

# HANSFORD

ECONOMIC CONSULTING LLC

## **Donner Summit Public Utility District**

### **2021 Utility Rates Study**

**June 4, 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      |
|---|-----------|
| <b>1. INTRODUCTION AND SUMMARY OF FINDINGS</b>      | <b>1</b>  |
| 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                      | 4         |
| <b>2. DISTRICT REVENUES AND EXPENSES</b>            | <b>7</b>  |
| 2.1 District Revenues                               | 7         |
| 2.2 District Expenses                               | 9         |
| <b>3. WATER FEE CALCULATIONS</b>                    | <b>13</b> |
| 3.1 DSPUD Water Systems                             | 13        |
| 3.2 Water Revenue Requirement                       | 13        |
| 3.3 Water Rate Calculations                         | 15        |
| 3.4 Projected Water Cash Flow                       | 16        |
| <b>4. WASTEWATER FEE CALCULATIONS</b>               | <b>18</b> |
| 4.1 DSPUD Wastewater System and Customers           | 18        |
| 4.2 Wastewater Revenue Requirement                  | 18        |
| 4.3 Wastewater Rate Calculations                    | 20        |
| 4.4 Projected Wastewater Cash Flow                  | 24        |
| <b>5. DISTRICT AND CUSTOMER IMPACTS</b>             | <b>26</b> |
| 5.1 District Financial Impacts                      | 26        |
| 5.2 Customer Bill Impacts                           | 27        |

## Attachment A: Water and Wastewater Fees Support Tables

## LIST OF TABLES

PAGE

### SECTION 1 – SUMMARY OF FINDINGS

|   |                                   |   |
|---|-----------------------------------|---|
| 1 | Five-Year Water Fee Schedule      | 3 |
| 2 | 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) | 8  |
| 5 | Big Bend Water Rates                                    | 8  |
| 6 | Current Wastewater Rates                                | 9  |
| 7 | Annual Change in DSPUD Operating Costs by Expense Item  | 10 |
| 8 | Fiscal Year 2021 Budget                                 | 11 |
| 9 | Depreciation of District Assets                         | 12 |

### SECTION 3- WATER FEE TABLES

|    |   |    |
|----|---|----|
| 10 | Projected Water Operations Revenue Requirements | 14 |
| 11 | Calculated Water Rates for a Typical Home       | 16 |
| 12 | Calculated Water Fees Schedule                  | 16 |
| 13 | Projected Cash Flow for Water                   | 17 |

### SECTION 4 - WASTEWATER FEE TABLES

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

### SECTION 5 – DISTRICT AND CUSTOMER IMPACTS TABLES

|    |   |    |
|----|---|----|
| 22 | Estimated District Cash Balances            | 26 |
| 23 | Projected Typical Home DSPUD Utilities Bill | 27 |
| 24 | Utility Rates Affordability                 | 29 |

## LIST OF FIGURES

## PAGE

### SECTION 1 – SUMMARY OF FINDINGS

|   |                                       |   |
|---|---------------------------------------|---|
| 1 | Historical and Projected Cash Balance | 5 |
|---|---------------------------------------|---|

### SECTION 2 – DISTRICT FINANCIAL HEALTH AND CURRENT FEES

|   |                             |    |
|---|-----------------------------|----|
| 2 | Sources of Revenue          | 7  |
| 3 | District Operating Expenses | 10 |

### SECTION 3 - WATER RATE STUDY FIGURES

|   |   |    |
|---|---|----|
| 4 | Components of Water Revenue Requirement | 15 |
|---|---|----|

### SECTION 4 - WASTEWATER RATE STUDY FIGURES

|   |  |    |
|---|--|----|
| 5 | Components of Wastewater Revenue Requirement | 20 |
| 6 | Projected Wastewater Revenue Sources         | 22 |

### SECTION 5 – DISTRICT AND CUSTOMER IMPACTS FIGURES

|   |   |    |
|---|---|----|
| 7 | District Unrestricted Cash Projection       | 27 |
| 8 | Projected Quarterly Bill for a Typical Home | 28 |



# 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.



## 1.4 WATER FEES FINDINGS

The calculated and proposed 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**  
**Five-Year Water Fee Schedule included in the Proposition 218 Public Hearing Notice**

| 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   |
| <b>Monthly Fee</b>                  |                        |            |  |            |            |            |            |
| 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 |
| <b>per thousand gallons</b>         |                        |            |  |            |            |            |            |
| Overage Charge                      |                        | \$7.298    | \$8.625                                | \$9.860    | \$10.727   | \$11.230   | \$11.765   |
| <i>Percentage Increase in Rates</i> |                        |            | <i>18%</i>                             | <i>14%</i> | <i>9%</i>  | <i>5%</i>  | <i>5%</i>  |

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 calculated and proposed wastewater rate schedule is provided in **Table 2** on the next page. The draft 2021 utility rates study dated March 12, 2021 included a second alternative under which 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, or indeed influx of new connections from any other location in the District or annexing to the District, rates should be revisited as they most likely could be lowered.

**Table 2**  
**Five-Year Wastewater Fee Schedule included in the Proposition 218 Public Hearing Notice**

| 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 |
| <b>Existing Customers</b>   |          | <b>Monthly Fee per EDU</b>               |          |          |          |          |
| 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 |
| <b>Future Customers</b>     |          |  |          |          |          |          |
| 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 |
|                             |          | <b>Special Taxes per EDU</b>             |          |          |          |          |
| Inside CFD No. 1 - All EDUs | \$49.42  | \$49.42                                  | \$49.42  | \$49.42  | \$49.42  | \$49.42  |

Source: HEC 2021 rate study.

