



WATER AND WASTEWATER UTILITY IMPACT FEE STUDY

City of Marble Falls, Texas

Prepared By:



5500 Democracy Drive, Ste. 130
Plano, Texas 75024
(972) 378-6588

www.economists.com

Project Manager: Dan V. Jackson
Project Analyst: Daniel Lanning

&

MillerGRAY

7320 N Mopac Expy, Suite 203, Austin, Texas 78731
(512) 861-5300

www.miller-gray.com

TBPE Firm Reg. No. F-16302

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Section I – Executive Summary

Introduction and Scope

In May 2022 the City of Marble Falls (“City”) engaged Willdan Financial Services (“Willdan”) and Miller Gray, LLC (“Miller Gray”) to develop an update to their Water and Wastewater (“Utility”) Impact Fees, last revised in 2018. The methodology used to develop the City’s Utility impact fees is governed by Texas Local Government Code Title 12, Subtitle C, Chapter 395 (“Chapter 395”).

As part of this process, the City’s water and wastewater service areas are separate and distinct. The engineering consultant, Miller Gray, has developed a land use assumptions map and a capital improvement plan (“CIP”) for each utility. The CIP identifies water and wastewater projects that will be required both to repair and replace current capacity and to expand total system capacity to meet the needs of new growth over the next decade. The results of this analysis, and the recommended maximum impact fees for each utility, are presented in this summary report.

In order to be properly calculated and implemented, the impact fee process must adhere to a basic, generally accepted methodology. This methodology has been closely followed during the course of this study. The methodology is known as the *Growth Related Cost Allocation* method, and is considered by the project team to be the most appropriate for the City. The methodology aligns with the requirements of Chapter 395.

The financial models for each Utility contained in the appendices to this report present the impact fee calculation methodology in detail.

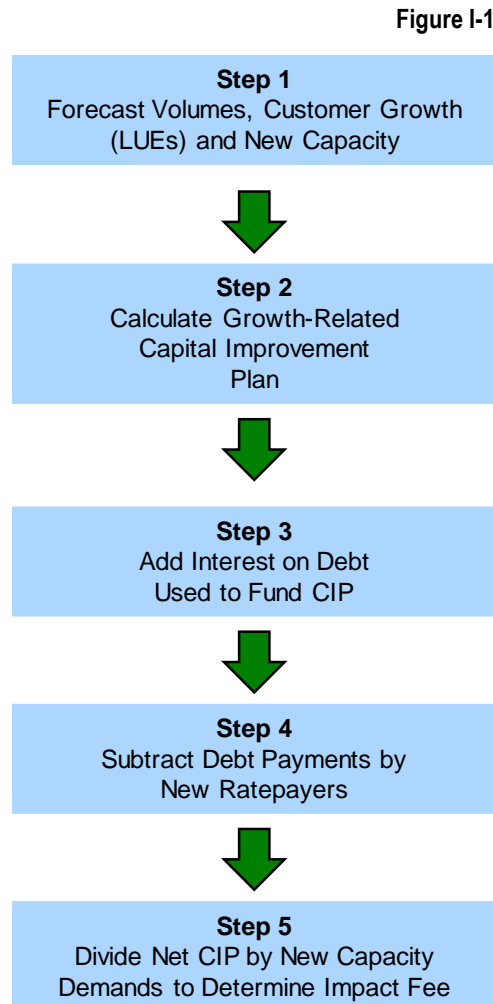
Study Methodology

In order to calculate impact fees for each utility, the following steps are required:

1. The first step is to examine the City’s actual and projected water and wastewater consumption/billing units, system capacity and customer growth. The existing and projected system capabilities are also identified and incorporated into the impact fee assumptions.
2. The second step is to calculate the impact of the City’s Capital Improvement Plan (“CIP”) on the determination of impact fees for each utility. The total CIP over the next decade must be identified and segregated between those expenses devoted to repair and maintain the existing system, and those expenses devoted to growth and system expansion.
3. The third step is to calculate the amount of debt expected to be issued to fund the capital improvement plan for each Utility. The amount of debt interest is added to the CIP to develop the total funding eligible to be recovered through an impact fee.
4. The fourth step is to calculate a credit for the amount of debt service expected to be paid by new connections during the planning period through monthly rates. This credit is netted against the total funding eligible to be recovered through an impact fee.

5. The final step is to calculate the impact fee per Living Unit Equivalent (LUE). The impact fee is based on the net cost of the expanded infrastructure as defined in the capital improvement plan, divided by the total new capacity to be provided by the CIP.

This process is illustrated in **Figure I-1**.



The City staff and Engineer expended considerable time and effort fulfilling the requests of the project team. All requests were complied with in an efficient, professional manner.

During the course of this study project team members conferred on a regular basis with the City staff. Staff input was solicited and incorporated into the analysis and recommendations.

Background on Impact fees

Arthur C. Nelson, author of *System Development Charges for Water, Wastewater and Stormwater Facilities*, succinctly defines impact fees as follows:

“System Development Charges (impact fees) are one-time charges paid by new development to finance the construction of public facilities needed to serve it.”

The basic premise of impact fees is that the development of land for residential, commercial or industrial use will have a measurable capacity impact on the public infrastructure systems and services. Therefore, the resulting financial impact of this new capacity should be funded directly by the development itself. Under this premise, existing ratepayers should not be compelled to fund the cost of new development through higher user rates or taxes.

Since impact fees are designed to offset the initial capital requirements associated with servicing growth or development, **they cannot be used for personnel, operating, maintenance, repair, alteration, or replacement of existing infrastructure.** Impact fee calculations that incorporate these expenses may be declared invalid by state or judicial authorities. Hence, the fundamental objective of impact fees is not simply to serve as another source of revenue. **The purpose is to ensure that adequate public infrastructure is provided to development in order to maintain public health, safety, and welfare.**

Several standards are available by which an impact fee must be measured in order to survive potential legal challenges or pass a test of “fairness”. These standards include, but are not limited to, the following:

Level of Service - New development must not be held to a higher standard for delivery of services than existing development.

Proportionality – The impact fee charged is matched to the projected outlay for infrastructure or services. The fee charged cannot exceed the projected expenditure level.

Universal Application – Impact fees that are implemented must be applicable to all development projects on a non-discriminatory basis.

Rational Nexus – There must be a direct relationship between the impact fee charged and the actual delivery of services. For example, water impact fees may not be used to fund parks and recreation, or other municipal services.

The **rational nexus** standard is the focus of most legal concerns regarding impact fee ordinances. According to the American Water Works Association (AWWA) manual M-1, *Principles of Water Rates, Fees and Charges*, there are several elements to satisfying the rational nexus when developing impact fees.

The first element is the establishment of a rational basis for the policy implemented through fees. This implies that planning and CIP studies be used to determine the need for new facilities to meet demands of anticipated growth. The second element of rational nexus is identification of the cost of new or expanded facilities needed to serve new development, i.e., establish the burden to the public in providing new facilities to serve new development and the rational basis to pass the cost of those facilities onto new development. This refers to a precedent set in a court decision outlining seven factors (“Banberry” factors) that determine the proportionate share of costs recovered by new development. These factors are summarized as follows:

1. The cost of existing facilities.
2. The means by which existing facilities have been financed and who paid the costs.

3. The amount new development may have already contributed to the cost of providing existing excess system capacity.
4. The extent existing development will contribute, in the future, to the cost of providing existing facilities used community-wide or non-occupants of new development.
5. The extent to which new development should receive credit for providing at its cost facilities the community has provided in the past without charge to other development in the service area.
6. Extraordinary costs incurred in serving new development.
7. The time-value of money inherent in fair comparisons of the amount of money paid at different times.

The final element is the reasonable apportionment of the costs to new development in proportion to the benefits the new development will reasonably receive.

Texas Impact Fee Statute – Chapter 395

In 1987, the Texas State Legislature approved law that mandated the impact fee approval procedure, calculation, and administration policy for municipal, county, and certain other local governments in the state. The law outlines a strict series of guidelines and dates for implementation of new impact fees by municipalities in Texas.

The City's legal counsel has opined that the approval procedures and policies mandated in Chapter 395 are applicable to the City impact fee approval process. Thus, the fee calculation approach described in Chapter 395 was used in preparing the maximum allowed impact fees presented in this study.

Current Impact Fee Survey

As a part of this study, Willdan conducted a survey of impact fees charged by neighboring communities. **Chart I-2** and **Chart I-3** present the water and wastewater survey results, respectively, compared to the City's existing water impact fee, \$2,761 per LUE, and wastewater impact fee, \$3,293 per LUE, to the surveyed population. To properly compare survey results, the charges gathered were representative of a typical single family residential dwelling, i.e., impact fee per LUE (5/8" or 3/4" water meter).

Chart I-2

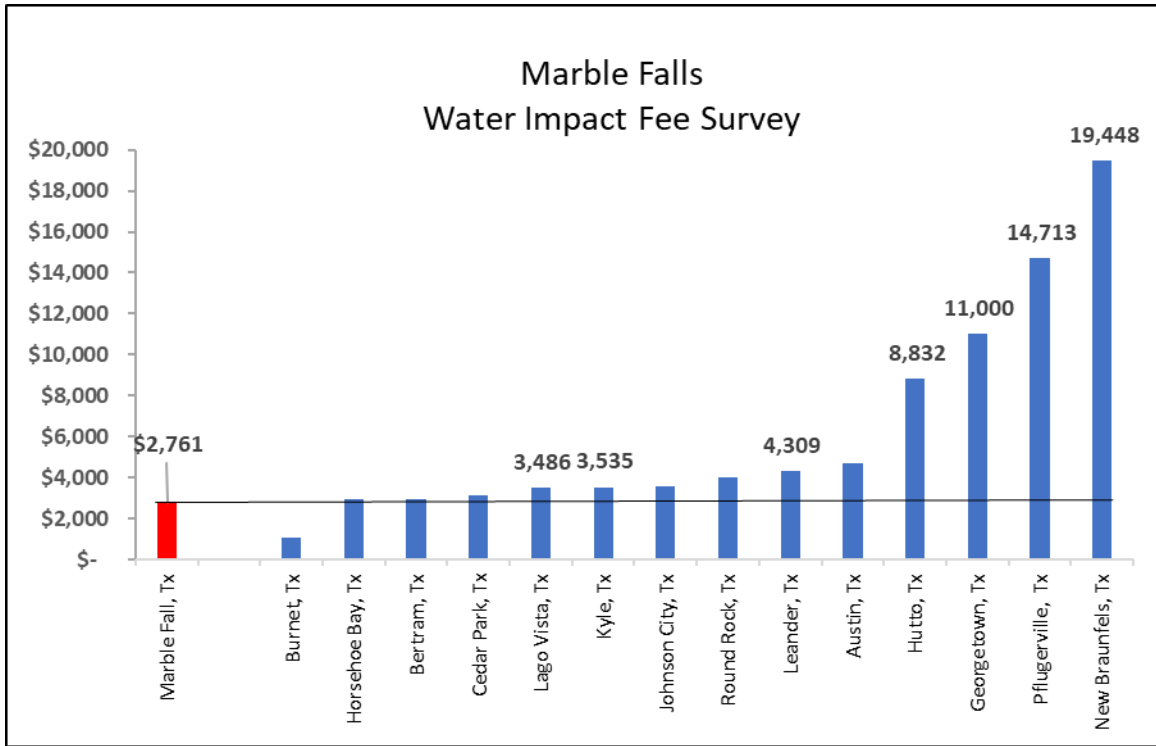
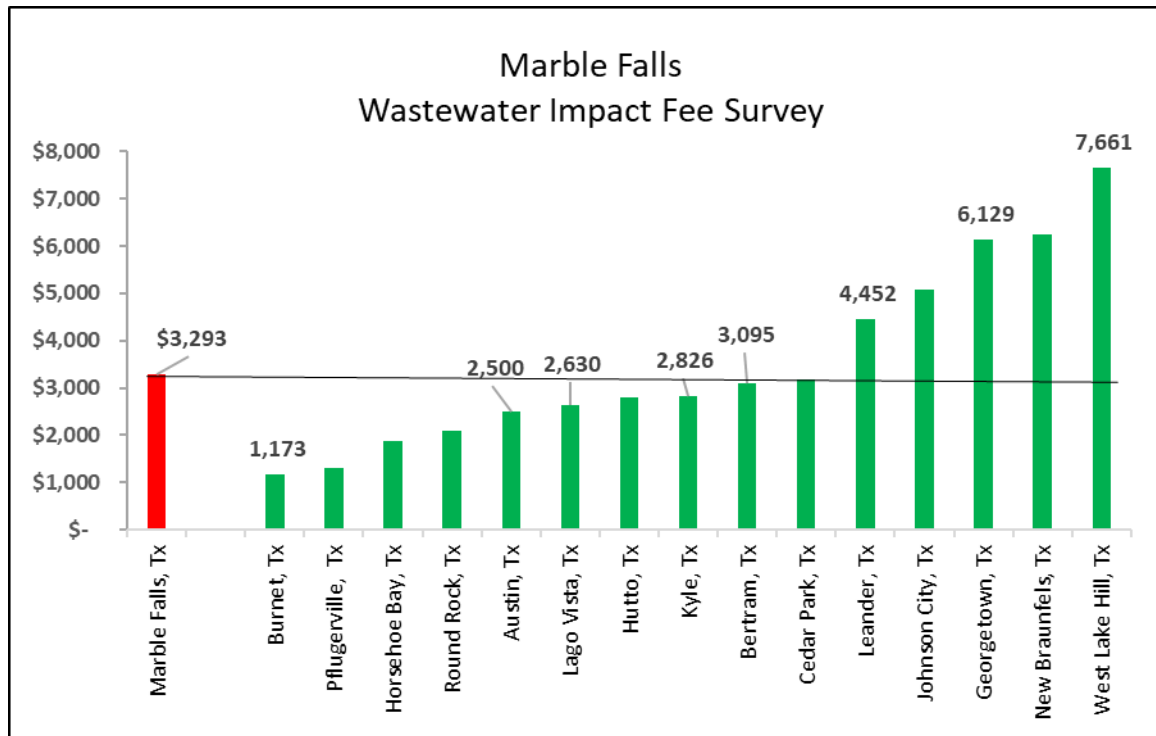


Chart I-3



Impact Fee Summary

Table I-4 and Table I-5 present a summary of the water and wastewater impact fee per LUE as presented in this study. This study calculates the following maximum impact fees:

Water Utility Impact Fee – using a combination of Supply, Treatment, Transmission and Distribution costs required to meet new demand from system growth.

Wastewater Utility Impact Fee – using a combination of Treatment, Pumping, Force Main and Collection costs required to meet new demand from system growth.

The maximum water and wastewater impact fees as shown in Table I-4 and Table 1-5 were determined using the City’s approved Capital Improvement Plan prepared by Miller Gray. Backup and supporting documentation are contained in Sections IV and V of this report.

Table I-4

CITY OF MARBLE FALLS WATER IMPACT FEE BY METER SIZE			
Impact Fee:			
Water Meter Size	MAXIMUM Treatment Impact Fee	MAXIMUM Distribution Impact Fee	MAXIMUM Water Impact Fee
Maximum Fee per LUE	\$ 5,225	\$ 2,486	\$ 7,711

Table I-5

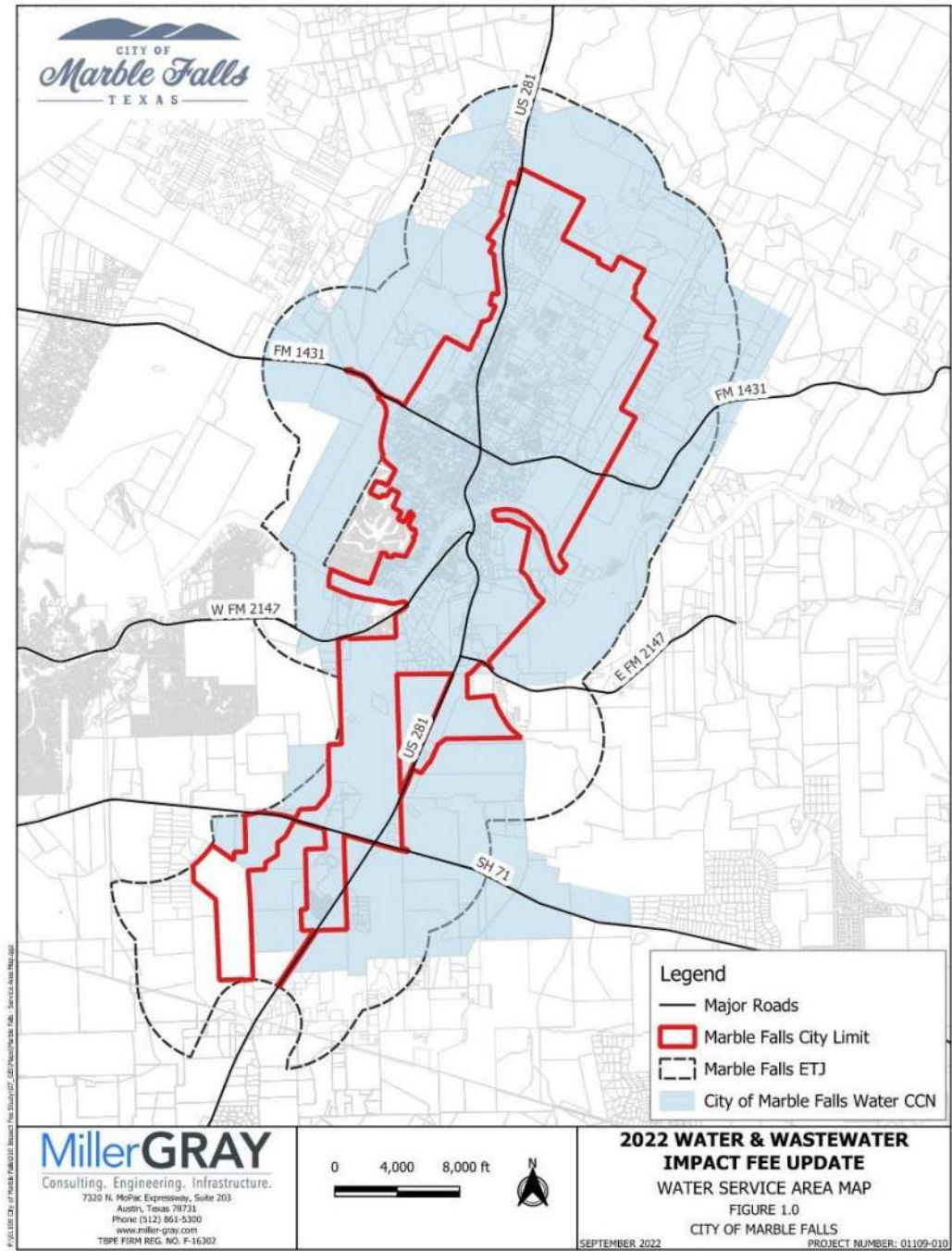
CITY OF MARBLE FALLS WASTEWATER IMPACT FEE BY METER SIZE			
Impact Fee:			
Water Meter Size	MAXIMUM Treatment Impact Fee	MAXIMUM Collection Impact Fee	MAXIMUM Wastewater Impact Fee
Maximum Fee per LUE	\$ 6,620	\$ 2,592	\$ 9,212

Section II – Utility Service Areas

Water Utility Service Area

The City is authorized to provide water utility services within their Certificate of Convenience and Necessity (CCN) boundaries as authorized by the Public Utility Commission of Texas. A map showing the boundaries of the City's water utility service area and Extraterritorial Jurisdiction (ETJ) is shown below in **Figure II-1** and **Appendix A**.

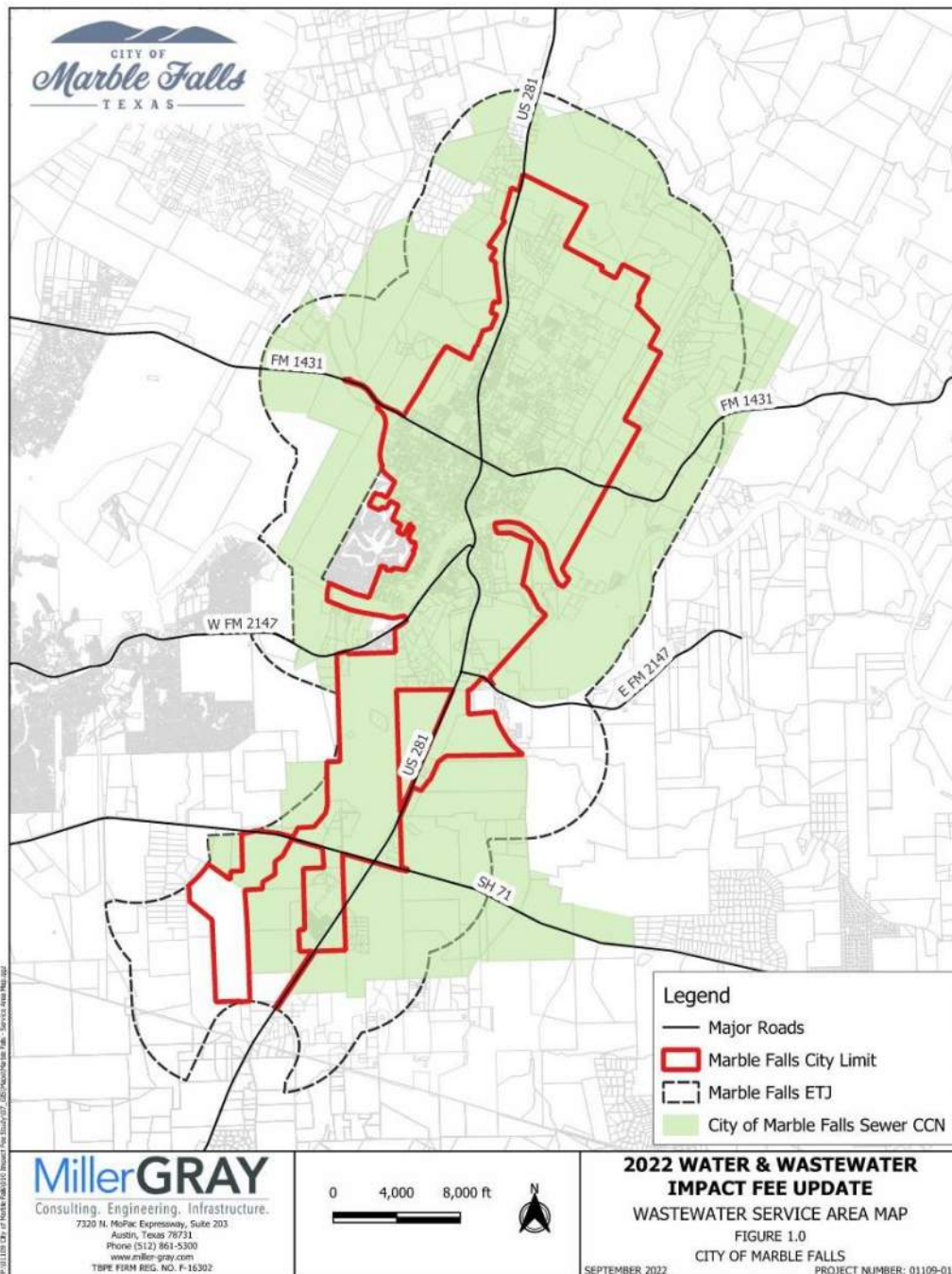
Figure II-1



Wastewater Utility Service Area

The City is authorized to provide wastewater utility services within their Certificate of Convenience and Necessity (CCN) boundaries as authorized by the Public Utility Commission of Texas. A map showing the boundaries of the City's wastewater utility service area and ETJ is shown below in **Figure II-2** and **Appendix B**.

