



PREPARED FOR:

PREPARED BY:

JORDANELLE SPECIAL
SERVICE DISTRICT



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SERVICE DISTRICT

JANUARY 2023

SEWER RATE STUDY

JORDANELLE SPECIAL SERVICE DISTRICT SEWER RATE STUDY

JANUARY 2023

Prepared by:



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TABLE OF CONTENTS

EXECUTIVE SUMMARY II

CHAPTER 1 INTRODUCTION AND BACKGROUND..... 1

 Introduction 1

 Existing Sewer Rate Structure 1

 Overall District Funding 1

CHAPTER 2 SEWER RATE STUDY..... 3

 Sewer Rate Calculation Approach..... 3

 Key Assumptions 3

 Projecting Sewer Growth 4

 Calculating Revenue Requirements 4

 Non-Rate Revenues 4

 Gross Revenue Requirement 5

 Net Rate Revenue Requirement 5

 Recommended Long Term Funding Levels 6

 Designing the rate Structure..... 9

 Calculating Rates..... 9

 Sewer Rate Study Conclusions..... 10

EXECUTIVE SUMMARY

Jordanelle Special Service District asked Bowen Collins & Associates to complete a rate study for their sewer 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 three lift station rehabilitation or replacement projects, replacement of the water reclamation facility membranes, and a large water reclamation facility expansion in 2032. Following this revenue requirement analysis, which is described further in this report, BC&A recommends JSSD adopts the rates summarized in Table ES-1.

These rates were adopted January 10, 2023. The report was modified from the draft version presented at adoption in that non-consequential errors in in Tables 2-3 and 2-4 were corrected. No changes to the proposed rates or rate structure was made after adoption.

**Table ES-1
Calculated Sewer Rates**

Rate Component	2022	2023	2024	2025	2026	2027
Base Rate Per Month	\$48.29	\$50.70	\$51.72	\$52.75	\$53.81	\$54.88

CHAPTER 1 INTRODUCTION AND BACKGROUND

INTRODUCTION

In the fall of 2022, Jordanelle Special Service District (JSSD or the District) retained Bowen Collins & Associates (BC&A) to conduct and document a rate study for the District's sewer 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.

Since the District's last update to sewer rates in 2015, rapidly increasing inflation and supply chain issues have affected the District's material availability and project costs. The District has also continued to expand and grow, changing the size and characteristics of the JSSD sewer system. These impacts to the District require an adjustment in sewer rates. The primary purpose of this report is to document the sewer rate study and provide recommendations regarding updates to the District's sewer and sewer user rates. The updates are intended to become effective in February 2023.

EXISTING SEWER RATE STRUCTURE

The existing sewer rates were adopted in 2015 and provided for annual rate adjustments through 2021. The existing sewer rate structure is based on Equivalent Residential Units¹ (sewer ERUs) and consists of one base rate per sewer ERU. No volumetric charge is included in the existing sewer rate structure, as is common, due to the difficulty of monitoring sewer flows.

According to JSSD personnel, the rate structure is operating well as it is. Therefore, there are no plans as part of this rate study to change the sewer rate structure—only to update the rate values to extend them beyond 2021 rates.

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 between each utility to ensure the recovery of costs for each utility by its respective user rates. Costs were divided based on analysis of each line item in the District's budget and estimates from District personnel.

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

¹ This rate study relies upon the term sewer ERU as the basis for sewer utility billing. This terminology is consistent with the existing and historic utility billing terminology. As a point of clarification, the District also utilizes a similar and related terminology for impact fee determination and master planning called a Sewer Capacity Unit (SCU). For the purposes of this rate study, both terms are equivalent. The minimum billing per connection is 1 sewer ERU.

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 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, 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:
 - **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 projects². Thus, these projects have no impact on District budgets or user rates.
 - **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. JSSD has not identified any of this type of funding within the planning window of this sewer rate study.
 - **Other.** While 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.

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

² 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).