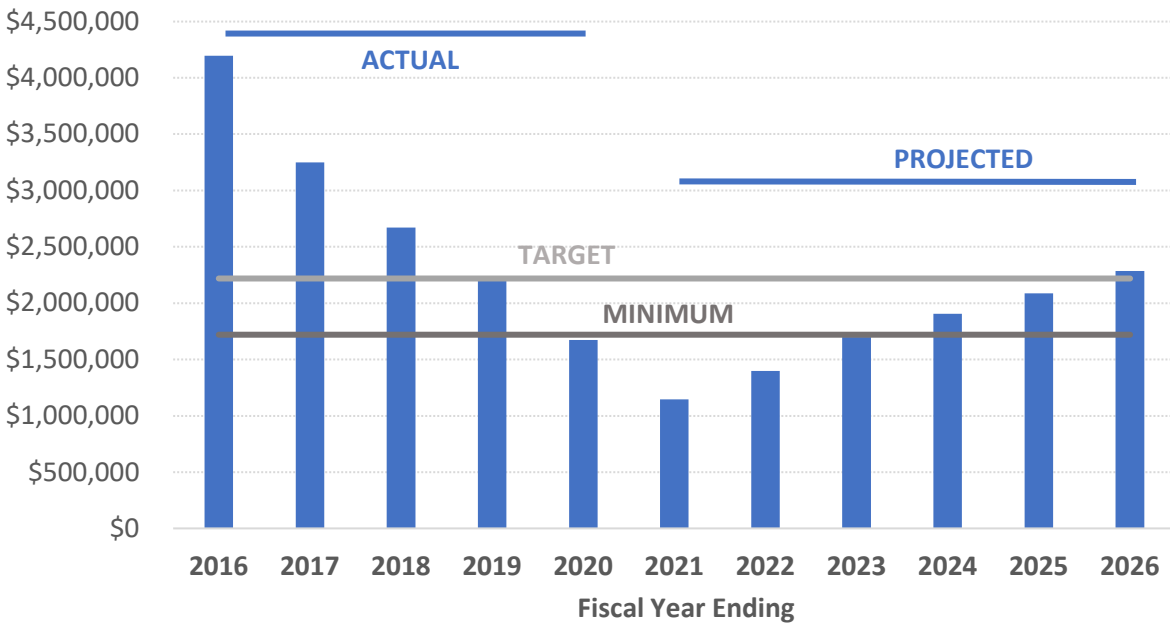
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## 1.6 COMBINED UTILITIES IMPACTS

**District.** The impact of adopting the proposed water and wastewater rates would be to improve the financial health of the District. **Figure 1** on the next page 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.

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

| 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          |
| <b>Total</b>                         | <b>\$762</b> | <b>\$873</b>     | <b>\$934</b> | <b>\$985</b> | <b>\$1,028</b> | <b>\$1,073</b> |
| <b>Increase per Quarter per Year</b> |              | <b>\$111</b>     | <b>\$61</b>  | <b>\$52</b>  | <b>\$43</b>    | <b>\$46</b>    |
| Annual Increase                      |              | \$445            | \$244        | \$207        | \$170          | \$182          |

Source: HEC 2021 rate study.

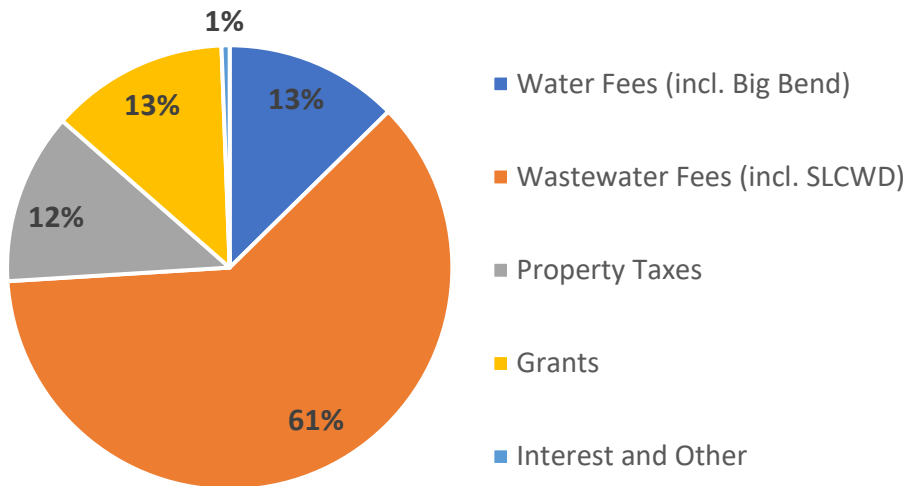
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## Section 2: DISTRICT REVENUES AND EXPENSES

### 2.1 DISTRICT REVENUES

The District's sources of revenue for the past five years are illustrated in **Figure 2**. 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 2**  
**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 |
| <b>Existing Customers</b>   |                               |                |          |
|                             | <b>Monthly Charge per EDU</b> |                |          |
| 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 |
| <b>Future Customers</b>     |                               |                |          |
| Inside CFD No. 1            | \$69.39                       | \$70.79        | \$72.29  |
| Outside CFD No. 1           | \$118.81                      | \$120.21       | \$121.70 |
|                             | <b>Special Taxes per EDU</b>  |                |          |
| 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.

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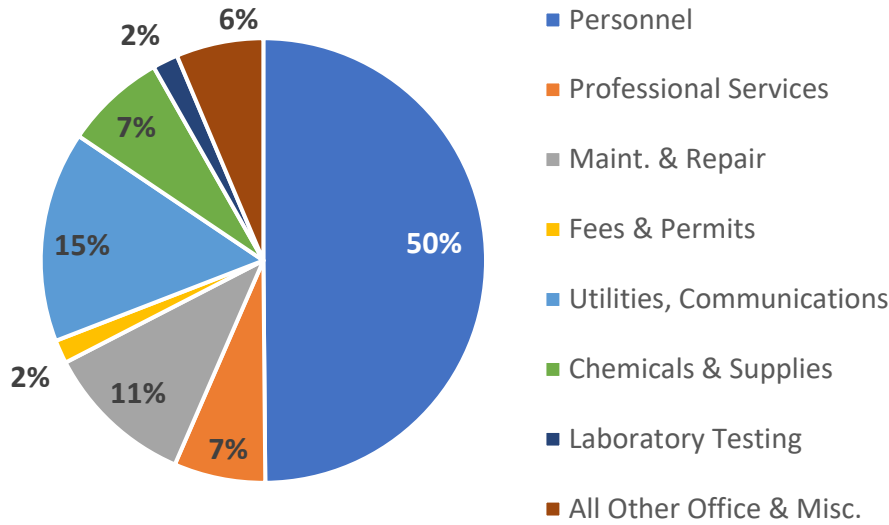
[1] Ordinance 2-2020.

