North Davis Sewer District

Sewer Impact Fee Analysis

December 29, 2022

Contents

EXECUTIVE SUMMARY

North Davis Sewer District (the District) provides this Sewer Impact Fee Analysis (IFA) update to the District's current sewer treatment plant and collection impact fees. 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 Brown & Caldwell (B&C) 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 Act[1] to ensure that the fee is equitable and fair.

NDSD IMPACT FEE SERVICE AREA AND LEVEL OF SERVICE DEFINITIONS PER ERU

B&C has defined the District's level of service in the IFFP prepared in September 2022. The average day demand for an Equivalent Residential Unit (ERU), a unit of demand measure based on residential water demand and sewer flow data, is 231 gpd. Flow and billing data suggests that the District serves a total demand of 83,510 equivalent residential units as of 2020. This demand is comprised of both residential and non-residential customers based upon an average dry weather demand of 19.3 MGD and 231 gpd per ERU. Approximately 43% of the total buildout ERUs have yet to be developed. This additional growth will require capacity of 14.6 MGD, equal to 146,684 ERUs, 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 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.

The District does not have assets provided through developer exactions or contributions as neither treatment infrastructure nor large interceptor lines are funded with developer exactions or reimbursement agreements, There are eight bonds currently outstanding that have funded major treatment plant upgrades and improvements to the collection system. Additional revenue bonds, $15m in 2026 and $10M in 2028 may be required to complete the ten-year project list. Therefore, all infrastructure is assumed to be District funded.

Until new development utilizes the full capacity remaining 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 $328,505,737[2] but only $125,865,811 is included in the impact fees. Only the actual original costs of the existing improvements without inflationary adjustments have been considered[3]. 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] North Davis Sewer District Depreciation Schedule, Appendix D
[3] See Appendix D for the detailed list of assets for the treatment and collection system.

District Treatment and Collection Impact Fees

The IFFP prepared by B&C identifies a list of capital projects to be constructed through the next ten years. The present value of the future improvements based on a 2022 fiscal year total of capital improvements is $188,048,000[4]. A 3.0% construction inflation factor is added to the present value resulting in a future value of $212,174,179. Only about 30% of the future capital projects totaling $63,339,493 are included in the impact fee.

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

Processes	Growth Related Costs	Additional ERUs	Cost per ERU
Treatment	$ 110,944,651.71	Varied by Process	**$ 1,969.27**
Collection	102,572,314.58	63,173	**1,623.66**
Professional	1,992,885.23	63,173	**31.55**
Impact Fee Updates	50,000.00	36,779	**1.36**
Fund Balance Credit	-	63,173	-
Debt Service Credit			**(171.81)**
Total Impact Fee per ERU	**$ 215,559,852**		**$ 3,454.03**

Recommended Plant and Collection Impact Fee per ERU

The impact fee calculated above in ES.1 will be applied throughout the District-Wide Service Area but would 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 residential unit shown in ES.2 based upon the demand per ERU. For non-residential occupancies, new connections will also pay an impact fee according to the schedule listed in Figure ES.2 and in Appendix H, which is based on average monthly culinary water usage.

Figure ES.2: Maximum Legal Fee per ERU

Zoning Category	Water Demand per Unit	Equivalent ERUs per Unit	Impact Fee per ERU	Proposed Impact Fee
Residential per Dwelling Unit				
Single Family Residential	231	1.00	$ 3,454.03	$ 3,454.03
Townhome Residential	208	0.90	3,454.03	3,108.63
Multi-Unit Residential	176	0.76	3,454.03	2,625.06
TOD-type Residential	141	0.61	3,454.03	2,106.96
Non-Residential per 1,000 Gallons Billed Monthly				
Non-Residential (per 1,000 gal billed monthly)	1,000	0.19	3,454.03	656.27

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 E for the detailed list of future capital projects.

CHAPTER 1: LEVEL OF SERVICE AND FUTURE GROWTH

LEVEL OF SERVICE DEFINITIONS PER ERU

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 Residential Unit. An ERU 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 eight cities in northern Davis County and southern Weber County plus Hill Airforce Base. 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 and user 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 five measures of the demand with different levels of peaking that have been used to design different processes within the treatment plant facilities. Each process within the treatment plant is sized to meet one of these levels of peak demand and is used to determine the amount of used or unused capacity within each treatment process. Level of service measures as shown in Figure 1.1.

Figure 1.1: Treatment Levels of Service per ERU

Level of Service Category	Peaking Factor	2020 Flow	2020 ERUs	Equivalent Gallons per Day
365 day Average	1.00	19.3	83,510	231
Max 30 Day Average	1.08	20.8	83,510	249
Max 14 Day Average	1.13	21.8	83,510	261
Peak Day	1.24	23.9	83,510	286
Peak Hour	2.49	48.0	83,510	575

Service area growth results from new residences and non-residential users such as commercial, industrial, institutional, churches, schools, etc. In 2020 the District had 83,510 ERUs. It is anticipated that the District will grow to 120,289 ERUs (an increase of 36,779 ERUs) by 2030[5]. Significant growth is expected within the District's boundaries resulting in increased demand on 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.

Figure 1.2: Projected District Growth in ERUs and Population [6]

	Total Average Dry Weather	Peak Day	Peak Dry Weather	Average Dry Day per ERU	Average Day ERU Count	% Change MGD	% Change ERUS	Population	% Change Pop
2020	**19.30**	**23.90**		**231.11**	**83,510**	**-**	**-**	**230,010**	**0%**
2030	27.80	37.30	41.90	231.11	120,289	3.15%	3.15%	246,982	0.69%
2040	29.60	39.70	43.80	231.11	128,078	0.17%	0.17%	263,663	0.64%
2050	31.90	42.70	46.30	231.11	138,029	-3.40%	-3.40%	285,156	0.76%
Buildout	33.90	45.40	48.40	231.11	146,684			305,354	

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

[6] Appendix A, Rows 117-160

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 D of this analysis. Appendix D lists all the asset records collected from the District and sorts each line item as either qualifying or non-qualifying. Qualifying assets are then sorted into either a collection system asset or treatment plant asset. All treatment plant assets are then sorted into one of the thirteen treatment processes to which the individual asset pertains. There is $328,505,737 in total existing asset expense. This amount is divided between systems with $188,534,006 relating to the treatment plant and $139,971,730 relating to the collection system.

The District has already constructed and/or will invest $328,505,737 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

Facility Name/Description	Existing Asset Cost	Outstanding Bonding	Total Existing Asset Cost
General Plant	$ 75,175,675	$ -	$ 75,175,675
Headworks - Screening System	241,507	40,054	281,561
Headworks - Mechanical Grit Removal	1,485,657	112,588	1,598,246
Influent Pump Station	6,262,649	-	6,262,649
Primary Clarifiers	2,601,550	-	2,601,550
Biotower Recirculation Pump Station	7,506,647	-	7,506,647
Biotowers and Second Stage Trickling Filters	1,105,625	-	1,105,625
Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	16,472,954	1,901,213	18,374,168
Final Clarifiers	672,336	-	672,336
Cholorine Contact Basins	6,643,976	9,425	6,653,400
Primary Sludge/Scum Thickening	-	-	-
Digesters	36,165,773	181,778	36,347,551
Biosolids Dewatering - Belt Filter Presses	4,250,487	930,618	5,181,105
Cogeneration Facility (Engine generators) Kw	29,949,170	2,519,810	32,468,980
Treatment	**$ 188,534,006**	**$ 5,695,486**	**$ 194,229,492**
Collections	**$ 139,971,730**	**$ 18,292,019**	**$ 158,263,749**
Totals	**$ 328,505,737**	**$ 23,987,504**	**$ 352,493,241**

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 3.0% annual rate of construction inflation. Construction year cost totals $212,174,179.

Figure 2.2: Future Facility Costs

Category	2022 Costs	FV Inflated Costs	% of Total
Non-Qualifying	$ 132,297,270	$ 148,834,686	70%
Qualifying Treatment	20,468,530	23,761,738	11%
Qualifying Collection	33,527,000	37,584,870	18%
Qualifying Professional	1,755,200	1,992,885	1%
Totals	**$ 188,048,000**	**$ 212,174,179**	**100%**

Outstanding and Future Bond Expense

The District has eight revenue bonds currently outstanding which have funded major treatment plant upgrades and improvements to the collection system. The District anticipates issuing an additional revenue bond in 2026 and then a second bond in 2028 to ensure adequate funding for future capital projects. 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 bond is included in the impact fee as the principle is already reflected in the historic cost of a project already funded. If both the historic cost of the asset and the principle of the bond that funded it were included, it would double count the project cost. Figure 2.3 shows the allocations of the qualifying interest expense to each functional category.

Figure 2.3: Outstanding and Future Bond Expense

Outstanding and Future Bonds	Outstanding Bond Interest	% Qualifying	Net to Impact Fees
Series 2013A	$ 471,225	43.75%	$ 206,160
Series 2012	46,200	27.51%	12,711
Series 2012B	23,700	67.06%	15,894
Series 2014	1,435,406	25.81%	370,522
Series 2016	3,626,700	24.52%	889,417
Series 2021A	10,737,325	67.06%	7,200,819
Series 2021B	975,815	26.34%	257,013
Series 2022	6,671,133	67.06%	4,473,891
Series 2026	11,023,545	52.19%	5,753,673
Series 2028	7,349,030	52.19%	3,835,782
	$ 42,360,078		**$ 23,015,882**

ENGINEERING PROFESSIONAL SERVICES

The Impact Fees Act allows the District to recover the cost of planning and engineering through impact fees[7]. The IFFP has determined that $1,992,885 of the planning and engineering cost estimate is a qualifying impact fee expense resulting in an impact fee of $31.55 per ERU.

Figure 2.4: Engineering Professional Services Expense

Qualifying Cost	$	1,992,885
Future ERUs to Buildout		63,173
Impact Fee Per ERU	**$**	**31.55**

Figure 2.5: Impact Fee Analysis Update Expense

Total Qualifying Cost	$	50,000
Cost to New Growth		100%
% of Total Expense to Growth	**$**	**50,000**

[7] Impact Fees Act 11-36a-305(1)(c)

CHAPTER 3: TREATMENT COST ALLOCATION

Treatment costs are based upon the cost and process capacities for existing and future projects within the current wastewater treatment plant. The assets related to the treatment plant total $188M and $74M will be added according to the IFFP. Impact fee eligible costs are estimated to be $111M of the $262M of capital costs.

COST ALLOCATION TO PLANT

The District wastewater treatment plant is divided into thirteen different treatment processes or cost allocation categories. Each one has a specific design standard that correlates with the level of service measures identified in the IFFP. Figure 3.1 is based upon the Brown and Caldwell IFFP and shows the percentage of each process capacity that is available for new growth.

