

South Davis Sewer District

Sewer Impact Fee Analysis

February 2, 2023

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EXECUTIVE SUMMARY

South Davis Sewer District (the District) provides this Sewer Impact Fee Analysis (IFA) update to the District's impact fees for sewer treatment plant and collection. The purpose of the Sewer Impact Fee Analysis amendment is to determine the maximum impact fee that may be assessed to new development given the District's current levels of service, updated costs, existing facilities, and projected growth. The proposed impact fee is based upon system demands, capital need projections, and accounts for historic costs of facilities. Information for this analysis has come from the *Impact Fee Facilities Plan* (IFFP) prepared by Aqua Engineering (Aqua) with a ten-year capital planning horizon that clearly defines the current and future level of service that the District will provide.

An impact fee is a one-time fee, not a tax, charged to new development to recover the District's cost of constructing sewer treatment and collection facilities that have added or will add capacity to serve new growth. The fee is assessed at the time of building permit issuance as a condition of development approval. The calculation of the impact fee must strictly follow the Impact Fees Act¹ to ensure that the fee is equitable and fair.

SDSD IMPACT FEE SERVICE AREA AND LEVEL OF SERVICE DEFINITIONS PER EDU

Aqua has defined the District's level of service in the IFFP prepared in 2022. The average day demand for an Equivalent Dwelling Unit (EDU), a unit of demand measure based on a typical residential unit's flow and loadings, is described in Figure 1.1 and assumes a persons per household of 3.08 people. A single EDU is equal to 260 gallons per day (gpd). Flow and billing data suggests that the District is projected to serve a demand of 43,409 EDUs as of 2024. This demand is comprised of both residential and non-residential customers based upon an average dry weather demand of 11.29 MGD at 260 gpd per EDU. Full buildout demands are estimated to total 61,538 EDUs and the maximum treatment plant design capacity is 16MGD. Approximately 29% of the buildout demand is yet to be developed. Future growth within the District will require an additional 4.71 MGD, equal to 18,684 EDUs, in capacity within the treatment plant and collection facilities.

DISTRICT TREATMENT AND COLLECTION EXPENSES

Impact fees may only be collected and used to fund major infrastructure that has been or will be expanded to provide capacity for new growth. Impact fees may not fund repair and maintenance of existing facilities nor operational expenses. The District uses monthly user rates and property tax revenues to fund operations and maintenance expenses.

Assets the District may have received as developer exactions or contributions are not included in the impact fees. There are three bonds currently outstanding that have funded major treatment plant upgrades and improvements to the collection system but only two are impact fee eligible. No future revenue bonds are anticipated nor included in the impact fees.

Until new development utilizes the full capacity in existing facilities, the District can assess an impact fee to recover its cost to overbuild the sewer facilities which provide latent capacity that is available to serve future development.

The total value of the District's existing facilities is \$129,333,818 but only \$86.1M² is included in the impact fee. Only the actual original costs of the existing improvements without inflationary adjustments have been considered³. An analysis has been completed to identify the capacity to serve new growth. This will be discussed in greater detail later in this document.

¹ Utah Impact Fees Act 11-36A

² Appendix B

³ See Appendix B for the detailed list of assets for the treatment and collection system.

DISTRICT TREATMENT AND COLLECTION IMPACT FEES

The IFFP prepared by Aqua identifies a list of capital projects to be constructed over the next ten years. The present value of the future improvements based on a 2022 fiscal year total of capital improvements is \$38,052,200⁴. A 3.5% construction inflation factor is added to the present value resulting in a future value of \$42,189,154. Only about 43% of the future capital projects totaling \$18,236,944 are included in the impact fee.

Figure ES.1: Calculation of the Sewer Impact Fee per EDU

	Total Cost	% of Project to Existing Users	% of Project to Growth	Cost to Existing Users	Cost to Future Users
Future 10 Year Projects	\$ 42,189,154	56.773%	43.23%	\$ 23,952,210	\$ 18,236,944
Future Bonds	-	0.000%	0.00%	-	-
Existing Assets	86,096,340	70.54%	29.46%	60,732,709	25,363,631
Existing Bonds	12,315,670	88.47%	11.53%	10,895,638	1,420,032
Professional Expenses	64,778	0.00%	100.00%	-	64,778
Grant Credits	(1,400,000)	56.77%	43.23%	(794,827)	(605,173)
	\$ 139,265,943			\$ 94,785,731	\$ 44,480,213
				Future ERUs to Buildout	18,129
				Total Impact Fees	\$ 2,453.54

RECOMMENDED PLANT AND COLLECTION IMPACT FEE PER EDU

The impact fee calculated in ES.1 will be applied throughout the District-Wide Service Area but will also apply to any connections served outside of the District’s Service Area. Residential units will pay impact fees per unit based upon an equivalency of the development unit shown in ES.2 based upon the demand per EDU. For non-residential occupancies, new connections will also pay an impact fee according to the schedule listed in Figure ES.2 and in Appendix F, which is based on average monthly culinary water usage and estimated loadings. An industrial user with loadings higher than the parameters shown in Figure 1.1 per EDU may be charged additional EDUs above that which flows alone would require.