CHAPTER 2 SEWER RATE STUDY

SEWER RATE CALCULATION APPROACH

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

1. **Projecting Sewer ERU's.** Future growth in the JSSD sewer system were based on current billing information and the growth patterns projected in the recently adopted 2022 JSSD Water Master Plan. It was assumed that sewer ERU's would grow proportionally with water ERU's.
2. **Calculating Revenue Requirements.** Total sewer revenue requirements for the system were projected for the next several years based on the sewer 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 sewer system rate payers.
3. **Calculating Rates.** Rates were calculated to recover the sewer system revenue requirement (employee salary and benefits costs, operations and maintenance costs, capital improvement costs, and debt service costs) based on uniform increases to the existing base rates.

Key Assumptions

The sewer rate study results in this report are based on the following key assumptions.

- The JSSD sewer operating fund will continue to be a self-funding enterprise-type fund.
- The cost of service for all customers throughout the system is not significantly different. Therefore, customers will continue to be billed using the District's existing rate structure, with one base rate per sewer ERU.
- This rate study is based on projections of future system growth and projected system operations, maintenance, and improvement costs. These projections are based on current and historic economic conditions. 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 sewer 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 SEWER GROWTH

Using recent billing data, the number of sewer customers and sewer ERU's served in December 2022 were identified. Based on these existing accounts and the projected growth rates, the total number of future sewer system ERU's were projected. These projections are summarized below in Table 2-1.

Table 2-1
Projected Growth in Sewer System ERU's

	Number of Accounts by Year With Predicted Annual Growth Rate					
	2022	2023	2024	2025	2026	2027
	Existing	9.9%	9.5%	9.2%	8.9%	9.0%
Total Number of Sewer ERU's	2,217	2,436	2,669	2,916	3,174	3,459

Table 2-1 indicates that JSSD is predicted to experience significant growth within the next several years.

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 sewer system growth 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 2-2.

Table 2-2
Projected Sewer Non-Rate Revenues

Item	2022	2023	2024	2025	2026	2027
Penalty Fees	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Maintenance and Administrative Fees	\$943,000	\$1,039,000	\$1,039,000	\$1,039,000	\$1,039,000	\$1,039,000
Lease Receipts	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
NVSSD Wastewater Treatment Fees	\$0	\$96,000	\$112,000	\$118,000	\$124,000	\$130,000
Impact Fees	\$2,127,000	\$888,000	\$922,000	\$957,000	\$991,000	\$1,100,000
Total Non-Rate Revenue	\$3,087,000	\$2,040,000	\$2,090,000	\$2,131,000	\$2,171,000	\$2,286,000

NVSSD recently began pumping wastewater to JSSD for treatment. Thus Table 2-2 shows that a *NVSSD Wastewater Treatment Fee*³ will be introduced and paid to JSSD for sewer treatment.

³ Due to the lack of sewer flow records, it is not possible to determine a direct cost of service for NVSSD wastewater treatment at this time. The values used in this study are approximated and acceptable to JSSD and NVSSD. After flow data from NVSSD is available and more data on the cost of treatment is available, a cost-of-service analysis may be completed and the treatment cost to NVSSD refined.

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.** Although an updated JSSD Sewer Master Plan has not been completed, detailed discussions with District staff and supporting analysis have confirmed that there is need to complete three projects to rehabilitate or replace existing lift stations and two projects to upgrade and expand the water reclamation facility (WRF) in the next 10 years. Therefore, estimated costs for these projects has been accounted for in capital costs. No specific developer funded capital projects have been identified in this study. This is due to the particular layout of the JSSD sewer system, but there will be much developer funded and constructed collection systems in the new subdivisions.

Projections in gross sewer revenue requirements are summarized below in Table 2-3.

**Table 2-3
Projected Gross Sewer Revenue Requirement**

Item	2022	2023	2024	2025	2026	2027
Salary & Benefits	\$523,000	\$580,000	\$609,000	\$627,000	\$646,000	\$665,000
O&M	\$818,000	\$931,000	\$1,056,000	\$1,165,000	\$1,282,000	\$1,415,000
Debt Service	\$217,000	\$206,000	\$194,000	\$146,000	\$151,000	\$157,000
Capital Expenses	\$408,000	\$3,184,000	\$2,540,000	\$1,683,000	\$936,000	\$958,000
Total Revenue Requirement	\$1,966,000	\$4,891,000	\$4,139,000	\$3,352,000	\$2,738,000	\$2,911,000

Net Rate Revenue Requirement

The net revenue to be recovered by sewer rates (the difference between the projected gross revenue requirement and the projected non-rate revenues) is summarized below in Table 2-4.

