Prepared for:

Prepared by:

Magna Water District

Sewer IFFP & IFA

January 2026

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SEWER IMPACT FEE ANALYSIS TABLES

Magna Water District Sewer Impact Fee Facilities Plan

January 2026

Prepared for:

Prepared by:

EXECUTIVE SUMMARY
SEWER IMPACT FEE FACILITIES PLAN

The purpose of an Impact Fee Facilities Plan (IFFP) is to identify demands placed upon Magna Water District (District) facilities by future development and evaluate how these demands will be met by the District. The IFFP is also intended to outline the improvements which may be funded through impact fees.

WHY IS AN IFFP NEEDED

The IFFP provides a technical basis for assessing updated impact fees throughout the District. This document addresses the future infrastructure needed to serve the District. The existing and future capital projects documented in this IFFP will ensure that level of service standards are maintained for all existing and future residents who reside within the service area. Local governments must pay strict attention to the required elements of the Impact Fee Facilities Plan which are enumerated in the Impact Fees Act.

PROJECTED FUTURE GROWTH

Before evaluating system capacity, it is first necessary to calculate the demand associated with existing development and projected growth. Using available information for existing development and growth projections from the District's Sewer Master Plan, projected growth in system demand is summarized in Table ES-1 in terms of Equivalent Residential Units (ERUs).

Table ES-1
District Service Area Projections

Year	Service Area ERUs	Estimated Dry Weather Sewer Flows (MGD)	Estimated Infiltration (MGD)	Total Estimated WWTP Flows (MGD)
2025	10,710	2.25	0.83	3.09
2035	12,751	2.52	0.87	3.39
2045	14,662	2.78	0.91	3.69
2055	16,841	3.10	0.96	4.07
2065	19,160	3.46	1.02	4.48
2075	21,162	3.84	1.07	4.91
2085	23,207	4.22	1.13	5.35
2090	23,309	4.42	1.16	5.58

An ERU represents the demand that a typical single-family residence places on the system. The basis of an ERU for historical flow rates is summarized in Table ES-2.

Table ES-2
Service Area Historic Flows

Item	Value for Existing Conditions (2025)	Total 10-Year Conditions (2035)
Equivalent Residential Connections (ERUs)	10,710	12,751
Domestic Wastewater Production (mgd)	2.25	2.52
Infiltration, Maximum Month (mgd)	0.83	0.87
Average Day, Maximum Month Flow (mgd)	3.09	3.39
Peak Hour Flow (mgd)	7.72	8.48
Flows per ERU		
Domestic Wastewater Production (gpd/ERU)	210.3	197.4
Average Day, Maximum Month Flow (gpd/ERU)	288.2	265.9
Peak Hour Flow (gpd/ERU)	720.6	664.8
Average Indoor Water Use (gpd/ERU)	249.3	231.6

Note: Conservation has been accounted for within production values

LEVEL OF SERVICE

Level of service is defined in the Impact Fees Act as "the defined performance standard or unit of demand for each capital component of a public facility within a service area". Summary values for both existing and proposed levels of service are contained in Table ES-3.

Table ES-3
Level of Service for Various System Requirements

	Existing Level of Service	Proposed Level of Service
Pipeline Capacity		
Maximum Ratio of Flow[1] to Pipeline Capacity/Percent of Collection System that Meets the Standard		
Pipes with diameter > 12 inches	0.75/98.82%	0.75/100%
Pipes with diameter ≤ 12 inches	0.5/98.15%	0.5/100%
Treatment Capacity		
Domestic Wastewater Production (gpd/ERU)	210.3	197.4
Infiltration (gpd/ERU)	77.9	29.6
Average Day, Maximum Month Flow (gpd/ERU)	288.2	227.0
Administration and Service Buildings		
Available Space to Required Need Ratio	0.82	1.0

[1] Peak hour, dry weather flow

EXISTING CAPACITY AVAILABLE TO SERVE FUTURE GROWTH

Projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities. Defining existing system capacity

in terms of a single number is difficult. To improve the accuracy of the analysis, the system was divided into two different components (collection, treatment, and administrative and service buildings). Excess capacity in each component of the system is summarized in Table ES-4.

Table ES-4
Available Excess Capacity

Use Category	Collection System Percent Use	Treatment Percent Use	Administrative and Service Buildings
Existing Use	80.78%	73.71%	45.95%
Use By 10-Year Growth	8.80%	11.06%	8.75%
Use By Growth Beyond 10 years	10.42%	15.23%	45.30%
Total	100.00%	100.00%	100.00%

REQUIRED SYSTEM IMPROVEMENTS

Beyond available existing capacity, additional improvements required to serve new growth are summarized in Table ES-5. To satisfy the requirements of state law, Table ES-5 provides a breakdown of the percentage of the project costs attributed to existing and future users. For future use, capacity has been divided between capacity to be used by growth within the 10-year planning horizon of this IFFP and capacity that will be available for growth beyond the 10-year horizon.

Table ES-5
Project Costs Allocated to Projected Development, 10 Year Planning Horizon

Project ID	Year	Project	Total Project Cost	Percent to Existing	Percent to 10 Year Growth	Percent to Growth 2029 through Buildout	Cost to Existing	Cost to 10 Year Growth	Cost to Growth 2029 through Buildout
	Collection System Projects								
2	2027	So. Frontage, 8400 W to 8000 W	$3,500,700	19.2%	7.8%	73.0%	$671,852	$272,396	$2,556,452
3	2030	So. Frontage, 8800 W to 8400 W	$3,115,300	21.9%	4.4%	73.8%	$681,472	$135,591	$2,298,238
4	2028	9200 West Trunk, Reach 1	$4,327,100	12.5%	4.7%	82.8%	$540,888	$203,439	$3,582,773
5	2029	9200 West Bridge Casing and West Trunk (Reach 2)	$2,650,600	14.3%	5.2%	80.5%	$378,657	$137,899	$2,134,044
11	2031	7200 W, 3500 S to 3100 S	$1,488,700	12.0%	52.9%	35.1%	$178,644	$787,333	$522,723
12	2031	8400 W, Main St. to So. Frontage	$1,274,800	14.3%	41.5%	44.2%	$182,114	$529,040	$563,645
15	2032	8000 W, 3200 s to So. Frontage	$3,650,600	93.9%	6.0%	0.04%	$3,429,595	$219,379	$1,626
		Subtotal	**$20,007,800**	**30.3%**	**11.4%**	**58.3%**	**$6,063,221**	**$2,285,078**	**$11,659,501**
	Treatment Plant Projects								
1	2035	Surface Aerator Phase 1	$3,200,000	73.7%	11.1%	15.2%	$2,358,736	$353,900	$487,364
		Subtotal	$3,200,000	73.7%	11.1%	15.2%	$2,358,736	$353,900	$487,364
	Administrative and Service Buildings								
	2030	Operator Change Building	$2,323,920	45.9%	8.8%	45.3%	$1,067,806	$203,439	$1,052,675
		Subtotal	$2,323,920	45.9%	8.8%	45.3%	$1,067,806	$203,439	$1,052,675
		Total	**$25,531,720**	**37.2%**	**11.1%**	**51.7%**	**$9,489,764**	**$2,842,417**	**$13,199,539**

IMPACT FEE FACILITIES PLAN

INTRODUCTION

Magna Water District has retained Bowen Collins & Associates (BC&A) to prepare an Impact Fee Facilities Plan (IFFP) for sewer collection services provided by the District. The purpose of an IFFP is to identify demands placed upon District facilities by future development and evaluate how these demands will be met by the District. The IFFP is also intended to outline the improvements which may be funded through impact fees.