Figure ES.2: Maximum Legal Fee per EDU

Zoning Category	Water Demand Adjusted for I&I	Equivalent EDUs	Impact Fee per EDU	Recommended Impact Fee
Residential per Dwelling Unit				
Residential per Dwelling Unit	260	1.00	\$ 2,453.54	\$ 2,453.54
Commercial (Non-SIU)-per fixture unit	260	0.05	2,453.54	122.68
Significant Industrial User-per 100 gpd discharged	260	0.3846	2,453.54	943.67

Figure ES.3: Non-Standard Calculation

Non-Standard Calculation	Daily Discharge per 100 gpd x 0.3846 x \$2,453.54 = Impact Fee
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The recommended impact fee structure presented in this analysis has been prepared to satisfy the Impact Fees Act, Utah Code Ann. Title 11 Chapter 36a et. Seq. (the “Act”) and represents the maximum sewer impact fee that the District may assess within its impact fee service area. The District must use other revenue sources to fund projects identified in the IFFP that constitute repair and replacement, cure existing deficiencies, or maintain the existing level of service for current users.

⁴ See Appendix C for the detailed list of future capital projects.

CHAPTER 1: LEVEL OF SERVICE AND FUTURE GROWTH

LEVEL OF SERVICE DEFINITIONS PER EDU

Level of service is defined as demand standards considered in the design of the treatment plant and collection systems and in defining demand per Equivalent Dwelling Unit. An EDU is equivalent to the amount of wastewater that reaches the treatment plant created by a single-family home. The amount of wastewater reaching the plant is based upon the home's actual wastewater that enters the system as well as its proportion of the total system inflow & infiltration that enters the collection lines indirectly (I&I).

DISTRICT'S SERVICE AREA GROWTH

Currently the District serves five cities and some unincorporated areas in southern Davis County. The entire District forms one single impact fee service area and all communities receive equal service. All District infrastructure has been funded in essentially the same manner using impact fees plus user rates and fees. All areas within the District are subject to the same design standards, level of service, and methods of funding capital projects and so all areas within the District will be charged at the same impact fee rate.

TREATMENT LEVELS OF SERVICE

Plant capacity design standards are based upon at least six measures of the hydraulic, chemical, and biological demand that have been used to design different processes within the treatment plant facilities. Each process within the treatment plant is sized to meet individual process peak demands. All processes are combined and expressed in terms of EDUs. Level of service measures per EDU is shown in Figure 1.1.

Figure 1.1: Treatment Levels of Service per EDU

Description	Unit	Per Capita	Per EDU
Flow	gpd	84	260
BOD	lbs/day	0.15	0.45
COD	lbs/day	0.41	1.27
TSS	lbs/day	0.21	0.065
Ammonia	lbs/day	0.024	0.074
Phosphorus	lbs/day	0.004	0.012

Service area growth results from new residences and non-residential users such as commercial, industrial, institutional, churches, schools, etc. In 2020 the District had 43,409 EDUs. It is anticipated that the District will grow to 61,538 EDUs (an increase of 18,129 EDUs) through buildout⁵. Significant growth is expected within the District's boundaries resulting in increased demand upon the District's treatment and collection facilities. New projects will be required to add sufficient capacity in the treatment and collection facilities to adequately serve new growth.

⁵ The growth projections in both population and EDUs are found in Appendix A of this document.

Figure 1.2: Projected District Growth in EDUs and Population ⁶

	% Annual Change MGD	EDUS	% Change EDUS	Population	% Change Pop
2024		43,409		164,954	
2030	0.38%	44,576	0.38%	169,387	0.38%
2040	0.36%	46,241	0.36%	175,717	0.36%
2050	0.35%	47,907	0.35%	182,047	0.35%
Max Capacity	28.45%	61,538	28.45%	233,844	28.45%

⁶ Appendix A, Rows 5-33

CHAPTER 2: EXISTING AND FUTURE FACILITY COSTS

IMPACT FEE ELIGIBLE COSTS

The Impact Fees Act specifically allows and limits costs included in impact fees. The following is a list of the key inclusions and exclusions.

The impact fees proposed in this analysis are calculated based upon:

- Costs of replacement facilities that are needed to perpetuate unused capacity in the system that growth will require;
- New capital infrastructure that provides new capacity for growth;
- Historic costs of existing improvements that maintain capacity that will serve new development; and
- Cost of professional services for engineering, planning services, and preparation of the impact fee facilities plan and impact fee analysis.

The costs, both direct capital and financing, that cannot be included in the impact fee are as follows:

- Projects that cure deficiencies for existing users;
- Projects that increase the level of service above that which is currently provided;
- Operations and maintenance costs;
- Costs of facilities funded by grants or other funds that the District does not have to repay; and
- Costs of reconstruction of facilities that do not have capacity to serve new growth.