Figure 3.1: Available Excess Capacity by Treatment Process

Facility / Area No.	Facility Name/Description	No. of Process Units	Capacity Each Unit (mgd)	Total Capacity (mgd)	Firm Capacity (mgd)	Flow Capacity Basis	LOS Measure	2021 Flow (mgd)	Excess Capacity in 2020 (mgd)	2030 Flow (mgd)	Excess Capacity in 2030 (mgd)	Excess Capacity in 2030 (mgd)	R-317 Reference
1	Headworks -Screening System	4	25	mgd	100	75	Peak Hr.	48	27	36.0%	64	11	14.7%
	Headworks -Mechanical Grit Removal	2	64	mgd	128	64	Peak Hr.	48	16	25.0%	64	0	0.0%
2	Influent Pump Station	6	22	mgd	124	102	Peak Hr.	48	54	52.9%	64	38	37.3%
21	Primary Clarifiers	4	17.6	mgd	70.4	52.8	Peak Day	23.9	28.9	54.7%	36.7	16.1	30.5%
17	Biotower Recirculation Pump Station	2	22.5	mgd	45	22.5	50% of Peak Day[3]	11.95	10.55	46.9%	18.35	4.15	18.4%
22	Biotowers and Second Stage Trickling Filters1	3	22.5	mgd	67.5	45	Peak Day	23.9	21.1	46.9%	36.7	8.3	18.4%
23, 18, 16	Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	8	4.9	mgd	39.2	34.3	Max. 30 Day Avg.	20.8	13.5	39.4%	31	3.3	9.6%
24	Final Clarifiers	4	16	mgd	64	48	Peak Day	23.9	24.1	50.2%	36.7	11.3	23.5%
7, 8, 9	Chlorine Contact Basins	4	18.6	mgd	74.4	55.8	Peak Day	23.9	31.9	57.2%	36.7	19.1	34.2%
3	Primary Sludge/Scum Thickening (Rotary Drum Thickeners)	2	47	lbs/day	94	47	Peak Day	23.9	23.1	49.1%	36.7	10.3	21.9%
3, 4, 5	Digesters	4	66,667	gpd	266,668	200,001	Max. 14 Day Avg.	159,062	40,939	20.5%	170,833	29,168	14.6%
	Biosolids Dewatering - Belt Filter Presses[5]	2	48,000	lbs/day	96,000	48,000	Peak Day	38,106	9,894	20.6%	41,885	6,115	12.7%
6, 19	Cogeneration Facility (Engine generators)[2]	3	1000	kW	3,000	2,000		1300	700	35.0%	1800	200	10.0%

Figure 3.3 divides the costs of capacity available for growth in each process by the number of ERUs that can still be served by each process. The total combined cost is $1,969.27 per ERU which is the new treatment impact fee per ERU. This will then be added to the impact fee per ERU for collection and professional services.

Figure 3.2: Future Capital Project Allocation by Category

Category	2022 Costs	FV Inflated Costs	% of Total
Non-Qualifying	$ 111,372,740	$ 125,952,398	68%
Qualifying Treatment	20,468,530	23,526,613	13%
Qualifying Collection	29,335,030	33,471,843	18%
Qualifying Professional	2,809,700	3,358,364	2%
Totals	**$ 163,986,000**	**$ 186,309,218**	**100%**

Figure 3.3 shows the treatment costs per ERU. This will be added to the cost of collection facilities discussed in Chapter 4 as well as professional expenses, credits, etc.

Figure 3.3: Treatment Allocation by Process and Cost per ERU

Facility Name/Description	Flow Capacity Basis	Demand per ERU	Excess Capacity in 2020 (mgd)	Excess Capacity in 2020 (ERUs)	Cost by Treatment Component	Cost per ERU
General Treatment Plant	Peak Day	286	28.90	**63,173**	$ 41,693,655	$ **659.99**
Screening System	Peak Hr.	575	27	**46,974**	101,362	**2**
Aerated Grit Removal	Max. 30 Day Avg.	249	16.00	**64,238**	399,561	**6.22**
Influent Pump Station	Peak Hr.	575	54.00	**93,949**	3,315,520	**35.29**
Primary Clarifiers	Peak Day	286	28.90	**100,981**	3,702,839	**36.67**
Biotower Recirculation Pump Station	Peak Day	286	10.55	**36,863**	3,519,783	**95.48**
Biotowers and Second Stage Trickling Filters	Peak Day	286	21.10	**73,726**	518,415	**7.03**
Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	Max. 30 Day Avg.	249	13.50	**54,201**	7,231,815	**133.43**
Final Clarifiers	Peak Day	286	24.10	**84,209**	337,569	**4.01**
Chlorine Contact Basins	Peak Day	286	31.90	**111,463**	3,803,646	**34.12**
Primary Sludge/Scum Thickening	Peak Day	286	23.10	**80,715**	-	**-**
Digesters	Max. 14 Day Avg.	1.90	40,939.00	**77,977**	7,440,125	**95.41**
Biosolids Dewatering - Belt Filter Presses	Max. 14 Day Avg.	0.46	9,894.00	**4,515**	3,823,841	**846.98**
Cogeneration Facility (Engine generators) Kw	Max. 30 Day Avg.	249	700.00	**2,810,433**	35,056,519	**12.47**
Totals					**$ 110,944,652**	**$ 1,969.27**

CHAPTER 4: COLLECTION FACILITY COSTS

COLLECTION SYSTEM COSTS AND CAPACITY

The District operates primary interceptor lines to which the collection systems of each individual city connect. These lines require regular maintenance and repair. Some repair projects that do not add capacity but rather replace lines with the same size of pipe are not impact fee qualifying. A portion of the cost of projects that increase the size of the pipe and do add growth-related capacity can be included in the impact fee. The impact fee also includes the cost of unused capacity in the existing collection lines. The IFFP has determined that 32.94% of the existing collection lines have capacity available for new growth.

Figure 4.1: Capacities and Utilization of the Collection Facilities

	Cost to Growth FV (future) and Historic (Existing)	% of Project to Existing Users	% of Project to Growth	Cost to Existing Users	Cost to Future Users
Future 10 Year Projects	$ 37,584,870	0.000%	100.00%	$ -	$ 37,584,870
Future Bonds	12,860,802	0.000%	100.00%	-	12,860,802
Existing	139,971,730	67.06%	32.94%	93,869,850	46,101,880
Existing Bonds	18,292,019	67.06%	32.94%	18,292,019	6,024,763
	$ 208,709,420			**$ 112,161,869**	**$ 102,572,315**
			Future ERUs to Buildout		63,173
					$ 1,623.66

The collection system has been funded with existing bonds and some of the future collection projects will also be funded with future bonds. Figure 4.1 totals the full cost of the existing bond interest and the interest on future bonds and the cost of the projects they will fund. The total cost of the collection system including future and existing qualifying projects and bond interest is $208,709,420. The cost of the existing facilities, found in the lower half of Figure 4.1, is allocated with 67.06% assigned to existing users and 32.94% assigned to growth. The cost of the future collection projects shown has already been discounted to remove non-impact fee qualifying projects and therefore all project cost is related to the creation of new growth-related capacity and is 100% attributable to impact fees.

The combined capacity of the existing lines and the future lines is expected to meet the buildout demand of 146,684 ERUs. Currently the District has 83,510 ERUs which leaves 63,173 ERUs to be developed in the future. The $102,572,315 that is assigned to future users will be divided by the remaining 63,173 ERUs to arrive at a collection impact fee per ERU of $1,623.66

CHAPTER 5: 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. North 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 later 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 does 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 North 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 3.0% 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 particular analysis, there is also a credit for unspent impact fee revenues collected in the past. 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 6: 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 ERU would utilize. The calculation of the demand per ERU is found in Figure 1.1.

MAXIMUM LEGAL SEWER IMPACT FEES PER ERU

The combined impact fees per ERU for treatment, collection, and professional services total $3,454 per ERU. 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 ERU 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 6.1: Base Fee per ERU

Processes	Growth Related Costs	Additional ERUs	Cost per ERU
Treatment	$ 110,944,652	Varied by Process	$ 1,969
Collection	102,572,315	63,173	1,624
Professional	1,992,885	63,173	32
Impact Fee Updates	50,000	36,779	1
Fund Balance Credit	-	63,173	-
Debt Service Credit			(172)
Total Impact Fee per ERU			**$ 3,454**

Figure 6.2: Base Fee per ERU

Zoning Category	Water Demand per Unit	Equivalent ERUs per Unit	Impact Fee per ERU	Proposed Impact Fee
Residential per Dwelling Unit				
Single Family Residential	231	1.00	$ 3,454.03	$ 3,454.03
Townhome Residential	208	0.90	3,454.03	3,108.63
Multi-Unit Residential	176	0.76	3,454.03	2,625.06
TOD-type Residential	141	0.61	3,454.03	2,106.96
Non-Residential per 1,000 Gallons Billed Monthly				
Non-Residential (per 1,000 gal billed monthly)	1,000	0.19	3,454.03	656.27

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 6.3: Non-Standard Impact Fee Formula

Non-Standard Calculation	Monthly Billed Demand / 0.7554 / 7,028 x $3,454.03

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 North 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 North Davis Sewer District and outside sources. Copies of letters requesting data are included as appendices to the IFFPs and the impact fee analysis.

Dated: December 29, 2022

Matt Millis
CapEx Planning LLC

APPENDICES

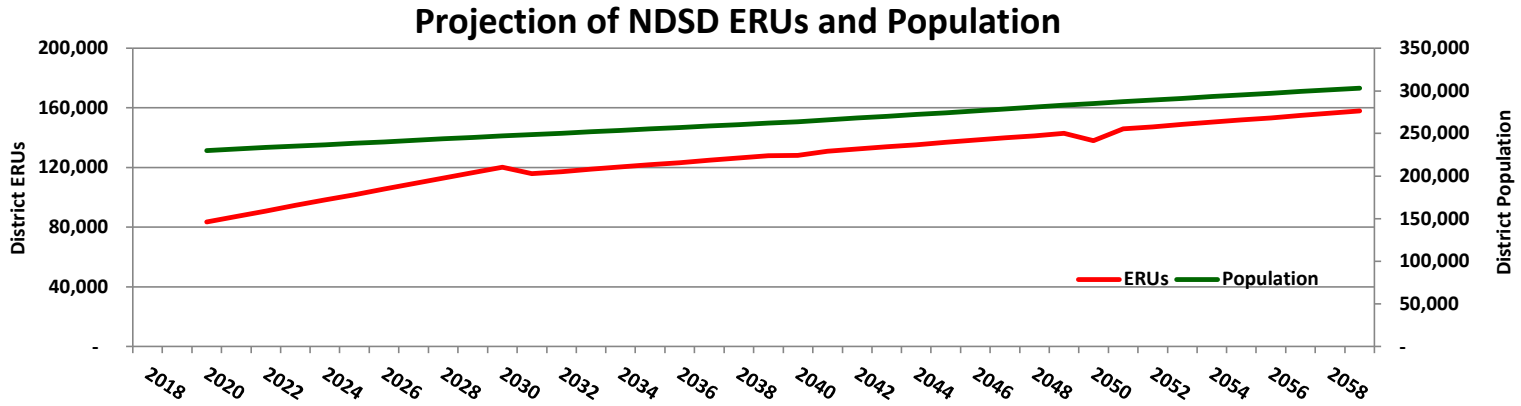
APPENDIX A: NORTH DAVIS SEWER SERVICE AREA GROWTH PROJECTIONS

North Davis Sewer District

TABLE A.1: SEWER AREA GROWTH

	Total Average Dry Weather	Peak Day	Peak Dry Weather	Average Dry Day per ERU	Average Day ERU Count	% Change MGD	% Change ERUS	Population	% Change Pop
2020	**19.30**	**23.90**		**231.11**	**83,510**	**-**	**-**	**230,010**	**0%**
2030	27.80	37.30	41.90	231.11	120,289	3.15%	3.15%	246,982	0.69%
2040	29.60	39.70	43.80	231.11	128,078	0.17%	0.17%	263,663	0.64%
2050	31.90	42.70	46.30	231.11	138,029	-3.40%	-3.40%	285,156	0.76%
Buildout	33.90	45.40	48.40	231.11	146,684			305,354	