Much of the analysis forming the basis of this IFFP has been taken from the District's Sewer Master Plan prepared by BC&A. The reader should refer to this document for additional discussion of planning and evaluation methodology beyond what is contained in this report.

SERVICE AREA

For the purpose of impact fee calculations, the District system will be treated as a single service area.

IMPACT FEE FACILITY PLAN COMPONENTS

Requirements for the preparation of an IFFP are outlined in Title 11, Chapter 36a of the Utah Code Annotated (the Impact Fees Act). Under these requirements, an IFFP shall accomplish the following for each facility:

1. Identify the existing level of service
2. Establish a proposed level of service
3. Identify excess capacity to accommodate future growth at the proposed level of service
4. Identify demands placed upon existing public facilities by new development
5. Identify the means by which demands from new development will be met
6. Consider the following additional issues
    a. revenue sources to finance required system improvements
    b. necessity of improvements to maintain the proposed level of service
    c. need for facilities relative to planned locations of schools

The following sections of this report have been organized to address each of these requirements.

EXISTING LEVEL OF SERVICE – Utah Code Annotated 11-36a-302(1)(a)(i)

Level of service is defined in the Impact Fees Act as "the defined performance standard or unit of demand for each capital component of a public facility within a service area". This section discusses the level of service being currently provided to existing users.

Unit of Demand

For the purposes of this analysis, it is useful to define these various demands in terms of Equivalent Residential Units (ERUs). An ERU represents the demand that a typical single-family residence places on the system. An equivalent residential unit was developed based on indoor billing data across the District along with the number of connections defined as "domestic". Based on this information, the

number of ERUs in the District was estimated and the flow rate basis of an ERU could be calculated for historic flows as summarized in Table 1.

Table 1
Service Area Historic Flows and Definition of an ERU

Item	Value for Existing Conditions (2025)	Total 10-Year Conditions (2035)
Equivalent Residential Connections (ERUs)	10,710	12,751
Domestic Wastewater Production (mgd)	2.25	2.52
Infiltration, Maximum Month (mgd)	0.83	0.87
Average Day, Maximum Month Flow (mgd)	3.09	3.39
Peak Hour Flow (mgd)	7.72	8.48
Flows per ERU		
Domestic Wastewater Production (gpd/ERU)	210.3	197.4
Average Day, Maximum Month Flow (gpd/ERU)	288.2	265.9
Peak Hour Flow (gpd/ERU)	720.6	664.8
Average Indoor Water Use (gpd/ERU)	249.3	231.6

It will be noted that projected design flows associated with future connections include a lower amount of infiltration than observed for the existing system. This is associated with projected lower infiltration rates resulting from new construction materials and techniques. This is discussed in detail in the District's Capital Facilities Plan. Thus, only the infiltration that is directly associated with new growth has been included for new connections. Any additional infiltration associated with older materials or system maintenance are specifically excluded from the future growth calculations. Impact fees will be based on only the lower level of infiltration directly associated with new growth as identified in the table.

Included in the table is the definition of an existing ERU in terms of both average and peak flows. The projected flow used to design and evaluate system components will vary depending on the nature of each component. For example, most wastewater treatment facility processes are designed based on average day, maximum month flow. Conversely, conveyance pipelines must be designed based on peak hour flow (function of daily flow and diurnal flow variation).

Performance Standard

Performance standards are those standards that are used to design and evaluate the performance of facilities. This section discusses the existing performance standards for the District.

To improve the accuracy of the analysis, this Impact Fee Facilities Plan has divided the system into three different components (pipeline capacity, treatment capacity, and administrative and service buildings). Each of these components has its own set of performance standards:

Pipeline Capacity. District engineering standards require that all sewer mains greater than or equal to 12-inches in diameter be designed such that the peak flow in the pipe is less than or equal to 75 percent of the pipe's full capacity and all sewer mains less than 12-inches in diameter to be designed such that the peak flow in the pipe is less than or equal to 50 percent of the pipe's full

capacity using a Manning's roughness factor[1] of 0.013. This design standard was used as the level of service for system evaluation.

Wastewater Treatment Facility Capacity. A wastewater treatment facility consists of a large number of different components. Each component may have different criteria for design depending on the nature of the component. For most treatment related components, however, design is based on treating the average daily flow during the maximum month. This is the same standard used by the State of Utah Department of Environmental Quality (UDEQ) when rating the overall capacity of a treatment plant.

Administrative and Service Buildings. In addition to the water system needs, Magna Water District personnel need to be able to provide administrative, operation, and maintenance functions for the District to satisfy a level of service for customers. The District's current administrative and service facilities is composed of a number of different components, including office space, open storage space, maintenance bays, etc., and does not have a specific performance standard. It is proposed that both existing and future users pay for these facilities in proportion to their overall use in the system. Thus, the level of service provided by the facility will be the same for existing and new users. The District's existing facilities should be satisfactory to provide space for personnel through the District's planning window such that there is some excess space available today that is available for additional personnel to fill in the future to support the needs of future users.

Existing Level of Service Summary

Existing level of service has been divided into the same three components as identified for the system performance standard (pipeline capacity, treatment capacity, and administrative and service buildings). Existing level of service values are summarized in Table 2 below.

Table 2
Existing Level of Service
for Various System Requirements

	Existing Level of Service	Proposed Level of Service
Pipeline Capacity		
Maximum Ratio of Flow[1] to Pipeline Capacity/Percent of Collection System that Meets the Standard		
Pipes with diameter > 12 inches	0.75/98.82%	0.75/100%
Pipes with diameter ≤ 12 inches	0.5/98.15%	0.5/100%
Treatment Capacity		
Domestic Wastewater Production (gpd/ERU)	210.3	197.4
Infiltration (gpd/ERU)	77.9	29.6
Average Day, Maximum Month Flow (gpd/ERU)	288.2	227.0
Administration and Service Buildings		
Available Space to Required Need Ratio	0.82	1.0

[1] Manning's roughness is an empirical measure of roughness or friction used to calculate hydraulic capacity.

As shown in the table, only a small percentage of sewer pipelines in the system fall below the desired performance standard. In most cases, there is excess capacity in District pipes that may be used to accommodate some of future growth. Excess capacity and curing of deficiencies will be discussed in subsequent sections of this report. Costs for projects to correct deficiencies that do not meet the required level of service will not be included as part of the impact fee, consistent with the Impact Fees Act.

PROPOSED LEVEL OF SERVICE - Utah Code Annotated 11-36a-302(1)(a)(ii), 11-36a-302(1)(b), and 11-36a-302(1)(c)(i)

The proposed level of service is the performance standard used to evaluate system needs in the future. The Impact Fee Act indicates that the proposed level of service may:

1. diminish or equal the existing level of service; or
2. exceed the existing level of service if, independent of the use of impact fees, the District implements and maintains the means to increase the level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

In the case of this IFFP, no changes are proposed to the existing level of service for design standards except relative to treatment capability. Thus, future growth will essentially be evaluated based on the same design standards level of service as identified for existing. In the case of projected design flows, the proposed level of service will decrease slightly as summarized in Table 1. This is the result of the slower growth in infiltration due to improved construction methods and system maintenance.

The Utah Division of Water Quality has been developing new criteria for the Utah Pollutant Discharge Elimination System (UPDES) Permit related to treatment plant nutrient removal requirements. As a result of the new permit requirements, several improvements will be needed at the District's wastewater treatment facility. As part of these improvements, the District will also be adding some new facilities at the treatment plant that will improve redundancy and the resulting reliability of the plant. These improvements represent an increased level of service that will benefit existing and future users alike. Increases in the level of service for the District will be funded in accordance with the requirements of the Impact Fees Act. As a result, projects associated with these treatment plant improvements will be paid for by all users at proportional rates.

