	\$261,427	\$172,189	\$220,707	\$272,350	\$252,121	(\$9,306)	-0.9%
Fees & Permits	\$33,340	\$38,699	\$63,901	\$33,641	\$43,551	\$10,211	6.9%
Insurance	\$55,338	\$59,664	\$72,474	\$80,351	\$94,195	\$38,857	14.2%
Utilities, Communications	\$318,387	\$366,726	\$395,209	\$443,222	\$392,405	\$74,018	5.4%
Chemicals & Lab Supplies	\$148,590	\$162,240	\$166,500	\$158,978	\$150,385	\$1,795	0.3%
Operating Supplies	\$26,753	\$26,398	\$32,774	\$27,136	\$18,271	(\$8,482)	-9.1%
Laboratory Testing	\$30,797	\$44,424	\$55,928	\$57,286	\$42,957	\$12,160	8.7%
Board Expense	\$23,047	\$28,369	\$46,297	\$48,231	\$54,629	\$31,582	24.1%
All Other Office & Misc.	\$33,379	\$58,459	\$54,923	\$48,592	\$34,827	\$1,448	1.1%
Total Operating Costs	\$2,199,872	\$2,393,418	\$2,547,568	\$2,638,502	\$2,530,240	\$330,368	3.6%
WWTP Only Operations	\$15,483	\$16,625	\$37,439	\$84,522	\$29,410	\$13,927	17.4%
Engineering News Record	<i>Jun 2016</i>	<i>Jun 2017</i>	<i>Jun 2018</i>	<i>Jun 2019</i>	<i>Jun 2020</i>		
CCI - 20-City [1]	10,337	10,703	11,069	11,268	11,436	\$1,099	2.6%
CCI - San Francisco	11,548	11,722	12,015	12,354	13,023	\$1,474	3.0%
Bureau of Labor Statistics							
CPI - California	256	262	272	281	285	\$29	2.7%
CPI - San Francisco	266	275	286	295	300	\$34	3.1%

Source: DSPUD financials, the Engineering News Record, and Bureau of Labor Statistics.

incr

The District’s budget for the current fiscal year is shown in **Table 8** below. The current budget forms the basis for the projection of expenses of the next five years in the financial model.

Table 8
Fiscal Year 2021 Budget

Revenues and Expenses	Water System	Wastewater System		Admin	Total
		Sewer	Treatment		
Program Revenue					
Water Fees	\$461,050	\$0	\$0	\$0	\$461,050
Sewer Fees	\$0	\$380,021	\$1,140,063	\$0	\$1,520,084
Connection Fees	\$0	\$0	\$0	\$0	\$0
Sierra Lakes County Water Dist.	\$0	\$0	\$368,040	\$0	\$368,040
Property Tax	\$29,040	\$19,048	\$83,912	\$0	\$132,000
Station 97 Utilities	\$0	\$0	\$0	\$6,500	\$6,500
Late Fees, Other Revenue	\$0	\$0	\$0	\$8,000	\$8,000
Suburban Propane Credit	\$0	\$0	\$10,230	\$0	\$10,230
Anticipated Recycled Water Sales [1]	\$0	\$0	\$5,000	\$0	\$5,000
Big Bend Service Fees (assmt not included)	\$28,892	\$0	\$0	\$0	\$28,892
Total Program Revenue	\$518,982	\$399,069	\$1,607,245	\$14,500	\$2,539,795
Expenses					
Salaries	\$124,883	\$105,015	\$337,751	\$337,725	\$905,373
Employee benefits	\$60,746	\$53,630	\$169,867	\$87,671	\$371,914
Board Expense	\$0	\$0	\$0	\$63,533	\$63,533
Professional Services	\$15,000	\$0	\$81,250	\$73,800	\$170,050
Dues	\$379		\$724	\$7,062	\$8,165
Fees, permits, certifications	\$7,536	\$3,376	\$17,623	\$20,593	\$49,128
Training, education, travel	\$942	\$273	\$2,745	\$1,500	\$5,460
Insurance- property, auto, etc.	\$26,848	\$26,848	\$73,831	\$6,712	\$134,238
Office supplies and miscellaneous	\$549	\$563	\$823	\$7,000	\$8,935
Utilities, communications, telemetry	\$24,879	\$26,448	\$260,000	\$28,420	\$339,746
Chemicals and lab supplies	\$16,146	\$565	\$127,042	\$0	\$143,754
Laboratory Testing	\$7,396		\$41,910		\$49,306
Equipment maintenance and repair	\$13,993	\$10,178	\$53,040	\$6,552	\$83,763
Small equipment rental and PPE	\$6,750	\$0	\$2,534	\$0	\$9,284
Operating supplies	\$0	\$0	\$7,632	\$0	\$7,632
Infiltration-Inflow	\$0	\$26,000	\$0	\$0	\$26,000
Sludge removal	\$0	\$0	\$43,000	\$0	\$43,000
Vehicle maintenance, repair, fuel	\$2,524	\$3,794	\$37,825		\$44,143
Facility maintenance and repair	\$8,783	\$18,665	\$13,520	\$5,200	\$46,168
Amortization of land lease	\$0	\$0	\$20,250	\$0	\$20,250
Long term debt (principal and interest)	\$9,350	\$0	\$153,383	\$0	\$162,733
Total Expenses	\$326,703	\$275,354	\$1,444,751	\$645,767	\$2,692,575
Net Revenue (Expense)	\$192,279	\$123,715	\$162,494	(\$631,267)	(\$152,780)

Source: DSPUD historical financials and HEC 2021 rate study.

financials

[1] HEC moved from water to wastewater.

In addition to accounting for the District’s operating expenses, utility rates should collect for future costs to rehabilitate existing assets. **Table 9** below shows the depreciation for water and wastewater assets included in the District’s annual audited financial records. The increase in depreciation for water assets in 2019 reflects the improvements that were completed at Lake Angela. The rate study includes 25% of annual depreciation in the rates. This rate revenue may be used for capital improvement projects as they arise; and, until they do, they will remain as District cash on hand (reserves).

**Table 9
Depreciation of District Assets**

Fiscal Year	Water	Wastewater
2016	\$65,136	\$690,153
2017	\$64,641	\$703,534
2018	\$87,566	\$703,557
2019	\$114,516	\$689,361
2020	\$114,189	\$692,737
System Rehab. @ 25%	\$29,000	\$173,000

Source: Audited financials. depr

The District’s annual operating expenses are allocated between the water and wastewater systems as shown in **Appendix A Table A-1**. Almost 80% of operating costs are incurred by the wastewater system.

Section 3: WATER FEE CALCULATIONS

3.1 DSPUD WATER SYSTEMS

The District owns two water systems. The Lake Angela surface water system provides potable water to the communities of Soda Springs and Sugar Bowl (about 355 water connections). The Big Bend groundwater system provides potable water to the community of Big Bend (29 cabins).

3.2 WATER REVENUE REQUIREMENT

According to the AWWA M1 Manual, the first step in the ratemaking analysis is to determine the adequate and appropriate funding of a utility. This is referred to as the “revenue requirement” analysis. This analysis considers the short-term and long-term service objectives of the utility over a given planning horizon, including capital facilities and system operations and maintenance, to determine the adequacy of a utility’s existing rates to recover its costs. Specifically, the revenue requirement refers to the amount of money that must be raised for revenue sufficiency of the water fund through rates. The projection of the revenue requirement is the cornerstone for the calculation of rates. This section explains the derivation of revenue requirement for the water system. Components of the revenue requirement include:

- Operating Expenses
- Debt Service
- System Rehabilitation
- Reserves for Capital or Operating Costs

Table 10 on the next page shows the projected revenue requirement for the water system for fiscal years 2022 through 2026. Operating expenses are increased from the fiscal year 2021 budget using the historical annual percentage increases for each of the cost categories explained in the previous section, except however that if a cost category had a negative change, an annual increase of 4% was used to project the costs for that category. Water system debt service include a loan from the State Water Resources Control Board (SWRCB) for the improvements made at Lake Angela in 2018, a loan from PG&E for electrical system upgrades, and the USDA loan for construction of the treatment facility to serve Big Bend. Big Bend loan repayment estimates are provided in **Appendix A Table A-2**. The PG&E loan repayments schedule, most of which is payable by the wastewater system, is provided in **Appendix A Table A-3**.

Other costs included in the revenue requirement include system rehabilitation (25% of the water system depreciation) and operating reserves. According to the District’s auditor, the water fund had a negative cash balance of nearly \$575,000 as of June 30, 2020. The water rates need to support a healthy cash reserve for the water department; therefore, additional sums are included in the revenue requirement to build back the water fund’s cash reserves.

Credited against the described costs are non-operating credits; namely, Big Bend service fees and rates for debt service, property tax allocated to the water fund, and some smaller miscellaneous revenues.