HISTORIC CAPITAL PROJECT COSTS (BUY-IN COMPONENT)

The existing treatment and collection facilities' costs are divided between qualifying and non-qualifying expenses in Appendix B of this analysis. There is \$86.1M in total existing asset expense. This amount is divided between systems with \$30.5M relating to the treatment plant and \$55.6M relating to the collection system.

The District has already constructed and/or will invest \$129,333,818 in capital projects, equipment, vehicles, buildings, etc. Of this total amount, only qualifying costs will be considered in the impact fee analysis. Costs related to non-qualifying expenses such as vehicles, equipment, office buildings and other assets that do not directly relate to the sewer treatment or collection system or are specifically excluded by the Impact Fee Act.

Figure 2.1: Existing Facility Costs

	Existing Cost	Percent to Growth	Cost to impact Fees
Treatment Plants			
Treatment Plant Historical Costs	31,308,304	29.46%	9,223,299
Credit for Grant Funding of Treatment Plant	(800,000)	29.46%	(235,677)
Treatment Total	\$ 30,508,304		\$ 8,987,622
Collection			
Collections Historical Costs	55,588,036	29.46%	16,376,009
Credit for Trunkline Reimbursement		29.46%	-
Collection Total	\$ 55,588,036		\$ 16,376,009
Totals	\$ 86,096,340		\$ 25,363,631

Source: Aqua Engineering, Impact Fee Facilities Plan 2022: Table 3-1

FUTURE CAPITAL PROJECT COSTS

The Impact Fee Facilities Plan lists the future capital projects that should be completed within the next ten years. Figure 2.2 defines the 2022 estimated cost, a year of construction, the percent that is growth related, and the final estimated construction year cost that considers a 3.5% annual rate of construction inflation. Construction year cost including professional expenses totals \$42,253,933.

Figure 2.2: Future Facility Costs

Category	2022 Costs	FV Inflated Costs	% of Total
Non-Qualifying	\$ 20,636,855	\$ 23,952,210	57%
Qualifying Treatment	15,482,012	18,236,944	43%
Qualifying Collection	-	-	0%
Qualifying Professional	1,933,333	64,778	0%
Totals	\$ 38,052,200	\$ 42,253,933	100%

OUTSTANDING AND FUTURE BOND EXPENSE

The District has three revenue bonds currently outstanding which have funded major treatment plant upgrades and improvements to the collection system. The District does not anticipate issuing additional revenue bonds to fund future facilities but the District may refund existing debt in the future. Depending upon the projects funded, each existing and future bond has a differing percentage of the interest that qualifies to be included in the impact fees. Only the interest on the bonds is included in the impact fee as the principal is already reflected in the historic cost of a project already funded. Figure 2.3 shows the allocations of the qualifying interest expense to each functional category.

Figure 2.3: Outstanding Bond Expense

Bond Series	Total Cost	% of Project to Existing Users	% of Project to Growth	Cost to Existing Users	Cost to Future Users
Series 2017A (WRR)	\$ 7,495,431	100.00%	0.00%	\$ 7,495,431	\$ -
Series 2019 (South Plant Upgrades)	2,543,336	70.54%	29.46%	1,794,080	749,256
Series 2021 (South Plant Upgrades/ Collections)	2,276,903	70.54%	29.46%	1,606,127	670,776
	\$ 12,315,670			\$ 10,895,638	\$ 1,420,032

ENGINEERING PROFESSIONAL SERVICES

The Impact Fees Act allows the District to recover the cost of planning and engineering through impact fees⁷. The IFFP has determined that \$64,778 of the planning and engineering cost estimate is a qualifying impact fee expense resulting in a portion of the impact fee of \$3.57 per EDU.

⁷ Impact Fees Act 11-36a-305(1)(c)

Figure 2.4: Engineering/Professional Planning Services Expense

Year	Cost
2022	\$ 30,000
2027	34,778
	\$ 64,778

Figure 2.5: Impact Fee Analysis Update Expense

Qualifying Cost	\$ 64,778
Future ERUs to Buildout	18,129
Impact Fee Per ERU	\$ 3.57

CHAPTER 3: PROPORTIONATE SHARE ANALYSIS

The Impact Fees Act requires that the impact fee analysis estimate the proportionate share of the costs for existing capacity that will be recouped; and the costs of impacts on system improvements that are reasonably related to the new development activity. South Davis Sewer District continues to grow and there is still expansion in the area. The capital improvement plan clearly defines what projects are growth related, repair and replacement, or pipe upsizing (the upsizing may include some element of growth). The projects are detailed in the Future Capital Projects section.

The proportionate share analysis is required to address the manner of how the District has funded existing sewer facilities. Historically the District has received revenues from a variety of different funding sources including:

- Property Tax
- User Rates
- Grants
- Bond Proceeds
- Impact Fees

The assets included in the buy-in cost for existing treatment and collection infrastructure do not include assets that were funded through any source other than user rate or impact fee revenues. All assets have been funded by existing users. In order to ensure fairness to existing users, impact fees are an appropriate means of funding future capital infrastructure. Using impact fees places a burden on future users that is equal to the burden that was borne in the past by existing users. (Utah Impact Fees Act, 11-36a-304(2)(c)(d))

FUNDING SOURCES

Just as existing infrastructure has been funded through different means; it is required by the Impact Fees Act to evaluate all means of funding future capital. There are positive and negative aspects to the various forms of funding. It is important to evaluate each.