Proposed Level of Service Summary

The resulting proposed level of service for the District is summarized in Table 3.

Table 3
Proposed Level of Service for Various System Requirements

	Proposed Level of Service
Pipeline Capacity	
Maximum Ratio of Flow[1] to Pipeline Capacity/Percent of Collection System that Currently Meets the Standard	
Pipes with diameter > 12 inches	0.75/100%
Pipes with diameter ≤ 12 inches	0.5/100%
Treatment Capacity	
Capacity Required for Future Connections – Average Day, Maximum Month Flow (gpd/ERU)	227.0
Administration and Service Buildings	
Available Space to Need Ratio	1.0

Note that the value given for treatment capacity is the reduced value for future connections based on reduced infiltration as discussed in association with Table 1. The same is true for evaluation of pipeline and lift station capacity. Only the infiltration that is directly associated with new growth has been included for new connections. Any additional infiltration associated with older materials or system maintenance are specifically excluded from the future growth calculations. Impact fees will be based on only the level of infiltration directly associated with new growth as identified in the table.

EXCESS CAPACITY TO ACCOMMODATE FUTURE GROWTH - Utah Code Annotated 11-36a-302(1)(a)(iii)

Because most of the sewer collection facilities within the District have adequate or excess capacity through the long-term planning horizon of the District, capacity for most future growth will be met through available excess capacity in existing facilities. There are two components of assets to discuss within the District: collections system facilities and treatment facilities. Excess capacity in the collection and treatment facilities are described as follows:

Collection

To calculate the percentage of existing capacity to be used by future growth in existing facilities, existing and future flows were examined in the system model for each collection pipeline. The method used to calculate excess capacity available for use by future flows is as follows:

1. **Calculate Flows –** The peak flow in each facility was calculated in the model for both existing and future flows. The available capacity of each pipeline was also calculated using a criteria based on pipe diameter. For pipes with a diameter greater than 12 inches the capacity at a 0.75 peak flow to capacity ratio was used and for pipes with a diameter less than or equal to 12 inches the capacity at a 0.50 peak flow to capacity ratio was used.
2. **Identify Available Capacity –** Where a facility has capacity in excess of projected flows at buildout, the available capacity in the facility was defined as the difference between existing flows and buildout flows. Where the facility has capacity less than projected flows at buildout, the available capacity in the facility was defined as the difference between existing flows and the facility's maximum capacity.
3. **Eliminate Facilities without Excess Capacity –** For the 10-year planning horizon period,

the projected growth in flow was compared against the facility's available capacity. Where the future flow exceeded the capacity of the facility, the available excess capacity was assumed to be zero. By definition, this corresponds to those facilities with deficiencies that are identified for replacement in the facilities plan. By assigning a capacity of zero to new users, this eliminated double counting those facilities against new users.

4. **Calculate Percent of Excess Capacity Used in Remaining Facilities –** Where the future flow was less than the capacity of the facility, the percent of excess capacity being used in each facility was calculated by dividing the growth in flow in the facility (future flow less existing flow) by the total capacity (existing flow plus available capacity).

5. **Calculate Excess Capacity for the System as a Whole –** Each pipeline in the system has a different quantity of excess capacity to be used by future growth. To develop an estimate of excess capacity on a system wide basis, the capacities of each of these pipelines and their contribution to the system as a whole must be considered. To do this, each pipeline must first be weighted based on its relative capacity in the system. For this purpose, each pipeline has been weighted based on the product of its diameter and length. For example, a pipe that is 36 inches in diameter and is 4,000 feet long will cost proportionally more than a pipe that is 10 inches in diameter and 300 feet long. The excess capacity in the system as a whole can then be calculated as the sum of the weighted capacity used by future growth divided by the sum of total weighted capacity in the system.

Based on the method described above, the amount of excess capacity in existing facilities available to accommodate future growth and the demands placed on the existing facilities by new development activity has been calculated for each element in the system by BC&A. This is summarized in Table 4.

Table 4
Collection System Excess Capacity

Use Category	District Area Percent Use
Existing Use	80.78%
Use By 10-Year Growth	8.80%
Use By Growth Beyond 10 years	10.42%
Total	100.00%

Treatment

The District has a total treatment capacity of 4.0 mgd at the Magna Wastewater Treatment Facility. Projected peak month, average day flows for existing development are 2.95 mgd, and are projected to be 3.39 mgd in 10 years. Based projected flows in the District service area, the existing treatment plant capacity is summarized in Table 5.

Table 5
Excess Wastewater Treatment Facility Capacity

Use Category	Total Treatment Plant Flow (MGD)	District Area Percent Use
Existing Use	2.95	73.71%
Use by 10-Year Growth	0.44	11.06%
Use by Growth Beyond 10 years	0.61	15.23%
Total	4.00	100.00%

Administrative and Service Buildings

As discussed under the existing and proposed level of service sections, Magna Water District's District Office has sufficient capacity through the District's long-term planning window and has excess capacity for future growth as listed in Table 6.

Table 6
Administrative Excess Capacity

Use Category	District Area ERUs	District Area Percent Use
Existing Use	10,710	45.95%
Use by 10-Year Growth	2,041	8.75%
Use by Growth Beyond 10 years	10,558	45.30%
Total	23,309	100.00%

DEMANDS PLACED ON FACILITIES BY NEW DEVELOPMENT - Utah Code Annotated 11-36a-302(a)(iv)

Growth within the District's service area, and projections of sewer flows resulting from said growth is discussed in detail in the District's Master Plans. Growth in terms of both Equivalent Residential Units and corresponding sewer flows is summarized in Table 7[2].

[2] For the purposes of this report, "10-year Growth" refers to growth between existing and 2030. Existing flows are based on 2019 estimates, which technically makes this an 11-year planning window. However, 2030 is a more common projection interval in District and regional growth projections and is thus, more convenient for estimating than 2029.

Table 7
District Projections of Growth

Year	Service Area ERUs	Estimated Dry Weather Sewer Flows (MGD)	Estimated Infiltration (MGD)	Total Max Month, average day Flow (MGD)	Peak Hour Flows (MGD)
2025	10,710	2.25	0.83	3.09	7.72
2035	12,751	2.52	0.87	3.39	8.48
2045	14,662	2.78	0.91	3.69	9.23
2055	16,841	3.10	0.96	4.07	10.16
2065	19,160	3.46	1.02	4.48	11.19
2075	21,162	3.84	1.07	4.91	12.28
2085	23,207	4.22	1.13	5.35	13.39
2090	23,309	4.42	1.16	5.58	13.96

INFRASTRUCTURE REQUIRED TO MEET DEMANDS OF NEW DEVELOPMENT – Utah Code Annotated 11-36a-302(1)(a)(v)

To satisfy the requirements of state law, demands placed upon existing system facilities by future development was projected using the process outlined below. Each of the steps were completed as part of this plan's development:

1. **Existing Demand** – The demand existing development places on the District's system was estimated based on historic water use and flow records.
2. **Existing Capacity** – The capacities of existing collection system facilities were estimated using size data provided by the District and a hydraulic computer model.
3. **Existing Deficiencies** – Existing deficiencies in the system were looked for by comparing defined levels of service against calculated capacities. A few deficiencies were identified in the Sewer Master Plan.
4. **Future Demand** - The demand future development will place on the system was estimated based on development projections (discussed in the Sewer Master Plan).
5. **Future Deficiencies** - Future deficiencies in the collection system (portions of the system that are inadequate to accommodate the demand created by future growth) were identified using the defined level of service and results from a hydraulic computer model (discussed in the Sewer Master Plan).
6. **Recommended Improvements** – Needed system improvements were identified to meet demands associated with future development.