Figure II-2



Section III – Land Use and Population

Land Use Assumptions

The future land use assumptions used for development of the utility impact fees are shown below in **Table III-1**. The area served is 28,164 acres and the land use areas are a composite of adopted zoning within the city limits and future land use map within the City's Extraterritorial Jurisdiction (ETJ).

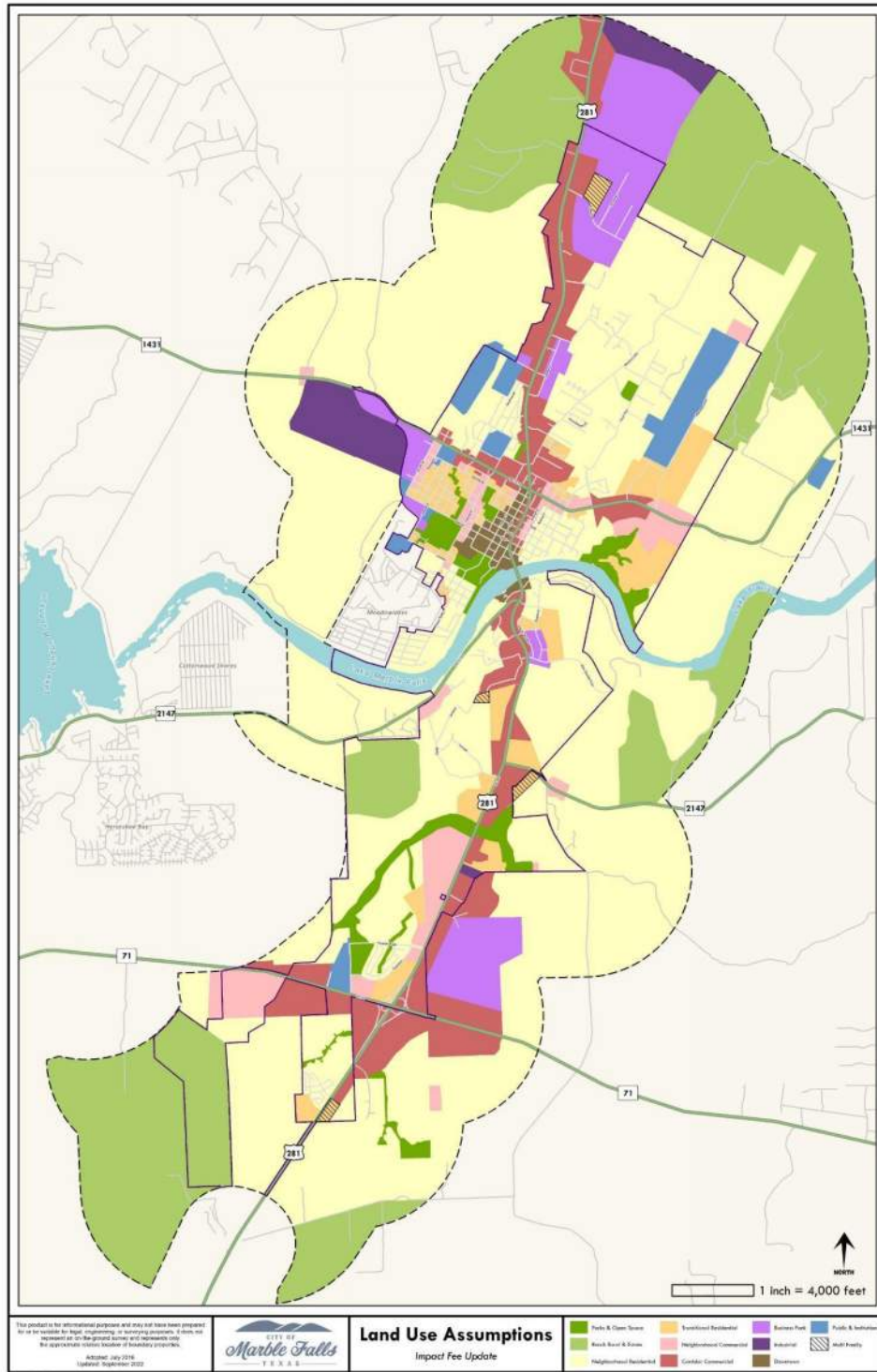
Table III-1

FUTURE LAND USE SUMMARY		
Future Land Use Classification	Total Area (Acres)	Percent (%)
Business Park	1,352	4.8%
Corridor Commercial	2,129	7.6%
Downtown	163	0.6%
Industrial	514	1.8%
Lake Marble Falls	523	1.9%
Neighborhood Commercial	750	2.7%
Neighborhood Residential	14,778	52.5%
Parks & Open Space	571	2.0%
Public & Institutional	536	1.9%
Ranch Rural & Estate	5,850	20.8%
Transitional Residential	1,001	3.6%

Land Use Map

A map showing the boundaries of the various land use types is shown below in **Figure III-2**. The land use areas are a composite of adopted zoning within the city limits and future land use map within the ETJ.

Figure III-2



Population Projections

A population estimate of the City of Marble Falls over the 10-year planning period was prepared for the study. The population was derived from a 2022 census estimate along with estimated ETJ population. The Impact Fee Advisory Committee voted to assume a 7% growth rate within the City limits and 2% growth rate in the ETJ, resulting in a combined effective growth rate of 6.7%. The population estimate is shown below in **Table III-3**.

Table III-3

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Annual Growth Rate (%) City Limits	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Annual Growth Rate (%) ETJ	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
City Limits Population	7,423	7,943	8,499	9,093	9,730	10,411	11,140	11,920	12,754	13,647	14,602	15,624
ETJ Population	750	765	780	796	812	828	845	862	879	896	914	933
Total Population	8,173	8,708	9,279	9,889	10,542	11,239	11,985	12,781	13,633	14,543	15,516	16,557

Section IV – Water System Impact Fees

Introduction

Section I of this study presented a five-step summary of the calculation of an impact fee. These five steps are as follows:

1. Determine the City's actual and forecast connections and LUEs.
2. Calculate the percentage of the City's Capital Improvement Plan devoted to system growth, as opposed to repair and maintenance of the existing system.
3. Determine the amount of growth-related CIP that is expected to be financed through the issuance of long-term debt and determine total interest expense over the forecast period.
4. Calculate the credit to be paid by new connections during the planning period for debt issued to fund the CIP.
5. Calculate the maximum impact fee per LUE.

What follows in this section of the report is a presentation of the water maximum impact fee calculation using these five basic steps. Detailed spreadsheet schedules supporting the calculations are provided in **Appendix F**.

Historical and Forecast Demand – Living Unit Equivalent (LUE)

The engineering consultant, Miller Gray, has reviewed the City's actual meter count and demands as of February 2023 along with installed meter types to estimate the current number of LUEs. The estimated number associated with the water system is **5,582 LUEs**. A detailed calculation of water system LUEs can be found in **Appendix C**.

The project team determined that the City's estimated growth in LUEs over the period 2023 through 2033 is **5,095 LUEs**. This is an average annual increase of approximately 6.7%. **Table IV-1** presents the annual increase and total estimated LUEs.

Table IV-1

CITY OF MARBLE FALLS FORECAST WASTEWATER LUEs			
WATER CUSTOMER CLASS			
	Treatment	Distribution	Other
Water LUEs			
Total LUEs -- Current Year (1)			
2023	5,582	5,582	-
Forecast Annual Total			
2024	5,956	5,956	-
2025	6,355	6,355	-
2026	6,781	6,781	-
2027	7,235	7,235	-
2028	7,720	7,720	-
2029	8,237	8,237	-
2030	8,789	8,789	-
2031	9,378	9,378	-
2032	10,006	10,006	-
2033	10,677	10,677	-
Forecast Annual New Water LUEs			
2024	374	374	-
2025	399	399	-
2026	426	426	-
2027	454	454	-
2028	485	485	-
2029	517	517	-
2030	552	552	-
2031	589	589	-
2032	628	628	-
2033	670	670	-

Water System Capacity

The engineering consultant, Miller Gray, has determined the existing and forecast system capacity needs as part of the preparation of the water system CIP. Using estimated average daily demand of a of 300 gallons/LUE/day from historical records, the Miller Gray determined the existing and forecast water system capacity requirements. **Table IV-2** presents the existing and forecast capacity needed to meet water supply and treatment customer demand through the impact fee period (2024 – 2033).

Table IV-2

WATER TREATMENT/SUPPLY CURRENT & FORECAST CAPACITY		
YEAR	Water Capacity (gal/day)	Water Capacity (LUEs)
2023	4,800,000	16,000
2024	4,800,000	16,000
2025	5,800,000	19,333
2026	5,800,000	19,333
2027	5,800,000	19,333
2028	5,800,000	19,333
2029	6,400,000	21,333
2030	7,000,000	23,333
2031	7,000,000	23,333
2032	8,000,000	26,667
2033	8,000,000	26,667
Total Increase	3,200,000	10,667

Capital Improvement Plan (CIP)

Table IV-3 is a summary of the CIP prepared for the City and used in the calculation of the water maximum impact fee. This table presents the total CIP cost, CIP related to growth, and CIP related to growth in the 10-year impact fee period 2024 – 2033.

Table IV-3

CITY OF MARBLE FALLS CAPITAL IMPROVEMENT PLAN					
Asset	Total Cost*	Percent Growth Related	Total Growth-Related CIP	2024 - 2033 Growth-Related CIP	Total Replacement CIP
Water System					
Treatment	\$ 32,898,668	93.8%	\$ 30,856,756	\$ 25,319,646	\$ 2,041,912
Distribution	25,098,519	92.4%	23,180,122	11,898,613	1,918,396
Total Water Capital Improvements	57,997,186		54,036,878	37,218,259	3,960,309
			93.2%	64.2%	6.8%

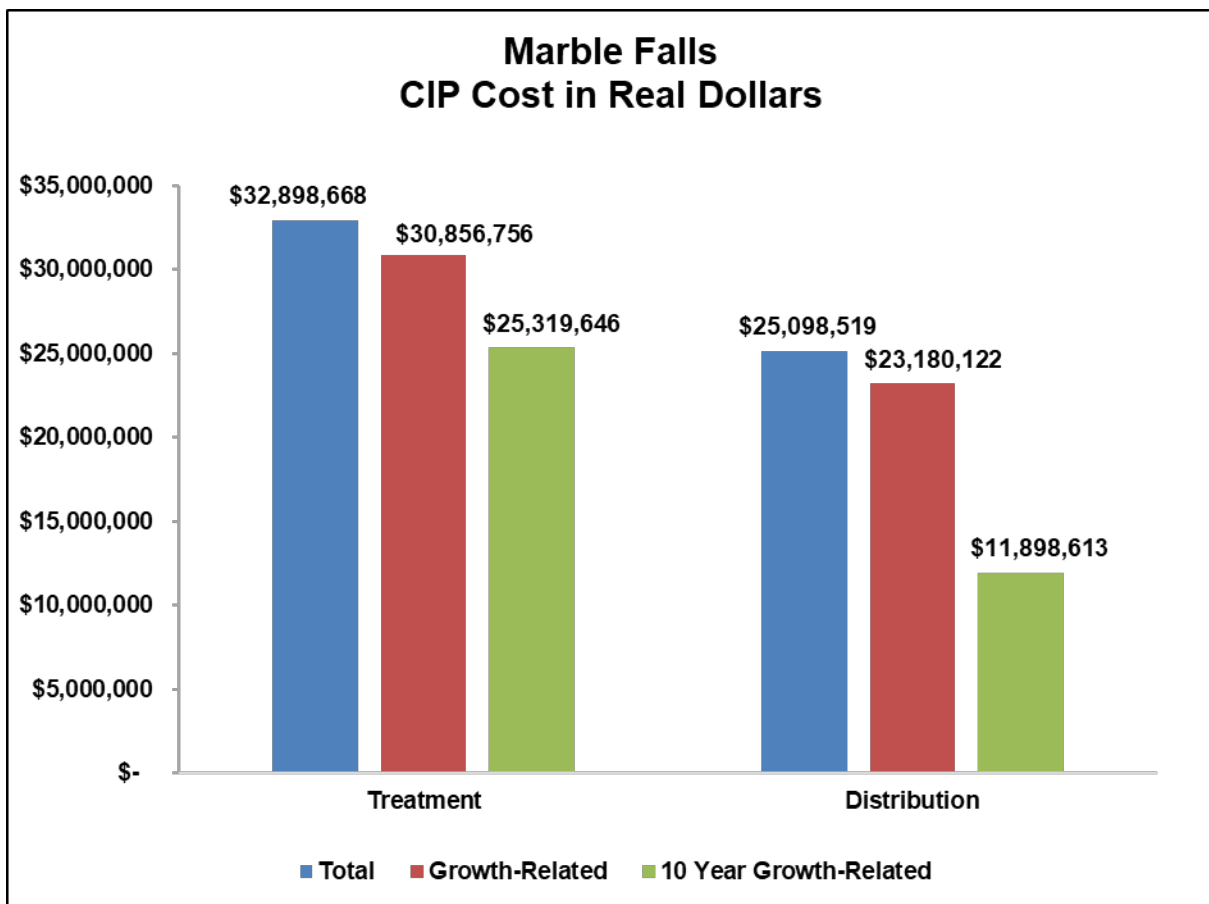
* Adjusted for inflation

The CIP developed by Miller Gray classified projects as either supply/treatment or transmission/distribution. Each project line item in the CIP includes cost, date of completion, total number of LUEs the project is designed to serve and number of new LUEs each project is designed to serve. The total CIP cost estimate in nominal dollars is \$50,249,375 for the period 2024 – 2033. The “real” cost (adjusted for time value of money) is \$57,997,186 for the same period. Cost of projects related to growth LUEs in “real” dollars is \$54,036,878 (93.2% of total CIP cost).

The table lists CIP projects designed to serve system growth include growth in LUEs expected after 2033, i.e., after the end of the 10-year period designated for impact fee calculation by Chapter 395. Adjusting the CIP to reflect only CIP project costs related to new LUEs added between 2024 and 2033 reduces the real dollar value of the CIP to \$37,218,259.

Chart IV-4 is a bar chart that presents the total CIP costs for supply and treatment (collectively “treatment”) and transmission and distribution (collectively “distribution”), CIP costs related to growth, and CIP costs related to growth added between 2024 and 2033. The CIP project list can be found in **Appendix D** and a map of the CIP projects can be found in **Appendix E**.

Chart IV-4



Current and Future Water System Debt Payments

Table II-5 presents the annual summary of principal and interest payments forecast for the impact fee period. These annual payments are discounted to reflect the payment values in today’s dollars. The debt is for a 20-year period at an interest rate of 4.0%.

Table IV-5

CITY OF MARBLE FALLS Water System Debt Payments FY2024 - FY2034			
YEAR	Principal Payment	Interest Payment	Total Payment
2024	\$ -	\$ -	\$ -
2025	171,939	204,800	376,739
2026	557,081	648,482	1,205,563
2027	665,333	728,599	1,393,933
2028	691,947	701,986	1,393,933
2029	719,625	674,308	1,393,933
2030	1,143,868	1,116,563	2,260,431
2031	1,189,623	1,070,808	2,260,431
2032	1,237,208	1,023,223	2,260,431
2033	1,286,696	973,735	2,260,431
2034	1,338,164	922,267	2,260,431
Treatment		\$ 4,997,120	\$ 10,475,728
Distribution		\$ 3,067,652	\$ 6,590,529
TOTAL	\$ 9,001,484	\$ 8,064,772	\$ 17,066,257
NPV Treatment		3,642,189	7,562,768
NPV Distribution		2,235,882	4,757,917
NPV	\$ 6,442,613	\$ 5,878,071	\$ 12,320,684

The net present value (NPV) of the interest payments is added to the 10-year growth related CIP cost in the calculation of the water maximum impact fee.

Debt Service Credit

Chapter 395 requirements include a credit for debt service that will be paid by new growth through water rates. This is to eliminate double charging debt payments to new customers: once in the impact fee, then again as part of their monthly water bills. Under Chapter 395, the City has two options in determining this credit:

1. Use a 50% credit of the total project cost of capital for all projects; or
2. Calculate the credit for utility service revenues generated by new service units during the program period that is used for payment of improvements through water rate payments.

This study presents a calculation of the credit paid by new service units in water rates. It is contained in **Table IV-6** below.

Table IV-6

CITY OF MARBLE FALLS TOTAL DEBT CREDIT		
	Treatment	Distribution
Planning Period Debt Service		
Total Principal and Interest	\$ 7,562,768	\$ 4,757,917
<u>Growth Related</u>		
Percent	100.0%	100.0%
Total	7,562,768	4,757,917
Credit Per Current LUE Per Month		
Current LUEs	5,582	5,582
Planning Period LUE	<u>25,314</u>	<u>25,314</u>
Monthly Bills from Current LUEs during Planning Period	973,606	973,606
Planning Period Credit per Current LUE Per Month	\$ 7.77	\$ 4.89
Cumulative Credit		
Cumulative Monthly Bills from New LUEs	303,766	303,766
Credit per Current LUE Per Month	\$ 7.77	\$ 4.89
Cumulative Credit	\$ 2,359,590	\$ 1,484,474



Maximum Water Impact Fee Calculation

Table IV-7 presents the calculation of the City’s maximum water impact fee per LUE using each of the components previously described in this report.

Table IV-7

CITY OF MARBLE FALLS			
<u>Maximum Water Impact Fee Calculations</u>			
	<u>Treatment</u>	<u>Distribution</u>	<u>Total</u>
I. Current and Forecast Demand (LUEs)			
Beginning Demand			5,582
New Growth 2024 - 2033			<u>5,095</u>
Total Demand 2033			10,677
II. Fee per LUE			
CIP Value of 2024 - 2033 Growth-Related Improvements	\$ 25,319,646	\$ 11,898,613	\$ 37,218,259
	-	-	
Impact Fee Study Preparation Expenses	15,000	15,000	30,000
	\$ -	\$ -	
Interest Expense Allocated to Planning Period	<u>3,642,189</u>	<u>2,235,882</u>	<u>5,878,071</u>
	\$ -	\$ -	
Sub-Total	\$ 28,976,836	\$ 14,149,495	\$ 43,126,331
	-	-	
Less CIP Credit	<u>2,359,590</u>	<u>1,484,474</u>	<u>3,844,064</u>
	-	-	
New Value of CIP to be Paid from Impact Fees	\$ 26,617,246	\$ 12,665,021	\$ 39,282,267
	-	-	
Total Forecast Expansions 2024 - 2033	5,095	5,095	5,095
	-	-	
Growth Related Impact Fee Per LUE	\$ 5,225	\$ 2,486	\$ 7,711

Table IV-8 presents the maximum impact fee per equivalent meter size with a simplified version shown in Appendix H.

Table IV-8

CITY OF MARBLE FALLS WATER IMPACT FEE BY METER SIZE			
Impact Fee:	MAXIMUM Treatment Impact Fee	MAXIMUM Collection Impact Fee	MAXIMUM Water Impact Fee
Water Meter Size			
Maximum Fee per EDU	\$ 5,225	\$ 2,486	\$ 7,711
Maximum Fee by Water Meter Size			
5/8" -- 3/4"	\$ 5,225	\$ 2,486	\$ 7,711
1"	8,725	4,152	12,877
1 1/2"	17,398	8,278	25,676
2"	27,847	13,250	41,097
3"	87,094	41,441	128,535
4"	217,708	103,590	321,298
6"	348,322	165,739	514,061
8"	696,592	331,453	1,028,045
MF Units	2,612	1,243	3,855

Table IV-9 presents the estimated annual water impact fee revenue recovered from new/growth related service units over the 2024 – 2033 impact fee period.