Table 10
Projected Water Operations Revenue Requirement

Item	Annual Increase	Budget 2021	Fiscal Year Ending				
			2022	2023	2024	2025	2026
Operating Expenses							
Personnel [1]	6.0%	\$291,846	\$272,567	\$288,921	\$306,256	\$324,631	\$344,109
Professional Services	4.0%	\$33,594	\$34,938	\$36,335	\$37,788	\$39,300	\$40,872
Maint. & Repair	4.0%	\$55,004	\$57,204	\$59,492	\$61,872	\$64,347	\$66,921
Fees & Permits	7.0%	\$19,203	\$20,547	\$21,985	\$23,524	\$25,171	\$26,933
Insurance	10.0%	\$29,683	\$32,651	\$35,916	\$39,508	\$43,458	\$47,804
Utilities, Communications	5.0%	\$34,831	\$36,572	\$38,401	\$40,321	\$42,337	\$44,454
Chemicals & Lab Supplies	2.5%	\$23,357	\$23,941	\$24,540	\$25,153	\$25,782	\$26,427
Operating Supplies	4.0%	\$2,822	\$2,935	\$3,053	\$3,175	\$3,302	\$3,434
Laboratory Testing	9.0%	\$3,153	\$3,437	\$3,746	\$4,084	\$4,451	\$4,852
Board Expense	10.0%	\$15,248	\$16,773	\$18,450	\$20,295	\$22,324	\$24,557
All Other Office & Misc.	2.5%	\$8,329	\$8,537	\$8,750	\$8,969	\$9,193	\$9,423
Total Operating Expenses	a	\$517,069	\$510,101	\$539,589	\$570,944	\$604,297	\$639,785
Debt Service							
SWRCB Loan - Water Treatment Plant		\$18,188	\$18,188	\$18,188	\$18,188	\$18,188	\$18,188
PG & E Loan		\$793	\$793	\$793	\$793	\$793	\$793
USDA Loans - Big Bend (estimate)		\$21,655	\$21,655	\$21,655	\$21,655	\$21,655	\$21,655
Subtotal Debt Service	b	\$40,636	\$40,636	\$40,636	\$40,636	\$40,636	\$40,636
System Rehabilitation Table 8	c	\$0	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000
Adjustment for Cash Flow or Loan Coverage		\$0	\$50,000	\$100,000	\$125,000	\$125,000	\$125,000
Non-Operating Credits (Expenses)							
Big Bend Service Fees	3.0%	\$29,900	\$30,797	\$31,721	\$32,672	\$33,652	\$34,662
Big Bend Rates for Debt Service	constant	\$21,513	\$21,513	\$21,513	\$21,513	\$21,513	\$21,513
Property Tax	2.0%	\$29,040	\$29,621	\$30,213	\$30,817	\$31,434	\$32,063
Other [2]	constant	\$2,900	\$2,900	\$2,900	\$2,900	\$2,900	\$2,900
Total Non-operating Credits (expenses)	d	\$83,353	\$84,831	\$86,347	\$87,903	\$89,500	\$91,138
Revenue Requirement	e = a+b+c-d	\$474,352	\$544,907	\$622,878	\$677,677	\$709,433	\$743,283

Source: DSPUD and HEC.

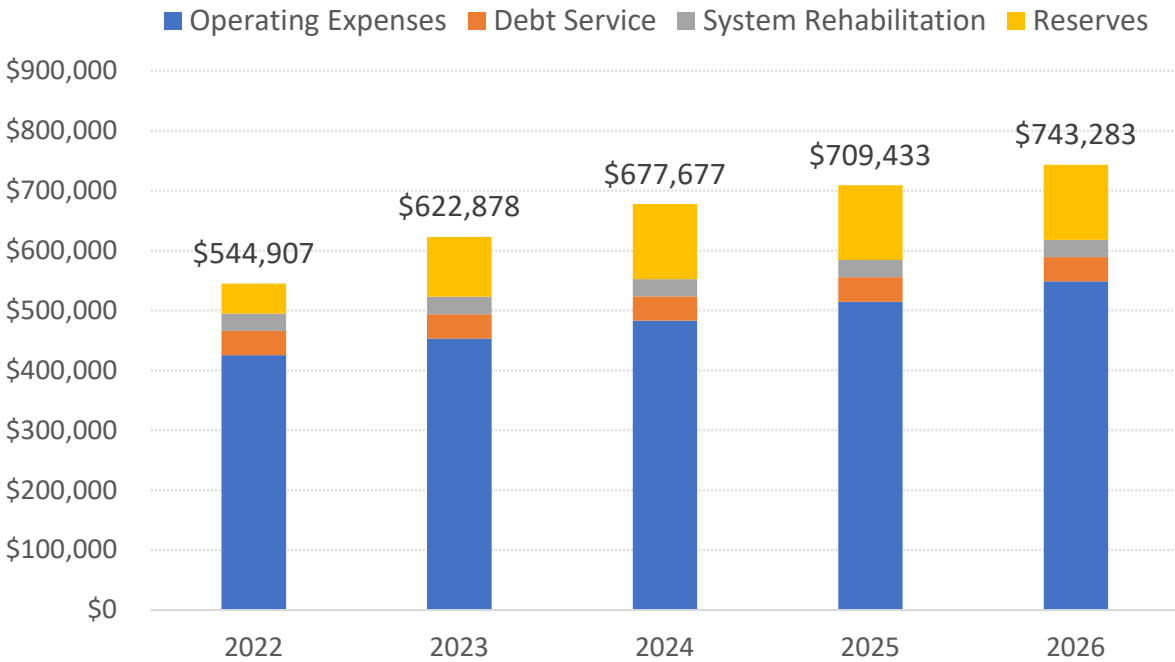
revw

[1] Personnel costs adjusted in fiscal year 2022 to account for retirements.

[2] Water system allocated 20% of Fire Station lease revenue and other revenues.

Components of the projected water revenue requirement are illustrated in **Figure 5** on the next page.

Figure 5
Components of Water Revenue Requirement



3.3 WATER RATE CALCULATIONS

Calculated water rates for a typical home are presented in **Table 11** on the next page. Over the five-year period, rates need to increase 61%. For a typical home that uses less than 10,000 gallons per month, the monthly rate would increase from \$72.98 this fiscal year to \$86.25 July 1, 2021.

Water rates are charged according to the size of the water meter serving the customer. Fees for all meter sizes are shown in **Table 12**. If the customer uses more than the base monthly allowance, the District will charge overage fees. Overage fees are charged per thousand gallons used above the base allowance each month. Collection of overage fees is rare as most customers use less than their base monthly allowance.

A revenue check for the water system financial model using current water rates is provided in **Appendix A Table A-4**. The revenue check demonstrates that the financial model is within 7% accuracy of current conditions and is therefore reasonable for the five-year projection.

Table 11
Calculated Water Rates for a Typical Home

Item	2021 Budget	Fiscal Year Ending				
		2022 7/1/2021	2023 7/1/2022	2024 7/1/2023	2025 7/1/2024	2026 7/1/2025
Water User Fees	\$461,050	\$461,050	\$461,050	\$461,050	\$461,050	\$461,050
Projected Revenue Requirement (User Fees)		\$544,907	\$622,878	\$677,677	\$709,433	\$743,283
Additional Revenue Requirement		\$83,857	\$161,828	\$216,628	\$248,383	\$282,233
Increase from 2021		18%	35%	47%	54%	61%
Annual Percentage Increase		18%	14%	9%	5%	5%
Typical Residence Monthly Rate	\$72.98	\$86.25	\$98.60	\$107.27	\$112.30	\$117.65
Typical Residence Annual Water Fees	\$875.76	\$1,035.04	\$1,183.15	\$1,287.24	\$1,347.56	\$1,411.86

Source: HEC.

water calc

Table 12
Calculated Water Fees Schedule

Meter Size	Base Monthly Allowance	Current	Calculated WATER Rates Next Five Years				
			7/1/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Monthly Fee							
3/4"	10,000	\$72.98	\$86.25	\$98.60	\$107.27	\$112.30	\$117.65
1"	18,500	\$135.01	\$159.57	\$182.40	\$198.45	\$207.74	\$217.66
1.5"	25,000	\$182.44	\$215.62	\$246.48	\$268.16	\$280.73	\$294.12
2"	40,000	\$291.91	\$345.00	\$394.37	\$429.07	\$449.17	\$470.60
3"	65,000	\$474.35	\$560.63	\$640.85	\$697.23	\$729.90	\$764.72
4"	175,000	\$1,277.11	\$1,509.39	\$1,725.37	\$1,877.17	\$1,965.13	\$2,058.90
6"	262,000	\$1,912.01	\$2,259.77	\$2,583.12	\$2,810.38	\$2,942.08	\$3,082.45
8"	350,000	\$2,554.21	\$3,018.77	\$3,450.73	\$3,754.32	\$3,930.25	\$4,117.78
per thousand gallons							
Overage Charge		\$7.298	\$8.625	\$9.860	\$10.727	\$11.230	\$11.765

Source: HEC 2021 Rate Study.

sum water

3.4 PROJECTED WATER CASH FLOW

A projected cash flow for water operations under the proposed increased water rates schedule is presented in **Table 13**. The proposed water rates should generate a cash surplus each year that would be put towards the negative cash balance, gradually bringing the cash balance back into a positive position by the end of the five-year period.

Table 13
Projected Cash Flow for Water

Revenues and Expenses	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Revenues						
Monthly Rates	\$461,050	\$544,907	\$622,878	\$677,677	\$709,433	\$743,283
Big Bend Service Fees	\$29,900	\$30,797	\$31,721	\$32,672	\$33,652	\$34,662
Big Bend Rates for Debt Service	\$21,513	\$21,513	\$21,513	\$21,513	\$21,513	\$21,513
Property Tax	\$29,040	\$29,621	\$30,213	\$30,817	\$31,434	\$32,063
Other	\$2,900	\$2,900	\$2,900	\$2,900	\$2,900	\$2,900
Total Revenues	\$544,403	\$629,737	\$709,225	\$765,580	\$798,933	\$834,421
Operating Expenses	\$517,069	\$510,101	\$539,589	\$570,944	\$604,297	\$639,785
Net Revenue before Debt Service	\$27,334	\$119,636	\$169,636	\$194,636	\$194,636	\$194,636
Debt Service	\$40,636	\$40,636	\$40,636	\$40,636	\$40,636	\$40,636
Debt Service Coverage	0.67	2.94	4.17	4.79	4.79	4.79
Net Income	(\$13,302)	\$79,000	\$129,000	\$154,000	\$154,000	\$154,000
Beginning Cash Balance	(\$573,640)	(\$586,942)	(\$507,942)	(\$378,942)	(\$224,942)	(\$70,942)
Net Income	(\$13,302)	\$79,000	\$129,000	\$154,000	\$154,000	\$154,000
Ending Cash Balance	(\$586,942)	(\$507,942)	(\$378,942)	(\$224,942)	(\$70,942)	\$83,058
Restricted Balance	\$0	\$1,969	\$1,969	\$1,969	\$1,969	\$1,969
Unrestricted Balance	(\$586,942)	(\$509,911)	(\$380,911)	(\$226,911)	(\$72,911)	\$81,089

Source: DSPUD financials and HEC 2021 rate study.

w flow

Section 4: WASTEWATER FEE CALCULATIONS

The wastewater rate study was prepared using the principles established by the WEF Manual of Practice No. 27 and guidelines prepared by the California State Water Resources Control Board for State Revolving Fund financing.

