

City of Marble Falls | TX

2020 Water and Wastewater Rate Study and Financial Plan



**CITY OF MARBLE FALLS, TEXAS
2020 WATER AND WASTEWATER RATE STUDY
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Appendix A – Water and Wastewater Rate Model

Acknowledgements

During the course of this rate study, several City employees expended considerable time and effort in assisting the project team. These employees included the Mayor and Council, Mr. Mike Hodge, Mr. Caleb Kraenzel, Mr. Baron Sauls, Ms. Angie Atkinson, Mr. James Kennedy, and Mr. Jay Everett. The project team owes a debt of gratitude to the hard work, dedication and professionalism of these individuals, without whom this project would not have been successfully completed.

The project team has relied upon the extensive data supplied by the City. Thus, the integrity of the study is largely dependent upon the accuracy of this financial and volumetric 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 cash flow projections and debt service coverage calculations are not intended to present overall financial positions, results of operations, and/or cash flows for the periods indicated, which is in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants.

Executive Summary

Background



In June 2020 the City of Marble Falls, Texas (the “City”) engaged **Willdan** to conduct a water and wastewater rate study and long-term financial plan. The City was interested in developing a comprehensive water and wastewater rate plan for FY 2020 and beyond.

The City identified numerous objectives for this study, including but not limited to the following:

- A comprehensive analysis and evaluation of the water and wastewater systems’ current cost of service and revenue requirements
- An estimate of current and forecast accounts, volumes and billing units for the ten-year forecast period
- A forecast of operating expenses over the next decade, taking into consideration such factors as inflation, system growth, and forecast increases from their provider, Lower Colorado River Authority
- A thorough review of the water and wastewater systems’ known capital improvement needs, and further development of a plan for funding capital requirements through fund transfers or the issuance of long-term debt
- An analysis of Marble Falls’ economic, income and demographic information, including a comparison of the City’s rates to surrounding communities
- The development of alternative rate structures that would recover the City’s cost of service, ensure equitable, just and reasonable treatment of identified customer classes, and maintain critical financial ratios
- An analysis and development of Marble Falls’ outside city customers rates
- An analysis and development of a wholesale water rate

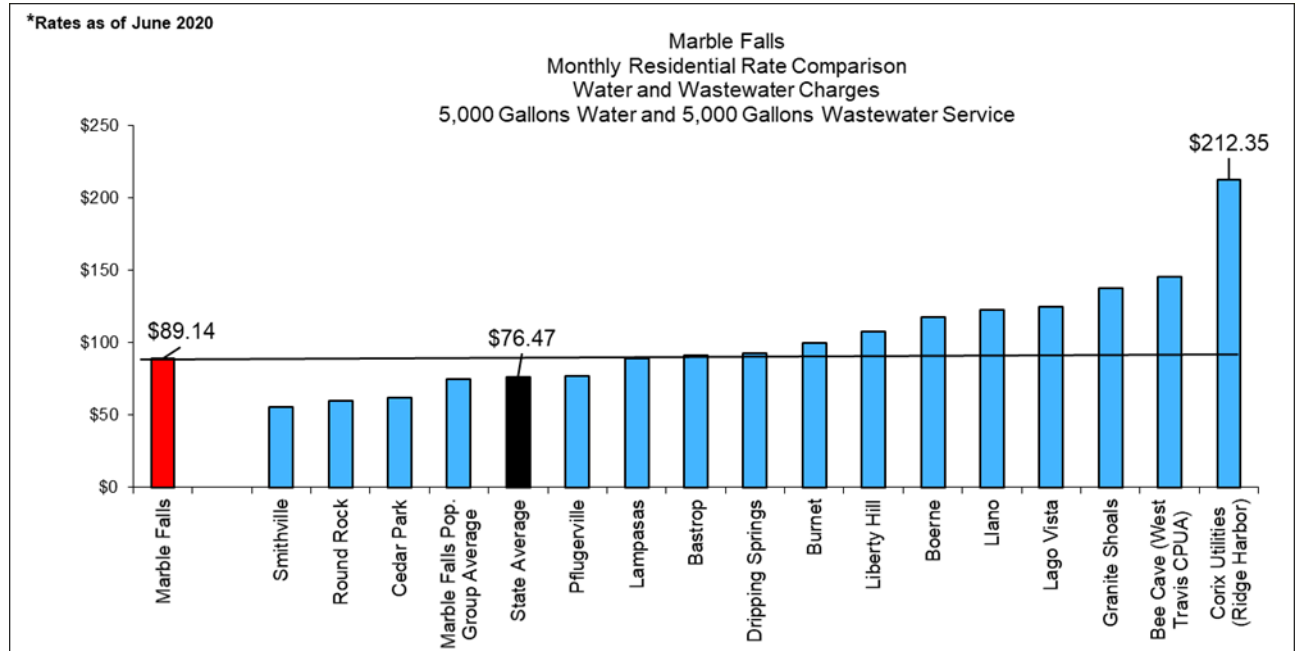
In conjunction with City staff, the project team evaluated several alternative rate structures, which would enable the City to achieve these objectives while continuing to provide ratepayers with superior quality water and wastewater services. After a series of meetings with City officials, the project team narrowed its recommendations to the water and wastewater rate design alternative contained in this study. The analysis and recommendations presented in this study achieve all of the objectives outlined above.

Water and Wastewater Rate Comparison

Table ES-1 compares Marble Falls’ current monthly water and wastewater charges to those of nearby cities in Texas. A volume of 5,000 gallons water and 5,000 gallons wastewater were used for the residential comparison as it represents typical usage levels for an average household.

The rate data is based on published rates and ordinances posted by each municipality in their rate ordinance. These rates do not include sales tax, activation or other charges beyond the basic minimum and volume charges.

TABLE ES-1



The chart reveals that the City’s rates are comparable to, or lower than, those of similarly sized cities in the region. For 5,000 gallons of water usage and 5,000 gallons of wastewater service a residential ratepayer in Marble Falls pays approximately \$89.14.

Water and Wastewater Customers and Meters – Test Year & Ten-Year Forecast

Table ES-2 presents total water accounts and classifications for the City forecast for the next decade. The table reveals that by the year 2029 the City of Marble Falls is forecast to have a total of **4,533** water customer accounts.

Table ES-3 presents total wastewater accounts and classifications for the City forecast for the next decade. The table reveals that by the year 2029 the City of Marble Falls is forecast to have a total of **4,391** wastewater customer accounts.

It must be stressed that if the City does not acquire these projected new connections, financial and rate plan assumptions will have to be substantially modified.

TABLE ES-2

CITY OF MARBLE FALLS									
FORECAST TOTAL CUSTOMERS									
WATER Customer Classes									
Fiscal Year	Residential	Sprinkler/Irrigation	Commercial	Municipal	Purple Pipe	Bulk	Residential Outside	Commercial Outside	Total
WATER Total Customers									
FY 2017	2,390	179	644	44	2	1	NA	NA	3,260
FY 2018	2,441	185	644	48	2	7	NA	NA	3,327
FY 2019	2,332	192	655	43	2	9	109	2	3,344
FY 2020	2,370	192	650	45	3	15	109	2	3,386
FY 2021	2,465	196	676	45	3	15	113	2	3,515
FY 2022	2,554	199	700	45	3	15	117	2	3,636
FY 2023	2,645	203	726	45	3	15	122	2	3,761
FY 2024	2,741	207	752	45	3	15	126	2	3,890
FY 2025	2,834	210	777	45	3	15	130	2	4,017
FY 2026	2,930	214	804	45	3	15	135	2	4,148
FY 2027	3,024	217	829	45	3	15	139	3	4,275
FY 2028	3,121	221	856	45	3	15	144	3	4,406
FY 2029	3,214	224	882	45	3	15	148	3	4,533

TABLE ES-3

CITY OF MARBLE FALLS				
FORECAST TOTAL CUSTOMERS				
WASTEWATER Customer Classes				
Fiscal Year	Residential	Commercial	Municipal	Total
WASTEWATER Total Customers				
FY 2017	2,001	1,124	1	3,126
FY 2018	2,050	1,122	1	3,173
FY 2019	2,051	1,149	1	3,201
FY 2020	2,089	1,147	1	3,237
FY 2021	2,173	1,193	1	3,367
FY 2022	2,251	1,236	1	3,488
FY 2023	2,332	1,281	1	3,614
FY 2024	2,416	1,327	1	3,744
FY 2025	2,498	1,372	1	3,871
FY 2026	2,583	1,419	1	4,002
FY 2027	2,665	1,464	1	4,131
FY 2028	2,751	1,511	1	4,263
FY 2029	2,833	1,556	1	4,391

Water and Wastewater Test Year and Forecast Net Revenue Requirement

The calculation of a revenue requirement differs from a utility’s budget in that it represents only that amount that must be raised through the City’s user rates. This means that non-rate revenue (such as connection fees, late payment charges and interest) must be subtracted from the budgeted operating and capital expenditures to determine the net revenue requirement to be raised from rates.

As is typical for publicly owned utilities, Marble Falls’ system revenue requirements were developed using the cash basis of ratemaking. Under the cash basis, as defined by the AWWA Manual M-1, system revenue requirements consist of cash expenditures and other financial commitments (such as debt service coverage or reserves) that must be met through system operating revenues and other revenue sources. All data used in the development of the revenue requirements was obtained from the financial statements, budgets and other information provided by the City. Detailed calculations are presented in the rate model contained in Appendix A of this report. For rate design purposes, revenue requirements are developed separately for the water and wastewater systems.

Operating expenses include such items as chemicals, electricity, supplies, materials, and contractual services. Added to operating expenses for ratemaking purposes are the City’s annual transfers from the water and wastewater budget to the General Fund to pay for administrative support provided to the utilities through other City departments’ personnel and facilities and transfers to the Equipment Replacement Fund.

Capital Outlays are separate from the large projects included in the City’s Capital Improvement Program (“CIP”). These capital improvements are primarily focused on large repair and replacement programs such as water and sewer line replacement and water tank and pump station rehabilitation. The City’s CIP is summarized in **Table ES-4**.

TABLE ES-4

CITY OF MARBLE FALLS		
Capital Improvement Plan FY 2020 - FY 2024		
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report		
WATER PROJECTS		
WATER PLANT CLARIFIER REPAIR & PUMPS	FY 2020	\$ 1,425,000
RAW WATER INTAKE REPAIRS AND FLOODPROOFING	FY 2020 - FY 2021	535,000
ROCKY ROAD WATER LINE	FY 2022 - FY 2023	2,170,000
VIA VIEJO PUMP STATION	FY 2023	500,000
GATEWAY PUMP STATION	FY 2024	50,000
FLATROCK PUMP STATION	FY 2024	225,000
FLATROCK WATER SERVICE LINE	FY 2022 - FY 2023	5,554,500
ABOVE GROUND WATER STORAGE REHAB	FY 2020 - FY 2023	750,000
Total Water Projects		\$ 11,209,500
WASTEWATER PROJECTS		
WASTEWATER TREATMENT PLANT PLANNING/DESIGN	FY 2020 - FY 2022	\$ 3,275,000
WASTEWATER TREATMENT PLANT CONSTRUCTION	FY 2022 - FY 2024	30,100,000
ROPER LIFT STATION	FY 2024	2,500,000
WASTEWATER LINE FROM LS TO S WWTP	FY 2024	1,150,000
Total Wastewater Projects		\$ 37,025,000
RECLAIMED WATER		
EFFLUENT REUSE (PURPLE PIPE)	FY 2021 - FY 2023	\$ 538,000
Total Reclaimed Water		\$ 538,000
Total Water, Wastewater and Reclaimed Water		\$ 48,772,500

The rate plan developed for the City assumes that the City of Marble Falls issues long term debt to fund \$19,250,000 of the current ten-year Capital Improvement Plan.

Chart ES-5 presents the forecast schedule of new debt projected to be issued in order to fund a portion of the CIP over the forecast period. The City is projected to issue approximately **\$19,250,000** in long-term water and wastewater debt over the next decade. For this analysis, the project team is assuming that the debt has a term of 20 years at an interest rate of 4.5%, with level debt service payments, a 2% issuing cost and no reserve requirement.

CHART ES-5

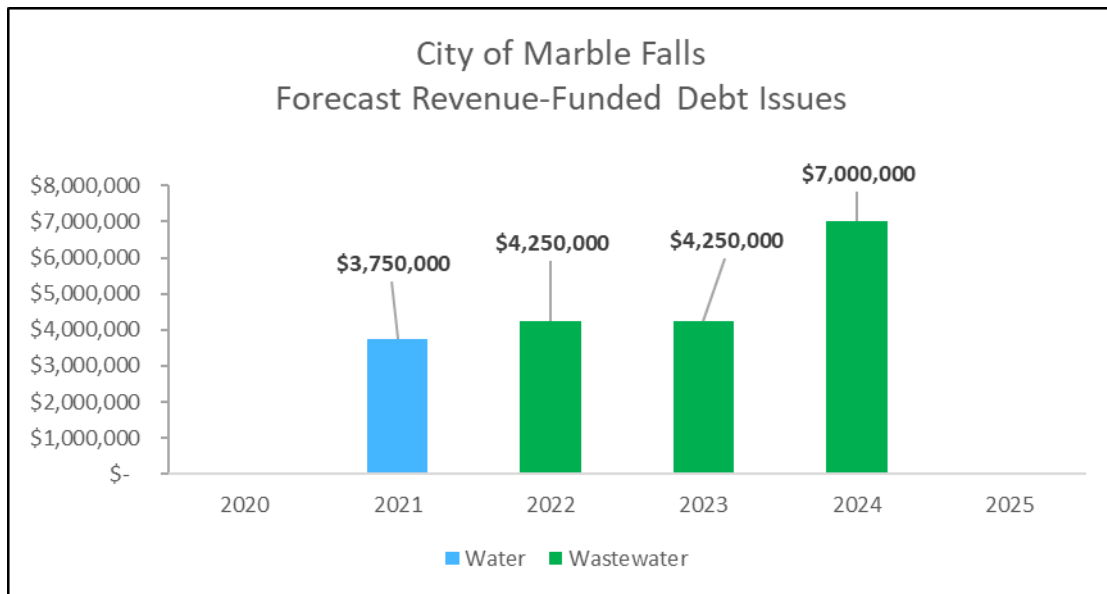


Table ES-6 presents the test year and ten-year forecast for the City’s net revenue requirement to be raised from rates for the proposed rate plan. Table ES-6 reveals that under the proposed scenario, the net revenue requirement for the water and wastewater utility is forecast to increase from \$5,399,304 in FY 2020 to \$8,823,088 in FY 2029, an average annual increase of 5.67%. Detailed calculations are presented in the rate model contained in Appendix A of this report.

TABLE ES-6

CITY OF MARBLE FALLS							
Net Revenue Requirement - Cash Basis							
SCENARIO 2020 12 10 Scenario I – Status Quo – FINAL Report							
	Operating Expenses	Capital Outlays	Debt Service	Transfers & Contingencies	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
WATER Revenue Requirement							
2020	\$ 1,870,277	\$ 76,875	\$ 1,104,460	\$ 183,000	\$ 3,234,612	\$ 255,600	\$ 2,979,012
2021	1,951,540	76,875	1,172,452	188,490	3,389,356	255,600	3,133,756
2022	2,032,417	76,875	1,466,347	195,522	3,771,161	255,600	3,515,561
2023	2,118,432	76,875	1,467,134	202,482	3,864,924	255,600	3,609,324
2024	2,208,431	76,875	1,463,984	210,006	3,959,296	255,600	3,703,696
2025	2,301,304	76,875	1,462,172	226,058	4,066,408	255,600	3,810,808
2026	2,399,276	76,875	1,459,204	242,688	4,178,043	255,600	3,922,443
2027	2,500,375	76,875	1,459,755	251,643	4,288,648	255,600	4,033,048
2028	2,607,027	76,875	1,461,517	260,758	4,406,176	255,600	4,150,576
2029	2,717,094	76,875	1,462,251	270,412	4,526,631	255,600	4,271,031
WASTEWATER Revenue Requirement							
2020	\$ 1,388,567	\$ 19,015	\$ 1,104,460	\$ 183,000	\$ 2,695,042	\$ 274,750	\$ 2,420,292
2021	1,429,903	19,015	1,172,452	188,490	2,809,859	274,750	2,535,109
2022	1,470,200	19,015	1,172,296	195,522	2,857,033	272,849	2,584,184
2023	1,515,386	19,015	1,506,341	202,482	3,243,224	273,850	2,969,374
2024	1,710,215	19,015	1,836,449	210,006	3,775,685	274,887	3,500,798
2025	1,912,439	19,015	2,383,532	226,058	4,541,044	274,244	4,266,800
2026	1,971,063	19,015	2,380,565	242,688	4,613,331	275,236	4,338,094
2027	2,029,306	19,015	2,381,115	251,643	4,681,079	274,427	4,406,653
2028	2,091,555	19,015	2,382,877	260,758	4,754,205	275,367	4,478,839
2029	2,153,400	19,015	2,383,611	270,412	4,826,438	274,381	4,552,057
Total Water and Wastewater Revenue Requirement							
2020	\$ 3,258,844	\$ 95,890	\$ 2,208,920	\$ 366,000	\$ 5,929,654	\$ 530,350	\$ 5,399,304
2021	3,381,442	95,890	2,344,903	376,980	6,199,215	530,350	5,668,865
2022	3,502,618	95,890	2,638,642	391,044	6,628,194	528,449	6,099,745
2023	3,633,818	95,890	2,973,475	404,965	7,108,148	529,450	6,578,698
2024	3,918,645	95,890	3,300,433	420,012	7,734,980	530,487	7,204,494
2025	4,213,742	95,890	3,845,704	452,116	8,607,453	529,844	8,077,609
2026	4,370,339	95,890	3,839,769	485,375	8,791,373	530,836	8,260,537
2027	4,529,682	95,890	3,840,870	503,285	8,969,727	530,027	8,439,701
2028	4,698,581	95,890	3,844,394	521,516	9,160,382	530,967	8,629,415
2029	4,870,494	95,890	3,845,862	540,823	9,353,070	529,981	8,823,088

Water and Wastewater Rate Recommendations

The water and wastewater rates developed in this study are designed to recover the test year and forecast revenue requirement while providing funding for the current identified capital, transfers and debt service.

Tables ES-7 present a summary of the recommended water rate plan proposed for the City of Marble Falls. **Table ES-8** presents a summary of the recommended wastewater rate plan proposed for the City. The following is notable about this rate proposal:

- The project team recommends that the City adopt a five-year rate plan and suggests an update to revise the rate model assumptions annually to make any needed modifications to future rate plans.
- Given the potential for unexpected events, this will allow the City to incorporate any changes to costs, volumes or growth assumptions that may occur during that time.
- Implement a 50% premium for outside city customers starting January 2021.
- Implement three-year wholesale water rates as shown in section IV of the report.

Table ES-9 presents the impact of this rate plan on monthly customer charges.