Table IV-9

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE MODEL					
	Treatment		Distribution		Total
Impact Fees - Forecast Annual Revenues					
	Impact Fee:		Water		
Forecast Revenues					
2024	\$	1,954,119	\$	929,749	\$ 2,883,868
2025		2,085,045		992,042	3,077,087
2026		2,224,743		1,058,509	3,283,252
2027		2,373,800		1,129,429	3,503,230
2028		2,532,845		1,205,101	3,737,946
2029		2,702,546		1,285,843	3,988,388
2030		2,883,616		1,371,994	4,255,610
2031		3,076,818		1,463,918	4,540,736
2032		3,282,965		1,562,000	4,844,966
2033		3,502,924		1,666,654	5,169,578
Total Period		26,619,420		12,665,240	39,284,660

NOTE: The total **\$7,711** is the **maximum** water impact fee per LUE. The actual water impact fee City Council may adopt can range from \$0 per LUE up to but not exceeding the calculated maximum of \$7,711 per LUE. The approved impact fee could be anywhere in this range depending on Council’s desire to recover the majority growth related capital costs through impact fees weighted against its desire to remain competitive with neighbors and encourage local development.

Section V – Wastewater System Impact Fees

Introduction

Section I of this study presented a five-step summary of the calculation of an impact fee. This section of the report presents the wastewater maximum impact fee calculation using these five basic steps. Detailed spreadsheet schedules supporting the calculations are provided in **Appendix G**.

Historical and Forecast Demand – Living Unit Equivalents (LUE)

The engineering consultant, Miller Gray, has reviewed the City’s actual connection count as of February 2023 to estimate the current number of LUEs. The estimated number associated with the water system is **4,234 LUEs** with the typical LUE using 480 gal/day/LUE in peak dry weather conditions. A detailed calculation of water system LUEs can be found in **Appendix C**.

The project team determined that the City’s estimated growth in LUEs over the period 2023 through 2033 is **3,864 LUEs**. This is an average annual increase of approximately 6.7%. **Table V-1** presents the annual increase and total estimated LUEs.

Table V-1

CITY OF MARBLE FALLS FORECAST WASTEWATER LUEs			
	WASTEWATER CUSTOMER CLASS		
	Treatment	Collection	Other
Wastewater LUEs			
Total LUEs -- Current Year			
2023	4,234	4,234	-
Forecast Annual Total			
2024	4,518	4,518	-
2025	4,820	4,820	-
2026	5,143	5,143	-
2027	5,488	5,488	-
2028	5,856	5,856	-
2029	6,248	6,248	-
2030	6,667	6,667	-
2031	7,113	7,113	-
2032	7,590	7,590	-
2033	8,098	8,098	-
Forecast Annual New WW Accounts			
2024	284	284	-
2025	303	303	-
2026	323	323	-
2027	345	345	-
2028	368	368	-
2029	392	392	-
2030	419	419	-
2031	447	447	-
2032	477	477	-
2033	509	509	-

Wastewater System Capacity

The engineering consultant, Miller Gray, has determined the existing and forecast system capacity needs as part of the preparation of the wastewater system CIP. Using estimated average dry weather demand of 240 gallons/LUE/day from historical records, the Miller Gray determined the existing and forecast wastewater system capacity requirements. **Table V-2** presents the existing and forecast capacity needed to meet wastewater treatment customer demand through the impact fee period (2024 – 2033).

Table V-2

WASTEWATER TREATMENT/SUPPLY CURRENT & FORECAST CAPACITY		
YEAR	WW Capacity (gal/day)	WW Capacity (LUEs)
2023	1,500,000	6,250
2024	1,500,000	6,250
2025	3,000,000	12,500
2026	3,000,000	12,500
2027	3,000,000	12,500
2028	3,000,000	12,500
2029	3,000,000	12,500
2030	3,000,000	12,500
2031	3,000,000	12,500
2032	3,000,000	12,500
2033	3,000,000	12,500
Total Increase	1,500,000	6,250

Capital Improvement Plan (CIP)

Table V-3 is a summary of the CIP prepared for the City and used in the calculation of the wastewater maximum impact fee. This table presents the total CIP cost (adjusted for inflation), CIP related to growth, and CIP related to growth in the 10-year impact fee period 2024 – 2033.

Table V-3

CITY OF MARBLE FALLS CAPITAL IMPROVEMENT PLAN					
Asset	Total Cost*	Percent Growth Related	Total Growth-Related CIP	2024 - 2033 Growth-Related CIP	Total Replacement CIP
Wastewater System					
Treatment	\$ 61,815,865	66.0%	\$ 40,798,471	\$ 21,017,394	\$ 21,017,394
Collection	<u>20,783,751</u>	82.6%	<u>17,162,672</u>	<u>9,670,660</u>	<u>3,621,079</u>
Total Wastewater Capital Improve	82,599,616		57,961,142	30,688,054	24,638,473
			70.2%	37.2%	29.8%

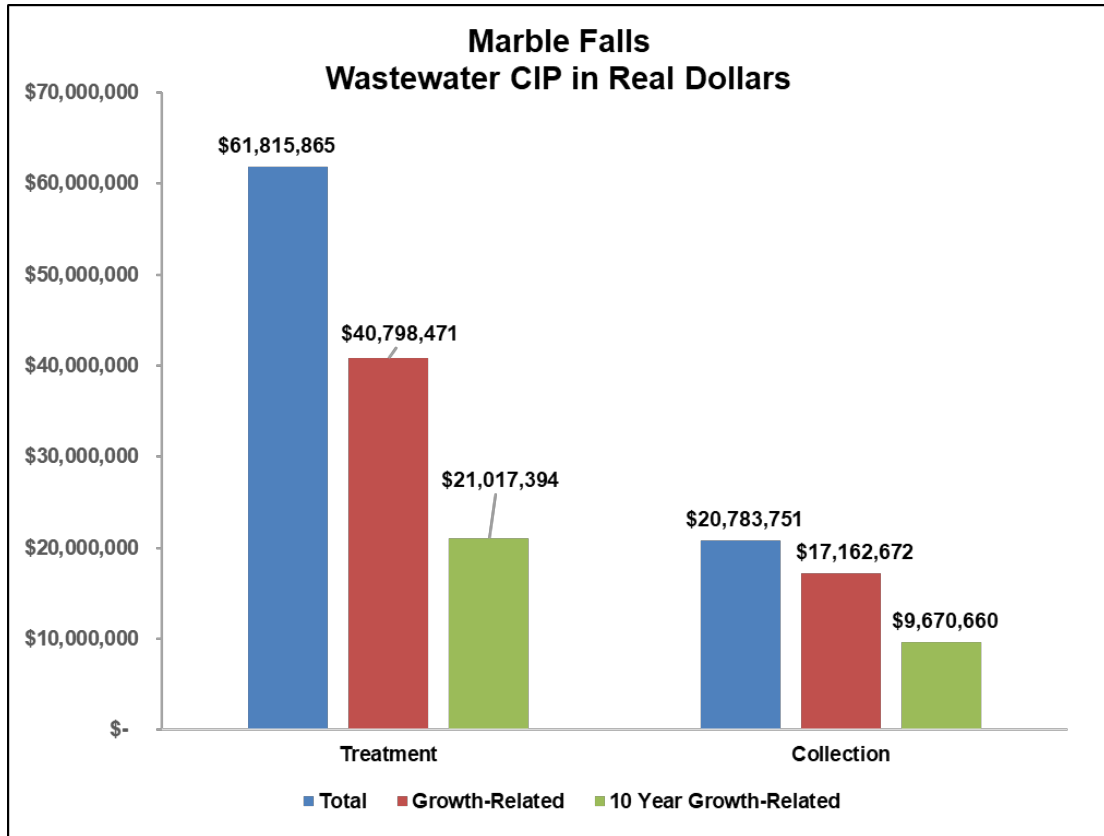
* Adjusted for inflation

The CIP developed by Miller Gray classified projects as either treatment or pumping/force-mains/collection. Each project line item in the CIP includes cost, date of completion, total number of LUEs the project is designed to serve and number of new LUEs each project is designed to serve. The total CIP cost estimate in nominal dollars is \$77,712,766 for the period 2024 – 2033. The “real” cost (adjusted for time value of money) is \$82,599,616 for the same period. Cost of projects related to growth LUEs in “real” dollars is \$57,961,142 (70.2% of total CIP cost).

The CIP projects designed to serve growth LUEs include growth in LUEs expected after 2033, i.e., after the end of the 10-year period designated for impact fee calculation by Chapter 395. Adjusting the CIP to reflect only CIP project costs related to new LUEs added between 2024 and 2033 reduces the real dollar value of the CIP to \$30,688,054.

Chart V-4 presents a bar chart that presents the total CIP costs for treatment and collection, CIP costs related to growth, and CIP costs related to growth added between 2024 and 2033. The CIP project list can be found in **Appendix D** and a map of the CIP projects can be found in **Appendix E**.

Chart V-4



Current and Future Wastewater System Debt Payments

Table V-5 presents the annual summary of principal and interest payments forecast for the impact fee period. These annual payments are discounted to reflect the payment values in today's dollars. The debt is for a 20-year period at an interest rate of 4.0%.

Table V-5

CITY OF MARBLE FALLS Wastewater System Debt Payments FY2024 - FY2034			
YEAR	Principal Payment	Interest Payment	Total Payment
2024	\$ -	\$ -	\$ -
2025	1,031,631	1,228,800	2,260,431
2026	2,104,528	2,416,335	4,520,863
2027	2,188,709	2,332,154	4,520,863
2028	2,276,257	2,244,605	4,520,863
2029	2,367,308	2,153,555	4,520,863
2030	2,462,000	2,058,863	4,520,863
2031	2,560,480	1,960,383	4,520,863
2032	2,662,899	1,857,963	4,520,863
2033	2,769,415	1,751,447	4,520,863
2034	2,880,192	1,640,671	4,520,863
Treatment		18,311,870	40,030,212
Distribution		1,332,906	2,917,984
TOTAL	\$ 23,303,420	\$ 19,644,776	\$ 42,948,196
NPV Treatment		13,864,422	29,849,572
NPV Distribution		1,009,180	2,175,871
NPV	\$ 17,151,841	\$ 14,873,602	\$ 32,025,443

The net present value (NPV) of the interest payments is added to the 10-year growth related CIP cost in the calculation of the wastewater maximum impact fee.

Debt Service Credit

Chapter 395 requirements include a credit for debt service that will be paid by new growth through wastewater rates. This is to eliminate double charging debt payments by new customers: once in the impact fee; then again as part of their monthly wastewater bills. Under Chapter 395, the City has two options in determining this credit:

1. Use a 50% credit of the total project cost of capital for all projects; or
2. Calculate the credit for utility service revenues generated by new service units during the program period that is used for payment of improvements through wastewater rate payments.

The City has opted to calculate the credit paid by new service units in wastewater rates. **Table V-6** presents a summary of the credit calculation.

Table V-6

CITY OF MARBLE FALLS TOTAL DEBT CREDIT		
	Treatment	Collection
Planning Period Debt Service		
Total Principal and Interest	\$ 29,849,572	\$ 2,175,871
<u>Growth Related</u>		
Percent	100.0%	100.0%
Total	29,849,572	2,175,871
Credit Per Current LUE Per Month		
Current LUEs	4,234	4,234
Planning Period LUE	<u>19,201</u>	<u>19,201</u>
Monthly Bills from Current LUEs during Planning Period	738,489	738,489
Planning Period Credit per Current LUE Per Month	\$ 40.42	\$ 2.95
Cumulative Credit		
Cumulative New LUEs	230,409	230,409
Credit per Current LUE Per Month	\$ 40.42	\$ 2.95
Cumulative Credit	\$ 9,313,091	\$ 678,874



Maximum Wastewater Impact Fee Calculation

Table V-7 presents the calculation of the City’s maximum wastewater impact fee per LUE using each of the components previously described in this report.

Table V-7

CITY OF MARBLE FALLS			
Maximum Wastewater Impact Fee Calculations			
	Treatment	Collection	Total
I. Current and Forecast Demand (LUEs)			
Beginning Demand			4,234
New Growth 2024 - 2033			<u>3,864</u>
Total Demand 2033			8,098
II. Fee per LUE			
CIP Value of 2024 - 2033 Growth-Related Improvements	\$ 21,017,394	\$ 9,670,660	\$ 30,688,054
Impact Fee Study Preparation Expenses	15,000	\$ 15,000	30,000
Interest Expense Allocated to Planning Period	<u>\$ 13,864,422</u>	<u>\$ 1,009,180</u>	<u>\$ 30,718,054</u>
Sub-Total	\$ 34,896,816	\$ 10,694,840	45,591,656
Less CIP Credit	\$ 9,313,091	\$ 678,874	\$ 9,991,965
New Value of CIP to be Paid from Impact Fees	\$ 25,583,725	\$ 10,015,966	\$ 35,599,691
Total Forecast Expansions 2020 - 2029	3,864	3,864	\$ 3,864
Growth Related Collection Impact Fee Per LUE	\$ 6,620	\$ 2,592	\$ 9,212

Table V-8 presents a summary of the maximum impact fee per equivalent water meter size with a simplified version shown in **Appendix H**.

Table V-8

CITY OF MARBLE FALLS WASTEWATER IMPACT FEE BY METER SIZE			
Impact Fee:	MAXIMUM Treatment Impact Fee	MAXIMUM Collection Impact Fee	MAXIMUM Wastewater Impact Fee
Water Meter Size			
Maximum Fee per EDU	\$ 6,620	\$ 2,592	\$ 9,212
Maximum Fee by Water Meter Size			
5/8" -- 3/4"	\$ 6,620	\$ 2,592	\$ 9,212
1"	11,056	4,328	15,384
1 1/2"	22,046	8,631	30,677
2"	35,287	13,815	49,102
3"	110,364	43,207	153,571
4"	275,876	108,005	383,881
6"	441,388	172,802	614,190
8"	882,711	345,579	1,228,290
MF	3,310	1,296	4,606

Table V-9 is the estimated annual wastewater impact fee revenue recovered from new/growth related service units over the 2024 – 2033 impact fee period.

Table V-9

CITY OF MARBLE FALLS					
WASTEWATER SYSTEM IMPACT FEE MODEL					
	Treatment		Collection		Total
Impact Fees - Forecast Annual Revenues					
	Impact Fee:		Wastewater		
Forecast Revenues					
2024	\$	1,877,948	\$	735,293	\$ 2,613,242
2025		2,003,771		784,558	2,788,329
2026		2,138,024		837,123	2,975,147
2027		2,281,271		893,211	3,174,482
2028		2,434,116		953,056	3,387,172
2029		2,597,202		1,016,911	3,614,113
2030		2,771,215		1,085,044	3,856,258
2031		2,956,886		1,157,741	4,114,627
2032		3,154,997		1,235,310	4,390,308
2033		<u>3,366,382</u>		<u>1,318,076</u>	<u>4,684,458</u>
Total Period		25,581,813		10,016,323	35,598,135

As previously stated, the total \$9,212 is the **maximum** wastewater impact fee per LUE. The actual wastewater impact fee City Council may adopt ran range from \$0 per LUE up to but not exceeding the calculated maximum of \$9,212 per LUE. The approved impact fee could be anywhere in this range depending on Council’s desire to recover the majority growth related capital costs through impact fees weighted against its desire to be competitive with neighbors and encourage local development.

Notes on Impact Fee Recommendations

The project team has relied upon the extensive data supplied by the City of Marble Falls. Thus, the integrity of the study is largely dependent upon the accuracy of this financial, engineering and customer data. Every effort has been made by the project team to validate and confirm the information contained herein prior to the preparation of the final study documents. **This report presents no assurance or guarantee that the forecast contained herein will be consistent with actual results or performances.** These represent forecasts based on a series of assumptions about future behavior and are not guarantees. Any changes in assumptions or actual events may result in significant revisions to the forecast and its conclusions.

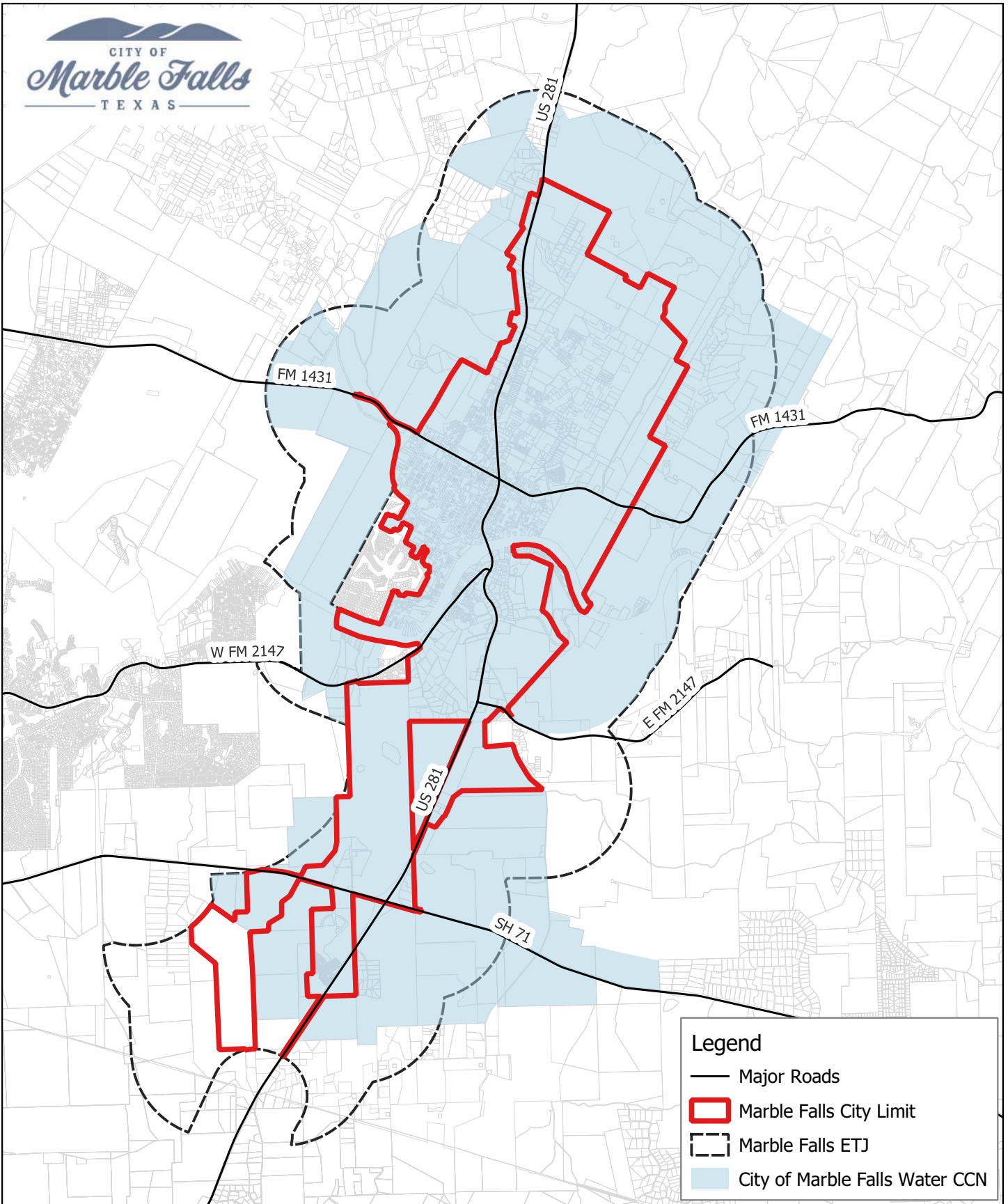
The forecast and recommendations presented in this study represent a combination of the best information available from the City of Marble Falls, its Engineers and the project team's expertise. However, this forecast relies in part on assumptions about future events and events beyond the control of the project team (such as account growth rates within the City). The forecast and recommendations contained in this study may be subject to revision if any of the following events occurs:

- Actual growth in accounts and consumed volumes is less than (or significantly greater than) forecast.
- Capital improvement plan funding costs increase significantly due to the rising cost of materials or other factors.
- An unforeseen event impacts the City, such as an extended recession, natural catastrophe or terrorist attack.
- Increases or decreases in interest rates or reserve requirements for long-term debt.
- The City of Marble Falls priorities change significantly from those forecast in this study.

It should be noted that none of these events are foreseen by the project team or the City of Marble Falls at this time.

If any of these events occur, the City may be compelled to consider further adjustments to its water and wastewater impact fees.