## 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 3** 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 3**  
**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%                 |
| <b>Total Operating Costs</b>      | <b>\$2,199,872</b> | <b>\$2,393,418</b> | <b>\$2,547,568</b> | <b>\$2,638,502</b> | <b>\$2,530,240</b> | <b>\$330,368</b> | <b>3.6%</b>          |
| WWTP Only Operations              | \$15,483           | \$16,625           | \$37,439           | \$84,522           | \$29,410           | \$13,927         | 17.4%                |
| <b>Engineering News Record</b>    | <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%                 |
| <b>Bureau of Labor Statistics</b> |                    |                    |                    |                    |                    |                  |                      |
| 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.

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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          |                    |                    |
| <b>Program Revenue</b>                     |                  |                   |                    |                    |                    |
| 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           |
| <b>Total Program Revenue</b>               | <b>\$518,982</b> | <b>\$399,069</b>  | <b>\$1,607,245</b> | <b>\$14,500</b>    | <b>\$2,539,795</b> |
| <b>Expenses</b>                            |                  |                   |                    |                    |                    |
| 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          |
| <b>Total Expenses</b>                      | <b>\$326,703</b> | <b>\$275,354</b>  | <b>\$1,444,751</b> | <b>\$645,767</b>   | <b>\$2,692,575</b> |
| <b>Net Revenue (Expense)</b>               | <b>\$192,279</b> | <b>\$123,715</b>  | <b>\$162,494</b>   | <b>(\$631,267)</b> | <b>(\$152,780)</b> |

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**

| <b>Fiscal Year</b>         | <b>Water</b>    | <b>Wastewater</b> |
|----------------------------|-----------------|-------------------|
| 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         |
| <b>System Rehab. @ 25%</b> | <b>\$29,000</b> | <b>\$173,000</b>  |

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             |
| <b>Operating Expenses</b>                     |                    |                  |                    |                  |                  |                  |                  |
| 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          |
| <b>Total Operating Expenses</b>               | <b>a</b>           | <b>\$517,069</b> | <b>\$510,101</b>   | <b>\$539,589</b> | <b>\$570,944</b> | <b>\$604,297</b> | <b>\$639,785</b> |
| <b>Debt Service</b>                           |                    |                  |                    |                  |                  |                  |                  |
| 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         |
| <b>Subtotal Debt Service</b>                  | <b>b</b>           | <b>\$40,636</b>  | <b>\$40,636</b>    | <b>\$40,636</b>  | <b>\$40,636</b>  | <b>\$40,636</b>  | <b>\$40,636</b>  |
| 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        |
| <b>Non-Operating Credits (Expenses)</b>       |                    |                  |                    |                  |                  |                  |                  |
| 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          |
| <b>Total Non-operating Credits (expenses)</b> | <b>d</b>           | <b>\$83,353</b>  | <b>\$84,831</b>    | <b>\$86,347</b>  | <b>\$87,903</b>  | <b>\$89,500</b>  | <b>\$91,138</b>  |
| <b>Revenue Requirement</b>                    | <b>e = a+b+c-d</b> | <b>\$474,352</b> | <b>\$544,907</b>   | <b>\$622,878</b> | <b>\$677,677</b> | <b>\$709,433</b> | <b>\$743,283</b> |

Source: DSPUD and HEC.

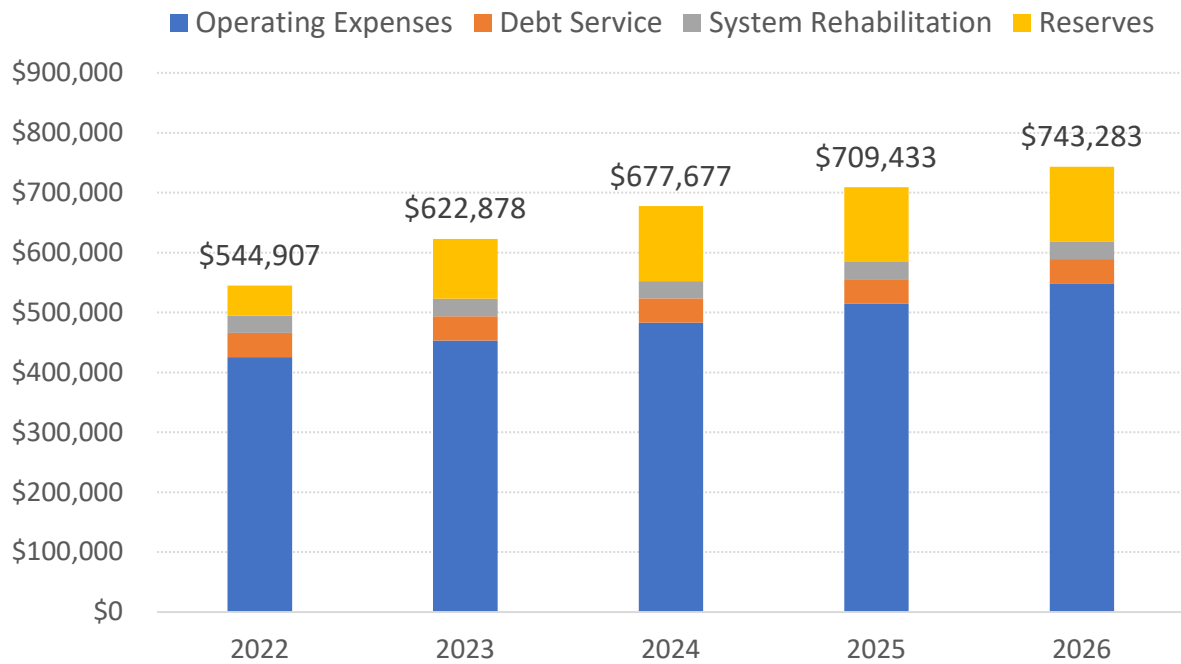
revw

[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 4** on the next page.