Source:Brown & Caldwell, Impact Fee Facilities Plan September 2022: Tables 2-1 and 2-2



Appendix B: Sanitary Sewer Level of Service (LOS) Analysis

North Davis Sewer District

TABLE B.1: ERU DEFINITION

Type of Unit	Relative Water Use (gpd)	ERU Equivalency	Gal per Unit
Single Family Residential	5,355	1.00	231
Townhome Residential	4,800	0.90	208
Multi-Unit Residential	4,095	0.76	176
TOD-type Residential	3,256	0.61	141
Total All Flow	17,506		
Ave Flow Per Day Per ERU (gal)			

Source: NDSD billing data for residential customers and engineers' hydraulic modeling

TABLE B.2: SEWER LOS PER ERU

Level of Service Category	Peaking Factor	2020 Flow	2020 ERUs	Equivalent Gallons per Day	Source
365 day Average	1.00	19.3	83,510	231	IFFP T.2-2,
Max 30 Day Average	1.08	20.8	83,510	249	IFFP T.2-2, ECT
Max 14 Day Average	1.13	21.8	83,510	261	ECT
Peak Day	1.24	23.9	83,510	286	IFFP T.2-2, ECT
Peak Hour	2.49	48.0	83,510	575	IFFP T.2-2, ECT

1 Includes allowance for average annual infiltration

2 Includes allowance for peak month infiltration. Basis for most treatment plant design

TABLE B.3: LIQUID PROCESSING

Facility Name/Description	Flow Capacity (mgd)	Flow Capacity Basis	2020 Flow (mgd)	Excess Capacity in 2020 (mgd)	Excess Capacity in 2021 (%)
General Plant	52.80	Peak Day	23.90	28.90	**54.73%**
Headworks - Screening System	75.00	Peak Hr.	48.00	27.00	**36.00%**
Headworks - Mechanical Grit Removal	64.00	Peak Hr.	48.00	16.00	**25.00%**
Influent Pump Station	102.00	Peak Hr.	48.00	54.00	**52.94%**
Primary Clarifiers	52.80	Peak Day	23.90	28.90	**54.73%**
Biotower Recirculation Pump Station	22.50	50% of Peak Day	11.95	10.55	**46.89%**
Biotowers and Second Stage Trickling Filters	45.00	Peak Day	23.90	21.10	**46.89%**
Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	34.30	Max. 30 Day Avg.	20.80	13.50	**39.36%**
Final Clarifiers	48.00	Peak Day	23.90	24.10	**50.21%**
Cholorine Contact Basins	55.80	Peak Day	23.90	31.90	**57.17%**
Primary Sludge/Scum Thickening	47.00	Peak Day	23.90	23.10	**49.15%**
Digesters	200,001.00	Max. 14 Day Avg.	159,062	40,939.00	**20.47%**
Biosolids Dewatering - Belt Filter Presses	48,000.00	Max. 14 Day Avg.	38,106	9,894.00	**20.61%**
Cogeneration Facility (Engine generators) Kw*	2,000.00		1,300	700.00	**35.00%**

*Cogeneration is rated at 2000 KW and producing 700 KW with a Max 30 Day demand o f 29.5 MGD.

Appendix C: Sanitary Sewer Level of Service (LOS) Analysis

North Davis Sewer District

TABLE C.1: Process Capacities

Facility/ Area No.	Facility Name/Description	No. of Process Units	Capacity Each Unit (mgd)	Total Capacity (mgd)	Firm Capacity (mgd)	Flow Capacity Basis	LOS Measure	2021 Flow (mgd)	Excess Capacity in 2020 (mgd)	2030 Flow (mgd)	Excess Capacity in 2030 (mgd)	Excess Capacity in 2030 (mgd)	R-317 Reference	Notes (Meeting with NDSD on December 13, 2021)	
	General Plant	4	17.6	mgd	70.4	52.8	Peak Day	23.9	28.9	54.7%	36.7	16.1	30.5%		
1	Headworks -Screening System	4	25	mgd	100	75	Peak Hr.	48	27	36.0%	64	11	14.7%	Min. two screens each designed to handle peak flow rate	Only use two screens unless flow is > 50 mgd, then use a third screen
	Headworks -Mechanical Grit Removal	2	64	mgd	128	64	Peak Hr.	48	16	25.0%	64	0	0.0%	2 mechanically cleaned grit removal units installed in parallel	
2	Influent Pump Station	6	22	mgd	124	102	Peak Hr.	48	54	52.9%	64	38	37.3%		Have 4 pumps rated to 22 mgd, 2 for 18 mgd currently only run 3
21	Primary Clarifiers	4	17.6	mgd	70.4	52.8	Peak Day	23.9	28.9	54.7%	36.7	16.1	30.5%		NDSD would like the new primary clarifiers to match the existing, deeper clarifiers
17	Biotower Recirculation Pump Station	2	22.5	mgd	45	22.5	50% of Peak Day[3]	11.95	10.55	46.9%	18.35	4.15	18.4%		Only run two recirculation pumps
22	Biotowers and Second Stage Trickling Filters1	3	22.5	mgd	67.5	45	Peak Day	23.9	21.1	46.9%	36.7	8.3	18.4%		
23, 18, 16	Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	8	4.9	mgd	39.2	34.3	Max. 30 Day Avg.	20.8	13.5	39.4%	31	3.3	9.6%		Only run aeration blowers at 50%; expansion bonds are still being paid for (mention to Matt Millis)
24	Final Clarifiers	4	16	mgd	64	48	Peak Day	23.9	24.1	50.2%	36.7	11.3	23.5%		
7, 8, 9	Chlorine Contact Basins	4	18.6	mgd	74.4	55.8	Peak Day	23.9	31.9	57.2%	36.7	19.1	34.2%	Produce effluent that meets coliform bacteria permit limits at maximum flow rate; CT is 30 min at max flow rate and 60 min at average design flow rate; 2 tanks required	
3	Primary Sludge/Scum Thickening (Rotary Drum Thickeners)	2	47	lbs/day	94	47	Peak Day	23.9	23.1	49.1%	36.7	10.3	21.9%		5.5% solids from thickening to all 4 digesters (70,000 gpd of raw sludge (primary and TWAS)
3, 4, 5	Digesters	4	66,667	gpd	266,668	200,001	Max. 14 Day Avg.	159,062	40,939	20.5%	170,833	29,168	14.6%	Multiple digestion units required	Two digester lids need to be replaced; 65% VSR in digesters
	Biosolids Dewatering - Belt Filter Presses[5]	2	48,000	lbs/day	96,000	48,000	Peak Day	38,106	9,894	20.6%	41,885	6,115	12.7%	Multiple units required	Only 2, three meter BFPs that run for 5 hours with both, 10 hours if 1 BFP is down
6, 19	Cogeneration Facility (Engine generators)[2]	3	1,000	kW	3,000	2,000		1,300	700	35.0%	1,800	200	10.0%		No cogen expansion

1 Three old TF's have equivalent capacity to one of the two newer biotowers, number of units expressed as biotowers

2 Engine Generator Capacity measured in KW

Appendix D: Future and Existing Assets Divided by Function

North Davis Sewer District

TABLE D.1: FUTURE ASSETS

	Year Constructed	Future Cost	General Plant	Headworks	Screening System	Aerated Grit Removal	Influent Pump Station	Primary Clarifiers	Biotower Recirculation Pump Station	Biotowers and Second Stage Trickling Filter	Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	Final Clarifiers	Chlorine Contact Basins	Primary Sludge/ Scum Thickening	Digesters	Biosolids Dewatering Belt Filter Presses	WSS Thickening - Gravity Belt Thickeners	Cogeneration Facilities	Collection	Office Building	Non-Qualifying	Totals
FUTURE PROJECTS																						
Treatment																						
Reolace Primary Clarifiers 1 & 2	2027	$ 17,529,882						13%													87%	100%
Dieesters 1 and 2 Cover Reolacement	2025	6,753,053													0%						100%	100%
Rotary Drum Thickener Addition	2024	1,092,727	50%																		50%	100%
TBPEL- Discharge Relocation to Gilbert Bay	2026	48,689,511																43%			57%	100%
Collection																						0%
Lining Project 11	2023	14,344,810																	14%		86%	100%
Lining Project 12	2024	11,473,634																	25%		75%	100%
Lining Project 13	2025	26,233,097																	44%		56%	100%
Lining Project 14	2026	37,701,169																	16%		84%	100%
Lining Project 15	2027	3,642,439																	24%		76%	100%
Hill Field Road	2023	9,461,580																	30%		70%	100%
Fairfield Road	2024	5,648,232																	10%		90%	100%
1800 North Phase 2	2024	722,473																	18%		82%	100%
Reverse Grade Replacement	2030	7,202,855																	16%		84%	100%
																						0%
East Outfall Phase 4	2028	9,188,232																	41%		59%	100%
East Outfall Phase 5	2029	9,835,301																	59%		41%	100%
																						0%
																						0%
																						0%
		$ 209,518,994	$ 546,364	$ -	$ -	$ -	$ -	$ 2,278,885	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,936,490	$ 37,584,870	$ -	$ 148,172,386	$ 209,518,994

