

MOUNTAIN GREEN SEWER IMPROVEMENT DISTRICT IMPACT FEE ANALYSIS UPDATE



5455 W Old Hwy Rd
Morgan, UT 84050

April 2023

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1.0 INTRODUCTION

1.1 IMPACT FEE FACILITIES PLAN AND IMPACT FEE ANALYSIS PURPOSE

The purpose of this Impact Fee Analysis Update (IFA), is to update the costs from the 2020 Mountain Green Impact Fee Facilities Plan, and to fulfill the requirements established in Utah Code Title 11 Chapter 36a.

The purpose of this study is to fulfill the requirements of the Impact Fees Act regarding the establishment of an IFFP and IFA. The IFFP identifies the demands placed upon the District's existing facilities by future development and evaluates how these demands will be met by the District. The IFFP is also intended to outline the improvements which are intended to be funded by impact fees. The purpose of the IFA is to allocate the cost of the new facilities and any excess capacity to new development, while ensuring that all methods of financing are considered. The Impact Fees Act requires that the IFFP and IFA consider the historic level of service provided to existing development and ensure that the proposed impact fees maintain the existing level of service.

1.2 MOUNTAIN GREEN SEWER IMPROVEMENT DISTRICT BACKGROUND & PURPOSE

Mountain Green is an unincorporated community located in northern Morgan County, Utah. It is nestled in the upper end of Weber Canyon and encompasses an area of 5.4 square miles. As of the 2020 census, it is estimated to have about 4,231 residents (data.census.gov).

In 1976, Morgan County created the Mountain Green Sewer Improvement District (MGSID) to establish sanitary regulations. The District could own property, require sewer impact fees, and charge monthly service fees for homes served by a future sewer system. Many residents were resistant to construction of a sewer system because their own systems were working just fine, and it wasn't until 1989 that construction was able to begin.

The initial wastewater treatment facility for MGSID was a conventional lagoon system. That lagoon system was capable of treating 900 ERUs, or about 0.3 million gallons per day (MGD). In 2007, it was expanded to double that capacity at a rating of 0.61 MGD. Because Mountain Green expects continued growth, it seeks to expand the sewer system even further. A new mechanical BNR (Biological Nutrient Removal) WWTP plant has been approved, and construction is set to begin in 2023. This new plant is expected to come on line by 2025 and will increase the capacity of MGSID system to 1.5 MGD. The new WWTP is designed to allow for further expansion, increasing the capacity to about 3.0 MGD. The entire MGSID system is summarized in figure 1 below.

Planned just south of Mountain Green is Wasatch Peaks Ranch (WPR), a private community and club with a ski resort, golf course, other amenities and their associated infrastructure. Wasatch Peak Ranch is currently under construction and will be completed through a series of phases over the next 15 years. WPR's sanitary sewer is expected to connect to the MGSID system in 2023 and MGSID plans to annex

WPR into the district. As such, MGSID is expecting an increase in demand upon connection of the WPR system, with gradual increases as WPR is further developed.

Due to the increased demand from WPR, MGSID needs to determine the appropriate impact fees in order to help offset the costs of the added flows to the system. This Impact Fee analysis will determine the appropriate impact fees necessary based on an analysis of the existing and future systems and their associated demands.

MGSID service area shown in Figure 1 will be assessed an impact fee. WPR service area as shown in Figure 1 will be assessed a separate impact fee. The separate impact fees are described in the plan below.

1.3 SCOPE

The scope of the MGSID Impact Fee Analysis Update includes the following.

1. To provide a brief review the proposed capital improvement projects for the MGSID. These items are planned or are currently under construction in the MGSID system. They were deemed to either be necessary based on an analysis of existing growth within the system or based on the connection and growth of WPR.
2. To provide an updated impact fee analysis for the MGSID. This impact fee analysis is based on the eligible capital improvement projects for Mountain Green's sanitary sewer system. This does not include projects deemed necessary solely due to the connection of other sewer areas. This report discusses the projected growth for Mountain Green, lists the eligible capital improvement projects, and then provides the full impact fee calculation for future Mountain Green connections.
3. To provide an impact fee analysis for future WPR developments. This impact fee analysis is based on the eligible capital improvement projects deemed necessary for the connection of the WPR sewer system. This part of the report discusses the projected growth of Wasatch Peaks Ranch, lists the relevant capital improvement projects with the proportional responsibility of WPR, and provides a full impact fee analysis for future WPR connections.