**Table 2-4
Projected Net Sewer Rate Revenue Requirement**

Item	2022	2023	2024	2025	2026	2027
Total Revenue Requirement	\$1,966,000	\$4,891,000	\$4,139,000	\$3,352,000	\$2,738,000	\$2,911,000
Non-Rate Revenue	\$3,087,000	\$2,040,000	\$2,090,000	\$2,131,000	\$2,171,000	\$2,286,000
Total Rate Revenue Requirement	\$0	\$2,851,000	\$2,048,000	\$1,219,000	\$564,000	\$620,000

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. A few pieces of background information are useful when interpreting this information, including the following:

- Impact fee receipts in 2021 and 2022 were abnormally high due to JSSD collecting some past-due impact fees. These same years had only baseline capital needs due to the pandemic and the District being in between large capital improvement projects. Thus, the 2022 data in Table 2-4 shows a net revenue need of zero, but that is not indicative of long term historic or future needs (See Figure 2-1).
- There no longer exists any past-due impact fees so future spikes in impact fee receipts are unlikely.
- The impact fee revenue projections moving forward are based on JSSD system growth and two assumptions: (i) approximately 25% of new growth will not be paying cash impact fees due to having previously obtained impact fee credit or via entitlement associated with paying toward the original infrastructure bonds and (ii) JSSD will continue to update impact fees every few years to keep up with changing costs and conditions. The District should monitor impact fee receipts over the next several years and keep its impact fees up to date.
- The major capital projects included are the State Park Lift Station (2023-2024), Ross Creek Lift Station (2023), Keetley Lift Station (2024-2025), WRF membrane replacement (2023-2027, 2032-2036), and WRF Expansion (2031-2033).
- Capital improvement needs do not abruptly end at the end of this 10-year planning window. This is evidenced by the information in the previous bullet. Of significant note is the WRF expansion project which is estimated to have another \$8M in cost in 2033 (which is just outside of the planning window). Due to the size of this particular expense, this study has ensured that the recommended revenues will meet the full cost of the WRF expansion (including those dollars to be expended in 2033).
- The recommended long-term funding level as shown in the figure above was calculated based on existing JSSD sewer infrastructure and assuming a maximum service life of 30 years for lift stations, 80 years for pipes, and 50 years for the WRF.