Source:Brown & Caldwell, Impact Fee Facilities Plan September 2022- Table 5-1

TABLE D.2: EXISTING ASSETS

	Year Constructed	Function	Bond	Original Life	Historic Cost	Impact Fee Qualifying/ Non-Qualifying	General Plant	Headworks	Screening System	Aerated Grit Removal	Influent Pump Station	Primary Clarifiers	Biotower Recirculation Pump Station	Biotowers and Second Stage Trickling Filter	Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	Final Clarifiers	Chlorine Contact Basins	Primary Sludge/ Scum Thickening	Digesters	Biosolids Dewatering - Belt Filter Presses	WSS Thickening - Gravity Belt Thickeners	Cogeneration Facilities	Collection	Collection	Office Building	Non-Qualifying	Totals
EXISTING PROJECTS																											
METRO SEWER SYSTEM	1946	Collection System Piping		480	$ 160,000	Qualifying																	100%				100%
SEWAGE TREATMENT PLT	1958	General Treatment Plant		600	988,623	Qualifying	100%																				100%
SEWAGE TREATMENT PLT	1958	General Treatment Plant		600	988,623	Qualifying	100%																				100%
SEWAGE TREATMENT PLT	1958	General Treatment Plant		600	988,623	Qualifying	100%																				100%
OUTFALL MAINS	1959	General Treatment Plant		600	175,722	Qualifying	100%																				100%
PAVING DRY BEDS	1964	Biosolids Dewatering - Belt Filter Presses		600	4,600	Qualifying														100%							100%
OUTFALL MAINS	1966	General Treatment Plant		600	851,593	Qualifying	100%																				100%
RAISING MH AND MH CO	1966	General Treatment Plant		600	5,367	Qualifying	100%																				100%
OUTFALL MAINS	1967	General Treatment Plant		600	40,885	Qualifying	100%																				100%
CLARIFIER TREATM PLT	1967	Primary Clarifiers		600	323,078	Qualifying						100%															100%
CLARIFIER TREAT PLNT	1968	Primary Clarifiers		600	2,347	Qualifying						100%															100%
OUTFALL MAINS	1969	General Treatment Plant		600	218,696	Qualifying	100%																				100%
PRIM CLARIFY LESS ADJ	1969	Primary Clarifiers		600	15,704	Qualifying						100%															100%
STORAGE BUILDING	1970	General Treatment Plant		480	16,206	Qualifying	100%																				100%
ENGINEERING PLT ADD	1970	General Treatment Plant		600	7,007	Qualifying	100%																				100%
3200 S ROY	1972	Collection System Piping		600	37,015	Qualifying																	100%				100%
ADDITIONS	1973	General Treatment Plant		600	632,981	Qualifying	100%																				100%
ADDITIONS ROY	1974	Collection System Piping		600	4,657	Qualifying																	100%				100%
TRAN OF CIP LESS PR	1975	General Treatment Plant		600	833,031	Qualifying	100%																				100%
OUTFALLS MAINS	1975	General Treatment Plant		600	8,486	Qualifying	100%																				100%
ADD LESS PRICE FIX R	1976	General Treatment Plant		600	143,849	Qualifying	100%																				100%
SEWER 200 S 2000 W	1977	Collection System Piping		600	27,762	Qualifying																	100%				100%
WEAVER LANE OUTFALL	1978	Collection System Piping		600	58,725	Qualifying																	100%				100%
ADDITIONS	1979	General Treatment Plant		600	114,375	Qualifying	100%																				100%
SEWER LINES	1982	Collection System Piping		480	342,570	Qualifying																	100%				100%
STEEL COATINGS	1983	General Treatment Plant		60	5,020	Non-Qualifying	100%																				100%
TREATMENT PLANT BALL	1983	General Treatment Plant		120	13,942	Qualifying	100%																				100%
TREATMENT PLANT BALL	1983	General Treatment Plant		120	17,010	Qualifying	100%																				100%
PLANT MODIFICATION	1984	General Treatment Plant		120	15,020	Qualifying	100%																				100%
DIGESTERS	1984	Digesters		480	1,617,958	Qualifying													100%								100%
SEWAGE TREATMENT	1985	General Treatment Plant		480	59,912	Qualifying	100%																				100%
PLANT EXPANSION MECH	1987	General Treatment Plant		288	1,937,542	Qualifying	100%																				100%
PLANT EXPANSION	1987	General Treatment Plant		600	5,398,655	Qualifying	100%																				100%
PLANT EXPANSION PIPI	1987	General Treatment Plant		600	1,454,809	Qualifying	100%																				100%
2ND ST TRKL FLT #3 M	1990	Biotowers and Second Stage Trickling Filters		288	100,919	Qualifying								100%													100%
CHEMICAL BLD MECH	1990	General Treatment Plant		288	224,708	Qualifying	100%																				100%
CONTROL ROOM MECH	1990	General Treatment Plant		288	107,424	Qualifying	100%																				100%
ENGINEERING	1990	General Treatment Plant		288	904,352	Qualifying	100%																				100%
GENERATOR BLD MECH	1990	General Treatment Plant		288	888,819	Qualifying	100%																				100%
MAINT BLD-MECHANICAL	1990	General Treatment Plant		288	68,677	Qualifying	100%																				100%
MAINT BLD-YARD PIPIN	1990	General Treatment Plant		288	5,000	Qualifying	100%																				100%
PRIMARY CLARIFY MECH	1990	Primary Clarifiers		288	159,602	Qualifying						100%															100%
2ND ST TRKL FLT #3 S	1990	Biotowers and Second Stage Trickling Filters		600	1,004,706	Qualifying								100%													100%
DIGSTR CTL BLD 152	1990	Digesters		600	149,076	Qualifying													100%								100%
FINAL CLARIFY STRUCT	1990	Final Clarifiers		600	667,385	Qualifying										100%											100%
CHEMICAL BLD STRUCT	1990	General Treatment Plant		600	219,791	Qualifying	100%																				100%
CONTROL ROOM STRUCT	1990	General Treatment Plant		600	39,360	Qualifying	100%																				100%
GENERATOR BLD STRUCT	1990	General Treatment Plant		600	106,584	Qualifying	100%																				100%
MAINT BLD-STRUCTURE	1990	General Treatment Plant		600	197,792	Qualifying	100%																				100%
YARD PIPING	1990	General Treatment Plant		600	2,514,293	Qualifying	100%																				100%
INTERMED CLARIFY STC	1990	Headworks		600	156,293	Qualifying	100%																				100%
INTERMED CLARIFY STR	1990	Headworks		600	496,312	Qualifying	100%																				100%
PRIMARY CLARIFY STRC	1990	Primary Clarifiers		600	471,873	Qualifying						100%															100%
5600 MANHOLE	1991	Collection System Piping		480	15,560	Qualifying																	100%				100%
5600 SOUTH SEWER	1991	Collection System Piping		480	273,106	Qualifying																	100%				100%
5600 MANHOLE	1992	Collection System Piping		480	1,225	Qualifying																	100%				100%
SUPERNATANT LINE REP	1992	General Treatment Plant		480	600	Qualifying	100%																				100%
OFFICE BUILDING	1992	Office Building		600	591,448	Qualifying	100%																				100%
SEWAGE TREATMENT PLT	1993	General Treatment Plant		260	76,210	Qualifying	100%																				100%
SEWAGE COLLECT SYSTM	1993	Collection System Piping		600	1,868,498	Qualifying																	100%				100%
SEWAGE TREATMENT PLA	1993	General Treatment Plant		600	14,945	Qualifying	100%																				100%
SEWER COLLECTION SYS	1994	Collection System Piping		480	106,931	Qualifying																	100%				100%
ADDTL COSTS MISC PLA	1995	General Treatment Plant		240	90,754	Qualifying	100%																				100%
MISC PLANT PROJECTS	1995	General Treatment Plant		240	855,567	Qualifying	100%																				100%
ADDITIONAL COSTS SLU	1995	Biosolids Dewatering - Belt Filter Presses		600	6,368	Qualifying															100%						100%
SLUDGE DRYING BEDS	1995	Biosolids Dewatering - Belt Filter Presses		600	3,299,989	Qualifying															100%						100%
ADDITION COSTS FREEP	1995	Collection System Piping		600	4,191	Qualifying																	100%				100%
ANTELOPE DRIVE PROJ	1995	Collection System Piping		600	365,296	Qualifying																	100%				100%
FREEPORT INTERCEPTOR	1995	Collection System Piping		600	685,335	Qualifying																	100%				100%
MISC PLANT PROJECTS	1996	General Treatment Plant		240	418,214	Qualifying	100%																				100%
CLARIFIER UPGRADE	1996	Primary Clarifiers		240	88,474	Qualifying						100%															100%
ADDITION SLUDGE BEDS	1996	Biosolids Dewatering - Belt Filter Presses		600	2,142	Qualifying															100%						100%
CANNERY RELIEF	1997	Collection System Piping		480	381,254	Qualifying																	100%				100%
KAYS CREEK	1997	Collection System Piping		480	512,702	Qualifying																	100%				100%
SOUTH RELIEF PH I	1997	Collection System Piping		480	1,165,040	Qualifying																	100%				100%
WEST OUTFALL RELIEF	1997	Collection System Piping		480	676,405	Qualifying																	100%				100%
Vehicle Stoarage Fac	1997	General Treatment Plant		480	528,723	Qualifying	100%																				100%
SOUTH RELIEF PHASE I	1998	Collection System Piping		120	11,208	Qualifying																	100%				100%
CHLORINATION MODIFICATION	1998	Chlorine Contact Basins		480	244,665	Qualifying											100%										100%
CANNERY RELIEF	1998	Collection System Piping		480	3,007	Qualifying																	100%				100%
NORTH FORK KAYS CREEK	1998	Collection System Piping		480	12,924	Qualifying																	100%				100%
NORTH RELIEF PASE II	1998	Collection System Piping		480	1,613,695	Qualifying																	100%				100%
WEST OUTFALL RELIEF	1998	Collection System Piping		480	24,635	Qualifying																	100%				100%
VEHICLE STORAGE	1998	General Treatment Plant		480	1,893	Qualifying	100%																				100%
COGEN Facility Upgrade	1999	Cogeneration Facility (Engine generators)		120	2,003,393	Qualifying																100%					100%
SCADA System Installation	1999	General Treatment Plant		120	1,386,497	Qualifying	100%																				100%
Third Generator Waukesha	1999	Cogeneration Facility (Engine generators)		240	898,621	Qualifying																100%					100%
Digester Cover Replacement	1999	Digesters		240	508,922	Qualifying													100%								100%
North Digester Access	1999	Digesters		260	109,669	Qualifying													100%								100%
South Digester Access	1999	Digesters		260	123,008	Qualifying													100%								100%
Sampling Dock	1999	General Treatment Plant		260	94,849	Qualifying	100%																				100%
Enterance Gate	1999	General Treatment Plant		480	68,469	Qualifying	100%																				100%
All American Gormet Sewer	1999	Collection System Piping		600	331,523	Qualifying																	100%				100%
South Relief Phase 2	1999	Collection System Piping		600	1,607,794	Qualifying																	100%				100%
South Relief Phase 3	1999	Collection System Piping		600	1,084,559	Qualifying																	100%				100%
Additional GOGEN Costs	2000	Cogeneration Facility (Engine generators)		108	18,341	Non-Qualifying																100%					100%
Additional All American Gormet Costs	2000	Collection System Piping		588	29,304	Qualifying																	100%				100%
North Relief 3A	2000	Collection System Piping		600	5,683,873	Qualifying																	100%				100%
North Relief 3B	2000	Collection System Piping		600	1,359,112	Qualifying																	100%				100%
Light ot Ferric Chloride	2001	Headworks	Series 2013A	120	3,002	Qualifying	100%																				100%