4.1 THE WASTEWATER SYSTEM AND CUSTOMERS

The wastewater system services the I-80 corridor and communities of Soda Springs and Sugar Bowl. In addition, the District's wastewater treatment plant accepts wastewater effluent from the SLCWD. The District's collection system transports wastewater to the treatment plant. After being treated to the required effluent water quality standards, the treated wastewater is piped to the Soda Springs Ski Area where it is applied to the land during the summer months and partially used for snowmaking during the winter months, with the balance of the treated effluent disposed to the Yuba River during the winter months. Treated effluent is also available for dust control and other non-potable uses year-round under permit with the State.

Wastewater customers are measured in Equivalent Dwelling Units (EDUs). Most residences have one EDU; lodges and homes with guest houses have more than one EDU, as do businesses along Donner Pass Road, the ski resorts, and the CalTrans rest areas at the summit along I-80. **Appendix A Table A-5** shows the current and projected number of wastewater EDUs estimated in this study.

Scenario (B). **Appendix B Tables B-1** and **B-2** show the projected number of wastewater EDUs under Scenario B.

4.2 WASTEWATER REVENUE REQUIREMENT

As previously described for the water fees calculations, the revenue requirement describes the amount of money that must be raised through collection of quarterly fees (or "Rates"). Components of the wastewater revenue requirement include:

- Operating Expenses
- Debt Service
- System Rehabilitation
- Reserves for Capital or Operating Costs

The projected revenue requirement through fiscal year 2026 for wastewater is presented in **Table 14** on the next page. Operating expenses are increased from the fiscal year 2021 budget using the historical annual percentage increases for each of the District's cost categories, except however that if a cost category had a negative change, an annual increase of 4% was used to project the costs for that category.

Wastewater department debt service includes a loan from SLCWD that will be fully repaid this fiscal year, a loan from the SWRCB for the wastewater treatment plant upgrade and expansion project (see the debt service schedule **Appendix A Table A-6**), and PG&E loan repayments for electrical upgrades, details of which are provided in **Appendix A Table A-3**.

Table 14
Projected Wastewater Operations Revenue Requirement

Item	Annual Increase	Budget 2021	Fiscal Year Ending				
			2022	2023	2024	2025	2026
Operating Expenses							
Personnel [1]	6.0%	\$985,441	\$920,357	\$975,579	\$1,034,114	\$1,096,160	\$1,161,930
Professional Services	4.0%	\$136,456	\$141,914	\$147,591	\$153,495	\$159,634	\$166,020
Maint. & Repair	4.0%	\$119,070	\$123,833	\$128,786	\$133,937	\$139,295	\$144,867
Fees & Permits	7.0%	\$29,926	\$32,020	\$34,262	\$36,660	\$39,226	\$41,972
Insurance	10.0%	\$104,555	\$115,011	\$126,512	\$139,163	\$153,080	\$168,388
Utilities, Communications	5.0%	\$304,915	\$320,161	\$336,169	\$352,978	\$370,626	\$389,158
Chemicals & Lab Supplies	2.5%	\$120,396	\$123,406	\$126,491	\$129,654	\$132,895	\$136,217
Operating Supplies	4.0%	\$4,810	\$5,002	\$5,202	\$5,410	\$5,626	\$5,852
Laboratory Testing	9.0%	\$46,153	\$50,307	\$54,834	\$59,769	\$65,148	\$71,012
Board Expense	10.0%	\$48,285	\$53,114	\$58,425	\$64,268	\$70,695	\$77,764
All Other Office & Misc.	2.5%	\$23,515	\$24,103	\$24,706	\$25,323	\$25,957	\$26,605
WWTP Operating Costs [2]	17.0%	\$69,000	\$40,000	\$46,800	\$54,756	\$64,065	\$74,955
Land Lease	constant	\$20,250	\$20,250	\$20,250	\$20,250	\$20,250	\$20,250
Total Operating Expenses	a	\$2,012,773	\$1,969,479	\$2,085,607	\$2,209,777	\$2,342,658	\$2,484,990
Debt Service							
SLCWD Loan [3]		\$65,575	\$0	\$0	\$0	\$0	\$0
PG & E Loan		\$8,303	\$8,303	\$8,303	\$8,303	\$8,303	\$8,303
SWRCB Loan [4]		\$719,191	\$719,191	\$719,191	\$719,191	\$719,191	\$719,191
Sugar Bowl Project Loan		\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Debt Service	b	\$793,069	\$727,494	\$727,494	\$727,494	\$727,494	\$727,494
System Rehabilitation	c	\$0	\$173,000	\$173,000	\$173,000	\$173,000	\$173,000
Adjustment for Cash Flow or Loan Coverage		\$0	\$0	\$0	\$0	\$0	\$0
Non-Operating Credits (Expenses)							
Property Tax	2.0%	\$102,960	\$105,019	\$107,120	\$109,262	\$111,447	\$113,676
Recycled Water Sales	constant	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
SLCWD Reimbursement [5]	estimate	\$368,040	\$360,120	\$381,360	\$404,060	\$428,360	\$454,390
Propane Credit [6]		\$10,230	\$10,230	\$10,230	\$10,230	\$10,230	\$10,230
Other	constant	\$11,600	\$11,600	\$11,600	\$11,600	\$11,600	\$11,600
Sugar Bowl Septic Conversion Customers Debt Payments			\$0	\$0	\$0	\$0	\$0
Total Non-operating Credits (expenses)	d	\$497,830	\$491,969	\$515,310	\$540,152	\$566,637	\$594,896
Revenue Requirement	e = a+b+c-d	\$2,308,011	\$2,378,003	\$2,470,791	\$2,570,118	\$2,676,514	\$2,790,587
Rev. Requirement All Customers	f = e-b	\$1,588,820	\$1,658,812	\$1,751,600	\$1,850,927	\$1,957,323	\$2,071,396

Source: DSPUD and HEC 2021 rate study.

revww

[1] Personnel costs adjusted in fiscal year 2022 to account for retirements.

[2] Budget for 2021 includes a one-time non-recurring cost that is removed in fiscal year 2022.

[3] Final payment due January 1, 2048.

[4] Final payment due December 31, 2041.

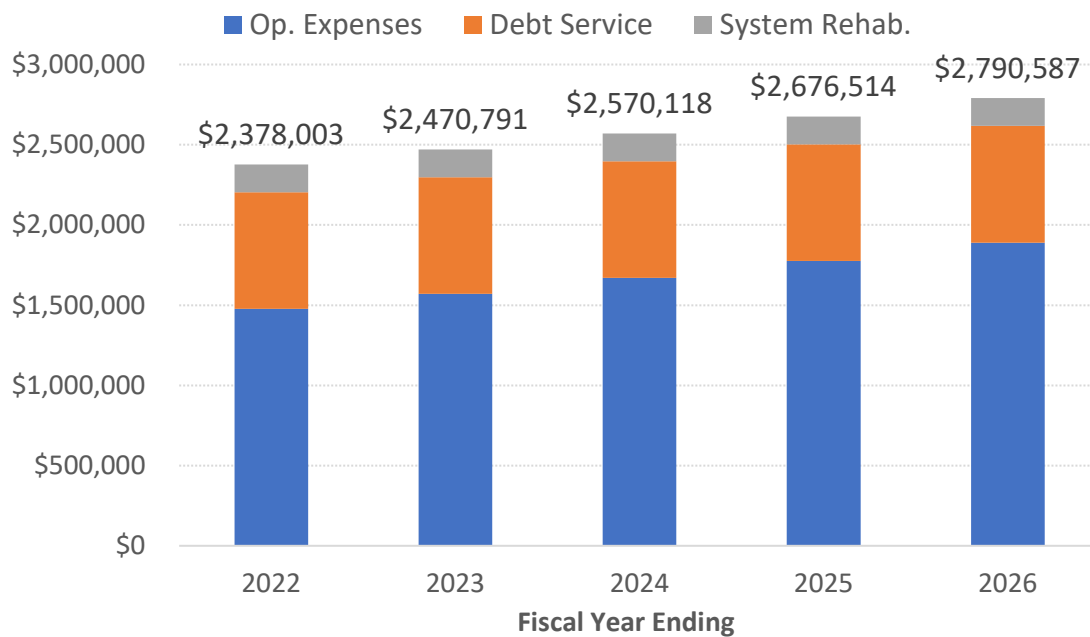
[5] SLCWD annual payment is calculated based on their share of flow entering the plant. It is projected as 25% of wastewater operating expenses, excluding Board expenses, plus administrative fees.

[6] Credit is for a period of seven years.

Other costs included in the revenue requirement include system rehabilitation (25% of the wastewater system depreciation) and collections to meet debt service coverage requirements.

Credited against the described costs are non-operating credits; namely, recycled water sales, SLCWD contributions, propane credit (sunsets in seven years), property tax allocated to the wastewater fund, and some smaller miscellaneous revenues. Components of the projected revenue requirement are shown in **Figure 6** below.

Figure 6
Components of Wastewater Revenue Requirement



Scenario (B). Under Scenario (B), the District would incur debt to finance infrastructure improvements that would extend municipal wastewater service to two neighborhoods (West Village and East Village) in Sugar Bowl that currently use septic systems. The District would pay the debt service but the revenue for the project costs would be generated solely by those properties receiving benefit from the new infrastructure. The District would most likely use a land-secured financing instrument such as a CFD to collect the annual revenues necessary to service the new debt. Estimated debt service for the project is shown in **Table B-3** in **Appendix B**. The estimated revenue requirement under Scenario (B) is presented in **Table B-4**.

4.3 WASTEWATER RATE CALCULATIONS

Revenue requirement that is paid for by all customers excludes the SWRCB loan debt service, and is shown at the bottom of **Table 14**. The revenue requirement is paid for by existing and future customers. Future customers pay for a portion of the annual operating costs of the District’s wastewater system. Currently, future customers pay 49% of an existing customer’s rates. The updated calculation presented in this report increases the percentage share due by future customers to 50% using the same metrics as the 2018 wastewater rate study. The calculated monthly rates per EDU payable by all customers is presented in **Table 15** on the next page.