APPENDIX A



Legend

- Major Roads
- Marble Falls City Limit
- Marble Falls ETJ
- City of Marble Falls Water CCN

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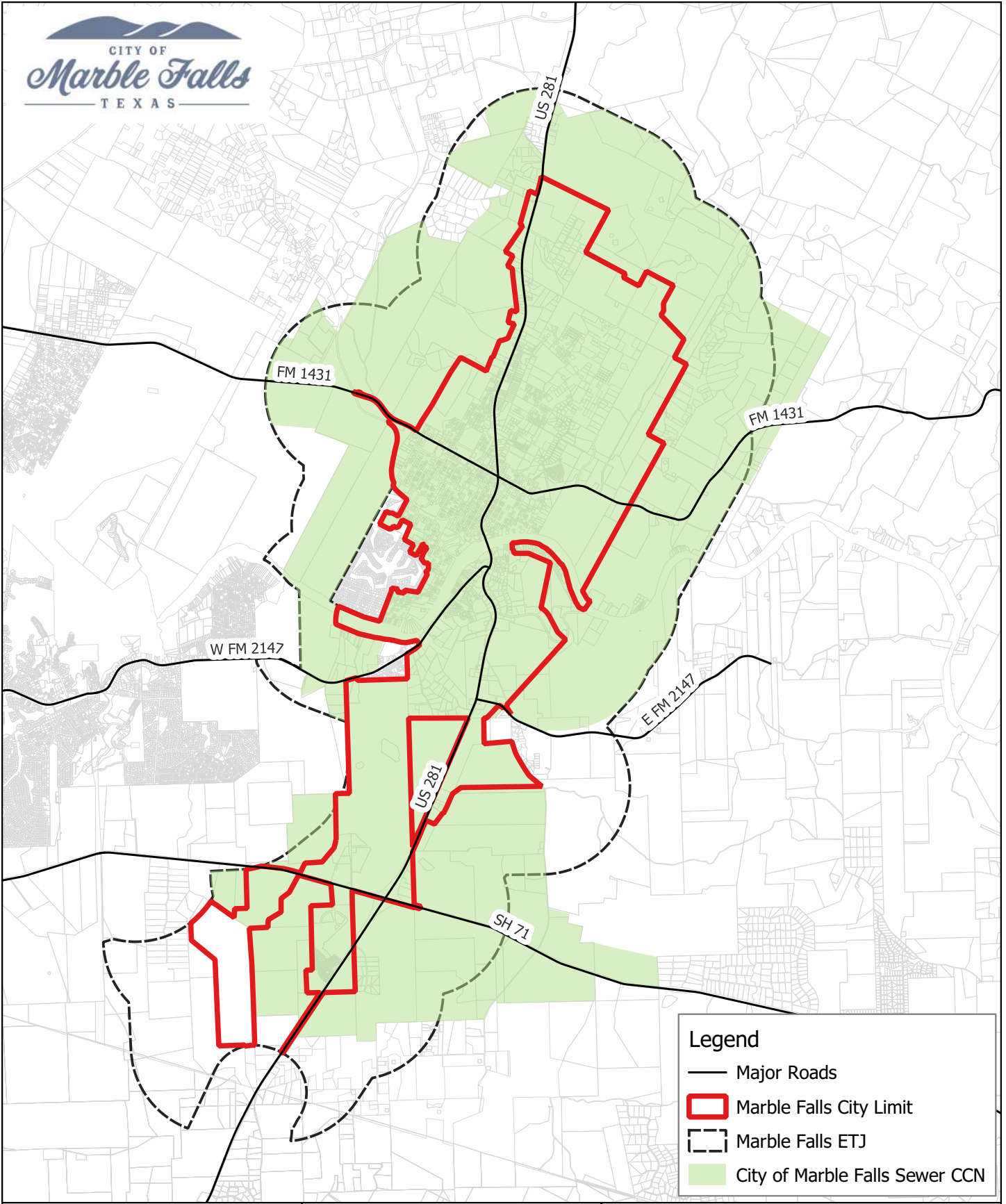
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**2022 WATER & WASTEWATER
IMPACT FEE UPDATE
WATER SERVICE AREA MAP**

FIGURE 1.0
CITY OF MARBLE FALLS



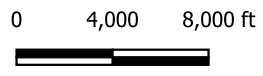
Legend

- Major Roads
- ▭ Marble Falls City Limit
- - - Marble Falls ETJ
- City of Marble Falls Sewer CCN

P:\01109 City of Marble Falls\010 Impact Fee Study\07_GIS\MapaMarble Falls - Service Area Map.gxd

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**2022 WATER & WASTEWATER
IMPACT FEE UPDATE**

WASTEWATER SERVICE AREA MAP

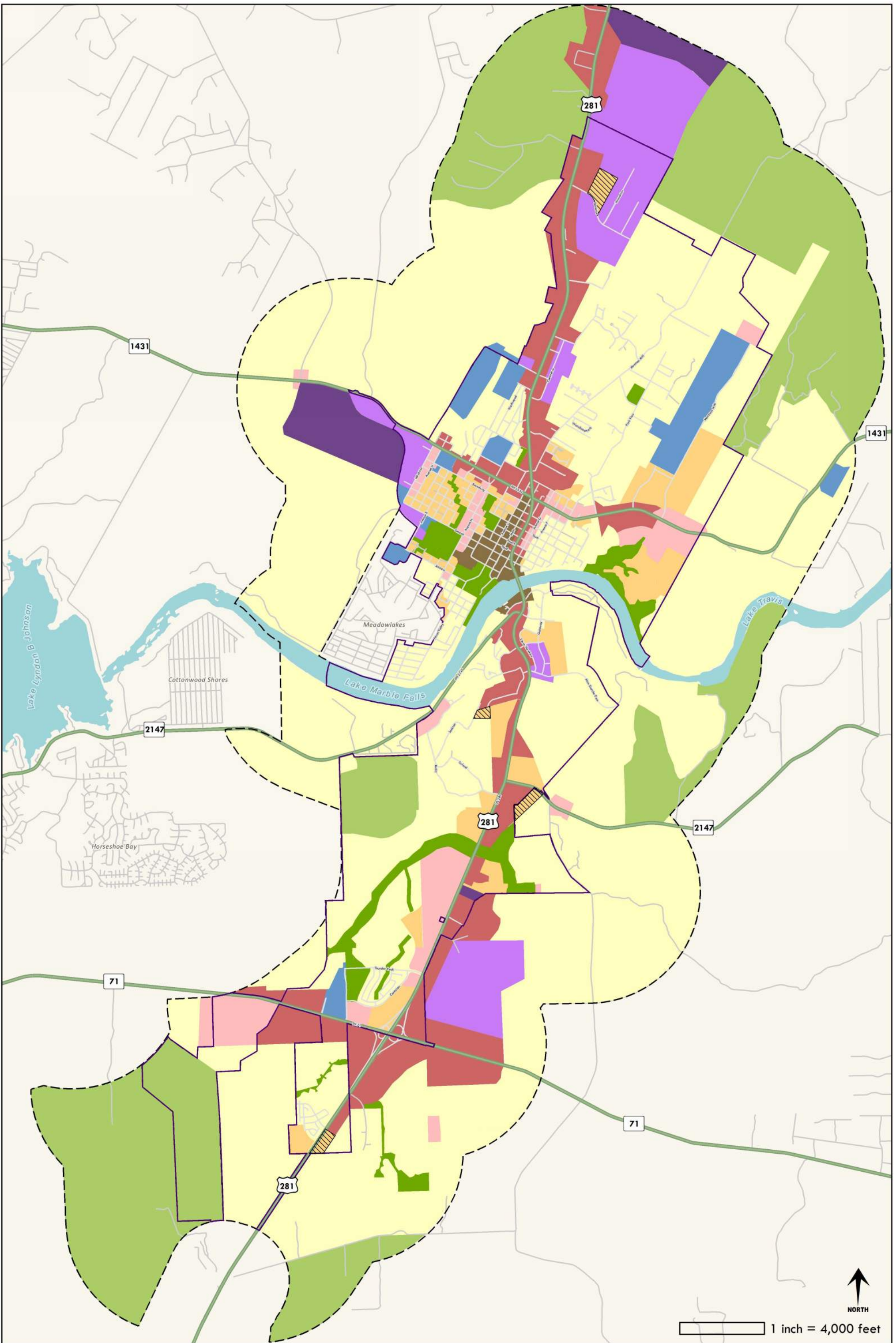
FIGURE 1.0

CITY OF MARBLE FALLS

SEPTEMBER 2022

PROJECT NUMBER: 01109-010

APPENDIX B



This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of boundary properties.

Adopted: July 2016
Updated: September 2022



Land Use Assumptions

Impact Fee Update

- Parks & Open Space
- Transitional Residential
- Business Park
- Public & Institutional
- Ranch Rural & Estate
- Neighborhood Commercial
- Industrial
- Multi Family
- Neighborhood Residential
- Corridor Commercial
- Downtown

APPENDIX C

Project: Impact Fee Study
Job No.: 01109-010
Date: 9/1/2023
By: SCS/MG
Title: LUE Calculations

WATER LUE CALCULATION			
Meter Size	Multiplier	No. of Meters/Units	LUE Equivalent
3/4" Meter	1.00	2,795	2,795
1" Meter	1.67	404	675
1-1/2" Meter	3.33	30	100
2" Meter	5.33	132	704
3" Meter	16.67	9	150
4" Meter	41.67	7	292
6" Meter	66.67	3	200
8" Meter	133.33	0	0
Multifamily Units	0.5	1,335	668
TOTAL		4,715	5,582
WASTEWATER LUE CALCULATION			
Meter Size	Multiplier	No. of Meters/Units	LUE Equivalent
3/4" Meter	1.00	2,250	2,250
1" Meter	1.67	204	341
1-1/2" Meter	3.33	15	50
2" Meter	5.33	80	426
3" Meter	16.67	8	133
4" Meter	41.67	5	208
6" Meter	66.67	3	200
8" Meter	133.33	0	0
Multifamily Units	0.5	1,251	626
TOTAL		3,816	4,234

Notes:

1. LUE is Living Unit Equivalent.
2. Multiplier is derived from AWWA C715 standards for continuous rated flow scaled to a 3/4" meter.
3. Multifamily units are calculated at 0.5 LUEs per unit.

APPENDIX D

Table 1 - Water System Impact Fee Eligible Projects

Proposed Projects									
Project Date (Fiscal Years)	Project ID	Fiscal Year Completion	Project Name	Project Description	2023 Utilization ¹	2033 Utilization	Eligible Utilization (2023-2033)	Engineer's OPCC	Impact Fee Eligible Cost
2022 to 2023	WP1	2023	Planning - Impact Fee Study	Preparation of update to impact fee	52%	100%	48%	\$32,779	\$15,734
2023	WP2	2023	Planning - Wastewater Master Plan	Preparation of update to Wastewater Master Plan	52%	100%	48%	\$74,596	\$35,806
2023 to 2024	WP3	2024	Raw Water Supply - Pump Station Pump & Well Improvements	Upgrade firm capacity from 3,600 gpm to 4,800 gpm, add new well, valves, piping, & controls	56%	69%	13%	\$2,497,000	\$324,610
2023 to 2024	WP4	2024	Booster Pump Station - Via Viejo Pump Station Improvements	Upgrade firm capacity from 1,000 gpm to 3,000 gpm, add valves, piping, & controls	28%	60%	32%	\$2,475,000	\$792,000
2023 to 2024	WP5	2024	Transmission - Nature Heights Transmission Main Extension	Extend 16" transmission main from Mormon Mill to US 281	0%	53%	53%	\$1,455,000	\$771,150
2024 to 2025	WP6	2025	Water Treatment Plant - Pump & Valve Improvements	Add 6th Pump (1,000 gpm), replace one pump (1,000 gpm), add valves and controls.	54%	67%	13%	\$625,000	\$81,250
2024 to 2025	WP7	2025	Storage - Gateway Elevated Storage Tank	Add 0.75 MG elevated storage tank for additional demand.	17%	31%	14%	\$4,250,000	\$595,000
2025 to 2026	WP8	2025	Water Supply - South Groundwater System Phase 1	Add groundwater wells, storage tanks, pressure tanks, pumps, piping, & dosing for new demand.	0%	85%	85%	\$9,500,000	\$8,075,000
2025 to 2026	WP9	2026	Storage - North Mustang Elevated Storage Tank	Add 0.75 MG elevated storage tank for additional demand	0%	60%	60%	\$5,200,000	\$3,120,000
2026 to 2027	WP10	2027	Transmission - Rocky Road WL Extension	Add 5,000 lf of 12" water main to serve new areas.	5%	89%	84%	\$1,750,000	\$1,470,000
2027 to 2028	WP11	2028	Transmission - South 281 WL Extension	Add 10,500 of 12" water main to serve highway cooridor.	0%	44%	44%	\$3,675,000	\$1,617,000
2028 to 2029	WP12	2029	Storage - Business Park Standpipe	Add 0.25 MG standpipe for additional demand	5%	89%	84%	\$1,750,000	\$1,470,000
2023 to 2029	WP13	2029	Treatment - DPR Plant	Add 0.6 MG direct potable reuse water treatment plant.	0%	85%	85%	\$11,845,000	\$10,068,250
2030 to 2031	WP14	2031	Booster Pump Station - Flatrock Pump Station Improvements	Add 2,250 gpm pump & controls for additional capacity	10%	43%	33%	\$325,000	\$107,250
2031 to 2032	WP15	2032	Water Supply - South Groundwater System Phase 2	Add groundwater wells, storage tanks, pressure tanks, pumps, piping, & dosing for new demand.	0%	85%	85%	\$3,500,000	\$2,975,000
2032 to 2033	WP16	2033	Transmission - Ollie Ln WL Extensions	Add 3,700' of 12" water main to serve new customers near Ollie Ln	3%	47%	44%	\$1,295,000	\$569,800

\$32,087,850

Notes: 1. 2023 Utilization for future or upgraded facilities is the capacity that current customers will use in the new/upgraded facility.

Table 2 - Wastewater System Impact Fee Eligible Projects

Proposed Projects									
Project Date (Fiscal Years)	Project ID	Fiscal Year Completion	Project Name	Project Description	2023 Utilization ¹	2033 Utilization	Eligible Utilization (2023-2033)	Engineer's OPCC	Impact Fee Eligible Cost
2022 to 2023	SP1	2023	Planning - Impact Fee Study	Preparation of update to impact fee	52%	100%	48%	\$32,779	\$15,734
2023	SP2	2023	Planning - Wastewater Master Plan	Preparation of update to Wastewater Master Plan	52%	100%	48%	\$74,596	\$35,806
2023 to 2024	SP3	2024	Pumping - Flatrock Lift Station Upgrade	Upgrade from 100 gpm to 1,500 gpm pumps for add. capacity	7%	75%	68%	\$250,000	\$170,000
2023 to 2024	SP4	2024	Pumping - Mustang Vistas Lift Station & Force Main	Upgrade lift station from 150 gpm to 1,000 gpm and relocate force main	10%	70%	60%	\$2,125,000	\$1,275,000
2024 to 2025	SP5	2025	Collections - NE Interceptor Upsizing	Upgrade 3,400' of 10" gravity main w/ 15" interceptor between Ave. H and Mustang Dr.	39%	65%	26%	\$1,932,700	\$502,502
2022 to 2025	SP6	2025	Treatment - New WWTP	Add new 3.0 MGD WWTP to replace old plant	34%	68%	34%	\$60,435,091	\$20,547,931
2025 to 2026	SP7	2026	Collections - North Lakeshore Interceptor Upsizing	Upgrade 4,425' of 10" gravity main w/15" interceptor between Ave. G and East Ave.	20%	50%	30%	\$1,768,000	\$530,400
2026 to 2027	SP8	2027	Collections - Ridge Point Interceptor Upsizing	Upgrade 995' of 6" gravity main w/ 12" interceptor between Commerce St. & Ridge Point Dr.	19%	75%	56%	\$459,600	\$257,376
2027 to 2028	SP9	2028	Pumping - Mormon Mill Lift Station Upgrade	Upgrade from 500 gpm to 1,000 gpm pumps for add. capacity	5%	75%	70%	\$2,400,000	\$1,680,000
2028 to 2029	SP10	2029	Pumping - Boulder Creek Lift Station Upgrade	Upgrade from 100 gpm to 750 gpm pumps for add. capacity	13%	75%	62%	\$120,000	\$74,400
2029 to 2030	SP11	2030	Collections - Whitman Branch Interceptor Upsizing	Upgrade 12,700' of 8"/10" gravity main w/ 15" interceptor between RM 1431 and Ollie Lane.	23%	60%	37%	\$5,715,000	\$2,114,550
2030 to 2031	SP12	2031	Pumping - New East FM 2147 Lift Station & Force Main	Add gravity main & regional lift station to serve NE quadrant of 281 & E 1431	0%	75%	75%	\$1,100,000	\$825,000
2031 to 2032	SP13	2032	Pumping - Replace Panther Hollow Area Lift Station & Force Main	Add gravity main & replace regional lift station to serve Panther Hollow Area	7%	50%	43%	\$1,300,000	\$559,000

\$28,587,699

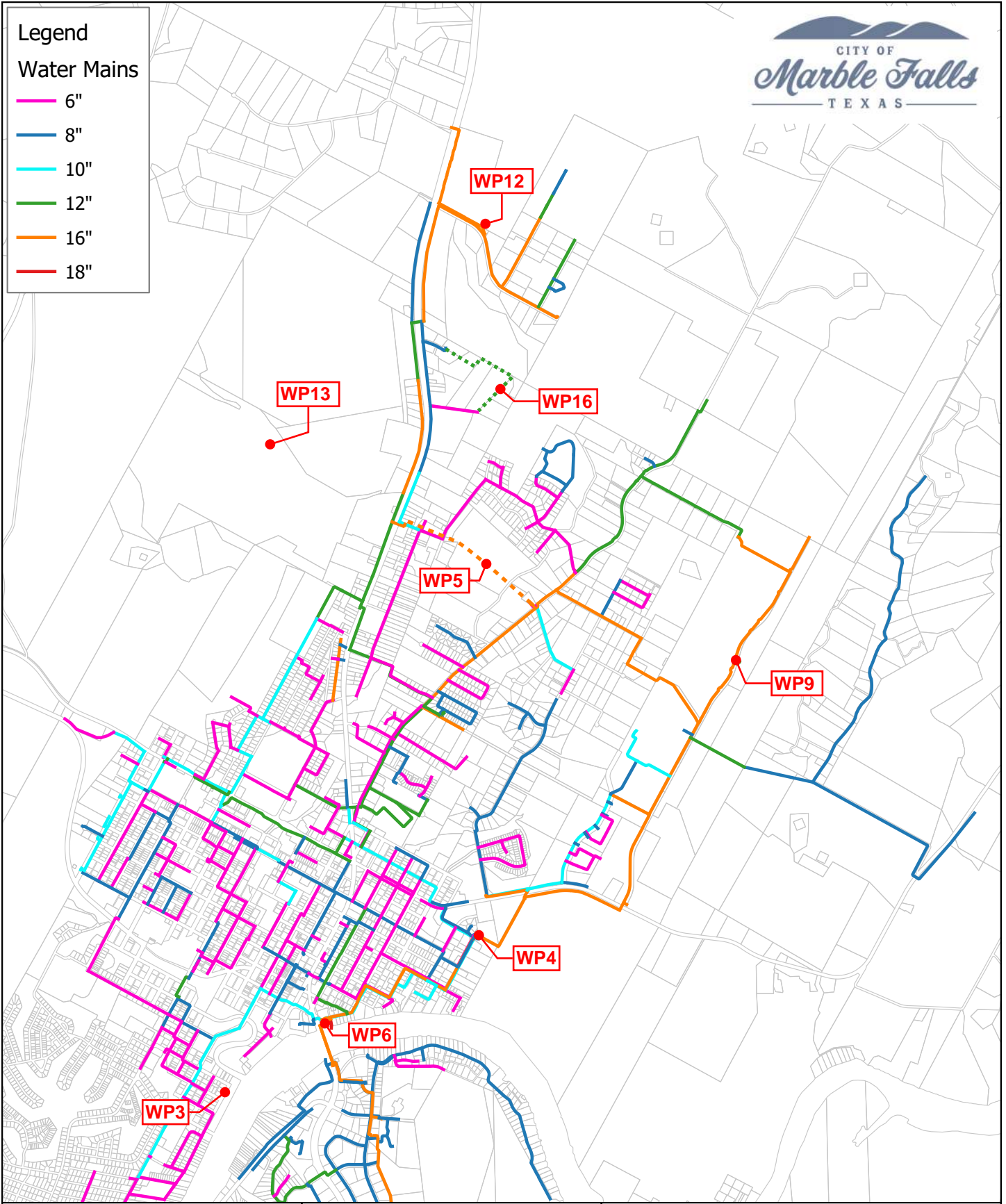
Notes: 1. 2023 Utilization for future or upgraded facilities is the capacity that current customers will use in the new/upgraded facility.