132	2700 West Relief	2001	Collection System Piping		480	1,042,129	Qualifying																								100%	132
133	Chlorine Scubber	2002	Chlorine Contact Basins	Series 2013A	240	1,634,544	Qualifying											100%													100%	133
134	Misc Treatment Plant Improvements	2002	General Treatment Plant		240	36,181	Qualifying	100%																							100%	134
135	North Relief Phase 3A	2002	Collection System Piping		360	552,165	Qualifying																							100%	100%	135
136	Locker Room Showers	2002	General Treatment Plant		360	381,558	Qualifying	100%																							100%	136
137	2700 West Relief	2002	Collection System Piping		468	228,242	Qualifying																							100%	100%	137
138	West Outfall Relief	2002	Collection System Piping		480	2,145,797	Qualifying																							100%	100%	138
139	Secondary Dig No. 2 Replacement	2002	Digesters		480	348,826	Qualifying													100%											100%	139
140	Drying Beds	2003	Biosolids Dewatering - Belt Filter Presses		120	107,242	Qualifying														100%										100%	140
141	2700 West Relief	2003	Collection System Piping		120	63,218	Qualifying																							100%	100%	141
142	Digester Cover Replacement	2003	Digesters		120	108,163	Qualifying													100%											100%	142
143	Predesign	2003	General Treatment Plant		120	631,136	Qualifying	100%																							100%	143
144	Headworks Design & Construction	2003	Headworks	Series 2013A	120	9,753,822	Qualifying	100%																							100%	144
145	Manholes on Hill Field Road	2003	Collection System Piping		600	10,000	Qualifying																							100%	100%	145
146	West Outfall Relief	2003	Collection System Piping		600	25,569	Qualifying																							100%	100%	146
147	West Outfall Relief/Replacement Phase II	2003	Collection System Piping		600	3,811,552	Qualifying																							100%	100%	147
148	Primary Digester Roller Cover	2004	Digesters		240	139,439	Qualifying													100%											100%	148
149	Enclose Building #12	2004	General Treatment Plant		240	45,930	Qualifying	100%																							100%	149
150	Headworks Design & Construction	2004	Headworks		240	1,354,913	Qualifying	100%																							100%	150
151	5000 West Outfall Relief Sewer	2004	Collection System Piping		600	126,207	Qualifying																							100%	100%	151
152	Racetrack Sewerline Rehabilitation	2004	Collection System Piping		600	317,835	Qualifying																							100%	100%	152
153	West Outfall Relief/Replacement Phase II	2004	Collection System Piping		600	33,050	Qualifying																							100%	100%	153
154	Site Services	2004	General Treatment Plant		600	902,580	Qualifying	100%																							100%	154
155	Belt Press Bldg	2005	Biosolids Dewatering - Belt Filter Presses	Series 2013A	240	1,338	Qualifying																						100%		100%	155
156	Sludge Dewatering	2005	Biosolids Dewatering - Belt Filter Presses		240	746,919	Qualifying																						100%		100%	156
157	CMS Digester Mixing Improvements	2005	Digesters		240	296,613	Qualifying													100%											100%	157
158	Digester Mixing Improvements	2005	Digesters		240	9,670	Qualifying													100%											100%	158
159	Construct Final Clarifiers	2005	Final Clarifiers	Series 2013A	240	4,951	Qualifying										100%														100%	159
160	West Outfall Relief/Replacement Phase 1	2005	Collection System Piping		600	652,551	Qualifying																							100%	100%	160
161	Site Services	2005	General Treatment Plant		600	712,248	Qualifying	100%																							100%	161
162	Construction Sequencing Outage Plan	2005	Primary Clarifiers		600	16,482	Qualifying						100%																		100%	162
163	Primary Clarifiers Construction	2005	Primary Clarifiers		600	924,913	Qualifying						100%																		100%	163
164	Thickening Building	2005	WSS Thickening - Gravity Belt Thickeners	Series 2013A	600	81,889	Qualifying																						100%		100%	164
165	Site Restoration	2006	General Treatment Plant		480	149,114	Qualifying	100%																							100%	165
166	Construction Biotower PS	2006	Biotower Recirculation Pump Station		600	7,503,338	Qualifying							100%																	100%	166
167	Cracked Piping Main St Gentile	2006	Collection System Piping		600	16,057	Qualifying																							100%	100%	167
168	Bldg 4 Improvements	2006	General Treatment Plant		600	453,223	Qualifying	100%																							100%	168
169	Site Demolition	2006	General Treatment Plant		600	2,391,248	Qualifying	100%																							100%	169
170	Site Services	2006	General Treatment Plant		600	704,848	Qualifying	100%																							100%	170
171	Construction infl pump station improvements	2006	Influent Pump Station		600	5,319,225	Qualifying					100%																			100%	171
172	Solids Contact Process	2006	Contact Process (Aeration Basins, Blower Building, RSS (	Series 2013A	600	14,591,205	Qualifying									100%															100%	172
173	Solids Proc Bldg	2006	Solids Processing Facility	Series 2013A	600	25,608,588	Qualifying	100%																							100%	173
174	Constuction Biotowers PS	2007	Biotower Recirculation Pump Station		600	3,309	Qualifying							100%																	100%	174
175	Chlorine Contract Basin	2007	Chlorine Contact Basins		600	4,605,315	Qualifying											100%													100%	175
176	South Relief Phase 4A	2007	Collection System Piping		600	7,721,445	Qualifying																							100%	100%	176
177	Laboratory Addition	2007	General Treatment Plant		600	2,676,522	Qualifying	100%																							100%	177
178	Site Grading & Demolition	2007	General Treatment Plant		600	1,674,245	Qualifying	100%																							100%	178
179	Site Grading & Demolition	2007	General Treatment Plant		600	1,492,389	Qualifying	100%																							100%	179
180	Site Services	2007	General Treatment Plant		600	558,751	Qualifying	100%																							100%	180
181	Construction Influ Pump Station Improvements	2007	Influent Pump Station		600	841,725	Qualifying					100%																			100%	181
182	Solids Contract Process - Construction	2007	Contact Process (Aeration Basins, Blower Building, RSS Pumps)		600	1,614,532	Qualifying									100%															100%	182
183	Solids Proc Bldg	2007	Solids Processing Facility		600	77,149	Qualifying	100%																							100%	183
184	Chlorine Contact Basins	2008	Chlorine Contact Basins		480	84,633	Qualifying											100%													100%	184
185	West Outfall Relief/Replacement Phase III	2008	Collection System Piping	Series 2013A	480	13,089,716	Qualifying																							100%	100%	185
186	Building 4 Improvements	2008	General Treatment Plant		480	39,834	Qualifying	100%																							100%	186
187	Lab & Bldg 13	2008	General Treatment Plant		480	19,130	Qualifying	100%																							100%	187
188	Site Grading & Demolition	2008	General Treatment Plant		480	61,220	Qualifying	100%																							100%	188
189	Site Services 2008	2008	General Treatment Plant		480	202,188	Qualifying	100%																							100%	189
190	Construction influ Pump Station Improvements	2008	Influent Pump Station		480	100,956	Qualifying					100%																			100%	190
191	Solids Contact Basin	2008	Contact Process (Aeration Basins, Blower Building, RSS Pumps)		480	129,539	Qualifying									100%															100%	191
192	Solids Proc Bldg	2008	Solids Processing Facility		480	80,060	Qualifying	100%																							100%	192
193	Railroad Crossing Repairs & Lining	2009	Collection System Piping		480	105,195	Qualifying																							100%	100%	193
194	South Relief Phase 4A	2009	Collection System Piping	Series 2013A	480	104,049	Qualifying																							100%	100%	194
195	West Outfall Relief/Replacement Phase II & IV	2009	Collection System Piping	Series 2013A	480	10,241	Qualifying																							100%	100%	195
196	Site Grading	2009	General Treatment Plant		480	51,184	Qualifying	100%																							100%	196
197	Ferric Tank for Emulsion Odor Chemical	2009	Headworks		480	43,062	Qualifying	100%																							100%	197
198	Tank & Pump for Emulsion Odor Chemical	2009	Headworks		480	8,252	Qualifying	100%																							100%	198
199	Influent Pump Station	2009	Influent Pump Station		480	743	Qualifying					100%																			100%	199
200	Solids Contact Process	2009	Contact Process (Aeration Basins, Blower Building, RSS Pumps)		480	958	Qualifying									100%															100%	200
201	Railroad Lining	2010	Collection System Piping		480	32,000	Qualifying																							100%	100%	201
202	South Relief Phase 4B	2010	Collection System Piping		480	9,858,147	Qualifying																							100%	100%	202
203	Supernatant Pipe & Valuues inside Secondary Digester	2010	Digesters		480	23,372	Qualifying													100%											100%	203
204	Decant Line from bldg #4 to filtrate pump	2010	General Treatment Plant		480	2,601	Qualifying	100%																							100%	204
205	SCBA Filing Station	2010	General Treatment Plant		480	4,151	Qualifying	100%																							100%	205
206	Sandblast & repaint #3 primary Clarifier	2010	Primary Clarifiers		480	51,337	Qualifying						100%																		100%	206
207	Screen for Headworks	2010	Screening System		480	178,017	Qualifying		100%																						100%	207
208	South Relief Extension	2011	Collection System Piping		480	45,132	Qualifying																							100%	100%	208
209	Grating around Vertical Conveyer	2011	General Treatment Plant		480	12,615	Qualifying	100%																							100%	209
210	South Outfall	2012	Collection System Piping	Series 2021B	480	6,385,594	Qualifying																							100%	100%	210
211	Transfer Switch in Bldg #2 for redundancy	2012	General Treatment Plant		480	13,403	Qualifying	100%																							100%	211
212	Aeration Diffuser Replacement planning	2013	Contact Process (Aeration Basins, Blower Building, RSS Pumps)		480	17,770	Qualifying									100%															100%	212
213	Antelope Dr Lining Eng & Construction	2014	Collection System Piping		480	209,526	Qualifying																							100%	100%	213
214	Gordan Ave Lining Eng & Construction	2014	Collection System Piping		480	5,417,783	Qualifying																							100%	100%	214
215	East Outfall Replacement & Design	2015	Collection System Piping	Series 2014	480	4,627,403	Qualifying																							100%	100%	215
216	Weaver Lane Design	2015	Collection System Piping	Series 2021B	480	124,925	Qualifying																							100%	100%	216
217	Digester Expansion Design	2015	Digesters		480	80,932	Qualifying													100%											100%	217
218	Secondary Digesters	2015	Digesters	Series 2014	480	5,009,999	Qualifying													100%											100%	218
219	East Outfall Ground Water Redmediation Work	2016	Collection System Piping		480	71,634	Qualifying																							100%	100%	219
220	Congeneration Upgrades & Expansion Construction	2017	Cogeneration Facility (Engine generators)	Series 2014, 2016	480	27,028,815	Qualifying																					100%			100%	220
221	Rehabilitation lining projects design/cms construction	2017	Collection System Piping		480	14,933,594	Qualifying																							100%	100%	221
222	Primary Solids Screening & Thickening Design	2017	Primary Sludge/Scum Thickening	Series 2014, 2016	480	27,620,465	Qualifying													100%											100%	222
223	Water Hammer	2017	General Treatment Plant		480	26,436	Qualifying	100%																							100%	223
224	Blower Control PLC and Modification Program	2017	Contact Process (Aeration Basins, Blower Building, RSS Pumps)		480	103,754	Qualifying									100%															100%	224
225	Aeration basin and secondary digester 1 flowmeter	2018	Contact Process (Aeration Basins, Blower Building, RSS Pumps)		120	11,368	Qualifying									100%															100%	225
226	LINING PROJECT 5	2018	Collection System Piping	Series 2014, 2016	480	5,941,384	Qualifying																							100%	100%	226
227	MASTER PLAN PROJECT 2A AND 2B	2018	Collection System Piping		480	4,567,684	Qualifying																							100%	100%	227
228	WEST POINT CITY REALIGNMENT PROJECT	2018	Collection System Piping		480	1,481,179	Qualifying																							100%	100%	228
229	Chlorine Residual Meter	2019	Chlorine Contact Basins		120	2,923	Qualifying											100%													100%	229
230	K-Q46H-79PR ATI Total Chlorine Residual Meter	2019	Chlorine Contact Basins		120	2,915	Qualifying											100%													100%	230
231	DR3900 Spectrophotometer	2019	General Treatment Plant		120	4,561	Qualifying	100%																							100%	231
232	Aeration Basin Flowmeter	2019	Contact Process (Aeration Basins, Blower Building, RSS Pumps)		120	3,847	Qualifying									100%															100%	232
233	LINING PROJECT 6	2019	Collection System Piping		480	6,871,426	Qualifying																							100%	100%	233
234	Piping and Valves for S-100 Transfer Pump upgrade	2019	Digesters		480	15,009	Qualifying													100%											100%	234
235	SECONDARY DIGESTER #2 FLOW METERKURZ 454-FTB-WGF FLOW METER	2020	Digesters	Series 2021B	120	4,652	Qualifying													100%											100%	235
236	Hasardous Gas Meters	2020	General Treatment Plant		120	2,699	Qualifying	100%																							100%	236
237	Chlorine Building Pipine and Valve Mods	2020	Chlorine Contact Basins		360	68,981	Qualifying											100%													100%	237
238	Stepscreen bio gates	2020	Screening System		360	63,400	Qualifying		100%																						100%	238
239	Grit Chamber Modifications	2020	Aerated Grit Removal	Series 2016	480	1,485,657	Qualifying			100%																					100%	239
240	Lining Project 7	2020	Collection System Piping	Series 2021A	480	4,030,722	Qualifying																							100%	100%	240
241	MSA s5000 Gas Detector	2021	General Treatment Plant		120	7,115	Qualifying	100%																							100%	241
242	Utility water pump VFD in bldg 7	2021	General Treatment Plant		120	11,600	Qualifying	100%																							100%	242
243	Enclose Influent Roy Box	2021	Headworks		240	4,477	Qualifying	100%																							100%	243
244	Launders and Weirs for #3 Primary Clarifier	2021	Primary Clarifiers		240	547,651	Qualifying						100%																		100%	244
245	1800 North Replacement Project	2021	Collection System Piping	Series 2021A	480	8,371,937	Qualifying																							100%	100%	245
246	East Outfall Phase 3 and 5600 South Project	2021	Collection System Piping	Series 2021A	480	11,766,151	Qualifying																							100%	100%	246
247	Lining Project 8	2021	Collection System Piping	Series 2021B	480	6,672,587	Qualifying																							100%	100%	247
248								$ 75,175,675	$ -	$ 241,507	$ 1,485,657	$ 6,262,649	$ 2,601,550	$ 7,506,647	$ 1,105,625	$ 16,472,954	$ 672,336	$ 6,643,976	$ -	$ 36,165,773	$ 4,250,487	$ -	$ 29,949,170	$ 139,971,730	$ -	$ -	$ -	0%	248
						$ 328,505,737		$ 75,175,675	$ -	$ 241,507	$ 1,485,657	$ 6,262,649	$ 2,601,550	$ 7,506,647	$ 1,105,625	$ 16,472,954	$ 672,336	$ 6,643,976	$ -	$ 36,165,773	$ 4,250,487	$ -	$ 29,949,170	$ 139,971,730	$ -	$ -	$ -	$ 328,505,737				
	A	B	C			E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z				

