

# Heber Valley Special Service District



## DRAFT Sewer Rates Study



## Contents

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Sewer Rates.....	2
Background and Approach.....	2
Growth Projections .....	2
Operating Expenses .....	2
Outstanding Debt.....	2
Capital Projects .....	2
Cash Balances.....	4
Rate Structuring .....	4
Current Rate Projections.....	5
Proposed Rate Options .....	5
Impacts on Existing Sewer Ratepayers .....	6
Benefits from Change in Water Rate Structure .....	7
Debt Coverage Ratios.....	7
Days Cash on Hand.....	7
Appendix A: Rate Increase Financial Projections.....	8

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## Sewer Rates

### Background and Approach

Heber Valley Special Service District (“HVSSD” or “the District”) is experiencing solid growth which is putting pressure on the District’s sewer system to serve more customers. Further, inflationary costs are resulting in increased operating expenses and many parts of the sewer system are in need of repair. Rates must be designed to keep up with these changes and must be structured to fairly and equitably serve customer needs.

The approach used in this analysis is commonly referred to as a “revenue sufficiency model.” All expenses (operating and capital) are first calculated, and then rates are structured to cover annual expenses, maintain sufficient debt service ratios, and to keep at least 180 days cash on hand in the sewer utility fund.

### Growth Projections

Growth in sewer equivalent residential units (ERUs) is based on historical growth in the District and has been projected at a rate of 3.0 percent annually. In 2021, the District had 10,207 sewer connections. By 2032, the District anticipates 14,035 ERUs – an increase of 3,828 ERUs, or average growth of about 348 ERUs each year.

**TABLE 1: PROJECTED SEWER CONNECTION ERU GROWTH**

	ERUs
2021	10,207
2032	14,035
Growth in ERCs, 2021-2032	3,828

### Operating Expenses

Growth in operating expenses is projected at an average annual rate of three percent per year based on historical costs as well as discussions with HVSSD staff.

### Outstanding Debt

The District has no outstanding debt obligations.

### Capital Projects

There are 78 capital projects anticipated between 2022 and 2032. While the costs shown in the table below are in \$2021, an inflation rate of three percent per year has been added to these projects in the financial model to cover the increased costs of construction over time.

**TABLE 2: SEWER CAPITAL PROJECTS**

<b>Project</b>	<b>Estimated Cost (\$2021)</b>	<b>Year Budget</b>
New Farm Shop	\$699,000	2022
Lab	\$620,000	2022
Generator	\$160,000	2022
Upgrade HVSSD Lift Station	\$638,025	2022
Land Disposal	\$13,083,750	2022
Winter Storage	\$3,080,000	2022
Mechanical Plant Aeration Upgrade	\$12,470,000	2025
Cell Dredging	\$5,000,000	2022
2012 Ram 1500	\$40,000	2022
Aerator Motor 1	\$7,500	2023
2008 Case IH LBX432 Bailer	\$114,736	2023
2008 Phiber AC4104 Bale Accumulator	\$26,980	2023
2013 Electric Hay Rake H&S HD11 17 Wheel	\$39,243	2023
Utility Pump 1	\$12,500	2023
Utility Pump 2	\$12,500	2023
2013 Ford F-350 Service Truck	\$175,000	2024
SCADA System Updates/Upgrades	\$120,000	2024
Lagoon Fence - 1500 feet @ \$10 / ft East Side	\$15,000	2025
Anoxic Mixer 2	\$21,000	2025
Aerator Chain 1	\$7,500	2025
Aerator Chain 2	\$7,500	2025
Aerator Chain 3	\$7,500	2025
Aerator Chain 4	\$7,500	2025
Grinder 1 - 18 in Muffin Monster	\$23,500	2026
Grinder 2 - 18 in Muffin Monster	\$23,500	2026
Pivot 5	\$59,414	2026
Pond Screen	\$32,500	2026
Farm Pump 1 - 1260 gpm Peabody Floway 125 hp	\$46,500	2027
Farm Pump 2 - 1260 gpm Peabody Floway 125 hp	\$46,500	2027
Farm Pump 3 - 1260 gpm Peabody Floway 125 hp	\$46,500	2027
Farm Pump 4 - 1260 gpm Peabody Floway 125 hp	\$46,500	2027
2012 New Holland Tractor w/Haybine Header & Loader	\$201,370	2027
Blower 1 - 3890 cfm Multi-Stage Centrifugal	\$150,000	2027
Blower 2 - 3890 cfm Multi-Stage Centrifugal	\$150,000	2027
Blower 3 - 3890 cfm Multi-Stage Centrifugal	\$150,000	2027
Blower 4 - 3890 cfm Multi-Stage Centrifugal	\$150,000	2027
Farm Pump 5 - 500 gpm Peabody Floway 50 hp	\$33,000	2027
Farm Pump 6 - 500 gpm Peabody Floway 50 hp	\$33,000	2027
Demco 850	\$3,900	2027
Sonic Flow Meter	\$7,900	2027
Ram 1500 Truck	\$40,000	2027
Scum Pump 1 - 185 gpm submersible 3 hp @ 24 ft	\$24,500	2028
Scum Pump 2 - 185 gpm submersible 3 hp @ 24 ft	\$24,500	2028
Aerator Gear Box 1	\$12,500	2028
Aerator Gear Box 2	\$12,500	2028
Aerator Gear Box 3	\$12,500	2028
Aerator Gear Box 4	\$12,500	2028
Ford F-350 Service Truck	\$175,000	2029