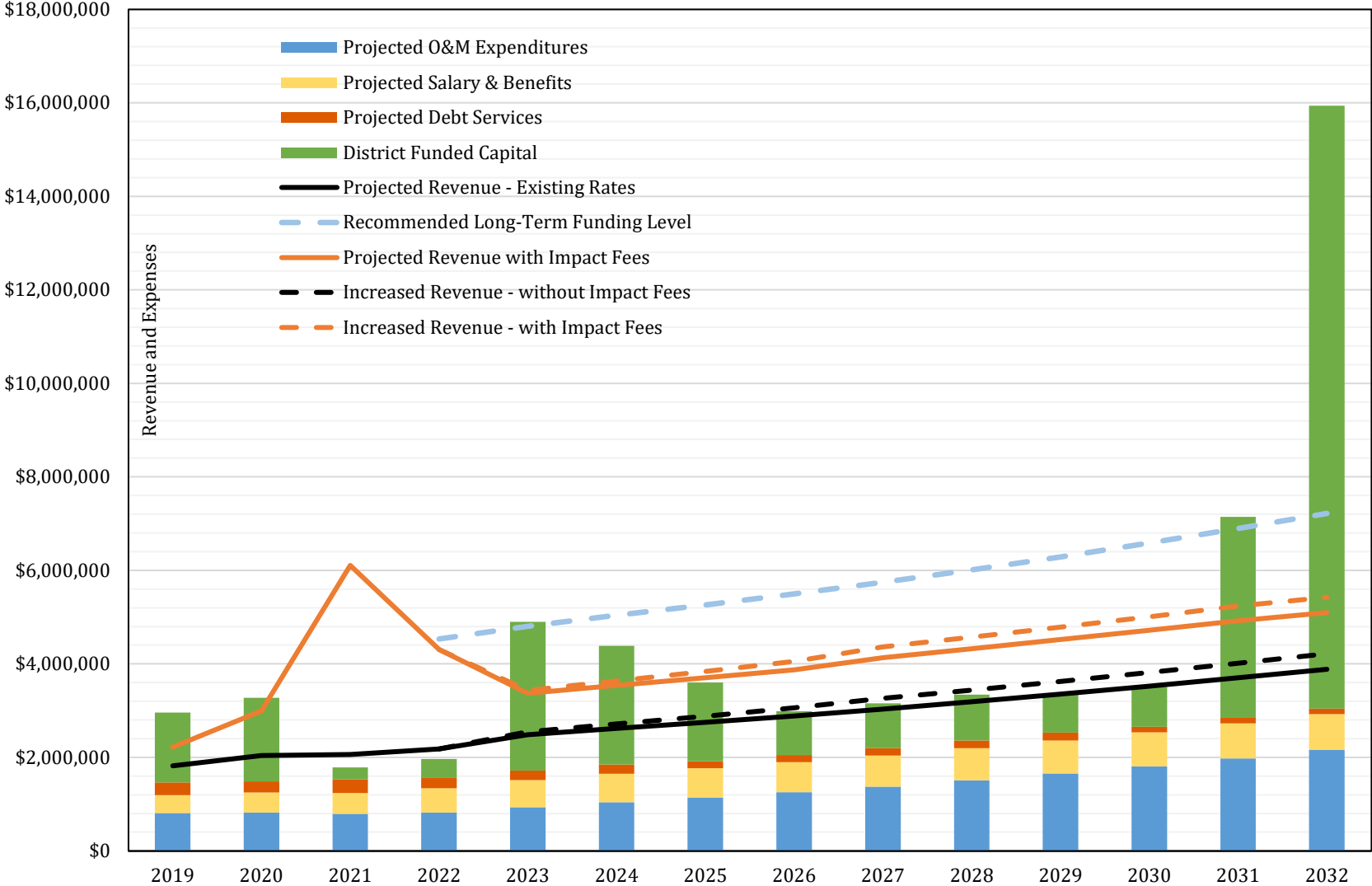
Recommended Long Term Funding Levels

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 2-5 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 2-5
System Valuation**

System Component	Quantity	Estimated Total Value (with contingency and engineering/admin)	Maximum Estimated Total Service Life
<i>Lift Stations</i>			
17 Total Lift Stations	17	\$3,978,000	30 years
<i>Subtotal Minimum Annual Budget</i>			\$132,600
<i>Pipes</i>			
8 inches	260,700 ft	\$88,495,000	80 years
10 inches	7,400 ft	\$2,655,000	80 years
12 inches	6,100 ft	\$2,335,000	80 years
15 inches	5,600 ft	\$2,440,000	80 years
Unknown Size	48,300 ft	\$18,318,000	80 years
<i>Subtotal Minimum Annual Budget</i>			\$1,428,000
<i>Manholes</i>			
48" Manhole	908	\$9,398,000	80 years
60" Manhole	704	\$9,715,000	80 years
<i>Subtotal Minimum Annual Budget</i>			\$1,667,000
<i>Water Reclamation Facility</i>			
Bio-Reactor WRF	1.2 MGD	\$4,968,000	50 years
<i>Subtotal Minimum Annual Budget</i>			\$99,400
Total Recommended Long Term Funding Level			\$3,326,900

Figure 2-1
10-Year Projected JSSD Sewer Revenue and Expenditures



As shown in Figure 2-1, projected revenue from existing rates will fall short of projected needs by 2023. 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 WRF Expansion. 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 2-6.

**Table 2-6
Recommended Overall Rate Revenue Increases**

Year	Increase
2023	5.0%
2024	2.0%
2025	2.0%
2026	2.0%
2027	2.0%

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.