Table 15
Calculated Monthly Rates per EDU (All Customers)

Cost	Fiscal Year Ending				
	2022	2023	2024	2025	2026
Revenue Requirement (no debt service)	\$1,658,812	\$1,751,600	\$1,850,927	\$1,957,323	\$2,071,396
Rate-payers					
Existing EDUs	878.55	878.55	878.55	878.55	878.55
Future EDUs	180.00	180.00	180.00	180.00	180.00
Future EDUs weighted [1] 50%	90.00	90.00	90.00	90.00	90.00
Total Existing plus Weighted Future EDUs	968.55	968.55	968.55	968.55	968.55
Projected Cost per Existing EDU	\$1,713	\$1,808	\$1,911	\$2,021	\$2,139
Monthly Service Charge per Existing EDU	\$142.72	\$150.71	\$159.25	\$168.41	\$178.22
Projected Cost per Future EDU	\$856	\$904	\$956	\$1,010	\$1,069
Monthly Service Charge per Future EDU	\$71.36	\$75.35	\$79.63	\$84.20	\$89.11

Source: HEC

calc ww

[1] Calculation below: future EDUs pay for fixed costs of the system less non-operating credits.

	FY 2021 Budget
"Fixed" Operating Costs	\$1,257,457
less Non-operating Credits	(\$497,830)
Total Costs to be Shared with Future EDUs	\$759,628
Total Revenue Requirement	\$1,588,820
Percentage Cost Share for Future EDU	50%

The remaining revenue requirement is the debt service for the loan with the SWRCB. **Table 16** shows the allocation of the debt service between inside and outside CFD No. 1 EDUs. The calculation excludes CalTrans, which has paid its share of the wastewater treatment plant upgrade and expansion improvement costs.

Table 16
Debt Service Allocation Inside and Outside CFD No. 1

Calculation	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Number of EDUs						
Inside CFD No. 1	461.6	461.6	461.6	461.6	461.6	461.6
Outside CFD No. 1	506.0	506.0	506.0	506.0	506.0	506.0
CalTrans [1]	91.0	91.0	91.0	91.0	91.0	91.0
Total Number of EDUs	1,058.6	1,058.6	1,058.6	1,058.6	1,058.6	1,058.6
Annual CWSRF Debt Service for Project						
Inside CFD No. 1	\$343,113	\$343,113	\$343,113	\$343,113	\$343,113	\$343,113
Outside CFD No. 1	\$376,078	\$376,078	\$376,078	\$376,078	\$376,078	\$376,078

Source: DSPUD and HEC.

alloc out

[1] CalTrans has already contributed its share of the SRF debt service with the exception of change order costs.

There are 461.6 taxable EDUs inside CFD No. 1 that generate \$273,729 per year for debt service which is 80% of the Inside CFD No. 1 share of annual debt service. The remaining 20% must be collected in rates, as shown in **Table 17** below.

Table 17
Share of CFD No. 1 Debt Service Paid by Rates

Item	Fiscal Year Ending				
	2022	2023	2024	2025	2026
Taxable EDUs	461.6	461.6	461.6	461.6	461.6
Annual Maximum Special Tax per EDU	\$593	\$593	\$593	\$593	\$593
Total Maximum Special Taxes	\$273,729	\$273,729	\$273,729	\$273,729	\$273,729
Inside CFD No.1 Debt Service	\$343,113	\$343,113	\$343,113	\$343,113	\$343,113
<i>Special Tax Revenue as a % of Debt Share</i>	<i>80%</i>	<i>80%</i>	<i>80%</i>	<i>80%</i>	<i>80%</i>
Revenue					
CFD No. 1 Special Tax Revenue	\$273,729	\$273,729	\$273,729	\$273,729	\$273,729
Inside CFD No. 1 Debt Service paid by Rates	\$69,384	\$69,384	\$69,384	\$69,384	\$69,384

Source: HEC.

cfid flow

The monthly charges included in rates for Inside CFD and Outside CFD No. 1 EDUs is calculated in **Table 18** on the next page. Total calculated wastewater rates are summarized in **Table 19**.

Scenario (B). The corresponding calculations under Scenario B are provided in **Appendix B Tables B-5** through **B-8**.

A revenue check for the wastewater system financial model using current wastewater rates is provided in **Appendix A Table A-7**. The revenue check demonstrates that the financial model is within 1% accuracy of current conditions and is therefore reasonable for the five-year projection.

Table 18
Calculated Additional Monthly Rates per EDU for SRF Debt Service

Item	Projected				
	2022	2023	2024	2025	2026
Inside CFD No. 1					
<i>Inside CFD No. 1 Additional Rates for Project Debt</i>					
Net Debt paid with Rates	\$69,384	\$69,384	\$69,384	\$69,384	\$69,384
Rate-paying EDUs					
Existing	347.7	347.7	347.7	347.7	347.7
Future	113.9	113.9	113.9	113.9	113.9
Rate-paying EDUs weighted [1] 100%	461.6	461.6	461.6	461.6	461.6
Annual Cost per Existing EDU	\$150.31	\$150.31	\$150.31	\$150.31	\$150.31
Annual Cost per Future EDU	\$150.31	\$150.31	\$150.31	\$150.31	\$150.31
Monthly Charge per EDU for Debt Service	\$12.53	\$12.53	\$12.53	\$12.53	\$12.53
Outside CFD No. 1					
<i>Outside CFD No. 1 Additional Rates for Project Debt</i>					
Debt Service Share	\$376,078	\$376,078	\$376,078	\$376,078	\$376,078
Rate-paying EDUs					
Existing	439.9	439.9	439.9	439.9	439.9
Future	66.1	66.1	66.1	66.1	66.1
Rate-paying EDUs weighted [1] 100%	506.0	506.0	506.0	506.0	506.0
Annual Cost per Existing EDU	\$743.31	\$743.31	\$743.31	\$743.31	\$743.31
Annual Cost per Future EDU	\$743.31	\$743.31	\$743.31	\$743.31	\$743.31
Monthly Charge per EDU	\$61.94	\$61.94	\$61.94	\$61.94	\$61.94

Source: SWRCB, DSPUD, and HEC.

debt share

[1] Future EDUs pay the same as existing EDUs for SRF debt service.

Table 19
Calculated Wastewater Fees Schedule

Rates by Customer	Current	Calculated WASTEWATER Rates Next 5 Years				
		7/1/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Existing Customers						
Monthly Fee per EDU						
Inside CFD No. 1	\$131.44	\$155.25	\$163.23	\$171.78	\$180.93	\$190.75
Outside CFD No. 1	\$180.86	\$204.67	\$212.65	\$221.20	\$230.35	\$240.16
CalTrans	\$120.59	\$142.72	\$150.71	\$159.25	\$168.41	\$178.22
Future Customers						
Inside CFD No. 1	\$69.39	\$83.89	\$87.88	\$92.15	\$96.73	\$101.64
Outside CFD No. 1	\$118.81	\$133.30	\$137.30	\$141.57	\$146.15	\$151.05
Special Taxes per EDU						
Inside CFD No. 1 - All EDUs	\$49.42	\$49.42	\$49.42	\$49.42	\$49.42	\$49.42

Source: HEC 2021 rate study.

sum ww

4.4 PROJECTED WASTEWATER CASH FLOW

The projected wastewater cash flow under the proposed increased wastewater rates schedule is presented in **Table 20** below. The wastewater fund had a positive cash balance on June 30, 2020 but it is projected to have negative income fiscal year 2021, resulting in drawdown of just over \$500,000 this fiscal year. A large portion of projected cash balance at the end of this fiscal year is restricted per the requirements of the SWRCB loan.

This fiscal year it is projected that the District will not meet the required 1.10 debt service coverage requirement of the SWRCB loan¹; however, with the proposed rates in place, the debt service coverage will again be met in fiscal year 2022. By the end of the five-year period, unrestricted cash will again be within the target range for the wastewater fund.

Table 20
Projected Cash Flow for Wastewater

Revenues and Expenses	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Revenues						
Rates from All Customers	\$1,074,622	\$1,658,812	\$1,751,600	\$1,850,927	\$1,957,323	\$2,071,396
Rates for Debt Service	\$445,462	\$445,462	\$445,462	\$445,462	\$445,462	\$445,462
Special Tax Revenues	\$273,729	\$273,729	\$273,729	\$273,729	\$273,729	\$273,729
Other	\$497,830	\$491,969	\$515,310	\$540,152	\$566,637	\$594,896
Total Revenues	\$2,291,642	\$2,869,972	\$2,986,101	\$3,110,270	\$3,243,151	\$3,385,483
Operating Expenses	\$2,012,773	\$1,969,479	\$2,085,607	\$2,209,777	\$2,342,658	\$2,484,990
Net Revenue before Debt Service	\$278,870	\$900,494	\$900,494	\$900,494	\$900,494	\$900,494
Debt Service	\$793,069	\$727,494	\$727,494	\$727,494	\$727,494	\$727,494
Debt Service Coverage [1]	0.35	1.24	1.24	1.24	1.24	1.24
Net Income	(\$514,199)	\$173,000	\$173,000	\$173,000	\$173,000	\$173,000
Beginning Balance	\$2,247,242	\$1,733,043	\$1,906,043	\$2,079,043	\$2,130,043	\$2,157,043
Net Income	(\$514,199)	\$173,000	\$173,000	\$173,000	\$173,000	\$173,000
Connection Fees (Sugar Bowl)	\$0	\$0	\$0	\$0	\$0	\$0
Capital Improvement Projects	\$0	\$0	\$0	(\$122,000)	(\$146,000)	(\$128,000)
Ending Balance	\$1,733,043	\$1,906,043	\$2,079,043	\$2,130,043	\$2,157,043	\$2,202,043
Restricted Balance	\$737,378	\$737,378	\$737,378	\$737,378	\$737,378	\$737,378
Unrestricted Balance	\$995,665	\$1,168,665	\$1,341,665	\$1,392,665	\$1,419,665	\$1,464,665

Source: DSPUD financials and HEC 2021 rate study.

ww flow

[1] Debt service coverage ratio must be at least 1.10 per the SWRCB Clean Water SRF agreement.

