

**PREPARED FOR:** 

**PREPARED BY:** 

JORDANELLE SPECIAL SERVICE DISTRICT



JORDANELLE SPECIAL SERVICE DISTRICT

CULINARY RATE STUDY JANUARY 2023

# JORDANELLE SPECIAL SERVICE DISTRICT CULINARY RATE STUDY

**JANUARY 2023** 

Prepared by:



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#### **EXECUTIVE SUMMARY**

The execution of this culinary rate study consisted of the following principal tasks.

Jordanelle Special Service District asked Bowen Collins & Associates to complete a rate study for their culinary utilities, which is documented in this report. The primary purpose of this study was to ensure JSSD can manage the cost of its systems and keep user rates up to date, manageable, and equitable in the coming years.

The study considered a 10-year window of projected non-rate revenues and revenue requirements, which were based on historic budgets and projected growth within the District. Upcoming expenses include five new booster stations, three new tanks, eight new transmission lines, a pack up generator, new raw water supplies, and completion of the Fisher Ranch WTP construction (Phase 2). Following this revenue requirement analysis, which is described further in this report, BC&A recommends JSSD adopts the rates as summarized in Tables ES-1 and ES-2.

These rates were adopted January 10, 2023. "This final report differs from the draft report in the following ways: (i) an error in Table ES-1 and Table 2-8 was corrected which had shifted base rates by one year and made the rates appear slightly higher than the actual recommended rates, and (ii) non-consequential cosmetic adjustments in the text such as the fixing of typos were made. No changes to the presented rate increases or rate structure was made after adoption.

Table ES-1
Recommended Culinary Base Rates

| Metered<br>Connections by<br>meter Size (inch) | 2022     | 2023     | 2024        | 2025      | 2026     | 2027     |
|------------------------------------------------|----------|----------|-------------|-----------|----------|----------|
| Monthly Base Rate                              |          |          |             |           |          |          |
| 1 and Smaller                                  | \$81.44  | \$85.51  | \$87.65     | \$89.84   | \$92.09  | \$94.39  |
| 1 1/2                                          | \$107.27 | \$112.63 | \$115.45    | \$118.34  | \$121.29 | \$124.33 |
| 2                                              | \$138.27 | \$145.18 | \$148.81    | \$152.53  | \$156.35 | \$160.26 |
| 3                                              | \$210.61 | \$221.14 | \$226.67    | \$232.34  | \$238.14 | \$244.10 |
| 4                                              | \$313.95 | \$329.65 | \$337.89    | \$346.34  | \$354.99 | \$363.87 |
| 6                                              | \$572.29 | \$600.90 | \$615.93    | \$631.33  | \$647.11 | \$663.29 |
| Volumetric Charges                             |          |          |             |           |          |          |
| Tier 1                                         |          |          | Included in | Base Rate |          |          |
| Tier 2                                         | \$7.11   | \$7.25   | \$7.40      | \$7.55    | \$7.70   | \$7.85   |
| Tier 3                                         | \$10.05  | \$10.25  | \$10.46     | \$10.67   | \$10.88  | \$11.10  |
| Tier 4                                         | \$20.00  | \$20.40  | \$20.81     | \$21.23   | \$21.65  | \$22.08  |

Table ES-2
Recommended Culinary Volume Tiers

|                                      | Volume Tier Divisions in Thousand Gallons |            |          |           |           |             |  |  |  |  |  |
|--------------------------------------|-------------------------------------------|------------|----------|-----------|-----------|-------------|--|--|--|--|--|
|                                      | 1" and<br>Smaller Meter                   | 1 ½" Meter | 2" Meter | 3" Meter  | 4" Meter  | 6" Meter    |  |  |  |  |  |
| Tier 1<br>(Included in<br>Base Rate) | 0 - 12                                    | 0 - 18     | 0 - 30   | 0 - 48    | 0 - 131   | 0 - 203     |  |  |  |  |  |
| Tier 2                               | 12 - 28                                   | 18 - 42    | 30 - 70  | 48 - 112  | 131 - 305 | 203 - 473   |  |  |  |  |  |
| Tier 3                               | 28 - 70                                   | 42 - 105   | 70 - 175 | 112 - 280 | 305 - 763 | 473 - 1,183 |  |  |  |  |  |
| Tier 4                               | > 70                                      | > 105      | > 175    | >280      | >763      | > 1,183     |  |  |  |  |  |

# CHAPTER 1 INTRODUCTION AND BACKGROUND

#### INTRODUCTION

In the fall of 2022, Jordanelle Special Service District (JSSD) retained Bowen Collins & Associates (BC&A) to conduct and document a rate study for the District's culinary utilities. The rate updates are part of JSSD's ongoing efforts to manage the cost of its systems and keep user rates up to date, manageable, and equitable.

The District's primary objectives for its financial planning and policies are:

- Maintaining high quality, reliable culinary service at affordable prices for customers;
- Encouraging wise use of resources through conservation;
- Maintaining stable revenue generation adequate to fund system needs; and
- Minimizing the District's long-term costs by avoiding further debt where possible.

The primary purpose of this report is to document the culinary rate study and provide recommendations regarding updates to the District's culinary user rates. The updates are intended to become effective in 2023.

#### **EXISTING CULINARY RATE STRUCTURE**

The existing culinary rates were adopted in 2015 and provided for annual rate adjustments through 2021. Existing rates are based on meter size and consist of a base rate with a volumetric allowance and a volumetric overage rate for users who exceed the 10,000 gallon allowance. The volume charges associated with the allowance and overage charges are increasing tiered rates in accordance with the current requirements of Utah State law.

According to JSSD personnel, adding additional volumetric tiers with increasing volumetric charges to the rate structure would encourage customers to conserve more than the existing rate structure does now. Additional tiers in the rate structure also makes it easier to bill customers equitably based on expected volumetric use and meter size. Therefore, in addition to ensuring District revenue needs are met in future years, this rate study also updates the JSSD sewer rate structure.

#### **OVERALL DISTRICT FUNDING**

JSSD operates utilities for sanitary sewer and culinary water, and it is important for District costs to be recovered by the user rate revenues of each utility. It is also important to reflect the real costs of each utility individually in its respective user rates. Therefore, in the District's new 10-year budget plan, all costs have been split across each utility to ensure all operating costs are recovered under the new recommended rate structures and facilitate the recovery of costs for each utility by its respective user rates. A recommended approach for cost allocation in culinary rate studies has been developed in the American Culinary Works Association's (AWWA) *Manual M1 – Principles of Culinary Rates, Fees, and Charges*. This study follows the principles and approach generally outlined in that document but modifies some of the cost categories to match the unique needs and circumstances of the District.

The District accrues four basic categories of expenses as it operates its two utilities, which are described as follows.

• Salary and Employee Benefits. These categories include salary, payroll tax, and various benefits available to JSSD employees. As JSSD personnel also operate and maintain other

special service districts in the area, this category also includes the costs of employing and operating those other districts, such as Twin Creeks Special Service District, North Village Special Service District, Owls Nest Special Service District, etc. Those other districts pay their share of this (and other) expenses by paying JSSD on a time and materials basis for services rendered.