The steps listed above "identify demands placed upon existing public facilities by new development activity at the proposed level of service; and… the means by which the political subdivision or private entity will meet those growth demands" (Section 11-36a-302(1)(a) of the Utah Code Annotated).

10 Year Improvement Plan

In the District's Sewer Master Plan, capital facility projects needed to provide service to customers of the District were identified. Some of the projects identified in the master plan will not be needed within the next 10 years. Only infrastructure to be constructed within a 10-year horizon will be considered in the calculation of impact fees to avoid uncertainty surrounding improvements further into the future. Table 8 summarizes the components of projects identified in the master plan that will need to be constructed within the next ten years.

Table 8
Project Costs Allocated to Projected Development, 10 Year Planning Horizon

Project ID	Year	Project	Total Project Cost	Percent to Existing	Percent to 10 Year Growth	Percent to Growth 2029 through Buildout	Cost to Existing	Cost to 10 Year Growth	Cost to Growth 2029 through Buildout
	Collection System Projects								
2	2027	So. Frontage, 8400 W to 8000 W	$3,500,700	19.2%	7.8%	73.0%	$671,852	$272,396	$2,556,452
3	2030	So. Frontage, 8800 W to 8400 W	$3,115,300	21.9%	4.4%	73.8%	$681,472	$135,591	$2,298,238
4	2028	9200 West Trunk, Reach 1	$4,327,100	12.5%	4.7%	82.8%	$540,888	$203,439	$3,582,773
5	2029	9200 West Bridge Casing and West Trunk (Reach 2)	$2,650,600	14.3%	5.2%	80.5%	$378,657	$137,899	$2,134,044
11	2031	7200 W, 3500 S to 3100 S	$1,488,700	12.0%	52.9%	35.1%	$178,644	$787,333	$522,723
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15	2032	8000 W, 3200 s to So. Frontage	$3,650,600	93.9%	6.0%	0.04%	$3,429,595	$219,379	$1,626
		Subtotal	**$20,007,800**	**30.3%**	**11.4%**	**58.3%**	**$6,063,221**	**$2,285,078**	**$11,659,501**
	Treatment Plant Projects								
1	2035	Surface Aerator Phase 1	$3,200,000	73.7%	11.1%	15.2%	$2,358,736	$353,900	$487,364
		Subtotal	$3,200,000	73.7%	11.1%	15.2%	$2,358,736	$353,900	$487,364
	Administrative and Service Buildings								
	2030	Operator Change Building	$2,323,920	45.9%	8.8%	45.3%	$1,067,806	$203,439	$1,052,675
		Subtotal	$2,323,920	45.9%	8.8%	45.3%	$1,067,806	$203,439	$1,052,675
		Total	**$25,531,720**	**37.2%**	**11.1%**	**51.7%**	**$9,489,764**	**$2,842,417**	**$13,199,539**

Project Cost Attributable to Future Growth

To satisfy the requirements of state law, Table 9 provides a breakdown of the capital facility projects and the percentage of the project costs attributed to existing and future users. As defined in Utah Code Annotated 11-36a-102(15), the Impact Fee Facilities Plan should only include the proportionate share of "the cost of public facilities that are roughly proportionate and reasonably related to the service demands and needs of any development activity." Some projects identified in the table are required solely to meet future growth, but some projects also provide a benefit to existing users. Projects that benefit existing users include those projects addressing existing capacity needs and maintenance related projects.

For many projects, the division of costs between existing and future users is easy because 100 percent of the project costs can be attributed to one category or the other (e.g. infrastructure needed solely to serve new development can be 100 percent attributed to new growth, while projects related to existing condition or capacity deficiencies can be 100 percent attributed to existing user needs). For projects needed to address both existing deficiencies and new growth or where a higher level of service is being proposed, costs have been divided proportionally between existing and future users based on their use of the facility. A few additional notes regarding specific projects are as follows:

- **Secondary Reuse –** This project both improves the District's wastewater treatment and increases the District's water supply. This sewer IFFP includes 20% of the total secondary reuse cost as the portion of project costs benefitting wastewater treatment and the rest is included in the District's water IFFP. For the portion of cost assigned to wastewater, the improvements are treated as level of service improvements that are to be paid for by all user types proportionally (see below).
- **New Dewatering Press –** This project increases the District's level of service for wastewater treatment by adding a new dewatering press for redundancy. This project gives the District's wastewater treatment plant the flexibility to cut down the run times for the existing dewatering presses.
- **Treatment Plant Projects –** As can be seen in the table, the percentages of cost assigned to future growth categories are identical for all the treatment plant projects. The reason for this is that all the treatment projects have been classified as improvements in level of service, not additions to capacity at the plant. Therefore, the percentage of cost to existing, 10-year growth, and beyond 10-year growth is distributed based on total use of the plant, the same as calculated in Table 6.

Project Cost Attributable to 10 Year Growth

Included in Table 9 is a breakdown of capacity use associated with growth both through buildout and through the next 10 years. This is necessary because the projects identified in the tables will be built with capacity to accommodate flows beyond the 10-year growth horizon. This has been done following the same general process as described above.

Basis of Construction Cost Estimates

The costs of pipe and planning projects have been based on engineering cost estimates contained in the Sewer Master Plan.

ADDITIONAL CONSIDERATIONS

MANNER OF FINANCING – Utah Code Annotated 11-36a-302(2)

The District may fund the infrastructure identified in this IFFP through a combination of different revenue sources.

Federal and State Grants and Donations

Impact fees cannot reimburse costs funded or expected to be funded through federal grants and other funds that the District has received for capital improvements without an obligation to repay. Grants and donations are not currently contemplated in this analysis. If grants become available for constructing facilities, impact fees will need to be recalculated and an appropriate credit given. Any existing infrastructure funded through past grants will be removed from the system value during the impact fee analysis.

Bonds

None of the costs contained in this IFFP include the cost of bonding. The cost of bonding required to finance impact fee eligible improvements identified in the IFFP may be added to the calculation of the impact fee. This will be considered in the impact fee analysis.

User Rate Revenue

Because infrastructure must generally be built ahead of growth, there often arises situations in which projects must be funded ahead of expected impact fee revenues. In some cases, the solution to this issue will be bonding. In others, funds from existing user rate revenue will be used to complete initial construction of impact fee eligible projects and will be reimbursed later as impact fees are received. Consideration of potential use of user rate revenue to pay for impact fee eligible expenditures will be included in the impact fee analysis and should also be considered in subsequent accounting of impact fee expenditures.

Interfund Loans

Because infrastructure must generally be built ahead of growth, there often arises situations in which projects must be funded ahead of expected impact fee revenues. In some cases, the solution to this issue will be bonding. In others, funds from existing user rate revenue will be loaned to the impact fee fund to complete initial construction of the project and will be reimbursed later as impact fees are received. Consideration of potential interfund loans will be included in the impact fee analysis and should also be considered in subsequent accounting of impact fee expenditures.

Impact Fees

It is recommended that impact fees be used to fund growth-related capital projects as they help to maintain the proposed level of service and prevent existing users from subsidizing the capital needs for new growth. Based on this IFFP, an impact fee analysis will be able to calculate a fair and legal fee that new growth should pay to fund the portion of the existing and new facilities that will benefit new development.

Developer Dedications and Exactions

Developer exactions are not the same as grants. Developer exactions may be considered in the inventory of current and future infrastructure. If a developer constructs facilities or dedicates land

within the development for the construction of facilities identified in this IFFP, the value of the dedication is credited against that particular developer's impact fee liability.

If the value of the dedication/exaction is less than the development's impact fee liability, the developer will owe the balance of the liability to the District. If the value of the improvements dedicated is worth more than the development's impact fee liability, the District must reimburse the difference to the developer from impact fee revenues collected from other developments.