TABLE ES-7

CITY OF MARBLE FALLS Impact on Monthly Customer Charges											
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report											
		Proposed	Proposed	Proposed	Proposed	Proposed	Forecast	Forecast	Forecast	Forecast	
	Current	Jan-21	Jan-22	Jan-23	Jan-24	Jan-25	Jan-26	Jan-27	Jan-28	Jan-29	
Water Rate and Charges											
W1 Residential/Commercial											
<u>Monthly Minimum Charge</u>											
	3/4"	\$ 25.21	\$ 25.97	\$ 26.75	\$ 27.28	\$ 27.83	\$ 28.38	\$ 28.38	\$ 28.95	\$ 28.95	\$ 29.53
	1"	35.94	37.02	38.13	38.89	39.67	40.46	40.46	41.27	41.27	42.10
	1 1/2"	64.38	66.31	68.30	69.67	71.06	72.48	72.48	73.93	73.93	75.41
	2"	111.27	114.61	118.05	120.41	122.82	125.27	125.27	127.78	127.78	130.33
	3"	238.25	245.40	252.76	257.81	262.97	268.23	268.23	273.59	273.59	279.07
	4"	421.82	434.47	447.51	456.46	465.59	474.90	474.90	484.40	484.40	494.09
	6"	746.60	769.00	792.07	807.91	824.07	840.55	840.55	857.36	857.36	874.51
<u>Volume Rate/1,000 Gal</u>											
	- 10,000	4.78	4.92	5.07	5.17	5.28	5.38	5.38	5.49	5.49	5.60
	10,001 30,000	5.83	6.00	6.19	6.31	6.43	6.56	6.56	6.69	6.69	6.83
	30,001 Above	7.14	7.35	7.57	7.73	7.88	8.04	8.04	8.20	8.20	8.36
W2 Sprinkler/Irrigation											
<u>Monthly Minimum Charge</u>											
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<u>Volume Rate/1,000 Gal</u>											
	- 10,000	4.00	4.12	4.24	4.33	4.42	4.50	4.50	4.59	4.59	4.69
	10,001 30,000	4.10	4.22	4.35	4.44	4.53	4.62	4.62	4.71	4.71	4.80
	30,001 Above	4.25	4.38	4.51	4.60	4.69	4.78	4.78	4.88	4.88	4.98
W5 Purple Pipe											
<u>Monthly Minimum Charge</u>											
	3/4"	\$ 12.61	\$ 12.98	\$ 13.37	\$ 13.64	\$ 13.91	\$ 14.19	\$ 14.19	\$ 14.47	\$ 14.47	\$ 14.76
	1"	17.97	18.51	19.06	19.45	19.83	20.23	20.23	20.64	20.64	21.05
	1 1/2"	32.19	33.16	34.15	34.83	35.53	36.24	36.24	36.97	36.97	37.70
	2"	55.64	57.30	59.02	60.20	61.41	62.64	62.64	63.89	63.89	65.17
	3"	119.13	122.70	126.38	128.91	131.49	134.12	134.12	136.80	136.80	139.53
	4"	210.91	217.24	223.75	228.23	232.79	237.45	237.45	242.20	242.20	247.04
	6"	373.30	384.50	396.03	403.95	412.03	420.27	420.27	428.68	428.68	437.25
<u>Volume Rate/1,000 Gal</u>											
	- 10,000	2.39	2.46	2.54	2.59	2.64	2.69	2.69	2.74	2.74	2.80
	10,001 30,000	2.92	3.00	3.09	3.15	3.22	3.28	3.28	3.35	3.35	3.41
	30,001 Above	3.57	3.68	3.79	3.86	3.94	4.02	4.02	4.10	4.10	4.18
W6 Bulk											
<u>Monthly Minimum Charge</u>											
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<u>Volume Rate/1,000 Gal</u>											
		20.00	20.60	21.22	21.64	22.08	22.52	22.52	22.97	22.97	23.43
W7 Residential/Commercial Outside											
<u>Monthly Minimum Charge</u>											
	3/4"	\$ 25.21	\$ 38.95	\$ 40.12	\$ 40.92	\$ 41.74	\$ 42.57	\$ 42.57	\$ 43.42	\$ 43.42	\$ 44.29
	1"	35.94	55.53	57.19	58.34	59.50	60.69	60.69	61.91	61.91	63.15
	1 1/2"	64.38	99.47	102.45	104.50	106.59	108.72	108.72	110.90	110.90	113.11
	2"	111.27	171.91	177.07	180.61	184.22	187.91	187.91	191.67	191.67	195.50
	3"	238.25	368.10	379.14	386.72	394.46	402.35	402.35	410.39	410.39	418.60
	4"	421.82	651.71	671.26	684.69	698.38	712.35	712.35	726.60	726.60	741.13
	6"	746.60	1,153.50	1,188.10	1,211.86	1,236.10	1,260.82	1,260.82	1,286.04	1,286.04	1,311.76
<u>Volume Rate/1,000 Gal</u>											
	- 10,000	4.78	7.39	7.61	7.76	7.91	8.07	8.07	8.23	8.23	8.40
	10,001 30,000	5.83	9.01	9.28	9.46	9.65	9.85	9.85	10.04	10.04	10.24
	30,001 Above	7.14	11.03	11.36	11.59	11.82	12.06	12.06	12.30	12.30	12.54

TABLE ES-8

CITY OF MARBLE FALLS Impact on Monthly Customer Charges										
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report										
	Current	Proposed Jan-21	Proposed Jan-22	Proposed Jan-23	Proposed Jan-24	Proposed Jan-25	Forecast Jan-26	Forecast Jan-27	Forecast Jan-28	Forecast Jan-29
2 Wastewater Monthly Rates and Charges										
All Classes										
Monthly Minimum Charge	\$ 18.88	\$ 21.15	\$ 23.68	\$ 26.53	\$ 28.91	\$ 31.51	\$ 32.77	\$ 34.09	\$ 35.45	\$ 36.87
Volume Rate/1,000 Gal										
- Above	4.23	4.74	5.31	5.94	6.48	7.06	7.34	7.64	7.94	8.26

TABLE ES-9

CITY OF MARBLE FALLS Impact on Monthly Customer Charges										
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report										
	Current	Proposed Jan-21	Proposed Jan-22	Proposed Jan-23	Proposed Jan-24	Proposed Jan-25	Forecast Jan-26	Forecast Jan-27	Forecast Jan-28	Forecast Jan-29
Residential Monthly Charges - 3/4"										
5,000 W 5,000 WW	\$ 89.14	\$ 95.42	\$ 102.31	\$ 109.38	\$ 115.51	\$ 122.11	\$ 124.78	\$ 128.67	\$ 131.56	\$ 135.69
Increase - \$		6.28	6.90	7.07	6.12	6.60	2.67	3.89	2.89	4.13
Increase - %		7.0%	7.2%	6.9%	5.6%	5.7%	2.2%	3.1%	2.2%	3.1%
10,000 W 5,000 WW	113.04	120.03	127.67	135.24	141.89	149.02	151.69	156.11	159.00	163.69
Increase - \$		6.99	7.64	7.57	6.64	7.13	2.67	4.42	2.89	4.68
Increase - %		6.2%	6.4%	5.9%	4.9%	5.0%	1.8%	2.9%	1.9%	2.9%
20,000 W 10,000 WW	202.99	214.59	227.19	239.41	250.21	261.78	265.86	273.30	277.72	285.57
Increase - \$		11.60	12.60	12.22	10.80	11.56	4.08	7.44	4.42	7.85
Increase - %		5.7%	5.9%	5.4%	4.5%	4.6%	1.6%	2.8%	1.6%	2.8%
Commercial Monthly Charges - 1"										
20,000 W 20,000 WW	\$ 256.02	\$ 273.01	\$ 291.63	\$ 310.45	\$ 326.83	\$ 344.46	\$ 351.37	\$ 361.99	\$ 369.47	\$ 380.74
Increase - \$		16.99	18.62	18.81	16.39	17.63	6.91	10.62	7.47	11.28
Increase - %		6.6%	6.8%	6.5%	5.3%	5.4%	2.0%	3.0%	2.1%	3.1%
60,000 W 60,000 WW	737.02	783.67	834.67	885.57	930.09	977.93	996.13	1,025.52	1,045.21	1,076.36
Increase - \$		46.65	51.00	50.90	44.53	47.83	18.21	29.39	19.69	31.14
Increase - %		6.3%	6.5%	6.1%	5.0%	5.1%	1.9%	3.0%	1.9%	3.0%
Residential Outside Monthly Charges - 3/4"										
5,000 Water	\$ 49.11	\$ 75.87	\$ 78.15	\$ 79.71	\$ 81.31	\$ 82.93	\$ 82.93	\$ 84.59	\$ 84.59	\$ 86.29
Increase - \$		26.76	2.28	1.56	1.59	1.63	-	1.66	-	1.69
Increase - %		54.5%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
10,000 Water	73.01	112.80	116.18	118.51	120.88	123.30	123.30	125.76	125.76	128.28
Increase - \$		39.79	3.38	2.32	2.37	2.42	-	2.47	-	2.52
Increase - %		54.5%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
Commercial Outside Monthly Charges - 1"										
20,000 Water	152.54	235.67	242.74	247.60	252.55	257.60	257.60	262.75	262.75	268.01
Increase - \$		83.13	7.07	4.85	4.95	5.05	-	5.15	-	5.26
Increase - %		54.5%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
60,000 Water	464.34	717.41	738.93	753.71	768.78	784.16	784.16	799.84	799.84	815.84
Increase - \$		253.07	21.52	14.78	15.07	15.38	-	15.68	-	16.00
Increase - %		54.5%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%

SECTION I

Introduction and Demographic Profile

Background



In June 2020 the City of Marble Falls, Texas (the “City”) engaged **Willdan** to conduct a water and wastewater rate study and long-term financial plan. The City was interested in developing a comprehensive water and wastewater rate plan for FY 2020 and beyond. Numerous objectives were identified by the City for this study, including but not limited to the following:

- A comprehensive analysis and evaluation of the water and wastewater systems’ current cost of service and revenue requirements
- An estimate of current and forecast accounts, volumes and billing units for the ten-year forecast period
- A forecast of operating expenses over the next decade, taking into consideration such factors as inflation, system growth, and forecast increases from their regional wholesale provider, Lower Colorado River Authority
- A thorough review of the water and wastewater systems’ known capital improvement needs, and further development of a plan for funding capital requirements through fund transfers or the issuance of long-term debt
- An analysis of Marble Falls’ economic, income and demographic information, including a comparison of the City’s rates to similar-sized surrounding communities
- The development of alternative rate structures that would recover the City’s cost of service, ensure equitable, just and reasonable treatment of identified customer classes, and maintain critical financial ratios
- An analysis and development of Marble Falls’ outside city customers rates
- An analysis and development of a wholesale water rate

In conjunction with City staff, the project team evaluated several alternative rate structures, all of which would enable the City to achieve these objectives while continuing to provide ratepayers with superior quality water and wastewater service. After a series of meetings with City officials, the project team narrowed its recommendations

to the water and wastewater rate design recommendation contained in this study. The analysis and recommendations presented in this study achieve all of the objectives outlined above.

Report Organization

This report is organized into the following sections:

Section I – Introduction and Demographic Profile - outlines the background, objectives and scope of this rate study and long-term financial plan. Also presents the City’s current rate structures and a demographic profile of the City of Marble Falls. This includes a comparison of the City’s water and wastewater charges with other cities in Texas.

Section II – Water and Wastewater Test Year and Forecast Volumes – analyzes the City’s customer base, total accounts and current volumes of treated water and wastewater. This section presents totals for the current year and a forecast ten years into the future.

Section III – Water and Wastewater Test Year and Forecast Revenue Requirement – outlines the process of analyzing the City’s current water and wastewater utility cost structure. The total current or “test year” revenue requirements are developed, and costs are functionalized between treatment, distribution/collection, administration and customer billing. Using the test year as a basis, costs are forecast for a ten-year period.

Section IV – Water and Wastewater Rate Design – Presents rate recommendations for the City to consider which would enable it to meet its revenue requirements over the next decade. Also presents an analysis of the impact of these rate plans on each defined customer class.

Appendix A – presents a hard copy printout of the interactive Microsoft Excel spreadsheet model developed for the City to calculate water and wastewater current and future revenue requirements. The model automatically generates all calculations based on a set of defined user inputs. An electronic copy of this model will be provided to the City so that staff may use it as a tool for future rate development.



City Leadership

The City operates under a Council-Manager form of government. The Council consists of the Mayor and six council members. The City Manager reports to the Mayor, Council and the citizens of Marble Falls, and is responsible for the day-to-day operations of the City. All changes to the City’s water and wastewater rate structure must be approved by a vote of the Council. **Table I-1** lists current serving City officials.

The City utilizes standard governmental accounting procedures for its general and enterprise funds. The Fiscal Year begins on October 1st and ends on the following September 30th.

TABLE I-1

CITY OF MARBLE FALLS			
CITY OFFICIALS – OCTOBER 2020			
Mayor and Council		Senior City Staff	
John Packer	Mayor	Mike Hodge	City Manager
Craig Magerkurth	Council Member	Caleb Kraenzel	Assistant City Manager
Dave Rhodes	Council Member	Baron Sauls	Interim Finance Director
Rene Rosales	Council Member	Angie Atkinson	Senior Accountant
Celia Merrill	Council Member	James Kennedy	Public Works Director
Richard Westerman	Council Member	Jay Everett	Assistant Public Works Director
Reed Norman	Council Member		

Water and Wastewater Current Rates

Table I-2 summarizes the City’s current water and wastewater rate structures. The current water rate structure assesses a base charge which varies by meter size to the Residential, Commercial, and Purple Pipe customer classes. There is no base charge for the Sprinkler/Irrigation and Bulk customer classes. Residential, Commercial, Sprinkler/Irrigation, and Purple Pipe water accounts are assessed for consumption to inverted block volume rates to encourage conservation. The Bulk customer class has a flat fee of \$20 for each 1,000 gallons of consumption.

All wastewater customers currently pay a monthly base rate of \$18.88. Residential wastewater volume rates are based on winter averages, a common billing procedure for cities in Texas and throughout the United States. The winter average methodology is used to eliminate sewer charges for discretionary summer water usage that is not returned to the sewer system, i.e. lawn watering and car washing. The City bases residential wastewater billing units on the average water usage for the months of November, December, January and February. Non-Residential wastewater volume rates are based on total water usage for every month.

TABLE I-2

CITY OF MARBLE FALLS					
CURRENT WATER AND WASTEWATER RATES					
Water Rates					
Residential/Commercial Rates			Sprinkler/Irrigation		
Minimum Charge by Meter Size	3/4"	\$ 25.21	Minimum Charge by Meter Size	3/4"	\$ -
	1"	35.94		1"	-
	1 1/2"	64.38		1 1/2"	-
	2"	111.27		2"	-
	3"	238.25		3"	-
	4"	421.82		4"	-
	6"	746.60		6"	-
Volume Rate (per 1,000 Gallons)			Volume Rate (per 1,000 Gallons)		
	0	10,000 \$ 4.78		0	10,000 \$ 4.00
	10,001	30,000 5.83		10,001	30,000 4.10
	30,001	Above 7.14		30,001	Above 4.25
Bulk			Purple Pipe		
Volume Rate (per 1,000 Gallons)		\$ 20.00	Minimum Charge by Meter Size	3/4"	\$ 12.61
				1"	17.97
				1 1/2"	32.19
				2"	55.64
				3"	119.13
				4"	210.91
				6"	373.30
Wastewater Rates -- All Customers					
Minimum Charge		\$ 18.88	Volume Rate (per 1,000 Gallons)		
Volume Rate (per 1,000 Gallons)		4.23		0	10,000 \$ 2.39
				10,001	30,000 2.92
				30,001	Above 3.57

Water and Wastewater Rate Comparison

Table I-3 compares Marble Falls' monthly residential water and wastewater charges to those of nearby cities in Texas. **Chart I-4** presents the municipal data graphically. Volumes of 5,000 gallons water and 5,000 gallons wastewater were used for the comparison as they represent typical usage levels for an average household in Marble Falls. The rate data is based on published rates and ordinances posted by each municipality in their rate ordinance as of June 2020.

Table I-5 compares Marble Falls' monthly commercial water and wastewater charges to those of nearby cities in Texas. **Chart I-6** presents the municipal data graphically. Volumes of 50,000 gallons water and 50,000 gallons wastewater were used for the comparison as they represent typical usage levels. The rate data is based on published rates and ordinances posted by each municipality in their rate ordinance as of June 2020.

These rates do not include sales tax, activation or other charges beyond the basic minimum and volume charges. Comparisons such as these are for usage charges only. This type of comparison may have the unintended effect of discriminating against communities who choose to finance system expansions through current rates or revenue bonds, which are included in rates, as opposed to those who utilize general obligation bonds, which are funded through taxes. All else being equal, a City that primarily or exclusively uses general obligation bonds will have a lower water rate per 1,000 gallons but a higher tax rate.

With these caveats in mind, the comparisons reveal that the City's rates are comparable to, or lower than, those of other cities in the region. The following is noteworthy about these charts:

- Many cities do not assess rates that recover the full cost of service, choosing instead to subsidize their water and wastewater utilities with other revenues or to defer needed repairs and maintenance at the expense of system reliability and integrity.
- Some cities do not charge residential customers by meter size while the City does. Since the majority of the current residential meters are 3/4" in the City, the comparisons reflect 3/4" meters for all the cities that charge by meter size.
- The majority of the current commercial meters are 3/4" in the City, the comparisons reflect 3/4" meters for all the cities that charge by meter size.
- For 5,000 gallons of water usage and 5,000 gallons of wastewater service, a residential ratepayer in Marble Falls pays approximately \$89.14 (not including taxes).
- For 50,000 gallons of water usage and 50,000 gallons of wastewater service, a commercial ratepayer in Marble Falls pays approximately \$562.79 (not including taxes).

TABLE I-3

CITY OF MARBLE FALLS				
MONTHLY RESIDENTIAL CHARGES -- 5,000 GALLONS WATER AND WASTEWATER				
	Population	Water	Wastewater	Total
Marble Falls	7,444	\$ 49.11	\$ 40.03	\$ 89.14
Smithville	4,472	25.80	29.75	55.55
Round Rock	117,901	29.32	30.22	59.54
Pflugerville	64,431	42.35	34.50	76.85
Cedar Park	76,999	28.66	33.67	62.33
Lampasas	7,909	47.25	41.75	89.00
Corix Utilities (Ridge Harbor)	946	115.14	97.21	212.35
Liberty Hill	2,993	58.14	49.67	107.81
Bastrop	9,420	42.35	49.22	91.57
Boerne	20,184	67.27	50.65	117.92
Dripping Springs	6,159	47.75	44.65	92.40
Burnet	7,100	44.64	55.00	99.64
Lago Vista	7,117	52.27	72.75	125.02
Llano	3,636	48.90	73.43	122.33
Bee Cave (West Travis CPUA)	6,801	68.07	77.28	145.35
Granite Shoals	5,117	54.61	83.32 *	137.93
Marble Falls Pop. Group Average		42.10	32.71	74.81
State Average		41.28	35.19	76.47

Source: Cities' Websites; US Census Bureau & 2020 TML Water & Wastewater Rate Survey
 * From Marble Falls "Water Rate Comparison 2019.xlsx"