General Fund/User Rates

The general fund and user rates have both been funded in one form or another by existing users. It would be an additional burden to existing users to use this revenue source to fund future capital to meet the needs of future users. This is not an equitable policy and can place too much stress on the tight budgets of the general fund and other user rate funds. The sewer rates in South Davis Sewer District are dedicated to operation and maintenance, repair and replacement, and ensuring a stable reserve for maintaining a good credit rating. If rate revenues are required to supplement the capital required by growth, the District will reimburse the user rate fund with impact fees as they are collected and act as a loan to the impact fee fund to be repaid.

Property Taxes

It is true that property taxes may be a stable source of income. However, property taxes are not based on impact placed upon a system. Property taxes are based upon property valuation. Using property taxes to fund future capital again places too much burden on existing users and subsidizes growth.

Impact Fees

Impact fees are a fair and equitable means of providing infrastructure for future development. They provide a rational nexus between the costs borne in the past and the costs required in the future. The Impact Fees Act ensures that future development is not paying any more than what future growth will demand. Existing users and future users receive equal treatment; therefore, impact fees are the optimal funding mechanism for future growth-related capital needs.

Developer Credits

If a project included in the Impact Fee Facilities Plan (or a project that will offset the demand for a system improvement that is listed in the IFFP) is constructed by a developer, that developer is entitled to a credit against impact fees owed. (Utah Impact Fees Act, 11-36a-304(2)(f))

Time-Price Differential

Utah Code 11-36a-304(2)(h) allows for the inclusion of a time-price differential in order to create fairness for amounts paid at different times. To address the time-price differential, this analysis includes an inflationary component to account for construction inflation for future projects. Projects constructed after the year 2022 will be calculated at a future value with a 3.5% inflation rate. All users who pay an impact fee today or within the next six to ten years will benefit from projects to be constructed and included in the fee.

Other

In this analysis, there is also a credit for grant funding related to the American Rescue Plan Act (ARPA). The current impact fee fund balance for sewer was credited against the fee.

DISTRICT REVENUES USED TO FUND CAPITAL PROJECTS

Historically the District has funded its existing sewer infrastructure through user fees (rate revenues), and impact fees with the help of bond financing to amortize large project costs over time. Property tax has been used primarily in paying for the costs of operations and maintenance. The treatment plant has not been funded with developer exactions and it is not the policy of the District to enter into developer agreements as the collection facilities are primarily large interceptor lines.

The District has not exacted improvements from developers or entered into reimbursement agreements and therefore all infrastructure is assumed to be District funded. Any developer contributions, donations, exactions, or reimbursement agreements would be related to the individual City's collection system and have no bearing on the District's impact fee. The District will continue using impact fee revenues and user fee revenues to expand the collection system capacity as needed. No grants are foreseen for either treatment or collection. Using impact fees places a burden on future users that is equal to the burden that was borne in the past by existing users.⁸

⁸ Utah Impact Fees Act, 11-36a-304(2) (c) (d)

CHAPTER 4: IMPACT FEE CALCULATIONS

To calculate a fair impact fee, we determine a growth-related cost of existing and future facilities and divide the qualifying cost by the number of new units that will benefit from the unused capacity. A cost per unit is calculated by dividing impact fee qualifying cost by the amount of capacity to derive the cost per capacity unit. This cost per unit of capacity is then multiplied by the amount of demand, in terms of gallons sent to the treatment plant, that a typical residential home or EDU would utilize. The calculation of the demand per EDU is found in Figure 1.1.

MAXIMUM LEGAL SEWER IMPACT FEES PER EDU

The combined impact fees per EDU for treatment, collection, and professional services total \$2,453.54 per EDU. This is the legal maximum amount that the District may charge as an impact fee. The District’s Board may adopt an impact fee at a lower amount but cannot adopt a fee that is higher.

The impact fee per EDU is the fee that will be assessed to all residential single family and multi-family units. Analysis of the single family and multifamily bills resulted in a nearly identical impact from the average unit of each class. Non-residential users do have a different impact on the system and a specific category has been created for non-residential users. Residential users are charged a flat fee per unit while non-residential use is charged according to the historic monthly water usage.