The District currently utilizes a base monthly charge for all of its sewer rate arrangements. Base charges are the most straightforward method of structuring sewer rates, as monitoring volumetric use on sewage is not generally practicable. This is especially true of the JSSD area, where industrial and commercial land use is rare, and most customers are residential users. Thus, it has been determined that the future rate structure will continue to be based on sewer ERU's (as mentioned above) and be operated on a monthly basis with a base rate charge per sewer ERU.

CALCULATING RATES

Rates have been calculated to recover the projected net sewer rate revenue requirement (Table 2-4) and maintaining acceptable account reserve balances in accordance with the goals of this rate study, including cost-of-service requirements. Highlighted calculation methods and rationale are listed as follows and the final calculated rates are shown below in Table 2-7. 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.

- **Base Rate.** These rates were adjusted to provide the proper rate revenue to meet the revenue requirements. From BC&A's initial cost of service analysis, the cost associated with fixed operating costs (such as billing) included in each base rate is minimal enough that it has not been separated for those customers billed for multiple ERU's.
- **Annual Increases.** Rates for the next 5 years have been set to meet revenue requirements with an initial (2023) 5 percent increase followed by even 2 percent annual increases.

**Table 2-7
Calculated Monthly Sewer Rates**

Rate Component	2022	2023	2024	2025	2026	2027
Base Rate Per Sewer ERU	\$48.29	\$50.70	\$51.72	\$52.75	\$53.81	\$54.88

SEWER RATE STUDY CONCLUSIONS

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

1. **Adopt and Implement New Rates.** It is recommended that JSSD adopt the rates summarized above in Table 2-7. 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 sewer 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