- **Operations and Maintenance Expenditures.** These are the annual costs of running the system. They include items such as salary and benefit costs for District staff, equipment and supplies, power costs, and all other costs associated with doing business throughout the year. Operation and maintenance (O&M) costs are relatively constant from year to year and tend to follow the rate of inflation.
- **Debt Service Expenditures.** These are the costs paid toward bonds taken out by the District in previous years. These costs are easily predictable because they are tied to set payment schedules for each bond.
- Capital Improvement Expenditures. These are costs for constructing new facilities within the District. This can include completely new facilities or replacement of existing facilities. Capital improvement expenditures are usually the most volatile of expenditure categories. Because O&M and debt service costs are basically fixed, budgets are usually balanced by increasing or decreasing capital improvement expenditures as necessary. For this report, capital improvement expenditures have been based on the capital facilities plan contained in the District's culinary system master plan.
- These are costs for constructing new facilities within the District, updating and repairing existing facilities, and making other capital investments (such as purchasing vehicles). Capital improvement expenditures are usually the most volatile of expenditure categories. Because O&M and debt service costs are basically fixed, budgets are usually balanced by increasing or decreasing capital improvement expenditures as necessary. For this report, capital improvement expenditures have been based on upcoming capital projects that are anticipated and being budgeted for by JSSD personnel. Within this category of improvement, sub-categories exist based on the planned source of funding:
  - o **District Funded Capital.** These are planned-for capital projects and purchases which are funded within the District budget and affect user rates.
  - Developer Funded Capital. These are capital projects for which the District has not planned funding and will only be completed if land developers fund the projects<sup>1</sup>. Thus, these projects have no impact on District budgets or user rates.
  - o **Grant Funded Capital.** On occasion, the District is able to apply for and secure grant funding for capital projects. Grants do not need to be repaid. When grant funding is available and used, the portion of the project paid with the grant is not budgeted and does not impact user rates.
  - Other. Though rare, other sources of funding are sometimes available. For example, if the District is liquidating an asset which does not need to be replaced, the proceeds from the sale may be used to pay for capital projects. JSSD has not identified any of this type of funding within the planning window of this rate study.

<sup>&</sup>lt;sup>1</sup> Capital projects identified in District planning documents but identified as District Funded are usually eligible for impact fee credit (and sometimes reimbursement from future impact fee receipts).

The revenue requirements for the culinary system are shown below in Chapter 2. These are the culinary portion of overall district funding plan based on recent real expenditures, next year's proposed budgets, and longer-term funding needs.

# CHAPTER 2 CULINARY RATE STUDY

#### **CULINARY RATE CALCULATION APPROACH**

With the overall District funding plan in place, the next steps in the rate calculation process consists of the following principal tasks:

- 1. **Projecting Culinary Water Use.** Future growth in the JSSD sewer system were based on current billing information and the growth patterns projected in the recently prepared 2022 JSSD Water Master Plan.
- 2. **Calculating Revenue Requirements.** Total culinary revenue requirements for the system were projected for the next several years based on the culinary portion of the overall funding plan discussed in Chapter 1. Non-rate revenue (including impact fee revenue) was deducted from the total revenue requirement to determine the net revenue requirement to be recovered from culinary system rate payers.
- 3. **Calculating Rates.** Rates were calculated to recover the culinary system revenue requirement (employee salary and benefits, operations and maintenance, capital improvement costs, and debt service costs) and maintain an adequate cash flow for the District's planned capital expenses and O&M. The rate structure was altered to add more tiers for flexibility and equality in volume charges for the various user classes.

#### **Key Assumptions**

The culinary rate study results in this report are based on the following key assumptions:

- The JSSD culinary operating fund will continue to be a self-funding enterprise-type fund.
- The cost of service analyzed in the previous study has not significantly changed and that: (i) meter size an adequate method of distributing costs between users of various use characteristics, and (ii) that the historic distribution of cost between peak and base costs is applicable.
- The State issued regional culinary conservation goal for JSSD (located in the Provo River Region) is to reduce per capita culinary usage 32 percent by the year 2060, measured from the year 2015. JSSD is projected to experience high growth rates in the next several years, which may impact water use. Additionally, many of JSSD's large water users are vacation areas with large seasonal fluctuations in water use. These fluctuations make water conservation in these areas difficult to predict. Therefore, this rate study did not consider conservation in its water use projections.
- This rate study is based on projections of future culinary demands and projected system operations, maintenance, and improvement costs. These projections are based on current economic conditions and weather patterns over the last several years. Because conditions may change over time, it is recommended that the District review the rates regularly and adjust them if needed to provide a revenue stream that will adequately fund operation and maintenance costs as well as needed capital improvements. It is also recommended that a comprehensive review and updating of culinary rates be undertaken in three to five years so that the basic analytical foundations of this study can be re-evaluated.
- District staff are currently working on a policy which would introduce a modest hardship
  program for temporary utility rate relief for customers in need. Such programs can be a
  significant benefit to a very small number of customers who need it, while having a very small

impact on the system as a whole. Thus, this rate study assumes: (i) that the cost of administration will be negligible by relying on other public assistance programs' qualification determinations for admittance to the District's program, (ii) that about 1 in 200 customers will qualify for and utilize the program, and (iii) that the program will provide up to a 50% reduction in utility billing while on the program. Therefore, the expected impact of this program on the recommended rates in this study is very small (about one quarter of one percent). This is within the margin of error of the other predictions made as a part of this study and thus would not require a change to recommended rates if the relief program is not adopted. However, if the program is adopted and utilization is significantly more than assumed, the recommendations of this rate study may need to be updated accordingly.

# **PROJECTING CULINARY USE**

Historic water use patterns and volumes were analyzed in depth in the 2022 JSSD Culinary Master Plan. In addition to this analysis, volumetric water use was analyzed from 2021 and 2022 billing data based on customer meter sizes. These two data sources were used in this rate study to identify and project water use patterns in JSSD.

# **Projected Accounts**

Using recent billing data, the number of culinary customers and culinary accounts served in December 2022 were identified. These culinary accounts were separated by meter size for analysis. Based on these existing accounts and the projected growth rates, the total number of future culinary accounts were projected. These projections are summarized below in Table 2-1.

Table 2-1
Projected Growth in Culinary System Accounts

|               | Number of Accounts by Year<br>With Predicted Annual Growth Rate |       |       |       |       |       |  |  |
|---------------|-----------------------------------------------------------------|-------|-------|-------|-------|-------|--|--|
| Meter Size    | 2022                                                            | 2023  | 2024  | 2025  | 2026  | 2027  |  |  |
| (inches)      | Existing                                                        | 9.2%  | 8.9%  | 8.5%  | 8.2%  | 8.4%  |  |  |
| 1 and smaller | 1,011                                                           | 1,104 | 1,202 | 1,305 | 1,412 | 1,531 |  |  |
| 1 ½           | 253                                                             | 276   | 301   | 327   | 353   | 383   |  |  |
| 2             | 120                                                             | 131   | 143   | 155   | 168   | 182   |  |  |
| 3             | 14                                                              | 15    | 17    | 18    | 20    | 21    |  |  |
| 4             | 11                                                              | 12    | 13    | 14    | 15    | 17    |  |  |
| 6             | 18                                                              | 20    | 21    | 23    | 25    | 27    |  |  |
| Total         | 1,427                                                           | 1,559 | 1,697 | 1,842 | 1,993 | 2,160 |  |  |

#### **Projected Culinary Use**

Future monthly culinary demands were projected by multiplying the average use per account (taken from two years of billing data) by the projected number of accounts in Table 2-1. Future culinary demands are summarized below in Table 2-2.