Figure 4.1: Base Fee per EDU

	Total Cost	% of Project to Existing Users	% of Project to Growth	Cost to Existing Users	Cost to Future Users
Future 10 Year Projects	\$ 42,189,154	56.773%	43.23%	\$ 23,952,210	\$ 18,236,944
Future Bonds	-	0.000%	0.00%	-	-
Existing Assets	86,096,340	70.54%	29.46%	60,732,709	25,363,631
Existing Bonds	12,315,670	88.47%	11.53%	10,895,638	1,420,032
Professional Expenses	64,778	0.00%	100.00%	-	64,778
Grant Credits	(1,400,000)	56.77%	43.23%	(794,827)	(605,173)
	\$ 139,265,943			\$ 94,785,731	\$ 44,480,213
				Future ERUs to Buildout	18,129
				Total Impact Fees	\$ 2,453.54

Figure 4.2: Base Fee per EDU

Zoning Category	Water Demand Adjusted for I&I	Equivalent EDUs	Impact Fee per EDU	Recommended Impact Fee
Residential per Dwelling Unit				
Residential per Dwelling Unit	260	1.00	\$ 2,453.54	\$ 2,453.54
Commercial (Non-SIU)-per fixture unit	260	0.05	2,453.54	122.68
Significant Industrial User-per 100 gpd discharged	260	0.3846	2,453.54	943.67

NON-STANDARD DEMAND ADJUSTMENT

The District may, on a case-by-case basis, adjust the impact fee to respond to a user that has an impact on the system that is more than the typical user. Some situations when this would be appropriate would be if a user will have a unique collection process or will have a different I&I rate than the standard non-residential or commercial user. The District may use the calculation below to calculate the fee that is fair for such a user. If a developer feels their impact on the system will be significantly less than the typical user, they must show a reasonable basis for this determination and the District can work with them to determine their fair impact fee.

Figure 4.3: Non-Standard Impact Fee Formula

Non-Standard Impact Fee Formula	
Non-Standard Calculation	Daily Discharge per 100 gpd x 0.3846 x \$2,453.54 = Impact Fee

CERTIFICATION AND APPENDICES

In accordance with Utah Code Annotated, 11-36a-306(2), Matthew Millis on behalf of CapEx Planning LLC makes the following certification:

I certify that the attached impact fee analysis:

1. Includes only the costs of public facilities that are:
 - a. allowed under the Impact Fees Act; and
 - b. actually incurred; or
 - c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. Does not include:
 - a. costs of operation and maintenance of public facilities; or
 - b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
3. Offsets costs with grants or other alternate sources of payment; and
4. Complies in each and every relevant respect with the Impact Fees Act.

Matthew Millis makes this certification with the following caveats:

1. All of the recommendations for implementations of the Impact Fee Facilities Plans ("IFFPs") made in the IFFP documents or in the impact fee analysis documents are followed in their entirety by South Davis Sewer District staff and elected officials.
2. If all or a portion of the IFFPs or impact fee analyses are modified or amended, this certification is no longer valid.
3. All information provided to CapEx Planning LLC, its contractors or suppliers is assumed to be correct, complete and accurate. This includes information provided by South Davis Sewer District and outside sources. Copies of letters requesting data are included as appendices to the IFFPs and the impact fee analysis.

Dated: February 2, 2023



Matt Millis
CapEx Planning LLC

APPENDICES

APPENDIX A: SERVICE AREA GROWTH PROJECTIONS

South Davis Sewer District

	A	B	C	D	E	F	
1	TABLE A.1: SEWER AREA GROWTH						1
2		% Annual Change MGD	EDUS	% Change EDUS	Population	% Change Pop	2
3	2024		43,409		164,954		3
4	2030	0.38%	44,576	0.38%	169,387	0.38%	4
5	2040	0.36%	46,241	0.36%	175,717	0.36%	5
6	2050	0.35%	47,907	0.35%	182,047	0.35%	6
7	Max Capacity	28.45%	61,538	28.45%	233,844	28.45%	7

Source: Aqua Engineering, Impact Fee Facilities Plan 2022: Tables 2-1 and 2-2

A B C D E F

APPENDIX B: EXISTING ASSETS DIVIDED BY FUNCTION

South Davis Sewer District

A B C D

TABLE B.1 EXISTING ASSETS

	Account No.	Total Cost	Qualifying Cost
Treatment			
Bldgs & Facilities	182000.01	\$ 2,710,250	\$ 2,710,250
Bldgs & Facilities	182000.02	21,597,044	21,597,044
Bldgs & Facilities	182000.11	22,231,175	
Imp other than Bldgs	184000.02	28,893	28,893
Imp other than Bldgs	184000.11	6,537,517	
Construction in Progress	188000.04	6,972,118	6,972,118
Treatment Total		\$ 60,076,996	\$ 31,308,304
Collection			
Outfall/ Sewer Lines	189000.01	\$ 46,769,348	\$ 46,769,348
Outfall/ Sewer Lines	189000.02	5,748,121	5,748,121
Outfall/ Sewer Lines	189000.04	-	-
Operations and Supply Equipment	189200.01	719,712	
Operations and Supply Equipment	189200.02	567,672	
Operations and Supply Equipment	189200.11	6,985,855	
Tools & Test Equip	189300.01	440,120	
Tools & Test Equip	189300.02	387,698	
Tools & Test Equip	189300.03	108,736	
Tools & Test Equip	189300.05	247,531	
Mobile Equipment	189400.01	2,226,709	
Mobile Equipment	189400.02	1,191,126	
Mobile Equipment	189400.03	22,437	
Office Furniture & Equipment	189500.01	388,211	
Office Furniture & Equipment	189500.02	378,130	
Office Furniture & Equipment	189500.03	4,850	
Land ROW	189600.01	421,633	421,633
Land ROW	189600.02	2,648,934	2,648,934
Collection Total		\$ 69,256,822	\$ 55,588,036
System Totals		\$ 129,333,818	\$ 86,896,340