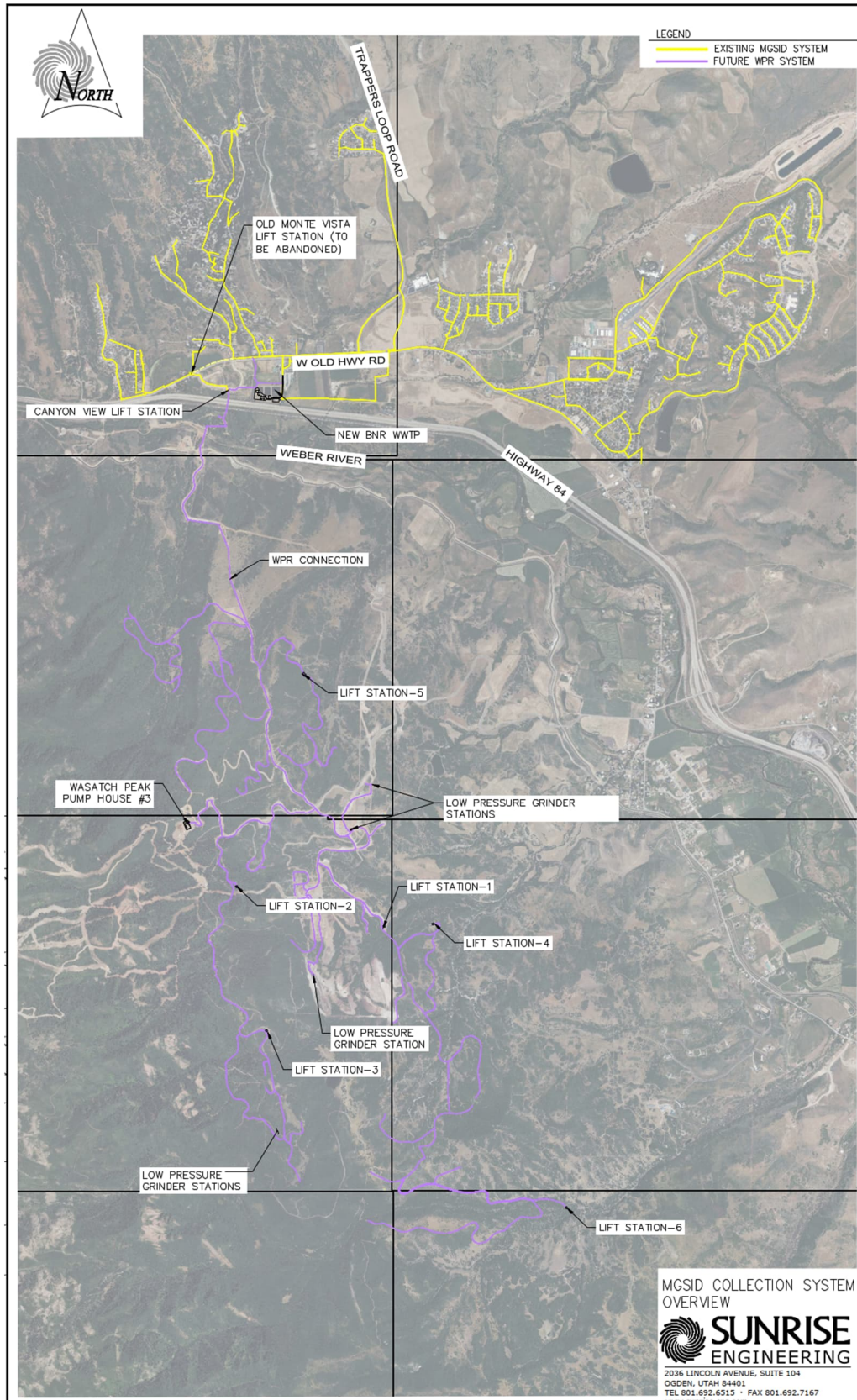


Figure 1 - Summary of MGSID System

2.0 IMPACT FEE ELIGIBLE CAPITAL IMPROVEMENT PROJECTS

2.1 IFECIP #1 PARK SEWER LINE

The Park Sewer Line is a proposed 15" and 18" gravity sewer line that will connect the sewer main in Old Highway Road to the existing sewer line in the WWTP driveway. The current sanitary system is operating above the capacity of the sanitary main in the WWTP driveway. This Capital Improvement Project is necessary to increase the current capacity of the Mountain Green's sanitary system to effectively handle current and existing demands. An overview of the proposed improvements is shown in Figure 2 below.

This improvement will benefit not only existing users of the MGSID district but also future growth to Mountain Green. The connection of the WPR system does not produce flows through this area and this project is not eligible for impact fees from WPR.

The engineers estimate for the total cost of the Park Sewer Line improvements is just shy of \$650,000. A detailed breakdown is shown in figure 3 below. Kastle Rock Excavation provided a cost estimate of the southern portion of the line (running East to West) of \$326,384. This part is not only tributary to the mountain green system but also the WPR connection. WPR has agreed to pay for 70% of the southern portion of the line up front. This gives MGSID and impact fee eligible amount of:

$$\$650,000 - 0.7 * \$326,384 = \textbf{\$421,531}$$

The cost estimate for the park sewer line is shown in Figure 2 below.

2.2 IFECIP #2 CANYON VIEW LIFT STATION MAIN/GRAVITY

The Canyon View Lift Station is currently under construction and is located just south of N Poll Drive. The lift Station will consist of a rectangular concrete well with three submersible pumps, a valve vault, and a lift station building that includes a generator and the pump control panels. The location of the Canyon View Lift Station is shown in Figure 4 below.

Initially, the lift station will utilize a system of two pumps which alternate to pump sewage into a 6" discharge pipe which is connected to an 8" force main. Based on data from the Canyon View Lifts Station Design Report, the two-pump system has a design point of 350 gpm at 31 ft of head.

As more of Wasatch Peaks Ranch will be completed, the demand for the lift station capacity will increase. As such, a third pump will be added to the system which will increase the design point for the system to 44 ft of head at 710 gpm.

The canyon view lift station is currently under construction. The cost of the project was bid to be \$1,258,321. The flows entering this lift station originate from either the eastern portion of the MGSID or directly from WPR. Wasatch Peaks Ranch has agreed to pay for the 70% of Lift station up front, as opposed to including WPR's portion of the cost in impact fees for future WPR developments. The cost breakdown is summarized in Table 1 below.