CHART I-4

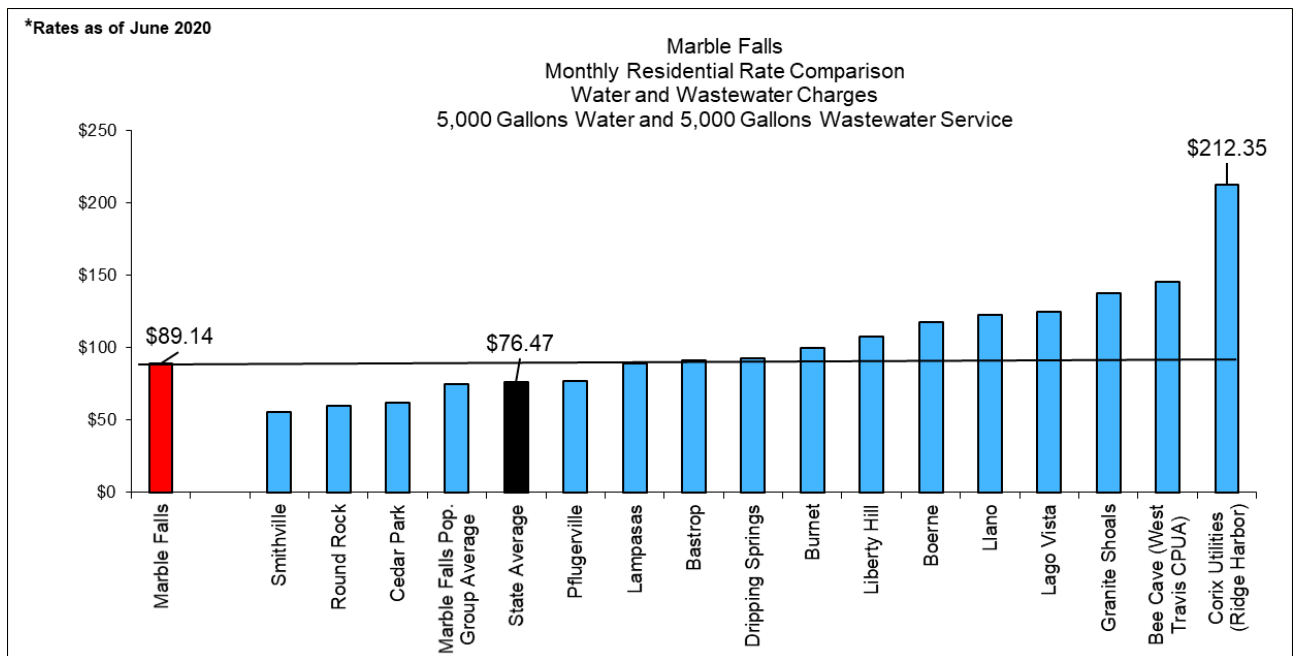
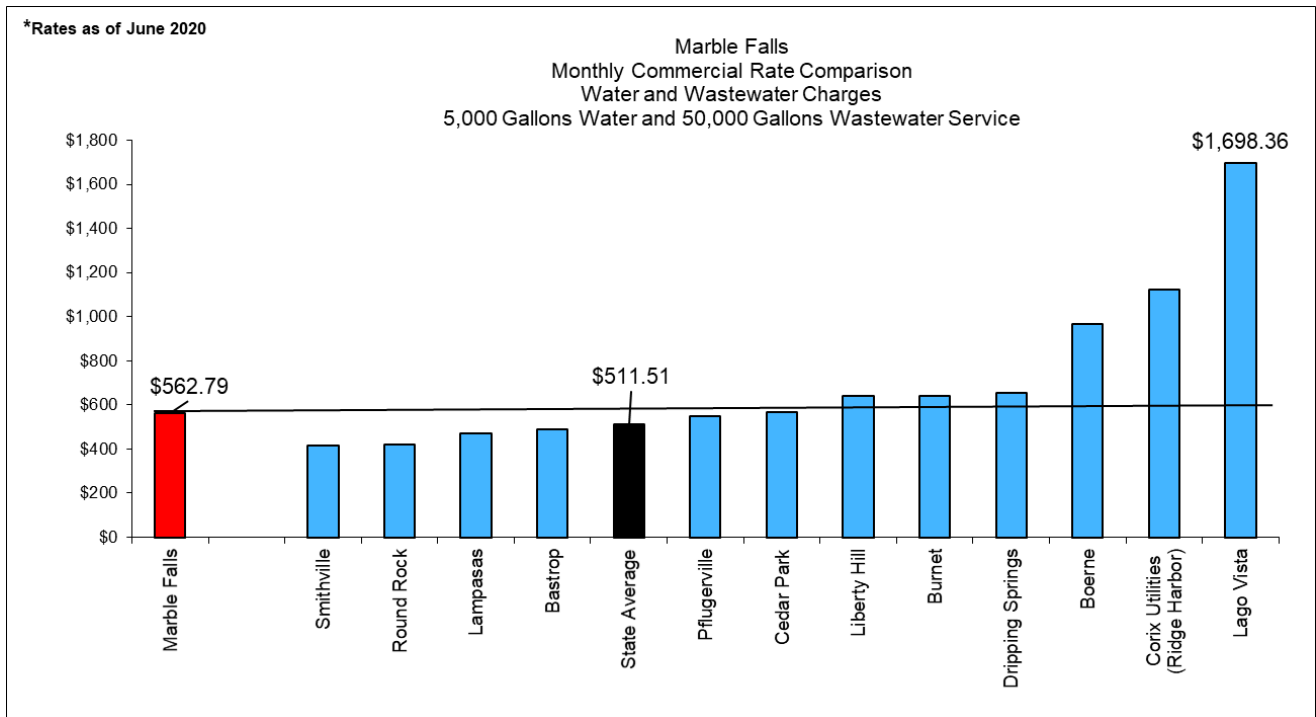


TABLE I-5

CITY OF MARBLE FALLS				
MONTHLY COMMERCIAL CHARGES -- 50,000 GALLONS WATER AND WASTEWATER				
	Population	Water	Wastewater	Total
Marble Falls 3/4" Meter; Add 2 LUE	7,444	\$ 332.41	\$ 230.38	\$ 562.79
Smithville	4,472	212.56	203.00	415.56
Pflugerville	64,431	416.90	133.50	550.40
Cedar Park	76,999	288.15	280.00	568.15
Lampasas	7,909	266.60	205.00	471.60
Corix Utilities (Ridge Harbor)	946	776.50	346.00	1,122.50
Bastrop	9,420	299.82	187.97	487.79
Boerne	20,184	457.08	509.60	966.68
Dripping Springs	6,159	345.50	310.25	655.75
Burnet	7,100	359.68	280.00	639.68
Lago Vista	7,117	970.86	727.50	1,698.36
Liberty Hill	3,636	456.79	182.61	639.40
Round Rock		236.41	182.77	419.18
Marble Falls Pop. Group Average		296.57	199.40	495.97
State Average		315.52	195.99	511.51

Source: Cities' Websites; US Census Bureau & 2020 TML Water & Wastewater Rate Survey
 * From Marble Falls "Water Rate Comparison 2019.xlsx"

CHART I-6



Section II

SECTION II

Water and Wastewater Test Year and Forecast Volumes



In order to accurately forecast future revenues and expenses, it is necessary to examine current water and wastewater utility conditions. The first step in developing cost of service rates is to analyze patterns of usage, both for the system as a whole, and for specified customer classes.

For the City of Marble Falls, water and wastewater records maintained by the City were reviewed for a three-year period beginning October 2016. These records provided information on the monthly water volumes distributed system-wide as well as the number of accounts for each month and the associated revenues. Additionally, these records provided the number of accounts, billing units and revenues by month for all classifications of

wastewater customers.

According to standard utility ratemaking methodology, in order to allocate revenue requirements equitably among system users, customers must be classified into relatively homogeneous groups with similar usage characteristics or service demands. Costs are then allocated to the customer classes in proportion to the usage characteristics of each class. For the water system, costs are typically allocated to customers based on their average and peak water demands. For the wastewater system, costs are allocated to customers based on their estimated wastewater flows, and in some cases, based on wastewater strengths.

The project team finds the customer class distinctions to be reasonable and appropriate, meeting the criteria of homogenous groups with similar usage patterns.

In this section the City's functional customer classes and test year usage patterns will be thoroughly analyzed. A ten-year projection of customers and usage will also be presented. These forecasts, along with the revenue requirements, will form the basis of the rate design recommendation.

Water and Wastewater Customers – Current Year

Table I-2 from the previous section present the City’s current water and wastewater rate structures for its existing customers. The City maintains eight separate and distinct customer classes. The project team reviewed volume and customer data for each of these customer classes, as well as for the City as a whole.

The rate model customer classes are outlined in **Table II-1**. This table presents the total customers by customer class for the test year FY 2020.

There are 3,386 water accounts and 3,237 wastewater accounts in the City in the test year.

TABLE II-1

CITY OF MARBLE FALLS			
EXISTING CUSTOMER CLASSES			
WATER Customer Accounts		WASTEWATER Customer Accounts	
Residential	2,370	Residential	2,089
Sprinkler/Irrigation	192	Commercial	1,147
Commercial	650	Municipal	<u>1</u>
Municipal	45		
Purple Pipe	3		
Bulk	15		
Residential Outside	109		
Commercial Outside	<u>2</u>		
Total Accounts	3,386	Total Accounts	3,237

Water and Wastewater Customers and Accounts – Test Year & Ten-Year Forecast

The majority of the water accounts served by Marble Falls are residential, with the balance being Sprinklers/Irrigation, Commercial, Municipal, Purple Pipe, and Bulk. In addition, there are approximately 111 Residential Outside and Commercial Outside water-only customers.

Similarly, the majority of wastewater accounts are residential with the remaining composed of commercial and Municipal customers. **Table II-2** presents total water accounts for the City for the test year and forecast period.

TABLE II-2

CITY OF MARBLE FALLS									
FORECAST TOTAL CUSTOMERS									
WATER Customer Classes									
Fiscal Year	Residential	Sprinkler/Irrigation	Commercial	Municipal	Purple Pipe	Bulk	Residential Outside	Commercial Outside	Total
WATER Total Customers									
FY2017	2,390	179	644	44	2	1	NA	NA	3,260
FY2018	2,441	185	644	48	2	7	NA	NA	3,327
FY2019	2,332	192	655	43	2	9	109	2	3,344
FY2020	2,370	192	650	45	3	15	109	2	3,386
FY2021	2,465	196	676	45	3	15	113	2	3,515
FY2022	2,554	199	700	45	3	15	117	2	3,636
FY2023	2,645	203	726	45	3	15	122	2	3,761
FY2024	2,741	207	752	45	3	15	126	2	3,890
FY2025	2,834	210	777	45	3	15	130	2	4,017
FY2026	2,930	214	804	45	3	15	135	2	4,148
FY2027	3,024	217	829	45	3	15	139	3	4,275
FY2028	3,121	221	856	45	3	15	144	3	4,406
FY2029	3,214	224	882	45	3	15	148	3	4,533
WATER Annual New Customers									
FY2018	51	6	-	4	-	6	NA	NA	67
FY2019	(109)	7	11	(5)	-	2	109	2	17
FY2020	38	-	(5)	2	1	6	-	-	42
FY2021	95	4	26	-	-	-	4	0	129
FY2022	89	4	24	-	-	-	4	0	121
FY2023	92	4	25	-	-	-	4	0	125
FY2024	95	4	26	-	-	-	4	0	129
FY2025	93	4	26	-	-	-	4	0	127
FY2026	96	4	26	-	-	-	4	0	131
FY2027	94	3	26	-	-	-	4	0	127
FY2028	97	3	27	-	-	-	4	0	131
FY2029	94	3	26	-	-	-	4	0	127

For each of the historical years, the average number of accounts for the year is shown and the growth reflects the difference from one fiscal year to the next. Overall water accounts are forecast to increase from **3,386** in the test year to **4,533** in FY 2029, an average annual increase of 3.30%. **Table II-3** presents the project team’s ten-year forecast of wastewater account growth. Wastewater accounts are forecast to increase from **3,237** in the test year to **4,391** in FY 2029.

TABLE II-3

CITY OF MARBLE FALLS				
FORECAST TOTAL CUSTOMERS				
WASTEWATER Customer Classes				
Fiscal Year	Residential	Commercial	Municipal	Total
WASTEWATER Total Customers				
FY 2017	2,001	1,124	1	3,126
FY 2018	2,050	1,122	1	3,173
FY 2019	2,051	1,149	1	3,201
FY 2020	2,089	1,147	1	3,237
FY 2021	2,173	1,193	1	3,367
FY 2022	2,251	1,236	1	3,488
FY 2023	2,332	1,281	1	3,614
FY 2024	2,416	1,327	1	3,744
FY 2025	2,498	1,372	1	3,871
FY 2026	2,583	1,419	1	4,002
FY 2027	2,665	1,464	1	4,131
FY 2028	2,751	1,511	1	4,263
FY 2029	2,833	1,556	1	4,391
WASTEWATER Annual New Customers				
FY 2018	49	(2)	-	47
FY 2019	1	27	-	28
FY 2020	38	(2)	-	36
FY 2021	84	46	-	129
FY 2022	78	43	-	121
FY 2023	81	45	-	126
FY 2024	84	46	-	130
FY 2025	82	45	-	127
FY 2026	85	47	-	132
FY 2027	83	45	-	128
FY 2028	85	47	-	132
FY 2029	83	45	-	128

It must be emphasized that if the City does not acquire these projected new connections, financial and rate plan assumptions will have to be substantially modified.

Historical and Forecast Water Consumption

Total water system consumption data was analyzed over the same time period as customer data. A combination of consumption over the past 12 months and historical trends were used as the basis for the development of the forecast water and wastewater volumes within the rate model.

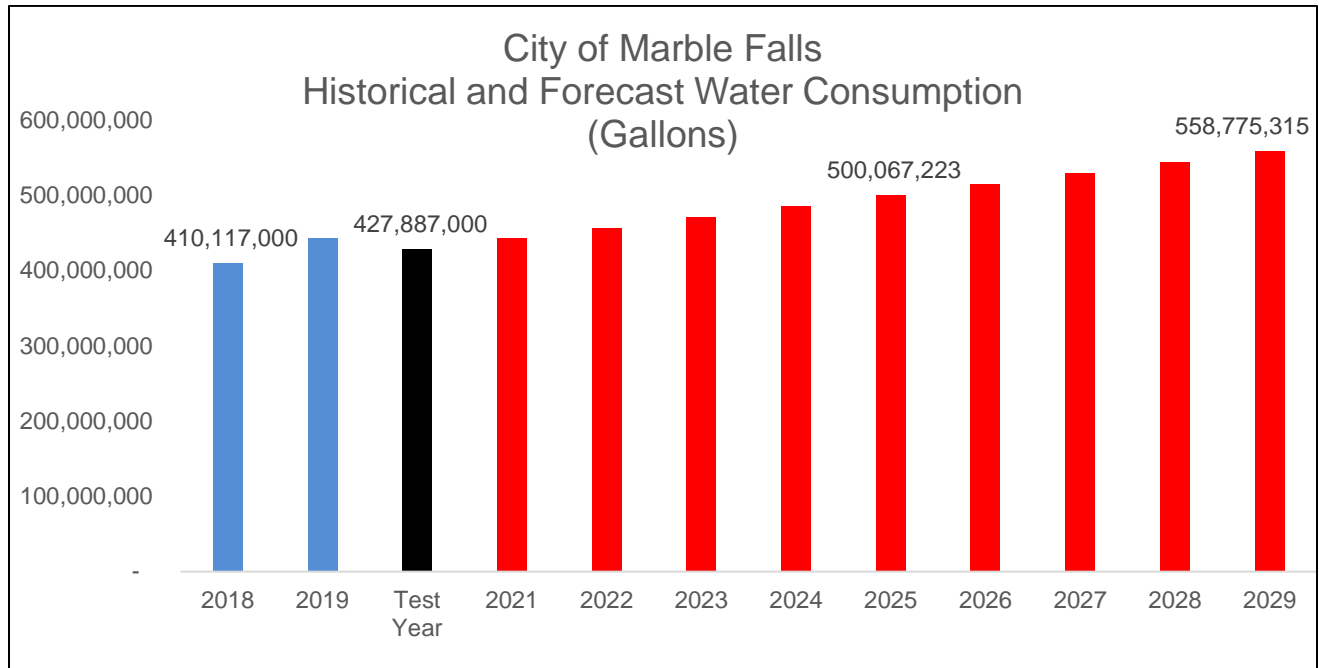
The project team prepared a ten-year forecast of water usage based on the same principles on which customer accounts were projected. An annual combined growth rate of 3.01% for all customer classes. The results of this forecast for water usage are presented in **Table II-4** and **Chart II-5**. Projections contained in this report include adjustments based on the impacts of normal customer growth and no drought restrictions and designed to forecast usage under normal conditions.

With these adjustments, by FY 2029 water usage is expected to reach **558,775,315** gallons, with 427,887,000 gallons provided in the test year.

TABLE II-4

CITY OF MARBLE FALLS									
FORECAST BILLED CONSUMPTION									
WATER Customer Classes									
	Residential	Sprinkler/Irrigation	Commercial	Municipal	Purple Pipe	Bulk	Residential Outside	Commercial Outside	Total
WATER Historical Volume									
2018	174,893,000	59,517,000	163,715,000	11,992,000	1,255,000	2,417,000	NA	NA	410,117,000
2019	203,459,000	69,579,000	160,400,000	9,267,000	942,000	1,402,000	NA	NA	442,705,000
WATER Forecast Volume									
Test Year	174,802,000	88,090,000	139,643,000	11,453,000	1,160,000	882,000	10,540,000	1,317,000	427,887,000
2021	181,794,080	89,851,800	145,228,720	11,453,000	1,160,000	882,000	10,961,600	1,369,680	442,700,880
2022	188,338,667	91,469,132	150,456,954	11,453,000	1,160,000	882,000	11,356,218	1,418,988	456,534,959
2023	195,118,859	93,115,577	155,873,404	11,453,000	1,160,000	882,000	11,765,041	1,470,072	470,837,953
2024	202,143,138	94,791,657	161,484,847	11,453,000	1,160,000	882,000	12,188,583	1,522,995	485,626,219
2025	209,016,004	96,403,115	166,975,332	11,453,000	1,160,000	882,000	12,602,995	1,574,776	500,067,223
2026	216,122,549	98,041,968	172,652,493	11,453,000	1,160,000	882,000	13,031,497	1,628,319	514,971,825
2027	223,038,470	99,610,640	178,177,373	11,453,000	1,160,000	882,000	13,448,504	1,680,425	529,450,412
2028	230,175,701	101,204,410	183,879,049	11,453,000	1,160,000	882,000	13,878,857	1,734,199	544,367,215
2029	237,080,972	102,722,476	189,395,420	11,453,000	1,160,000	882,000	14,295,222	1,786,225	558,775,315

CHART II-5



Peaking Factors

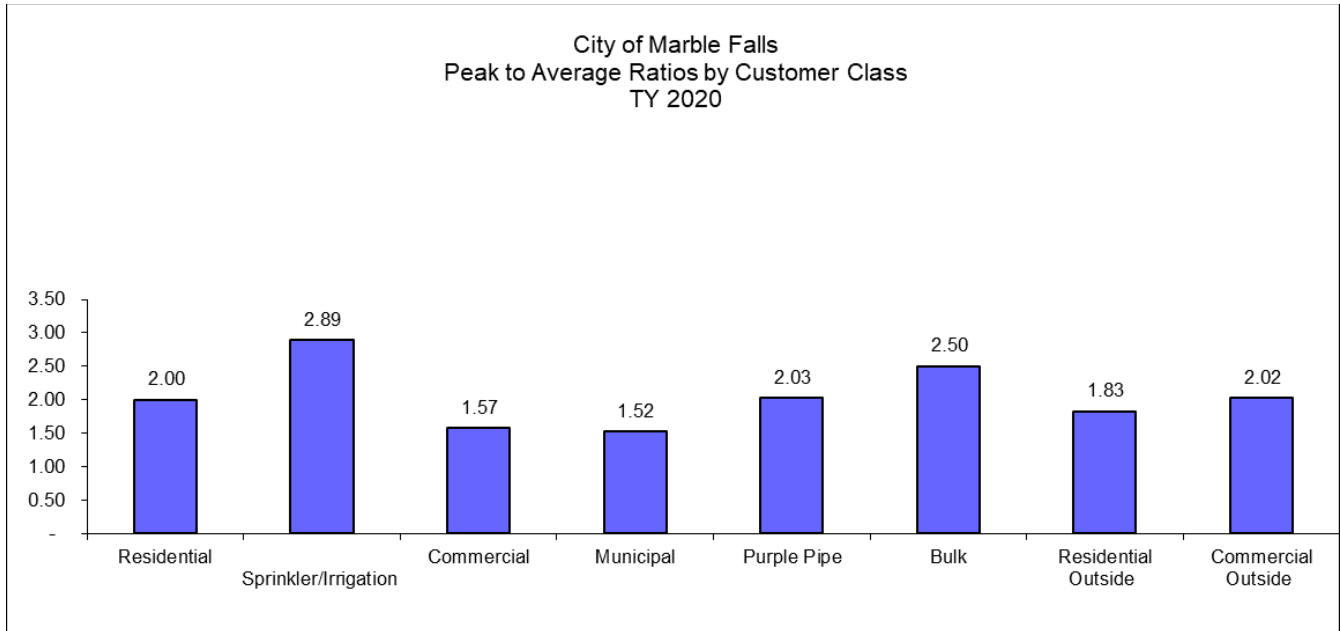
The cost of providing water to customers depends not only on the amount of water each class uses, but also on how that usage occurs over time. The maximum-day and maximum-hour peaking requirements of a water utility’s customers are an important influence on the utility’s costs. Because water utilities attempt to meet all of the demands of their customers, water systems are sized to meet customers’ peak requirements. Therefore, during off-peak periods, there are usually significant costs associated with the unused capacity of the system. These costs must be allocated to customers in proportion to the contribution of each customer class to the system peak, in order to develop equitable cost-based rates. Thus, it is necessary to determine the peak rate of use relative to the average rate of use for each class. This ratio is called a **Peaking Factor**.

The consumption data by class provided by the City was utilized in the rate model to calculate the peak day factor and peaking factors for individual rate classes.

The calculation of peaking factors for individual classes relies on available pumping and consumption information as well as professional judgment. If customer meters could record daily flow rates for each customer, more refined information could be obtained on peaking factors. This is not feasible because of the enormous cost that would be imposed on the utility. Therefore, it is accepted practice in the water industry to develop peaking factor estimates based on standard formulas using system peak day information and monthly customer class usage records. This is a conservative methodology, since customer class peaking factors based on peak months will inevitably be lower than the system-wide peaking factor, which is based on the peak day.

Based on AWWA guidelines, the customer class peaking factors calculated in this study are for non-coincidental peaks. The peaking factors developed for this analysis are based on actual monthly water consumption by customer class for the recent twelve-month period, June 2019 – May 2020. The calculations of the peaking factors by class are presented graphically in **Chart II-6**.