The wastewater fund cash flow includes cash withdrawals for capital improvement projects that are detailed in **Table 21** on the next page. The District provided estimated costs in 2021 dollars that have been inflated to estimated costs in the years the improvements are anticipated to occur.

¹ If the District wants to issue future debt on parity with the SRF debt, it needs to demonstrate coverage of 1.20 net revenues.

Table 21
CIP for the Wastewater System

Wastewater Improvements	Total Cost Est.	Fiscal Year Ending				
		2022	2023	2024	2025	2026
Collection System	2021 \$			2021 \$		
Snow Lab/Bunny Hill Rd Rehab.	\$100,000					\$100,000
Treatment Plant						
Membrane replacement	\$75,000			\$75,000		
Reactor #1 coating	\$120,000				\$120,000	
Reactors #1 & #2 wasting systems	\$30,000			\$30,000		
Total CIP	\$325,000	\$0	\$0	\$105,000	\$120,000	\$100,000
Collection System	Inflated \$			5% per year inflation factor		
Snow Lab/Bunny Hill Rd Rehab.	\$128,000	\$0	\$0	\$0	\$0	\$128,000
Treatment Plant						
Membrane replacement	\$87,000	\$0	\$0	\$87,000	\$0	\$0
Reactor #1 coating	\$146,000	\$0	\$0	\$0	\$146,000	\$0
Reactors #1 & #2 wasting systems	\$35,000	\$0	\$0	\$35,000	\$0	\$0
Total CIP	\$396,000	\$0	\$0	\$122,000	\$146,000	\$128,000

Source: DSPUD February 2021.

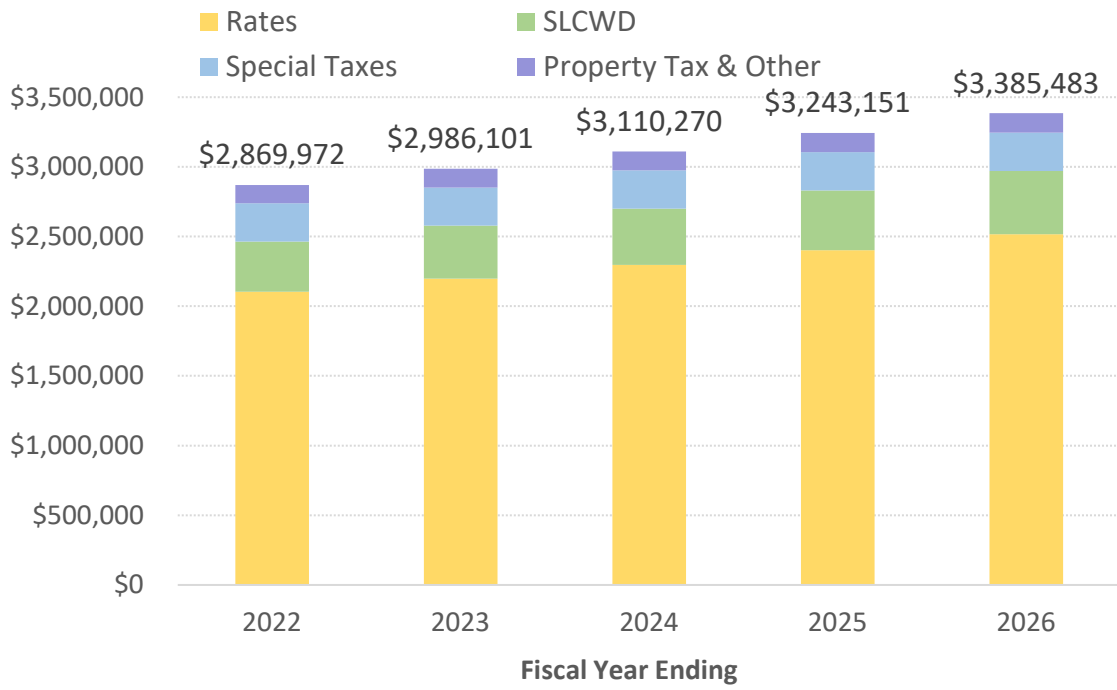
cip

Capital improvement projects include pipeline rehabilitation along Bunny Hill road and treatment plant rehabilitation including membrane replacement, coating of reactor 1, and upkeep of the wasting systems for reactors 1 and 2. The total estimated cost for the improvements is \$396,000 in inflated dollars.

Figure 7 on the next page shows the District’s projected sources of wastewater revenues over the next five years.

Scenario (B). The cash flow under Scenario (B) is shown in **Appendix B Table B-9**.

Figure 7
Wastewater Revenue Sources



Section 5: DISTRICT AND CUSTOMER IMPACTS

5.1 DISTRICT FINANCIAL IMPACTS

This section of the report describes impacts of the proposed new rates on the District and its customers.

The impact of adopting the proposed water and wastewater Scenario (A) rates will be to improve the financial health of the District. **Table 22** below shows the estimated change in the District’s total cash balance between fiscal year 2021 and fiscal year 2026². The proposed increased water and wastewater rates would bring the District back into full compliance with State loan requirements within the first fiscal year, and would gradually increase cash reserves back to recommended levels, per GFOA guidelines. The targeted unrestricted cash balance for the District is six months of operating expenses, and the minimum unrestricted cash balance for the District is four months of operating expenses. It is projected that the District can reach the minimum cash balance by the end of year two, and the target cash balance by the end of year five.

Table 22
Estimated District Cash Balances

Item	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Beginning Cash Balance	\$1,673,602	\$1,146,101	\$1,398,101	\$1,700,101	\$1,905,101	\$2,086,101
Water Change	(\$13,302)	\$79,000	\$129,000	\$154,000	\$154,000	\$154,000
Wastewater Change	(\$514,199)	\$173,000	\$173,000	\$51,000	\$27,000	\$45,000
Ending Cash Balance	\$1,146,101	\$1,398,101	\$1,700,101	\$1,905,101	\$2,086,101	\$2,285,101
Restricted	\$737,378	\$739,347	\$739,347	\$739,347	\$739,347	\$739,347
Unrestricted	\$408,723	\$658,754	\$960,754	\$1,165,754	\$1,346,754	\$1,545,754
One Year Operating Expenses	\$2,529,842	\$2,479,580	\$2,625,196	\$2,780,721	\$2,946,954	\$3,124,774
Target Six Months Operating Expenses	\$1,264,921	\$1,239,790	\$1,312,598	\$1,390,361	\$1,473,477	\$1,562,387
Minimum Cash Reserves (4 months)	\$843,281	\$826,527	\$875,065	\$926,907	\$982,318	\$1,041,591
Projected Months of Op. Expenses [1]	2	3	4	5	5	6

Source: DSPUD and HEC 2021 rate study.

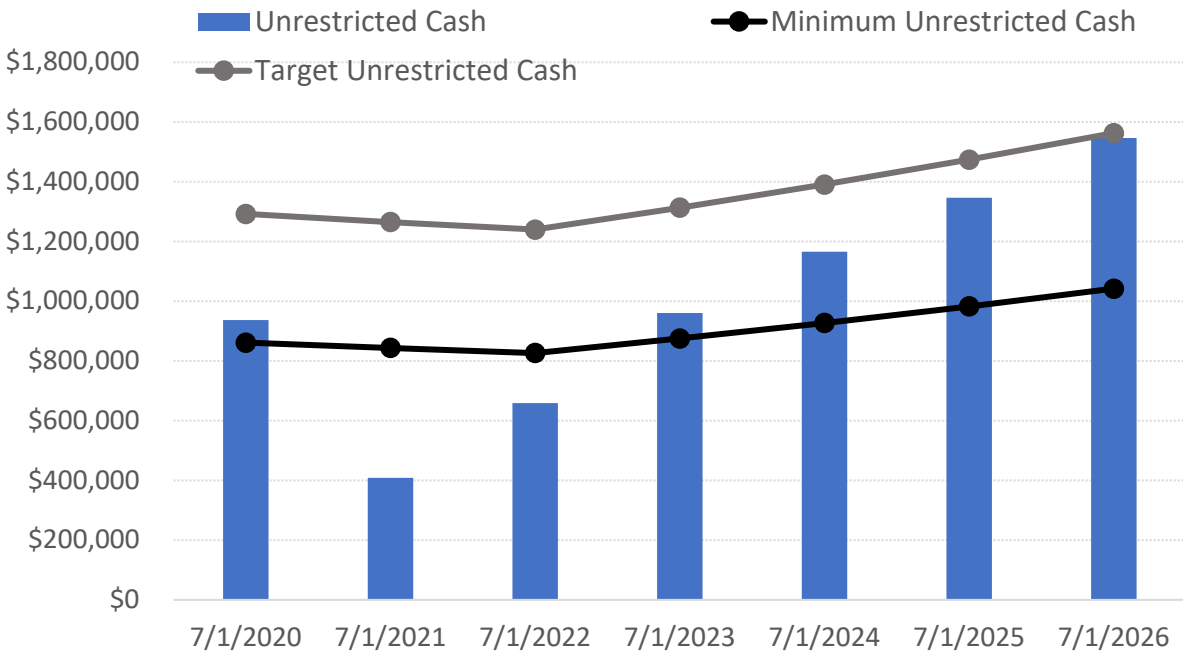
tot flow

[1] Unrestricted cash in the water and wastewater utilities combined.

The projected unrestricted District cash balance is illustrated in **Figure 8** on the next page.

² **Table B-10** in **Appendix B** shows the projected District total cash balances under Scenario (B).

Figure 8
District Unrestricted Cash Projection



5.2 CUSTOMER BILL IMPACTS

The proposed rate changes will increase a typical residential customer’s quarterly utility bill by \$111 in the first year of the increases, beginning July 1, 2021. **Table 23** projects a typical residential customer’s utilities bill through the five-year rate period and shows the quarterly bill increase each year. **Figure 9** on the next page illustrates the total projected bill for a typical home.