Table 2-2
Projected Growth in Culinary System Culinary Use

|               | Average Annual  | I      | Amount of Total Annual Use by Year (kGal) |        |        |        |        |  |
|---------------|-----------------|--------|-------------------------------------------|--------|--------|--------|--------|--|
| Meter Size    | Use per Account |        |                                           |        |        |        |        |  |
| (inches)      | (kGal)          | 2022   | 2023                                      | 2024   | 2025   | 2026   | 2027   |  |
| 1 and smaller | 38              | 38,574 | 42,134                                    | 45,874 | 49,793 | 53,865 | 58,399 |  |
| 1 ½           | 114             | 9,653  | 10,544                                    | 11,480 | 12,460 | 13,480 | 14,614 |  |
| 2             | 189             | 4,579  | 5,001                                     | 5,445  | 5,910  | 6,393  | 6,932  |  |
| 3             | 319             | 534    | 583                                       | 635    | 690    | 746    | 809    |  |
| 4             | 312             | 420    | 458                                       | 499    | 542    | 586    | 635    |  |
| 6             | 1,098           | 687    | 750                                       | 817    | 887    | 959    | 1,040  |  |
| Totals        | 2,070           | 54,446 | 59,471                                    | 64,750 | 70,281 | 76,029 | 82,428 |  |

# CALCULATING REVENUE REQUIREMENTS

The revenue requirement to be recovered by user rates is based on the actual cash expenditures of the system to make sure that revenues meet the cash needs of the system. And, as mentioned previously, the revenue requirement for user rates is the total gross revenue requirement less non-rate revenues (i.e., grants, impact fees, etc.).

#### **Non-Rate Revenues**

Like the updated projections of culinary use above, non-rate revenue projections have been updated based on existing real revenues over the past several years, projected growth, and inflation. Projections in non-rate revenues are summarized below in Table 2-3.

Table 2-3
Projected Culinary Non-Rate Revenues

| Item                                             | 2022        | 2023         | 2024        | 2025        | 2026        | 2027        |
|--------------------------------------------------|-------------|--------------|-------------|-------------|-------------|-------------|
| Water Sub-<br>lease Revenue                      | \$64,900    | \$60,300     | \$65,652    | \$71,260    | \$77,089    | \$83,577    |
| Water Reserve<br>Revenue                         | \$4,869,800 | \$4,962,900  | \$4,781,430 | \$4,618,525 | \$4,473,768 | \$4,325,579 |
| Penalty<br>Revenue                               | \$19,188    | \$17,160     | \$17,160    | \$17,160    | \$17,160    | \$17,160    |
| Maintenance<br>and<br>Administration<br>Services | \$157,952   | \$274,196    | \$298,310   | \$323,581   | \$349,843   | \$379,077   |
| Lease Receipts                                   | \$47,520    | \$48,000     | \$48,000    | \$48,000    | \$48,000    | \$48,000    |
| Snowmaking<br>Revenue                            | \$288,300   | \$296,000    | \$296,000   | \$296,000   | \$296,000   | \$296,000   |
| Laboratory<br>Fees                               | \$3,400     | \$1,500      | \$1,500     | \$1,500     | \$1,500     | \$1,500     |
| Interest<br>Revenue                              | \$523,800   | \$768,900    | \$807,345   | \$831,565   | \$856,512   | \$882,208   |
| Sub Total                                        | \$5,974,860 | \$6,428,956  | \$6,315,397 | \$6,207,591 | \$6,119,872 | \$6,033,100 |
| Construction<br>Inspection<br>Fees               | \$928,000   | \$430,000    | \$489,664   | \$546,185   | \$607,243   | \$676,569   |
| Hookup Fees                                      | \$183,200   | \$153,800    | \$167,450   | \$181,755   | \$196,621   | \$213,170   |
| Impact Fees                                      | \$925,495   | \$3,048,446  | \$1,419,053 | \$1,608,899 | \$1,810,998 | \$2,156,225 |
| Sub Total                                        | \$2,036,695 | \$3,632,246  | \$2,076,168 | \$2,336,838 | \$2,614,861 | \$3,045,964 |
| Total Non-Rate<br>Revenue                        | \$8,011,555 | \$10,061,202 | \$8,391,565 | \$8,544,430 | \$8,734,733 | \$9,079,064 |

#### **Gross Revenue Requirement**

The gross sewer revenue requirements have been projected based on real expenditures from recent years (as described in the *Overall District Funding Section* of Chapter 1), projected growth, upcoming expenses, and inflation. Revenue requirement projections were also updated to reflect expected O&M budget requirements, updated capital expenditures, and changes in debt service as described below.

- Operations and Maintenance Costs. As discussed in Chapter 1, these are the annual costs of running the system, including equipment and supplies, power costs, and all other costs associated with doing business throughout the year. Typical O&M expenditures as well as expected and budgeted costs of O&M were projected forward based on a typical inflation rate (3%) and projected JSSD system growth. These projections constitute the anticipated future O&M needs for the District and contribute to the gross revenue requirement.
- **Debt Service.** JSSD sewer currently has no debt service, therefore debt payments were neglected for this study.
- **Upcoming Capital Improvements.** The District has several capital facilities projects scheduled for the next 10 years. Estimated costs of these projects have been considered in the gross revenue requirement. These projects include:
  - o Phase 2 of the Fisher Ranch Water Treatment Plant (WTP),
  - o 5 booster stations,

- o 3 new tanks,
- o 8 Transmission Lines,
- o A Backup Generator, and
- New raw water supplies

Projections in gross culinary revenue requirements are summarized below in Table 2-4.

Table 2-4
Projected Gross Culinary Revenue Requirement

| Item                         | 2022         | 2023         | 2024         | 2025         | 2026         | 2027         |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Salary &<br>Benefits         | \$3,717,450  | \$4,158,529  | \$4,366,455  | \$4,497,449  | \$4,632,372  | \$4,771,343  |
| 0&M                          | \$4,951,270  | \$5,421,539  | \$6,112,524  | \$6,756,149  | \$7,450,351  | \$8,236,197  |
| Debt Service                 | \$471,785    | \$490,727    | \$194,961    | \$197,987    | \$203,286    | \$209,383    |
| Capital<br>Expenses          | \$6,792,361  | \$14,517,285 | \$6,989,739  | \$1,753,484  | \$2,696,054  | \$3,676,785  |
| Total Revenue<br>Requirement | \$15,932,867 | \$24,588,080 | \$17,663,680 | \$13,205,069 | \$14,982,063 | \$16,893,708 |

# **Net Rate Revenue Requirement**

The net revenue to be recovered by culinary rates (the difference between the projected gross revenue requirement and the projected non-rate revenues) is summarized below in Table 2-5.