APPENDIX E

Legend

Water Mains

- 6"
- 8"
- 10"
- 12"
- 16"
- 18"



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0 1,500 3,000



**2023 WATER & WASTEWATER
IMPACT FEE UPDATE
NORTH AREA WATER MAINS**

FIGURE 1.0
CITY OF MARBLE FALLS

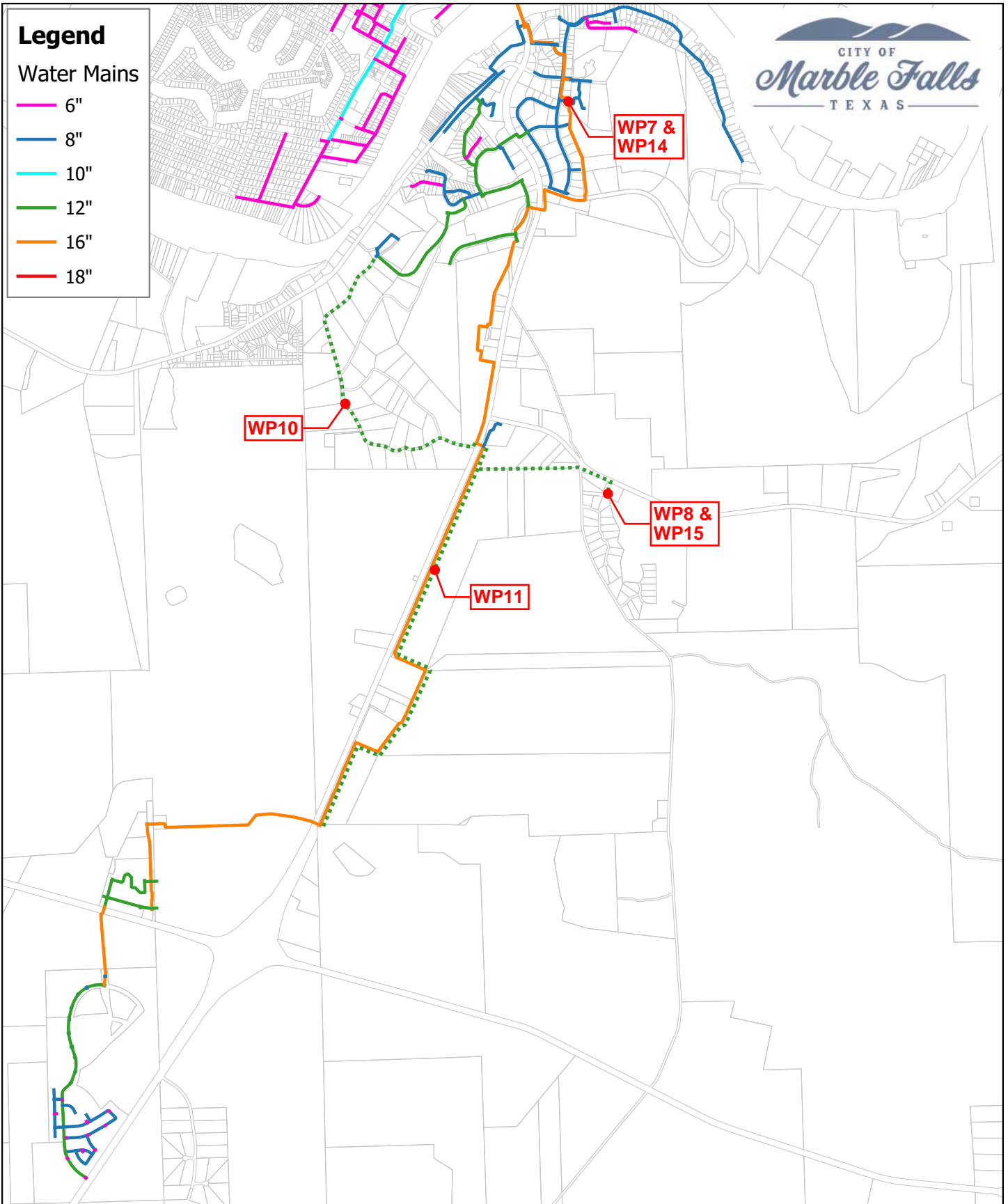
JULY 2023

PROJECT NUMBER: 01109-010

Legend

Water Mains

- 6"
- 8"
- 10"
- 12"
- 16"
- 18"



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**2023 WATER & WASTEWATER
IMPACT FEE UPDATE**
SOUTH AREA WATER MAINS

FIGURE 2.0
CITY OF MARBLE FALLS

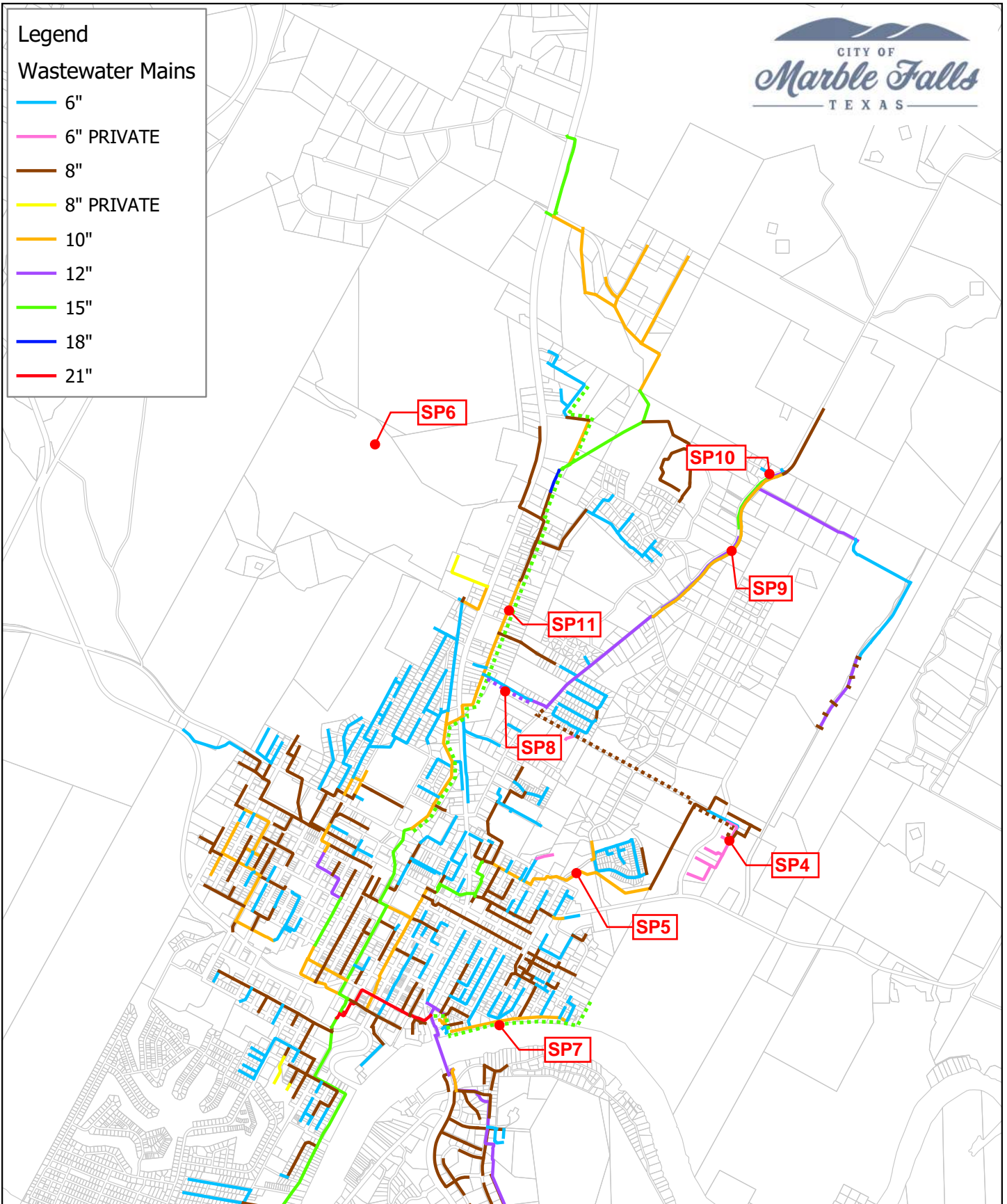
JULY 2023

PROJECT NUMBER: 01109-010

Legend

Wastewater Mains

- 6"
- 6" PRIVATE
- 8"
- 8" PRIVATE
- 10"
- 12"
- 15"
- 18"
- 21"



P:\01109 City of Marble Falls\000_General\Water Model\GIS\MP\MBASE-WW-Sys-Mp-aggz

MillerGRAY
Consulting. Engineering. Infrastructure.

7320 N. MoPac Expressway, Suite 203
Austin, Texas 78731
Phone (512) 861-5300
www.miller-gray.com
TBPE FIRM REG. NO. F-16302

0 1,500 3,000



**2023 WATER & WASTEWATER
IMPACT FEE UPDATE**

NORTH AREA WASTEWATER MAINS

FIGURE 1.0

CITY OF MARBLE FALLS

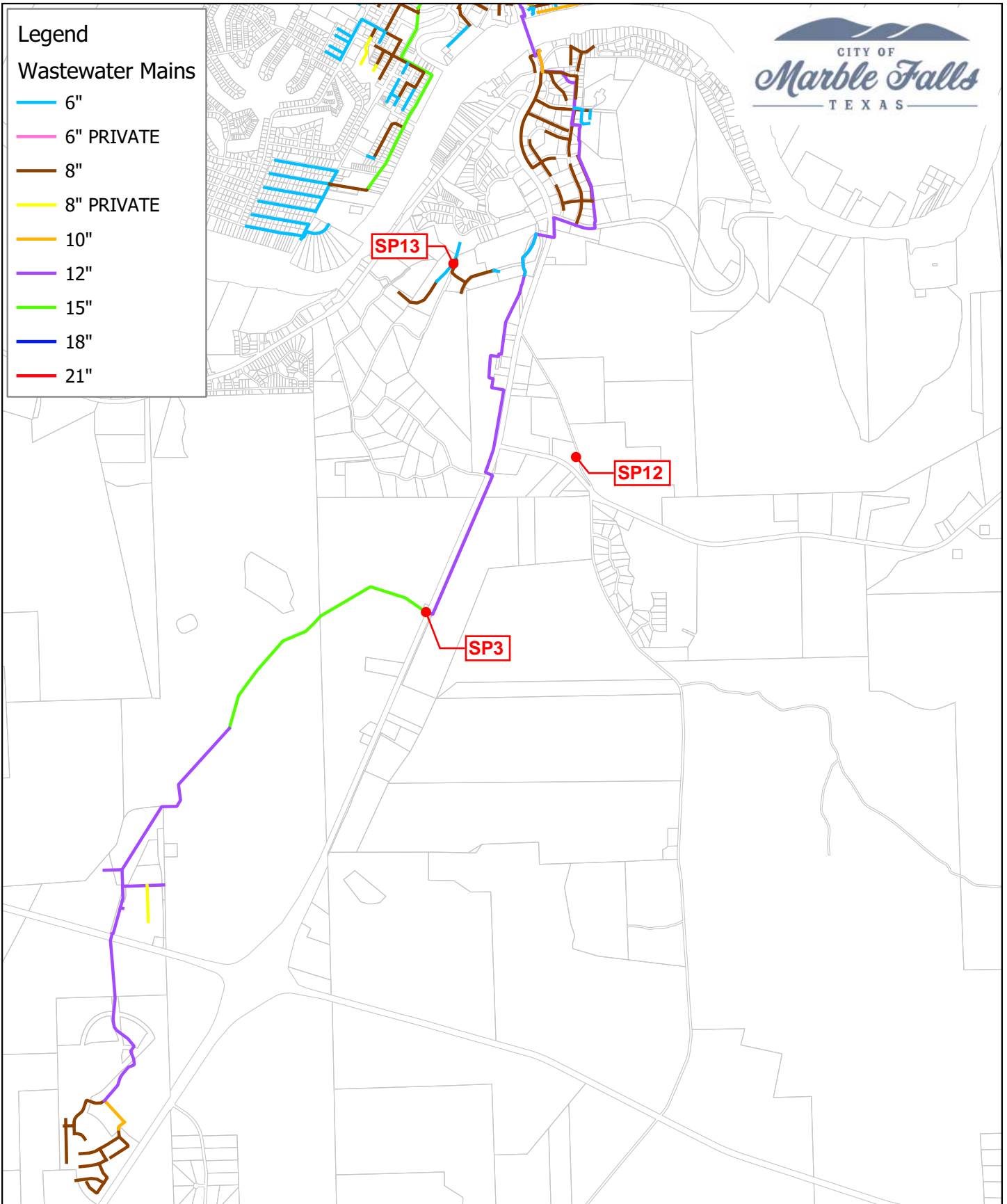
JULY 2023

PROJECT NUMBER: 01109-010

Legend

Wastewater Mains

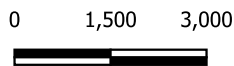
- 6"
- 6" PRIVATE
- 8"
- 8" PRIVATE
- 10"
- 12"
- 15"
- 18"
- 21"



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**2022 WATER & WASTEWATER
IMPACT FEE UPDATE**
SOUTH AREA WASTEWATER MAINS

FIGURE 2.0
CITY OF MARBLE FALLS

NOVEMBER 2022

PROJECT NUMBER: 01109-010

APPENDIX F

CITY OF MARBLE FALLS WATER IMPACT FEE BY METER SIZE			
Impact Fee:			
Water Meter Size	MAXIMUM Treatment Impact Fee	MAXIMUM Collection Impact Fee	MAXIMUM Water Impact Fee
Maximum Fee per EDU	\$ 5,225	\$ 2,486	\$ 7,711
Maximum Fee by Water Meter Size			
5/8" – 3/4"	\$ 5,225	\$ 2,486	\$ 7,711
1"	8,725	4,152	12,877
1 1/2"	17,398	8,278	25,676
2"	27,847	13,250	41,097
3"	87,094	41,441	128,535
4"	217,708	103,590	321,298
6"	348,322	165,739	514,061
8"	696,592	331,453	1,028,045
MF Units	2,612	1,243	3,855

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE MODEL					
	Treatment		Distribution		Total
Impact Fees - Forecast Annual Revenues					
	Impact Fee:		Water		
Forecast Revenues					
2024	\$	1,954,119	\$	929,749	\$ 2,883,868
2025		2,085,045		992,042	3,077,087
2026		2,224,743		1,058,509	3,283,252
2027		2,373,800		1,129,429	3,503,230
2028		2,532,845		1,205,101	3,737,946
2029		2,702,546		1,285,843	3,988,388
2030		2,883,616		1,371,994	4,255,610
2031		3,076,818		1,463,918	4,540,736
2032		3,282,965		1,562,000	4,844,966
2033		3,502,924		1,666,654	5,169,578
Total Period		26,619,420		12,665,240	39,284,660

Forecast 2024 - 2033		Treatment/ Dist/Admin/ Customer	Depreciable Lifespan (Years)	Percent Grant Funded	CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE MODEL			Total CIP	Total Growth	2024 - 2033		
					Percent Growth	Percent Growth	Percent Replacement			Total Growth	Total Replacement	
Input Area -- Capital Improvement Plan -- Water												
Input Area - Growth vs. Replacement												
Utility:		CITY OF MARBLE FALLS										
Test Year		2024										
Forecast Period		2024 - 2033										
Impact Fee		Water										
Inflator		4.57%										
Treatment		Funding Source										
A	1 Raw Water Supply - Pump Station Pump & Well Impr	Debt	Treat	50	0.0%	44.0%	13.0%	56.0%	\$ 2,497,000	\$ 1,098,680	\$ 324,610	\$ 1,398,320
B	2 Water Treatment Plant - Pump & Valve Improvement	Debt	Treat	50	0.0%	46.0%	13.0%	54.0%	625,000	287,500	81,250	337,500
C	3 Water Supply - South Groundwater Sys. Phase 1	Debt	Treat	50	0.0%	100.0%	85.0%	0.0%	9,500,000	9,500,000	8,075,000	-
D	4 Water Supply - South Groundwater Sys. Phase 2	Debt	Treat	50	0.0%	100.0%	85.0%	0.0%	3,500,000	3,500,000	2,975,000	-
E	5 Treatment - DPR Plant	Debt	Treat	50	0.0%	100.0%	85.0%	0.0%	11,845,000	11,845,000	10,068,250	-
	6 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	7 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	8 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	9 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	10 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	Subtotal								27,967,000	26,231,180	21,524,110	1,735,820
	Inflation Adjusted Subtotal								32,898,668	30,856,756	25,319,646	2,041,912
Distribution												
F	1 Booster Pump Station - Via Viejo Pump Station Impro	Debt	Coll	50	0.0%	72.0%	32.0%	28.0%	2,475,000	1,782,000	792,000	693,000
G	2 Transmission - Nature Heights Transmission Main Ex	Debt	Coll	50	0.0%	100.0%	53.0%	0.0%	1,455,000	1,455,000	771,150	-
H	3 Storage - Gateway Elevated Storage Tank	Debt	Coll	50	0.0%	83.0%	14.0%	17.0%	4,250,000	3,527,500	595,000	722,500
I	4 Storage - North Mustang Elevated Storage Tank	Debt	Coll	50	0.0%	100.0%	60.0%	0.0%	5,200,000	5,200,000	3,120,000	-
J	5 Transmission - Rocky Road WL Extension	Debt	Coll	50	0.0%	95.0%	84.0%	5.0%	1,750,000	1,662,500	1,470,000	87,500
K	6 Transmission - South 281 WL Extension	Debt	Coll	20	0.0%	100.0%	44.0%	0.0%	3,675,000	3,675,000	1,617,000	-
L	7 Storage - Business Park Standpipe	Debt	Coll	20	0.0%	95.0%	84.0%	5.0%	1,750,000	1,662,500	1,470,000	87,500
M	8 Booster Pump Station - Flatrock Pump Station Improv	Debt	Coll	20	0.0%	90.0%	33.0%	10.0%	325,000	292,500	107,250	32,500
N	9 Transmission - Ollie Ln WL Extensions	Debt	Coll	20	0.0%	97.0%	44.0%	3.0%	1,295,000	1,256,150	569,800	38,850
O	10 Planning - Wastewater Master Plan	Debt	Coll	20	0.0%	48.0%	48.0%	52.0%	74,596	35,806	35,806	38,790
P	11 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	12 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	13 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	14 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	15 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	16 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
R	17 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	18 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	Subtotal								22,249,596	20,548,956	10,548,006	1,700,640
	Inflation Adjusted Subtotal								25,098,519	23,180,122	11,898,613	1,918,396
TOTAL WATER CIP (Inflation Adjusted)								57,997,186	54,036,878	37,218,259	3,960,309	
Allocation to:												
Treatment								56.7%	32,898,668	30,856,756	25,319,646	2,041,912
Distribution								43.3%	25,098,519	23,180,122	11,898,613	1,918,396
Administration								0.0%	-	-	-	-
Customer								0.0%	-	-	-	-
Total								100.0%	57,997,186	54,036,878	37,218,259	3,960,309
Annual %												
Treatment												
Distribution												
Administration												
Customer												
Total												

Forecast 2024 - 2033	CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE MODEL									
	0 2024	1 2025	2 2026	3 2027	4 2028	5 2029	6 2030	7 2031	8 2032	9 2033

Input Area -- Capital Improvement Plan -- Water

Input Area - Annual Capital Expenditures

Utility:		CITY OF MARBLE FALLS											
Test Year		2024											
Forecast Period		2024 - 2033											
Impact Fee		Water											
Inflator		4.57%											
Treatment		Funding Source											
A	1 Raw Water Supply - Pump Station Pump & Well Impr	Debt	\$ 2,497,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
B	2 Water Treatment Plant - Pump & Valve Improvement	Debt	-	625,000	-	-	-	-	-	-	-	-	-
C	3 Water Supply - South Groundwater Sys. Phase 1	Debt	-	9,500,000	-	-	-	-	-	-	-	-	-
D	4 Water Supply - South Groundwater Sys. Phase 2	Debt	-	-	-	-	-	-	-	-	3,500,000	-	-
E	5 Treatment - DPR Plant	Debt	-	-	-	-	-	11,845,000	-	-	-	-	-
	6 Project		-	-	-	-	-	-	-	-	-	-	-
	7 Project		-	-	-	-	-	-	-	-	-	-	-
	8 Project		-	-	-	-	-	-	-	-	-	-	-
	9 Project		-	-	-	-	-	-	-	-	-	-	-
	10 Project		-	-	-	-	-	-	-	-	-	-	-
	Subtotal		2,497,000	10,125,000	-	-	-	11,845,000	-	-	3,500,000	-	-
	Inflation Adjusted Subtotal		2,497,000	10,587,656	-	-	-	14,810,137	-	-	5,003,875	-	-
Distribution													
F	1 Booster Pump Station - Via Viejo Pump Station Impro	Debt	2,475,000	-	-	-	-	-	-	-	-	-	-
G	2 Transmission - Nature Heights Transmission Main Ex	Debt	1,455,000	-	-	-	-	-	-	-	-	-	-
H	3 Storage - Gateway Elevated Storage Tank	Debt	-	4,250,000	-	-	-	-	-	-	-	-	-
I	4 Storage - North Mustang Elevated Storage Tank	Debt	-	-	5,200,000	-	-	-	-	-	-	-	-
J	5 Transmission - Rocky Road WL Extension	Debt	-	-	-	1,750,000	-	-	-	-	-	-	-
K	6 Transmission - South 281 WL Extension	Debt	-	-	-	-	3,675,000	-	-	-	-	-	-
L	7 Storage - Business Park Standpipe	Debt	-	-	-	-	-	1,750,000	-	-	-	-	-
M	8 Booster Pump Station - Flatrock Pump Station Impro	Debt	-	-	-	-	-	-	-	325,000	-	-	-
N	9 Transmission - Ollie Ln WL Extensions	Debt	-	-	-	-	-	-	-	-	-	1,295,000	-
O	10 Planning - Wastewater Master Plan	Debt	74,596	-	-	-	-	-	-	-	-	-	-
P	11 Project	Debt	-	-	-	-	-	-	-	-	-	-	-
Q	12 Project	Debt	-	-	-	-	-	-	-	-	-	-	-
	13 Project	Debt	-	-	-	-	-	-	-	-	-	-	-
	14 Project	Debt	-	-	-	-	-	-	-	-	-	-	-
	15 Project	Debt	-	-	-	-	-	-	-	-	-	-	-
	16 Project	Debt	-	-	-	-	-	-	-	-	-	-	-
R	17 Project	Debt	-	-	-	-	-	-	-	-	-	-	-
	18 Project	Debt	-	-	-	-	-	-	-	-	-	-	-
	Subtotal		4,004,596	4,250,000	5,200,000	1,750,000	3,675,000	1,750,000	-	325,000	-	1,295,000	-
	Inflation Adjusted Subtotal		4,004,596	4,444,201	5,686,080	2,001,025	4,394,167	2,188,074	-	444,342	-	1,936,034	-
TOTAL WATER CIP (Inflation Adjusted)			6,501,596	15,031,858	5,686,080	2,001,025	4,394,167	16,998,211	-	444,342	5,003,875	1,936,034	-
Allocation to:													
	Treatment		2,497,000	10,587,656	-	-	-	14,810,137	-	-	5,003,875	-	-
	Distribution		4,004,596	4,444,201	5,686,080	2,001,025	4,394,167	2,188,074	-	444,342	-	1,936,034	-
	Administration		-	-	-	-	-	-	-	-	-	-	-
	Customer		-	-	-	-	-	-	-	-	-	-	-
	Total		6,501,596	15,031,858	5,686,080	2,001,025	4,394,167	16,998,211	-	444,342	5,003,875	1,936,034	-
Annual %													
	Treatment		38%	70%	0%	0%	0%	87%	0%	0%	100%	0%	0%
	Distribution		62%	30%	100%	100%	100%	13%	0%	100%	0%	100%	100%
	Administration		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Customer		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total		100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL					
<u>Calculation Year</u> 2024					Forecast Annual Meter Equivalents (LUEs)
Year	Existing Capacity (gallons/day)	Additional Capacity (gallons/day)	Total Capacity (gallons/day)	Total Capacity (LUEs)	