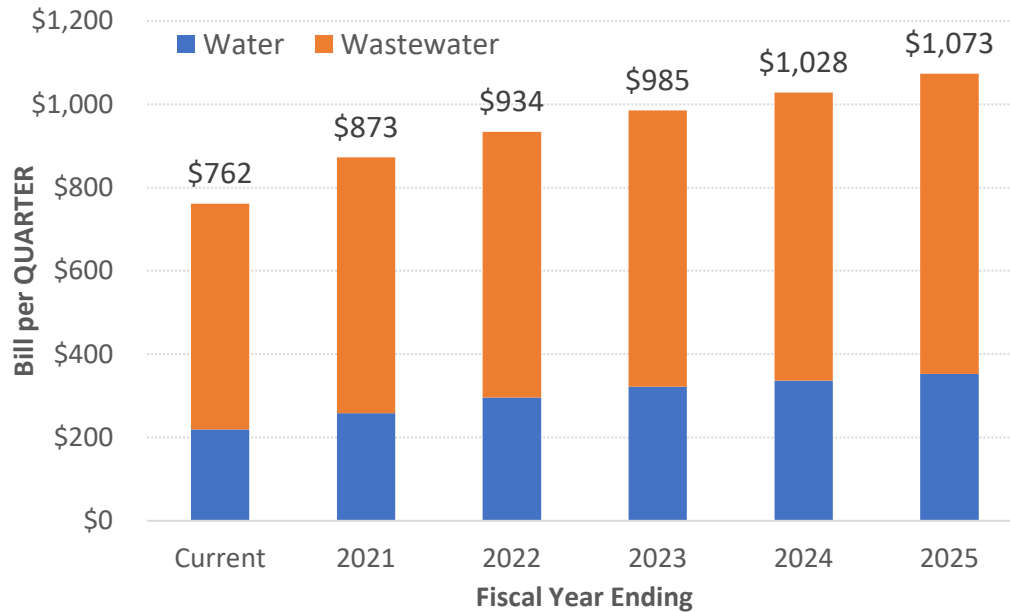
Table 23
Projected Typical Home DSPUD Utilities Bill

Utility	Current	Beginning July 1				
		2021	2022	2023	2024	2025
<i>Quarterly Bill (3 Months)</i>						
Water	\$219	\$259	\$296	\$322	\$337	\$353
Wastewater	\$543	\$614	\$638	\$664	\$691	\$720
Total	\$762	\$873	\$934	\$985	\$1,028	\$1,073
Increase per Quarter per Year		\$111	\$61	\$52	\$43	\$46
Annual Increase		\$445	\$244	\$207	\$170	\$182

Source: HEC 2021 rate study.

sf

Figure 9
Projected Quarterly Bill for a Typical Home



Affordability. The State of California bases its evaluation of affordability of water utility bills on two criteria:

1. The median household income (MHI) of the community compared to the State MHI, and
2. The percentage of MHI spent on water and wastewater bills.

If a community’s MHI is less than 80 percent of the State’s MHI, and service provision is to a full-time community (more than half of the homes are lived in permanently), the community is considered “Disadvantaged”, in which case a water bill greater than 1.5% of MHI, and a wastewater bill greater than 2.0% is considered burdensome. Using the most recent U.S. Census data available, the State would not classify DSPUD as serving a “Disadvantaged” community because MHI is 81% of the State’s MHI, and SWRCB staff has indicated they consider Donner Summit to be a part-time residential community.

When a community is not considered “Disadvantaged”, water utility bills can be up to 6.5% of MHI (2.5% for water and 4.0% for wastewater) before the State will consider the rates unaffordable.

Currently, a typical residential customer’s water bill is about 1.4% of the community’s MHI. Under the proposed rates starting July 1, 2021, a typical customer’s water bill would be 1.7% of MHI. Currently, a typical wastewater bill is about 3.6% of MHI. Under the proposed new rates starting July 1, 2021, the wastewater bill would increase to 4.0% of MHI. Together, the utility bill would be 5.7% of MHI in July, which is within the range of what the State considers to be affordable. The affordability calculations are shown in **Table 24** on the next page.

Table 24
Utility Rates Affordability

Item	Annual Bills	Rates as % of MHI
		[1]
Current Rates		
Water	\$876	1.4%
Wastewater	\$2,170	3.6%
Total	\$3,046	5.0%
July 1, 2021		
Water	\$1,035	1.7%
Wastewater	\$2,456	4.0%
Total	\$3,491	5.7%
Dollar Increase	\$445	
Percentage Increase	15%	

Source: SWRCB and Donner Summit PUD. afford

[1] Data from 2019 5-year American Community Survey data.

DSPUD MHI	\$61,106
State of California MHI	\$75,235
DSPUD as a Percentage of State MHI	81%

APPENDIX A

WATER AND WASTEWATER FEES

SUPPORT TABLES

Table A-1
DSPUD 2021 Utility Rates Study
Historical Water and Wastewater Shared Operating Costs

DRAFT

Operating Costs	Water		Wastewater		Total
	5-Year Total	Percentage	5-Year Total	Percentage	
Personnel	\$1,423,316	23%	\$4,805,942	77%	\$6,229,258
Professional Services	\$164,023	20%	\$666,252	80%	\$830,275
Maint. & Repair	\$372,476	32%	\$806,318	68%	\$1,178,794
Fees & Permits	\$83,306	39%	\$129,826	61%	\$213,132
Insurance	\$80,050	22%	\$281,972	78%	\$362,022
Utilities, Communications	\$196,424	10%	\$1,719,525	90%	\$1,915,949
Chemicals & Lab Supplies	\$127,824	16%	\$658,869	84%	\$786,693
Operating Supplies	\$48,569	37%	\$82,763	63%	\$131,332
Laboratory Testing	\$14,798	6%	\$216,594	94%	\$231,392
Board Expense	\$48,137	24%	\$152,436	76%	\$200,573
All Other Office & Misc.	\$60,202	26%	\$169,978	74%	\$230,180
Total	\$2,619,125	21%	\$9,690,475	79%	\$12,309,600

SouUce: DSPUD Financial Audits.

shared

Table A-2
DSPUD 2021 Utility Rates Study
Big Bend USDA Loan Repayment Estimates **DRAFT**

Item	Big Bend USDA Loans	
	1st Loan	2nd Loan
Loan Amount	\$336,000	\$138,000
Annual Payment	\$13,955	\$5,731
10% Reserve	\$1,395	\$573
Annual Payment First 10 Years	\$15,350	\$6,304

Interest Rate: 2.75%

Years: 40

Source: USDA and DSPUD.

bigl

Table A-3
DSPUD 2021 Utility Rates Study
PG & E Loans

DRAFT

Item	Total Borrowed	Monthly Debt Service		
		Total	Water	WW
			[1]	
PG & E Loan #1	\$70,436	\$697	\$66	\$631
PG & E Loan #2	\$7,321	\$61	\$0	\$61
Annual Debt Service Water			\$793	
Annual Debt Service WW				\$8,303

Source: District financial information.

elec

[1] Allocated 9% of the loan:

Electricity Costs Budget 2021

Water	\$18,094	9%
WW	\$172,640	91%
Total	\$190,734	100%

Table A-4
DSPUD 2021 Utility Rates Study
Revenue Check for Water Fiscal Year 2021 **DRAFT**

Meter Size	Number of Meters	Monthly Rate	Annual Revenue
3/4"	271	\$72.98	\$237,331
1"	60	\$135.01	\$97,207
1.5"	7	\$182.44	\$15,325
2"	12	\$291.91	\$42,035
3"	3	\$474.35	\$17,077
4"	0	\$1,277.11	\$0
6"	1	\$1,912.01	\$22,944
8"	0	\$2,554.21	\$0
Total	354		\$431,919
Budget 2021			\$461,050
Difference (underestimate in model)		-6.3%	(\$29,131)

Source: DSPUD customer records.

w check

Table A-5
DSPUD 2021 Utility Rates Study
Total Wastewater Customers (in EDUs)

No New Sewer Connections

DRAFT

EDU Type	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Inside CFD No. 1						
Existing	347.7	347.7	347.7	347.7	347.7	347.7
Caltrans Existing	91.0	91.0	91.0	91.0	91.0	91.0
Future	113.9	113.9	113.9	113.9	113.9	113.9
Total Inside CFD No. 1 EDUs	552.6	552.6	552.6	552.6	552.6	552.6
Taxable EDUs	461.6	461.6	461.6	461.6	461.6	461.6
Outside CFD No. 1						
Existing	439.9	439.9	439.9	439.9	439.9	439.9
Future	66.1	66.1	66.1	66.1	66.1	66.1
Total Outside CFD No. 1 EDUs	506.0	506.0	506.0	506.0	506.0	506.0
Total Rate-payers						
Existing	878.6	878.6	878.6	878.6	878.6	878.6
Future	180.0	180.0	180.0	180.0	180.0	180.0
Total Rate-paying EDUs	1,058.6	1,058.6	1,058.6	1,058.6	1,058.6	1,058.6

Source: HEC 2021 rate study.

edus

Table A-6
DSPUD 2021 Utility Rates Study
SRF Loan Repayment Schedule for Project C-06-7670-210