It should be emphasized that the concept of impact fee credits pertains to system level improvements only. For project level improvement (i.e. projects not identified in the impact fee facility plan), developers will be responsible for the construction of the improvements without credit against the impact fee.

NECESSITY OF IMPROVEMENTS TO MAINTAIN LEVEL OF SERVICE - Utah Code Annotated 11-36a-302(3)

According to State statute, impact fees cannot be used to correct deficiencies in the District's system and must be necessary to maintain the proposed level of service established for all users. Only those facilities or portions of facilities that are required to maintain the proposed level of service for future growth have been included in this IFFP. This will result in an equitable fee as future users will not be expected to fund any portion of the facilities that will benefit existing residents.

SCHOOL RELATED INFRASTRUCTURE - Utah Code Annotated 11-36a-302(2)

As part of the noticing and data collection process for this plan, information was gathered regarding future school District and charter school development. Where the District is aware of the planned location of a school, required public facilities to serve the school have been included in the impact fee facility plan.

NOTICING AND ADOPTION REQUIREMENTS - Utah Code Annotated 11-36a-502

The Impact Fees Act requires that entities must publish a notice of intent to prepare or modify any IFFP. If an entity prepares an independent IFFP rather than include a capital facilities element in the general plan, the actual IFFP must be adopted by enactment. Before the IFFP can be adopted, a reasonable notice of the public hearing must be published in a local newspaper at least 10 days before the actual hearing. A copy of the proposed IFFP must be made available in each public library within the District during the 10-day noticing period for public review and inspection. Utah Code requires that the District must post a copy of the ordinance in at least three places. These places may include the District offices and the public libraries within the District's jurisdiction. Following the 10-day noticing period, a public hearing will be held, after which the District may adopt, amend and adopt, or reject the proposed IFFP.

IMPACT FEE CERTIFICATION - UTAH CODE ANNOTATED 11-36A-306(1)

This IFFP has been prepared in accordance with Utah Code Title 11 Chapter 36a (the "Impact Fees Act"), which prescribes the laws pertaining to Utah municipal capital facilities plans and impact fee analyses. The accuracy of this report relies upon the planning, engineering, and other source data, which was provided by the City and their designees.

In accordance with Utah Code Annotated, 11-36a-306(1), Bowen Collins & Associates, makes the following certification:

I certify that this impact fee facility plan:

1. Includes only the cost 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. cost of 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; and
3. Complies in each relevant respect with the Impact Fees Act.

This certification is made with the following caveats:

1. All of the recommendations for implementations of the Impact Fee Facilities Plan (IFFP) made in the IFFP or in the impact fee analysis are followed in their entirety by the City.
2. If all or a portion of the IFFP or impact fee analysis is modified or amended, this certification is no longer valid.
3. All information provided in the preparation of this IFFP is assumed to be correct, complete and accurate. This includes information provided by the City and outside sources.

_____

Keith Larson, P.E.

Magna Water District Sewer Impact Fee Analysis

January 2026

Prepared for:

Prepared by:

EXECUTIVE SUMMARY
SEWER IMPACT FEE ANALYSIS

INTRODUCTION

An impact fee is a one-time fee, not a tax, imposed upon new development activity as a condition of development approval to mitigate the impact of the new development on public infrastructure. The purpose of the impact fee analysis (IFA) is to calculate the allowable impact fee that may be assessed to new development in accordance with Utah Code.

WHY ASSESS AN IMPACT FEE?

Until new development utilizes the full capacity of existing facilities, the City can assess an impact fee to recover its cost of latent capacity available to serve future development. The general impact fee methodology divides the available capacity of existing and future capital projects between existing and future users. Capacity is measured in terms of Equivalent Residential Units, or ERUs, which represents the demand that a typical single-family residence places on the system.

HOW ARE IMPACT FEES CALCULATED?

A fair impact fee is calculated by dividing the cost of existing and future facilities by the amount of new growth that will benefit from the unused capacity. Only the capacity that is needed to serve the projected growth within in the next ten years is included in the fee. Costs used in the calculation of impact fees include:

- New facilities required to maintain (but not exceed) the proposed level of service in the system; only those expected to be built within ten years are considered in the final calculations of the impact fee.
- Historic costs of existing facilities that will serve new development
- Cost of professional services for engineering, planning, and preparation of the impact fee facilities plan and impact fee analysis

Costs not used in the impact fee calculation

- Operational and maintenance costs
- Cost of facilities constructed beyond 10 years
- Cost associated with capacity not expected to be used within 10 years
- Cost of facilities funded by grants, developer contributions, or other funds which the District is not required to repay
- Cost of renovating or reconstructing facilities which do not provide new capacity or needed enhancement of services to serve future development

IMPACT FEE CALCULATION

Impact fees for this analysis were calculated by dividing the proportional cost of facilities required to service 10-year growth by the amount of growth expected over the next 10-years based on ERUs. This is done for both collection and treatment facilities. Calculated impact fees by component are summarized in Table ES-1. Table ES-1 covers the cost of impacts on collection and treatment facilities from growth within the Magna Water District service area.

Table ES-1
Impact Fee Calculation per ERU – Magna Water District Service Area

System Components	Total Cost of Components	% Serving 10-year Growth	Cost Serving 10-year Growth	10-year ERUs Served	Cost Per ERU
Administrative and Service Facilities					
Existing Facilities - Administration Building	$1,885,028	8.8%	$165,018	2,041	$80.85
10- year Project - Operator Change Building	$2,323,920	8.8%	$203,439	2,041	$99.68
Subtotal	**$4,208,948**		**$368,457**		**$180.53**
Collection Facilities					
Existing Facilities - Pipelines	$12,004,035	9.9%	$1,193,982	2,041	$585.00
Existing Facility Interest Costs - Pipelines	$848,537	9.9%	$84,400	2,041	$41.35
10-Year Projects	$20,007,800	11.4%	$2,285,078	2,041	$1,119.59
10-Year Project Interest Costs	$0	11.4%	$0	2,041	$0.00
Credit for User Fees Paid Toward Existing					($69.85)
Subtotal	**$32,860,372**		**$3,563,460**		**$1,676.09**
Treatment Plant					
Existing Facilities	$48,138,096	11.1%	$5,323,771	2,041	$2,608.41
Existing Facility Interest Costs	$3,394,149	11.1%	$375,372	2,041	$183.92
10-Year Projects	$3,200,000	11.1%	$353,900	2,041	$173.40
10 Year Project Interest Costs	$0	11.1%	$0	2,041	$0.00
Credit for Users Fees Paid Toward Existing					($396.24)
Subtotal	**$54,732,245**		**$6,053,043**		**$2,569.49**
Studies					
All Studies	$319,949	49.8%	$159,196	2,041	$78.00
Total	**$92,121,514**		**$10,144,155**		**$4,504.10**

RECOMMENDED IMPACT FEE

The total calculated impact fees are summarized in Table ES-2. Included in this table is the appropriate user fee credit and corresponding overall fee. The calculated user fee credit associated with the impact fees will decrease over time. As a result, the allowable impact fee will increase over time as shown in the table. This is the legal maximum amount that may be charged as an impact fee. A lower amount may be adopted if desired, but a higher fee is not allowable under the requirements of Utah Code.