**Figure 4**  
**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<br>Budget   | Fiscal Year Ending |                  |                  |                  |                  |
|---|------------------|--------------------|------------------|------------------|------------------|------------------|
|   |                  | 2022<br>7/1/2021   | 2023<br>7/1/2022 | 2024<br>7/1/2023 | 2025<br>7/1/2024 | 2026<br>7/1/2025 |
| <b>Water User Fees</b>                    | <b>\$461,050</b> | <b>\$461,050</b>   | <b>\$461,050</b> | <b>\$461,050</b> | <b>\$461,050</b> | <b>\$461,050</b> |
| 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%              |
| <b>Annual Percentage Increase</b>         |                  | <b>18%</b>         | <b>14%</b>       | <b>9%</b>        | <b>5%</b>        | <b>5%</b>        |
| <b>Typical Residence Monthly Rate</b>     | <b>\$72.98</b>   | <b>\$86.25</b>     | <b>\$98.60</b>   | <b>\$107.27</b>  | <b>\$112.30</b>  | <b>\$117.65</b>  |
| 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<br>Size               | Base Monthly<br>Allowance | Current    | Calculated WATER Rates Next Five Years |            |            |            |            |
|-----------------------------|---------------------------|------------|--|------------|------------|------------|------------|
|                             |                           |            | 7/1/2021                               | 7/1/2022   | 7/1/2023   | 7/1/2024   | 7/1/2025   |
| <b>Monthly Fee</b>          |                           |            |  |            |            |            |            |
| 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 |
| <b>per thousand gallons</b> |                           |            |  |            |            |            |            |
| 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             |
| <b>Revenues</b>                        |                    |                    |                    |                    |                   |                  |
| 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          |
| <b>Total Revenues</b>                  | <b>\$544,403</b>   | <b>\$629,737</b>   | <b>\$709,225</b>   | <b>\$765,580</b>   | <b>\$798,933</b>  | <b>\$834,421</b> |
| <b>Operating Expenses</b>              | <b>\$517,069</b>   | <b>\$510,101</b>   | <b>\$539,589</b>   | <b>\$570,944</b>   | <b>\$604,297</b>  | <b>\$639,785</b> |
| <b>Net Revenue before Debt Service</b> | <b>\$27,334</b>    | <b>\$119,636</b>   | <b>\$169,636</b>   | <b>\$194,636</b>   | <b>\$194,636</b>  | <b>\$194,636</b> |
| <b>Debt Service</b>                    | <b>\$40,636</b>    | <b>\$40,636</b>    | <b>\$40,636</b>    | <b>\$40,636</b>    | <b>\$40,636</b>   | <b>\$40,636</b>  |
| Debt Service Coverage                  | 0.67               | 2.94               | 4.17               | 4.79               | 4.79              | 4.79             |
| <b>Net Income</b>                      | <b>(\$13,302)</b>  | <b>\$79,000</b>    | <b>\$129,000</b>   | <b>\$154,000</b>   | <b>\$154,000</b>  | <b>\$154,000</b> |
| 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        |
| <b>Ending Cash Balance</b>             | <b>(\$586,942)</b> | <b>(\$507,942)</b> | <b>(\$378,942)</b> | <b>(\$224,942)</b> | <b>(\$70,942)</b> | <b>\$83,058</b>  |
| <b>Restricted Balance</b>              | <b>\$0</b>         | <b>\$1,969</b>     | <b>\$1,969</b>     | <b>\$1,969</b>     | <b>\$1,969</b>    | <b>\$1,969</b>   |
| <b>Unrestricted Balance</b>            | <b>(\$586,942)</b> | <b>(\$509,911)</b> | <b>(\$380,911)</b> | <b>(\$226,911)</b> | <b>(\$72,911)</b> | <b>\$81,089</b>  |

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 DSPUD 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.

### 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               |
| <b>Operating Expenses</b>                            |                    |                    |                    |                    |                    |                    |                    |
| 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           |
| <b>Total Operating Expenses</b>                      | <b>a</b>           | <b>\$2,012,773</b> | <b>\$1,969,479</b> | <b>\$2,085,607</b> | <b>\$2,209,777</b> | <b>\$2,342,658</b> | <b>\$2,484,990</b> |
| <b>Debt Service</b>                                  |                    |                    |                    |                    |                    |                    |                    |
| 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                |
| <b>Subtotal Debt Service</b>                         | <b>b</b>           | <b>\$793,069</b>   | <b>\$727,494</b>   | <b>\$727,494</b>   | <b>\$727,494</b>   | <b>\$727,494</b>   | <b>\$727,494</b>   |
| 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                |
| <b>Non-Operating Credits (Expenses)</b>              |                    |                    |                    |                    |                    |                    |                    |
| 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                | \$0                |
| <b>Total Non-operating Credits (expenses)</b>        | <b>d</b>           | <b>\$497,830</b>   | <b>\$491,969</b>   | <b>\$515,310</b>   | <b>\$540,152</b>   | <b>\$566,637</b>   | <b>\$594,896</b>   |
| <b>Revenue Requirement</b>                           | <b>e = a+b+c-d</b> | <b>\$2,308,011</b> | <b>\$2,378,003</b> | <b>\$2,470,791</b> | <b>\$2,570,118</b> | <b>\$2,676,514</b> | <b>\$2,790,587</b> |
| <b>Rev. Requirement All Customers</b>                | <b>f = e-b</b>     | <b>\$1,588,820</b> | <b>\$1,658,812</b> | <b>\$1,751,600</b> | <b>\$1,850,927</b> | <b>\$1,957,323</b> | <b>\$2,071,396</b> |

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.