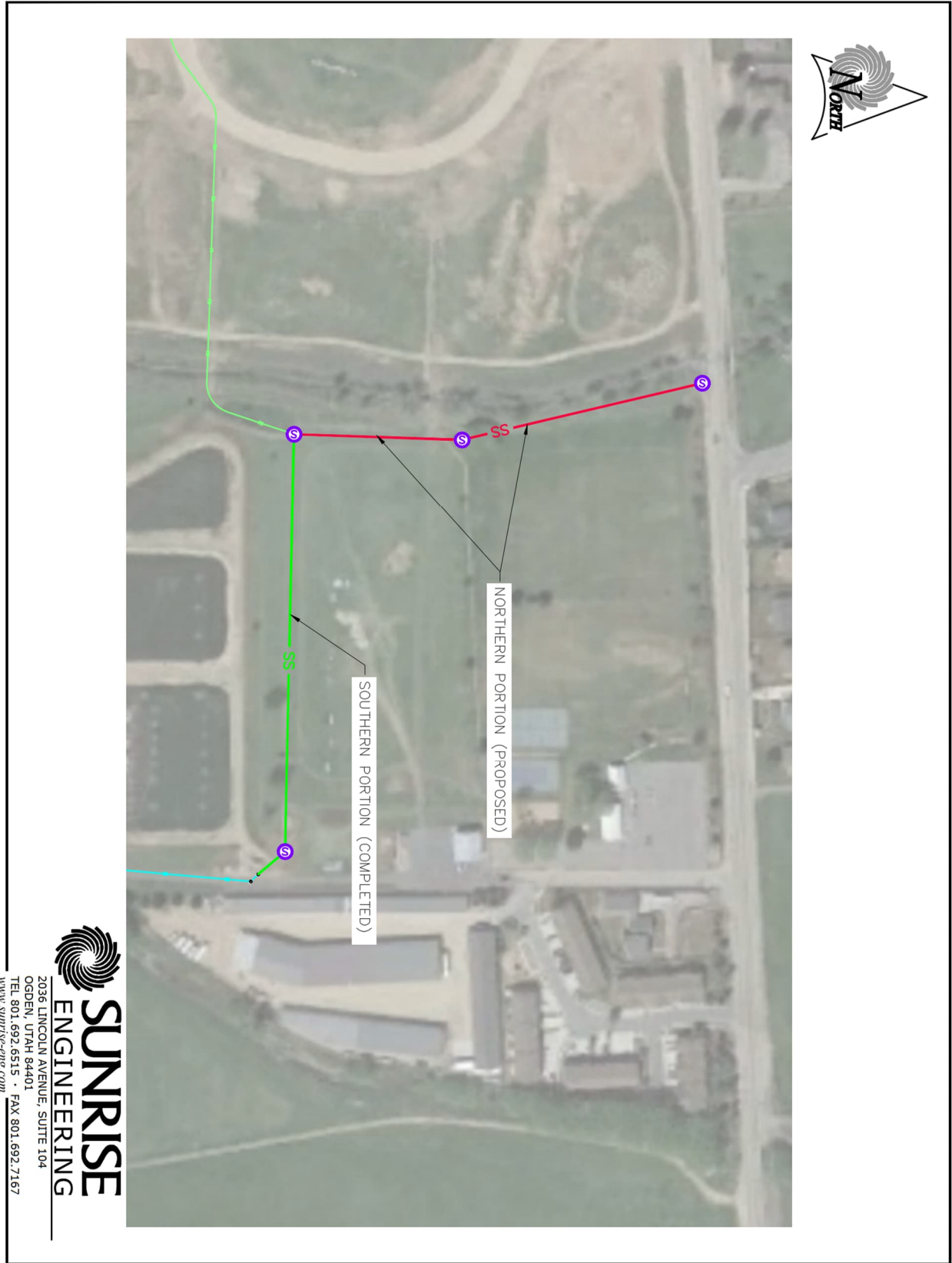


Figure 2 - Park Line Sewer Improvements


<div> <div> SUNRISE ENGINEERING, INC. CONSULTING ENGINEERS AND SURVEYORS <i>Opinion of Probable Costs</i> </div> <div>  SUNRISE ENGINEERING </div> </div>						
DESCRIPTION:		CIP#1 and #2 Bypass	PROJECT NO:			
		Park Line	DATE:			
OWNER: Mountain Green Sewer Improvement District			BY: HDW			
No.	Spec.	Item	Quantity	Unit	Unit Price	Amount
GENERAL BID ITEMS						
1		Traffic Control	1	LS	\$ 5,000.00	\$ 5,000.00
2		Temporary Pumping & Sewer Relocation	0	LS	\$ 10,000.00	\$ -
3		Mobilization	1	LS	\$ 32,500.00	\$ 32,500.00
4		Utility Investigation	8	HRS	\$ 325.00	\$ 2,600.00
5		SWPPP Plan	1	LS	\$ 2,875.00	\$ 2,875.00
6		Asphalt Cutting	0	SY	\$ 12.00	\$ -
7		Aggregate Base Course (8" THK)	0	TN	\$ 24.00	\$ -
8		Asphalt T-Patch	0	TN	\$ 128.00	\$ -
9		Imported Pipe Bedding	1,432	LF	\$ 27.00	\$ 38,664.00
10		Imported Trench Fill	1,432	LF	\$ 76.00	\$ 108,832.00
11		12", 15", 18" PVC SDR-35	1,432	LF	\$ 155.00	\$ 221,960.00
12		Sewer Pipe Existing Manhole	0	EACH	\$ 2,700.00	\$ -
13		Removal	4	EACH	\$ 6,500.00	\$ 26,000.00
14		60" Sewer Manhole Installation	0	EACH	\$ 1,350.00	\$ -
15		Modify Manhole	1	EACH	\$ 35,000.00	\$ 35,000.00
CONSTRUCTION SUBTOTAL						\$ 473,431.00
CONTINGENCY (15%)						\$ 71,014.65
CONSTRUCTION TOTAL						\$ 544,446
PROFESSIONAL SERVICES & MISC. PROJECT COSTS						
a		Engineering Design (8.5%)	1	LS	\$ 40,241.64	\$ 40,241.64
b		Construction Administration & Observation	1	LS	\$ 47,343.10	\$ 47,343.10
						\$ 87,585
TOTAL						\$ 632,040
<small>In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided</small>						

Figure 3 - Park Line Engineers Estimate

Table 1 - Canyon View Lift Station Cost Split

	% of Cost	Construction	Design	CM	Total
Total	100.00%	\$ 1,139,121.00	\$ 69,200.00	\$ 50,000.00	\$ 1,258,321.00
WPR	70.00%	\$ 797,384.70	\$ 48,440.00	\$ 35,000.00	\$ 880,824.70
MGSID	30.00%	\$ 341,736.30	\$ 20,760.00	\$ 15,000.00	\$ 377,496.30

Based on the above breakdown, MGSID is responsible for \$377,496.30 for the construction of the Canyon View Lift Station. This will be the cost used for the lift station in the impact fee analysis.



Figure 4 - Canyon View Lift Station Layout

2.4 IFECIP #4 MECHANICAL BNR SYSTEM – 1.5 MGD SYSTEM

The largest capital Improvement project is the construction of a new wastewater treatment plant for the entire MGSID system. After in-depth analysis, (which can be found in the 2020 Mountain Green Capital Facilities Plan) it was decided upon to build a mechanical BNR system in the same location as the existing conventional lagoon plant. This design will utilize the existing basins as part of the design and will have a capacity of 1.5MGD, with the potential for expansion into a 3.0MGD plant in the future. An overview of the project is shown in figure 6 below. Construction is expected to start mid-2023.

Based on the bid of \$22,975,108 from COP the total project cost is expected to be \$30,189,993 after accounting for all other relevant costs as summarized in table 2 below.