Table ES-2
Recommended Per ERU Impact Fee – Magna Water District Service Area

	Maximum Allowable Impact Fee (Per ERU, by year)					
	2026	**2027**	**2028**	**2029**	**2030**	**2031**
Base Impact Fee (includes study costs)	$4,970.19	$4,970.19	$4,970.19	$4,970.19	$4,970.19	$4,970.19
User Fee Credit	$401.32	$340.78	$294.86	$251.48	$211.11	$180.85
Total Overall Fee	**$4,568.87**	**$4,629.41**	**$4,675.33**	**$4,718.71**	**$4,759.08**	**$5,151.04**

IMPACT FEE ANALYSIS (SEWER)

INTRODUCTION

Magna Water District has retained Bowen Collins & Associates (BC&A) to prepare an impact fee analysis (IFA) for its sewer system based on a recently completed impact fee facilities plan. An impact fee is a one-time fee, not a tax, imposed upon new development activity as a condition of development approval to mitigate the impact of the new development on public infrastructure. The purpose of an IFA is to calculate the allowable impact fee that may be assessed to new development in accordance with Utah Code.

Service Areas

For the purpose of impact fee calculations, the Magna Water District sewer system includes the Magna Water District corporate boundary.

Requirements

Requirements for the preparation of an IFA are outlined in Title 11, Chapter 36a of the Utah Code (the Impact Fees Act). Under these requirements, an IFA shall accomplish the following for each facility:

1. Identify the impact of anticipated development activity on existing capacity
2. Identify the impact of anticipated development activity on system improvements required to maintain the established level of service
3. Demonstrate how the impacts are reasonably related to anticipated development activity
4. Estimate the proportionate share of:
    a. Costs of existing capacity that will be recouped
    b. Costs of impacts on system improvements that are reasonably related to the new development activity
5. Identify how the impact fee was calculated
6. Consider the following additional issues
    a. Manner of financing improvements
    b. Dedication of system improvements
    c. Extraordinary costs in servicing newly developed properties
    d. Time-price differential

The following sections of this report have been organized to address each of these requirements.

IMPACT ON SYSTEM - 11-36A-304(1)(A)(B)

Growth within the District's service area, and projections of sewer flows resulting from said growth is discussed in detail in the District's Impact Fee Facilities Plan. For the purposes of impact fee calculation, growth in the system has been expressed in terms of equivalent residential units (ERUs). An ERU represents the demand that a typical single-family residence places on the system. Growth in ERUs projected for the service area is summarized in Table 1.

Table 1
Projected Magna Water Sewer System Growth – Flow ERUs

Year	Service Area ERUs	Estimated Dry Weather Sewer Flows (MGD)	Estimated Infiltration (MGD)	Total Estimated WWTP Flows (MGD)
2025	10,710	2.25	0.83	3.09
2035	12,751	2.52	0.87	3.39
2045	14,662	2.78	0.91	3.69
2055	16,841	3.10	0.96	4.07
2065	19,160	3.46	1.02	4.48
2075	21,162	3.84	1.07	4.91
2085	23,207	4.22	1.13	5.35
2090	23,309	4.42	1.16	5.58

As indicated in the table, projected growth for the 10-year planning window of this impact fee analysis is 2,041 ERUs. In order to maintain the established level of service, projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities. Use of excess capacity and required system improvements are detailed in the Impact Fee Facilities Plan.

RELATION OF IMPACTS TO ANTICIPATED DEVELOPMENT - 11-36A-304(1)(C)

To satisfy the requirements of state law, it is necessary to show that all impacts identified in the impact fee analysis are reasonably related to the anticipated development activity. This has been documented in detail in Impact Fee Facilities Plan. In short, only that capacity directly associated with demand placed upon existing system facilities by future development has been identified as an impact of the development. The steps completed to identify the impacts of anticipated development are as follows.

1. **Existing Demand** – The demand existing development places on the system was estimated based on historic demand records.
2. **Existing Capacity** – The capacities of existing facilities were calculated based on the level of service criteria established for each type of facility in the Impact Fee Facilities Plan.
3. **Existing Deficiencies** – Existing deficiencies in the system were looked for by comparing defined levels of service against calculated capacities. If existing deficiencies exist, projects were identified to eliminate the deficiencies. Costs associated with existing deficiencies were not assigned to impacts of development.
4. **Future Demand** - The demand future development will place on the system was estimated based on development projections as discussed in the Impact Fee Facilities Plan.

5. **Future Demand Use of Existing Capacity** – Whenever possible, excess capacity in existing facilities has been used to serve future demands. Where this occurs, the amount of capacity used by future growth has been calculated as described in detail in the Impact Fee Facilities Plan.
6. **Future Deficiencies** – Where excess capacity is inadequate to meet projected demands, future deficiencies in the system were identified using the same established level of service criteria used for existing demands.
7. **Recommended Improvements** – Needed system improvements were identified to meet demands associated with future development.

Proportionate Share Analysis – 11 – 36A-304(D)

A comprehensive proportionate share analysis associated with anticipated future development and its impact on the system was completed as part of the Impact Fee Facilities Plan. A summary of that analysis is contained here with additional discussion of the costs of facilities impacted by growth.

Excess Capacity to Accommodate Future Growth

Projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities. Defining existing system capacity in terms of a single number is difficult. To improve the accuracy of the analysis, the system was divided into two different components (collection, treatment, and administrative and service buildings). Excess capacity in each component of the system is summarized in Table 2.

Table 2
Use of Existing Capacity

Use Category	Collection System Percent Use	Treatment Percent Use	Administrative and Service Buildings
Existing Use	80.78%	73.71%	45.95%
Use By 10-Year Growth	8.80%	11.06%	8.75%
Use By Growth Beyond 10 years	10.42%	15.23%	45.30%
Total	100.00%	100.00%	100.00%

Existing System Infrastructure Costs

To calculate the actual cost of excess capacity in the existing system, BC&A first looked at the actual cost of all existing facilities. Table 3 lists the actual construction costs of existing components of the District's wastewater system. These are not depreciated replacement costs, but the actual cost of existing District infrastructure at the time of construction. Appendix A shows a detailed breakdown of these projects and their associated costs. These costs were estimated from the District's asset depreciation schedule.

Table 3
Existing Infrastructure Costs

	Collection	Treatment	Sewer Portion of Administrative Building
Existing Infrastructure Costs	$12,004,035	$48,138,096	$1,885,028

In this study, public facility costs already incurred by the District will be included in the impact fee only to the extent that new growth will be served by the previously constructed improvements.

Reimbursement Agreements

There are no current reimbursement agreements existing within the District's system that have not already been accounted for in the existing infrastructure analysis.

Future Improvements

In additional to using available existing capacity, demand associated with projected future development will be met through the construction of additional capacity in new facilities. A primary focus of the Impact Fee Facilities Plan was the identification of projects required to serve new development. The results of the Impact Fee Facilities Plan are summarized in Table 4. Included in the table are the costs of each required project and the portion of costs associated with development for the 10-year planning window. All cost estimates contained in this IFA have been taken directly from the IFFP. The basis of these estimates is documented in the IFFP.

Table 4
Impact Fee Eligible Capital Projects

Project ID	Year	Project	Total Project Cost	Percent to 10 Year Growth	Cost to 10 Year Growth
Collection System Projects					
2	2027	So. Frontage, 8400 W to 8000 W	$3,500,700	7.8%	$272,396
3	2030	So. Frontage, 8800 W to 8400 W	$3,115,300	4.4%	$135,591
4	2028	9200 West Trunk, Reach 1	$4,327,100	4.7%	$203,439
5	2029	9200 West Bridge Casing and West Trunk (Reach 2)	$2,650,600	5.2%	$137,899
11	2031	7200 W, 3500 S to 3100 S	$1,488,700	52.9%	$787,333
12	2031	8400 W, Main St. to So. Frontage	$1,274,800	41.5%	$529,040
15	2032	8000 W, 3200 s to So. Frontage	$3,650,600	6.0%	$219,379
		Subtotal	*$20,007,800*	*11.4%*	*$2,285,078*
Treatment Plant Projects					
1	2035	Surface Aerator Phase 1	$3,200,000	11.1%	$353,900
		Subtotal	*$3,200,000*	*11.1%*	*$353,900*
Administrative and Service Buildings					
	2030	*Operator Change Building*	*$2,323,920*	*8.8%*	*$203,439*
		Subtotal	*$2,323,920*	*8.8%*	*$203,439*
		Total	**$25,531,720**	**11.1%**	**$2,842,417**

Planning and Impact Fee Studies

Utah Code allows for the cost of planning and engineering associated with impact fee calculations to be recovered as part of an impact fee. The final impact fee will include the cost of this study and recommended planning projects in the next ten years as summarized in Table 5.