Project	Estimated Cost (\$2021)	Year Budget
Pivot 1 - 11200' w/200' Swing	\$173,858	2029
Pivot 2 - 1320'	\$116,376	2029
SCADA System Updates/Upgrades	\$120,000	2029
Heber Parshall Flume - 12"	\$4,000	2030
Pivot 3 - 1250' w/250' Swing	\$175,138	2030
West Field - 13500' @ 25% bad + sfr Fencing	\$81,000	2030
East Field - 15400' @ 25% bad + sfr Fencing	\$92,400	2030
Cell 1 to Cell 2 - 30 x 48 up	\$17,000	2030
Cell 1A to Cell 2 - 31 x 48 up	\$17,000	2030
Cell 2 to Cell 3 - 32 x 48 up	\$17,000	2030
Cell 4 to Cell 5 - 33 x 48 up	\$17,000	2030
Into Cell 1A - 34 x 48 up	\$17,000	2030
Lagoon Isolation Gate - 1 - 36" x 36" aluminum UP	\$8,000	2030
Lagoon Isolation Gate - 2 - 36" x 36" aluminum UP	\$8,000	2030
Into cell 1 - 36 x 36 up	\$17,000	2030
Pivot 4 - 820'	\$80,720	2030
Electrical Upgrade	\$500,000	2030
Generator	\$60,000	2030
South Aeration Piping - 1	\$200,000	2030
South Aeration Piping - 2	\$200,000	2030
West Aeration Piping	\$50,000	2030
2007 International 7300 Dump Truck	\$118,000	2031
Recirculation pump 1 - 2800 gpm axial flow 5 hp @ 2 ft	\$26,000	2031
Anoxic Mixer 1 - 6 hp 16 inch blade	\$21,000	2031
Ram 1500 Truck	\$40,000	2032
Aerator Chain 5	\$7,500	2032
Aerator Chain 6	\$7,500	2032
Aerator Chain 7	\$7,500	2032
Aerator Chain 8	\$7,500	2032
Cell Dredging	\$2,500,000	2032
<b>TOTAL</b>	<b>\$42,589,810</b>	

### Cash Balances

The beginning cash balance in the Sewer Fund is \$6,297,310.<sup>1</sup>

### Rate Structuring

Current sewer rates are structured as follows:

**TABLE 3: CURRENT SEWER RATES**

	Current Monthly Rates
Base Rate per ERU	\$1.50
Volume per 1,000 gallons	\$0.52

<sup>1</sup> Source: Heber Valley Special Service District

## Current Rate Projections

The current rate structure, with no projected rate increases and no new bonds issued, fails to meet the future needs of the Sewer Fund. The capital expenses required to maintain the current service level create a further financial strain under current rates. Financial projections for the current rates with no future rate increases or issuance of bonds are shown in the following table. With no changes to the existing situation, the Sewer Fund will not have sufficient cash flows to cover its costs by 2022.