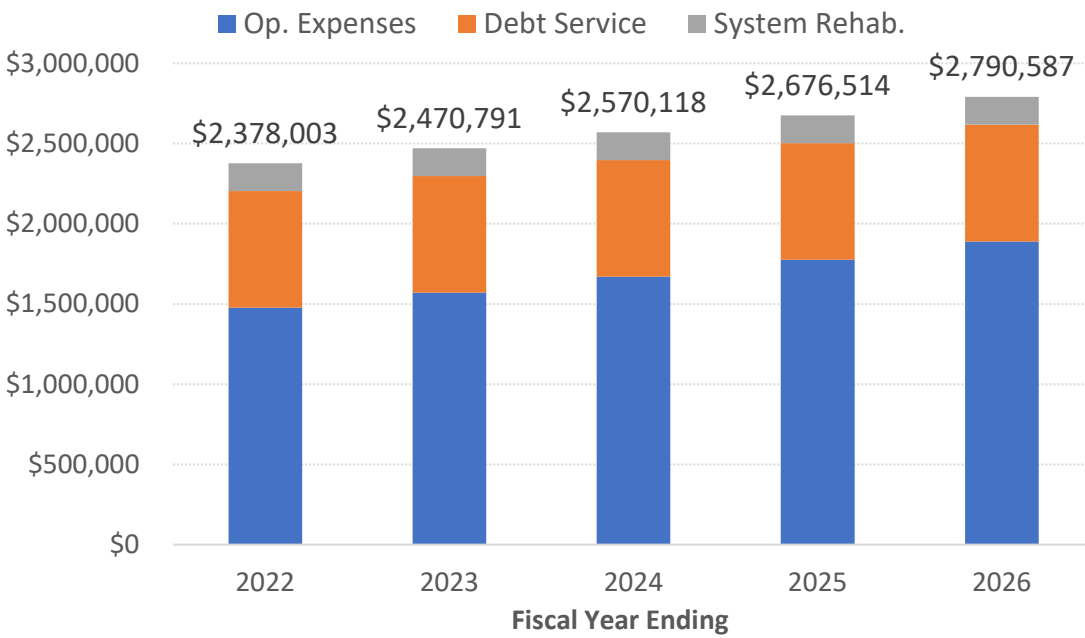
[4] Final payment due December 31, 2041.

[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 5** on the next page.

**Figure 5**  
**Components of Wastewater Revenue Requirement**



**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.

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 15**  
**Calculated Monthly Rates per EDU (All Customers)**

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

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)      |
| <b>Total Costs to be Shared with Future EDUs</b> | <b>\$759,628</b> |
| Total Revenue Requirement                        | \$1,588,820      |
| <b>Percentage Cost Share for Future EDU</b>      | <b>50%</b>       |

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

| Calculation                                  | Fiscal Year Ending |                |                |                |                |                |
|--|--------------------|----------------|----------------|----------------|----------------|----------------|
|  | 2021               | 2022           | 2023           | 2024           | 2025           | 2026           |
| <b>Number of EDUs</b>                        |                    |                |                |                |                |                |
| 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           |
| <b>Total Number of EDUs</b>                  | <b>1,058.6</b>     | <b>1,058.6</b> | <b>1,058.6</b> | <b>1,058.6</b> | <b>1,058.6</b> | <b>1,058.6</b> |
| <b>Annual CWSRF Debt Service for Project</b> |                    |                |                |                |                |                |
| 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** on the next page.

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

| Item  | Fiscal Year Ending |                  |                  |                  |                  |
|---|--------------------|------------------|------------------|------------------|------------------|
|   | 2022               | 2023             | 2024             | 2025             | 2026             |
| <b>Taxable EDUs</b>                             | <b>461.6</b>       | <b>461.6</b>     | <b>461.6</b>     | <b>461.6</b>     | <b>461.6</b>     |
| Annual Maximum Special Tax per EDU              | \$593              | \$593            | \$593            | \$593            | \$593            |
| <b>Total Maximum Special Taxes</b>              | <b>\$273,729</b>   | <b>\$273,729</b> | <b>\$273,729</b> | <b>\$273,729</b> | <b>\$273,729</b> |
| <b>Inside CFD No.1 Debt Service</b>             | <b>\$343,113</b>   | <b>\$343,113</b> | <b>\$343,113</b> | <b>\$343,113</b> | <b>\$343,113</b> |
| <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>       |
| <b>Revenue</b>                                  |                    |                  |                  |                  |                  |
| 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.

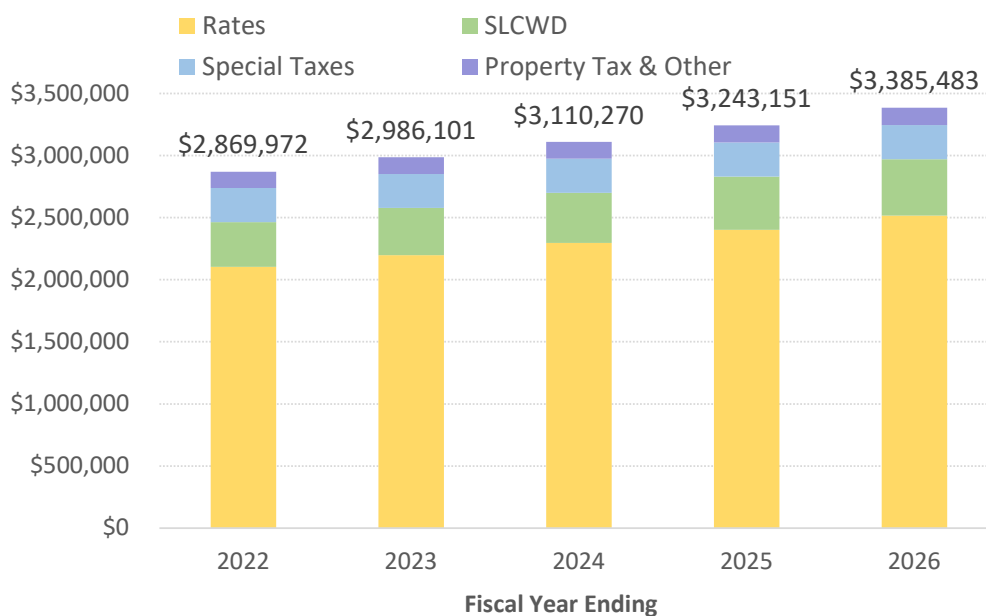
cfid flow

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**.