Table 5
Impact Fee Costs Associated with Studies per ERU

System Components	Total Cost of Component	% Serving 10-year Growth	Cost Serving 10-year Growth	10-year ERUs Served	Cost Per ERU
2025 Sewer Master Plan	$59,702	76.96%	$45,949	2,041	$22.51
2025 Sewer Impact Fee Facility Plan and Impact Fee Analysis	$15,247	100.00%	$15,247	2,041	$7.47
2025 Treatment Plant Facility Plan Study	$245,000	40.00%	$98,000	2,041	$48.02
Subtotal	$319,949		$159,196		$95.54

IMPACT FEE CALCULATION - 11-36A-304(1)(E)

Using the information contained in the previous sections, impact fees can be calculated by dividing the proportional cost of facilities required to service 10-year growth by the amount of growth expected over the next 10-years. Calculated impact fees by component are summarized in Table 6 for Magna Water District.

Table 6
Impact Fee Calculation per ERU – Magna Water District Service Area

System Components	Total Cost of Components	% Serving 10-year Growth	Cost Serving 10-year Growth	10-year ERUs Served	Cost Per ERU
Administrative and Service Facilities					
Existing Facilities - Administration Building	$1,885,028	8.8%	$165,018	2,041	$80.85
10- year Project - Operator Change Building	$2,323,920	8.8%	$203,439	2,041	$99.68
Subtotal	**$4,208,948**		**$368,457**		**$180.53**
Collection Facilities					
Existing Facilities - Pipelines	$12,004,035	9.9%	$1,193,982	2,041	$585.00
Existing Facility Interest Costs - Pipelines	$848,537	9.9%	$84,400	2,041	$41.35
10-Year Projects	$20,007,800	11.4%	$2,285,078	2,041	$1,119.59
10-Year Project Interest Costs	$0	11.4%	$0	2,041	$0.00
Credit for User Fees Paid Toward Existing					($69.85)
Subtotal	**$32,860,372**		**$3,563,460**		**$1,676.09**
Treatment Plant					
Existing Facilities	$48,138,096	11.1%	$5,323,771	2,041	$2,608.41
Existing Facility Interest Costs	$3,394,149	11.1%	$375,372	2,041	$183.92
10-Year Projects	$3,200,000	11.1%	$353,900	2,041	$173.40
10 Year Project Interest Costs	$0	11.1%	$0	2,041	$0.00
Credit for Users Fees Paid Toward Existing					($396.24)
Subtotal	**$54,732,245**		**$6,053,043**		**$2,569.49**
Studies					
All Studies	$319,949	49.8%	$159,196	2,041	$78.00
Total	**$92,121,514**		**$10,144,155**		**$4,504.10**

Bonding Interest Costs

In addition to construction costs, Table 5 includes the cost of bond interest expense where applicable. This includes both historic interest costs on existing facilities where new growth will benefit from excess capacity and future interest costs for bonds required to build projects needed for growth as identified in the Impact Fee Facilities Plan. Similar to project construction costs, only that portion of interest expense associated with capacity for growth is included in the impact fee calculation. In the case of the Magna Water District wastewater system, the following bonds were included in the study:

- **2013 General Obligation Refunding Bond** – This bond was a refunding of a previous bond used for improvements to the District's wastewater treatment plant, minor sewer collection improvements, and improvements to the EDR system. The District started payments on this bond in the year 2014. The beginning bond balance was $8,245,000 with 51.78 percent of this associated with sewer improvements. This bond was included in the table above under the Treatment Plant Existing Facility Interest Costs and Collection Facilities Existing Facility Interest Costs categories. Costs shown are actual costs that have been or will be incurred in association with this bond.
- **2017 General Obligation Refunding Bond** – This bond was a refunding of a previous bond used for improvements to the District's wastewater treatment plant, minor sewer collection improvements, and the District's water distribution system. The District started payments on this bond in the year 2017. The beginning bond balance was $13,975,000 with 43.38 percent of this associated with sewer improvements. This bond was included in the table above under the Treatment Plant Existing Facility Interest Costs and Collection Facilities Existing Facility Interest Costs categories. Costs shown are actual costs that have been or will be incurred in association with this bond.
- **2019 General Obligation Refunding Bond** – This bond was a refunding of a previous bond used for improvements to the District's wastewater treatment plant, minor sewer collection improvements, and the District's water distribution system. The District started payments on this bond in the year 2019. The beginning bond balance was $8,025,000 with 43.38 percent of this associated with sewer improvements. This bond was included in the table above under the Treatment Plant Existing Facility Interest Costs and Collection Facilities Existing Facility Interest Costs categories. Costs shown are actual costs that have been or will be incurred in association with this bond.

Credit for User Fees

As currently structured, future users will pay for their portion of capacity via impact fees. They cannot also be expected to pay through user rates the portion of future bonds that will be used to build capacity for existing users. This creates the need for a credit for future users. Calculation of this credit is summarized in Table 7 and Table 8. These tables include the following information:

- **Existing Portion of Loan Paid Through User Fees** – This represents the total amount paid each year by the District toward the portion of any loans used to build capacity for existing users.
- **Cost Per ERU** – This column takes the total amount paid and divides it by the number of ERUs projected for each year. This represents the amount paid in each year by each ERU.
- **Present Value Cost per ERU** – This column takes into account the time value of money assuming a rate of return of 3.5 percent annually.
- **Total User Fee Credit** – At the bottom of the table, the present value costs for all future years are added together to develop the total user fee credit.

It will be noted that, because the user fee credit is the summation of user fees paid toward existing deficiencies in each year, a new user who joins the system in five or ten years will pay less in total user fees than someone who joins the system next year. Thus, the user fee credit will decrease over time. The appropriate user fee can be calculated by adding the present value cost for all years subsequent to a new user's connection to the system.