DRAFT

Year	Payment No.	Beginning Balance [1]	Principal Due	Interest Due [2]	Total Payment	Ending Balance
2018	4	\$15,742,478	\$601,122	\$118,069	\$719,191	\$15,141,355
2019	5	\$15,141,355	\$605,631	\$113,560	\$719,191	\$14,535,724
2020	6	\$14,535,724	\$610,173	\$109,018	\$719,191	\$13,925,551
2021	7	\$13,925,551	\$614,749	\$104,442	\$719,191	\$13,310,802
2022	8	\$13,310,802	\$619,360	\$99,831	\$719,191	\$12,691,442
2023	9	\$12,691,442	\$624,005	\$95,186	\$719,191	\$12,067,436
2024	10	\$12,067,436	\$628,685	\$90,506	\$719,191	\$11,438,751
2025	11	\$11,438,751	\$633,400	\$85,791	\$719,191	\$10,805,351
2026	12	\$10,805,351	\$638,151	\$81,040	\$719,191	\$10,167,200
2027	13	\$10,167,200	\$642,937	\$76,254	\$719,191	\$9,524,263
2028	14	\$9,524,263	\$647,759	\$71,432	\$719,191	\$8,876,504
2029	15	\$8,876,504	\$652,617	\$66,574	\$719,191	\$8,223,887
2030	16	\$8,223,887	\$657,512	\$61,679	\$719,191	\$7,566,375
2031	17	\$7,566,375	\$662,443	\$56,748	\$719,191	\$6,903,931
2032	18	\$6,903,931	\$667,412	\$51,779	\$719,191	\$6,236,520
2033	19	\$6,236,520	\$672,417	\$46,774	\$719,191	\$5,564,103
2034	20	\$5,564,103	\$677,460	\$41,731	\$719,191	\$4,886,643
2035	21	\$4,886,643	\$682,541	\$36,650	\$719,191	\$4,204,101
2036	22	\$4,204,101	\$687,660	\$31,531	\$719,191	\$3,516,441
2037	23	\$3,516,441	\$692,818	\$26,373	\$719,191	\$2,823,623
2038	24	\$2,823,623	\$698,014	\$21,177	\$719,191	\$2,125,609
2039	25	\$2,125,609	\$703,249	\$15,942	\$719,191	\$1,422,361
2040	26	\$1,422,361	\$708,523	\$10,668	\$719,191	\$713,837
2041	27	\$713,837	\$713,837	\$5,354	\$719,191	\$0
Total			\$15,742,478	\$1,518,107	\$17,260,585	

Source: State Water Resources Control Board.

loan repay

[1] Draw Amount: 16,846,932

[2] Interest Rate: 0.75%

Table A-7
DSPUD 2021 Utility Rates Study
Revenue Check for Wastewater Fiscal Year 2021

DRAFT

Wastewater Customers	Number of EDUs		Fees		Annual Fees Total		
	Existing	Futures	Existing	Futures	Existing	Futures	All
Inside CFD # 1							
Special Taxes	347.7	113.9	\$49.42	\$49.42	\$206,186	\$67,543	\$273,729
Rates	347.7	113.9	\$131.44	\$69.39	\$548,433	\$94,845	\$643,279
CalTrans	91.0	0.0	\$120.59	\$0.00	\$131,681	\$0	\$131,681
Outside CFD #1							
Rates	439.9	66.1	\$180.86	\$118.81	\$954,614	\$94,239	\$1,048,853
TOTAL					\$1,840,914	\$256,627	\$2,097,541
Budget 2021							\$2,085,891
Difference (overestimate in model)						0.6%	\$11,650

Source: DSPUD customer records.

ww check

APPENDIX B

SCENARIO (B) SUGAR BOWL SEPTIC CONVERSIONS FINANCIAL MODEL TABLES

Table B-1**DSPUD 2021 Utility Rates Study****Sugar Bowl Septic Conversion Potential New Sewer Customers****DRAFT**

Item	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Current Rate Payers						
Inside CFD No. 1 Existing	9	9	9	34	54	69
Inside CFD No. 1 Futures	23	23	60	35	15	0
Total Current Rate Payers	32	32	69	69	69	69
New Rate Payers						
Buy capacity through CFD No. 1	0	37	0	0	0	0
Conversion from Futures to Existing						
New Connects to System [1]	0	0	0	25	20	15

Source: DSPUD and Auerbach Engineering February 2021.

sugar

[1] Assumes 25 West Village connects July 2023-June 2024,

20 East Village connect the following year, and 15 East Village connect the third year.

Table B-2
DSPUD 2021 Utility Rates Study

Includes New Sugar Bowl Sewer EDUs

Total Wastewater Customers (in EDUs)

DRAFT

EDU Type	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Inside CFD No. 1						
Existing	347.7	347.7	347.7	372.7	392.7	407.7
Caltrans Existing	91.0	91.0	91.0	91.0	91.0	91.0
Future	113.9	113.9	150.9	125.9	105.9	90.9
Total Inside CFD No. 1 EDUs	552.6	552.6	589.6	589.6	589.6	589.6
Taxable EDUs	461.6	461.6	498.6	498.6	498.6	498.6
Outside CFD No. 1						
Existing	439.9	439.9	439.9	439.9	439.9	439.9
Future	66.1	66.1	66.1	66.1	66.1	66.1
Total Outside CFD No. 1 EDUs	506.0	506.0	506.0	506.0	506.0	506.0
Total Rate-payers						
Existing	878.6	878.6	878.6	903.6	923.6	938.6
Future	180.0	180.0	217.0	192.0	172.0	157.0
Total Rate-paying EDUs	1,058.6	1,058.6	1,095.6	1,095.6	1,095.6	1,095.6

Source: HEC 2021 rate study.

edus

Table B-3
DSPUD 2021 Utility Rates Study
Sugar Bowl Septic Conversion Project Financing Estimate

DRAFT

Item	Sugar Bowl Villages		Total
	East	West	
Estimated Project Cost	\$844,205	\$887,212	\$1,731,416
Est. CFD & Consultant Costs [1]	\$19,503	\$20,497	\$40,000
Total Project Cost Estimate	\$863,708	\$907,708	\$1,771,416
Est. Annual Debt Service	\$60,771	\$63,867	\$124,639
Total Payments	\$1,215,428	\$1,277,347	\$2,492,775
Financing Charges	\$371,224	\$390,135	\$761,359

Source: Auerbach Engineering and HEC.

debt

Term Assumptions: 20 years
3.50% interest rate

[1] Preliminary estimate includes special tax consultant (15K), legal (10K), financial consultant (10K), and other (5K).

Table B-4
DSPUD 2021 Utility Rates Study

Includes Sugar Bowl Project Costs
Includes New Sugar Bowl Sewer EDUs

Projected Wastewater Operations Revenue Requirement

WASTEWATER

DRAFT

Item	Annual Increase	Budget 2021	Fiscal Year Ending				
			2022	2023	2024	2025	2026
Operating Expenses							
Personnel [1]	6.0%	\$985,441	\$920,357	\$975,579	\$1,034,114	\$1,096,160	\$1,161,930
Professional Services	4.0%	\$136,456	\$141,914	\$147,591	\$153,495	\$159,634	\$166,020
Maint. & Repair	4.0%	\$119,070	\$123,833	\$128,786	\$133,937	\$139,295	\$144,867
Fees & Permits	7.0%	\$29,926	\$32,020	\$34,262	\$36,660	\$39,226	\$41,972
Insurance	10.0%	\$104,555	\$115,011	\$126,512	\$139,163	\$153,080	\$168,388
Utilities, Communications	5.0%	\$304,915	\$320,161	\$336,169	\$352,978	\$370,626	\$389,158
Chemicals & Lab Supplies	2.5%	\$120,396	\$123,406	\$126,491	\$129,654	\$132,895	\$136,217
Operating Supplies	4.0%	\$4,810	\$5,002	\$5,202	\$5,410	\$5,626	\$5,852
Laboratory Testing	9.0%	\$46,153	\$50,307	\$54,834	\$59,769	\$65,148	\$71,012
Board Expense	10.0%	\$48,285	\$53,114	\$58,425	\$64,268	\$70,695	\$77,764
All Other Office & Misc.	2.5%	\$23,515	\$24,103	\$24,706	\$25,323	\$25,957	\$26,605
WWTP Operating Costs [2]	17.0%	\$69,000	\$40,000	\$46,800	\$54,756	\$64,065	\$74,955
Land Lease	constant	\$20,250	\$20,250	\$20,250	\$20,250	\$20,250	\$20,250
Total Operating Expenses	a	\$2,012,773	\$1,969,479	\$2,085,607	\$2,209,777	\$2,342,658	\$2,484,990
Debt Service							
SLCWD Loan [3]		\$65,575	\$0	\$0	\$0	\$0	\$0
PG & E Loan		\$8,303	\$8,303	\$8,303	\$8,303	\$8,303	\$8,303
SWRCB Loan [4]		\$719,191	\$719,191	\$719,191	\$719,191	\$719,191	\$719,191
Sugar Bowl Project Loan		\$0	\$0	\$0	\$125,000	\$125,000	\$125,000
Subtotal Debt Service	b	\$793,069	\$727,494	\$727,494	\$852,494	\$852,494	\$852,494
System Rehabilitation	c	\$0	\$173,000	\$173,000	\$173,000	\$173,000	\$173,000
Adjustment for Cash Flow or Loan Coverage		\$0	\$0	\$0	\$28,000	\$28,000	\$28,000
Non-Operating Credits (Expenses)							
Property Tax	2.0%	\$102,960	\$105,019	\$107,120	\$109,262	\$111,447	\$113,676
Recycled Water Sales	constant	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
SLCWD Reimbursement [5]	estimate	\$368,040	\$360,120	\$381,360	\$404,060	\$428,360	\$454,390
Propane Credit [6]		\$10,230	\$10,230	\$10,230	\$10,230	\$10,230	\$10,230
Other	constant	\$11,600	\$11,600	\$11,600	\$11,600	\$11,600	\$11,600
Sugar Bowl Septic Conversion Customers Debt Payments			\$0	\$0	\$125,000	\$125,000	\$125,000
Total Non-operating Credits (expenses)	d	\$497,830	\$491,969	\$515,310	\$665,152	\$691,637	\$719,896
Revenue Requirement	e = a+b+c-d	\$2,308,011	\$2,378,003	\$2,470,791	\$2,598,118	\$2,704,514	\$2,818,587
Rev. Requirement All Customers	f = e-b	\$1,588,820	\$1,658,812	\$1,751,600	\$1,878,927	\$1,985,323	\$2,099,396

Source: DSPUD and HEC 2021 rate study.

revww

[1] Personnel costs adjusted in fiscal year 2022 to account for retirements.

[2] Budget for 2021 includes a one-time non-recurring cost that is removed in fiscal year 2022.

[3] Final payment due January 1, 2048.

[4] Final payment due December 31, 2041.