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.

**Figure 6** shows the District’s projected sources of wastewater revenues over the next five years.

**Figure 6**  
**Projected Wastewater Revenue Sources**



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

| Item   | Projected        |                  |                  |                  |                  |
|--|------------------|------------------|------------------|------------------|------------------|
|  | 2022             | 2023             | 2024             | 2025             | 2026             |
| <b>Inside CFD No. 1</b>                                    |                  |                  |                  |                  |                  |
| <i>Inside CFD No. 1 Additional Rates for Project Debt</i>  |                  |                  |                  |                  |                  |
| <b>Net Debt paid with Rates</b>                            | <b>\$69,384</b>  | <b>\$69,384</b>  | <b>\$69,384</b>  | <b>\$69,384</b>  | <b>\$69,384</b>  |
| <b>Rate-paying EDUs</b>                                    |                  |                  |                  |                  |                  |
| 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            |
| <b>Annual Cost per Existing EDU</b>                        | <b>\$150.31</b>  | <b>\$150.31</b>  | <b>\$150.31</b>  | <b>\$150.31</b>  | <b>\$150.31</b>  |
| <b>Annual Cost per Future EDU</b>                          | <b>\$150.31</b>  | <b>\$150.31</b>  | <b>\$150.31</b>  | <b>\$150.31</b>  | <b>\$150.31</b>  |
| <b>Monthly Charge per EDU for Debt Service</b>             | <b>\$12.53</b>   | <b>\$12.53</b>   | <b>\$12.53</b>   | <b>\$12.53</b>   | <b>\$12.53</b>   |
| <b>Outside CFD No. 1</b>                                   |                  |                  |                  |                  |                  |
| <i>Outside CFD No. 1 Additional Rates for Project Debt</i> |                  |                  |                  |                  |                  |
| <b>Debt Service Share</b>                                  | <b>\$376,078</b> | <b>\$376,078</b> | <b>\$376,078</b> | <b>\$376,078</b> | <b>\$376,078</b> |
| <b>Rate-paying EDUs</b>                                    |                  |                  |                  |                  |                  |
| 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            |
| <b>Annual Cost per Existing EDU</b>                        | <b>\$743.31</b>  | <b>\$743.31</b>  | <b>\$743.31</b>  | <b>\$743.31</b>  | <b>\$743.31</b>  |
| <b>Annual Cost per Future EDU</b>                          | <b>\$743.31</b>  | <b>\$743.31</b>  | <b>\$743.31</b>  | <b>\$743.31</b>  | <b>\$743.31</b>  |
| <b>Monthly Charge per EDU</b>                              | <b>\$61.94</b>   | <b>\$61.94</b>   | <b>\$61.94</b>   | <b>\$61.94</b>   | <b>\$61.94</b>   |

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 |
| <b>Existing Customers</b>    |          |  |          |          |          |          |
| <b>Monthly Fee per EDU</b>   |          |  |          |          |          |          |
| 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 |
| <b>Future Customers</b>      |          |  |          |          |          |          |
| 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 |
| <b>Special Taxes per EDU</b> |          |  |          |          |          |          |
| 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 loan<sup>1</sup>; 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               |
| <b>Revenues</b>                        |                    |                    |                    |                    |                    |                    |
| 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          |
| <b>Total Revenues</b>                  | <b>\$2,291,642</b> | <b>\$2,869,972</b> | <b>\$2,986,101</b> | <b>\$3,110,270</b> | <b>\$3,243,151</b> | <b>\$3,385,483</b> |
| <b>Operating Expenses</b>              | <b>\$2,012,773</b> | <b>\$1,969,479</b> | <b>\$2,085,607</b> | <b>\$2,209,777</b> | <b>\$2,342,658</b> | <b>\$2,484,990</b> |
| <b>Net Revenue before Debt Service</b> | <b>\$278,870</b>   | <b>\$900,494</b>   | <b>\$900,494</b>   | <b>\$900,494</b>   | <b>\$900,494</b>   | <b>\$900,494</b>   |
| 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               |
| <b>Net Income</b>                      | <b>(\$514,199)</b> | <b>\$173,000</b>   | <b>\$173,000</b>   | <b>\$173,000</b>   | <b>\$173,000</b>   | <b>\$173,000</b>   |
| 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)        |
| <b>Ending Balance</b>                  | <b>\$1,733,043</b> | <b>\$1,906,043</b> | <b>\$2,079,043</b> | <b>\$2,130,043</b> | <b>\$2,157,043</b> | <b>\$2,202,043</b> |
| <b>Restricted Balance</b>              | <b>\$737,378</b>   | <b>\$737,378</b>   | <b>\$737,378</b>   | <b>\$737,378</b>   | <b>\$737,378</b>   | <b>\$737,378</b>   |
| <b>Unrestricted Balance</b>            | <b>\$995,665</b>   | <b>\$1,168,665</b> | <b>\$1,341,665</b> | <b>\$1,392,665</b> | <b>\$1,419,665</b> | <b>\$1,464,665</b> |

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.