**Input Area -- Forecast Water Facility Capacity
Impact Fee: Water**

Treatment

Persons per Living Unit Equivalents (LUE)	1.70	(1)
Gallons Per Capita Per Day	152.4	
Average Treated Gallons Per Day Per LUE	259.0	

2024	4,800,000	1,728,000	6,528,000	25,205	5,956
2025	-	1,440,000	7,968,000	30,764	6,355
2026	-	-	7,968,000	30,764	6,781
2027	-	-	7,968,000	30,764	7,235
2028	-	-	7,968,000	30,764	7,720
2029	-	-	7,968,000	30,764	8,237
2030	-	-	7,968,000	30,764	8,789
2031	-	-	7,968,000	30,764	9,378
2032	-	-	7,968,000	30,764	10,006
2033	-	-	7,968,000	30,764	10,677
Ending Capacity	-	7,968,000	7,968,000	30,764	10,677
Beginning Capacity	-	4,800,000	4,800,000	18,533	5,582
Total Capacity Required for Growth	-	3,168,000	3,168,000	12,232	5,095

(1) See "LUE Current and Forecast.msg"

CITY OF MARBLE FALLS						
WATER SYSTEM IMPACT FEE CALCULATION MODEL						
<u>Calculation Year</u>						
2024					Treatment	Distribution
	Treatment	Total LUEs in System		Other	Treatment Total	Distribution Total
		Distribution	Other	Other		

**Input Area -- 10 Year Water System Forecast Demand
Impact Fee Water**

Water System						
Growth Rate		6.7%				
Total LUEs -- Current Year (1)						
Total		5,582	5,582	-	-	
Forecast Annual Growth Rate						
2024		6.70%	6.70%	0.00%	0.00%	
2025		6.70%	6.70%	0.00%	0.00%	
2026		6.70%	6.70%	0.00%	0.00%	
2027		6.70%	6.70%	0.00%	0.00%	
2028		6.70%	6.70%	0.00%	0.00%	
2029		6.70%	6.70%	0.00%	0.00%	
2030		6.70%	6.70%	0.00%	0.00%	
2031		6.70%	6.70%	0.00%	0.00%	
2032		6.70%	6.70%	0.00%	0.00%	
2033		6.70%	6.70%	0.00%	0.00%	
Forecast Annual Total						
2024		5,956	5,956	-	-	
2025		6,355	6,355	-	-	
2026		6,781	6,781	-	-	
2027		7,235	7,235	-	-	
2028		7,720	7,720	-	-	
2029		8,237	8,237	-	-	
2030		8,789	8,789	-	-	
2031		9,378	9,378	-	-	
2032		10,006	10,006	-	-	
2033		10,677	10,677	-	-	
Forecast Annual New Water LUEs (1)						
1	2024	374	374	-	-	374 374
2	2025	399	399	-	-	773 773
3	2026	426	426	-	-	1,199 1,199
4	2027	454	454	-	-	1,653 1,653
5	2028	485	485	-	-	2,138 2,138
6	2029	517	517	-	-	2,655 2,655
7	2030	552	552	-	-	3,207 3,207
8	2031	589	589	-	-	3,796 3,796
9	2032	628	628	-	-	4,424 4,424
10	2033	670	670	-	-	5,095 5,095
		5,095	5,095	-	-	25,314 25,314
Meter Equivalents/Equivalent Residential Units (LUEs)						
Conversion Factor		1.0	1.0	1.0	1.0	
Most Recent Month		5,582	5,582	-	-	669,840 669,840

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL						
Calculation Year	Total LUEs in System				Treatment	Distribution
2024	Treatment	Distribution	Other	Other	Total	Total

Input Area -- 10 Year Water System Forecast Demand
Impact Fee Water

Forecast Meter Equiv/LUEs						
2024	5,956	5,956	-	-		
2025	6,355	6,355	-	-		
2026	6,781	6,781	-	-		
2027	7,235	7,235	-	-		
2028	7,720	7,720	-	-		
2029	8,237	8,237	-	-		
2030	8,789	8,789	-	-		
2031	9,378	9,378	-	-		
2032	10,006	10,006	-	-		
2033	10,677	10,677	-	-		
Forecast Annual New Meter Equiv/LUEs						
2024	374	374	-	-	374	374
2025	399	399	-	-	773	773
2026	426	426	-	-	1,199	1,199
2027	454	454	-	-	1,653	1,653
2028	485	485	-	-	2,138	2,138
2029	517	517	-	-	2,655	2,655
2030	552	552	-	-	3,207	3,207
2031	589	589	-	-	3,796	3,796
2032	628	628	-	-	4,424	4,424
2033	670	670	-	-	5,095	5,095
Total	5,095	5,095	-	-		
Forecast Monthly Bills -- Total LUEs						
					New LUEs	New LUEs
2024	71,472	71,472	-	-	4,488	4,488
2025	76,261	76,261	-	-	9,277	9,277
2026	81,370	81,370	-	-	14,386	14,386
2027	86,822	86,822	-	-	19,838	19,838
2028	92,639	92,639	-	-	25,655	25,655
2029	98,846	98,846	-	-	31,862	31,862
2030	105,468	105,468	-	-	38,484	38,484
2031	112,535	112,535	-	-	45,551	45,551
2032	120,075	120,075	-	-	53,091	53,091
2033	128,120	128,120	-	-	61,136	61,136
Total	973,606	973,606	-	-	303,766	303,766

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL											
<u>Calculation Year</u> 2024	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Period

**Input Area -- CIP Debt Funding Assumptions
Impact Fee: Water**

Water System												
Beginning Balance		\$ 1,502,272	\$ 811,501	\$ 968,673	\$ 2,470,878	\$ 1,814,657	\$ 580,834	\$ 4,836,444	\$ 8,932,839	\$ 8,773,930		
Forecast Capital Improvement Plan Total	\$ 6,501,596	\$ 15,031,858	\$ 5,686,080	\$ 2,001,025	\$ 4,394,167	\$ 16,998,211	\$ -	\$ 444,342	\$ 5,003,875	\$ 1,936,034	\$ 57,997,186	
Forecast Debt Issues												
Principal (1)	5,000,000	11,000,000	2,500,000			11,500,000	-	-	-	-	\$ 30,000,000	
Closing Costs/Reserves (1)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%		
Total Debt Issues	\$ 5,120,000	\$ 11,264,000	\$ 2,560,000	\$ -	\$ -	\$ 11,776,000	\$ -	\$ -	\$ -	\$ -	\$ 30,720,000	
Contribution From Impact Fee	\$ 2,883,868	\$ 3,077,087	\$ 3,283,252	\$ 3,503,230	\$ 3,737,946	\$ 3,988,388	\$ 4,255,610	\$ 4,540,736	\$ 4,844,966	\$ 5,169,578	\$ 39,284,660	
Total Funds For CIP	\$ 8,003,868	\$ 14,341,087	\$ 5,843,252	\$ 3,503,230	\$ 3,737,946	\$ 15,764,388	\$ 4,255,610	\$ 4,540,736	\$ 4,844,966	\$ 5,169,578	\$ 70,004,660	
Ending Balance	\$ 1,502,272	\$ 811,501	\$ 968,673	\$ 2,470,878	\$ 1,814,657	\$ 580,834	\$ 4,836,444	\$ 8,932,839	\$ 8,773,930	\$ 12,007,474		
Growth-Related Debt Service												
Percent Growth-Related	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	
Total Growth-Related Debt	\$ 4,770,383	\$ 10,494,843	\$ 2,385,192	\$ -	\$ -	\$ 10,971,882	\$ -	\$ -	\$ -	\$ -	\$ 28,622,300	
Funding Assumptions												
Year of Issuance	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
Interest Rate	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
Term (Years)	20	20	20	20	20	20	20	20	20	20	20	
Total Interest (3)												
Total Interest -- Actual	1,703,073	3,456,324	714,814	-	-	2,190,562	-	-	-	-	8,064,772	
Total Interest -- NPV	1,366,334	2,820,154	593,644	-	-	1,926,151	-	-	-	-	6,706,284	
Growth-Related Interest												
Total Interest -- Actual	1,586,779	3,220,311	666,003	-	-	2,040,980	-	-	-	-	7,514,074	
Total Interest -- NPV	1,273,035	2,627,581	553,107	-	-	1,794,625	-	-	-	-	6,248,348	

(1) – SOURCE: Client and Project Team Estimates
 (2) – SOURCE: CIP Input
 (3) – SOURCE: Debt Interest Input

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL								
Calculation Year							Total New Capacity LUEs	Interest Expense Per LUE
2024								
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"								
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal			

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2013	50% Water/Wastewater
Total Water Principal	\$ 1,745,000	
Term of Debt	20	
Interest Rate	3.3%	Average

2024	\$ 1,142,500		-	\$ 1,142,500	
2025	1,142,500		-	1,142,500	
2026	1,142,500		-	1,142,500	
2027	1,142,500		-	1,142,500	
2028	1,142,500		-	1,142,500	
2029	1,142,500		-	1,142,500	
2030	1,142,500		-	1,142,500	
2031	1,142,500		-	1,142,500	
2032	1,142,500		-	1,142,500	
2033	1,142,500		-	1,142,500	
2034	1,142,500		-	1,142,500	
Treatment	50.0%		-	-	
Distribution	50.0%		-	-	
TOTAL	100.0%		-	-	
NPV		-	-	-	12,232

Series	2014 CO	50% Water/Wastewater
Total Water Principal	\$ 2,000,000	
Term of Debt	20	
Interest Rate	3.5%	Average

2024	\$ 342,500		-	\$ 342,500	
2025	342,500		-	342,500	
2026	342,500		-	342,500	
2027	342,500		-	342,500	
2028	342,500		-	342,500	
2029	342,500		-	342,500	
2030	342,500		-	342,500	
2031	342,500		-	342,500	
2032	342,500		-	342,500	
2033	342,500		-	342,500	
2034	342,500		-	342,500	
Treatment	50.0%		-	-	
Distribution	50.0%		-	-	
TOTAL			-	-	
NPV		-	-	-	12,232

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL							Total New Capacity LUEs	Interest Expense Per LUE
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal			
2024								
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"								

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2014	50% Water/Wastewater
Total Water Principal	\$ 2,702,500	
Term of Debt	15	
Interest Rate	4.0%	

2024	\$ 2,115,000		\$ -	\$ 2,115,000
2025	2,115,000		-	2,115,000
2026	2,115,000		-	2,115,000
2027	2,115,000		-	2,115,000
2028	2,115,000		-	2,115,000
2029	2,115,000		-	2,115,000
2030	2,115,000		-	2,115,000
2031	2,115,000		-	2,115,000
2032	2,115,000		-	2,115,000
2033	2,115,000		-	2,115,000
2034	2,115,000	-	-	2,115,000
Treatment	50.0%		-	-
Distribution	50.0%		-	-
TOTAL				
NPV		-	-	-
				12,232

Series	2015	50% Water/Wastewater
Total Water Principal	\$ 4,775,000	
Term of Debt	12	
Interest Rate	2.0%	

2024	\$ 1,835,000		\$ -	\$ 1,835,000
2025	1,835,000		-	1,835,000
2026	1,835,000		-	1,835,000
2027	1,835,000		-	1,835,000
2028	1,835,000		-	1,835,000
2029	1,835,000	-	-	1,835,000
2030	1,835,000	-	-	1,835,000
2031	1,835,000	-	-	1,835,000
2032	1,835,000	-	-	1,835,000
2033	1,835,000	-	-	1,835,000
2034	1,835,000	-	-	1,835,000
Treatment	50.0%		-	-
Distribution	50.0%		-	-
TOTAL				
NPV		-	-	-
				12,232

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL							Total New Capacity LUEs	Interest Expense Per LUE
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal			
2024								
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"								

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2016	50% Water/Wastewater
Total Water Principal	\$ 3,795,000	
Term of Debt	20	
Interest Rate	2.7%	Average

2024	\$ 2,925,000		\$ -	2,925,000
2025	2,925,000		-	2,925,000
2026	2,925,000		-	2,925,000
2027	2,925,000		-	2,925,000
2028	2,925,000		-	2,925,000
2029	2,925,000		-	2,925,000
2030	2,925,000		-	2,925,000
2031	2,925,000		-	2,925,000
2032	2,925,000		-	2,925,000
2033	2,925,000		-	2,925,000
2034	2,925,000		-	2,925,000
Treatment	50.0%		-	-
Distribution	50.0%		-	-
TOTAL			-	-
NPV			-	-
				12,232

Series	2018	50% Water/Wastewater
Total Water Principal	\$ 3,132,500	
Term of Debt	15	
Interest Rate	3.5%	Average

2024	\$ 855,000		\$ -	855,000
2025	855,000		-	855,000
2026	855,000		-	855,000
2027	855,000		-	855,000
2028	855,000		-	855,000
2029	855,000		-	855,000
2030	855,000		-	855,000
2031	855,000		-	855,000
2032	855,000		-	855,000
2033	855,000		-	855,000
2034	855,000		-	855,000
Treatment	50.0%		-	-
Distribution	50.0%		-	-
TOTAL			-	-
NPV			-	-
				12,232

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year						Total New Capacity LUEs	Interest Expense Per LUE
2024							
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal		

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2019	50% Water/Wastewater
Total Water Principal	\$ 1,092,500	
Term of Debt	15	
Interest Rate	2.9%	Average

2024	\$ 965,000		\$ -	\$ 965,000			
2025	965,000		-	965,000			
2026	965,000		-	965,000			
2027	965,000		-	965,000			
2028	965,000		-	965,000			
2029	965,000		-	965,000			
2030	965,000		-	965,000			
2031	965,000		-	965,000			
2032	965,000		-	965,000			
2033	965,000		-	965,000			
2034	965,000		-	965,000			
Treatment	50.0%		-	-			
Distribution	50.0%		-	-			
TOTAL						12,232	-
NPV							

Series	2020 A	50% Water/Wastewater
Total Water Principal		
Term of Debt		
Interest Rate	1.2%	Average

2024	\$ 197,500		\$ -	\$ 197,500.00			
2025	197,500		-	197,500			
2026	197,500		-	197,500			
2027	197,500		-	197,500			
2028	197,500		-	197,500			
2029	197,500		-	197,500			
2030	197,500		-	197,500			
2031	197,500		-	197,500			
2032	197,500		-	197,500			
2033	197,500		-	197,500			
2034	197,500		-	197,500			
Treatment	50.0%		-	-			
Distribution	50.0%		-	-			
TOTAL						12,232	-
NPV							

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL							Total New Capacity LUEs	Interest Expense Per LUE
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal			
2024								
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"								

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2020	50% Water/Wastewater
Total Water Principal	\$ 2,872,500	
Term of Debt	15	
Interest Rate	2.7%	Average

Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024	\$ 310,000				\$ 310,000.00		
2025	310,000				310,000		
2026	310,000				310,000		
2027	310,000				310,000		
2028	310,000				310,000		
2029	310,000				310,000		
2030	310,000				310,000		
2031	310,000				310,000		
2032	310,000				310,000		
2033	310,000				310,000		
2034	310,000				310,000		
Treatment Distribution	50.0%		-	-			
TOTAL NPV						12,232	-

Series	2021 CO	50% Water/Wastewater
Total Water Principal	\$ 552,500	
Term of Debt	20	
Interest Rate	4.5%	Average

Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024	\$ 552,500				\$ 552,500		
2025	552,500				552,500		
2026	552,500				552,500		
2027	552,500				552,500		
2028	552,500				552,500		
2029	552,500				552,500		
2030	552,500				552,500		
2031	552,500				552,500		
2032	552,500				552,500		
2033	552,500				552,500		
2034	552,500				552,500		
Treatment Distribution	50.0%		-	-			
TOTAL NPV						12,232	-

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL							Total New Capacity LUEs	Interest Expense Per LUE
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal			
2024								
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"								

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2022	50% Water/Wastewater
Total Water Principal	\$ 1,705,000	
Term of Debt	20	
Interest Rate	4.8%	Average

2024	\$ 1,705,000		\$ -	\$ 1,705,000	
2025	1,705,000		-	1,705,000	
2026	1,705,000		-	1,705,000	
2027	1,705,000		-	1,705,000	
2028	1,705,000		-	1,705,000	
2029	1,705,000		-	1,705,000	
2030	1,705,000		-	1,705,000	
2031	1,705,000		-	1,705,000	
2032	1,705,000		-	1,705,000	
2033	1,705,000		-	1,705,000	
2034	1,705,000		-	1,705,000	
Treatment	0.0%		-	-	
Distribution	100.0%		-	-	
TOTAL			-	-	
NPV		-	-	-	12,232

Series	2024
Total Water Principal	\$ 5,120,000
Term of Debt	20
Interest Rate	4.0%

2024	5,120,000		\$ -	\$ 5,120,000	
2025	5,120,000	171,939	204,800	376,739	4,948,061
2026	4,948,061	178,816	197,922	376,739	4,769,245
2027	4,769,245	185,969	190,770	376,739	4,583,277
2028	4,583,277	193,407	183,331	376,739	4,389,869
2029	4,389,869	201,144	175,595	376,739	4,188,725
2030	4,188,725	209,190	167,549	376,739	3,979,536
2031	3,979,536	217,557	159,181	376,739	3,761,979
2032	3,761,979	226,259	150,479	376,739	3,535,719
2033	3,535,719	235,310	141,429	376,739	3,300,409
2034	3,300,409	244,722	132,016	376,739	3,055,687
Treatment	38.4%		654,081	1,446,900	
Distribution	61.6%		1,048,991	2,320,485	
TOTAL			1,703,073	3,767,386	
NPV		1,604,539	1,366,334	2,970,874	12,232 111.70

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL						
Calculation Year						
2024						
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"						
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs
						Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2025
Total Water Principal	\$ 11,264,000
Term of Debt	20
Interest Rate	4.0%

2024					\$ -		
2025	11,264,000				11,264,000		
2026	11,264,000	378,265	450,560	828,825	10,885,735		
2027	10,885,735	393,395	435,429	828,825	10,492,340		
2028	10,492,340	409,131	419,694	828,825	10,083,208		
2029	10,083,208	425,496	403,328	828,825	9,657,712		
2030	9,657,712	442,516	386,308	828,825	9,215,196		
2031	9,215,196	460,217	368,608	828,825	8,754,979		
2032	8,754,979	478,626	350,199	828,825	8,276,353		
2033	8,276,353	497,771	331,054	828,825	7,778,582		
2034	7,778,582	517,682	311,143	828,825	7,260,901		
Treatment	70.4%		2,434,454	5,254,029			
Distribution	29.6%		1,021,870	2,205,395			
TOTAL			3,456,324	7,459,424			
NPV		3,185,598	2,820,154	6,005,752		12,232	230.56

Series	2026
Total Water Principal	\$ 2,560,000
Term of Debt	20
Interest Rate	4.0%

2024					\$ -		
2025					-		
2026	2,560,000				2,560,000		
2027	2,560,000	85,969	102,400	188,369	2,474,031		
2028	2,474,031	89,408	98,961	188,369	2,384,623		
2029	2,384,623	92,984	95,385	188,369	2,291,638		
2030	2,291,638	96,704	91,666	188,369	2,194,935		
2031	2,194,935	100,572	87,797	188,369	2,094,363		
2032	2,094,363	104,595	83,775	188,369	1,989,768		
2033	1,989,768	108,779	79,591	188,369	1,880,989		
2034	1,880,989	113,130	75,240	188,369	1,767,860		
Treatment	0.0%		-	-			
Distribution	100.0%		714,814	1,506,954			
TOTAL			714,814	1,506,954			
NPV		645,301	593,644	1,238,945		12,232	48.53

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL							Total New Capacity LUEs	Interest Expense Per LUE
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal			
2024								
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"								

Input Area -- Forecast Debt Service
Impact Fee: Water

Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024					\$ -		
2025					-		
2026					-		
2027					-		
2028	-	-	-	-	-		
2029	-	-	-	-	-		
2030	-	-	-	-	-		
2031	-	-	-	-	-		
2032	-	-	-	-	-		
2033	-	-	-	-	-		
2034	-	-	-	-	-		
Treatment Distribution	0.0%						
	100.0%						
TOTAL NPV		-	-	-	-	12,232	-

Series	2027
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024					\$ -		
2025					-		
2026					-		
2027					-		
2028	-	-	-	-	-		
2029	-	-	-	-	-		
2030	-	-	-	-	-		
2031	-	-	-	-	-		
2032	-	-	-	-	-		
2033	-	-	-	-	-		
2034	-	-	-	-	-		
Treatment Distribution	0.0%						
	100.0%						
TOTAL NPV		-	-	-	-	12,232	-

Series	2028
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024							
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"							

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2029
Total Water Principal	\$ 11,776,000
Term of Debt	20
Interest Rate	4.0%

2024					\$ -		
2025					-		
2026					-		
2027					-		
2028					-		
2029	11,776,000				11,776,000		
2030	11,776,000	395,459	471,040	866,499	11,380,541		
2031	11,380,541	411,277	455,222	866,499	10,969,264		
2032	10,969,264	427,728	438,771	866,499	10,541,536		
2033	10,541,536	444,837	421,661	866,499	10,096,699		
2034	10,096,699	462,631	403,868	866,499	9,634,068		
Treatment Distribution	87.1%		1,908,584	3,774,798			
	12.9%		281,977	557,695			
TOTAL NPV		1,870,408	1,926,151	3,796,559		12,232	157.47

Series	2030
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024					\$ -		
2025					-		
2026					-		
2027					-		
2028					-		
2029					-		
2030	-				-		
2031	-	-	-	-	-		
2032	-	-	-	-	-		
2033	-	-	-	-	-		
2034	-	-	-	-	-		
Treatment Distribution	0.0%		-	-			
	100.0%		-	-			
TOTAL NPV		-	-	-		12,232	-

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL								
Calculation Year						Total New Capacity LUEs	Interest Expense Per LUE	
2024	Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal			