Additional Inflation: 3%

Assumed Annual Rate of Inflation: 3.0%

Item	Actual 2019	Actual 2020	Estimated 2021	Budgeted 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030	Projected 2031	Projected 2032
<u>Salary & Benefits</u>	<u>\$383,695</u>	<u>\$427,710</u>	<u>\$448,273</u>	<u>\$523,250</u>	<u>\$579,971</u>	<u>\$614,770</u>	<u>\$633,213</u>	<u>\$652,209</u>	<u>\$671,775</u>	<u>\$691,929</u>	<u>\$712,687</u>	<u>\$734,067</u>	<u>\$756,089</u>	<u>\$778,772</u>
Wages	\$317,752	\$360,130	\$395,314	\$438,705	\$487,920	\$517,195	\$532,711	\$548,692	\$565,153	\$582,108	\$599,571	\$617,558	\$636,085	\$655,167
Payroll Taxes	\$14,950	\$16,620	\$18,506	\$21,050	\$23,510	\$24,921	\$25,668	\$26,438	\$27,232	\$28,049	\$28,890	\$29,757	\$30,649	\$31,569
Worker's Comp	\$2,434	\$3,113	\$2,904	\$3,283	\$3,636	\$3,854	\$3,970	\$4,089	\$4,211	\$4,338	\$4,468	\$4,602	\$4,740	\$4,882
State Retirement	\$48,558	\$47,847	\$31,548	\$60,211	\$64,905	\$68,800	\$70,864	\$72,990	\$75,179	\$77,435	\$79,758	\$82,150	\$84,615	\$87,153
<u>O&M</u>	<u>\$807,283</u>	<u>\$820,350</u>	<u>\$789,799</u>	<u>\$818,366</u>	<u>\$931,497</u>	<u>\$1,056,076</u>	<u>\$1,164,698</u>	<u>\$1,282,479</u>	<u>\$1,414,635</u>	<u>\$1,558,533</u>	<u>\$1,714,479</u>	<u>\$1,882,771</u>	<u>\$2,064,564</u>	<u>\$2,258,068</u>
Travel	\$6,485	\$2,362	\$2,479	\$4,500	\$9,750	\$10,335	\$10,645	\$10,964	\$11,293	\$11,632	\$11,981	\$12,341	\$12,711	\$13,092
Training/Conferences	\$14,037	\$4,850	\$6,720	\$8,700	\$8,650	\$9,169	\$9,444	\$9,727	\$10,019	\$10,320	\$10,629	\$10,948	\$11,277	\$11,615
Utilities	\$164,289	\$186,916	\$198,197	\$212,184	\$222,873	\$257,518	\$289,047	\$323,347	\$362,027	\$404,272	\$450,174	\$499,823	\$553,576	\$610,874
Phones	\$15,311	\$17,220	\$17,406	\$20,160	\$21,504	\$22,794	\$23,478	\$24,182	\$24,908	\$25,655	\$26,425	\$27,218	\$28,034	\$28,875
Postage	\$943	\$411	\$464	\$850	\$1,200	\$1,387	\$1,556	\$1,741	\$1,949	\$2,177	\$2,424	\$2,691	\$2,981	\$3,289
Equipment	\$66,243	\$69,467	\$60,613	\$35,037	\$82,314	\$87,253	\$89,870	\$92,567	\$95,344	\$98,204	\$101,150	\$104,184	\$107,310	\$110,529
Repairs & Maint	\$104,704	\$134,155	\$135,042	\$120,160	\$110,720	\$127,931	\$143,594	\$160,634	\$179,850	\$200,836	\$223,640	\$248,305	\$275,008	\$303,473
Supplies	\$157,294	\$127,268	\$144,899	\$159,540	\$174,600	\$201,741	\$226,441	\$253,312	\$283,614	\$316,709	\$352,669	\$391,565	\$433,674	\$478,563
Services	\$193,889	\$241,219	\$169,415	\$170,075	\$211,550	\$244,435	\$274,362	\$306,919	\$343,634	\$383,733	\$427,303	\$474,430	\$525,451	\$579,839
Vehicle Expense	\$40,959	\$35,642	\$53,209	\$78,250	\$86,300	\$91,478	\$94,222	\$97,049	\$99,960	\$102,959	\$106,048	\$109,230	\$112,506	\$115,882
Bad Debt	\$27	\$457	\$224	\$7,436	\$2,036	\$2,036	\$2,036	\$2,036	\$2,036	\$2,036	\$2,036	\$2,036	\$2,036	\$2,036
Judgments and Losses	\$43,104	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$381	\$1,132	\$1,474	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>Debt Service</u>	<u>\$270,562</u>	<u>\$237,200</u>	<u>\$294,323</u>	<u>\$216,544</u>	<u>\$205,823</u>	<u>\$193,943</u>	<u>\$145,623</u>	<u>\$150,922</u>	<u>\$157,019</u>	<u>\$163,382</u>	<u>\$170,012</u>	<u>\$117,000</u>	<u>\$117,000</u>	<u>\$117,000</u>
Interest Expense	\$134,311	\$93,491	\$78,323	\$60,535	\$41,438	\$20,645	\$17,623	\$14,422	\$11,019	\$7,382	\$3,512	\$0	\$0	\$0
Refunds	\$251	\$1,208	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
LBA Lease Rev 2018	\$15,500	\$16,500	\$17,500	\$18,500	\$19,500	\$20,500	\$21,000	\$22,000	\$23,000	\$24,500	\$25,500	\$0	\$0	\$0
2019 W&S Refunding	\$0	\$0	\$0	\$87,500	\$93,500	\$100,000	\$107,000	\$114,500	\$123,000	\$131,500	\$141,000	\$0	\$0	\$0
Heavy Equipment Notes	\$53,000	\$53,000	\$117,000	\$50,010	\$51,385	\$52,798	\$0	\$0	\$0	\$0	\$0	\$117,000	\$117,000	\$117,000
Water & Sewer 2009	\$67,500	\$73,000	\$81,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>Capital Expenses</u>	<u>\$1,494,401</u>	<u>\$1,786,532</u>	<u>\$252,899</u>	<u>\$407,639</u>	<u>\$3,173,597</u>	<u>\$2,273,727</u>	<u>\$1,408,231</u>	<u>\$652,831</u>	<u>\$666,996</u>	<u>\$681,586</u>	<u>\$515,947</u>	<u>\$531,425</u>	<u>\$3,971,615</u>	<u>\$12,556,098</u>
Capital Outlay - Operating/Impact Fee Funded	\$1,275,730	\$1,573,834	\$252,899	\$407,639	\$667,930	\$445,060	\$458,412	\$472,164	\$486,329	\$500,919	\$515,947	\$531,425	\$547,368	\$563,789
Capital Outlay - Bond/Loan Funded	\$58,635	\$169,275	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Outlay - Developer Funded	\$160,036	\$43,424	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State Park Lift Station	\$0	\$0	\$0	\$0	\$875,000	\$901,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ross Creek Lift Station	\$0	\$0	\$0	\$0	\$1,450,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Keetley Lift Station	\$0	\$0	\$0	\$0	\$0	\$746,750	\$769,153	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Membrane Replacement (WRF)	\$0	\$0	\$0	\$0	\$180,667	\$180,667	\$180,667	\$180,667	\$180,667	\$180,667	\$0	\$0	\$0	\$235,729
WRF Expansion	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,424,247	\$11,756,580
Total	\$2,955,941	\$3,271,791	\$1,785,294	\$1,965,799	\$4,890,888	\$4,138,516	\$3,351,765	\$2,738,441	\$2,910,425	\$3,095,429	\$3,113,123	\$3,265,263	\$6,909,268	\$15,709,938