Table 2-5
Projected Net Culinary Rate Revenue Requirement

| Item              | 2022         | 2023          | 2024         | 2025         | 2026              | 2027         |
|-------------------|--------------|---------------|--------------|--------------|-------------------|--------------|
| Total Revenue     | \$15,932,867 | \$24,588,080  | \$17,663,680 | \$13,205,069 | \$14,982,063      | \$16,893,708 |
| Requirement       | 1-0,00-,00   | 1 = 1,000,000 | 1=1,000,000  | +==,===,==   | 1 = 1,1 = =,0 = 0 | +==,===,===  |
| Non-Rate          | \$8,011,555  | ¢10.061.202   | \$8,391,565  | ¢0 ⊑11 120   | \$8,734,733       | ¢0.070.064   |
| Revenue           | \$6,011,555  | \$10,061,202  | \$6,391,303  | \$8,544,430  | \$6,734,733       | \$9,079,064  |
| <b>Total Rate</b> |              |               |              |              |                   |              |
| Revenue           | \$7,921,312  | \$14,526,878  | \$9,272,115  | \$4,660,639  | \$6,247,330       | \$7,814,644  |
| Requirement       |              |               |              |              |                   |              |

Figure 2-1 below compares the gross revenue and the gross revenue need and thus illustrates the net revenue requirement (as shown in Table 2-4) graphically over the next 10 years.

#### **Recommended Long Term Funding Levels**

An important part of maintaining existing infrastructure is anticipating and planning for rehabilitation and replacement of system components. The purpose of including a recommended long term funding level in this report is to help the District understand the theoretical value of their current system compared to their current funding levels. This value is calculated by summing the estimated cost of rehabilitation or replacement of each system averaged over its typical lifespan. Table 2-6 below shows the value and estimated service life of the JSSD system components in 2022. For planning purposes, this value was projected into future years based on inflation and estimated system growth.

# Table 2-6 System Valuation

| System Component                   | Quantity              | Estimated Total Value (with contingency) | Max Estimated<br>Total Service<br>Life |  |  |  |  |  |
|------------------------------------|-----------------------|------------------------------------------|----------------------------------------|--|--|--|--|--|
| Booster Stations                   |                       |                                          |                                        |  |  |  |  |  |
| 10 Total Throughout the District   | 10                    | \$60,324,227                             | 30 years                               |  |  |  |  |  |
| Minimum Annual Budget              |                       |                                          | \$2,010,808                            |  |  |  |  |  |
| Tanks                              |                       |                                          |                                        |  |  |  |  |  |
| 15 Total Throughout the District   | 15                    | \$47,759,800                             | 80 years                               |  |  |  |  |  |
| Minimum Annual Budget              |                       |                                          | \$596,998                              |  |  |  |  |  |
| Pipes                              |                       |                                          |                                        |  |  |  |  |  |
| <8 inches                          | 14,100 ft             | \$4,573,000                              | 80 years                               |  |  |  |  |  |
| 8" Pipe                            | 145,400 ft            | \$49,160,000                             | 80 years                               |  |  |  |  |  |
| 10" Pipe                           | 69,400 ft             | \$24,422,000                             | 80 years                               |  |  |  |  |  |
| 12" Pipe                           | 114,100 ft            | \$42,199,000                             | 80 years                               |  |  |  |  |  |
| 14" Pipe                           | 11,300 ft             | \$4,429,000                              | 80 years                               |  |  |  |  |  |
| 16" Pipe                           | 58,400 ft             | \$24,258,000                             | 80 years                               |  |  |  |  |  |
| 18" Pipe                           | 21,900 ft             | \$9,369,000                              | 80 years                               |  |  |  |  |  |
| 20" Pipe                           | 3,000 ft              | \$1,317,000                              | 80 years                               |  |  |  |  |  |
| 24" Pipe                           | 18,100 ft             | \$8,418,000                              | 80 years                               |  |  |  |  |  |
| 30" Pipe                           | 200                   | \$100,000                                | 80 years                               |  |  |  |  |  |
| Minimum Annual Budget              |                       |                                          | \$2,103,031                            |  |  |  |  |  |
| Wells                              |                       |                                          |                                        |  |  |  |  |  |
| 5 Total Throughout the District    | 5                     | \$4,564,350                              | 50 years                               |  |  |  |  |  |
| Minimum Annual Budget              |                       |                                          | \$91,287                               |  |  |  |  |  |
| Water Treatment Plant              | Water Treatment Plant |                                          |                                        |  |  |  |  |  |
| Entire Treatment System            |                       | \$33,120,000                             | 60 years                               |  |  |  |  |  |
| Minimum Annual Budget              |                       |                                          | \$552,000                              |  |  |  |  |  |
| <b>Total Recommended Long Term</b> | Funding Lev           | vel                                      | \$5,354,123                            |  |  |  |  |  |

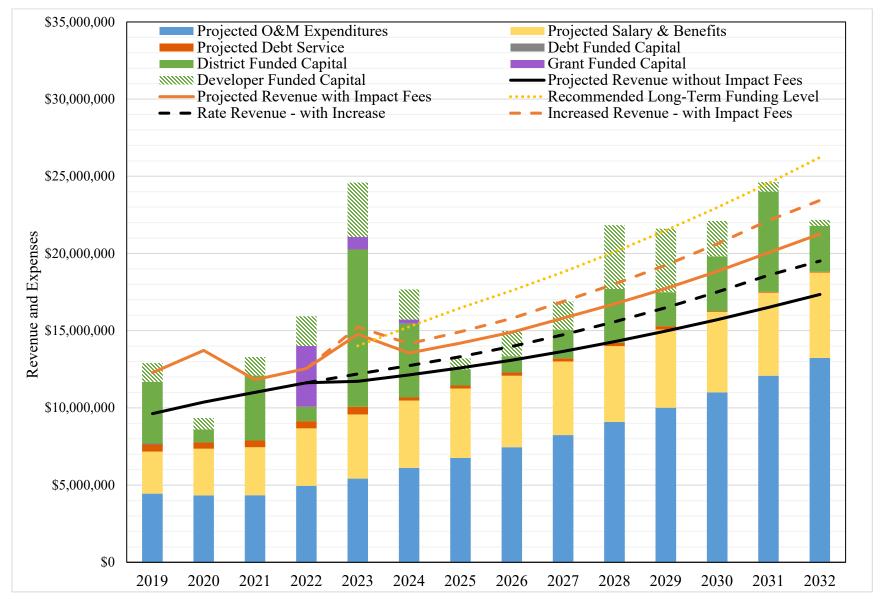


Figure 2-1
10-Year Culinary Revenue and Expenditures

As shown in Figure 2-1, projected revenue from existing rates could fall short of projected needs by 2023 if capital projects continue as expected. The District has sufficient funds in impact fees and reserve and replacement savings to meet the immediate project cost needs. However, this reserve account will need to be replenished through impact fee receipts and rate revenues so that sufficient funds are available for the future Fisher Ranch WTP upgrade and other capital improvement projects planned between 2028 and 2032. To meet these projected funding needs, the District has the option of cutting expenses by curbing services or increasing revenue. Upon review of the District's budgets and infrastructure needs, the appropriate response is to increase user rates to meet the rate-revenue increases as summarized in Table 2-7.