Table 2 - WWTP Total Cost Calculation

Phase	Cost
Preliminary-Feasibility-Engineering Design	\$ 970,000.00
Owner Supplied Equipment	\$ 2,778,982.00
Engineering CM	\$ 1,134,964.00
SKM SCADA	\$ 330,939.00
COP Contractor Bid	\$ 22,975,108.00
Contingency	\$ 2,000,000.00
Total	\$ 30,189,993.00

The funding for the WWTP is expected to come from various sources. MGSID will self-fund \$586,000 towards the construction of the plant. Additionally, the engineering design which includes the feasibility studies as part of the 2020 Capital Facilities Plan, The preliminary design, and the final engineering design, has already been paid for a total of \$970,000. Of the \$2.78 million in owners supplies equipment, there is about \$1.28 million worth of existing, owner supplied equipment and materials which have already been purchased will be used in the new WWTP. The above items are all included in the self-funding for a total of \$2,845,414.30. This reduces the total amount required for the loans and saves MGSID the additional interest for that portion of the funding. An additional \$4,400,000 will be provided through ARPA grants. The complete funding breakdown is summarized in table 3.

Table 3 - WWTP Total Funding Breakdown

Phase	Cost
Self-Funding	\$ 2,845,414.30
ARPA	\$ 4,000,000.00
County ARPA	\$ 400,000.00
Water Quality Loan	\$ 7,000,000.00
CIB	\$ 14,000,000.00
Private (Contingency)	\$ 1,944,578.70
Total	\$ 30,189,993.00

While the total cost for the WWTP is shown in the tables above, to calculate the accurate impact fee, the cost of the WWTP as applied to the impact fee analysis must also include the costs associated with the loans that will be taken out. This number includes the costs of the loan and self-participation but not the costs of the grant, yielding a figure of \$34,110,640.02. The calculation is presented in figure 5 below.

Mountain Green Proposed WWTP Project							
Proposed Funding Plan - WQB & CIB							
4/28/2023							
WWTP Project Cost						\$ 30,189,993.00	
Proposed Funding:						% of Project	
Self Funding						9%	\$ 2,845,414.30
Grant						15%	4,400,000.00
Loan						76%	\$ 22,944,578.70
Total Project Funding						\$ 30,189,993.00	
New Debt Service:							
WQB	Loan	1.30% Interest Ra	30	years	7,000,000.00	\$	283,277.82
CIB	Loan	2.00% Interest Ra	30	years	14,000,000.00	\$	625,098.89
Private	Loan	5.50% Interest Ra	30	years	1,944,578.70	\$	133,797.48
					Total	22,944,578.70	
10% Debt Reserve						\$	104,217.42
Total Cost of Loan+Self Funding						\$ 34,110,640.02	

Figure 5 - The Cost of the WWTP to be Applied to the Impact Fee Analysis.



Figure 6 - Proposed Wastewater Treatment Plant

3.0 IMPACT FEE ANALYSIS

3.1 OVERVIEW

An impact fee is a fee imposed on new development when expanding public infrastructure is needed to accommodate the new development. The impact fee is assessed per newly developed Equivalent Residential Unit (ERU). Cost analysis of the capital improvement plan to MGSID's sewer system has been previously identified and discussed in detail. Along with the impact fees required of new development, it's important to recognize that existing users benefit from some system improvements as well. That is, it raises their level of service. Only that portion of system improvements directly resulting from future growth may be considered in calculating a reasonable impact fee.

3.2 INTRODUCTION

An impact fee is a fee imposed on new development to "mitigate the impact of the new development on public infrastructure." Utah Code § 11-36a-102-8(a). Impact fees are subject to the restrictions within the Fifth Amendment of the US Constitution prohibiting the taking of private property for public use without just compensation. To comply with the US Constitution requires that there be an "essential nexus" between the fee imposed and the projected interest and that the fee imposed be "roughly proportional" to the burden created by the new development. See *Nollan v. California Coastal Commission*, 483 US 825 (1987); and see *Dolan v. City of Tigard*, 512 US 374 (1994).

The levy of impact fees in Utah is governed by the Utah Impact Fees Act codified as Utah Code § 11-36a and requires more specific analysis than that required by the US Constitution. Before imposing an impact fee, a municipality or public service provider such as Mountain Green Sewer Improvement District must prepare a written analysis of each impact fee. An impact fee analysis is designed to proportionally allocate to new development that portion of the cost of new facilities that may be required or excess capacity of existing facilities. The impact fee analysis must:

1. Identify the anticipated impact on existing facilities by new development,
2. Identify the anticipated impact on system improvements by anticipated development,
3. Demonstrate how those impacts are reasonably related to the anticipated development,
4. Estimate the proportionate share of costs to be recouped by the impact fee, and
5. Identify how the impact fee was calculated. Id. at § 304.

Entities imposing impact fees must also prepare an Impact Fee Facilities Plan unless excepted by statute. An impact fee facilities plan is not required if the municipalities general plan under Utah Code 10-91-401 contains the elements required by the Impact Fees Act. Id. At § 301. Municipalities serving less than 5,000 people and charging total impact fees of less than \$250,000 annually are not required to prepare an impact fee facilities plan. However, they must ensure that the impact fees "are based upon a reasonable plan that otherwise complies with the common law and [the other sections of the Impact Fees Act]." Id. At § 301. Mountain Green services less than 5000 people, but currently projects collecting more than \$250,000 annually in impact fees, therefore the previous 2020 Impact Fee Facilities Plan includes the requirements of an impact fee facilities plan.

The Utah Supreme Court outlined a set of seven factors which may be considered in determining the reasonableness of an impact fee; these factors are now known as the “Banberry factors.” Banberry Dev. Corp. v. S. Jordan City, 631 P.2d 899, 904 (Utah 1981). However, the Court has subsequently notes that these factors “were merely a ‘means to [an] end.’ And the ultimate legal test is whether the impact fees related to the cost of the benefits conferred on those paying the fees.” Toole Assoc. LTD. V. Tooele City Corp., 247 P.3d 371 (Utah 2011) (quoting Home Builders Ass’n of Utah v. City of American Fork, 973 P.2d 425, at ¶ 20 (Utah 1999)). This impact fee study will review each of the Banberry factors for the system impact fee. A brief analysis of the Banberry factors for the system is attached to this analysis as Appendix E.

Although the District may enact a lower impact fee than that justified by the Impact Fee Analysis, the municipality may not impose a fee higher than that justified in the analysis.