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2031
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024					\$ -	
2025					-	
2026					-	
2027					-	
2028					-	
2029					-	
2030					-	
2031	-				-	
2032	-	-	-	-	-	
2033	-	-	-	-	-	
2034	-	-	-	-	-	
Treatment	0.0%		-	-		
Distribution	100.0%					
TOTAL						12,232
NPV		-	-	-		-

Series	2032
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024					\$ -	
2025					-	
2026					-	
2027					-	
2028					-	
2029					-	
2030					-	
2031					-	
2032	-				-	
2033	-	-	-	-	-	
2034	-	-	-	-	-	
Treatment	100.0%		-	-		
Distribution	0.0%					
TOTAL						12,232
NPV		-	-	-		-

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year						Total New Capacity LUEs	Interest Expense Per LUE
2024							
Sources: "Marble Falls UF Debt Schedule 2022.xlsx" & "Marble Falls Debt Model 2022.pdf"							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal		

Input Area -- Forecast Debt Service
Impact Fee: Water

Series	2033
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024					\$ -	
2025					-	
2026					-	
2027					-	
2028					-	
2029					-	
2030					-	
2031					-	
2032					-	
2033					-	
2034					-	
Treatment	0.0%				-	
Distribution	100.0%				-	
TOTAL					-	
NPV					-	12,232

Water System

Series	TOTAL
Discount Rate	4.57%

2024	\$ -	\$ -	\$ -
2025	171,939	204,800	376,739
2026	557,081	648,482	1,205,563
2027	665,333	728,599	1,393,933
2028	691,947	701,986	1,393,933
2029	719,625	674,308	1,393,933
2030	1,143,868	1,116,563	2,260,431
2031	1,189,623	1,070,808	2,260,431
2032	1,237,208	1,023,223	2,260,431
2033	1,286,696	973,735	2,260,431
2034	1,338,164	922,267	2,260,431
Treatment		4,997,120	10,475,728
Distribution		3,067,652	6,590,529
TOTAL	9,001,484	8,064,772	17,066,257
NPV Treatment		3,642,189	7,562,768
NPV Distribution		2,235,882	4,757,917
NPV	6,442,613	5,878,071	12,320,684

**CITY OF MARBLE FALLS
WATER SYSTEM IMPACT FEE CALCULATION MODEL**

Calculation Year
2024

***Input Area -- Debt Credit
Impact Fee: Water***

Treatment

Planning Period Debt Service		
Total Principal and Interest	\$	7,562,768
<u>Funded through User Rates:</u>		
Percent		100.0%
Total		7,562,768
Credit Per LUE Per Month		
Monthly Bills from Total LUEs during Planning Period		973,606
Planning Period Credit per LUE Per Month		
	\$	7.77
Cumulative Credit		
Cumulative New LUE Monthly Bills		303,766
Credit per EDU Per Month	\$	7.77
Cumulative Credit		2,359,590

**CITY OF MARBLE FALLS
WATER SYSTEM IMPACT FEE CALCULATION MODEL**

Calculation Year
2024

***Input Area -- Debt Credit
Impact Fee: Water***

Distribution

Planning Period Debt Service		
Total Principal and Interest	\$	4,757,917
<u>Funded through User Rates:</u>		
Percent		100.0%
Total		4,757,917
Credit Per EDU Per Month		
Monthly Bills from Total LUEs during Planning Period		973,606
Planning Period Credit per LUE Per Month	\$	4.89
Cumulative Credit		
Cumulative New LUE Monthly Bills		303,766
Credit per LUE Per Month	\$	4.89
Cumulative Credit		1,484,474
Cumulative Credit at 50% of CIP Value plus Interest	\$	7,074,747

**CITY OF MARBLE FALLS
WATER SYSTEM IMPACT FEE CALCULATION MODEL**

<u>Calculation Year</u> 2024		Water Meter Size	AWWA Meter Ratio	MAXIMUM Wastewater Impact Fee
Description	Total			

**Summary Schedule -- Calculation of Treatment Water Impact Fee
Impact Fee: Water**

Treatment System Impact Fee

I. Current and Forecast Demand (LUEs)

Beginning Demand	5,582
New Growth 2024 - 2033	<u>5,095</u>
Total Demand 2033	10,677
Forecast Demand 2033 - 2050	<u>10,160</u>
Total Existing and Forecast Demand 2050	<u>20,837</u>

II. Fee per LUE

CIP Value of 2024 - 2033 Growth-Related Improvements	25,319,646
Impact Fee Study Preparation Expenses	<u>15,000</u>
Interest Expense Allocated to Planning Period	<u>3,642,189</u>
Sub-Total	\$ 28,976,836
Less CIP Credit	<u>2,359,590</u>
New Value of CIP to be Paid from Impact Fees	\$ 26,617,246
Total Forecast Expansions 2024 - 2033	5,095
Growth Related Impact Fee Per LUE	\$ 5,225

III. Water Impact Fee by Water Meter Size

5/8" -- 3/4"	1.0	\$	5,225
1"	1.7	\$	8,725
1 1/2"	3.3	\$	17,398
2"	5.3	\$	27,847
3"	16.7	\$	87,094
4"	41.7	\$	217,708
6"	66.7	\$	348,322
8"	133.3	\$	696,592
MF Units	0.5	\$	2,612

CITY OF MARBLE FALLS WATER SYSTEM IMPACT FEE CALCULATION MODEL				
<u>Calculation Year</u> 2024		Water Meter Size	AWWA Meter Ratio	MAXIMUM Wastewater Impact Fee
Description	Total			

Summary Schedule -- Calculation of Distribution Water Impact Fee
Impact Fee: Water

Distribution System Impact Fee

I. Current and Forecast Demand (LUEs)

Beginning Demand	5,582
New Growth 2024 - 2033	<u>5,095</u>
Total Demand 2033	10,677
Forecast Demand 2033 - 2050	<u>10,160</u>
Total Existing and Forecast Demand 2050	20,837

II. Fee per LUE

CIP Value of 2024 - 2033 Growth-Related Improvements	\$ 11,898,613
Impact Fee Study Preparation Expenses	<u>15,000</u>
Interest Expense Allocated to Planning Period	<u>2,235,882</u>
Sub-Total	\$ 14,149,495
Less CIP Credit	<u>1,484,474</u>
New Value of CIP to be Paid from Impact Fees	\$ 12,665,021
Total Forecast Expansions 2024 - 2033	5,095
Growth Related Impact Fee Per LUE	\$ 2,486

III. Water Impact Fee by Water Meter Size

5/8" -- 3/4"	1.0	\$ 2,486
1"	1.7	\$ 4,152
1 1/2"	3.3	\$ 8,278
2"	5.3	\$ 13,250
3"	16.7	\$ 41,441
4"	41.7	\$ 103,590
6"	66.7	\$ 165,739
8"	133.3	\$ 331,453
MF Units	0.5	\$ 1,243

APPENDIX G

CITY OF MARBLE FALLS WASTEWATER IMPACT FEE BY METER SIZE			
Impact Fee:			
Water Meter Size	MAXIMUM Treatment Impact Fee	MAXIMUM Collection Impact Fee	MAXIMUM Wastewater Impact Fee
Maximum Fee per EDU	\$ 6,620	\$ 2,592	\$ 9,212
Maximum Fee by Water Meter Size			
5/8" -- 3/4"	\$ 6,620	\$ 2,592	\$ 9,212
1"	11,056	4,328	15,384
1 1/2"	22,046	8,631	30,677
2"	35,287	13,815	49,102
3"	110,364	43,207	153,571
4"	275,876	108,005	383,881
6"	441,388	172,802	614,190
8"	882,711	345,579	1,228,290
MF	3,310	1,296	4,606

CITY OF MARBLE FALLS						
WASTEWATER SYSTEM IMPACT FEE MODEL						
		Treatment		Collection		Total
Impact Fees - Forecast Annual Revenues						
	Impact Fee:			Wastewater		
Forecast Revenues						
2024	\$	1,877,948	\$	735,293	\$	2,613,242
2025		2,003,771		784,558		2,788,329
2026		2,138,024		837,123		2,975,147
2027		2,281,271		893,211		3,174,482
2028		2,434,116		953,056		3,387,172
2029		2,597,202		1,016,911		3,614,113
2030		2,771,215		1,085,044		3,856,258
2031		2,956,886		1,157,741		4,114,627
2032		3,154,997		1,235,310		4,390,308
2033		3,366,382		1,318,076		4,684,458
Total Period		25,581,813		10,016,323		35,598,135

Forecast 2024 - 2033		Treatment/ Dist/Admin/ Customer	Depreciable Lifespan (Years)	Percent Grant Funded	CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE MODEL 2024 - 2033			Total CIP	Total Growth	2024 - 2033 Total Growth	Total Replacement	
Input Area -- Capital Improvement Plan -- Wastewater												
Input Area - Growth vs. Replacement												
Utility: Test Year Forecast Period Impact Fee		CITY OF MARBLE FALLS 2024 2024 - 2033 Wastewater										
Inflator		4.57%										
Treatment		Funding Source		Percentages From MillerGrav CIP Worksheet								
A	1 Treatment - New WWTP	Debt	Treat	50	0.0%	66.0%	34.0%	34.0%	\$ 60,435,091	\$ 39,887,160	\$ 20,547,931	\$ 20,547,931
B	2 Project	Debt	Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
C	3 Project	Debt	Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
D	4 Project	Debt	Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
E	5 Project	Debt	Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	6 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	7 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	8 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	9 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	10 Project		Treat	50	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	Subtotal								60,435,091	39,887,160	20,547,931	20,547,931
	Inflation Adjusted Subtotal								61,815,865	40,798,471	21,017,394	21,017,394
Collection				Percentages From MillerGrav CIP Worksheet								
F	1 Pumping - Flatrock Lift Station Upgrade	Debt	Coll	50	0.0%	93.0%	68.0%	7.0%	250,000	232,500	170,000	17,500
G	2 Pumping - Mustang Vistas Lift Station & Force Main	Debt	Coll	50	0.0%	90.0%	60.0%	10.0%	2,125,000	1,912,500	1,275,000	212,500
H	3 Collections - NE Interceptor Upsizing	Debt	Coll	10	0.0%	61.0%	26.0%	39.0%	1,932,700	1,178,947	502,502	753,753
I	4 Collections - North Lakeshore Interceptor Upsizing	Debt	Coll	50	0.0%	80.0%	30.0%	20.0%	1,768,000	1,414,400	530,400	353,600
J	5 Collections - Ridge Point Interceptor Upsizing	Debt	Coll	50	0.0%	81.0%	56.0%	19.0%	459,600	372,276	257,376	87,324
K	6 Pumping - Mormon Mill Lift Station Upgrade	Debt	Coll	20	0.0%	95.0%	70.0%	5.0%	2,400,000	2,280,000	1,680,000	120,000
L	7 Pumping - Boulder Creek Lift Station Upgrade	Debt	Coll	20	0.0%	87.0%	62.0%	13.0%	120,000	104,400	74,400	15,600
M	8 Collections - Whitman Branch Interceptor Upsizing	Debt	Coll	20	0.0%	77.0%	37.0%	23.0%	5,715,000	4,400,550	2,114,550	1,314,450
N	9 Pumping - New East FM 2147 Lift Station & Force Main	Debt	Coll	20	0.0%	100.0%	75.0%	0.0%	1,100,000	1,100,000	825,000	-
O	10 Pumping - Replace Panther Hollow Area Lift Station & Force Main	Debt	Coll	20	0.0%	93.0%	43.0%	7.0%	1,300,000	1,209,000	559,000	91,000
P	11 Planning - Wastewater Master Plan	Debt	Coll	20	0.0%	48.0%	48.0%	52.0%	74,596	35,806	35,806	38,790
Q	12 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
R	13 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	14 Project	Debt	Coll	20	0.0%	100.0%	0.0%	0.0%	-	-	-	-
	Subtotal								17,244,896	14,240,379	8,024,034	3,004,517
	Inflation Adjusted Subtotal								20,783,751	17,162,672	9,670,660	3,621,079
TOTAL WASTEWATER CIP (Inflation Adjusted)									82,599,616	57,961,142	30,688,054	24,638,473
Allocation to:												
	Treatment			74.8%								
	Collection			25.2%								
	Administration			0.0%								
	Customer			0.0%								
	Total			100.0%								
									61,815,865	40,798,471	21,017,394	21,017,394
									20,783,751	17,162,672	9,670,660	3,621,079
									-	-	-	-
									-	-	-	-
	Total								82,599,616	57,961,142	30,688,054	24,638,473
										70.2%	37.2%	29.8%
Allocation %:												
	Treatment			74.8%								
	Collection			25.2%								
	Administration			0.0%								
	Customer			0.0%								
	Total			100.0%								

Forecast 2024 - 2033	CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE MODEL									
	0	1	2	3	4	5	6	7	8	9
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033

Input Area -- Capital Improvement Plan -- Wastewater

Utility: CITY OF MARBLE FALLS
 Test Year: 2024
 Forecast Period: 2024 - 2033
 Impact Fee: Wastewater
 Inflation: 4.57%

Input Area - Annual Capital Expenditures

	Treatment	Funding Source								
A	1 Treatment - New WWTP	Debt	\$ 30,217,546	\$ 30,217,546	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
B	2 Project	Debt	-	-	-	-	-	-	-	-
C	3 Project	Debt	-	-	-	-	-	-	-	-
D	4 Project	Debt	-	-	-	-	-	-	-	-
E	5 Project	Debt	-	-	-	-	-	-	-	-
	6 Project		-	-	-	-	-	-	-	-
	7 Project		-	-	-	-	-	-	-	-
	8 Project		-	-	-	-	-	-	-	-
	9 Project		-	-	-	-	-	-	-	-
	10 Project		-	-	-	-	-	-	-	-
	Subtotal		30,217,546	30,217,546	-	-	-	-	-	-
	Inflation Adjusted Subtotal		30,217,546	31,598,319	-	-	-	-	-	-
	Collection									
F	1 Pumping - Flatrock Lift Station Upgrade	Debt	250,000	-	-	-	-	-	-	-
G	2 Pumping - Mustang Vistas Lift Station & Force Main	Debt	2,125,000	-	-	-	-	-	-	-
H	3 Collections - NE Interceptor Upsizing	Debt	-	1,932,700	-	-	-	-	-	-
I	4 Collections - North Lakeshore Interceptor Upsizing	Debt	-	-	1,768,000	-	-	-	-	-
J	5 Collections - Ridge Point Interceptor Upsizing	Debt	-	-	-	459,600	-	-	-	-
K	6 Pumping - Mormon Mill Lift Station Upgrade	Debt	-	-	-	-	2,400,000	-	-	-
L	7 Pumping - Boulder Creek Lift Station Upgrade	Debt	-	-	-	-	-	120,000	-	-
M	8 Collections - Whitman Branch Interceptor Upsizing	Debt	-	-	-	-	-	5,715,000	-	-
N	9 Pumping - New East FM 2147 Lift Station & Force Main	Debt	-	-	-	-	-	-	1,100,000	-
O	10 Pumping - Replace Panther Hollow Area Lift Station	Debt	-	-	-	-	-	-	-	1,300,000
P	11 Planning - Wastewater Master Plan	Debt	74,596	-	-	-	-	-	-	-
Q	12 Project	Debt	-	-	-	-	-	-	-	-
R	13 Project	Debt	-	-	-	-	-	-	-	-
	14 Project	Debt	-	-	-	-	-	-	-	-
	Subtotal		2,449,596	1,932,700	1,768,000	459,600	2,400,000	120,000	5,715,000	1,300,000
	Inflation Adjusted Subtotal		2,449,596	2,021,014	1,933,267	525,526	2,869,660	150,039	7,472,141	1,858,582
	TOTAL WASTEWATER CIP (Inflation Adjusted)		32,667,142	33,619,333	1,933,267	525,526	2,869,660	150,039	7,472,141	1,858,582
	Allocation to:									
	Treatment		30,217,546	31,598,319	-	-	-	-	-	-
	Collection		2,449,596	2,021,014	1,933,267	525,526	2,869,660	150,039	7,472,141	1,858,582
	Administration		-	-	-	-	-	-	-	-
	Customer		-	-	-	-	-	-	-	-
	Total		32,667,142	33,619,333	1,933,267	525,526	2,869,660	150,039	7,472,141	1,858,582
	Allocation %:									
	Treatment		92.5%	94.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Collection		7.5%	6.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Administration		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Customer		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL						
Calculation Year	Total LUEs in System				Treatment Total	Collection Total
2024	Treatment	Collection	Other	Other		

Input Area -- 10 Year Wastewater System Forecast Demand
Impact Fee Wastewater

Wastewater System						
Total LUEs -- Current Year						
Total	4,234	4,234	-	-		
Forecast Annual Growth Rate						
2024	6.70%	6.70%	0.00%	0.00%		
2025	6.70%	6.70%	0.00%	0.00%		
2026	6.70%	6.70%	0.00%	0.00%		
2027	6.70%	6.70%	0.00%	0.00%		
2028	6.70%	6.70%	0.00%	0.00%		
2029	6.70%	6.70%	0.00%	0.00%		
2030	6.70%	6.70%	0.00%	0.00%		
2031	6.70%	6.70%	0.00%	0.00%		
2032	6.70%	6.70%	0.00%	0.00%		
2033	6.70%	6.70%	0.00%	0.00%		
Forecast Annual Total						
2024	4,518	4,518	-	-		
2025	4,820	4,820	-	-		
2026	5,143	5,143	-	-		
2027	5,488	5,488	-	-		
2028	5,856	5,856	-	-		
2029	6,248	6,248	-	-		
2030	6,667	6,667	-	-		
2031	7,113	7,113	-	-		
2032	7,590	7,590	-	-		
2033	8,098	8,098	-	-		
Forecast Annual New Wastewater Accounts (1)						
1 2024	284	284	-	-	284	284
2 2025	303	303	-	-	586	586
3 2026	323	323	-	-	909	909
4 2027	345	345	-	-	1,254	1,254
5 2028	368	368	-	-	1,622	1,622
6 2029	392	392	-	-	2,014	2,014
7 2030	419	419	-	-	2,433	2,433
8 2031	447	447	-	-	2,879	2,879
9 2032	477	477	-	-	3,356	3,356
10 2033	509	509	-	-	3,864	3,864
	3,864	3,864	-	-	19,201	19,201
Meter Equivalents/Equivalent Residential Units (LUEs)						
Conversion Factor	1.0	1.0	1.0	1.0		
Most Recent Month	4,234	4,234	-	-	508,080	508,080

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL						
Calculation Year	Total LUEs in System				Treatment	Collection
2024	Treatment	Collection	Other	Other	Total	Total

Input Area -- 10 Year Wastewater System Forecast Demand
Impact Fee Wastewater

Forecast Meter Equiv/LUEs						
2024	4,518	4,518	-	-		
2025	4,820	4,820	-	-		
2026	5,143	5,143	-	-		
2027	5,488	5,488	-	-		
2028	5,856	5,856	-	-		
2029	6,248	6,248	-	-		
2030	6,667	6,667	-	-		
2031	7,113	7,113	-	-		
2032	7,590	7,590	-	-		
2033	8,098	8,098	-	-		
Forecast Annual New Meter Equiv/LUEs						
2024	284	284	-	-	284	284
2025	303	303	-	-	586	586
2026	323	323	-	-	909	909
2027	345	345	-	-	1,254	1,254
2028	368	368	-	-	1,622	1,622
2029	392	392	-	-	2,014	2,014
2030	419	419	-	-	2,433	2,433
2031	447	447	-	-	2,879	2,879
2032	477	477	-	-	3,356	3,356
2033	509	509	-	-	3,864	3,864
Total	3,864	3,864	-	-		
Forecast Monthly Bills -- Total LUEs						
					New LUEs	New LUEs
2024	54,212	54,212	-	-	3,404	3,404
2025	57,844	57,844	-	-	7,036	7,036
2026	61,720	61,720	-	-	10,912	10,912
2027	65,855	65,855	-	-	15,047	15,047
2028	70,267	70,267	-	-	19,459	19,459
2029	74,975	74,975	-	-	24,167	24,167
2030	79,999	79,999	-	-	29,191	29,191
2031	85,359	85,359	-	-	34,551	34,551
2032	91,078	91,078	-	-	40,270	40,270
2033	97,180	97,180	-	-	46,372	46,372
Total	738,489	738,489	-	-	230,409	230,409

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL					
<u>Calculation Year</u> 2024					
Year	Existing Capacity (gallons/day)	Additional Capacity (gallons/day)	Total Capacity (gallons/day)	Total Capacity (LUEs)	Forecast Annual Meter Equivalents (LUEs)

**Input Area -- Forecast Wastewater Facility Capacity
Impact Fee: Wastewater**

Treatment

Persons per Living Unit Equivalents (LUE)	2.79	(1)
Gallons Per Capita Per Day	71.7	
Average Treated Gallons Per Day Per LUE	200.0	

2024	(2)	1,500,000	-	1,500,000	7,500	4,518
2025		-	-	1,500,000	7,500	4,820
2026		-	-	1,500,000	7,500	5,143
2027		-	-	1,500,000	7,500	5,488
2028		-	-	1,500,000	7,500	5,856
2029		-	-	1,500,000	7,500	6,248
2030		-	-	1,500,000	7,500	6,667
2031		-	-	1,500,000	7,500	7,113
2032		-	-	1,500,000	7,500	7,590
2033		-	-	1,500,000	7,500	8,098
Ending Capacity		-	-	1,500,000	7,500	8,098
Beginning Capacity		-	-	-	-	4,234
Total Capacity Required for Growth		-	-	1,500,000	7,500	3,864

(1) See "LUE Current and Forecast.msg"
 (2) Source: City Engineers MillerGray

**CITY OF MARBLE FALLS
WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL**

Calculation Year
2024

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Period
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Input Area -- CIP Debt Funding Assumptions
Impact Fee: Wastewater