[5] SLCWD annual payment is calculated based on their share of flow entering the plant. It is projected as 25% of wastewater operating expenses, excluding Board expenses, plus administrative fees.

[6] Credit is for a period of seven years.

Table B-5
DSPUD 2021 Utility Rates Study
Calculated Monthly Rates per EDU (All Customers)

Includes Sugar Bowl Project Costs
Includes New Sugar Bowl Sewer EDUs

DRAFT

Cost	Fiscal Year Ending				
	2022	2023	2024	2025	2026
Revenue Requirement (no debt service)	\$1,658,812	\$1,751,600	\$1,878,927	\$1,985,323	\$2,099,396
Rate-payers					
Existing EDUs	878.55	878.55	903.55	923.55	938.55
Future EDUs	180.00	217.00	192.00	172.00	157.00
Future EDUs weighted [1] 50%	90.00	108.50	96.00	86.00	78.50
Total Existing plus Weighted Future EDUs	968.55	987.05	999.55	1,009.55	1,017.05
Projected Cost per Existing EDU	\$1,713	\$1,775	\$1,880	\$1,967	\$2,064
Monthly Service Charge per Existing EDU	\$142.72	\$147.88	\$156.65	\$163.88	\$172.02
Projected Cost per Future EDU	\$856	\$887	\$940	\$983	\$1,032
Monthly Service Charge per Future EDU	\$71.36	\$73.94	\$78.32	\$81.94	\$86.01

Source: HEC

calc ww

[1] Calculation below: future EDUs pay for fixed costs of the system less non-operating credits.

	<u>FY 2021 Budget</u>
"Fixed" Operating Costs	\$1,257,457
less Non-operating Credits	(\$497,830)
Total Costs to be Shared with Future EDUs	\$759,628
Total Revenue Requirement	\$1,588,820
Percentage Cost Share for Future EDU	50%

Table B-6
DSPUD 2021 Utility Rates Study
Debt Service Allocation Inside and Outside CFD No. 1

Includes New Sugar Bowl Sewer EDUs

DRAFT

Calculation	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Number of EDUs						
Inside CFD No. 1	461.6	461.6	498.6	498.6	498.6	498.6
Outside CFD No. 1	506.0	506.0	506.0	506.0	506.0	506.0
CalTrans [1]	91.0	91.0	91.0	91.0	91.0	91.0
Total Number of EDUs	1,058.6	1,058.6	1,095.6	1,095.6	1,095.6	1,095.6
Annual CWSRF Debt Service for Project						
Inside CFD No. 1	\$719,191	\$719,191	\$719,191	\$719,191	\$719,191	\$719,191
Outside CFD No. 1	\$343,113	\$343,113	\$356,964	\$356,964	\$356,964	\$356,964
Outside CFD No. 1	\$376,078	\$376,078	\$362,227	\$362,227	\$362,227	\$362,227

Source: DSPUD and HEC.

alloc out

[1] CalTrans has already contributed its share of the SRF debt service with the exception of change order costs.

Table B-7

DSPUD 2021 Utility Rates Study

Includes New Sugar Bowl Sewer EDUs

Share of CFD No. 1 Debt Service Paid by Rates

DRAFT

Item	Fiscal Year Ending				
	2022	2023	2024	2025	2026
Taxable EDUs	461.6	498.6	498.6	498.6	498.6
Annual Maximum Special Tax per EDU	\$593	\$593	\$593	\$593	\$593
Total Maximum Special Taxes	\$273,729	\$295,670	\$295,670	\$295,670	\$295,670
Inside CFD No.1 Debt Service	\$343,113	\$356,964	\$356,964	\$356,964	\$356,964
<i>Special Tax Revenue as a % of Debt Share</i>	<i>80%</i>	<i>83%</i>	<i>83%</i>	<i>83%</i>	<i>83%</i>
Revenue					
CFD No. 1 Special Tax Revenue	\$273,729	\$295,670	\$295,670	\$295,670	\$295,670
Inside CFD No. 1 Debt Service paid by Rates	\$69,384	\$61,295	\$61,295	\$61,295	\$61,295

Source: HEC.

cfid flow

Table B-8
DSPUD 2021 Utility Rates Study

Includes New Sugar Bowl Sewer EDUs

Calculated Additional Monthly Rates per EDU for SRF Debt Service

DRAFT

Item	Projected				
	2022	2023	2024	2025	2026
Inside CFD No. 1	<i>Inside CFD No. 1 Additional Rates for Project Debt</i>				
Net Debt paid with Rates	\$69,384	\$61,295	\$61,295	\$61,295	\$61,295
Rate-paying EDUs					
Existing	347.7	347.7	372.7	392.7	407.7
Future	113.9	150.9	125.9	105.9	90.9
Rate-paying EDUs weighted [1] 100%	461.6	498.6	498.6	498.6	498.6
Annual Cost per Existing EDU	\$150.31	\$122.93	\$122.93	\$122.93	\$122.93
Annual Cost per Future EDU	\$150.31	\$122.93	\$122.93	\$122.93	\$122.93
Monthly Charge per EDU for Debt Service	\$12.53	\$10.24	\$10.24	\$10.24	\$10.24
Outside CFD No. 1	<i>Outside CFD No. 1 Additional Rates for Project Debt</i>				
Debt Service Share	\$376,078	\$362,227	\$362,227	\$362,227	\$362,227
Rate-paying EDUs					
Existing	439.9	439.9	439.9	439.9	439.9
Future	66.1	66.1	66.1	66.1	66.1
Rate-paying EDUs weighted [1] 100%	506.0	506.0	506.0	506.0	506.0
Annual Cost per Existing EDU	\$743.31	\$715.93	\$715.93	\$715.93	\$715.93
Annual Cost per Future EDU	\$743.31	\$715.93	\$715.93	\$715.93	\$715.93
Monthly Charge per EDU	\$61.94	\$59.66	\$59.66	\$59.66	\$59.66

Source: SWRCB, DSPUD, and HEC.

debt share

[1] Future EDUs pay the same as existing EDUs for SRF debt service.

Table B-9
DSPUD 2021 Utility Rates Study
Projected Cash Flow for Wastewater

Includes Sugar Bowl Project Costs
Includes New Sugar Bowl Sewer EDUs

DRAFT

Revenues and Expenses	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Revenues						
Rates from All Customers	\$1,074,622	\$1,658,812	\$1,751,600	\$1,878,927	\$1,985,323	\$2,099,396
Rates for Debt Service	\$445,462	\$445,462	\$423,521	\$423,521	\$423,521	\$423,521
Special Tax Revenues	\$273,729	\$273,729	\$295,670	\$295,670	\$295,670	\$295,670
Other	\$497,830	\$491,969	\$515,310	\$665,152	\$691,637	\$719,896
Total Revenues	\$2,291,642	\$2,869,972	\$2,986,101	\$3,263,270	\$3,396,151	\$3,538,483
Operating Expenses	\$2,012,773	\$1,969,479	\$2,085,607	\$2,209,777	\$2,342,658	\$2,484,990
Net Revenue before Debt Service	\$278,870	\$900,494	\$900,494	\$1,053,494	\$1,053,494	\$1,053,494
Debt Service	\$793,069	\$727,494	\$727,494	\$852,494	\$852,494	\$852,494
Debt Service Coverage [1]	0.35	1.24	1.24	1.24	1.24	1.24
Net Income	(\$514,199)	\$173,000	\$173,000	\$201,000	\$201,000	\$201,000
Beginning Balance	\$2,247,242	\$1,733,043	\$2,331,031	\$2,504,031	\$2,583,031	\$2,638,031
Net Income	(\$514,199)	\$173,000	\$173,000	\$201,000	\$201,000	\$201,000
Connection Fees (Sugar Bowl)	\$0	\$424,988	\$0	\$0	\$0	\$0
Capital Improvement Projects	\$0	\$0	\$0	(\$122,000)	(\$146,000)	(\$128,000)
Ending Balance	\$1,733,043	\$2,331,031	\$2,504,031	\$2,583,031	\$2,638,031	\$2,711,031
Restricted Balance	\$737,378	\$737,378	\$737,378	\$737,378	\$737,378	\$737,378
Unrestricted Balance	\$995,665	\$1,593,653	\$1,766,653	\$1,845,653	\$1,900,653	\$1,973,653

Source: DSPUD financials and HEC 2021 rate study.

ww flow

[1] Debt service coverage ratio must be at least 1.10 per the SWRCB Clean Water SRF agreement.

Table B-10
DSPUD 2021 Utility Rates Study
Estimated District Cash Balances

Includes Sugar Bowl Project Costs
Includes New Sugar Bowl Sewer EDUs
DRAFT

Item	Fiscal Year Ending					
	2021	2022	2023	2024	2025	2026
Beginning Cash Balance	\$1,673,602	\$1,146,101	\$1,823,089	\$2,125,089	\$2,358,089	\$2,567,089
Water Change	(\$13,302)	\$79,000	\$129,000	\$154,000	\$154,000	\$154,000
Wastewater Change	(\$514,199)	\$597,988	\$173,000	\$79,000	\$55,000	\$73,000
Ending Cash Balance	\$1,146,101	\$1,823,089	\$2,125,089	\$2,358,089	\$2,567,089	\$2,794,089
Restricted	\$737,378	\$739,347	\$739,347	\$739,347	\$739,347	\$739,347
Unrestricted	\$408,723	\$1,083,742	\$1,385,742	\$1,618,742	\$1,827,742	\$2,054,742
One Year Operating Expenses	\$2,529,842	\$2,479,580	\$2,625,196	\$2,780,721	\$2,946,954	\$3,124,774
Target Six Months Operating Expenses	\$1,264,921	\$1,239,790	\$1,312,598	\$1,390,361	\$1,473,477	\$1,562,387
Minimum Cash Reserves (4 months)	\$843,281	\$826,527	\$875,065	\$926,907	\$982,318	\$1,041,591
Projected Months of Op. Expenses [1]	2	5	6	7	7	8

Source: DSPUD and HEC 2021 rate study.

tot flow

[1] Unrestricted cash in the water and wastewater utilities combined.