The purpose of this Impact Fee Analysis is to proportionally allocate the cost of public facilities required to provide sanitary sewer service within the Mountain Green community to new development within the service area. System improvements include the construction of a new wastewater treatment plant, new sewer lines, and the upgrade of interceptor and collection pipelines to handle future growth. An outline of the proposed improvements and the associated estimated costs can be found in Section 2. This impact fee analysis calculates the highest proportionate share of the cost of these public facilities which may be reasonably allocated to new development. In conjunction with calculating the reasonable impact fee for future projects, this analysis will review and update the current impact fees and determine a total maximum reasonable impact fee for Mountain Green’s sanitary sewer system.

3.3 METHODOLOGY

The impact fee for sanitary sewer facilities is derived primarily from a plan-based method for future planned development. However, this analysis also considers cost recovery for excess capacity of the current system. The portion of the Impact Fee Analysis which focuses on planned development accounts for estimates of how the system projects will be financed. Should the actual financing of the project change from the estimated portion of grant versus debt, this analysis may require updating to ensure the impact fee assessed does not exceed the proportionate share of development’s impact on the new facilities.

Impact fees may not be used for maintenance or repair of the existing system, or for system improvements that increase the level of service to existing system users unless the improvement provides additional system capacity that directly supports new development. Impact fees may not be used to recoup more than the actual public facility costs incurred or those projected to be incurred “within six years after the day on which each impact fee is paid.” Id. At § 306. Also, impact fees must include an offset for grants or other alternative sources of payment and may not include expenses for operation and maintenance or for overhead unless such overhead expense are calculated using a methodology consistent with generally accepted cost accounting practices and the standards accepted by the federal Office of Management and Budget for federal grant reimbursement. Id.

To determine the proportionate share of the cost to new development, this analysis reviews current and past demographic trends and provides a projection for future growth within MGSID's service area for the next twenty years. The capacity of the current system and excess capacity of each new system component that will be used in this analysis are based upon data provided by MGSID, a model analysis of the existing and proposed sewer collection system, and estimates calculated by SEI. Costs of the proposed public facilities are calculated based upon an engineer's opinion of probable cost, and with 2020 quotes from equipment manufacturers used for the treatment plant and lift stations.

Because sanitary sewer loads of multi-family, industrial, and commercial connections vary widely, excess capacity of system components is expressed in terms of equivalent residential units (ERUs). An ERU is equivalent to what would be collected from a typical single-family residence. The determination of the existing Level of Service (LOS) of the current systems is based upon previous project design capacity as well as model analysis results.

3.4 MOUNTAIN GREEN DISTRICT IMPACT FEE ANALYSIS

3.4.1 PROJECTED WASTEWATER CONNECTIONS AND ERUS

In Mountain Green's 2020 Capital Facility Plan, Mountain Green's vicinity with its respective zoning was analyzed in detail in order to understand the limits of further growth. The growth of the region for the last 20 years was also analyzed, and it was determined that for the sake of planning, a 4.55% growth rate should be used for future ERU calculations.

Once the growth rate is known, the projected total number of ERUs for the planning period is calculated with the compound interest formula as follows:

$$ERUs = 1202 \text{ ERUs} \times (1 + .0455)^t$$

The total New ERUs is found by taking the difference between the calculated number of ERUs and the existing 1202 ERUs. Then, this total subtracts the previous 5-year total of New ERUs and divides by 5 years to attain the # of ERU's expected per year for that 5-year increment. An example calculation is as follows:

$$ERUs = 1202 \text{ ERUs} \times (1 + .0455)^5 = 1502 \text{ ERUs}$$

$$1502 \text{ ERUs} - 1202 \text{ ERUs} = 300 \text{ NEW ERUs} / 5 \text{ years} = 60 \text{ ERUs/year}$$

Table 4 below shows the projected ERUs for the next 30 years using a 4.55% growth rate. The time period of 30 years is used because it is just longer than the planning period for the 1.5 MGD WWTP.

Table 4 -Projected MGSID Internal Growth

Year	ERU	MGD	New ERUs	Avg New ERUs per year
Year 5	1501	0.55	301	60
Year 10	1875	0.69	374	75
Year 15	2342	0.86	467	93
Year 20	2925	1.07	583	117
Year 25	3654	1.34	729	146
Year 30	4564	1.68	910	182

However, this is not the only growth that the MGSID is expected to receive. Outside of Mountain Green, Wasatch Peaks Resort will be connected to the system. These will increase the expected ERU's entering the system. This is summarized in table 5 below.

Table 5 -Projected total MGSID Growth, Including WPR.

Year	ERU	MGD	New ERUs	Avg New ERUs per year
Year 5	1701	0.62	501	100
Year 10	2325	0.85	624	125
Year 15	3042	1.12	717	143
Year 20	3675	1.35	633	127
Year 25	4404	1.62	729	146
Year 30	5314	1.95	910	182

By the end of the 1.5 MGD capacity planning period (about 23 years), Mountain Green can expect a projected increase in new connections equivalent to 2885 ERUs, for a total of 4085 ERUs. This number will be used as the capacity of the 1.5MGD WWTP in the impact fee calculations.

3.4.2 ELIGIBLE CAPITAL IMPROVEMENT PROJECTS

All of the Capital Improvement Project discussed in Section 2 of this report are at least partly eligible for impact fees for the MGSID. This is due to the fact that residents of Mountain Green tie directly into the system that is being improved through these projects.

The majority of future users of the new Canyon View lift station will be a part of Wasatch Peaks ranch and not members of the original Mountain Green system. As mentioned previously, Wasatch Peaks has agreed to pay for 70% of The Canyon View lift station, leaving only 30% of the cost of the lift station to be included in Mountain Green's impact fee.

As discussed above, WPR has agreed to pay for 70% up front of the southern portion of the Park Line. For the purposes of the impact fee calculation, the cost of the Park line will only include the cost of the upper portion (North/South line) and 30% of the cost of the lower portion (East/West line).

Based on the above information, the projects used to calculate the Mountain Green Lift Station are listed below.

- CIP#1 Park Sewer Line
- CIP#2 Canyon View Lift Station
- CIP#4 WWTP

3.4.3 DETERMINATION OF IMPACT FEE

The Proposed impact fee for the Mountain Green Sewer Improvement District was determined to be \$11,795.25. To determine the percent of cost eligible for impact fees, the total capacity of the capital improvement project is calculated in terms of ERUs. Next, the impact fee eligible ERUs are determined by subtracting the current amount of ERUs from the capacity of the project. The percent of cost eligible is determined by dividing the impact fee eligible ERUs by the total capacity. This is multiplied by the cost of the project to determine the amount that new users of the system are responsible for. The impact fee is calculated by dividing the impact fee eligible cost by the amount of impact fee eligible ERUs.