TABLE B.2: EXISTING ASSETS

	Existing Cost	Percent to Growth	Cost to impact Fees
Treatment Plants			
Treatment Plant Historical Costs	31,308,304	29.46%	9,223,299
Credit for Grant Funding of Treatment Plant	(800,000)	29.46%	(235,677)
Treatment Total	\$ 30,508,304		\$ 8,987,622
Collection			
Collections Historical Costs	55,588,036	29.46%	16,376,009
Credit for Trunkline Reimbursement		29.46%	-
Collection Total	\$ 55,588,036		\$ 16,376,009
Totals	\$ 86,096,340		\$ 25,363,631

Source: Aqua Engineering, Impact Fee Facilities Plan 2022: Table 3-1

A B C D

APPENDIX C: SANITARY SEWER 10 YEAR CAPITAL PROJECTS

South Davis Sewer District

1	A	B	C	D	E	F	G	H	I	J	K	L	1
2	Construction Cost Inflation Rate*		3.5%										2

3	TABLE C.1: SEWER CAPITAL PROJECTS										3
4	Project Name	% Impact Fee Qualifying	Year to be Constructed	2022 Cost	2022 % Impact Fee Qualifying	Construction Cost	Total Project Cost	Impact Fee Qualifying Cost	Non Impact Fee Qualifying	4	
5	Current Treatment Expansion										4
6	Headworks	33.63%	2025	\$ 8,295,620	\$ 2,789,763	\$ 9,197,502	\$ 9,197,502	\$ 3,093,060	\$ 6,104,442	5	
7	Primary Clarifier	100.00%	2025	4,289,840	4,289,840	4,756,222	4,756,222	4,756,222	-	6	
8	MBBR System	38.67%	2025	13,476,280	5,210,828	14,941,393	14,941,393	5,777,338	9,164,054	7	
9	Dewatering Building	33.63%	2025	5,431,400	1,826,545	6,021,890	6,021,890	2,025,123	3,996,767	8	
10	Effluent Pipe Replacement	33.63%	2025	4,059,060	1,365,036	4,500,352	4,500,352	1,513,440	2,986,913	9	
11	Treatment Facilities Subtotal	43.55%		\$ 35,552,200	\$ 15,482,012	\$ 39,417,360	\$ 39,417,360	\$ 17,165,183	\$ 22,252,176	11	
12	Collection										12
13						-				13	
14						-				14	
15	Collection Subtotal			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	15	
16	Miscellaneous										16
17	New Admin Building	38.67%	2025	\$ 2,500,000	\$ 966,667	\$ 2,771,795	\$ 2,771,795	\$ 1,071,761	\$ 1,700,034	17	
18										18	
19	Miscellaneous Subtotal			\$ 2,500,000	\$ 966,667	\$ 2,771,795	\$ 2,771,795	\$ 1,071,761	\$ 1,700,034	19	
20	Ten Year Sanitary Sewer			\$ 38,052,200	\$ 16,448,679	\$ 42,189,154	\$ 42,189,154	\$ 18,236,944	\$ 23,952,210	20	

21 Source: Aqua Engineering , Impact Fee Facilities Plan 2022: Table 4-1

22 *Based on 20 years average cost of inflation using ENR and net of interest earnings

23

25	Category	2022 Costs	FV Inflated Costs	% of Total	25
26	Non-Qualifying	\$ 20,636,855	\$ 23,952,210	57%	26
27	Qualifying Treatment	15,482,012	18,236,944	43%	27
28	Qualifying Collection	-	-	0%	28
29	Qualifying Professional	1,933,333	64,778	0%	29
30	Totals	\$ 38,052,200	\$ 42,253,933	100%	30

31	A	B	C	D	E	F	G	H	I	J	K	L	31
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APPENDIX C: SANITARY SEWER 10 YEAR CAPITAL PROJECTS