CHART II-6



A general ratemaking rule is that **the higher the peak to average ratio, the higher the unit cost of service for a given customer class**. While this is not an absolute rule, it is a good general indicator as to which customer classes are incurring the greatest costs to provide service. This principle will be examined more thoroughly in Section III.

The chart reveals that the highest peak to average ratio is for the Sprinkler/Irrigation customer class followed by the Bulk customer class. This is to be expected due to a greater level of discretionary water usage for irrigation of landscaping and turf.

Historical and Forecast Wastewater Flows

The City currently calculates wastewater charges for all Residential customers based on the winter average of their water consumption. All other wastewater account classifications are billed based on water consumption. All wastewater flows are assumed to be domestic strength as the City does not have a high concentration of customers dumping high strength sewage into the system. Sprinklers are not billed for any wastewater charges since they do not require a connection to the wastewater system.

As with water billed consumption, the project team prepared a ten-year forecast of wastewater billing units. Since individual wastewater usage is not metered, it is derived from the water consumption figures for each customer class. The billing unit forecast is derived using anticipated growth in accounts as depicted in Table II-3. The results of the forecast are presented in **Table II-7**.

TABLE II-7

CITY OF MARBLE FALLS				
FORECAST BILLED CONSUMPTION				
WASTEWATER Customer Classes				
	Residential	Commercial	Municipal	Total
WASTEWATER Historical Volume				
2018	103,756,000	146,238,000	-	249,994,000
2019	95,936,000	152,160,000	-	248,096,000
WASTEWATER Forecast Volume				
Test Year	98,521,000	142,590,000	-	241,111,000
2021	102,461,840	148,293,600	-	250,755,440
2022	106,150,466	153,632,170	-	259,782,636
2023	109,971,883	159,162,928	-	269,134,811
2024	113,930,871	164,892,793	-	278,823,664
2025	117,804,520	170,499,148	-	288,303,668
2026	121,809,874	176,296,119	-	298,105,993
2027	125,707,790	181,937,595	-	307,645,385
2028	129,730,439	187,759,598	-	317,490,037
2029	133,622,353	193,392,386	-	327,014,738

Two points are notable about this table. First, as with water, these billing units are forecast based on the growth of wastewater accounts and anticipated consumption ratios built into the rate model based on the growth projections provided by City personnel. Secondly, wastewater usage is not subject to the significant fluctuations experienced by water accounts. This is because the water volume fluctuation is largely due to outdoor usage that is not returned to the wastewater system. The table reveals that wastewater billing units are forecast to increase by an annual average of 3.44% over the forecast period.

Section III

SECTION III

Water and Wastewater Forecast Revenue Requirement



In this section of the water and wastewater rate study and long-term financial plan, the City of Marble Falls' test year and forecast water and wastewater utility revenue requirements are developed. The test year consists of the City's fiscal year, October 1, 2019 through September 30, 2020. The estimates presented in this section are based on the City's proposed budget for FY 2020.

The calculation of a revenue requirement differs from a utility's budget in that it represents only that amount that must be raised through the City's user rates. This means that non-rate revenue (such as reconnection fees, late payment charges and interest) must be subtracted from the budgeted operating and capital expenditures to determine the net revenue requirement to be raised from rates.

As is typical for publicly owned utilities, the City of Marble Falls' system revenue requirements were developed using the cash basis of ratemaking. Under the cash basis, as defined by the AWWA Manual M-1, system revenue requirements consist of cash expenditures and other financial commitments (such as debt service coverage or reserves) that must be met through system operating revenues and other revenue sources.

All data used in the development of the revenue requirements was obtained from the financial statements, budgets and other information provided by the City. Calculation summaries are presented in the rate model provided in **Appendix A** in conjunction with this report. For rate design purposes, revenue requirements are developed separately for the water and wastewater systems.

The assumptions utilized in this expense forecast will be thoroughly detailed in this section of the report. These assumptions are critical to the development of both the revenue requirement and the ultimate rate recommendation. The project team reviewed these assumptions with the City staff and considers all to be consistent with staff recommendations.

In this section, current and forecast Operating Costs, Capital Outlays, Transfers, and Debt Service will be examined first. Non-rate revenues will be subtracted from the total to yield the Net Revenue Requirement.

Operating Expenses and Capital Outlays – Test Year

Table III-1 on the following page summarizes the test year FY 2020 water system operating expenses and capital outlays in detail by department. **Table III-2** on the following page summarizes the test year FY 2020 wastewater system operating expenses and capital outlays in detail by department.

The following is noteworthy about these tables:

- There are five departments within the City's Water and Wastewater Fund, each with their own budget:
 - **Water Services** – provides water service for the residential, commercial, and public use for the City of Marble Falls.
 - **Water Plant** - captures the primary operating expenses associated with the day-to-day management, maintenance and repair of the water plant, pump stations, and storage tanks. These expenses include such items as chemicals, electricity, supplies, and materials. The largest single operating expense item is the payment to Lower Colorado River Authority for raw water.
 - **Wastewater Services** – provides wastewater service for the customers of the City of Marble Falls. The duties of the department include line extensions, replacing old wastewater lines, installing manholes, tie ins, and conducting pressure tests on wastewater lines.
 - **Wastewater Plant** - captures the primary operating expenses associated with the day-to-day management, maintenance and repair of the wastewater plant. These expenses include such items as chemicals, electricity, supplies, and materials.
 - **Wastewater Irrigation** - responsible for the oversight of all activities associated with the delivery of reused effluent for irrigation.

Expenses in each of these areas are then allocated to one the following sub-categories: Personnel Services; Supplies; Maintenance; Services; Other; Capital; or Transfers.

Tables III-1 and III-2 also allocate total budget expenses by functionality and general ratemaking principles. As the tables show, total operating expenses, transfers, and capital outlays in the test year are **\$3,720,734**, of which \$2,130,152 is for the water utility and \$1,590,582 is for the wastewater utility.

TABLE III-1

CITY OF MARBLE FALLS					
TEST YEAR Operating Expenses, Transfers and Capital Outlays CASH BASIS					
SCENARIO: 2020 11 03 Scenario I-- Status Quo					
	Net Budget	Treatment	Distribution	Admin	Customer Billing
WATER Utility					
<u>Operating & Maintenance</u>					
Water Services	\$ 850,525	\$ -	\$ 662,944	\$ -	\$ 187,581
Water Plant	942,626	942,626	-	-	-
Wastewater Services	-	-	-	-	-
Wastewater Plant	-	-	-	-	-
W_WW Irrigation System	77,126	-	77,126	-	-
Total Operating & Maintenance	1,870,277	942,626	740,070	-	187,581
Transfers	183,000	-	-	183,000	-
Capital Outlays	76,875	-	76,875	-	-
WATER Total O&M, CO, & Transfers	2,130,152	942,626	816,945	183,000	187,581

TABLE III-2

CITY OF MARBLE FALLS					
TEST YEAR Operating Expenses, Transfers and Capital Outlays CASH BASIS					
SCENARIO: 2020 11 03 Scenario I-- Status Quo					
	Net Budget	Treatment	Distribution	Admin	Customer Billing
WASTEWATER Utility					
<u>Operating & Maintenance</u>					
Water Services	\$ -	\$ -	\$ -	\$ -	\$ -
Water Plant	-	-	-	-	-
Wastewater Services	574,614	-	574,614	-	-
Wastewater Plant	736,827	736,827	-	-	-
W_WW Irrigation System	77,126	-	77,126	-	-
Total Operating & Maintenance	1,388,567	736,827	651,740	-	-
Transfers	183,000	-	-	183,000	-
Capital Outlays	19,015	-	19,015	-	-
WASTEWATER Total O&M, CO, & Transfers	1,590,582	736,827	670,755	183,000	-

Forecast Expenses – LCRA

In FY 2020 the project team has estimated that \$209,098 will be required for LCRA raw water purchases. While electricity and other operating expenses continue to increase, systemwide growth and increased volume may result in a moderation of expected rate increases.

Using the FY 2020 budget as a starting point, the expense is increased each year by two factors. The first factor is the forecast increase in the total volume of service required from the water entity. The volume of services from the water entity is forecast to increase annually at an average of 3.01% for the raw water supply. The second factor is the expected annual unit rate increase forecast over the next decade.

The forecast of LCRA costs for the City throughout the forecast period are shown in **Table III-3**.

TABLE III-3

CITY OF MARBLE FALLS			
FORECAST LCRA COSTS			
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report			
Year	Total Gallons	Total Annual Cost Increase	Total Fiscal Year Charges
Test Year	469,894,000		\$ 209,098
2021	486,162,205	9.3%	228,496
2022	501,354,419	7.5%	245,664
2023	517,061,582	7.3%	263,701
2024	533,301,658	7.2%	282,650
2025	549,160,380	6.9%	302,038
2026	565,528,214	6.7%	322,351
2027	581,428,209	6.4%	343,043
2028	597,809,441	6.3%	364,664
2029	613,632,029	6.0%	386,588

Operating Expenses – Ten Year Forecast

Table III-4 presents the project team’s ten-year forecast of the City’s operating costs. Details behind these calculations can be found in the rate model contained in Appendix A. This forecast is based on the following set of assumptions:

- Most operating costs are expected to increase at an annual rate of 3.0%, which is approximately equivalent to the rate of inflation.
- Certain expenses will increase at higher rates to reflect the forecast growth in accounts and volumes. These expenses include chemicals, maintenance, and system repairs.
- Certain expenses will increase at above-inflation rates, to reflect the rapid rate of increase of these costs. These expenses include workers compensation, Medicare and insurance.
- Additional expenses are accounted for when the new wastewater treatment plant comes online.
- Raw water purchase costs from Lower Colorado River Authority will increase at an average annual rate of 6.8%.

Table III-4 shows that total water-related operating expenses are forecast to increase from the test year total of \$2,053,277 to **\$2,987,505** by FY 2029. This represents a total average annual rate of increase of **4.3%**. Wastewater-related operating costs are expected to increase from the test year total of \$1,571,567 to **\$2,423,812** by FY 2029. This represents an average annual rate of increase of **5.0%**.

TABLE III-4

CITY OF MARBLE FALLS										
FORECAST OPERATING EXPENSES										
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report										
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
WATER										
Water Services	\$ 850,525	\$ 877,674	\$ 905,739	\$ 934,753	\$ 964,754	\$ 995,777	\$ 1,027,863	\$ 1,061,050	\$ 1,095,382	\$ 1,130,903
Water Plant	942,626	994,721	1,046,348	1,100,721	1,157,998	1,217,838	1,280,862	1,346,672	1,415,976	1,488,316
Wastewater Services	-	-	-	-	-	-	-	-	-	-
Wastewater Plant	-	-	-	-	-	-	-	-	-	-
W_WW Irrigation System	77,126	79,145	80,331	82,958	85,679	87,688	90,551	92,653	95,669	97,874
Transfers	183,000	188,490	195,522	202,482	210,006	226,058	242,688	251,643	260,758	270,412
Total	2,053,277	2,140,030	2,227,940	2,320,914	2,418,436	2,527,362	2,641,963	2,752,018	2,867,785	2,987,505
WASTEWATER										
Water Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Plant	-	-	-	-	-	-	-	-	-	-
Wastewater Services	574,614	591,826	608,170	627,277	647,021	666,143	687,146	707,487	729,844	751,503
Wastewater Plant	736,827	758,932	781,700	805,151	977,515	1,158,607	1,193,366	1,229,167	1,266,042	1,304,023
W_WW Irrigation System	77,126	79,145	80,331	82,958	85,679	87,688	90,551	92,653	95,669	97,874
Transfers	183,000	188,490	195,522	202,482	210,006	226,058	242,688	251,643	260,758	270,412
Total	1,571,567	1,618,393	1,665,723	1,717,868	1,920,221	2,138,497	2,213,751	2,280,949	2,352,313	2,423,812
Water/WW Total	3,624,844	3,758,422	3,893,662	4,038,783	4,338,657	4,665,859	4,855,714	5,032,967	5,220,097	5,411,317

Capital Improvement Plan

The purpose of the CIP is to rehabilitate and maintain the existing system, expand the system and to service new growth. The most impactful capital improvement project is the construction and design for the new wastewater treatment plant.

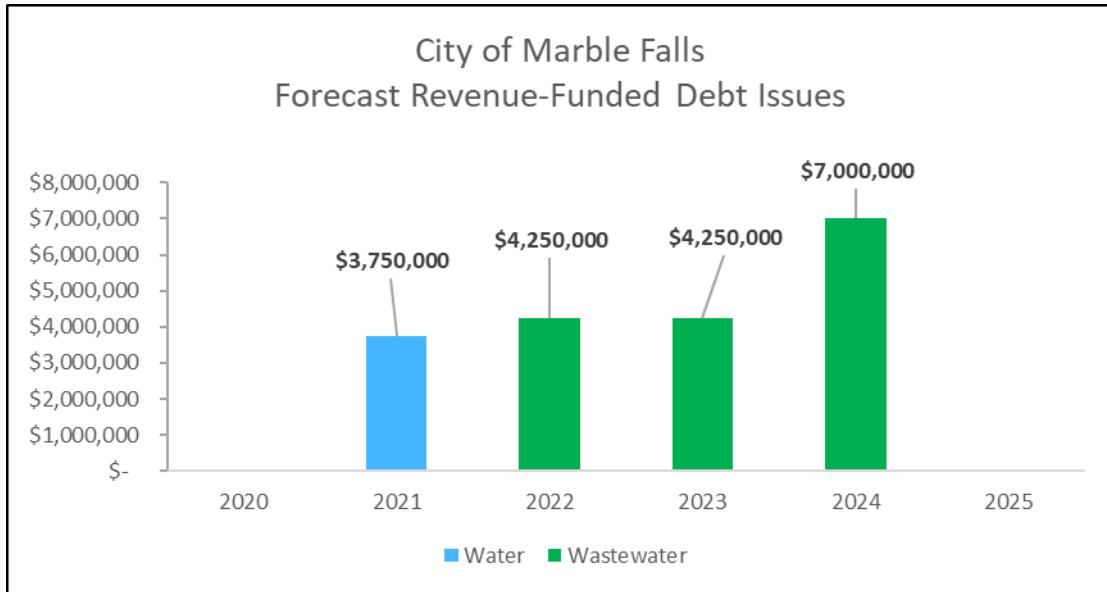
The capital improvement plan is an integral part of any long-term rate and financing plan. **Table III-5** reveals that the City’s current CIP over the next ten years is estimated to be **\$11,209,500** for the water system, **\$37,025,000** for the wastewater system, and **\$538,000** for the reclaimed water system. The City intends to fund \$19,250,000 of the CIP projects with revenue-funded long-term debt. The remaining CIP projects are forecast to be funded from other City sources.

The City is forecast to issue revenue bonds totaling **\$19,250,000** for the currently identified and future water, wastewater, and reclaimed water system projects in the next ten years. The City plans to issue water and wastewater debt annually from FY 2021 to FY 2024 to pay for the CIP. Annual forecast debt issues are presented in **Chart III-5A**. If the City makes significant changes to the CIP provided by the City staff or the amount of revenue-funded long-term debt than the assumption in the rate model will need to be revised.

Table III-5

CITY OF MARBLE FALLS		
Capital Improvement Plan FY 2020 - FY 2024		
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report		
WATER PROJECTS		
WATER PLANT CLARIFIER REPAIR & PUMPS	FY 2020	\$ 1,425,000
RAW WATER INTAKE REPAIRS AND FLOODPROOFING	FY 2020 - FY 2021	535,000
ROCKY ROAD WATER LINE	FY 2022 - FY 2023	2,170,000
VIA VIEJO PUMP STATION	FY 2023	500,000
GATEWAY PUMP STATION	FY 2024	50,000
FLATROCK PUMP STATION	FY 2024	225,000
FLATROCK WATER SERVICE LINE	FY 2022 - FY 2023	5,554,500
ABOVE GROUND WATER STORAGE REHAB	FY 2020 - FY 2023	750,000
Total Water Projects		\$ 11,209,500
WASTEWATER PROJECTS		
WASTEWATER TREATMENT PLANT PLANNING/DESIGN	FY 2020 - FY 2022	\$ 3,275,000
WASTEWATER TREATMENT PLANT CONSTRUCTION	FY 2022 - FY 2024	30,100,000
ROPER LIFT STATION	FY 2024	2,500,000
WASTEWATER LINE FROM LS TO S WWTP	FY 2024	1,150,000
Total Wastewater Projects		\$ 37,025,000
RECLAIMED WATER		
EFFLUENT REUSE (PURPLE PIPE)	FY 2021 - FY 2023	\$ 538,000
Total Reclaimed Water		\$ 538,000
Total Water, Wastewater and Reclaimed Water		\$ 48,772,500

Chart III-5A



Existing and Forecast Debt Service

Table III-6 presents current and forecast debt service assuming that the City issues new water and/or wastewater revenue bonds annually from FY 2021 to FY 2024 to fund the CIP according to the schedule presented in Chart III-5A. Debt service is currently being paid from contributions from the City’s Utility System Revenue. For FY 2020 forward, it is projected that bonds will be repaid entirely with Utility System Revenues. Future revenue debt is assumed to have a 20-year term, 4.5% interest rate and level principal and interest payments.

As shown in the rate model presented in Appendix A, the City is assumed to issue approximately **\$3,750,000** in water-related debt and **\$15,500,000** in wastewater-related debt over the next ten years.

These assumptions are preliminary in nature and subject to change. Should the City Council choose to issue more or less revenue debt than assumed in this study, or should different financing terms be available at the time the debt is issued, then the rate plans contained in this study may require revision.

Table III-6

CITY OF MARBLE FALLS						
Current and Forecast Debt Service						
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report						
Year	WATER		WASTEWATER		Total	
	Current	Forecast	Current	Forecast		
TY 2020	\$ 1,104,460	\$ -	1,104,460	-	\$ 2,208,920	
FY 2021	1,172,452	-	1,172,452	-	2,344,903	
FY 2022	1,172,296	294,051	1,172,296	-	2,638,642	
FY 2023	1,173,083	294,051	1,173,083	333,258	2,973,475	
FY 2024	1,169,933	294,051	1,169,933	666,516	3,300,433	
FY 2025	1,168,121	294,051	1,168,121	1,215,412	3,845,704	
FY 2026	1,165,153	294,051	1,165,153	1,215,412	3,839,769	
FY 2027	1,165,704	294,051	1,165,704	1,215,412	3,840,870	
FY 2028	1,167,466	294,051	1,167,466	1,215,412	3,844,394	
FY 2029	1,168,200	294,051	1,168,200	1,215,412	3,845,862	

Non-Rate Revenues

Although sales revenues constitute the majority of the revenue received by the City for water and wastewater service, a certain amount of revenue is accrued from non-rate sources. These revenues include other general revenues, surcharges, liquid waste disposal, development charges, and service revenues. These non-rate revenues are subtracted from the overall budget to determine the revenue requirement to be raised from rates. **Table III-7** shows that the test year FY 2020 non-rate revenues total \$530,350, of which \$255,600 is allocated to the water utility and \$274,750 is allocated to the wastewater utility. All of the non-rate revenues are conservatively forecast to remain at the same level during the forecast period.

TABLE III-7

CITY OF MARBLE FALLS							
Non-Rate Revenues							
SCENARIO:	2020 12 10 Scenario I -- Status Quo -- FINAL Report						
	WATER			WASTEWATER			TOTAL
	Flatrock Springs	Other	Total	Liquid Waste Disposal Fee	Other	Total	
FY 2020	\$ 115,000	\$ 140,600	\$ 255,600	\$ 70,000	\$ 204,750	\$ 274,750	\$ 530,350
FY 2021	115,000	140,600	255,600	70,000	204,750	274,750	530,350
FY 2022	115,000	140,600	255,600	70,000	202,849	272,849	528,449
FY 2023	115,000	140,600	255,600	70,000	203,850	273,850	529,450
FY 2024	115,000	140,600	255,600	70,000	204,887	274,887	530,487
FY 2025	115,000	140,600	255,600	70,000	204,244	274,244	529,844
FY 2026	115,000	140,600	255,600	70,000	205,236	275,236	530,836
FY 2027	115,000	140,600	255,600	70,000	204,427	274,427	530,027
FY 2028	115,000	140,600	255,600	70,000	205,367	275,367	530,967
FY 2029	115,000	140,600	255,600	70,000	204,381	274,381	529,981

Net Revenue Requirement

Table III-8 presents the City’s net revenue requirement for the water and wastewater utility for the test year FY 2020 and forecast period. As the table shows, the City’s net revenue requirement is forecast to increase from **\$5,399,304** in FY 2020 to **\$8,823,088** in FY 2029, an average annual increase of 5.67%.