APPENDIX E: SANITARY SEWER 10 YEAR CAPITAL PROJECTS

North Davis Sewer District

Construction Cost Inflation Rate*	3.0%

TABLE E.1: SEWER CAPITAL PROJECTS

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
Current Treatment Expansion - 2021 PV Estimate								
Liquid Treatment Process								
Replace Primary Clarifiers 1 & 2	13%	2027	$ 14,681,000	$ 1,908,530	17,529,882	**$ 17,529,882**	$ 2,278,885	$ 15,250,997
Biosolids Treatment Process Projects								
Digesters 1 and 2 Cover Replacement	0%	2025	6,000,000	-	6,753,053	**6,753,053**	-	6,753,053
Rotary Drum Thickener Addition	50%	2024	1,000,000	500,000	1,092,727	**1,092,727**	546,364	546,364
Disinfection								
TBPEL- Discharge Relocation to Gilbert Bay	43%	2026	42,000,000	18,060,000	48,689,511	**48,689,511**	20,936,490	27,753,021
Treatment Facilities Subtotal	**32%**	**2015**	**$ 63,681,000**	**$ 20,468,530**	**$ 74,065,173**	**$ 74,065,173**	**$ 23,761,738**	**$ 50,303,435**
Collection - 2022 PV Estimate								
Lining Project 11	14%	2023	13,927,000	1,950,000	14,344,810.0	**14,344,810**	2,008,500	12,336,310
Lining Project 12	25%	2024	10,815,000	2,704,000	11473633.5	**11,473,634**	2,868,674	8,604,960
Lining Project 13	44%	2025	24,007,000	10,563,000	26233097.09	**26,233,097**	11,542,475	14,690,622
Lining Project 14	16%	2026	33,497,000	5,360,000	37701168.61	**37,701,169**	6,032,727	31,668,441
Lining Project 15	24%	2027	3,142,000	754,000	3642439.141	**3,642,439**	874,093	2,768,346
Hill Field Road	30%	2023	9,186,000	2,756,000	9,461,580	**9,461,580**	2,838,680	6,622,900
Fairfield Road	10%	2024	5,324,000	533,000	5,648,232	**5,648,232**	565,460	5,082,772
1800 North Phase 2	18%	2024	681,000	123,000	722,473	**722,473**	130,491	591,982
Reverse Grade Replacement	16%	2030	5,686,000	910,000	7,202,855	**7,202,855**	1,152,761	6,050,094
East Outfall Phase 4	41%	2028	7,695,000	3,155,000	9,188,232	**9,188,232**	3,767,235	5,420,997
East Outfall Phase 5	59%	2029	7,997,000	4,719,000	9,835,301	**9,835,301**	5,803,775	4,031,527
				-	-	-	-	-
				-	-	-	-	-
Collection Subtotal	**28%**		**$ 121,957,000**	**$ 33,527,000**	**$ 135,453,821**	**$ 135,453,821**	**$ 37,584,870**	**$ 97,868,952**
Professional								
Biosolids Master Plan Update	100%	2025	150,000	150,000	163,909	**$ 163,909**	$ 163,909	$ -
Performance/Permitting/Nutrient Studies	12%	2022	460,000	55,200	460,000	**$ 460,000**	$ 55,200	$ 404,800
Master Plan Update	100%	2027	400,000	400,000	463,710	**463,710**	463,709.63	-
Master Plan Update	100%	2032	400,000	400,000	537,567	**537,567**	537,567	-
Collection System Engineering	75%	2023	1,000,000	750,000	1,030,000	**1,030,000**	772,500	257,500
Professional Subtotal	**75%**		**$ 2,410,000**	**$ 1,755,200**	**$ 2,655,185**	**$ 2,655,185**	**$ 1,992,885**	**$ 662,300**
Ten Year Sanitary Sewer			**$ 188,048,000**	**$ 55,750,730**	**$ 212,174,179**	**$ 212,174,179**	**$ 63,339,493**	**$ 148,834,686**

Non-Qualifying	$ 132,297,270	$ 148,834,686	70%
Qualifying Treatment	20,468,530	23,761,738	11%
Qualifying Collection	33,527,000	37,584,870	18%
Qualifying Professional	1,755,200	1,992,885	1%
Totals	**$ 188,048,000**	**$ 212,174,179**	**100%**