South Davis Sewer District

Inflation Rate 3.50%

	A	B	C	D	E	F	G	H	I	J	K	L	
1	TABLE C.2: FUTURE VALUE CAPITAL PROJECTS												1
2		1.000	1.035	1.071	1.109	1.148	1.188	1.229	1.272	1.317	1.363	1.411	2
3	Project	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	3
4	Current Treatment Expansion												4
5	Headworks	\$ -	\$ -	\$ -	9,197,502	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5
6	Primary Clarifier	-	-	-	4,756,222	-	-	-	-	-	-	-	6
7	MBBR System	-	-	-	14,941,393	-	-	-	-	-	-	-	7
8	Dewatering Building	-	-	-	6,021,890	-	-	-	-	-	-	-	8
9	Effluent Pipe Replacement	-	-	-	4,500,352	-	-	-	-	-	-	-	9
10	Treatment Total	\$ -	\$ -	\$ -	39,417,360	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	10
11	Collection												11
12		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	12
13		-	-	-	-	-	-	-	-	-	-	-	13
14	Collection Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	14
15	Miscellaneous												15
16	New Admin Building	-	-	-	2,771,795	-	-	-	-	-	-	-	16
17													17
18													18
19													19
20													20
21													21
22													22
23	Miscellaneous Total	\$ -	\$ -	\$ -	2,771,795	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	23
24	Total Projects	\$ -	\$ -	\$ -	42,189,154	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	24
25	A	B	C	D	E	F	G	H	I	J	K	L	25
26													26
27													27
28	TABLE C.3: FUTURE VALUE QUALIFYING PROJECTS												28
29		1.000	1.035	1.071	1.109	1.148	1.188	1.229	1.272	1.317	1.363	1.411	29
30	Project	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	30
31	Headworks	\$ -	\$ -	\$ -	3,093,060	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	31
32	Primary Clarifier	-	-	-	4,756,222	-	-	-	-	-	-	-	32
33	MBBR System	-	-	-	5,777,338	-	-	-	-	-	-	-	33
34	Dewatering Building	-	-	-	2,025,123	-	-	-	-	-	-	-	34
35	Effluent Pipe Replacement	-	-	-	1,513,440	-	-	-	-	-	-	-	35
36	Treatment Total	\$ -	\$ -	\$ -	17,165,183	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	36
37	Collection												37
38		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	38
39		-	-	-	-	-	-	-	-	-	-	-	39
40	Collection Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	40
41	Miscellaneous												41
42	New Admin Building	-	-	-	1,071,761	-	-	-	-	-	-	-	42
43													43
44													44
45	Miscellaneous Total	\$ -	\$ -	\$ -	1,071,761	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	45
46	Total Projects	\$ -	\$ -	\$ -	18,236,944	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	46
	A	B	C	D	E	F	G	H	I	J	K	L	

APPENDIX C: SANITARY SEWER 10 YEAR CAPITAL PROJECTS

South Davis Sewer District

	A	B	C	D	E	F	G	H	I	J	K	L
1	TABLE C.5: FUTURE VALUE NON-QUALIFYING PROJECTS	1.000	1.035	1.071	1.109	1.148	1.188	1.229	1.272	1.317	1.363	1.411
2	Project	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
3	Project											
4	Headworks	\$ -	\$ -	\$ -	6,104,442	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	Primary Clarifier	-	-	-	-	-	-	-	-	-	-	-
6	MBBR System	-	-	-	9,164,054	-	-	-	-	-	-	-
7	Dewatering Building	-	-	-	3,996,767	-	-	-	-	-	-	-
8	Effluent Pipe Replacement	-	-	-	2,986,913	-	-	-	-	-	-	-
9		-	-	-	-	-	-	-	-	-	-	-
10	Treatment Total	\$ -	\$ -	\$ -	22,252,176	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11	Collection											
12		0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13		0	-	-	-	-	-	-	-	-	-	-
14	Collection Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	Miscellaneous											
16	New Admin Building	-	-	-	1,700,034	-	-	-	-	-	-	-
17	Miscellaneous Total	\$ -	\$ -	\$ -	1,700,034	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18	Total Projects	\$ -	\$ -	\$ -	23,952,210	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	A	B	C	D	E	F	G	H	I	J	K	L