Detailed calculations are presented in the rate model contained in Appendix A of this report.

TABLE III-8

CITY OF MARBLE FALLS								
Net Revenue Requirement - Cash Basis								
SCENARIO 2020 12 10 Scenario I -- Status Quo -- FINAL Report								
	Operating Expenses	Capital Outlays	Debt Service	Transfers & Contingencies	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement	
WATER Revenue Requirement								
2020	\$ 1,870,277	\$ 76,875	\$ 1,104,460	\$ 183,000	\$ 3,234,612	\$ 255,600	\$ 2,979,012	
2021	1,951,540	76,875	1,172,452	188,490	3,389,356	255,600	3,133,756	
2022	2,032,417	76,875	1,466,347	195,522	3,771,161	255,600	3,515,561	
2023	2,118,432	76,875	1,467,134	202,482	3,864,924	255,600	3,609,324	
2024	2,208,431	76,875	1,463,984	210,006	3,959,296	255,600	3,703,696	
2025	2,301,304	76,875	1,462,172	226,058	4,066,408	255,600	3,810,808	
2026	2,399,276	76,875	1,459,204	242,688	4,178,043	255,600	3,922,443	
2027	2,500,375	76,875	1,459,755	251,643	4,288,648	255,600	4,033,048	
2028	2,607,027	76,875	1,461,517	260,758	4,406,176	255,600	4,150,576	
2029	2,717,094	76,875	1,462,251	270,412	4,526,631	255,600	4,271,031	
WASTEWATER Revenue Requirement								
2020	\$ 1,388,567	\$ 19,015	\$ 1,104,460	\$ 183,000	\$ 2,695,042	\$ 274,750	\$ 2,420,292	
2021	1,429,903	19,015	1,172,452	188,490	2,809,859	274,750	2,535,109	
2022	1,470,200	19,015	1,172,296	195,522	2,857,033	272,849	2,584,184	
2023	1,515,386	19,015	1,506,341	202,482	3,243,224	273,850	2,969,374	
2024	1,710,215	19,015	1,836,449	210,006	3,775,685	274,887	3,500,798	
2025	1,912,439	19,015	2,383,532	226,058	4,541,044	274,244	4,266,800	
2026	1,971,063	19,015	2,380,565	242,688	4,613,331	275,236	4,338,094	
2027	2,029,306	19,015	2,381,115	251,643	4,681,079	274,427	4,406,653	
2028	2,091,555	19,015	2,382,877	260,758	4,754,205	275,367	4,478,839	
2029	2,153,400	19,015	2,383,611	270,412	4,826,438	274,381	4,552,057	
Total Water and Wastewater Revenue Requirement								
2020	\$ 3,258,844	\$ 95,890	\$ 2,208,920	\$ 366,000	\$ 5,929,654	\$ 530,350	\$ 5,399,304	
2021	3,381,442	95,890	2,344,903	376,980	6,199,215	530,350	5,668,865	
2022	3,502,618	95,890	2,638,642	391,044	6,628,194	528,449	6,099,745	
2023	3,633,818	95,890	2,973,475	404,965	7,108,148	529,450	6,578,698	
2024	3,918,645	95,890	3,300,433	420,012	7,734,980	530,487	7,204,494	
2025	4,213,742	95,890	3,845,704	452,116	8,607,453	529,844	8,077,609	
2026	4,370,339	95,890	3,839,769	485,375	8,791,373	530,836	8,260,537	
2027	4,529,682	95,890	3,840,870	503,285	8,969,727	530,027	8,439,701	
2028	4,698,581	95,890	3,844,394	521,516	9,160,382	530,967	8,629,415	
2029	4,870,494	95,890	3,845,862	540,823	9,353,070	529,981	8,823,088	

Water Utility Cost Functionalization

Once the total water and wastewater system costs have been identified, the next step in the rate development process is to isolate the costs associated with each system function. Some of these expenditures are a function of base water demand; others are based on the peak demands placed on the system. Certain costs are associated with serving customers regardless of the volume of water use or wastewater discharge. The basic steps used to allocate the City’s water revenue requirements include the following:

1. Each system’s costs (revenue requirements) are categorized by utility function (i.e. treatment, distribution, administrative, customer). This process is known as *functionalization*.
2. Functionalized costs are classified based on the service characteristics or the types of demand served by the utility (base and maximum day). This process is known as *classification*.
3. Costs by service characteristic are allocated to customer classes in proportion to the service demands demonstrated by each class.

This three-step process allows for the allocation of system costs in the same terms as customer classes. The approaches described in this section follow standard industry practices. Water system costs are allocated to the following functions:

Treatment – the process by which raw water is converted to potable water

Distribution – the lines that carry water to individual customers’ properties

Administration – miscellaneous overhead and other non-operating costs

Customer Billing – the processes involved in billing and providing other services to customers

The project team allocated operating budget line item expenses individually to system functions based on general guidelines, specific research and input from City staff. The results of the allocation process for the test year are presented in **Table III-9**.

TABLE III-9

CITY OF MARBLE FALLS			
TEST YEAR WATER COST FUNCTIONALIZATION			
SCENARIO: 2020 12 10 Scenario I – Status Quo – FINAL Report			
TY 2020			
Function	CASH Basis Revenue Requirement	Percent	
Treatment	\$ 1,376,732	46.2%	
Distribution	1,260,982	42.3%	
Administration	168,539	5.7%	
Customer	172,759	5.8%	
Total	2,979,012	100.0%	

Water Utility Cost Classification

The allocation of functionalized water system costs to service characteristics follows the base-extra capacity cost allocation method recommended by AWWA. Using this method, costs are segregated into the following categories:

Base costs – capital costs and O&M expenses associated with service to customers under average demand conditions. This category does not include any costs attributable to variations in water use resulting from peaks in demand. Base costs tend to vary directly with the total quantity of water used.

Maximum Day/Extra Capacity costs – costs attributable to facilities that are designed to meet peaking requirements. These costs include capital and operating charges for additional plant and system capacity beyond that required for average usage.

Customer Billing costs – costs associated with any aspect of customer service, including billing, accounting, and meter services. These costs are independent of the amount of water used and the size of the customer’s meter, and are not subject to peaking factors.

According to AWWA Manual M-1, in the base-extra capacity method, care must be taken in separating costs between those devoted to base capacity and those devoted to extra capacity. Over the past twelve months the system’s maximum day to average day ratio (known as the *system peaking factor*) was calculated to be 1.69. The peak to average factor is calculated by dividing the volume on the peak day of the year by the average daily volume.

All customer service-related costs are allocated 100% to customer billing. Administration costs are generally not directly assignable to individual classifications. Therefore, it is standard ratemaking practice to allocate these costs on an indirect basis to service characteristics.

The rate model in Appendix A provides the detailed allocations of costs to service characteristics. The system-wide costs by service characteristic are shown in **Table III-10**. As with cost functionalization, these percentages are not expected to change significantly in the forecast period.

TABLE III-10

CITY OF MARBLE FALLS			
TEST YEAR WATER COST CLASSIFICATION			
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report			
TY 2020			
Function	CASH Basis Revenue Requirement	Percent	
Base	\$ 1,863,929	62.57%	
Maximum Day	931,964	31.28%	
Customer	<u>183,119</u>	<u>6.15%</u>	
Total	2,979,012	100.0%	

Water Utility Cost Allocation

Allocation of costs by service characteristic to customer classes is based on the proportionate usage levels of each characteristic by each class. The water utility costs for test year FY 2020 by customer class are presented in **Table III-11**. The total water utility costs by customer class for the entire forecast period are summarized in **Table III-12**. Overall cost calculations are presented in detail in the rate model contained in Appendix A.

TABLE III-11

CITY OF MARBLE FALLS		
TEST YEAR WATER COST ALLOCATION		
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report		
TY 2020		
Function	CASH Basis Revenue Requirement	Percent
Residential	\$ 1,232,356	41.4%
Sprinkler/Irrigation	734,425	24.7%
Commercial	797,955	26.8%
Municipal	63,849	2.1%
Purple Pipe	7,604	0.3%
Bulk	7,302	0.2%
Residential Outside	119,380	4.0%
Commercial Outside	16,139	0.5%
Total	2,979,012	100.0%

TABLE III-12

CITY OF MARBLE FALLS									
FORECAST WATER COST ALLOCATION (CASH Basis)									
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report									
Year	Residential	Sprinkler/Irrigation	Commercial	Municipal	Purple Pipe	Bulk	Residential Outside	Commercial Outside	Total
FY 2020	\$ 1,232,356	\$ 734,425	\$ 797,955	\$ 63,849	\$ 7,604	\$ 7,302	\$ 119,380	\$ 16,139	\$ 2,979,012
FY 2021	1,305,543	763,990	845,562	65,057	7,752	7,439	121,927	16,486	3,133,756
FY 2022	1,473,395	853,421	958,519	71,216	8,499	8,101	125,443	16,968	3,515,561
FY 2023	1,514,361	861,419	984,170	70,572	8,424	8,040	142,956	19,382	3,609,324
FY 2024	1,564,296	873,325	1,015,308	70,266	8,387	8,019	144,505	19,591	3,703,696
FY 2025	1,620,064	888,544	1,050,191	70,280	8,389	8,034	145,571	19,734	3,810,808
FY 2026	1,678,327	904,276	1,086,581	70,315	8,393	8,052	146,620	19,878	3,922,443
FY 2027	1,736,008	919,853	1,122,621	70,386	8,402	8,073	147,685	20,020	4,033,048
FY 2028	1,797,137	936,499	1,160,834	70,516	8,418	8,100	148,890	20,182	4,150,576
FY 2029	1,862,277	954,935	1,201,297	70,839	8,455	8,152	145,299	19,778	4,271,031

Wastewater Utility Cost Functionalization and Classification

Wastewater system costs are allocated to the following functions:

Treatment -- Volume – the costs associated with treating wastewater volume discharges

Collection – the lines that transport wastewater from customers’ properties to the wastewater treatment plant

Administration – miscellaneous overhead and other non-operating costs

Customer Billing – the processes involved in billing and other services to customers

As was the case for the water system, wastewater utility operating budget line item expenses are allocated individually to functions. The results of the allocation process are presented in **Table III-13**. The rate model in Appendix A presents a detailed listing of the cost allocations by line item. As with the water utility, these percentages are not forecast to change significantly during the next ten years.

The limited size of the system, and the absence of high strength commercial and industrial customers, eliminates the necessity to develop strength-related wastewater rates. In this case, all costs, with the exception of those specifically pertaining to customer billing, may be classified as flow-related.

TABLE III-13

CITY OF MARBLE FALLS			
TEST YEAR WASTEWATER COST FUNCTIONALIZATION			
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report			
TY 2020			
Function	CASH Basis Revenue Requirement	Percent	
Treatment	\$ 1,157,642	47.8%	
Collection	1,098,306	45.4%	
Administration	164,344	6.8%	
Customer	-	<u>0.0%</u>	
Reclaimed Water	-	0.0%	
Total	2,420,292	100.0%	

Wastewater Utility Cost Allocation

Allocation of wastewater utility costs by service characteristic to customer classes is performed in the same manner as described for the water utility. The total wastewater utility costs by customer class are summarized in **Table III-14**. The rate model in Appendix A presents a detailed listing of the cost calculations by line item.

TABLE III-14

CITY OF MARBLE FALLS			
TEST YEAR WASTEWATER COST ALLOCATION			
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report			
TY 2020			
Function	CASH Basis Revenue Requirement	Percent	
Residential	\$ 988,962	40.9%	
Commercial	1,431,330	59.1%	
Municipal	-	0.0%	
Total	2,420,292	100.0%	

Table III-15 presents the ten-year forecast of the wastewater net revenue requirement by customer class.

TABLE III-15

CITY OF MARBLE FALLS				
FORECAST WASTEWATER COST ALLOCATION (CASH Basis)				
SCENARIO: 2020 12 10 Scenario I -- Status Quo -- FINAL Report				
Year	Residential	Commercial	Municipal	Total
FY 2020	\$ 988,962	\$ 1,431,330	-	\$ 2,420,292
FY 2021	1,035,878	1,499,232	-	2,535,109
FY 2022	1,055,930	1,528,254	-	2,584,184
FY 2023	1,213,324	1,756,050	-	2,969,374
FY 2024	1,430,470	2,070,328	-	3,500,798
FY 2025	1,743,469	2,523,332	-	4,266,800
FY 2026	1,772,600	2,565,494	-	4,338,094
FY 2027	1,800,614	2,606,039	-	4,406,653
FY 2028	1,830,110	2,648,729	-	4,478,839
FY 2029	1,860,028	2,692,029	-	4,552,057

Section IV

SECTION IV

Water and Wastewater Rate Design



Rate design involves determining charges for each class of customers that will generate a desired level of revenue. In accordance with the goals and objectives described by the City, several alternative sets of rates were developed and discussed with City staff and Council over the course of the project.

As noted in the previous section, these revenue requirements include all direct and indirect expenditures for operations and maintenance, capital requirements for expansion, repair and replacement, debt service and required reserves. The City was presented with several alternative rate plans designed to capture sufficient revenues for these purposes as well as coverage of the basic cost of service.

In this section the project team presents the final recommended rate plan for the City. **Table IV-1** presents a summary of this water rate plan proposed for all customer classes and the water rate plan developed for the Outside City customers. **Table IV-2** presents a summary of this wastewater rate plan proposed for all customer classes.

- The project team recommends that the City adopt a five-year rate plan and suggests an update to revise the rate model assumptions annually to make any needed modifications to future rate plans.
- Given the potential for unexpected events, this will allow the City to incorporate any changes to costs, volumes or growth assumptions that may occur during that time.
- The most significant impact on rates will be debt issued to fund the CIP. The initial cost of service and rate proposal assumes that the Utility rate adjustments will be funded on a stand-alone basis, whereby debt service will be fully funded through rates.
- The scenario also assumes that debt will be used to fund \$19,250,000 of the current 10-year Capital Improvement Plan.

- Uniform adjustments are applied to the existing base and volumetric rates for each rate class, with higher adjustments to the wastewater rates.
- Implement a 50% premium for outside city customers starting January 2021. The justification for this recommendation will be presented in further detail in the next section.
- Implement five-year wholesale water rates as shown in Chart IV-4.

The projected rate revenues developed in this section are forecast to be sufficient to fund all operating and current scheduled capital obligations. Rate revenues will be sufficient to fund the water and wastewater existing debt service and future debt service over the forecast period. **Table IV-3** presents the customer rate impact.



TABLE IV-1

CITY OF MARBLE FALLS Impact on Monthly Customer Charges													
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report													
		Current	Proposed Jan-21	Proposed Jan-22	Proposed Jan-23	Proposed Jan-24	Proposed Jan-25	Forecast Jan-26	Forecast Jan-27	Forecast Jan-28	Forecast Jan-29		
Water Rate and Charges													
W1 Residential/Commercial													
Monthly Minimum Charge													
	3/4"	\$ 25.21	\$ 25.97	\$ 26.75	\$ 27.28	\$ 27.83	\$ 28.38	\$ 28.38	\$ 28.95	\$ 28.95	\$ 29.53		
	1"	35.94	37.02	38.13	38.89	39.67	40.46	40.46	41.27	41.27	42.10		
	1 1/2"	64.38	66.31	68.30	69.67	71.06	72.48	72.48	73.93	73.93	75.41		
	2"	111.27	114.61	118.05	120.41	122.82	125.27	125.27	127.78	127.78	130.33		
	3"	238.25	245.40	252.76	257.81	262.97	268.23	268.23	273.59	273.59	279.07		
	4"	421.82	434.47	447.51	456.46	465.59	474.90	474.90	484.40	484.40	494.09		
	6"	746.60	769.00	792.07	807.91	824.07	840.55	840.55	857.36	857.36	874.51		
Volume Rate/1,000 Gal													
	- 10,000	4.78	4.92	5.07	5.17	5.28	5.38	5.38	5.49	5.49	5.60		
	10,001 30,000	5.83	6.00	6.19	6.31	6.43	6.56	6.56	6.69	6.69	6.83		
	30,001 Above	7.14	7.35	7.57	7.73	7.88	8.04	8.04	8.20	8.20	8.36		
W2 Sprinkler/Irrigation													
Monthly Minimum Charge													
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Volume Rate/1,000 Gal													
	- 10,000	4.00	4.12	4.24	4.33	4.42	4.50	4.50	4.59	4.59	4.69		
	10,001 30,000	4.10	4.22	4.35	4.44	4.53	4.62	4.62	4.71	4.71	4.80		
	30,001 Above	4.25	4.38	4.51	4.60	4.69	4.78	4.78	4.88	4.88	4.98		
W5 Purple Pipe													
Monthly Minimum Charge													
	3/4"	\$ 12.61	\$ 12.98	\$ 13.37	\$ 13.64	\$ 13.91	\$ 14.19	\$ 14.19	\$ 14.47	\$ 14.47	\$ 14.76		
	1"	17.97	18.51	19.06	19.45	19.83	20.23	20.23	20.64	20.64	21.05		
	1 1/2"	32.19	33.16	34.15	34.83	35.53	36.24	36.24	36.97	36.97	37.70		
	2"	55.64	57.30	59.02	60.20	61.41	62.64	62.64	63.89	63.89	65.17		
	3"	119.13	122.70	126.38	128.91	131.49	134.12	134.12	136.80	136.80	139.53		
	4"	210.91	217.24	223.75	228.23	232.79	237.45	237.45	242.20	242.20	247.04		
	6"	373.30	384.50	396.03	403.95	412.03	420.27	420.27	428.68	428.68	437.25		
Volume Rate/1,000 Gal													
	- 10,000	2.39	2.46	2.54	2.59	2.64	2.69	2.69	2.74	2.74	2.80		
	10,001 30,000	2.92	3.00	3.09	3.15	3.22	3.28	3.28	3.35	3.35	3.41		
	30,001 Above	3.57	3.68	3.79	3.86	3.94	4.02	4.02	4.10	4.10	4.18		
W6 Bulk													
Monthly Minimum Charge													
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Volume Rate/1,000 Gal													
		20.00	20.60	21.22	21.64	22.08	22.52	22.52	22.97	22.97	23.43		
W7 Residential/Commercial Outside													
Monthly Minimum Charge													
	3/4"	\$ 25.21	\$ 38.95	\$ 40.12	\$ 40.92	\$ 41.74	\$ 42.57	\$ 42.57	\$ 43.42	\$ 43.42	\$ 44.29		
	1"	35.94	55.53	57.19	58.34	59.50	60.69	60.69	61.91	61.91	63.15		
	1 1/2"	64.38	99.47	102.45	104.50	106.59	108.72	108.72	110.90	110.90	113.11		
	2"	111.27	171.91	177.07	180.61	184.22	187.91	187.91	191.67	191.67	195.50		
	3"	238.25	368.10	379.14	386.72	394.46	402.35	402.35	410.39	410.39	418.60		
	4"	421.82	651.71	671.26	684.69	698.38	712.35	712.35	726.60	726.60	741.13		
	6"	746.60	1,153.50	1,188.10	1,211.86	1,236.10	1,260.82	1,260.82	1,286.04	1,286.04	1,311.76		
Volume Rate/1,000 Gal													
	- 10,000	4.78	7.39	7.61	7.76	7.91	8.07	8.07	8.23	8.23	8.40		
	10,001 30,000	5.83	9.01	9.28	9.46	9.65	9.85	9.85	10.04	10.04	10.24		
	30,001 Above	7.14	11.03	11.36	11.59	11.82	12.06	12.06	12.30	12.30	12.54		

TABLE IV-2

CITY OF MARBLE FALLS Impact on Monthly Customer Charges										
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report										
	Current	Proposed Jan-21	Proposed Jan-22	Proposed Jan-23	Proposed Jan-24	Proposed Jan-25	Forecast Jan-26	Forecast Jan-27	Forecast Jan-28	Forecast Jan-29
2 Wastewater Monthly Rates and Charges										
All Classes										
Monthly Minimum Charge	\$ 18.88	\$ 21.15	\$ 23.68	\$ 26.53	\$ 28.91	\$ 31.51	\$ 32.77	\$ 34.09	\$ 35.45	\$ 36.87
Volume Rate/1,000 Gal										
- Above	4.23	4.74	5.31	5.94	6.48	7.06	7.34	7.64	7.94	8.26