The above method is used for the Park Sewer Line as well as the Canyon View Lift Station. However, for the WWTP a slightly different method is used. The need for the new lift station was prompted not by capacity issues but rather by phosphorus content rules set forth by the Utah Department of Environmental Quality. As such, impact fees should not be determined proportional to total capacity increases but based on additional users since the phosphorus cap was hit. The percent of cost eligible is determined by dividing the amount of impact fee eligible ERUs by the additional ERU capacity of the plant since the phosphorus cap was hit (referred to as “growth” in the spreadsheet). The impact fee eligible ERUs are simply the excess capacity of the plant since the phosphorus cap was hit minus any new ERUs since the cap was hit in 2020. The calculations are shown in figure 7 below.

Mountain Green Proposed Impact Fee

Impact Fee Plan - WQB & CIB

5/4/2023

Impact Fee Eligible Capital Improvement Projects

1.5 MGD Treatment Plant	\$	30,189,993.00
Park Line Sewer Improvements	\$	650,000.00
Canyon View Lift Station Improvements	\$	377,496.30

Total Impact Fee Eligible Projects **\$ 31,217,489.30**

1.5 MGD Treatment Plant

Note Impact Fee Eligible Costs are calculated as a percentage of new units since MGSID surpassed unit count requiring phosphorus treatment, not as percentage of total units.*

Current ERUs	1205 ERUs
Proposed Treatment Plant ERUs	4225 ERUs
Growth	3020 ERUs
ERUs Since 2020	74 ERUs
Additional ERUs Impact Fee Eligible	2946 ERUs
% Eligible for Impact Fee	98%
Total Cost of Loan	\$ 34,110,640.02
Treatment Plant Impact Fee Eligible Cost	\$ 33,274,816.39
Treatment Plant Impact Fee	\$ 11,294.91

Park Line Sewer Improvements

Existing Level of Service	411 ERUs
Current ERUs	812 ERUs
Existing Line	-401 ERUs
Proposed Pipe Capacity	2975 ERUs
Impact Fee Eligible	2163
% Eligible for Impact Fee	87%
Total Cost of the Project	\$ 421,531.05
CIP #1 Impact Fee Eligible Cost	\$ 364,712.91
CIP #1 WWTP Interceptor Line Upgrade Impact Fee	\$ 168.61

Canyon View Lift Station Improvements

Existing Level of Service	152 ERUs
Current ERUs	95 ERUs
Existing Line	57 ERUs
Proposed LS Capacity	1138 ERUs
Impact Fee Eligible	1043
% Eligible for Impact Fee	92%
Total Cost of the Project	\$ 377,496.30
Impact Fee Eligible Cost	\$ 345,982.99
Canyon View Lift Station Improvements Impact Fee	\$ 331.72

Total Proposed Impact Fee MGSID **\$ 11,795.25**

Figure 7 - Mountain Green District Proposed Impact Fee

3.5 WASATCH PEAKS RANCH IMPACT FEE ANALYSIS

3.5.1 PROJECTED WASTEWATER CONNECTIONS AND ERUS

Morgan County has approved a maximum of 750 ERUs as part of the WPR development. It is expected that the development will occur over the next 15 years. It is estimated that the growth will occur at a constant rate. As such, there is an estimated 50 new ERUs per year. The estimated ERUs by year are summarized in table 6 below. The first units are expected to come online in 2024.

Table 6 - Projected WPR Growth

Year		new ERUs	Total ERUs
2024	2	50	50
2025	3	50	100
2026	4	50	150
2027	5	50	200
2028	6	50	250
2029	7	50	300
2030	8	50	350
2031	9	50	400
2032	10	50	450
2033	11	50	500
2034	12	50	550
2035	13	50	600
2036	14	50	650
2037	15	50	700
2038	16	50	750

3.5.2 ELIGIBLE CAPITAL IMPROVEMENT PROJECTS

As discussed on the Capital Improvement Projects Section above, Wasatch Peaks Ranch has agreed to pay for a portion of both the Park Sewer line and the Canyon View Lift Station up front. As such, these are not included in the impact fee analysis. The only eligible Capital Improvement project is the new wastewater treatment plant.

3.5.3 DETERMINATION OF IMPACT FEE

The proposed impact fee for the Wasatch Peaks Ranch was determined to be \$11,294.91. See the discussion in section 3.4.3 for how the impact fees for the WWTP were calculated. The calculations are shown in figure 8 below.

Wasatch Peaks Ranch Proposed Impact Fee

Impact Fee Plan - WQB & CIB

5/4/2023

Impact Fee Eligible Capital Improvement Projects

1.5 MGD Treatment Plant	\$	30,189,993.00
Total Impact Fee Eligible Projects	\$	30,189,993.00

1.5 MGD Treatment Plant

Note Impact Fee Eligible Costs are calculated as a percentage of new units since MGSID surpassed unit count requiring phosphorus treatment, not as percentage of total units.*

Current ERUs	1205	ERUs
Proposed Treatment Plant ERUs	4225	ERUs
Growth	3020	ERUs
ERUs Since 2020	74	ERUs
Additional ERUs Impact Fee Eligible	2946	ERUs
% Eligible for Impact Fee		98%
Total Cost of Loan	\$	34,110,640.02
Treatment Plant Impact Fee Eligible Cost	\$	33,274,816.39
Treatment Plant Impact Fee	\$	11,294.91

Total Proposed Impact Fee MGSID	\$	11,294.91
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Figure 8 - Wasatch Peaks Ranch Impact Fee

APPENDIX A – MOUNTAIN GREEN CASH FLOW MODEL

[illegible]