**TABLE 4: CURRENT RATE PROJECTIONS**

	2021	2022	2023	2024	2025	2026	2027
Net Revenues before Debt Service	\$357,426	\$1,002,560	\$1,053,600	\$1,080,577	\$1,108,362	\$1,136,981	\$1,166,459
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Expenses	-	(\$24,020,398)	(\$226,459)	(\$322,354)	(\$14,109,378)	(\$161,039)	(\$1,319,631)
Debt Service Coverage Ratio	-	-	-	-	-	-	-
Days Cash on Hand (Target 180 days)	3,181	(6,196)	(6,291)	(6,026)	(10,006)	(9,582)	(9,505)

## Proposed Rate Options

A proposed rate increase is included below. General rate objectives considered in this analysis include:

- Ensure sufficient revenues to cover all operating costs and maintain a debt coverage ratio of at least 1.25;<sup>2</sup>
- Maintain at least 180 days cash on hand;
- Balance minimizing rates with minimizing new debt obligations when debt obligations are considered; and
- Proposed rates should be easy to implement and administer.

The proposed sewer rates are structured to ensure that new capital improvements can be constructed, that inflationary operating costs can be met, and that the sewer utility fund maintains at least 180 days cash on hand.

### Proposed Rate Increase

Under this increase, the base rate per ERC would experience a 1-year increase to \$14.65 in 2022. The base rate would remain constant thereafter. The District would also increase the usage rate from \$0.52 per 1,000 gallons to \$0.65 per 1,000 gallons in 2022 and maintain this rate into the future. The District would also need to issue a \$22.5 million bond in 2022, and a bond for \$12.5 million in 2025 to maintain financial stability.

<sup>2</sup> Debt coverage ratios are measured by comparing operating cash (revenues less operating expenses) to annual debt service obligations before capital costs.

**TABLE 5: RECOMMENDED SEWER RATES**

	2021	2022
Base Only	\$1.50	\$14.65
Volume Charge	\$0.52	\$0.65

With these proposed rate increases, the Sewer Fund will maintain sustainability.

**TABLE 6: RATE INCREASE KEY RATIOS (2021-2026)**

	2021	2022	2023	2024	2025	2026
Net Revenues before Debt Service	\$357,426	\$2,743,752	\$2,845,873	\$2,925,462	\$3,007,439	\$3,091,876
Debt Service	-	-	(\$1,472,177)	(\$1,472,177)	(\$1,472,177)	(\$2,290,052)
Capital Expenses	-	(\$24,020,398)	(\$226,459)	(\$322,354)	(\$14,109,378)	(\$161,039)
Debt Service Coverage Ratio	-	-	1.93	1.99	2.04	1.35
Days Cash on Hand (Target 180 days)	3,181	1,767	1,721	1,870	1,635	1,620

**TABLE 7: RATE INCREASE KEY RATIOS (2027-2032)**

	2027	2028	2029	2030	2031	2032
Net Revenues before Debt Service	\$3,178,845	\$3,268,424	\$3,360,689	\$3,455,723	\$3,553,608	\$3,654,429
Debt Service	(\$2,290,052)	(\$2,290,052)	(\$2,290,052)	(\$2,290,052)	(\$2,290,052)	(\$2,290,052)
Capital Expenses	(\$1,319,631)	(\$121,758)	(\$741,357)	(\$2,037,088)	(\$221,746)	(\$3,557,481)
Debt Service Coverage Ratio	1.39	1.43	1.47	1.51	1.55	1.60
Days Cash on Hand (Target 180 days)	1,290	1,335	1,228	802	889	156

### Impacts on Existing Sewer Ratepayers

Under this rate increase, existing sewer ratepayers using a volume of 4,000 gallons a month will see their rates increase from \$3.58 per month (\$42.96 annually) to \$17.25 per month (\$207.00 annually). This represents an annual increase of \$164.04 or \$13.67 per month.

### **Benefits from Change in Water Rate Structure**

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Benefits from the change in the sewer rates are that the District will be able to better meet its capital needs requirements as well as maintain a high level of service to its residents.

### **Debt Coverage Ratios**

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Minimum debt coverage ratios are generally assumed to be 1.25. The rate increase maintains at least this ratio.

### **Days Cash on Hand**

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The rate increase maintains the District's goal of maintaining over 180 days cash on hand over the next 10 years.

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## Appendix A: Rate Increase Financial Projections

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