Table 2-7
Recommended Overall Rate Increases

| Year | Increase |
|------|----------|
| 2023 | 5.0%     |
| 2024 | 2.5%     |
| 2025 | 2.5%     |
| 2026 | 2.5%     |
| 2027 | 2.5%     |

#### **DESIGNING THE RATE STRUCTURE**

BC&A has consulted closely with District personnel to formulate a rate structure that meets the identified goals of this rate study. It has been determined that the rate structure will be based on meter size as it has hitherto been. The rate structure will consist of a base rate and volumetric charges in 4 blocks.

#### **Base Rate**

The District currently utilizes a base monthly charge for its culinary rate arrangements. The new rate structure will keep this approach and include a monthly base charge per account. Base charges have the advantage of spreading revenues over the entire year (not just during the irrigation season) for proper upkeep and management of the system and the advantage of providing a stable revenue stream (as opposed to revenue from volumetric charges that can be volatile depending on weather, economic circumstances, and conservation).

#### **Volumetric Charges**

There are several different types of rate structures that are commonly used for billing volumetric charges to customers. These includes uniform, seasonal, and increasing block rates. The State of Utah has mandated that most culinary rate structures use an increasing block rate (aka tiered rate structure). To comply with this requirement and to encourage water conservation, we have structured the recommended rates contained in this report using an increasing block structure.

The increasing block structure proposed is similar to the existing rate structure, except the existing rate structure has only two tiers where the proposed has four.

#### **CALCULATING RATES**

Based on the rate structure described above, BC&A calculated rates to recover the projected net Culinary rate revenue requirement (Table 2-5) in accordance with the goals of this rate study, including the cost-of-service requirements. Highlighted calculation methods and rationale are listed as follows and the final calculated rates are shown below in Tables 2-8 and 2-9. It should be noted

that the District's convention is to adopt rates in five-year rate schedules. Therefore, the rate schedule shown below goes through 2027 and account projected growth, revenue needs, and inflation.

Table 2-8
Recommended Culinary Base Rates by Meter Size

| Metered<br>Connections<br>by meter Size<br>(inch) | 2022     | 2023     | 2024       | 2025      | 2026         | 2027     |
|---------------------------------------------------|----------|----------|------------|-----------|--------------|----------|
| Monthly Base Ra                                   | te       |          |            |           |              |          |
| 1 and<br>Smaller                                  | \$81.44  | \$85.51  | \$87.65    | \$89.84   | \$92.09      | \$94.39  |
| 1 1/2                                             | \$107.27 | \$112.63 | \$115.45   | \$118.34  | \$121.29     | \$124.33 |
| 2                                                 | \$138.27 | \$145.18 | \$148.81   | \$152.53  | \$156.35     | \$160.26 |
| 3                                                 | \$210.61 | \$221.14 | \$226.67   | \$232.34  | \$238.14     | \$244.10 |
| 4                                                 | \$313.95 | \$329.65 | \$337.89   | \$346.34  | \$354.99     | \$363.87 |
| 6                                                 | \$572.29 | \$600.90 | \$615.93   | \$631.33  | \$647.11     | \$663.29 |
| Volumetric Char                                   | ges      |          |            |           |              |          |
| Tier 1                                            |          | I        | ncluded ir | Base Rate | <del>)</del> |          |
| Tier 2                                            | \$7.11   | \$7.25   | \$7.40     | \$7.55    | \$7.70       | \$7.85   |
| Tier 3                                            | \$10.05  | \$10.25  | \$10.46    | \$10.67   | \$10.88      | \$11.10  |
| Tier 4                                            | \$20.00  | \$20.40  | \$20.81    | \$21.23   | \$21.65      | \$22.08  |

Table 2-9
Recommended Culinary Volumetric Rates by Meter Sizes

|                                      | Volume Tier Divisions in Thousand Gallons |            |          |           |           |             |  |  |  |  |  |
|--------------------------------------|-------------------------------------------|------------|----------|-----------|-----------|-------------|--|--|--|--|--|
|                                      | 1" and<br>Smaller<br>Meter                | 1 ½" Meter | 2" Meter | 3" Meter  | 4" Meter  | 6" Meter    |  |  |  |  |  |
| Tier 1<br>(Included in<br>Base Rate) | 0 - 12                                    | 0 - 18     | 0 - 30   | 0 - 48    | 0 - 131   | 0 - 203     |  |  |  |  |  |
| Tier 2                               | 12 - 28                                   | 18 - 42    | 30 - 70  | 48 - 112  | 131 - 305 | 203 - 473   |  |  |  |  |  |
| Tier 3                               | 28 - 70                                   | 42 - 105   | 70 - 175 | 112 - 280 | 305 - 763 | 473 - 1,183 |  |  |  |  |  |
| Tier 4                               | > 70                                      | > 105      | > 175    | >280      | >763      | > 1,183     |  |  |  |  |  |

#### **CULINARY RATE STUDY CONCLUSIONS**

Based on the analysis contained in this report, the following actions are recommended:

- 1. **Adopt and Implement New Rate Structure and New Rates.** It is recommended that JSSD adopt the rates summarized above in Tables 2-8 and 2-9. These changes are needed: to continue to meet immediate operations and maintenance needs; to fund capital expenditures necessary to meet the District's longer-term system investment goals; to keep rates current with inflation and projected system growth; and to provide a manageable uniform rate structure for the District's entire culinary water system.
- 2. **Continue Monitoring System Costs and Revenues.** After the implementation of any rate changes, we would suggest JSSD monitor actual costs and revenues, as well as customer responses. Doing so is especially critical Therefore, it is critical to continue to monitoring system costs and revenues, especially now due to the volatile inflationary environment that we're in and due to the high growth that is expected to continue in the District.
- 3. **Update this Rate Study Periodically.** All rates are calculated based on existing conditions and assumptions about the future which may need to be revised from time to time. Therefore, in addition to monitoring system costs and revenues, it is recommended that this rate study be updated every 3 to 5 years at a minimum and more often as dictated by changing conditions. Doing so will ensure rates are as up-to-date as possible and will also keep the District ahead of expiring rate schedules.