Mountain Green CASH FLOW MODEL

		40					
		Growth Rate		4.55%			
		Assumed Inflation		4%			
		Property Tax Growth		2%			
		7	8	9	10	11	12
		2029	2030	2031	2032	2033	2034
1.0 General Information							
1.1	Number of Mountain Green Residential ERUs	1640	1715	1793	1875	1960	2049
1.4	WPR Total ERUs	300	350	400	450	500	550
1.5	WPR New ERU's	50	50	50	50	50	50
1.6	Total ERU's	1940	2065	2193	2325	2460	2599
1.7	WWTP Average Flow (100 gpcd) MGD	0.69	0.73	0.78	0.83	0.87	0.92
1.8	MGISD Total Number of New Connections	75	78	82	85	89	93
1.9	Base Rate	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
1.10	WPR Base Rate	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
1.11	MGISD Impact Fee	\$ 11,795	\$ 11,795	\$ 11,795	\$ 11,795	\$ 11,795	\$ 11,795
1.13	WPR Impact Fee	\$ 11,295	\$ 11,295	\$ 11,295	\$ 11,295	\$ 11,295	\$ 11,795
2.0 Fee Revenues							
2.1	Base Revenue	\$ 984,204	\$ 1,028,985	\$ 1,075,804	\$ 1,124,753	\$ 1,175,929	\$ 1,229,434
2.2	WPR Base Revenue	\$ 360,000	\$ 420,000	\$ 480,000	\$ 540,000	\$ 600,000	\$ 660,000
2.4	Total Base Revenue	\$ 1,344,204	\$ 1,448,985	\$ 1,555,804	\$ 1,664,753	\$ 1,775,929	\$ 1,889,434
2.5	MGISD Impact Fee Revenue	\$ 880,344	\$ 920,399	\$ 962,278	\$ 1,006,061	\$ 1,051,837	\$ 1,099,696
2.6	WPR Impact Fee Revenue	\$ 564,746	\$ 564,746	\$ 564,746	\$ 564,746	\$ 564,746	\$ 589,762
2.8	Total Impact Fee Revenue	\$ 1,445,090	\$ 1,485,145	\$ 1,527,023	\$ 1,570,807	\$ 1,616,583	\$ 1,689,458
2.9	Fee Revenue	\$ 2,789,293	\$ 2,934,130	\$ 3,082,827	\$ 3,235,560	\$ 3,392,512	\$ 3,578,892
2.0 Other Revenues							
2.1	Property Taxes	\$ 71,317	\$ 72,743	\$ 74,198	\$ 75,682	\$ 77,196	\$ 78,740
2.2	Property Taxes - Redemption	\$ 2,047	\$ 2,087	\$ 2,129	\$ 2,172	\$ 2,215	\$ 2,260
2.3	Property Tax - fee in Lieu	\$ 5,728	\$ 5,878	\$ 6,028	\$ 6,178	\$ 6,328	\$ 6,478
2.2	Charges for services-inspections	\$ 111,395	\$ 113,623	\$ 115,895	\$ 118,213	\$ 120,578	\$ 122,989
2.3	Miscellaneous	\$ 6,548	\$ 6,679	\$ 6,813	\$ 6,949	\$ 7,088	\$ 7,230
2.4	Property Tax Revenue	\$ 197,034	\$ 200,975	\$ 204,995	\$ 209,095	\$ 213,276	\$ 217,542
2.5	Cash on Hand - Supplement						
2.6	Total Revenue	\$ 2,986,327.89	\$ 3,135,105.50	\$ 3,287,822.01	\$ 3,444,654.62	\$ 3,605,788.56	\$ 3,796,434.14
3.0 Expenses							
Operation Expenses							
3.1	1 ADMINISTRATION EXPENSES						
3.2	2 Advertising/Website/News	\$ 5,061	\$ 5,264	\$ 5,474	\$ 5,693	\$ 5,921	\$ 6,158
3.3	3 Automobile Miles/Parking/Tolls for MGISD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.4	4 Blue Stakes Utility Notification	\$ 1,265	\$ 1,316	\$ 1,369	\$ 1,423	\$ 1,480	\$ 1,539
3.5	5 Board Meeting Compensation & Expense	\$ 28,596	\$ 29,740	\$ 30,930	\$ 32,167	\$ 33,454	\$ 34,792
3.6	6 General Insurance	\$ 13,033	\$ 13,554	\$ 14,096	\$ 14,660	\$ 15,247	\$ 15,856
3.7	7 Licenses, Permits	\$ 6,327	\$ 6,580	\$ 6,843	\$ 7,117	\$ 7,401	\$ 7,697
3.8	8 Office Expenses	\$ 21,510	\$ 22,371	\$ 23,266	\$ 24,196	\$ 25,164	\$ 26,171
3.9	9 Salary, Bonus, Insurance, Benefits & Tax	\$ 303,930	\$ 316,087	\$ 328,730	\$ 341,879	\$ 355,555	\$ 369,777
3.10	10 Salary, Bonus, Insurance, Benefits & Tax - Hourly	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.11	11 Salary, Bonus, Insurance, Benefits & Tax - Salary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.12	12 Professional Fees/Consulting	\$ 120,205	\$ 125,014	\$ 130,014	\$ 135,215	\$ 140,623	\$ 146,248
3.13	13 Employee Training	\$ 3,163	\$ 3,290	\$ 3,421	\$ 3,558	\$ 3,701	\$ 3,849
3.14	14 Travel, Entertainment & Christmas Dinner	\$ 2,531	\$ 2,632	\$ 2,737	\$ 2,847	\$ 2,960	\$ 3,079
3.15	15 Utilities: Main Office & Garage	\$ 9,490	\$ 9,869	\$ 10,264	\$ 10,675	\$ 11,102	\$ 11,546
3.16	16 Total Administration Expense	\$ 515,111	\$ 535,716	\$ 557,144	\$ 579,430	\$ 602,607	\$ 626,712
3.17	17 OPERATIONS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.18	18 Main Garage/Office Building	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.19	19 Vehicles, Fuel, Service, Repair	\$ 2,531	\$ 2,632	\$ 2,737	\$ 2,847	\$ 2,960	\$ 3,079
3.20	20 Building Maintenance	\$ 1,645	\$ 1,711	\$ 1,779	\$ 1,850	\$ 1,924	\$ 2,001
3.21	21 Equipment & Instrumentation	\$ 2,531	\$ 2,632	\$ 2,737	\$ 2,847	\$ 2,960	\$ 3,079
3.22	22 Supplies, Repairs & Spares, other O&M	\$ 2,531	\$ 2,632	\$ 2,737	\$ 2,847	\$ 2,960	\$ 3,079