TABLE IV-3

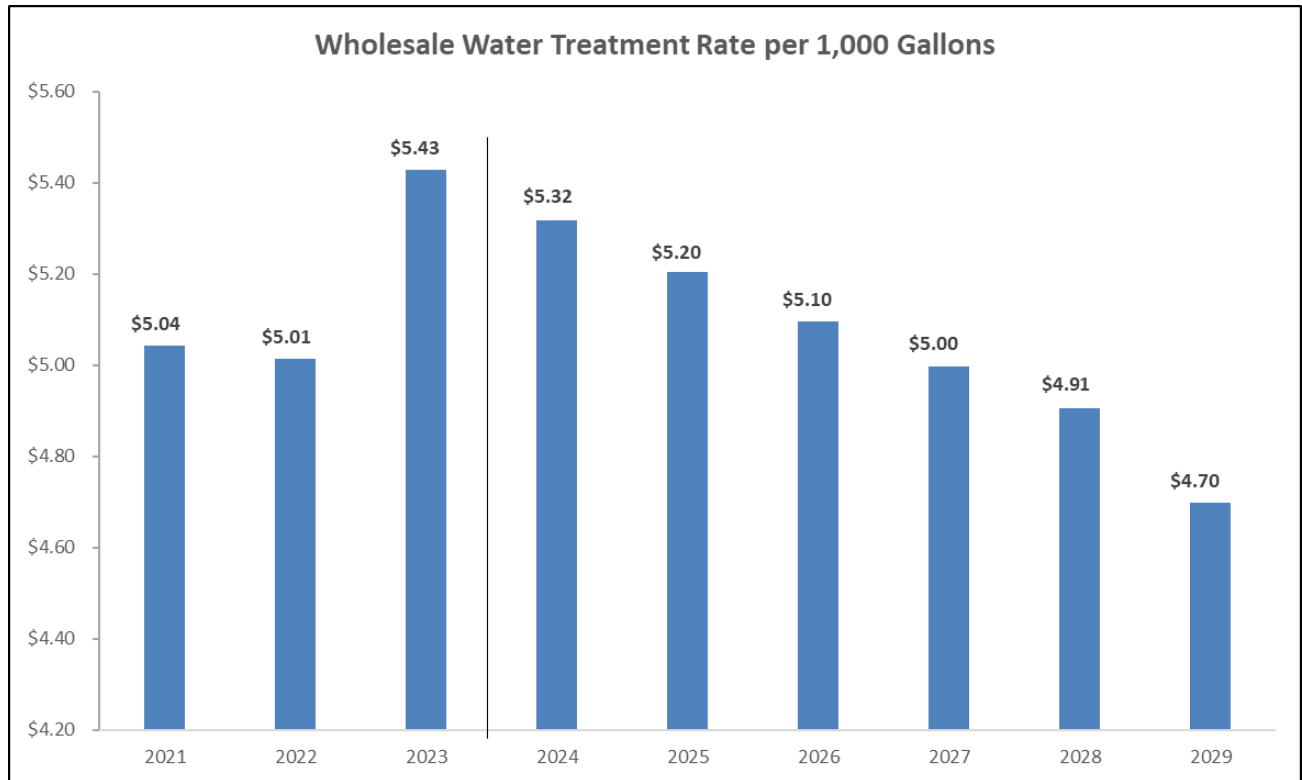
CITY OF MARBLE FALLS Impact on Monthly Customer Charges										
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report										
	Current	Proposed Jan-21	Proposed Jan-22	Proposed Jan-23	Proposed Jan-24	Proposed Jan-25	Forecast Jan-26	Forecast Jan-27	Forecast Jan-28	Forecast Jan-29
Residential Monthly Charges - 3/4"										
5,000 W 5,000 WW	\$ 89.14	\$ 95.42	\$ 102.31	\$ 109.38	\$ 115.51	\$ 122.11	\$ 124.78	\$ 128.67	\$ 131.56	\$ 135.69
Increase - \$		6.28	6.90	7.07	6.12	6.60	2.67	3.89	2.89	4.13
Increase - %		7.0%	7.2%	6.9%	5.6%	5.7%	2.2%	3.1%	2.2%	3.1%
10,000 W 5,000 WW	113.04	120.03	127.67	135.24	141.89	149.02	151.69	156.11	159.00	163.69
Increase - \$		6.99	7.64	7.57	6.64	7.13	2.67	4.42	2.89	4.68
Increase - %		6.2%	6.4%	5.9%	4.9%	5.0%	1.8%	2.9%	1.9%	2.9%
20,000 W 10,000 WW	202.99	214.59	227.19	239.41	250.21	261.78	265.86	273.30	277.72	285.57
Increase - \$		11.60	12.60	12.22	10.80	11.56	4.08	7.44	4.42	7.85
Increase - %		5.7%	5.9%	5.4%	4.5%	4.6%	1.6%	2.8%	1.6%	2.8%
Commercial Monthly Charges - 1"										
20,000 W 20,000 WW	\$ 256.02	\$ 273.01	\$ 291.63	\$ 310.45	\$ 326.83	\$ 344.46	\$ 351.37	\$ 361.99	\$ 369.47	\$ 380.74
Increase - \$		16.99	18.62	18.81	16.39	17.63	6.91	10.62	7.47	11.28
Increase - %		6.6%	6.8%	6.5%	5.3%	5.4%	2.0%	3.0%	2.1%	3.1%
60,000 W 60,000 WW	737.02	783.67	834.67	885.57	930.09	977.93	996.13	1,025.52	1,045.21	1,076.36
Increase - \$		46.65	51.00	50.90	44.53	47.83	18.21	29.39	19.69	31.14
Increase - %		6.3%	6.5%	6.1%	5.0%	5.1%	1.9%	3.0%	1.9%	3.0%
Residential Outside Monthly Charges - 3/4"										
5,000 Water	\$ 49.11	\$ 75.87	\$ 78.15	\$ 79.71	\$ 81.31	\$ 82.93	\$ 82.93	\$ 84.59	\$ 84.59	\$ 86.29
Increase - \$		26.76	2.28	1.56	1.59	1.63	-	1.66	-	1.69
Increase - %		54.5%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
10,000 Water	73.01	112.80	116.18	118.51	120.88	123.30	123.30	125.76	125.76	128.28
Increase - \$		39.79	3.38	2.32	2.37	2.42	-	2.47	-	2.52
Increase - %		54.5%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
Commercial Outside Monthly Charges - 1"										
20,000 Water	152.54	235.67	242.74	247.60	252.55	257.60	257.60	262.75	262.75	268.01
Increase - \$		83.13	7.07	4.85	4.95	5.05	-	5.15	-	5.26
Increase - %		54.5%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
60,000 Water	464.34	717.41	738.93	753.71	768.78	784.16	784.16	799.84	799.84	815.84
Increase - \$		253.07	21.52	14.78	15.07	15.38	-	15.68	-	16.00
Increase - %		54.5%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%

Wholesale Water Rates

The City of Marble Falls also expressed a desire to develop a wholesale water rate. The City does not have wholesale customers currently. Willdan has reviewed the costs associated with water treatment.

Chart IV-4 presents the wholesale water treatment rate per 1,000 gallons.

CHART IV-4



Outside City Rates

Charging outside customers higher rates is a common and accepted practice in the Utility industry. According to a nation-wide survey of outside city rates, the average premium for those cities that assess this charge is 47%.

Typically, outside city rates are charged based on the Utility Basis of ratemaking. According to AWWA Manual M-1, the Utility Basis is used to calculate the cost of service for outside customers. Given the limited number of City of Marble Falls' outside city customers, it was not considered to be reasonable or prudent as part of this study to prepare a full utility basis cost calculation. The project team reserves the right to revisit this assumption and prepare a more in-depth analysis at a later date.

However, a general utility basis comparison of the cost of service was prepared and is presented as **Table IV-5**. This table reveals that for the test year, a utility basis calculation, which would be used for outside city customers, would result in a cost of service that is approximately 61.8% greater than the cash basis cost of service calculation. This calculation clearly justifies the use of a 50.0% premium for outside city customers, based on the higher cost of service that would be incurred to serve these customers.

TABLE IV-5

CITY OF MARBLE FALLS						
Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report						
Total Cost of Service and Net Revenue Requirement to be Raised from Rates						
	3-Year Period Total	2020	2021	2022	2023	
WATER Utility						
CASH BASIS						
1	Operating Expenses	\$ 7,972,666	\$ 1,870,277	\$ 1,951,540	\$ 2,032,417	\$ 2,118,432
2	Capital Outlays	307,500	76,875	76,875	76,875	76,875
3	Transfers	769,495	183,000	188,490	195,522	202,482
4	Current Debt Service	4,622,290	1,104,460	1,172,452	1,172,296	1,173,083
5	Future Debt Service	588,103	-	-	294,051	294,051
6	Depreciation	-	-	-	-	-
7	Return	-	-	-	-	-
	Cost of Service	14,260,053	3,234,612	3,389,356	3,771,161	3,864,924
	Less Non-Rate Revenues	1,022,400	255,600	255,600	255,600	255,600
	Net Revenue Requirement	13,237,653	2,979,012	3,133,756	3,515,561	3,609,324
UTILITY BASIS						
1	Operating Expenses	\$ 7,972,666	\$ 1,870,277	\$ 1,951,540	\$ 2,032,417	\$ 2,118,432
2	Capital Outlays	-	-	-	-	-
3	Transfers	769,495	183,000	188,490	195,522	202,482
4	Current Debt Service	-	-	-	-	-
5	Future Debt Service	-	-	-	-	-
6	Depreciation	4,457,581	1,050,699	1,070,532	1,094,522	1,241,828
7	Return	8,908,455	2,130,402	2,101,456	2,109,765	2,566,832
	Cost of Service	22,108,196	5,234,377	5,312,018	5,432,227	6,129,575
	Percent Greater than Cash Basis	55.0%	61.8%	56.7%	44.0%	58.6%
	Less Non-Rate Revenues	1,022,400	255,600	255,600	255,600	255,600
	Net Revenue Requirement	21,085,796	4,978,777	5,056,418	5,176,627	5,873,975
	Percent Greater than Cash Basis	59.3%	67.1%	61.4%	47.2%	62.7%

Notes on Rate Recommendations

The forecast and recommendations presented in this study represent a combination of the best information available from Marble Falls 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 Marble Falls service territory). 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 of Marble Falls, such as an extended recession, natural catastrophe or terrorist attack.
- Significant and long-lasting changes in weather patterns.
- Increases or decreases in interest rates, coverage requirements, or reserve requirements for long-term debt.
- City of Marble Falls budget levels or 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 City of Marble Falls at this time.

If any of these events occur, City of Marble Falls may be compelled to consider further adjustments to its water and wastewater rates.

Appendix A



CITY OF
Marble Falls
TEXAS

City of Marble Falls

Ten Year Rate Analysis and Pro Forma

Fiscal Years 2020 - 2029



WILLDAN



Future Debt Term 20

Water Future Bond Issues		
	Alternative	Proposed
2020	\$	-
2021	\$	3,750,000
2022	\$	-
2023	\$	-
2024	\$	-
2025	\$	-
2026	\$	-
2027	\$	-
2028	\$	-
2029	\$	-

Sewer Future Bond Issues		
	Alternative	Proposed
2020	\$	-
2021	\$	-
2022	\$	4,250,000
2023	\$	4,250,000
2024	\$	7,000,000
2025	\$	-
2026	\$	-
2027	\$	-
2028	\$	-
2029	\$	-

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water Rate Adjustments										
Meter Charge	0.00%	3.00%	3.00%	2.00%	2.00%	2.00%	0.00%	2.00%	0.00%	2.00%
Volume Charge	0.00%	3.00%	3.00%	2.00%	2.00%	2.00%	0.00%	2.00%	0.00%	2.00%
	-10	-1	16	37	53	54	73	104	146	199
Sewer Rate Adjustments										
Base Charge	0.00%	12.00%	12.00%	12.00%	9.00%	9.00%	4.00%	4.00%	4.00%	4.00%
Volume Charge Residential	0.00%	12.00%	12.00%	12.00%	9.00%	9.00%	4.00%	4.00%	4.00%	4.00%
Volume Charge Non-Residential	0.00%	12.00%	12.00%	12.00%	9.00%	9.00%	4.00%	4.00%	4.00%	4.00%

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL									
Effective Mar-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27	Effective Jan-28	Effective Jan-29

City Rate Plan -- 10 Year Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

1 Water Monthly Rates and Charges

CITY Water Rate and Charges

W1 Residential

Monthly Minimum Charge

3/4"	\$	25.21	\$	25.97	\$	26.75	\$	27.28	\$	27.83	\$	28.38	\$	28.38	\$	28.95	\$	28.95	\$	29.53
1"		35.94		37.02		38.13		38.89		39.67		40.46		40.46		41.27		41.27		42.10
1 1/2"		64.38		66.31		68.30		69.67		71.06		72.48		72.48		73.93		73.93		75.41
2"		111.27		114.61		118.05		120.41		122.82		125.27		125.27		127.78		127.78		130.33

Volume Rate/1,000 Gal

-	10,000	4.78	4.92	5.07	5.17	5.28	5.38	5.38	5.49	5.49	5.60
10,001	30,000	5.83	6.00	6.19	6.31	6.43	6.56	6.56	6.69	6.69	6.83
30,001	Above	7.14	7.35	7.57	7.73	7.88	8.04	8.04	8.20	8.20	8.36

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL									
Effective Mar-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27	Effective Jan-28	Effective Jan-29

City Rate Plan -- 10 Year Summary
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

W2 Sprinkler/Irrigation

Monthly Minimum Charge

3/4"	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
1"		-		-		-		-		-		-		-		-
1 1/2"		-		-		-		-		-		-		-		-
2"		-		-		-		-		-		-		-		-
3"		-		-		-		-		-		-		-		-
4"		-		-		-		-		-		-		-		-

Volume Rate/1,000 Gal

-	10,000	4.00	4.12	4.24	4.33	4.42	4.50	4.50	4.59	4.59	4.69
10,001	30,000	4.10	4.22	4.35	4.44	4.53	4.62	4.62	4.71	4.71	4.80
30,001	Above	4.25	4.38	4.51	4.60	4.69	4.78	4.78	4.88	4.88	4.98

**CITY OF MARBLE FALLS
WATER/WASTEWATER COST OF SERVICE MODEL**

Effective Mar-20 Effective Jan-21 Effective Jan-22 Effective Jan-23 Effective Jan-24 Effective Jan-25 Effective Jan-26 Effective Jan-27 Effective Jan-28 Effective Jan-29

**City Rate Plan -- 10 Year Summary
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report**

W3 Commercial

Monthly Minimum Charge

3/4"	\$	25.21	\$	25.97	\$	26.75	\$	27.28	\$	27.83	\$	28.38	\$	28.38	\$	28.95	\$	28.95	\$	29.53
1"		35.94		37.02		38.13		38.89		39.67		40.46		40.46		41.27		41.27		42.10
1 1/2"		64.38		66.31		68.30		69.67		71.06		72.48		72.48		73.93		73.93		75.41
2"		111.27		114.61		118.05		120.41		122.82		125.27		125.27		127.78		127.78		130.33
3"		238.25		245.40		252.76		257.81		262.97		268.23		268.23		273.59		273.59		279.07
4"		421.82		434.47		447.51		456.46		465.59		474.90		474.90		484.40		484.40		494.09
6"		746.60		769.00		792.07		807.91		824.07		840.55		840.55		857.36		857.36		874.51
8"		746.60		769.00		792.07		807.91		824.07		840.55		840.55		857.36		857.36		874.51

Volume Rate/1,000 Gal

-	10,000	4.78	4.92	5.07	5.17	5.28	5.38	5.38	5.49	5.49	5.60
10,001	30,000	5.83	6.00	6.19	6.31	6.43	6.56	6.56	6.69	6.69	6.83
30,001	Above	7.14	7.35	7.57	7.73	7.88	8.04	8.04	8.20	8.20	8.36
-	-	7.14	7.35	7.57	7.73	7.88	8.04	8.04	8.20	8.20	8.36

W4 Municipal

Monthly Minimum Charge

3/4"	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
1"		-		-		-		-		-		-		-		-		-		-
1 1/2"		-		-		-		-		-		-		-		-		-		-
2"		-		-		-		-		-		-		-		-		-		-
3"		-		-		-		-		-		-		-		-		-		-
4"		-		-		-		-		-		-		-		-		-		-
6"		-		-		-		-		-		-		-		-		-		-
8"		-		-		-		-		-		-		-		-		-		-

Volume Rate/1,000 Gal

-	10,000	-	-	-	-	-	-	-	-	-	-
10,001	30,000	-	-	-	-	-	-	-	-	-	-
30,001	Above	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

CITY OF MARBLE FALLS										
WATER/WASTEWATER COST OF SERVICE MODEL										
	Effective	Effective	Effective	Effective	Effective	Effective	Effective	Effective	Effective	Effective
	Mar-20	Jan-21	Jan-22	Jan-23	Jan-24	Jan-25	Jan-26	Jan-27	Jan-28	Jan-29

City Rate Plan -- 10 Year Summary
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

W5 Purple Pipe

Monthly Minimum Charge

3/4"	\$	12.61	\$	12.98	\$	13.37	\$	13.64	\$	13.91	\$	14.19	\$	14.19	\$	14.47	\$	14.47	\$	14.76
1"		17.97		18.51		19.06		19.45		19.83		20.23		20.23		20.64		20.64		21.05
1 1/2"		32.19		33.16		34.15		34.83		35.53		36.24		36.24		36.97		36.97		37.70
2"		55.64		57.30		59.02		60.20		61.41		62.64		62.64		63.89		63.89		65.17
3"		119.13		122.70		126.38		128.91		131.49		134.12		134.12		136.80		136.80		139.53
4"		210.91		217.24		223.75		228.23		232.79		237.45		237.45		242.20		242.20		247.04
6"		373.30		384.50		396.03		403.95		412.03		420.27		420.27		428.68		428.68		437.25
8"		373.30		384.50		396.03		403.95		412.03		420.27		420.27		428.68		428.68		437.25

Volume Rate/1,000 Gal

-	10,000	2.39	2.46	2.54	2.59	2.64	2.69	2.69	2.74	2.74	2.80
10,001	30,000	2.92	3.00	3.09	3.15	3.22	3.28	3.28	3.35	3.35	3.41
30,001	Above	3.57	3.68	3.79	3.86	3.94	4.02	4.02	4.10	4.10	4.18
-	-	3.57	3.68	3.79	3.86	3.94	4.02	4.02	4.10	4.10	4.18

W6 Bulk

Monthly Minimum Charge

3/4"	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
1"		-		-		-		-		-		-		-		-		-		-
1 1/2"		-		-		-		-		-		-		-		-		-		-
2"		-		-		-		-		-		-		-		-		-		-
3"		-		-		-		-		-		-		-		-		-		-
4"		-		-		-		-		-		-		-		-		-		-
6"		-		-		-		-		-		-		-		-		-		-
8"		-		-		-		-		-		-		-		-		-		-

Volume Rate/1,000 Gal

-	10,000	20.00	20.60	21.22	21.64	22.08	22.52	22.52	22.97	22.97	23.43
10,001	30,000	20.00	20.60	21.22	21.64	22.08	22.52	22.52	22.97	22.97	23.43
30,001	Above	20.00	20.60	21.22	21.64	22.08	22.52	22.52	22.97	22.97	23.43
-	-	20.00	20.60	21.22	21.64	22.08	22.52	22.52	22.97	22.97	23.43

**CITY OF MARBLE FALLS
WATER/WASTEWATER COST OF SERVICE MODEL**

Effective	Effective	Effective	Effective	Effective	Effective	Effective	Effective	Effective	Effective	Effective
Mar-20	Jan-21	Jan-22	Jan-23	Jan-24	Jan-25	Jan-26	Jan-27	Jan-28	Jan-28	Jan-29