Table A-2
JSSD
Historic and Projected Revenue (Projections Assume No Change to Existing Rates)

Assumed Annual Rate of Inflation: Rate of Inflation: 3.0%

Item	Actual 2019	Actual 2020	Estimated 2021	Budgeted 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030	Projected 2031	Projected 2032
<i>Rates and O&M</i>	<u>\$1,821,560</u>	<u>\$2,037,474</u>	<u>\$2,060,280</u>	<u>\$2,180,440</u>	<u>\$2,492,465</u>	<u>\$2,637,701</u>	<u>\$2,780,259</u>	<u>\$2,929,719</u>	<u>\$3,093,903</u>	<u>\$3,266,989</u>	<u>\$3,448,356</u>	<u>\$3,637,383</u>	<u>\$3,834,751</u>	<u>\$4,036,727</u>
Sewer Revenue	\$924,951	\$1,002,776	\$1,092,082	\$1,219,900	\$1,340,721	\$1,468,687	\$1,604,448	\$1,746,705	\$1,903,252	\$2,068,244	\$2,241,030	\$2,420,962	\$2,608,689	\$2,800,446
Penalty Revenue	\$6,489	\$4,039	\$4,246	\$5,412	\$4,840	\$4,840	\$4,840	\$4,840	\$4,840	\$4,840	\$4,840	\$4,840	\$4,840	\$4,840
TCSSD Maintenance Revenue	\$785,209	\$882,851	\$765,062	\$706,800	\$706,800	\$706,800	\$706,800	\$706,800	\$706,800	\$706,800	\$706,800	\$706,800	\$706,800	\$706,800
NVSSD Maintenance Revenue	\$61,024	\$91,051	\$132,344	\$167,600	\$235,800	\$235,800	\$235,800	\$235,800	\$235,800	\$235,800	\$235,800	\$235,800	\$235,800	\$235,800
Hideout Maintenance Revenue	\$11,808	\$7,589	\$2,058	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SLSSD Maintenance Revenue	\$26,493	\$20,089	\$35,154	\$38,200	\$41,100	\$41,100	\$41,100	\$41,100	\$41,100	\$41,100	\$41,100	\$41,100	\$41,100	\$41,100
ONSSD Maintenance Revenue	\$0	\$1,201	\$3,714	\$16,600	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000
WCSSA#1 Administrative Services	\$1,108	\$991	\$1,202	\$748	\$704	\$704	\$704	\$704	\$704	\$704	\$704	\$704	\$704	\$704
SRSSD Maintenance Revenue	\$4,298	\$14,918	\$12,315	\$13,300	\$10,500	\$10,500	\$10,500	\$10,500	\$10,500	\$10,500	\$10,500	\$10,500	\$10,500	\$10,500
Lease Receipts	\$180	\$11,970	\$12,102	\$11,880	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
NVSSD Wastewater Treatment Revenue	\$0	\$0	\$0	\$0	\$96,000	\$113,270	\$120,067	\$127,271	\$134,907	\$143,002	\$151,582	\$160,677	\$170,318	\$180,537
<i>Expansion and Replacement</i>	<u>\$401,385</u>	<u>\$956,341</u>	<u>\$4,047,081</u>	<u>\$2,127,043</u>	<u>\$887,833</u>	<u>\$921,889</u>	<u>\$956,598</u>	<u>\$991,490</u>	<u>\$1,099,867</u>	<u>\$1,133,407</u>	<u>\$1,165,303</u>	<u>\$1,194,886</u>	<u>\$1,221,507</u>	<u>\$1,210,179</u>
Sewer Impact	\$401,385	\$956,341	\$4,047,081	\$2,127,043	\$887,833	\$921,889	\$956,598	\$991,490	\$1,099,867	\$1,133,407	\$1,165,303	\$1,194,886	\$1,221,507	\$1,210,179
Total	\$2,222,945	\$2,993,815	\$6,107,361	\$4,307,483	\$3,380,298	\$3,559,590	\$3,736,857	\$3,921,209	\$4,193,770	\$4,400,396	\$4,613,660	\$4,832,269	\$5,056,258	\$5,246,906