Wastewater System

Beginning Balance	-	666,100	555,096	1,596,976	4,245,931	4,763,444	8,227,517	4,611,634	7,222,336	9,754,062	
Forecast Capital Improvement Plan Total	\$ 32,667,142	\$ 33,619,333	\$ 1,933,267	\$ 525,526	\$ 2,869,660	\$ 150,039	\$ 7,472,141	\$ 1,503,925	\$ 1,858,582	\$ -	\$ 82,599,616
Forecast Debt Issues											
Principal (1)	30,000,000	30,000,000	-	-	-	-	-	-	-	-	60,000,000
Closing Costs/Reserves	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Total	\$ 30,720,000	\$ 30,720,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	61,440,000
Contribution From Impact Fee	\$ 2,613,242	\$ 2,788,329	\$ 2,975,147	\$ 3,174,482	\$ 3,387,172	\$ 3,614,113	\$ 3,856,258	\$ 4,114,627	\$ 4,390,308	\$ 4,684,458	35,598,135
Total Funds For CIP	\$ 33,333,242	\$ 33,508,329	\$ 2,975,147	\$ 3,174,482	\$ 3,387,172	\$ 3,614,113	\$ 3,856,258	\$ 4,114,627	\$ 4,390,308	\$ 4,684,458	\$ 97,038,135
Ending Balance	\$ 666,100	\$ 555,096	\$ 1,596,976	\$ 4,245,931	\$ 4,763,444	\$ 8,227,517	\$ 4,611,634	\$ 7,222,336	\$ 9,754,062	\$ 14,438,520	

Growth-Related Debt Service

Percent Growth-Related	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%
Total Growth-Related Debt	\$ 21,556,593	\$ 21,556,593	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,113,186

Funding Assumptions

Year of Issuance	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Interest Rate	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Term (Years)	20	20	20	20	20	20	20	20	20	20	

Total Interest (3)

Total Interest -- Actual	10,218,437	9,426,339	-	-	-	-	-	-	-	-	19,644,776
Total Interest -- NPV	8,198,007	7,691,330	-	-	-	-	-	-	-	-	15,889,337

Growth-Related Interest

Total Interest -- Actual	7,170,400	6,614,575	-	-	-	-	-	-	-	-	13,784,975
Total Interest -- NPV	5,752,640	5,397,099	-	-	-	-	-	-	-	-	11,149,738

- (1) -- SOURCE: Project Team Estimates
- (2) -- SOURCE: CIP Input
- (3) -- SOURCE: Debt Interest Input

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL								
Calculation Year								
2024	Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	0
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	3.3%

2024	\$ 1,142,500				\$ 1,142,500		
2025	1,142,500				1,142,500		
2026	1,142,500				1,142,500		
2027	1,142,500				1,142,500		
2028	1,142,500				1,142,500		
2029	1,142,500				1,142,500		
2030	1,142,500				1,142,500		
2031	1,142,500				1,142,500		
2032	1,142,500				1,142,500		
2033	1,142,500				1,142,500		
2034	1,142,500				1,142,500		
Treatment	50.0%		-	-			
Distribution	50.0%						
TOTAL	100.0%						
NPV			-	-			7,500

Series	
Total Water Principal	
Term of Debt	20
Interest Rate	3.5%

2024	\$ 342,500				\$ 342,500		
2025	342,500				342,500		
2026	342,500				342,500		
2027	342,500				342,500		
2028	342,500				342,500		
2029	342,500				342,500		
2030	342,500				342,500		
2031	342,500				342,500		
2032	342,500				342,500		
2033	342,500				342,500		
2034	342,500				342,500		
Treatment	50.0%		-	-			
Distribution	50.0%						
TOTAL							
NPV			-	-			7,500

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	
Total Water Principal	15
Term of Debt	
Interest Rate	4.0%

2024	\$ 2,115,000		\$ -	\$ 2,115,000			
2025	2,115,000		-	2,115,000			
2026	2,115,000		-	2,115,000			
2027	2,115,000		-	2,115,000			
2028	2,115,000		-	2,115,000			
2029	2,115,000		-	2,115,000			
2030	2,115,000		-	2,115,000			
2031	2,115,000		-	2,115,000			
2032	2,115,000		-	2,115,000			
2033	2,115,000		-	2,115,000			
2034	2,115,000		-	2,115,000			
Treatment	50.0%		-	-			
Distribution	50.0%		-	-			
TOTAL			-	-		7,500	
NPV			-	-			

Series	
Total Water Principal	12
Term of Debt	
Interest Rate	2.0%

2024	\$ 1,835,000		\$ -	\$ 1,835,000			
2025	1,835,000		-	1,835,000			
2026	1,835,000		-	1,835,000			
2027	1,835,000		-	1,835,000			
2028	1,835,000		-	1,835,000			
2029	1,835,000		-	1,835,000			
2030	1,835,000		-	1,835,000			
2031	1,835,000		-	1,835,000			
2032	1,835,000		-	1,835,000			
2033	1,835,000		-	1,835,000			
2034	1,835,000		-	1,835,000			
Treatment	50.0%		-	-			
Distribution	50.0%		-	-			
TOTAL			-	-		7,500	
NPV			-	-			

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series						
Total Water Principal						20
Term of Debt						2.7%
Interest Rate						

2024	\$ 2,925,000		\$ -		2,925,000	
2025	2,925,000		-		2,925,000	
2026	2,925,000		-		2,925,000	
2027	2,925,000		-		2,925,000	
2028	2,925,000		-		2,925,000	
2029	2,925,000		-		2,925,000	
2030	2,925,000		-		2,925,000	
2031	2,925,000		-		2,925,000	
2032	2,925,000		-		2,925,000	
2033	2,925,000		-		2,925,000	
2034	2,925,000		-		2,925,000	
Treatment	50.0%		-			
Distribution	50.0%		-			
TOTAL			-			
NPV			-			7,500

Series						
Total Water Principal						15
Term of Debt						3.5%
Interest Rate						

2024	\$ 855,000		\$ -		855,000	
2025	855,000		-		855,000	
2026	855,000		-		855,000	
2027	855,000		-		855,000	
2028	855,000		-		855,000	
2029	855,000		-		855,000	
2030	855,000		-		855,000	
2031	855,000		-		855,000	
2032	855,000		-		855,000	
2033	855,000		-		855,000	
2034	855,000		-		855,000	
Treatment	50.0%		-			
Distribution	50.0%		-			
TOTAL			-			
NPV			-			7,500

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	Total Water Principal	Term of Debt	Interest Rate
			15
			2.9%

2024	\$ 965,000		\$ -	\$ 965,000		
2025	965,000		-	965,000		
2026	965,000		-	965,000		
2027	965,000		-	965,000		
2028	965,000		-	965,000		
2029	965,000		-	965,000		
2030	965,000		-	965,000		
2031	965,000		-	965,000		
2032	965,000		-	965,000		
2033	965,000		-	965,000		
2034	965,000		-	965,000		
Treatment	50.0%	-	-			
Distribution	50.0%	-	-			
TOTAL						
NPV		-	-			7,500

Series	Total Water Principal	Term of Debt	Interest Rate
			1.2%

2024	\$ 197,500		\$ -	\$ 197,500.00		
2025	197,500		-	197,500		
2026	197,500		-	197,500		
2027	197,500		-	197,500		
2028	197,500		-	197,500		
2029	197,500		-	197,500		
2030	197,500		-	197,500		
2031	197,500		-	197,500		
2032	197,500		-	197,500		
2033	197,500		-	197,500		
2034	197,500	-	-	197,500		
Treatment	50.0%	-	-			
Distribution	50.0%	-	-			
TOTAL						
NPV		-	-			7,500

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	
Total Wastewater Principal	15
Term of Debt	
Interest Rate	2.7%

2024	\$ 310,000			\$ -	\$ 310,000		
2025	310,000			-	310,000		
2026	310,000			-	310,000		
2027	310,000			-	310,000		
2028	310,000			-	310,000		
2029	310,000			-	310,000		
2030	310,000			-	310,000		
2031	310,000			-	310,000		
2032	310,000			-	310,000		
2033	310,000			-	310,000		
2034	310,000			-	310,000		
Treatment Collection	0.0%		-	-			
	100.0%		-	-			
TOTAL NPV			-	-		7,500	-

Series	
Total Wastewater Principal	30
Term of Debt	
Interest Rate	0.0%

2024	\$ 16,629,000			\$ -	\$ 16,629,000		
2025	16,629,000			-	16,629,000		
2026	16,629,000			-	16,629,000		
2027	16,629,000			-	16,629,000		
2028	16,629,000			-	16,629,000		
2029	16,629,000			-	16,629,000		
2030	16,629,000			-	16,629,000		
2031	16,629,000			-	16,629,000		
2032	16,629,000			-	16,629,000		
2033	16,629,000			-	16,629,000		
2034	16,629,000			-	16,629,000		
Treatment Collection	0.0%		-	-			
	100.0%		-	-			
TOTAL NPV			-	-		7,500	-

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	
Total Wastewater Principal	20
Term of Debt	
Interest Rate	4.5%

2024	\$ 552,500			\$ -	\$ 552,500		
2025	552,500			-	552,500		
2026	552,500			-	552,500		
2027	552,500			-	552,500		
2028	552,500			-	552,500		
2029	552,500			-	552,500		
2030	552,500			-	552,500		
2031	552,500			-	552,500		
2032	552,500			-	552,500		
2033	552,500			-	552,500		
2034	552,500			-	552,500		
Treatment Collection	50.0%		-	-			
TOTAL NPV	50.0%		-	-		7,500	-

Series	
Total Wastewater Principal	20
Term of Debt	
Interest Rate	4.8%

2024	\$ 1,705,000			\$ -	\$ 1,705,000		
2025	1,705,000			-	1,705,000		
2026	1,705,000			-	1,705,000		
2027	1,705,000			-	1,705,000		
2028	1,705,000			-	1,705,000		
2029	1,705,000			-	1,705,000		
2030	1,705,000			-	1,705,000		
2031	1,705,000			-	1,705,000		
2032	1,705,000			-	1,705,000		
2033	1,705,000			-	1,705,000		
2034	1,705,000			-	1,705,000		
Treatment Collection	0.0%		-	-			
TOTAL NPV	100.0%		-	-		7,500	-

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year							
2024							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	2024
Total Water Principal	\$ 30,720,000
Term of Debt	20
Interest Rate	4.0%

2024	30,720,000			\$	30,720,000		
2025	30,720,000	1,031,631	1,228,800	2,260,431	29,688,369		
2026	29,688,369	1,072,897	1,187,535	2,260,431	28,615,472		
2027	28,615,472	1,115,812	1,144,619	2,260,431	27,499,660		
2028	27,499,660	1,160,445	1,099,986	2,260,431	26,339,215		
2029	26,339,215	1,206,863	1,053,569	2,260,431	25,132,352		
2030	25,132,352	1,255,137	1,005,294	2,260,431	23,877,214		
2031	23,877,214	1,305,343	955,089	2,260,431	22,571,872		
2032	22,571,872	1,357,557	902,875	2,260,431	21,214,315		
2033	21,214,315	1,411,859	848,573	2,260,431	19,802,456		
2034	19,802,456	1,468,333	792,098	2,260,431	18,334,123		
Treatment	92.5%		9,452,192	20,909,294			
Distribution	7.5%		766,245	1,695,019			
TOTAL			10,218,437	22,604,314			
NPV		9,627,235	8,198,007	17,825,242		7,500	1,093.07

Series	2025
Total Water Principal	\$ 30,720,000
Term of Debt	20
Interest Rate	4.0%

2024				\$	-		
2025	30,720,000				30,720,000		
2026	30,720,000	1,031,631	1,228,800	2,260,431	29,688,369		
2027	29,688,369	1,072,897	1,187,535	2,260,431	28,615,472		
2028	28,615,472	1,115,812	1,144,619	2,260,431	27,499,660		
2029	27,499,660	1,160,445	1,099,986	2,260,431	26,339,215		
2030	26,339,215	1,206,863	1,053,569	2,260,431	25,132,352		
2031	25,132,352	1,255,137	1,005,294	2,260,431	23,877,214		
2032	23,877,214	1,305,343	955,089	2,260,431	22,571,872		
2033	22,571,872	1,357,557	902,875	2,260,431	21,214,315		
2034	21,214,315	1,411,859	848,573	2,260,431	19,802,456		
Treatment	94.0%		8,859,678	19,120,917			
Distribution	6.0%		566,661	1,222,965			
TOTAL			9,426,339	20,343,882			
NPV		8,687,995	7,691,330	16,379,325		7,500	1,025.51

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year							
2024	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	2026
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024					\$ -		
2025					-		
2026	-				-		
2027	-	-	-	-	-		
2028	-	-	-	-	-		
2029	-	-	-	-	-		
2030	-	-	-	-	-		
2031	-	-	-	-	-		
2032	-	-	-	-	-		
2033	-	-	-	-	-		
2034	-	-	-	-	-		
Treatment Distribution	0.0%						
	100.0%						
TOTAL NPV		-	-	-		7,500	-

Series	2027
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024					\$ -		
2025					-		
2026	-				-		
2027	-	-	-	-	-		
2028	-	-	-	-	-		
2029	-	-	-	-	-		
2030	-	-	-	-	-		
2031	-	-	-	-	-		
2032	-	-	-	-	-		
2033	-	-	-	-	-		
2034	-	-	-	-	-		
Treatment Distribution	0.0%						
	100.0%						
TOTAL NPV		-	-	-		7,500	-

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year							
2024	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	2028
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024					\$ -		
2025					-		
2026					-		
2027					-		
2028	-				-		
2029	-	-	-	-	-		
2030	-	-	-	-	-		
2031	-	-	-	-	-		
2032	-	-	-	-	-		
2033	-	-	-	-	-		
2034	-	-	-	-	-		
Treatment Distribution	0.0%						
	100.0%						
TOTAL NPV		-	-	-	-	7,500	-

Series	2029
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024					\$ -		
2025					-		
2026					-		
2027					-		
2028					-		
2029	-				-		
2030	-	-	-	-	-		
2031	-	-	-	-	-		
2032	-	-	-	-	-		
2033	-	-	-	-	-		
2034	-	-	-	-	-		
Treatment Distribution	0.0%						
	100.0%						
TOTAL NPV		-	-	-	-	7,500	-

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	2030
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024				\$ -	
2025				-	
2026				-	
2027				-	
2028				-	
2029				-	
2030	-			-	
2031	-	-	-	-	
2032	-	-	-	-	
2033	-	-	-	-	
2034	-	-	-	-	
Treatment Distribution	0.0%			-	-
	100.0%			-	-
TOTAL NPV		-	-	-	7,500

Series	2031
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024				\$ -	
2025				-	
2026				-	
2027				-	
2028				-	
2029				-	
2030				-	
2031	-			-	
2032	-	-	-	-	
2033	-	-	-	-	
2034	-	-	-	-	
Treatment Distribution	0.0%			-	-
	100.0%			-	-
TOTAL NPV		-	-	-	7,500

CITY OF MARBLE FALLS WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL							
Calculation Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE
2024							
Year	Beginning Principal	Principal Payment	Interest Payment	Total Payment	Ending Principal	Total New Capacity LUEs	Interest Expense Per LUE

Input Area -- Forecast Debt Service
Impact Fee: Wastewater

Series	2032
Total Water Principal	\$ -
Term of Debt	20
Interest Rate	4.0%

2024				\$ -	
2025				-	
2026				-	
2027				-	
2028				-	
2029				-	
2030				-	
2031				-	
2032	-			-	
2033	-	-	-	-	
2034	-	-	-	-	
Treatment	0.0%			-	
Distribution	100.0%			-	
TOTAL NPV					7,500

Wastewater System

Series	TOTAL
Discount Rate	4.6%

2024	\$ -	\$ -	\$ -
2025	1,031,631	1,228,800	2,260,431
2026	2,104,528	2,416,335	4,520,863
2027	2,188,709	2,332,154	4,520,863
2028	2,276,257	2,244,605	4,520,863
2029	2,367,308	2,153,555	4,520,863
2030	2,462,000	2,058,863	4,520,863
2031	2,560,480	1,960,383	4,520,863
2032	2,662,899	1,857,963	4,520,863
2033	2,769,415	1,751,447	4,520,863
2034	2,880,192	1,640,671	4,520,863
Treatment		18,311,870	40,030,212
Collection		1,332,906	2,917,984
TOTAL	23,303,420	19,644,776	42,948,196
NPV Treatment		13,864,422	29,849,572
NPV Collection		1,009,180	2,175,871
NPV	17,151,841	14,873,602	32,025,443

**CITY OF MARBLE FALLS
WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL**

Calculation Year
2024

***Input Area -- Debt Credit
Impact Fee: Wastewater***

Treatment

Planning Period Debt Service		
Total Principal and Interest	\$	29,849,572
<u>Funded through User Rates:</u>		
Percent		100.0%
Total		29,849,572
Credit Per LUE Per Month		
Monthly Bills from Total LUEs during Planning Period		738,489
Planning Period Credit per LUE Per Month	\$	40.42
Cumulative Credit		
Cumulative New LUE Monthly Bills		230,409
Credit per EDU Per Month	\$	40.42
Cumulative Credit		9,313,091

**CITY OF MARBLE FALLS
WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL**

Calculation Year
2024

***Input Area -- Debt Credit
Impact Fee: Wastewater***

Treatment

Planning Period Debt Service

Total Principal and Interest	\$	2,175,871
<u>Funded through User Rates:</u>		
Percent		100.0%
Total		2,175,871

Credit Per EDU Per Month

Monthly Bills from Total LUEs during Planning Period		738,489
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Planning Period Credit per LUE Per Month	\$	2.95
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Cumulative Credit

Cumulative New LUE Monthly Bills		230,409
Credit per LUE Per Month	\$	2.95
Cumulative Credit		678,874
Cumulative Credit at 50% of CIP Value plus Interest	\$	5,347,420

**CITY OF MARBLE FALLS
WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL**

<u>Calculation Year</u> 2024					MAXIMUM Wastewater Impact Fee
Description	Total	Water Meter Size	AWWA Meter Ratio		
Summary Schedule -- Calculation of Treatment Wastewater Impact Fee					
Impact Fee: Wastewater					
Treatment System Impact Fee					
I. Current and Forecast Capacity (LUEs)					
Beginning Demand	4,234				
New Growth 2024 - 2033	<u>3,864</u>				
Total Demand 2033	8,098				
Forecast Demand 2033 - 2050	<u>8,245</u>				
Total Existing and Forecast Demand 2050	<u>16,343</u>				
II. Impact Fee per LUE					
CIP Value of 2024 - 2033 Growth-Related Improvements	\$ 21,017,394				
Impact Fee Study Preparation Expenses	<u>15,000</u>				
Interest Expense Allocated to Planning Period	<u>13,864,422</u>				
Sub-Total	\$ 34,896,816				
Less CIP Credit	<u>9,313,091</u>				
New Value of CIP to be Paid from Impact Fees	\$ 25,583,725				
Total Forecast Expansions 2024 - 2033	3,864				
Growth Related Wastewater Impact Fee Per LUE	\$ 6,620				
III. Wastewater Impact Fee by Water Meter Size					
		5/8" -- 3/4"	1.0	\$	6,620
		1"	1.7	\$	11,056
		1 1/2"	3.3	\$	22,046
		2"	5.3	\$	35,287
		3"	16.7	\$	110,364
		4"	41.7	\$	275,876
		6"	66.7	\$	441,388
		8"	133.3	\$	882,711
		MF	0.5	\$	3,310

**CITY OF MARBLE FALLS
WASTEWATER SYSTEM IMPACT FEE CALCULATION MODEL**

Calculation Year
2024

Description

Total

**Water
Meter
Size**

**AWWA
Meter
Ratio**

**MAXIMUM
Wastewater
Impact
Fee**

Summary Schedule -- Calculation of Collection Wastewater Impact Fee
Impact Fee:

Wastewater

Collection System Impact Fee

I. Current and Forecast Capacity (LUEs)

Beginning Demand	4,234
New Growth 2024 - 2033	<u>3,864</u>
Total Demand 2033	8,098
Forecast Demand 2033 - 2050	<u>8,245</u>
Total Existing and Forecast Demand 2050	16,343

II. Fee per LUE

CIP Value of 2024 - 2033 Growth-Related Improvements	\$ 9,670,660
Impact Fee Study Preparation Expenses	15,000
Interest Expense Allocated to Planning Period	<u>1,009,180</u>
Sub-Total	\$ 10,694,840
Less CIP Credit	<u>678,874</u>
New Value of CIP to be Paid from Impact Fees	\$ 10,015,966
Total Forecast Expansions 2020 - 2029	3,864
Growth Related Collection Impact Fee Per LUE	\$ 2,592

III. Wastewater Impact Fee by Water Meter Size

5/8" -- 3/4"	1.0	\$	2,592
1"	1.7	\$	4,328
1 1/2"	3.3	\$	8,631
2"	5.3	\$	13,815
3"	16.7	\$	43,207
4"	41.7	\$	108,005
6"	66.7	\$	172,802
8"	133.3	\$	345,579
MF	0.5	\$	1,296

APPENDIX H

Project: Impact Fee Study
Job No.: 01109-010
Date: 10/18/2023
By: MG/Willdan
Title: Maximum Allowable Impact Fee



Proposed Maximum Allowable Impact Fee

Meter Size (Inch) or Type	LUE Equivalent	Water Impact Fee	Wastewater Impact Fee
3/4	1.00	\$7,711	\$9,212
1	1.67	\$12,877	\$15,384
1.5	3.33	\$25,676	\$30,677
2	5.33	\$41,097	\$49,102
3	16.67	\$128,535	\$153,571
4	41.67	\$321,298	\$383,881
6	66.67	\$514,061	\$614,190
8	133.33	\$1,028,045	\$1,228,290
Multifamily	0.50	\$3,855	\$4,606