City Rate Plan -- 10 Year Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

W7 Residential Outside

Monthly Minimum Charge

3/4"	\$	25.21	\$	38.95	\$	40.12	\$	40.92	\$	41.74	\$	42.57	\$	42.57	\$	43.42	\$	43.42	\$	44.29
1"		35.94		55.53		57.19		58.34		59.50		60.69		60.69		61.91		61.91		63.15
1 1/2"		64.38		99.47		102.45		104.50		106.59		108.72		108.72		110.90		110.90		113.11
2"		111.27		171.91		177.07		180.61		184.22		187.91		187.91		191.67		191.67		195.50
3"		238.25		368.10		379.14		386.72		394.46		402.35		402.35		410.39		410.39		418.60
4"		421.82		651.71		671.26		684.69		698.38		712.35		712.35		726.60		726.60		741.13
6"		746.60		1,153.50		1,188.10		1,211.86		1,236.10		1,260.82		1,260.82		1,286.04		1,286.04		1,311.76
8"		-		-		-		-		-		-		-		-		-		-

Volume Rate/1,000 Gal

-	10,000	4.78	7.39	7.61	7.76	7.91	8.07	8.07	8.23	8.23	8.40
10,001	30,000	5.83	9.01	9.28	9.46	9.65	9.85	9.85	10.04	10.04	10.24
30,001	Above	7.14	11.03	11.36	11.59	11.82	12.06	12.06	12.30	12.30	12.54
-	-	7.14	11.03	11.36	11.59	11.82	12.06	12.06	12.30	12.30	12.54

W8 Commercial Outside

Monthly Minimum Charge

3/4"	\$	25.21	\$	38.95	\$	40.12	\$	40.92	\$	41.74	\$	42.57	\$	42.57	\$	43.42	\$	43.42	\$	44.29
1"		35.94		55.53		57.19		58.34		59.50		60.69		60.69		61.91		61.91		63.15
1 1/2"		64.38		99.47		102.45		104.50		106.59		108.72		108.72		110.90		110.90		113.11
2"		111.27		171.91		177.07		180.61		184.22		187.91		187.91		191.67		191.67		195.50
3"		238.25		368.10		379.14		386.72		394.46		402.35		402.35		410.39		410.39		418.60
4"		421.82		651.71		671.26		684.69		698.38		712.35		712.35		726.60		726.60		741.13
6"		746.60		1,153.50		1,188.10		1,211.86		1,236.10		1,260.82		1,260.82		1,286.04		1,286.04		1,311.76
8"		746.60		1,153.50		1,188.10		1,211.86		1,236.10		1,260.82		1,260.82		1,286.04		1,286.04		1,311.76

Volume Rate/1,000 Gal

-	10,000	4.78	7.39	7.61	7.76	7.91	8.07	8.07	8.23	8.23	8.40
10,001	30,000	5.83	9.01	9.28	9.46	9.65	9.85	9.85	10.04	10.04	10.24
30,001	Above	7.14	11.03	11.36	11.59	11.82	12.06	12.06	12.30	12.30	12.54
-	-	7.14	11.03	11.36	11.59	11.82	12.06	12.06	12.30	12.30	12.54

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL									
Effective Mar-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27	Effective Jan-28	Effective Jan-29

City Rate Plan -- 10 Year Summary
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

2 Wastewater Monthly Rates and Charges

Residential

Monthly Minimum Charge

3/4"	\$	18.88	\$	21.15	\$	23.68	\$	26.53	\$	28.91	\$	31.51	\$	32.77	\$	34.09	\$	35.45	\$	36.87
1"		18.88		21.15		23.68		26.53		28.91		31.51		32.77		34.09		35.45		36.87
1 1/2"		18.88		21.15		23.68		26.53		28.91		31.51		32.77		34.09		35.45		36.87
2"		18.88		21.15		23.68		26.53		28.91		31.51		32.77		34.09		35.45		36.87

Volume Rate/1,000 Gal

- Above		4.23		4.74		5.31		5.94		6.48		7.06		7.34		7.64		7.94		8.26
-		4.23		4.74		5.31		5.94		6.48		7.06		7.34		7.64		7.94		8.26

Commercial

Monthly Minimum Charge

3/4"		18.88		21.15		23.68		26.53		28.91		31.51		32.77		34.09		35.45		36.87
1"		18.88		21.15		23.68		26.53		28.91		31.51		32.77		34.09		35.45		36.87
1 1/2"		18.88		21.15		23.68		26.53		28.91		31.51		32.77		34.09		35.45		36.87
2"		18.88		21.15		23.68		26.53		28.91		31.51		32.77		34.09		35.45		36.87

Volume Rate/1,000 Gal

- Above		4.23		4.74		5.31		5.94		6.48		7.06		7.34		7.64		7.94		8.26
-		4.23		4.74		5.31		5.94		6.48		7.06		7.34		7.64		7.94		8.26

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL									
Effective Mar-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27	Effective Jan-28	Effective Jan-29

City Rate Plan -- 10 Year Summary
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

3 Residential Monthly Charges -- WATER

	Effective Mar-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27	Effective Jan-28	Effective Jan-29
5,000 Gallons -- 3/4" Meter										
Total	\$ 49.11	\$ 50.58	\$ 52.10	\$ 53.14	\$ 54.21	\$ 55.29	\$ 55.29	\$ 56.40	\$ 56.40	\$ 57.52
Dollar Inc		1.47	1.52	1.04	1.06	1.08	-	1.11	-	1.13
Percent Inc		3.0%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
10,000 Gallons -- 3/4" Meter										
Total	73.01	75.20	77.46	79.01	80.59	82.20	82.20	83.84	83.84	85.52
Dollar Inc		2.19	2.26	1.55	1.58	1.61	-	1.64	-	1.68
Percent Inc		3.0%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
20,000 Gallons -- 3/4" Meter										
Total	141.81	146.06	150.45	153.46	156.52	159.65	159.65	162.85	162.85	166.10
Dollar Inc		4.25	4.38	3.01	3.07	3.13	-	3.19	-	3.26
Percent Inc		3.0%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
50,000 Gallons -- 3/4" Meter										
Total	382.21	393.68	405.49	413.60	421.87	430.31	430.31	438.91	438.91	447.69
Dollar Inc		11.47	11.81	8.11	8.27	8.44	-	8.61	-	8.78
Percent Inc		3.0%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%

<div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 auto; width: 80%;"> CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL </div>										
	Effective Mar-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27	Effective Jan-28	Effective Jan-29

City Rate Plan -- 10 Year Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

4 Commercial Monthly Charges -- WATER

20,000 Gallons -- 1" Meter

Total	152.54	157.12	161.83	165.07	168.37	171.73	171.73	175.17	175.17	178.67
Dollar Inc		4.58	4.71	3.24	3.30	3.37	-	3.43	-	3.50
Percent Inc		3.0%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%

60,000 Gallons -- 1" Meter

Total	464.34	478.27	492.62	502.47	512.52	522.77	522.77	533.23	533.23	543.89
Dollar Inc		13.93	14.35	9.85	10.05	10.25	-	10.46	-	10.66
Percent Inc		3.0%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL									
Effective Mar-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27	Effective Jan-28	Effective Jan-29

City Rate Plan -- 10 Year Summary
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

5 Residential Monthly Charges -- WASTEWATER

5,000 Gallons -- 3/4" Meter																				
Total	\$	40.03	\$	44.83	\$	50.21	\$	56.24	\$	61.30	\$	66.82	\$	69.49	\$	72.27	\$	75.16	\$	78.17
Dollar Inc				4.80		5.38		6.03		5.06		5.52		2.67		2.78		2.89		3.01
Percent Inc				12.0%		12.0%		12.0%		9.0%		9.0%		4.0%		4.0%		4.0%		4.0%
10,000 Gallons -- 3/4" Meter																				
Total		61.18		68.52		76.74		85.95		93.69		102.12		106.21		110.45		114.87		119.47
Dollar Inc				7.34		8.22		9.21		7.74		8.43		4.08		4.25		4.42		4.59
Percent Inc				12.0%		12.0%		12.0%		9.0%		9.0%		4.0%		4.0%		4.0%		4.0%
20,000 Gallons -- 3/4" Meter																				
Total		103.48		115.90		129.81		145.38		158.47		172.73		179.64		186.82		194.30		202.07
Dollar Inc				12.42		13.91		15.58		13.08		14.26		6.91		7.19		7.47		7.77
Percent Inc				12.0%		12.0%		12.0%		9.0%		9.0%		4.0%		4.0%		4.0%		4.0%
30,000 Gallons -- 3/4" Meter																				
Total		145.78		163.27		182.87		204.81		223.24		243.34		253.07		263.19		273.72		284.67
Dollar Inc				17.49		19.59		21.94		18.43		20.09		9.73		10.12		10.53		10.95
Percent Inc				12.0%		12.0%		12.0%		9.0%		9.0%		4.0%		4.0%		4.0%		4.0%

6 Commercial Monthly Charges -- WASTEWATER

30,000 Gallons -- 1" Meter																					
Total	1 1/2"	\$	145.78	\$	163.27	\$	182.87	\$	204.81	\$	223.24	\$	243.34	\$	253.07	\$	263.19	\$	273.72	\$	284.67
Dollar Inc					17.49		19.59		21.94		18.43		20.09		9.73		10.12		10.53		10.95
Percent Inc					12.0%		12.0%		12.0%		9.0%		9.0%		4.0%		4.0%		4.0%		4.0%
60,000 Gallons -- 1" Meter																					
Total	1 1/2"		272.68		305.40		342.05		383.10		417.57		455.16		473.36		492.30		511.99		532.47
Dollar Inc					32.72		36.65		41.05		34.48		37.58		18.21		18.93		19.69		20.48
Percent Inc					12.0%		12.0%		12.0%		9.0%		9.0%		4.0%		4.0%		4.0%		4.0%

**CITY OF MARBLE FALLS
WATER/WASTEWATER COST OF SERVICE MODEL**

	Prior	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
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Model Summary

Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

1 Water and Wastewater Rates

Water Rates -- Residential

	\$	22.92	\$	25.21	\$	25.97	\$	26.75	\$	27.28	\$	27.83	\$	28.38	\$	28.38	\$	28.95	\$	28.95	\$	29.53	
Monthly Minimum Charge--3/4"																							
Volume Rate Per 1,000 Gal																							
- 10,000	\$	4.45	\$	4.78	\$	4.92	\$	5.07	\$	5.17	\$	5.28	\$	5.38	\$	5.38	\$	5.49	\$	5.49	\$	5.60	
10,001 30,000		5.42		5.83		6.00		6.19		6.31		6.43		6.56		6.56		6.69		6.69		6.83	
30,001 Above		6.64		7.14		7.35		7.57		7.73		7.88		8.04		8.04		8.20		8.20		8.36	
- -		6.64		7.14		7.35		7.57		7.73		7.88		8.04		8.04		8.20		8.20		8.36	

Wastewater Rates - Residential

Monthly Charge	\$	18.15	\$	18.88	\$	21.15	\$	23.68	\$	26.53	\$	28.91	\$	31.51	\$	32.77	\$	34.09	\$	35.45	\$	36.87
Volume Rate/1,000 Gal		3.90		4.23		4.74		5.31		5.94		6.48		7.06		7.34		7.64		7.94		8.26
Volume Rate/1,000 Gal		3.90		4.23		4.74		5.31		5.94		6.48		7.06		7.34		7.64		7.94		8.26

2 Residential Standard Monthly Bill

5,000 W	Total	\$	82.82	\$	89.14	\$	95.42	\$	102.31	\$	109.38	\$	115.51	\$	122.11	\$	124.78	\$	128.67	\$	131.56	\$	135.69
5,000 WW	Increase -- \$				6.32		6.28		6.90		7.07		6.12		6.60		2.67		3.89		2.89		4.13
	Increase -- %				7.6%		7.0%		7.2%		6.9%		5.6%		5.7%		2.2%		3.1%		2.2%		3.1%
10,000 W	Total		124.57		134.19		143.72		154.20		164.96		174.27		184.32		188.40		194.30		198.71		204.99
10,000 WW	Increase -- \$				9.62		9.53		10.48		10.76		9.32		10.04		4.08		5.89		4.42		6.27
	Increase -- %				7.7%		7.1%		7.3%		7.0%		5.6%		5.8%		2.2%		3.1%		2.3%		3.2%
20,000 W	Total		188.47		202.99		214.59		227.19		239.41		250.21		261.78		265.86		273.30		277.72		285.57
10,000 WW	Increase -- \$				14.52		11.60		12.60		12.22		10.80		11.56		4.08		7.44		4.42		7.85
	Increase -- %				7.7%		5.7%		5.9%		5.4%		4.5%		4.6%		1.6%		2.8%		1.6%		2.8%
50,000 W	Total		412.07		443.39		462.20		482.23		499.55		515.56		532.43		536.51		549.37		553.78		567.16
10,000 WW	Increase -- \$				31.32		18.81		20.03		17.32		16.01		16.87		4.08		12.85		4.42		13.37
	Increase -- %				7.6%		4.2%		4.3%		3.6%		3.2%		3.3%		0.8%		2.4%		0.8%		2.4%

**CITY OF MARBLE FALLS
WATER/WASTEWATER COST OF SERVICE MODEL**

	Prior	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
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Model Summary

Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

3	Fund Balance, Revenues and Expenses										
	Beginning Fund Balance	\$ -	\$ (163,387)	\$ (18,891)	\$ 279,161	\$ 703,441	\$ 1,108,185	\$ 1,265,959	\$ 1,741,102	\$ 2,530,683	\$ 3,617,508
	Revenues and Expenses -- CASH BASIS										
3.1	Revenues										
	Water Rate Revenues	\$ 3,518,739	\$ 3,844,224	\$ 4,112,968	\$ 4,351,844	\$ 4,590,040	\$ 4,832,566	\$ 5,021,105	\$ 5,242,501	\$ 5,437,310	\$ 5,666,866
	WW Rate Revenues	1,717,177	1,969,138	2,284,830	2,651,134	3,019,198	3,402,817	3,714,576	3,986,780	4,278,931	4,583,591
	Non-Rate Revenues	530,350	530,350	528,449	529,450	530,487	529,844	530,836	530,027	530,967	529,981
	Total Revenues	5,766,266	6,343,712	6,926,247	7,532,428	8,139,725	8,765,227	9,266,516	9,759,308	10,247,207	10,780,438
3.2	Operating Expenses	3,258,844	3,381,442	3,502,618	3,633,818	3,918,645	4,213,742	4,370,339	4,529,682	4,698,581	4,870,494
3.3	Net Revenues for Debt Service and Coverage	2,507,423	2,962,269	3,423,629	3,898,610	4,221,079	4,551,484	4,896,178	5,229,626	5,548,626	5,909,944
3.4	Capital Outlays	95,890	95,890	95,890	95,890	95,890	95,890	95,890	95,890	95,890	95,890
3.5	Transfers	366,000	376,980	391,044	404,965	420,012	452,116	485,375	503,285	521,516	540,823
3.6	Net Revenues Less Capital Outlays and Transfers	2,045,533	2,489,399	2,936,695	3,397,755	3,705,178	4,003,478	4,314,912	4,630,451	4,931,220	5,273,231
	Debt Service										
	Current Debt Service	2,208,920	2,344,903	2,344,591	2,346,166	2,339,866	2,336,241	2,330,306	2,331,407	2,334,931	2,336,399
	Future Debt Service	-	-	294,051	627,309	960,567	1,509,463	1,509,463	1,509,463	1,509,463	1,509,463
3.7	Total Debt Service	2,208,920	2,344,903	2,638,642	2,973,475	3,300,433	3,845,704	3,839,769	3,840,870	3,844,394	3,845,862
3.8	Total Cost of Service -- CASH Basis	5,929,654	6,199,215	6,628,194	7,108,148	7,734,980	8,607,453	8,791,373	8,969,727	9,160,382	9,353,070
3.9	Net Revenues for Contingency and Coverage	(163,387)	144,496	298,052	424,280	404,744	157,774	475,143	789,581	1,086,826	1,427,369
	Percent of COS	-2.8%	2.3%	4.5%	6.0%	5.2%	1.8%	5.4%	8.8%	11.9%	15.3%
	Debt Coverage (3.5/3.6)	1.14	1.26	1.30	1.31	1.28	1.18	1.28	1.36	1.44	1.54
	Ending Water & Sewer Combined Fund Balance	(163,387)	(18,891)	279,161	703,441	1,108,185	1,265,959	1,741,102	2,530,683	3,617,508	5,044,877
	One Day Operating Expenditures (Op.Exp+Det Svc)	15,983	16,721	17,897	19,212	20,929	23,319	23,823	24,312	24,834	25,362
	Days of Operating Expenditures	(10)	(1)	16	37	53	54	73	104	146	199
	Fund Balance Goal Days	60									
	Over (Short) of Requirement	(1,122,362)	(1,022,177)	(794,642)	(449,259)	(147,556)	(133,202)	311,708	1,071,970	2,127,455	3,523,149

**CITY OF MARBLE FALLS
WATER/WASTEWATER COST OF SERVICE MODEL**

	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
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Model Summary

Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

5 Total Accounts

Water Accounts

Total Accounts	3,386	3,515	3,636	3,761	3,890	4,017	4,148	4,275	4,406	4,533
New Accounts	-	125	117	121	125	122	126	123	127	123
Avg. Annual Growth Rate		3.81%	3.44%	3.44%	3.44%	3.25%	3.26%	3.07%	3.07%	2.88%

Wastewater Accounts

Total Accounts	3,237	3,367	3,488	3,614	3,744	3,871	4,002	4,131	4,263	4,391
New Accounts	-	129	121	126	130	127	132	128	132	128
Avg. Annual Growth Rate		4.00%	3.60%	3.60%	3.60%	3.40%	3.40%	3.20%	3.20%	3.00%

6 Annual Volume

Water Volume

Residential	174,802,000	181,794,080	188,338,667	195,118,859	202,143,138	209,016,004	216,122,549	223,038,470	230,175,701	237,080,972
Sprinkler/Irrigation	88,090,000	89,851,800	91,469,132	93,115,577	94,791,657	96,403,115	98,041,968	99,610,640	101,204,410	102,722,476
Commercial	139,643,000	145,228,720	150,456,954	155,873,404	161,484,847	166,975,332	172,652,493	178,177,373	183,879,049	189,395,420
Municipal	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000
Purple Pipe	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000
Bulk	882,000	882,000	882,000	882,000	882,000	882,000	882,000	882,000	882,000	882,000
Residential Outside	10,540,000	10,961,600	11,356,218	11,765,041	12,188,583	12,602,995	13,031,497	13,448,504	13,878,857	14,295,222
Commercial Outside	-	-	-	-	-	-	-	-	-	-
Other W9	-	-	-	-	-	-	-	-	-	-
Other W10	-	-	-	-	-	-	-	-	-	-
Total System	427,887,000	442,700,880	456,534,959	470,837,953	485,626,219	500,067,223	514,971,825	529,450,412	544,367,215	558,775,315

Wastewater Billing Units

Residential	98,521,000	102,461,840	106,150,466	109,971,883	113,930,871	117,804,520	121,809,874	125,707,790	129,730,439	133,622,353
Municipal	0	-	-	-	-	-	-	-	-	-
Residential Outside	-	-	-	-	-	-	-	-	-	-
Other WW5	-	-	-	-	-	-	-	-	-	-
Other WW6	-	-	-	-	-	-	-	-	-	-
Other WW7	-	-	-	-	-	-	-	-	-	-
Other WW8	-	-	-	-	-	-	-	-	-	-
Other WW9	-	-	-	-	-	-	-	-	-	-
Other WW10	-	-	-	-	-	-	-	-	-	-
Total System	241,111,000	250,755,440	259,782,636	269,134,811	278,823,664	288,303,668	298,105,993	307,645,385	317,490,037	327,014,738

CITY OF MARBLE FALLS										
WATER/WASTEWATER COST OF SERVICE MODEL										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029