<sup>1</sup> 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             |
| <b>Collection System</b>         | <b>2021 \$</b>     |                    |            | <b>2021 \$</b>                      |                  |                  |
| Snow Lab/Bunny Hill Rd Rehab.    | \$100,000          |                    |            |                                     |                  | \$100,000        |
| <b>Treatment Plant</b>           |                    |                    |            |                                     |                  |                  |
| Membrane replacement             | \$75,000           |                    |            | \$75,000                            |                  |                  |
| Reactor #1 coating               | \$120,000          |                    |            |                                     | \$120,000        |                  |
| Reactors #1 & #2 wasting systems | \$30,000           |                    |            | \$30,000                            |                  |                  |
| <b>Total CIP</b>                 | <b>\$325,000</b>   | <b>\$0</b>         | <b>\$0</b> | <b>\$105,000</b>                    | <b>\$120,000</b> | <b>\$100,000</b> |
| <b>Collection System</b>         | <b>Inflated \$</b> |                    |            | <b>5% per year inflation factor</b> |                  |                  |
| Snow Lab/Bunny Hill Rd Rehab.    | \$128,000          | \$0                | \$0        | \$0                                 | \$0              | \$128,000        |
| <b>Treatment Plant</b>           |                    |                    |            |                                     |                  |                  |
| 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              |
| <b>Total CIP</b>                 | <b>\$396,000</b>   | <b>\$0</b>         | <b>\$0</b> | <b>\$122,000</b>                    | <b>\$146,000</b> | <b>\$128,000</b> |

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.

## 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 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 2026. 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               |
| <b>Beginning Cash Balance</b>               | <b>\$1,673,602</b> | \$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           |
| <b>Ending Cash Balance</b>                  | <b>\$1,146,101</b> | <b>\$1,398,101</b> | <b>\$1,700,101</b> | <b>\$1,905,101</b> | <b>\$2,086,101</b> | <b>\$2,285,101</b> |
| Restricted                                  | \$737,378          | \$739,347          | \$739,347          | \$739,347          | \$739,347          | \$739,347          |
| <b>Unrestricted</b>                         | <b>\$408,723</b>   | <b>\$658,754</b>   | <b>\$960,754</b>   | <b>\$1,165,754</b> | <b>\$1,346,754</b> | <b>\$1,545,754</b> |
| 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        |
| <b>Projected Months of Op. Expenses [1]</b> | <b>2</b>           | <b>3</b>           | <b>4</b>           | <b>5</b>           | <b>5</b>           | <b>6</b>           |

Source: DSPUD and HEC 2021 rate study.

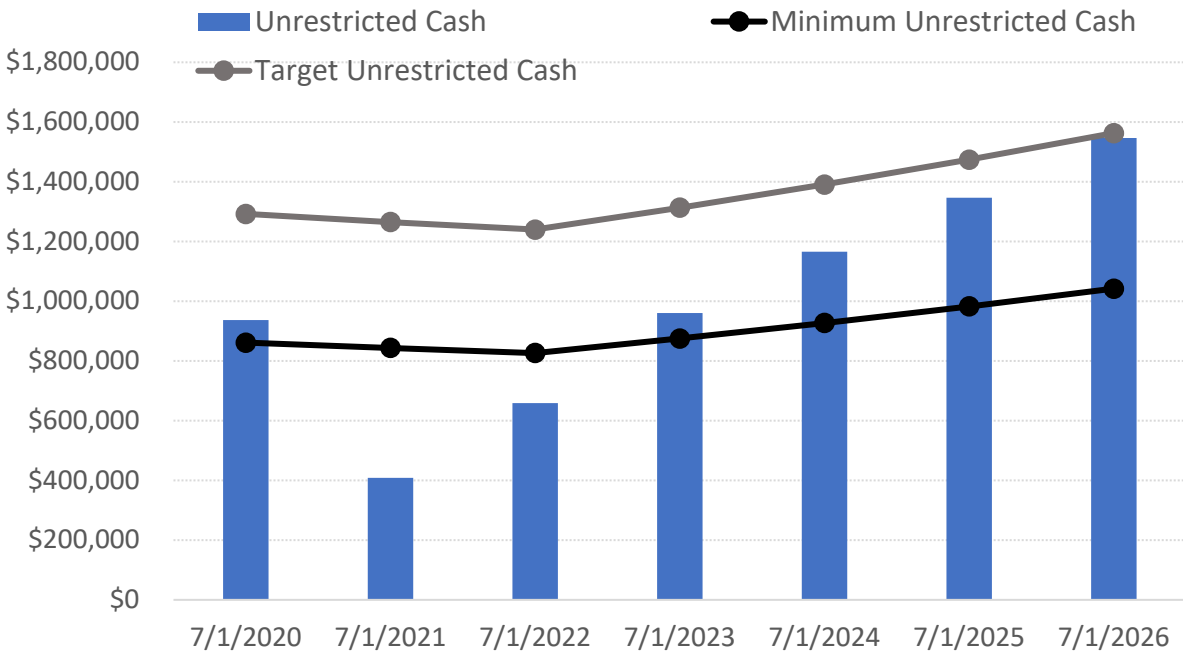
tot flow

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

The projected unrestricted District cash balance is illustrated in **Figure 7** on the next page.



**Figure 7**  
**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 8** on the next page illustrates the total projected bill for a typical home.

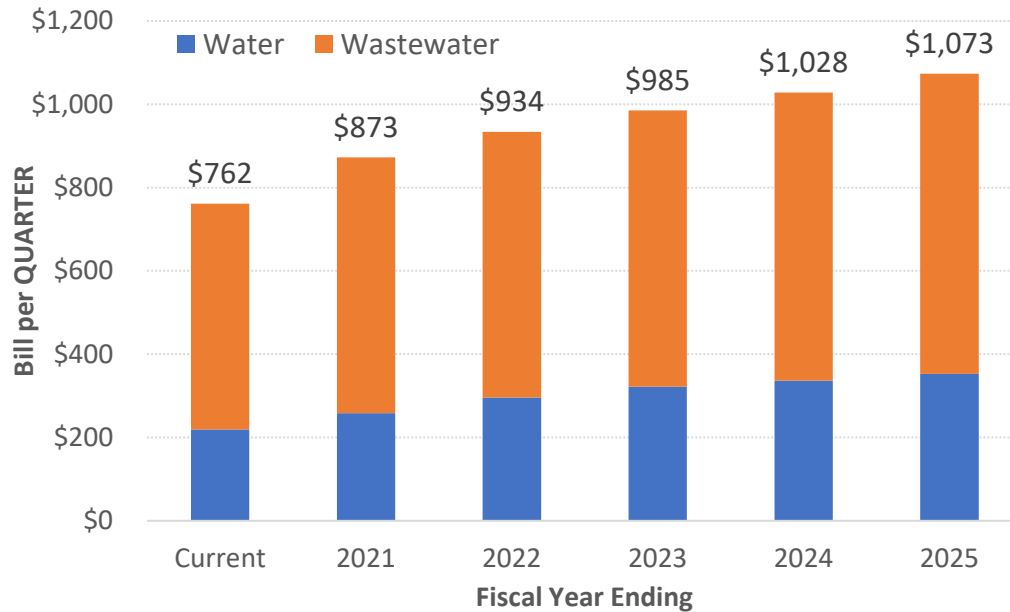
**Table 23**  
**Projected Typical Home DSPUD Utilities Bill**