3.23	23	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.24	24 Lagoons & Control Building	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.25	25 Lagoons, Air & Chlorine Systems	\$ 31,633	\$ 32,898	\$ 34,214	\$ 35,583	\$ 37,006	\$ 38,486
3.26	26 Control / Instrumentation / Computers	\$ 12,652	\$ 13,159	\$ 13,686	\$ 14,233	\$ 14,802	\$ 15,395
3.27	27 Generator Maintenance & Fuel	\$ 2,025	\$ 2,105	\$ 2,190	\$ 2,277	\$ 2,368	\$ 2,463
3.28	28 Lab Tests	\$ 10,123	\$ 10,527	\$ 10,949	\$ 11,386	\$ 11,842	\$ 12,316
3.29	29 Supplies, Repairs & Spares, other O&M	\$ 14,551	\$ 15,133	\$ 15,739	\$ 16,368	\$ 17,023	\$ 17,704
3.30	30 Utilities (Power)	\$ 41,502	\$ 43,163	\$ 44,889	\$ 46,685	\$ 48,552	\$ 50,494
3.31	31 Collection Lines & Manholes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.32	32 Manholes/Line Repair/Maint	\$ 36,947	\$ 38,425	\$ 39,962	\$ 41,561	\$ 43,223	\$ 44,952
3.33	33 Clean & Video	\$ 86,927	\$ 90,405	\$ 94,021	\$ 97,782	\$ 101,693	\$ 105,760
3.34	34 Monte Verde Lift Station / Canyon View Lift Station	\$ 6,327	\$ 6,580	\$ 6,843	\$ 7,117	\$ 7,401	\$ 7,697
3.35	35 Equipment / Controls / Instrumentation	\$ 3,922	\$ 4,079	\$ 4,243	\$ 4,412	\$ 4,589	\$ 4,772
3.36	30 Supplies, Repairs & Spares, other O&M	\$ 253	\$ 263	\$ 274	\$ 285	\$ 296	\$ 308
3.37	31 Grounds Maintenance/Landscaping	\$ 5,188	\$ 5,395	\$ 5,611	\$ 5,836	\$ 6,069	\$ 6,312
3.38	35 BNR O&M						
3.39	36 Utilities (Power)	\$ 122,496	\$ 132,659	\$ 144,918	\$ 156,650	\$ 170,731	\$ 185,827
3.40	37 Annual Solids Removal Costs	\$ 7,592	\$ 7,896	\$ 8,211	\$ 8,540	\$ 8,881	\$ 9,237
3.41	38 Annual Chemical Purchasing Costs	\$ 51,878	\$ 56,585	\$ 61,586	\$ 66,896	\$ 72,532	\$ 78,512
3.42	39 Plant Parts Replacement fund	\$ 18,980	\$ 19,739	\$ 20,529	\$ 21,350	\$ 22,204	\$ 23,092
3.43	40 Plant Operator Salary and Benefits	\$ 101,226	\$ 105,275	\$ 109,486	\$ 113,865	\$ 118,420	\$ 123,156
3.44	41 Office Supplies	\$ 12,653	\$ 13,159	\$ 13,686	\$ 14,233	\$ 14,802	\$ 15,395
3.45	42 HVAC	\$ 18,980	\$ 19,739	\$ 20,529	\$ 21,350	\$ 22,204	\$ 23,092
3.46	43 Lab Fees/Testing	\$ 7,592	\$ 7,896	\$ 8,211	\$ 8,540	\$ 8,881	\$ 9,237
3.47	44 Filter Replacement Fund	\$ 6,327	\$ 6,580	\$ 6,843	\$ 7,117	\$ 7,401	\$ 7,697
3.48	45	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.49	46 Subtotal Operation Expenses	\$ 609,011	\$ 641,267	\$ 676,607	\$ 712,453	\$ 753,208	\$ 794,682
3.50	47 WWTP Design Self Funding						
3.51		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.48	Subtotal Expenses	\$ 1,124,122.07	\$ 1,176,982.54	\$ 1,233,751.31	\$ 1,291,883.20	\$ 1,355,814.95	\$ 1,421,393.32
	Net Revenues Available for DS	\$ 1,862,205.82	\$ 1,958,122.96	\$ 2,054,070.70	\$ 2,152,771.42	\$ 2,249,973.61	\$ 2,375,040.82
Debt Service							
3.49	1.3% \$ 7,000,000.00 DWQ	282,795	283,169	283,504	282,800	283,070	283,301
3.50	2.0% \$ 14,000,000.00 CIB	625,560	625,080	625,460	624,680	624,760	624,680
3.51	5.5% Private	0	0	0	0	0	0
30	Loan Period						
3.52	Subtotal Debt Service Expenses	\$ 908,355	\$ 908,249	\$ 908,964	\$ 907,480	\$ 907,830	\$ 907,981
3.53	Debt Service Reserve Fund	\$132,494.47	\$132,494.47	\$28,327.80	\$28,327.80	\$0.00	\$0.00
3.54	Total Debt Service	\$ 1,040,849	\$ 1,040,743	\$ 937,292	\$ 935,808	\$ 907,830	\$ 907,981
3.55	Debt Coverage Ratio	1.79	1.88	2.19	2.30	2.48	2.62
3.55	Debt Coverage Ratio Less All Impact Fees	0.40	0.45	0.56	0.62	0.70	0.76
3.55	Debt Coverage Ratio Less WPR Rev	0.90	0.94	1.08	1.12	1.20	1.24
3.56	Profit/Loss	\$ 821,356	\$ 917,379	\$ 1,116,779	\$ 1,216,964	\$ 1,342,144	\$ 1,467,060
3.57	From Depreciation/CIP Fund/Cash On Hand						
3.58	Debt Coverage Ratio w/Depreciation Fund	1.83	1.93	2.03	2.14	2.24	2.38
4.0	Cash On Hand	\$ 6,246,337	\$ 7,067,694	\$ 7,985,073	\$ 9,101,852	\$ 10,318,816	\$ 11,660,959
4.1	Capital Improvement Projects						
4.1	CIP #1 Park Sewer Line	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.2	CIP #2 Canyon View Lift Station/Main/Gravity Line	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3	CIP #4 Expansion of Plant to 3.0 MGD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.4	CIP Totals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.5	Total Cash On Hand End of Year	\$ 7,067,694	\$ 7,985,073	\$ 9,101,852	\$ 10,318,816	\$ 11,660,959	\$ 13,128,019

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