Table A-3
JSSD
Existing and Projected Customers by Class

Customer Base	Actual 2019	Actual 2020	Estimated 2021	Budgeted 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030	Projected 2031	Projected 2032
ERU's Connected to System		1,840	1,985	2,217	2,436	2,669	2,916	3,174	3,459	3,758	4,072	4,399	4,741	5,089
Total ERUs			1,985	2,217	2,436	2,669	2,916	3,174	3,459	3,758	4,072	4,399	4,741	5,089

Table A-4
JSSD
Historic and Projected Expenses and Revenues

Item	Actual 2019	Actual 2020	Estimated 2021	Budgeted 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030	Projected 2031	Projected 2032
Total Expenses	\$2,955,941	\$3,271,791	\$1,785,294	\$1,965,799	\$4,890,888	\$4,138,516	\$3,351,765	\$2,738,441	\$2,910,425	\$3,095,429	\$3,113,123	\$3,265,263	\$6,909,268	\$15,709,938
Total Non-Rate Revenue	\$1,297,994	\$1,991,038	\$5,015,279	\$3,087,583	\$2,039,577	\$2,090,903	\$2,132,409	\$2,174,505	\$2,290,518	\$2,332,152	\$2,372,629	\$2,411,307	\$2,447,569	\$2,446,460
<i>Scenario 1: Do Nothing and Keep Existing Rates</i>														
Total Rate Revenues	\$924,951	\$1,002,776	\$1,092,082	\$1,219,900	\$1,340,721	\$1,468,687	\$1,604,448	\$1,746,705	\$1,903,252	\$2,068,244	\$2,241,030	\$2,420,962	\$2,608,689	\$2,800,446
Total Revenues	\$2,222,945	\$2,993,815	\$6,107,361	\$4,307,483	\$3,380,298	\$3,559,590	\$3,736,857	\$3,921,209	\$4,193,770	\$4,400,396	\$4,613,660	\$4,832,269	\$5,056,258	\$5,246,906
Revenue Surplus (Shortfall)	-\$732,996	-\$277,977	\$4,322,067	\$2,341,684	-\$1,510,591	-\$578,926	\$385,091	\$1,182,769	\$1,283,345	\$1,304,967	\$1,500,536	\$1,567,006	-\$1,853,010	-\$10,463,032
<i>Scenario 2a:</i>														
Percent Overall Rate Increase					5.0%	2.0%	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Rate Revenues				\$1,219,900	\$1,404,237	\$1,569,031	\$1,748,349	\$1,941,432	\$2,157,740	\$2,391,689	\$2,591,498	\$2,799,569	\$3,016,653	\$3,238,398
Total Revenues				\$4,307,483	\$3,443,814	\$3,659,934	\$3,880,758	\$4,115,937	\$4,448,258	\$4,723,842	\$4,964,127	\$5,210,875	\$5,464,222	\$5,684,858
Revenue Surplus (Shortfall)				\$2,341,684	-\$1,447,074	-\$478,581	\$528,993	\$1,377,496	\$1,537,833	\$1,628,413	\$1,851,003	\$1,945,612	-\$1,445,046	-\$10,025,080

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