# APPENDIX A DETAILED CALCULATION TABLES

Table A-1 JSSD Historic and Projected Revenue Requirement

**Added Inflation** 2% Assumed Annual Rate of Inflation: I Rate of Inflation: 3.0% Actual Actual Actual Projected Budgeted Projected Projected Projected Projected Projected Projected Projected Projected Projected 2019 2020 2021 2023 2024 2025 2026 2027 2028 2029 2031 2032 2022 2030 Item \$2,725,473 \$4,158,529 \$3,022,005 \$3,109,330 \$3,717,450 \$4,366,455 \$4,497,449 \$4,632,372 \$4,771,343 \$4,914,484 \$5,061,918 \$5,213,776 \$5,370,189 \$5,531,295 Salary & Benefits \$1,800,597 \$2,040,736 \$2,240,114 \$2,485,995 \$2,764,880 \$2,903,124 \$2,990,218 \$3,079,924 \$3,172,323 \$3,267,492 \$3,365,516 \$3,466,482 \$3,570,476 \$3,677,592 Wages Payroll Taxes \$137,602 \$152,969 \$170,332 \$193,750 \$216,390 \$227,209 \$234,026 \$241,046 \$248,278 \$255,726 \$263,398 \$271,300 \$279,439 \$287,82 \$22,404 \$28,656 \$26,729 \$30,217 \$33,464 \$35,137 \$36,192 \$37,27 \$38,390 \$39,547 \$40,734 \$41,956 \$43,215 \$44,51 Worker's Comp \$317,935 \$359,260 \$381,784 \$453,300 \$546,400 \$573,720 \$590,932 \$608,660 \$626,919 \$645,727 \$665,099 \$685,052 \$705,603 \$726,77 **Employee Benefits** \$446,935 \$440,384 \$290,372 \$554,189 \$597,395 \$627,264 \$646,082 \$665,465 \$685,429 \$705,992 \$727,171 \$748,986 \$771,456 \$794,600 State Retirement 0&M \$6,112,524 \$13,231,080 \$4,444,208 \$4,330,464 \$4,343,924 \$4,951,270 \$5,421,539 \$6,756,149 \$7,450,351 \$8,236,197 \$9,090,563 \$10,010,893 \$11,007,890 \$12,086,128 \$19,454 \$7,087 \$7,436 \$13.500 \$29,250 \$31.634 \$32,583 \$33,560 \$34.567 \$36.672 \$37,773 \$38,906 Travel \$30.713 \$35,604 \$14,037 \$4,850 \$8,700 \$8,650 \$9,355 \$9,636 \$9,92 \$10,529 \$11,170 \$11,50 Training/Conferences \$6,720 \$9,083 \$10,222 \$10,845 Utilities \$703,162 \$618,039 \$745,598 \$798,216 \$838,427 \$954,762 \$1,064,96 \$1,184,020 \$1,319,194 \$1,466,389 \$1,625,146 \$1,797,361 \$1,983,838 \$2,181,99 \$21,143 \$23,780 \$24,037 \$27,840 \$29,696 \$32,116 \$33,080 \$34,072 \$35,094 \$36,147 \$37,232 \$38,348 \$39,49 Phones \$31,181 \$307,124 \$163,444 \$228,474 \$466,800 \$425,000 \$446,250 \$459,638 \$473,427 \$487,629 \$502,258 \$517,326 \$532,846 \$548,831 \$565,296 Legal Fees JSSD Water \$1,565,947 \$1,604,154 \$1,610,952 \$1,804,400 \$1,966,400 \$2,239,245 \$2,497,715 \$2,776,935 \$3,093,965 \$3,439,18 \$3,811,528 \$4,215,430 \$4,652,78 \$5,117,540 Bank Charges \$15,283 \$17,746 \$19,380 \$30,400 \$32,400 \$34,020 \$35,041 \$36,092 \$37,175 \$38,290 \$39,439 \$40,622 \$41,840 \$43,09 \$943 \$411 \$464 \$850 \$1,200 \$1,367 \$1,524 \$1,695 \$1,888 \$2,099 \$2,326 \$2,572 \$2,839 \$3,123 Postage \$63,645 \$58,236 \$33,663 \$83,040 \$85,532 \$66,742 \$79,086 \$88,097 \$90,740 \$93,463 \$96,266 \$99,154 \$102,129 \$105,193 Equipment Repairs & Maint \$157,056 \$201,233 \$202,563 \$180,240 \$166,080 \$189,124 \$210,954 \$234,537 \$261,313 \$290,470 \$321,917 \$356,031 \$392,969 \$432,22 Supplies \$629,175 \$509,071 \$579,596 \$638,160 \$698,400 \$795,306 \$887,106 \$986,275 \$1,098,874 \$1,221,485 \$1,353,728 \$1,497,181 \$1,652,514 \$1,817,580 \$581,667 \$723,658 \$508,246 \$510,225 \$634,650 \$722,710 \$806,130 \$896,248 \$998,568 \$1,109,988 \$1,230,160 \$1,360,518 \$1,501,672 \$1,651,67 Services \$256,914 \$268,131 \$295,003 \$354,800 \$426,000 \$485,109 \$541,104 \$601,594 \$670,275 \$745,064 \$825,728 \$913,229 \$1,007,97 \$1,108,661 Insurance- Liability \$40,959 \$35,642 \$53,209 \$78,250 \$86,300 \$90,615 \$93,333 \$96,133 \$99,017 \$101,988 \$105,048 \$108,199 \$114,788 Vehicle Expense \$111,445 Judgments and Losses \$152,823 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,351 \$4,012 \$5,226 \$0 \$0 \$0 Miscellaneous Expense \$457,361 \$52,364 \$413,118 \$429,221 \$471,785 \$490,727 \$194,961 \$197,987 \$203,286 \$209,383 \$215,746 \$222,376 \$52,364 \$52,364 Debt Service \$68,359 \$38,967 \$35,425 \$30,421 \$26,363 \$22,097 \$17,623 \$14,422 \$11,019 \$7,382 \$3,512 \$0 Interest Expense Refunds \$889 \$4,283 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$26,000 \$26,000 \$68,183 \$26,413 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 Debt Services \$236,833 \$252,333 \$268,000 \$283,000 \$299,000 \$0 \$0 \$0 \$0 Certificate of Participation 2003 A&B \$0 \$0 \$15,500 \$16,500 \$17,500 \$20,500 \$21,000 \$22,000 \$23,000 \$24,500 \$25,500 \$0 LBA Lease Rev 2018 \$18,500 \$19,500 \$0 \$0 \$0 \$0 \$0 \$0 2019 W&S Refunding \$87,500 \$93,500 \$100,000 \$107,000 \$114,500 \$123,000 \$131,500 \$141,000 \$26,364 Bad Debt \$97 \$1,622 \$795 \$26,364 \$26,364 \$26,364 \$26,364 \$26,364 \$26,364 \$26,364 \$26,364 \$26,364 \$26,364