Source:Brown & Caldwell, Impact Fee Facilities Plan June 2022: Table 5-1

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

APPENDIX E: SANITARY SEWER 10 YEAR CAPITAL PROJECTS

North Davis Sewer District

Inflation Rate **3.00%**

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Table E.2: Future Value Sewer Capital Projects by Year**	**1.000**	**1.030**	**1.061**	**1.093**	**1.126**	**1.159**	**1.194**	**1.230**	**1.267**	**1.305**	**1.344**
2	**Project**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
3	**Current Treatment Expansion - 2021 PV Estimate**											
4	Replace Primary Clarifiers 1 & 2	$ -	$ -	$ -	$ -	$ -	$ 17,019,303	$ -	$ -	$ -	$ -	$ -
5	Digesters 1 and 2 Cover Replacement	-	-	-	6,556,362	-	-	-	-	-	-	-
6	Rotary Drum Thickener Addition	-	-	1,060,900	-	-	-	-	-	-	-	-
7	TBPEL- Discharge Relocation to Gilbert Bay	-	-	-	-	47,271,370	-	-	-	-	-	-
8		-	-	-	-	-	-	-	-	-	-	-
9		-	-	-	-	-	-	-	-	-	-	-
10		-	-	-	-	-	-	-	-	-	-	-
11		-	-	-	-	-	-	-	-	-	-	-
12	Treatment Total	$ -	$ -	$ 1,060,900	$ 6,556,362	$ 47,271,370	$ 17,019,303	$ -	$ -	$ -	$ -	$ -
13	**Collection - 2022 PV Estimate**											
14	Lining Project 11	$ -	$ 14,344,810	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	Lining Project 12	-	-	11,473,634	-	-	-	-	-	-	-	-
16	Lining Project 13	-	-	-	26,233,097	-	-	-	-	-	-	-
17	Lining Project 14	-	-	-	-	37,701,169	-	-	-	-	-	-
18	Lining Project 15	-	-	-	-	-	3,642,439	-	-	-	-	-
19	Hill Field Road	-	9,461,580	-	-	-	-	-	-	-	-	-
20	Fairfield Road	-	-	5,648,232	-	-	-	-	-	-	-	-
21	1800 North Phase 2	-	-	722,473	-	-	-	-	-	-	-	-
22	Reverse Grade Replacement	-	-	-	-	-	-	-	-	7,202,855	-	-
23	East Outfall Phase 4	-	-	-	-	-	-	-	-	-	-	-
24	East Outfall Phase 5	-	-	-	-	-	-	9,188,232	-	-	-	-
25	Collection Total	$ -	$ 23,806,390	$ 17,844,338	$ 26,233,097	$ 37,701,169	$ 3,642,439	$ 9,188,232	$ -	$ 7,202,855	$ -	$ -
25	**Professional**											
26	Biosolids Master Plan Update	-	-	-	163,909	-	-	-	-	-	-	-
27	Performance/Permitting/Nutrient Studies	460,000	-	-	-	-	-	-	-	-	-	-
28	Master Plan Update	-	-	-	-	-	463,710	-	-	-	-	-
29	Master Plan Update	-	-	-	-	-	-	-	-	-	-	537,567
30	Collection System Engineering	-	1,030,000	-	-	-	-	-	-	-	-	-
31												
32	Miscellaneous Total	$ 460,000	$ 1,030,000	$ -	$ 163,909	$ -	$ 463,710	$ -	$ -	$ -	$ -	$ 537,567
33	**Total Projects**	**$ 460,000**	**$ 24,836,390**	**$ 18,905,238**	**$ 32,953,368**	**$ 84,972,539**	**$ 21,125,451**	**$ 9,188,232**	**$ -**	**$ 7,202,855**	**$ -**	**$ 537,567**
34	A	B	C	D	E	F	G	H	I	J	K	L
35												
36												
37	**Table E.3: Future Value Qualifying Sewer Capital Projec**	**1.000**	**1.030**	**1.061**	**1.093**	**1.126**	**1.159**	**1.194**	**1.230**	**1.267**	**1.305**	**1.344**
38	**Project**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
39	**Project**											
40	Replace Primary Clarifiers 1 & 2	$ -	$ -	$ -	$ -	$ -	$ 2,212,509	$ -	$ -	$ -	$ -	$ -
41	Digesters 1 and 2 Cover Replacement	-	-	-	-	-	-	-	-	-	-	-
42	Rotary Drum Thickener Addition	-	-	530,450	-	-	-	-	-	-	-	-
43	TBPEL- Discharge Relocation to Gilbert Bay	-	-	-	-	20,326,689	-	-	-	-	-	-
44		-	-	-	-	-	-	-	-	-	-	-
45		-	-	-	-	-	-	-	-	-	-	-
46		-	-	-	-	-	-	-	-	-	-	-
47		-	-	-	-	-	-	-	-	-	-	-
48	Treatment Total	$ -	$ -	$ 530,450	$ -	$ 20,326,689	$ 2,212,509	$ -	$ -	$ -	$ -	$ -
49	**Collection**											
50	Lining Project 11	$ -	$ 2,008,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
51	Lining Project 12	-	-	2,868,674	-	-	-	-	-	-	-	-
52	Lining Project 13	-	-	-	11,542,475	-	-	-	-	-	-	-
53	Lining Project 14	-	-	-	-	6,032,727	-	-	-	-	-	-
54	Lining Project 15	-	-	-	-	-	874,093	-	-	-	-	-
55	Hill Field Road	-	2,838,680	-	-	-	-	-	-	-	-	-
56	Fairfield Road	-	-	565,460	-	-	-	-	-	-	-	-
57	1800 North Phase 2	-	-	130,491	-	-	-	-	-	-	-	-
58	Reverse Grade Replacement	-	-	-	-	-	-	-	-	1,152,761	-	-
59	East Outfall Phase 4	-	-	-	-	-	-	-	-	-	-	-
60	East Outfall Phase 5	-	-	-	-	-	-	3,767,235	-	-	-	-
61	Collection Total	$ -	$ 4,847,180	$ 3,564,624	$ 11,542,475	$ 6,032,727	$ 874,093	$ 3,767,235	$ -	$ 1,152,761	$ -	$ -
61	**Professional**											
62	Biosolids Master Plan Update	-	-	-	163,909	-	-	-	-	-	-	-
63	Performance/Permitting/Nutrient Studies	55,200	-	-	-	-	-	-	-	-	-	-
64	Master Plan Update	-	-	-	-	-	463,710	-	-	-	-	-
65	Master Plan Update	-	-	-	-	-	-	-	-	-	-	537,567
66	Collection System Engineering	-	772,500	-	-	-	-	-	-	-	-	-
67	-											
68	Miscellaneous Total	$ 55,200	$ 772,500	$ -	$ 163,909	$ -	$ 463,710	$ -	$ -	$ -	$ -	$ 537,567
69	**Total Projects**	**$ 55,200**	**$ 5,619,680**	**$ 4,095,074**	**$ 11,706,384**	**$ 26,359,416**	**$ 3,550,312**	**$ 3,767,235**	**$ -**	**$ 1,152,761**	**$ -**	**$ 537,567**
	A	B	C	D	E	F	G	H	I	J	K	L

APPENDIX E: SANITARY SEWER 10 YEAR CAPITAL PROJECTS

North Davis Sewer District

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Table E.4: Future Value Non-Qualifying Sewer Capital P**	**1.000**	**1.030**	**1.061**	**1.093**	**1.126**	**1.159**	**1.194**	**1.230**	**1.267**	**1.305**	**1.344**
2	**Project**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
3												
4	Replace Primary Clarifiers 1 & 2	$ -	$ -	$ -	$ -	$ -	$ 14,806,793	$ -	$ -	$ -	$ -	$ -
5	Digesters 1 and 2 Cover Replacement	-	-	-	6,556,362	-	-	-	-	-	-	-
6	Rotary Drum Thickener Addition	-	-	530,450	-	-	-	-	-	-	-	-
7	TBPEL- Discharge Relocation to Gilbert Bay	-	-	-	-	26,944,681	-	-	-	-	-	-
8												
9												
10												
11												
12	Treatment Total	$ -	$ -	$ 530,450	$ 6,556,362	$ 26,944,681	$ 14,806,793	$ -	$ -	$ -	$ -	$ -
13	**Collection**											
14	Lining Project 11	$ -	$ 12,336,310	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	Lining Project 12	-	-	8,604,960	-	-	-	-	-	-	-	-
16	Lining Project 13	-	-	-	14,690,622	-	-	-	-	-	-	-
17	Lining Project 14	-	-	-	-	31,668,441	-	-	-	-	-	-
18	Lining Project 15	-	-	-	-	-	2,768,346	-	-	-	-	-
19	Hill Field Road	-	6,622,900	-	-	-	-	-	-	-	-	-
20	Fairfield Road	-	-	5,082,772	-	-	-	-	-	-	-	-
21	1800 North Phase 2	-	-	591,982	-	-	-	-	-	-	-	-
22	Reverse Grade Replacement	-	-	-	-	-	-	-	-	6,050,094	-	-
23	East Outfall Phase 4	-	-	-	-	-	-	-	-	-	-	-
24	East Outfall Phase 5	-	-	-	-	-	-	5,420,997	-	-	-	-
25	Collection Total	$ -	$ 18,959,210	$ 14,279,714	$ 14,690,622	$ 31,668,441	$ 2,768,346	$ 5,420,997	$ -	$ 6,050,094	$ -	$ -
25	**Professional**											
26	Biosolids Master Plan Update	-	-	-	-	-	-	-	-	-	-	-
27	Performance/Permitting/Nutrient Studies	404,800	-	-	-	-	-	-	-	-	-	-
28	Master Plan Update	-	-	-	-	-	-	-	-	-	-	-
29	Master Plan Update	-	-	-	-	-	-	-	-	-	-	-
30	Collection System Engineering	-	257,500	-	-	-	-	-	-	-	-	-
31												
32	Miscellaneous Total	$ 404,800	$ 257,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
33	**Total Projects**	**$ 404,800**	**$ 19,216,710**	**$ 14,810,164**	**$ 21,246,984**	**$ 58,613,122**	**$ 17,575,140**	**$ 5,420,997**	**$ -**	**$ 6,050,094**	**$ -**	**$ -**
	A	B	C	D	E	F	G	H	I	J	K	L

APPENDIX F: Outstanding and Future Debt Service

North Davis Sewer District

		43.75%			27.51%			67.06%			25.81%			24.52%					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	**TABLE F.1: OUTSTANDING AND FUTURE DEBT**																		
1		**Series 2013A**			**Series 2012**			**Series 2012B**			**Series 2014**			**Series 2016**					
2	**Year**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**			
13	2022	2,440,000	209,550	2,649,550	2,310,000	46,200	2,356,200	1,185,000	23,700	1,208,700	2,275,000.00	1,375,656.26	3,650,656	600,000.00	471,400.00	1,071,400			
14	2023	2,500,000	147,650	2,647,650							2,390,000.00	59,750.00	2,449,750	625,000.00	440,775.00	1,065,775			
15	2024	2,560,000	84,550	2,644,550									-	660,000.00	408,650.00	1,068,650			
16	2025	2,620,000	29,475	2,649,475									-	690,000.00	374,900.00	1,064,900			
17	2026												-	725,000.00	339,525.00	1,064,525			
18	2027												-	760,000.00	306,200.00	1,066,200			
19	2028												-	790,000.00	275,200.00	1,065,200			
20	2029												-	825,000.00	242,900.00	1,067,900			
21	2030												-	855,000.00	209,300.00	1,064,300			
22	2031												-	885,000.00	174,500.00	1,059,500			
23	2032												-	920,000.00	138,400.00	1,058,400			
24	2033												-	950,000.00	105,750.00	1,055,750			
25	2034												-	985,000.00	76,725.00	1,061,725			
26	2035													1,015,000.00	46,725.00	1,061,725			
27	2036													1,050,000.00	15,750.00	1,065,750			
28	2037													-	-				
29	2038													-	-				
30	2039																		
31	2040																		
32	2041																		
33	2042																		
34	2043																		
35	2044																		
36	2045																		
37	2046																		
38	2047																		
39	2048																		
40	2049																		
41	2050																		
42	2051																		
43	2052																		
44	2053													-	-				
45	2054																		
46	2055													-	-				
47	2056													-	-				
48		**$ 10,120,000**	**$ 471,225**	**$ 10,591,225**	**$ 2,310,000**	**$ 46,200**	**$ 2,356,200**	**$ 1,185,000**	**$ 23,700**	**$ 1,208,700**	**$ 4,665,000**	**$ 1,435,406**	**$ 6,100,406**	**$ 12,335,000**	**$ 3,626,700**	**$ 15,961,700**			
49																			
50																			
51																			
52		**Series 2021A**			**Series 2021B**			**Series 2022**			**Series 2026**			**Series 2028**			**TOTALS**		
53	**Year**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**	**Principal**	**Interest**	**Fiscal**
63	2022	-	866,050	866,050	1,275,000	210,027	1,485,027		249,942								10,085,000	3,452,526	13,287,584
64	2023	-	866,050	866,050	4,855,000	202,505	5,057,505	100,000	1,003,708								10,470,000	2,720,438	12,086,730
65	2024	-	866,050	866,050	4,875,000	184,249	5,059,249	2,645,000	900,542								10,740,000	2,444,041	9,638,499
66	2025	-	866,050	866,050	4,925,000	152,852	5,077,852	2,720,000	825,701								10,955,000	2,248,978	9,658,277
67	2026	-	866,050	866,050	4,950,000	108,896	5,058,896	2,800,000	748,697								8,475,000	2,063,168	6,989,471
68	2027	-	866,050	866,050	2,320,000	69,429	2,389,429	2,875,000	669,530		267,451	600,000	867,451	178,301	400,000	578,301	6,400,752	2,911,209	5,767,431
69	2028	-	866,050	866,050	2,350,000	37,545	2,387,545	2,960,000	588,132		278,150	589,302	867,451	185,433	392,868	578,301	6,563,583	2,749,097	5,764,547
70	2029	950,000	842,300	1,792,300	1,250,000	10,313	1,260,313	3,045,000	504,362		289,276	578,176	867,451	192,850	385,451	578,301	6,552,126	2,563,501	5,566,265
71	2030	2,300,000	761,050	3,061,050	-	-		3,130,000	418,221		300,847	566,605	867,451	200,564	377,737	578,301	6,786,411	2,332,913	5,571,102
72	2031	2,420,000	643,050	3,063,050	-	-		3,215,000	329,708		312,880	554,571	867,451	208,587	369,714	578,301	7,041,467	2,071,543	5,568,302
73	2032	2,530,000	531,950	3,061,950	-	-		3,310,000	238,685		325,396	542,056	867,451	216,930	361,371	578,301	7,302,326	1,812,461	5,566,102
74	2033	2,630,000	428,750	3,058,750				3,400,000	145,080		338,411	529,040	867,451	225,608	352,693	578,301	7,544,019	1,561,313	5,560,252
75	2034	1,235,000	351,450	1,586,450				3,500,000	48,825		351,948	515,504	867,451	234,632	343,669	578,301	6,306,580	1,336,173	4,093,927
76	2035	1,285,000	301,050	1,586,050							366,026	501,426	867,451	244,017	334,284	578,301	2,910,043	1,183,484	4,093,527
77	2036	1,345,000	248,450	1,593,450							380,667	486,785	867,451	253,778	324,523	578,301	3,029,445	1,075,508	4,104,952
78	2037	1,390,000	200,700	1,590,700							395,894	471,558	867,451	263,929	314,372	578,301	2,049,823	986,630	3,036,452
79	2038	1,435,000	158,325	1,593,325							411,729	455,722	867,451	274,486	303,815	578,301	2,121,215	917,862	3,039,077
80	2039	1,475,000	114,675	1,589,675							428,198	439,253	867,451	285,466	292,835	578,301	2,188,664	846,763	3,035,427
81	2040	1,520,000	69,750	1,589,750							445,326	422,125	867,451	296,884	281,417	578,301	2,262,211	773,292	3,035,502
82	2041	1,565,000	23,475	1,588,475							463,139	404,312	867,451	308,760	269,541	578,301	2,336,899	697,328	3,034,227
83	2042										481,665	385,786	867,451	321,110	257,191	578,301	802,775	642,977	1,445,752
84	2043										500,932	366,520	867,451	333,954	244,347	578,301	834,886	610,866	1,445,752
85	2044										520,969	346,483	867,451	347,313	230,988	578,301	868,281	577,471	1,445,752
86	2045										541,808	325,644	867,451	361,205	217,096	578,301	903,013	542,740	1,445,752
87	2046										563,480	303,972	867,451	375,653	202,648	578,301	939,133	506,619	1,445,752
88	2047										586,019	281,432	867,451	390,679	187,622	578,301	976,699	469,054	1,445,752
89	2048										609,460	257,992	867,451	406,307	171,994	578,301	1,015,767	429,986	1,445,752
90	2049										633,838	233,613	867,451	422,559	155,742	578,301	1,056,397	389,355	1,445,752
91	2050										659,192	208,260	867,451	439,461	138,840	578,301	1,098,653	347,099	1,445,752
92	2051										685,560	181,892	867,451	457,040	121,261	578,301	1,142,599	303,153	1,445,752
93	2052										712,982	154,470	867,451	475,321	102,980	578,301	1,188,303	257,449	1,445,752
94	2053										741,501	125,950	867,451	494,334	83,967	578,301	1,235,835	209,917	1,445,752
95	2054										771,161	96,290	867,451	514,107	64,194	578,301	1,285,269	160,484	1,445,752
96	2055										802,008	65,444	867,451	534,672	43,629	578,301	1,336,679	109,073	1,445,752
97	2056										834,088	33,364	867,451	556,059	22,242	578,301	1,390,147	55,606	1,445,752
98		**$ 22,080,000**	**$ 10,737,325**	**$ 32,817,325**	**$ 26,800,000**	**$ 975,815**	**$ 27,775,815**	**$ 33,700,000**	**$ 6,671,133**	**$ -**	**$ 15,000,000**	**$ 11,023,545**	**$ 26,023,545**	**$ 10,000,000**	**$ 7,349,030**	**$ 17,349,030**	**$ 138,195,000**	**$ 42,360,078**	**$ 140,183,945**
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S