APPENDIX D: OUTSTANDING AND FUTURE DEBT SERVICE

South Davis Sewer District

TABLE D.1: OUTSTANDING DEBT SERVICE													
	Series 2017A (WRR)			Series 2019 (South Plant Upgrades)			Series 2021 (South Plant Upgrades/ Collections)			Total			
Year	Principal	Interest	Fiscal	Principal	Interest	Fiscal	Principal	Interest	Fiscal	Principal	Interest	Fiscal	Total
2022	\$ 875,000	\$ 763,513	\$ 1,638,513	\$ 541,000	\$ 247,651	\$ 788,651	\$ 420,000	\$ 193,611	\$ 613,611	\$ 1,836,000	\$ 1,204,775	\$ 3,040,775	
2023	900,000	737,263	1,637,263	552,000	236,560	788,560	417,000	196,390	613,390	1,869,000.00	1,170,212.90	3,039,213	
2024	930,000	708,013	1,638,013	563,000	225,244	788,244	426,000	187,842	613,842	1,919,000.00	1,121,098.40	3,040,098	
2025	960,000	676,625	1,636,625	575,000	213,703	788,703	435,000	179,109	614,109	1,970,000.00	1,069,436.40	3,039,436	
2026	995,000	643,025	1,638,025	586,000	201,915	787,915	444,000	170,191	614,191	2,025,000.00	1,015,131.40	3,040,131	
2027	1,030,000	606,956	1,636,956	599,000	189,902	788,902	453,000	161,089	614,089	2,082,000.00	957,947.66	3,039,948	
2028	1,075,000	564,469	1,639,469	611,000	177,623	788,623	462,000	151,803	613,803	2,148,000.00	893,894.16	3,041,894	
2029	1,120,000	520,125	1,640,125	623,000	165,097	788,097	471,000	142,332	613,332	2,214,000.00	827,553.90	3,041,554	
2030	1,165,000	473,925	1,638,925	636,000	152,326	788,326	481,000	132,676	613,676	2,282,000.00	758,926.90	3,040,927	
2031	1,215,000	425,869	1,640,869	649,000	139,288	788,288	491,000	122,816	613,816	2,355,000.00	687,972.16	3,042,972	
2032	1,260,000	375,750	1,635,750	662,000	125,983	787,983	501,000	112,750	613,750	2,423,000.00	614,483.40	3,037,483	
2033	1,315,000	323,775	1,638,775	676,000	112,412	788,412	511,000	102,480	613,480	2,502,000.00	538,666.90	3,040,667	
2034	1,375,000	264,600	1,639,600	690,000	98,554	788,554	522,000	92,004	614,004	2,587,000.00	455,158.40	3,042,158	
2035	1,435,000	202,725	1,637,725	704,000	84,409	788,409	533,000	81,303	614,303	2,672,000.00	368,437.40	3,040,437	
2036	1,500,000	138,150	1,638,150	720,000	68,288	788,288	543,000	70,377	613,377	2,763,000.00	276,814.30	3,039,814	
2037	1,570,000	70,650	1,640,650	737,000	51,800	788,800	555,000	59,245	614,245	2,862,000.00	181,694.80	3,043,695	
2038				754,000	34,923	788,923	566,000	47,868	613,868	1,320,000.00	82,790.00	1,402,790	
2039				771,000	17,656	788,656	578,000	36,265	614,265	1,349,000.00	53,920.40	1,402,920	
2040						-	589,000	24,416	613,416	589,000.00	24,415.50	613,416	
2041							602,000	12,341	614,341	602,000.00	12,341.00	614,341	
	\$ 18,720,000	\$ 7,495,431	\$ 26,215,431	\$ 11,649,000	\$ 2,543,336	\$ 14,192,336	\$ 10,000,000	\$ 2,276,903	\$ 12,276,903	\$ 40,369,000	\$ 12,315,670	\$ 52,684,670	

TABLE D.2: DEBT SERVICE PROPORTION TO GROWTH					
Bond Series	Total Cost	% of Project to Existing Users	% of Project to Growth	Cost to Existing Users	Cost to Future Users
Series 2017A (WRR)	\$ 7,495,431	100.00%	0.00%	\$ 7,495,431	\$ -
Series 2019 (South Plant Upgrades)	2,543,336	70.54%	29.46%	1,794,080	749,256
Series 2021 (South Plant Upgrades/ Collections)	2,276,903	70.54%	29.46%	1,606,127	670,776
	\$ 12,315,670			\$ 10,895,638	\$ 1,420,032

APPENDIX E: PROPORTIONATE SHARE ANALYSIS

South Davis Sewer District

	A	B	C	D	E	F
1	TABLE E.1: QUALIFYING IMPACT FEE EXPENSE AND IMPACT FEE PER ERC					
2		Total Cost	% of Project to Existing Users	% of Project to Growth	Cost to Existing Users	Cost to Future Users
3	Future 10 Year Projects	\$ 42,189,154	56.773%	43.23%	\$ 23,952,210	\$ 18,236,944
4	Future Bonds	-	0.000%	0.00%	-	-
5	Existing Assets	86,096,340	70.54%	29.46%	60,732,709	25,363,631
6	Existing Bonds	12,315,670	88.47%	11.53%	10,895,638	1,420,032
7	Professional Expenses	64,778	0.00%	100.00%	-	64,778
8	Grant Credits	(1,400,000)	56.77%	43.23%	(794,827)	(605,173)
9		\$ 139,265,943			\$ 94,785,731	\$ 44,480,213
10					Future ERUs to Buildout	18,129
11					Total Impact Fees	\$ 2,453.54

13 **TABLE E.2: ENGINEERING/PROFESSIONAL PLANNING STUDIES**

14		
15	Qualifying Cost	\$ 64,778
16	Future ERUs to Buildout	18,129
17	Impact Fee Per ERU	\$ 3.57

A B C D E F

APPENDIX F: MAXIMUM ALLOWABLE IMPACT FEES

South Davis Sewer District

A B C D E

1 **TABLE F.1: SANITARY SEWER IMPACT FEE** 1

Zoning Category	Water Demand Adjusted for I&I	Equivalent EDUs	Impact Fee per EDU	Recommended Impact Fee
Residential per Dwelling Unit				
Residential per Dwelling Unit	260	1.00	\$ 2,453.54	\$ 2,453.54
Commercial (Non-SIU)-per fixture unit	260	0.05	2,453.54	122.68
Significant Industrial User-per 100 gpd discharged	260	0.3846	2,453.54	943.67

8
9 **TABLE F.2: NON-STANDARD IMPACT FEE CALCULATION** 9

Non-Standard Calculation
Daily Discharge per 100 gpd x 0.3846 x \$2,453.54 = Impact Fee

A B C D E