Table 7
Credit for User Fees Paid Toward Existing – Magna Water District Collection System

Year	Magna Water ERUs	Existing Capacity Portion of Loans Paid Through User Fees	Cost Per ERU	Present Value Cost Per ERU
2025	10,710	$103,966	$9.71	$9.71
2026	10,955	$103,857	$9.48	$9.07
2027	11,166	$83,930	$7.52	$6.88
2028	11,329	$84,042	$7.42	$6.50
2029	11,605	$83,727	$7.21	$6.05
2030	11,738	$66,339	$5.65	$4.54
2031	11,990	$66,519	$5.55	$4.26
2032	12,206	$66,525	$5.45	$4.00
2033	12,323	$66,610	$5.41	$3.80
2034	12,504	$66,207	$5.29	$3.56
2035	12,751	$66,404	$5.21	$3.35
2036	12,919	$66,315	$5.13	$3.16
2037	13,053	$66,627	$5.10	$3.01
2038	13,326	$23,784	$1.78	$1.01
2039	13,615	$23,713	$1.74	$0.94
2040	13,676	$0	$0.00	$0.00
			Total User Fee Credit	**$69.85**

Table 8
Credit for User Fees Paid Toward Existing – Magna Water District Treatment

Year	Magna ERUs	Existing Capacity Portion of Loans Paid Through User Fees	Cost Per ERU	Present Value Cost Per ERU
2025	10,710	$589,766	$55.07	$55.07
2026	10,955	$589,145	$53.78	$51.46
2027	11,166	$476,106	$42.64	$39.04
2028	11,329	$476,743	$42.08	$36.88
2029	11,605	$474,959	$40.93	$34.32
2030	11,738	$376,318	$32.06	$25.73
2031	11,990	$377,341	$31.47	$24.17
2032	12,206	$377,373	$30.92	$22.72
2033	12,323	$377,857	$30.66	$21.56
2034	12,504	$375,573	$30.04	$20.21
2035	12,751	$376,686	$29.54	$19.02
2036	12,919	$376,181	$29.12	$17.94
2037	13,053	$377,955	$28.95	$17.07
2038	13,326	$134,921	$10.12	$5.71
2039	13,615	$134,515	$9.88	$5.33
2040	13,676	$0	$0.00	$0.00
			Total User Fee Credit	**$396.24**

Recommended Impact Fee

The total calculated impact fees are summarized in Table 9. Included in this table is the appropriate user fee credit and corresponding overall fee. This is the legal maximum amount that may be charged as an impact fee. A lower amount may be adopted if desired, but a higher fee is not allowable under the requirements of Utah Code.

Table 9
Recommended Per ERU Impact Fee – Magna Water District Service Area

	Maximum Allowable Impact Fee (Per ERU, by year)					
	2026	**2027**	**2028**	**2029**	**2030**	**2031**
Base Impact Fee (includes study costs)	$4,970.19	$4,970.19	$4,970.19	$4,970.19	$4,970.19	$4,970.19
User Fee Credit	$401.32	$340.78	$294.86	$251.48	$211.11	$180.85
Total Overall Fee	**$4,568.87**	**$4,629.41**	**$4,675.33**	**$4,718.71**	**$4,759.08**	**$5,151.04**

As discussed previously, the calculated user fee credit associated with the impact fees will decrease over time. As a result, the allowable impact fee will increase over time as shown in the table. Impact fees beyond 2030 can be calculated by reducing the user fee credit by the amount shown for each successive year in the credit calculation tables.

Calculation of Non-Standard Impact Fees

The calculations above have been based on an ERU. The Impact Fee Enactment should include a provision that allows for calculation of a fee for customers other than typical residential connections. Consistent with the level of service standards established in the Impact Fee Facilities Plan, the following formula may be used to calculate an impact fee for a non-standard user based on the calculated daily indoor water use for an average residential connection[1].

$$\frac{Estimated\ Indoor\ Water\ Use}{246.7\ gallons\ per\ day} X\ Impact\ Fee\ per\ ERU = Impact\ Fee$$

Calculation all non-standard impact fees should be completed by District personnel using the formula above based on information regarding water use as provided for each non-standard use. This approach will be used for all commercial and industrial development.

[1] Based on average domestic wastewater of 222.0 gpd/ERU entering the wastewater collection system and 10 percent consumption, consistent with previous calculations.

ADDITIONAL CONSIDERATIONS - 11-36A-304(2)

MANNER OF FINANCING - 11-36A-304(2)(A-E)

As part of this Impact Fee Analysis, it is important to consider how each facility has been or will be paid for. Potential infrastructure funding includes a combination of different revenue sources.

User Charges

Because infrastructure must generally be built ahead of growth, there often arises situations in which projects must be funded ahead of expected impact fee revenues. In some cases, the solution to this issue will be bonding. In others, funds from existing user rate revenue will be loaned to the impact fee fund to complete initial construction of the project and will be reimbursed later as impact fees are received. Interfund loans should be considered in subsequent accounting of impact fee expenditures.

Special Assessments

Where special assessments exist, the impact fee calculation must take into account funds contributed. No special assessments currently exist in the Magna Water District wastewater system.

Pioneering Agreements

Where pioneering agreements exist, the impact fee calculation must take into account payback requirements under each pioneering agreement. The District currently does not have any pioneering agreements.

Bonds

None of the costs contained in the IFFP included bonding. Where District financial plans identify bonding will be required to finance impact fee eligible improvements, the portion of bond cost and interest expense attributable to future growth has been added to the calculation of the impact fee.

General Taxes

If taxes are used to pay for infrastructure, they should be accounted for in the impact fee calculation. Specifically, any contribution made by property owners through taxes should be credited toward their available capacity in the system. In this case, no taxes are proposed for the construction of infrastructure.

Federal and State Grants and Donations

Impact fees cannot reimburse costs funded or expected to be funded through federal grants and other funds that the District has received for capital improvements without an obligation to repay. Grants and donations are not currently contemplated in this analysis. If grants become available for constructing facilities, impact fees will need to be recalculated and an appropriate credit given. Any existing infrastructure funded through past grants has been removed from the system cost.

DEDICATION OF SYSTEM IMPROVEMENTS - 11-36A-304(2)(F)

Developer exactions are not the same as grants. If a developer constructs a system improvement or dedicates land for a system improvement identified in this IFFP, or dedicates a public facility that is recognized to reduce the need for a system improvement, the developer may be entitled to an appropriate credit against that particular developer's impact fee liability or a proportionate reimbursement.

If the value of the credit is less than the development's impact fee liability, the developer will owe the balance of the liability to the District. If the recognized value of the improvements/land dedicated is more than the development's impact fee liability, the District may be required to reimburse the difference to the developer.

It should be emphasized that the concept of impact fee credits pertains to system level improvements only. Developers will be responsible for the construction of project improvements (i.e. improvements not identified in the impact fee facilities plan) without credit against the impact fee.

EXTRAORDINARY COSTS - 11-36A-304(2)(G)

The Impact Fees Act indicates the analysis should include consideration of any extraordinary costs of servicing newly developed properties. In cases where one area of potential growth may cost significantly more to service than other growth, a separate service area may be warranted. No areas with extraordinary costs have been identified as part of this analysis.

TIME-PRICE DIFFERENTIAL - 11-36A-304(2)(H)

Utah Code allows consideration of time-price differential in order to create fairness for amounts paid at different times. To address time-price differential, this analysis includes a conversion to present value cost for future expenditures. In the case of future construction costs, it has been assumed that the return rate on investment will be roughly equivalent to construction inflation and current construction estimates have been used in the calculation of impact fees. Per the requirements of the Code, existing infrastructure cost is based on actual historical costs without adjustment.

IMPACT FEE CERTIFICATION - 11-36A-306(2)

This impact fee analysis has been prepared in accordance with Utah Code Title 11 Chapter 36a (the "Impact Fees Act"), which prescribes the laws pertaining to the imposition of impact fees in Utah. The accuracy of this report relies upon the planning, engineering, and other source data, which was provided by the City and their designees.

In accordance with Utah Code Annotated, 11-36a-306(2), Bowen Collins & Associates, makes the following certification:

I certify that this impact fee facility plan:

1. Includes only the cost 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. cost of 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 alternat sources of payment; and
4. Complies in each relevant respect with the Impact Fees Act.

This certification is made with the following caveats:

1. All of the recommendations for implementations of the Impact Fee Facilities Plan (IFFP) made in the IFFP or in the impact fee analysis are followed in their entirety by the City.
2. If all or a portion of the IFFP or impact fee analysis is modified or amended, this certification is no longer valid.
3. All information provided in the preparation of this IFFP is assumed to be correct, complete and accurate. This includes information provided by the City and outside sources.

Keith J. Larson, P.E.

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