APPENDIX G: PROPORTIONATE SHARE ANALYSIS

North Davis Sewer District

TABLE G.1: COST ALLOCTION

Facility Name/Description	Existing Asset Cost	Outstanding Bonding	Total Existing Asset Cost	% of Existing Assets to New Growth	Existing Asset Cost to New Growth	Future Cost	Bonding	Total Cost
General Plant	$ 75,175,675	$ -	$ 75,175,675	54.73%	**$ 41,147,292**	$ 546,364	$ -	**$ 41,693,655**
Headworks - Screening System	241,507	40,054	281,561	36.00%	**101,362**	-	-	**101,362**
Headworks - Mechanical Grit Removal	1,485,657	112,588	1,598,246	25.00%	**399,561**	-	-	**399,561**
Influent Pump Station	6,262,649	-	6,262,649	52.94%	**3,315,520**	-	-	**3,315,520**
Primary Clarifiers	2,601,550	-	2,601,550	54.73%	**1,423,954**	2,278,885	-	**3,702,839**
Biotower Recirculation Pump Station	7,506,647	-	7,506,647	46.89%	**3,519,783**	-	-	**3,519,783**
Biotowers and Second Stage Trickling Filters	1,105,625	-	1,105,625	46.89%	**518,415**	-	-	**518,415**
Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	16,472,954	1,901,213	18,374,168	39.36%	**7,231,815**	-	-	**7,231,815**
Final Clarifiers	672,336	-	672,336	50.21%	**337,569**	-	-	**337,569**
Cholorine Contact Basins	6,643,976	9,425	6,653,400	57.17%	**3,803,646**	-	-	**3,803,646**
Primary Sludge/Scum Thickening	-	-	-	49.15%	**-**	-	-	**-**
Digesters	36,165,773	181,778	36,347,551	20.47%	**7,440,125**	-	-	**7,440,125**
Biosolids Dewatering - Belt Filter Presses	4,250,487	930,618	5,181,105	20.61%	**1,067,955.26**	-	2,755,886	**3,823,841**
Cogeneration Facility (Engine generators) Kw	29,949,170	2,519,810	32,468,980	35.00%	**11,364,143**	20,936,490	2,755,886	**35,056,519**
Treatment	**$ 188,534,006**	**$ 5,695,486**	**$ 194,229,492**	**0.00%**	**$ 81,671,141**	**$ 23,761,738**	**$ 5,511,772**	**$ 110,944,652**
Collections	**$ 139,971,730**	**$ 18,292,019**	**$ 158,263,749**	**32.94%**	**$ 52,126,642.82**	**$ 37,584,870**	**$ 12,860,802**	**$ 102,572,315**
Totals	**$ 328,505,737**	**$ 23,987,504**	**$ 352,493,241**		**$ 133,797,784**	**$ 61,346,608**	**$ 18,372,574**	**$ 213,516,966**

TABLE G.2: TREATMENT CAPACITY BY PROCESS

Facility Name/Description	Flow Capacity Basis	Demand per ERU	Excess Capacity in 2020 (mgd)	Excess Capacity in 2020 (ERUs)	Cost by Treatment Component	Cost per ERU
General Treatment Plant	Peak Day	286	28.90	**63,173**	$ 41,693,655	**$ 659.99**
Screening System	Peak Hr.	575	27	**46,974**	101,362	**2**
Aerated Grit Removal	Max. 30 Day Avg.	249	16.00	**64,238**	399,561	**6.22**
Influent Pump Station	Peak Hr.	575	54.00	**93,949**	3,315,520	**35.29**
Primary Clarifiers	Peak Day	286	28.90	**100,981**	3,702,839	**36.67**
Biotower Recirculation Pump Station	Peak Day	286	10.55	**36,863**	3,519,783	**95.48**
Biotowers and Second Stage Trickling Filters	Peak Day	286	21.10	**73,726**	518,415	**7.03**
Solids Contact Process (Aeration Basins, Blower Building, RSS Pumps)	Max. 30 Day Avg.	249	13.50	**54,201**	7,231,815	**133.43**
Final Clarifiers	Peak Day	286	24.10	**84,209**	337,569	**4.01**
Chlorine Contact Basins	Peak Day	286	31.90	**111,463**	3,803,646	**34.12**
Primary Sludge/Scum Thickening	Peak Day	286	23.10	**80,715**	-	**-**
Digesters	Max. 14 Day Avg.	1.90	40,939.00	**77,977**	7,440,125	**95.41**
Biosolids Dewatering - Belt Filter Presses	Max. 14 Day Avg.	0.46	9,894.00	**4,515**	3,823,841	**846.98**
Cogeneration Facility (Engine generators) Kw	Max. 30 Day Avg.	249	700.00	**2,810,433**	35,056,519	**12.47**
Totals					**$ 110,944,652**	**$ 1,969.27**

TABLE G.3: QUALIFYING COLLECTION EXPENSE AND IMPACT FEE PER ERC

	Cost to Growth FV (future) and Historic (Existing)	% of Project to Existing Users	% of Project to Growth	Cost to Existing Users	Cost to Future Users
Future 10 Year Projects	$ 37,584,870	0.000%	100.00%	$ -	$ 37,584,870
Future Bonds	12,860,802	0.000%	100.00%	-	12,860,802
Existing	139,971,730	67.06%	32.94%	93,869,850	46,101,880
Existing Bonds	18,292,019	67.06%	32.94%	18,292,019	6,024,763
	$ 208,709,420			**$ 112,161,869**	**$ 102,572,315**
			Future ERUs to Buildout		63,173
					$ 1,623.66

TABLE G.4: ENGINEERING/PROFESSIONAL PLANNING STUDIES

Qualifying Cost	$ 1,992,885
Future ERUs to Buildout	63,173
Impact Fee Per ERU	**$ 31.55**

TABLE G.5: IMPACT FEE UPDATES

Total Qualifying Cost	$ 50,000
Cost to New Growth	100%
% of Total Expense to Growth	**$ 50,000**

TABLE G.6: IMPACT FEE SUMMARY PER ERU

Processes	Growth Related Costs	Additional ERUs	Cost per ERU
Treatment	$ 110,944,651.71	Varied by Process	**$ 1,969.27**
Collection	102,572,314.58	63,173	**1,623.66**
Professional	1,992,885.23	63,173	**31.55**
Impact Fee Updates	50,000.00	36,779	**1.36**
Fund Balance Credit	-	63,173	**-**
Debt Service Credit			**(171.81)**
Total Impact Fee per ERU	**$ 215,559,852**		**$ 3,454.03**

APPENDIX H: MAXIMUM ALLOWABLE IMPACT FEES

North Davis Sewer District

TABLE H.1: Sanitary Sewer Impact Fee

Zoning Category	Water Demand per Unit	Equivalent ERUs per Unit	Impact Fee per ERU	Proposed Impact Fee
Residential per Dwelling Unit				
Single Family Residential	231	1.00	$ 3,454.03	$ 3,454.03
Townhome Residential	208	0.90	3,454.03	3,108.63
Multi-Unit Residential	176	0.76	3,454.03	2,625.06
TOD-type Residential	141	0.61	3,454.03	2,106.96
Non-Residential per 1,000 Gallons Billed Monthly				
Non-Residential (per 1,000 gal billed monthly)	1,000	0.19	3,454.03	656.27

TABLE H.2: Non-Standard Users

Non-Standard Calculation	Monthly Billed Demand / 0.7554 / 7,028 x $3,454.03