| 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          |
| <b>Total</b>                         | <b>\$762</b> | <b>\$873</b>     | <b>\$934</b> | <b>\$985</b> | <b>\$1,028</b> | <b>\$1,073</b> |
| <b>Increase per Quarter per Year</b> |              | <b>\$111</b>     | <b>\$61</b>  | <b>\$52</b>  | <b>\$43</b>    | <b>\$46</b>    |
| Annual Increase                      |              | \$445            | \$244        | \$207        | \$170          | \$182          |

Source: HEC 2021 rate study.

sf

**Figure 8**  
**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]               |
| <b>Current Rates</b>       |                |                   |
| Water                      | \$876          | 1.4%              |
| Wastewater                 | \$2,170        | 3.6%              |
| <b>Total</b>               | <b>\$3,046</b> | <b>5.0%</b>       |
| <b>July 1, 2021</b>        |                |                   |
| Water                      | \$1,035        | 1.7%              |
| Wastewater                 | \$2,456        | 4.0%              |
| <b>Total</b>               | <b>\$3,491</b> | <b>5.7%</b>       |
| <b>Dollar Increase</b>     | <b>\$445</b>   |                   |
| <b>Percentage Increase</b> | <b>15%</b>     |                   |

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   |
| <b>DSPUD as a Percentage of State MHI</b> | <b>81%</b> |



# **APPENDIX A**

## **WATER AND WASTEWATER FEES**

### **SUPPORT TABLES**



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

**Final**

| 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           |
| <b>Total</b>              | <b>\$2,619,125</b> | <b>21%</b> | <b>\$9,690,475</b> | <b>79%</b> | <b>\$12,309,600</b> |

SouUce: DSPUD Financial Audits.

shared

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

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

Interest Rate: 2.75%

Years: 40

Source: USDA and DSPUD.

bigl



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

**Final**

| 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           |
| <b>Annual Debt Service Water</b> |                |                      | <b>\$793</b> |                |
| <b>Annual Debt Service WW</b>    |                |                      |              | <b>\$8,303</b> |

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** **Final**

| Meter Size                                 | Number of<br>Meters | Monthly<br>Rate | Annual<br>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               |
| <b>Total</b>                               | <b>354</b>          |                 | <b>\$431,919</b>  |
| <b>Budget 2021</b>                         |                     |                 | <b>\$461,050</b>  |
| <b>Difference (underestimate in model)</b> |                     | <b>-6.3%</b>    | <b>(\$29,131)</b> |

Source: DSPUD customer records.

w check

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

*No New Sewer Connections*

**Final**

| EDU Type                            | Fiscal Year Ending |                |                |                |                |                |
|-------------------------------------|--------------------|----------------|----------------|----------------|----------------|----------------|
|                                     | 2021               | 2022           | 2023           | 2024           | 2025           | 2026           |
| <b>Inside CFD No. 1</b>             |                    |                |                |                |                |                |
| 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          |
| <b>Total Inside CFD No. 1 EDUs</b>  | <b>552.6</b>       | <b>552.6</b>   | <b>552.6</b>   | <b>552.6</b>   | <b>552.6</b>   | <b>552.6</b>   |
| <b>Taxable EDUs</b>                 | <b>461.6</b>       | <b>461.6</b>   | <b>461.6</b>   | <b>461.6</b>   | <b>461.6</b>   | <b>461.6</b>   |
| <b>Outside CFD No. 1</b>            |                    |                |                |                |                |                |
| 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           |
| <b>Total Outside CFD No. 1 EDUs</b> | <b>506.0</b>       | <b>506.0</b>   | <b>506.0</b>   | <b>506.0</b>   | <b>506.0</b>   | <b>506.0</b>   |
| <b>Total Rate-payers</b>            |                    |                |                |                |                |                |
| 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          |
| <b>Total Rate-paying EDUs</b>       | <b>1,058.6</b>     | <b>1,058.6</b> | <b>1,058.6</b> | <b>1,058.6</b> | <b>1,058.6</b> | <b>1,058.6</b> |

Source: HEC 2021 rate study.

edus

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

**Final**

| 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            |
| <b>Total</b> |             |                       | <b>\$15,742,478</b> | <b>\$1,518,107</b> | <b>\$17,260,585</b> |                |

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**

**Final**

| Wastewater Customers                      | Number of EDUs |         | Fees     |          | Annual Fees Total  |                  |                    |
|---|----------------|---------|----------|----------|--------------------|------------------|--------------------|
|   | Existing       | Futures | Existing | Futures  | Existing           | Futures          | All                |
| <b>Inside CFD # 1</b>                     |                |         |          |          |                    |                  |                    |
| 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          |
| <b>Outside CFD #1</b>                     |                |         |          |          |                    |                  |                    |
| Rates                                     | 439.9          | 66.1    | \$180.86 | \$118.81 | \$954,614          | \$94,239         | \$1,048,853        |
| <b>TOTAL</b>                              |                |         |          |          | <b>\$1,840,914</b> | <b>\$256,627</b> | <b>\$2,097,541</b> |
| <b>Budget 2021</b>                        |                |         |          |          |                    |                  | <b>\$2,085,891</b> |
| <b>Difference (overestimate in model)</b> |                |         |          |          |                    | <b>0.6%</b>      | <b>\$11,650</b>    |

Source: DSPUD customer records.

ww check