\$67,500

\$73,000

Water & Sewer 2009

\$81,500

\$0

\$0

\$0

\$0

\$0

\$0

\$0

\$0

\$0

\$0

| <u>Capital Expenses</u>                          | <u>\$5,278,848</u> | <u>\$1,583,423</u> | <u>\$5,413,067</u> | <u>\$6,792,361</u> | <u>\$14,517,285</u> | <u>\$6,989,739</u> | <u>\$1,753,484</u> | <u>\$2,696,054</u> | <u>\$3,676,785</u> | <u>\$7,613,442</u> | <u>\$6,310,900</u> | <u>\$5,828,443</u> | <u>\$7,113,362</u> | <u>\$3,360,403</u> |
|--------------------------------------------------|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Contributions to Other Gov't                     | \$3,019,257        | \$4,043            | \$795,520          | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                |
| Capital Outlay - Operating/Impact Fee Funded     | \$981,627          | \$830,702          | \$3,412,575        | \$930,943          | \$845,250           | \$887,513          | \$914,138          | \$941,562          | \$969,809          | \$998,903          | \$1,028,870        | \$1,059,736        | \$1,091,528        | \$1,124,274        |
| Capital Outlay - Bond/Loan Funded                | \$64,130           | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                |
| Capital Outlay - Grant Funded                    | \$0                | \$0                | \$0                | \$3,935,039        | \$814,961           | \$250,000          | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                |
| Capital Outlay - Developer Funded                | \$1,213,834        | \$748,678          | \$1,204,971        | \$1,926,380        | \$3,325,919         | \$1,800,500        | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                |
| FRWTP Phase 1 and Snowmaking Pump Station        | \$0                | \$0                | \$0                | \$0                | \$9,006,500         | \$3,711,500        | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                |
| CUWCD Raw Water Delivery (Canal Lining) - Extell | \$0                | \$0                | \$0                | \$0                | \$190,004           | \$65,235           | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                |
| CUWCD Raw Water Delivery (Canal Lining) - JSSD   | \$0                | \$0                | \$0                | \$0                | \$211,696           | \$72,682           | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                |
| FRWTP Phase 2                                    | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$1,631,600        | \$5,041,644        | \$1,730,964        |
| Future Benloch Ranch Tank                        | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$471,184          | \$1,455,958        | \$499,879          | \$0                | \$0                | \$0                | \$0                | \$0                |
| Future Ventana Tank                              | \$0                | \$0                | \$0                | \$0                | \$71,404            | \$71,404           | \$71,404           | \$71,404           | \$71,404           | \$71,404           | \$71,404           | \$71,404           | \$71,404           | \$71,404           |
| 6800 to Lady Monument Transmission Line          | \$0                | \$0                | \$0                | \$0                | \$0                 | \$79,355           | \$245,208          | \$84,188           | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                |
| Lady Monument to Benloch Transmission Line       | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$963,125          | \$2,976,056        | \$1,021,779        | \$0                | \$0                | \$0                |
| Benloch Transmission Line                        | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$76,048           | \$234,989          | \$80,680           | \$0                | \$0                | \$0                |
| Benloch to VR Transmission Line                  | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$91,391           | \$282,399          | \$96,957           | \$0                | \$0                | \$0                | \$0                |
| HWY 32 Benloch Ranch Transmission Line #1        | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$613,026          | \$1,894,252        | \$650,360          | \$0                | \$0                |
| HWY 32 Transmission Line #2                      | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$123,692          | \$382,210          |
| HWY 40 Crossing                                  | \$0                | \$0                | \$0                | \$0                | \$18,950            | \$18,950           | \$18,950           | \$18,950           | \$18,950           | \$18,950           | \$18,950           | \$18,950           | \$18,950           | \$18,950           |
| Line From HWY to Tank                            | \$0                | \$0                | \$0                | \$0                | \$32,600            | \$32 <i>,</i> 600  | \$32,600           | \$32,600           | \$32,600           | \$32,600           | \$32,600           | \$32,600           | \$32,600           | \$32,600           |
| 6800 to Lady Monument Pump Station               | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$0                | \$455,299          | \$1,406,875        | \$483,027          | \$0                |
| Additional Deer Canyon Preserve Pump Station     | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$287,268          | \$887,658          | \$304,763          | \$0                | \$0                | \$0                |
| Benloch Pump Station                             | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$214,213          | \$661,918          | \$227,259          | \$0                | \$0                |
| HWY 40 Pump Station                              | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$475,302          | \$1,468,684        | \$504,248          | \$0                | \$0                | \$0                |
| Deer Mountain Pump Station                       | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$0                | \$212,522          | \$656,694          | \$225,465          | \$0                |
| Back Up Generator                                | \$0                | \$0                | \$0                | \$0                | \$0                 | \$0                | \$0                | \$0                | \$0                | \$0                | \$23,614           | \$72,966           | \$25,052           | \$0                |
| Total                                            | \$12,905,890       | \$9,349,010        | \$13,295,542       | \$15,932,867       | \$24,588,080        | \$17,663,680       | \$13,205,069       | \$14,982,063       | \$16,893,708       | \$21,834,235       | \$21,606,086       | \$22,102,473       | \$24,622,043       | \$22,175,141       |

Table A-2

JSSD

Historic and Projected Revenue (Projections Assume No Change to Existing Rate Structure)

Assumed Annual Rate of Inflation: 3.0% Actual Actual **Actual** Projected Budgeted **Projected** Projected Projected Projected Projected **Projected Projected Projected** Projected 2019 2020 2021 2022 2023 2024 2025 2027 2028 2029 2032 Item 2026 2030 2031 \$9,630,628 \$10,371,223 \$11,006,566 \$11,627,660 \$11,721,956 \$12,139,297 \$12,588,427 \$13,088,488 \$13,658,445 \$14,286,831 \$14,970,258 \$15,710,050 \$16,507,321 \$17,348,996 Rates and O&M Water Revenue \$2,531,222 \$3,424,778 \$3,391,789 \$3,237,100 \$3,224,638 \$3,510,837 \$3,810,758 \$4,122,440 \$4,469,408 \$4,834,017 \$5,212,349 \$5,608,322 \$6,021,939 \$6,442,800 Wholesale Revenue \$714,315 \$906,877 \$1,099,438 \$1,292,000 \$1,484,562 \$1,655,948 \$1,842,138 \$2,042,312 \$2,266,199 \$2,507,978 \$2,767,661 \$3,045,230 \$3,342,268 \$3,654,793 Water Sub-lease Revenue \$4,086 \$94,367 \$64,909 \$64,900 \$60,300 \$65,652 \$71,260 \$77,089 \$83,577 \$90,395 \$97,470 \$104,874 \$112,609 \$120,479 \$4,997,418 \$4,936,874 \$4,925,669 \$4,869,800 \$4,962,900 \$4,781,430 \$4,618,525 \$4,473,768 \$3,860,364 \$3,773,830 Water Reserve Revenue \$4,325,579 \$4,190,689 \$4,070,423 \$3,960,618 \$23,008 \$14,319 \$15,055 \$17,160 \$17,160 \$17,160 \$17,160 \$17,160 \$17,160 \$17,160 \$17,160 Penalty Revenue \$19,188 \$17,160 \$17,160 \$432,406 \$280,761 \$776,399 \$928,000 \$430,000 \$489,664 \$546,185 \$607,243 \$676,569 \$752,060 \$833,481 \$921,804 \$1,017,441 \$1,119,071 Construction Inspection Fees \$299,299 \$35,808 \$79,931 \$4,067 \$48,600 \$149.800 \$163.095 \$177.028 \$191,507 \$207,626 \$224.563 \$242,139 \$260,534 \$279,748 Mine Maintenance Revenue \$0 \$0 \$94,158 \$106,700 \$121,900 \$212,010 \$227,645 \$243,555 Lake Creek Irr Maintenance Revenue \$132,719 \$144,057 \$155,839 \$168,956 \$182,739 \$197,041 \$3.928 WCSSA#1 Administrative Services \$3.514 \$4.263 \$2.652 \$2,496 \$2,496 \$2,496 \$2,496 \$2,496 \$2,496 \$2,496 \$2,496 \$2,496 \$2,496 Hookup Fees \$103,250 \$90.150 \$195,400 \$183.200 \$153,800 \$167,450 \$181,755 \$196,621 \$213,170 \$230,560 \$248.604 \$267,490 \$287,218 \$307,291 Lease Receipts \$720 \$47,880 \$48,408 \$47,520 \$48,000 \$48,000 \$48,000 \$48,000 \$48,000 \$48,000 \$48,000 \$48,000 \$48,000 \$48,000 \$254,181 Snowmaking Revenue \$266,888 \$278,649 \$288,300 \$296,000 \$296,000 \$296,000 \$296,000 \$296,000 \$296,000 \$296,000 \$296,000 \$296,000 \$296,000 \$1,720 \$1,820 \$1,500 \$1,359 \$3,400 \$1,500 \$1,500 \$1,500 \$1,500 \$1,500 \$1,500 \$1,500 \$1,500 \$1,500 Laboratory Fees \$807,345 \$856,512 Interest Revenue \$484,782 \$220,591 \$103,690 \$523,800 \$768,900 \$831,565 \$882,208 \$908,674 \$935,934 \$964,012 \$992,933 \$1,022,720 \$0 \$43,784 \$2,474 \$3,313 \$12,500 Miscellaneous Revenue \$2,653,789 \$3,349,919 \$824,253 \$925,495 \$1,419,053 \$1,608,899 \$1,810,998 \$2,156,225 \$2,450,342 *\$2,756,*340 \$3,124,918 \$3,539,735 \$3,923,239 Expansion and Replacement \$3,048,446 \$2,653,789 Water Impact Fee \$3,349,919 \$824,253 \$925,495 \$1,064,319 \$1,224,350 \$1,405,486 \$1,601,152 \$1,942,530 \$2,235,555 \$2,543,244 \$2,916,166 \$3,337,711 \$3,729,950 \$18,728 \$20,637 \$21,566 Projected TIC Water Impact Fee \$19,688 \$22,466 \$23,327 \$24,889 \$25,569 \$0 \$0 \$0 \$0 \$24,138 \$26,170 Projected RL Water Impact Fee \$0 \$0 \$0 \$0 \$165,399 \$175,016 \$182,776 \$188,280 \$191,229 \$191,460 \$188,957 \$183,863 \$176,455 \$167,119 Projected NVSSD Water Impact Fee \$0 \$0 \$0 \$0 \$1,800,000 \$0 \$0 \$0 \$12,284,417 \$13,721,142 \$11,830,819 \$12,553,155 \$14,770,402 \$13,558,350 \$14,197,326 \$14,899,485 \$15,814,671 \$16,737,173 \$17,726,598 \$18,834,968 \$20,047,056 \$21,272,234 Total

Table A-3
JSSD
Existing and Projected Customers by Class

|                      | ,      |        | T      | 1         |          | 0,00000   |           | 1         |           |           | ı         | T         | ı         |           |
|----------------------|--------|--------|--------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                      | Actual | Actual | Actual | Projected | Budgeted | Projected |
| Customer Base        | 2019   | 2020   | 2021   | 2022      | 2023     | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      | 2031      | 2032      |
| 1" and Smaller Meter |        |        | 985    | 1,011     | 1,104    | 1,202     | 1,305     | 1,412     | 1,531     | 1,655     | 1,785     | 1,921     | 2,062     | 2,206     |
| 1.5" Meter           |        |        | 224    | 253       | 276      | 301       | 327       | 353       | 383       | 414       | 447       | 481       | 516       | 552       |
| 2" Meter             |        |        | 115    | 120       | 131      | 143       | 155       | 168       | 182       | 196       | 212       | 228       | 245       | 244       |
| 3" Meter             |        |        | 13     | 14        | 15       | 17        | 18        | 20        | 21        | 23        | 25        | 27        | 29        | 28        |
| 4" Meter             |        |        | 11     | 11        | 12       | 13        | 14        | 15        | 17        | 18        | 19        | 21        | 22        | 22        |
| 6" Meter             |        |        | 10     | 18        | 20       | 21        | 23        | 25        | 27        | 29        | 32        | 34        | 37        | 37        |
| Total ERUs           |        |        | 1,358  | 1,427     | 1,559    | 1,697     | 1,842     | 1,993     | 2,160     | 2,337     | 2,520     | 2,711     | 2,911     | 3,090     |

# Table A-4 JSSD

#### Historic and Projected Expenses and Revenues

| nistoric and Projected Expenses and Revendes                    |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
|-----------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                                                                 | Actual       | Actual       | Actual       | Projected    | Budgeted     | Projected    |
| Item                                                            | 2019         | 2020         | 2021         | 2022         | 2023         | 2024         | 2025         | 2026         | 2027         | 2028         | 2029         | 2030         | 2031         | 2032         |
| Total Expenses                                                  | \$11,692,056 | \$8,600,332  | \$12,090,570 | \$10,071,448 | \$20,257,195 | \$15,468,590 | \$12,488,677 | \$13,350,526 | \$15,072,257 | \$17,698,993 | \$17,492,158 | \$19,817,980 | \$24,015,323 | \$21,792,932 |
| Total Non-Rate Revenue                                          | \$9,753,195  | \$10,296,364 | \$8,439,030  | \$9,316,055  | \$11,545,764 | \$10,047,513 | \$10,386,568 | \$10,777,045 | \$11,345,263 | \$11,903,156 | \$12,514,249 | \$13,226,645 | \$14,025,118 | \$14,829,434 |
| Scenario 1: Do Nothing and Keep Existing Rates                  |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Total Rate Revenues                                             | \$2,531,222  | \$3,424,778  | \$3,391,789  | \$3,237,100  | \$3,224,638  | \$3,510,837  | \$3,810,758  | \$4,122,440  | \$4,469,408  | \$4,834,017  | \$5,212,349  | \$5,608,322  | \$6,021,939  | \$6,442,800  |
| Total Revenues                                                  | \$12,284,417 | \$13,721,142 | \$11,830,819 | \$12,553,155 | \$14,770,402 | \$13,558,350 | \$14,197,326 | \$14,899,485 | \$15,814,671 | \$16,737,173 | \$17,726,598 | \$18,834,968 | \$20,047,056 | \$21,272,234 |
| Revenue Surplus (Shortfall)                                     | \$592,361    | \$5,120,810  | -\$259,751   | \$2,481,706  | -\$5,486,793 | -\$1,910,240 | \$1,708,648  | \$1,548,960  | \$742,414    | -\$961,820   | \$234,440    | -\$983,012   | -\$3,968,267 | -\$520,697   |
| Scenario 2: Meet Revenue Need with Initial and Annual Increases |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Total Rate Revenues                                             |              |              |              | \$3,239,616  | \$3,697,659  | \$4,103,414  | \$4,542,360  | \$5,012,726  | \$5,543,727  | \$6,118,281  | \$6,733,667  | \$7,396,958  | \$8,109,606  | \$8,611,555  |
| Total Revenues                                                  |              |              |              | \$12,555,671 | \$15,243,423 | \$14,150,927 | \$14,928,928 | \$15,789,771 | \$16,888,990 | \$18,021,436 | \$19,247,916 | \$20,623,603 | \$22,134,723 | \$23,440,989 |
| Revenue Surplus (Shortfall)                                     |              |              |              | \$2,484,222  | -\$5,013,773 | -\$1,317,663 | \$2,440,250  | \$2,439,246  | \$1,816,733  | \$322,444    | \$1,755,758  | \$805,623    | -\$1,880,600 | \$1,648,057  |

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