Revenue Summary

Scenario: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
WATER Revenues -- Total											
W1 Residential	\$	1,647,974	\$ 1,794,849	\$ 1,915,248	\$ 2,030,365	\$ 2,145,527	\$ 2,262,845	\$ 2,355,175	\$ 2,462,947	\$ 2,558,484	\$ 2,670,375
W2 Sprinkler/Irrigation		370,859	385,842	404,570	421,436	437,602	453,942	464,696	478,426	489,279	503,240
W3 Commercial		1,377,616	1,495,392	1,595,703	1,691,614	1,787,562	1,885,306	1,962,231	2,052,023	2,131,620	2,224,843
W4 Municipal		-	-	-	-	-	-	-	-	-	-
W5 Purple Pipe		5,099	5,329	5,488	5,616	5,728	5,843	5,881	5,960	5,999	6,079
W6 Bulk		17,640	17,993	18,533	18,964	19,343	19,730	19,860	20,125	20,257	20,527
W7 Residential Outside		88,928	129,410	154,972	164,286	173,605	183,098	190,568	199,289	207,019	216,073
Total Rate Revenue		3,518,739	3,844,224	4,112,968	4,351,844	4,590,040	4,832,566	5,021,105	5,242,501	5,437,310	5,666,866
Non-Rate Revenue		255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600
Total Revenue		3,774,339	4,099,824	4,368,568	4,607,444	4,845,640	5,088,166	5,276,705	5,498,101	5,692,910	5,922,466
Water Revenues -- Additional											
W1 Residential			146,875	120,398	115,117	115,162	117,317	92,330	107,773	95,536	111,891
W2 Sprinkler/Irrigation			14,983	18,729	16,865	16,166	16,340	10,754	13,730	10,853	13,961
W3 Commercial			117,776	100,311	95,911	95,948	97,744	76,925	89,792	79,597	93,223
W4 Municipal			-	-	-	-	-	-	-	-	-
W5 Purple Pipe			230	160	128	112	115	38	78	39	80
W6 Bulk			353	540	431	379	387	130	265	132	270
Total Rate Revenue			325,485	268,744	238,876	238,196	242,526	188,538	221,397	194,808	229,556
Non-Rate Revenue			-	-	-	-	-	-	-	-	-
Total Revenue			325,485	268,744	238,876	238,196	242,526	188,538	221,397	194,808	229,556
WASTEWATER Revenues -- Total											
WW1 Residential	\$	873,090	\$ 999,679	\$ 1,159,948	\$ 1,345,910	\$ 1,532,767	\$ 1,727,520	\$ 1,885,792	\$ 2,023,983	\$ 2,172,300	\$ 2,326,968
WW2 Commercial		844,087	969,459	1,124,882	1,305,223	1,486,431	1,675,297	1,828,784	1,962,797	2,106,631	2,256,623
Total Rate Revenue		1,717,177	1,969,138	2,284,830	2,651,134	3,019,198	3,402,817	3,714,576	3,986,780	4,278,931	4,583,591
Non-Rate Revenue		274,750	274,750	272,849	273,850	274,887	274,244	275,236	274,427	275,367	274,381
Total Revenue		1,991,927	2,243,888	2,557,679	2,924,984	3,294,084	3,677,060	3,989,812	4,261,206	4,554,297	4,857,972
WASTEWATER Revenues -- Additional											
WW1 Residential			126,589	160,269	185,963	186,856	194,753	158,272	138,191	148,317	154,668
WW2 Commercial			125,372	155,424	180,341	181,208	188,866	153,487	134,013	143,834	149,992
Total Rate Revenue			251,961	315,692	366,304	368,064	383,619	311,759	272,204	292,151	304,660
Non-Rate Revenue			-	(1,901)	1,001	1,037	(643)	993	(810)	940	(985)
Total Revenue			251,961	313,791	367,305	369,101	382,976	312,751	271,394	293,091	303,675

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL											
	Current	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029

Revenue and Expense Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

1 TOTAL Revenues and Expenses -- CASH BASIS

Beginning Fund Balance		\$	-	\$	(163,387)	\$	(18,891)	\$	279,161	\$	703,441	\$	1,108,185	\$	1,265,959	\$	1,741,102	\$	2,530,683	\$	3,617,508	
1.1 Rate Revenues																						
<u>Water Rate Revenue</u>																						
W1 Residential			1,647,974		1,794,849		1,915,248		2,030,365		2,145,527		2,262,845		2,355,175		2,462,947		2,558,484		2,670,375	
W2 Sprinkler/Irrigation			370,859		385,842		404,570		421,436		437,602		453,942		464,696		478,426		489,279		503,240	
W3 Commercial			1,377,616		1,495,392		1,595,703		1,691,614		1,787,562		1,885,306		1,962,231		2,052,023		2,131,620		2,224,843	
W4 Municipal			-		-		-		-		-		-		-		-		-		-	
W5 Purple Pipe			5,099		5,329		5,488		5,616		5,728		5,843		5,881		5,960		5,999		6,079	
W6 Bulk			17,640		17,993		18,533		18,964		19,343		19,730		19,860		20,125		20,257		20,527	
W7 Residential Outside			88,928		129,410		154,972		164,286		173,605		183,098		190,568		199,289		207,019		216,073	
W8 Commercial Outside			10,623		15,410		18,454		19,563		20,673		21,803		22,693		23,732		24,652		25,730	
W9 Other W9			-		-		-		-		-		-		-		-		-		-	
W10 Other W10			-		-		-		-		-		-		-		-		-		-	
Total			<u>3,518,739</u>		<u>3,844,224</u>		<u>4,112,968</u>		<u>4,351,844</u>		<u>4,590,040</u>		<u>4,832,566</u>		<u>5,021,105</u>		<u>5,242,501</u>		<u>5,437,310</u>		<u>5,666,866</u>	
<u>Wastewater Rate Revenue</u>																						
WW1 Residential			873,090		999,679		1,159,948		1,345,910		1,532,767		1,727,520		1,885,792		2,023,983		2,172,300		2,326,968	
WW2 Commercial			844,087		969,459		1,124,882		1,305,223		1,486,431		1,675,297		1,828,784		1,962,797		2,106,631		2,256,623	
WW4 Residential Outside			-		-		-		-		-		-		-		-		-		-	
Total			<u>1,717,177</u>		<u>1,969,138</u>		<u>2,284,830</u>		<u>2,651,134</u>		<u>3,019,198</u>		<u>3,402,817</u>		<u>3,714,576</u>		<u>3,986,780</u>		<u>4,278,931</u>		<u>4,583,591</u>	
Non-Rate Revenues			<u>530,350</u>		<u>530,350</u>		<u>528,449</u>		<u>529,450</u>		<u>530,487</u>		<u>529,844</u>		<u>530,836</u>		<u>530,027</u>		<u>530,967</u>		<u>529,981</u>	
Total Revenues			<u>5,766,266</u>		<u>6,343,712</u>		<u>6,926,247</u>		<u>7,532,428</u>		<u>8,139,725</u>		<u>8,765,227</u>		<u>9,266,516</u>		<u>9,759,308</u>		<u>10,247,207</u>		<u>10,780,438</u>	
Cost of Service																						
<u>Cost Center Code</u>																						
560 Water Services			850,525		877,674		905,739		934,753		964,754		995,777		1,027,863		1,061,050		1,095,382		1,130,903	
561 Water Plant			942,626		994,721		1,046,348		1,100,721		1,157,998		1,217,838		1,280,862		1,346,672		1,415,976		1,488,316	
562 Wastewater Services			574,614		591,826		608,170		627,277		647,021		666,143		687,146		707,487		729,844		751,503	
563 Wastewater Plant			736,827		758,932		781,700		805,151		829,515		858,607		888,366		918,167		948,602		979,683	
564 W_WW Irrigation System			77,126		79,145		80,331		82,958		85,679		87,688		90,551		92,653		95,669		97,874	
564 W_WW Irrigation System			<u>77,126</u>		<u>79,145</u>		<u>80,331</u>		<u>82,958</u>		<u>85,679</u>		<u>87,688</u>		<u>90,551</u>		<u>92,653</u>		<u>95,669</u>		<u>97,874</u>	
Total			<u>3,258,844</u>		<u>3,381,442</u>		<u>3,502,618</u>		<u>3,633,818</u>		<u>3,918,645</u>		<u>4,213,742</u>		<u>4,370,339</u>		<u>4,529,682</u>		<u>4,698,581</u>		<u>4,870,494</u>	

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL											
	Current	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue and Expense Summary											
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report											
Budget Code											
1	Personnel Svcs	1,491,277	1,537,203	1,584,601	1,633,524	1,782,447	1,938,321	1,998,215	2,060,045	2,123,881	2,189,795
2	Supplies	543,298	581,593	618,927	658,493	715,391	775,109	822,599	872,312	924,936	979,992
3	Maintenance	678,125	698,489	719,464	741,070	763,326	786,250	809,863	834,185	859,239	885,046
4	Services	470,344	486,084	499,210	517,902	572,168	626,190	649,153	669,915	694,504	716,759
5	Other	75,800	78,074	80,416	82,829	85,314	87,873	90,509	93,224	96,021	98,902
6	Administration	-	-	-	-	-	-	-	-	-	-
	Total	3,258,844	3,381,442	3,502,618	3,633,818	3,918,645	4,213,742	4,370,339	4,529,682	4,698,581	4,870,494
1.2	Total Operating Expenses	3,258,844	3,381,442	3,502,618	3,633,818	3,918,645	4,213,742	4,370,339	4,529,682	4,698,581	4,870,494
1.3	Net Revenues for Debt Service and Coverage	2,507,423	2,962,269	3,423,629	3,898,610	4,221,079	4,551,484	4,896,178	5,229,626	5,548,626	5,909,944
1.4	Capital Outlays	95,890	95,890	95,890	95,890	95,890	95,890	95,890	95,890	95,890	95,890
1.5	Transfers	366,000	376,980	391,044	404,965	420,012	452,116	485,375	503,285	521,516	540,823
1.6	Net Revenues Less Capital Outlays and Transfers	2,045,533	2,489,399	2,936,695	3,397,755	3,705,178	4,003,478	4,314,912	4,630,451	4,931,220	5,273,231
Debt Service											
	Debt Service -- Current	2,208,920	2,344,903	2,344,591	2,346,166	2,339,866	2,336,241	2,330,306	2,331,407	2,334,931	2,336,399
	Debt Service -- Future	-	-	294,051	627,309	960,567	1,509,463	1,509,463	1,509,463	1,509,463	1,509,463
1.7	Total Debt Service	2,208,920	2,344,903	2,638,642	2,973,475	3,300,433	3,845,704	3,839,769	3,840,870	3,844,394	3,845,862
1.8	Total Cost of Service	5,929,654	6,199,215	6,628,194	7,108,148	7,734,980	8,607,453	8,791,373	8,969,727	9,160,382	9,353,070
1.9	Net Revenues for Contingency and Coverage	(163,387)	144,496	298,052	424,280	404,744	157,774	475,143	789,581	1,086,826	1,427,369
	Percent of COS	-2.8%	2.3%	4.3%	5.6%	5.0%	1.8%	5.1%	8.1%	10.6%	13.2%
	Ending Fund Balance	(163,387)	(18,891)	279,161	703,441	1,108,185	1,265,959	1,741,102	2,530,683	3,617,508	5,044,877
Revenue Adequacy Tests											
	Total Operating + Debt Service + Transfers	5,833,764	6,103,325	6,532,304	7,012,258	7,639,090	8,511,563	8,695,483	8,873,837	9,064,492	9,257,180
	Expenses Per Day	15,983	16,721	17,897	19,212	20,929	23,319	23,823	24,312	24,834	25,362
	Days of Operating Expenses	(10)	(1)	16	37	53	54	73	104	146	199
	Debt Coverage (1.5/1.6)	0.87	1.14	1.26	1.30	1.31	1.28	1.18	1.28	1.36	1.44

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL											
	Current	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue and Expense Summary											
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report											
2	WATER Revenues and Expenses -- CASH BASIS										
2.1	Water Revenues										
	<u>Water Rate Revenue</u>										
W1	Residential	\$ 1,647,974	\$ 1,794,849	\$ 1,915,248	\$ 2,030,365	\$ 2,145,527	\$ 2,262,845	\$ 2,355,175	\$ 2,462,947	\$ 2,558,484	\$ 2,670,375
W9	Other W9	-	-	-	-	-	-	-	-	-	-
W2	Sprinkler/Irrigation	370,859	385,842	404,570	421,436	437,602	453,942	464,696	478,426	489,279	503,240
W10	Other W10	-	-	-	-	-	-	-	-	-	-
	Sub-Total	3,518,739	3,844,224	4,112,968	4,351,844	4,590,040	4,832,566	5,021,105	5,242,501	5,437,310	5,666,866
	Non-Rate Revenues	255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600
	Total Revenues	3,774,339	4,099,824	4,368,568	4,607,444	4,845,640	5,088,166	5,276,705	5,498,101	5,692,910	5,922,466
	<u>Water Cost of Service</u>										
	<u>Cost Center Code</u>										
560	Water Services	850,525	877,674	905,739	934,753	964,754	995,777	1,027,863	1,061,050	1,095,382	1,130,903
561	Water Plant	942,626	994,721	1,046,348	1,100,721	1,157,998	1,217,838	1,280,862	1,346,672	1,415,976	1,488,316
562	Wastewater Services	-	-	-	-	-	-	-	-	-	-
563	Wastewater Plant	-	-	-	-	-	-	-	-	-	-
564	W_WW Irrigation Sustum	77,126	79,145	80,331	82,958	85,679	87,688	90,551	92,653	95,669	97,874
	Total	1,870,277	1,951,540	2,032,417	2,118,432	2,208,431	2,301,304	2,399,276	2,500,375	2,607,027	2,717,094
	<u>Budget Code</u>										
1	Personnel Svcs	849,712	875,849	902,822	930,660	959,394	989,055	1,019,676	1,051,291	1,083,937	1,117,651
2	Supplies	447,173	482,359	516,473	552,703	591,187	631,557	674,410	719,320	766,969	816,870
3	Maintenance	305,075	314,247	323,696	333,429	343,455	353,783	364,422	375,381	386,671	398,300
4	Services	226,793	236,313	245,373	256,264	267,658	278,770	291,186	303,312	316,847	330,092
5	Other	41,525	42,771	44,054	45,375	46,737	48,139	49,583	51,071	52,603	54,181
9	Capital Outlay	-	-	-	-	-	-	-	-	-	-
	Total	1,870,277	1,951,540	2,032,417	2,118,432	2,208,431	2,301,304	2,399,276	2,500,375	2,607,027	2,717,094
2.2	Total Operating Expenses	1,870,277	1,951,540	2,032,417	2,118,432	2,208,431	2,301,304	2,399,276	2,500,375	2,607,027	2,717,094
2.3	Net Revenues for Debt Service and Coverage	1,904,063	2,148,284	2,336,150	2,489,012	2,637,210	2,786,863	2,877,429	2,997,726	3,085,883	3,205,373
2.4	Capital Outlays	76,875	76,875	76,875	76,875	76,875	76,875	76,875	76,875	76,875	76,875
2.5	Transfers	183,000	188,490	195,522	202,482	210,006	226,058	242,688	251,643	260,758	270,412
2.6	Net Revenues Less Captial Outlays and Transfers	1,644,188	1,882,919	2,063,753	2,209,654	2,350,329	2,483,929	2,557,866	2,669,209	2,748,250	2,858,086
	<u>Debt Service</u>										
	Debt Service -- Current	1,104,460	1,172,452	1,172,296	1,173,083	1,169,933	1,168,121	1,165,153	1,165,704	1,167,466	1,168,200
	Debt Service -- Future	-	-	294,051	294,051	294,051	294,051	294,051	294,051	294,051	294,051
2.7	Total Debt Service	1,104,460	1,172,452	1,466,347	1,467,134	1,463,984	1,462,172	1,459,204	1,459,755	1,461,517	1,462,251
2.8	Total Cost of Service	3,234,612	3,389,356	3,771,161	3,864,924	3,959,296	4,066,408	4,178,043	4,288,648	4,406,176	4,526,631
2.9	Net Revenues for Contingency and Coverage	539,728	710,468	597,406	742,520	886,345	1,021,758	1,098,662	1,209,454	1,286,734	1,395,835
	Percent of COS	14.3%	17.3%	13.7%	16.1%	18.3%	20.1%	20.8%	22.0%	22.6%	23.6%
	Debt Coverage (2.5/2.6)	1.70	1.72	1.83	1.59	1.70	1.80	1.91	1.97	2.05	2.11

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL											
	Current	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue and Expense Summary											
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report											
3	WASTEWATER Revenues and Expenses -- CASH BASIS										
3.1	Wastewater Revenues										
	<u>Wastewater Rate Revenue</u>										
WW1	Residential	\$ 873,090	\$ 999,679	\$ 1,159,948	\$ 1,345,910	\$ 1,532,767	\$ 1,727,520	\$ 1,885,792	\$ 2,023,983	\$ 2,172,300	\$ 2,326,968
WW2	Commercial	844,087	969,459	1,124,882	1,305,223	1,486,431	1,675,297	1,828,784	1,962,797	2,106,631	2,256,623
WW3	Municipal	-	-	-	-	-	-	-	-	-	-
WW4	Residential Outside	-	-	-	-	-	-	-	-	-	-
		1,717,177	1,969,138	2,284,830	2,651,134	3,019,198	3,402,817	3,714,576	3,986,780	4,278,931	4,583,591
	Non-Rate Revenues	274,750	274,750	272,849	273,850	274,887	274,244	275,236	274,427	275,367	274,381
	Total Revenues	1,991,927	2,243,888	2,557,679	2,924,984	3,294,084	3,677,060	3,989,812	4,261,206	4,554,297	4,857,972
	Wastewater Cost of Service										
	<u>Cost Center Code</u>										
560	Water Services	-	-	-	-	-	-	-	-	-	-
561	Water Plant	-	-	-	-	-	-	-	-	-	-
562	Wastewater Services	574,614	591,826	608,170	627,277	647,021	666,143	687,146	707,487	729,844	751,503
563	Wastewater Plant	736,827	758,932	781,700	805,151	977,515	1,158,607	1,193,366	1,229,167	1,266,042	1,304,023
564	W_WW Irrigation Sustum	77,126	79,145	80,331	82,958	85,679	87,688	90,551	92,653	95,669	97,874
	Total	1,388,567	1,429,903	1,470,200	1,515,386	1,710,215	1,912,439	1,971,063	2,029,306	2,091,555	2,153,400
	<u>Budget Code</u>										
1	Personnel Svcs	641,566	661,354	681,779	702,863	823,054	949,266	978,539	1,008,754	1,039,944	1,072,144
2	Supplies	96,125	99,234	102,454	105,790	124,204	143,552	148,189	152,991	157,967	163,122
3	Maintenance	373,050	384,242	395,769	407,642	419,871	432,467	445,441	458,804	472,569	486,746
4	Services	243,552	249,771	253,837	261,637	304,510	347,420	357,968	366,603	377,657	386,667
5	Other	34,275	35,303	36,362	37,453	38,577	39,734	40,926	42,154	43,419	44,721
6	Administration	-	-	-	-	-	-	-	-	-	-
	Total	1,388,567	1,429,903	1,470,200	1,515,386	1,710,215	1,912,439	1,971,063	2,029,306	2,091,555	2,153,400
3.2	Total Operating Expenses	1,388,567	1,429,903	1,470,200	1,515,386	1,710,215	1,912,439	1,971,063	2,029,306	2,091,555	2,153,400
3.3	Net Revenues for Debt Service and Coverage	603,360	813,985	1,087,479	1,409,598	1,583,869	1,764,622	2,018,749	2,231,900	2,462,742	2,704,572
3.4	Capital Outlays	19,015	19,015	19,015	19,015	19,015	19,015	19,015	19,015	19,015	19,015
3.5	Transfers	183,000	188,490	195,522	202,482	210,006	226,058	242,688	251,643	260,758	270,412
3.6	Net Revenues Less Captial Outlays and Transfers	401,345	606,480	872,941	1,188,101	1,354,849	1,519,549	1,757,046	1,961,242	2,182,970	2,415,145
	<u>Debt Service</u>										
	Debt Service -- Current	1,104,460	1,172,452	1,172,296	1,173,083	1,169,933	1,168,121	1,165,153	1,165,704	1,167,466	1,168,200
	Debt Service -- Future	-	-	-	333,258	666,516	1,215,412	1,215,412	1,215,412	1,215,412	1,215,412
3.7	Total Debt Service	1,104,460	1,172,452	1,172,296	1,506,341	1,836,449	2,383,532	2,380,565	2,381,115	2,382,877	2,383,611
3.8	Total Cost of Service	2,695,042	2,809,859	2,857,033	3,243,224	3,775,685	4,541,044	4,613,331	4,681,079	4,754,205	4,826,438
3.9	Net Revenues for Contingency and Coverage	(703,115)	(565,972)	(299,354)	(318,240)	(481,601)	(863,984)	(623,519)	(419,873)	(199,908)	31,534
	Percent of COS	-35.3%	-25.2%	-11.7%	-10.9%	-14.6%	-23.5%	-15.6%	-9.9%	-4.4%	0.6%
	Debt Coverage (5.5/5.6)	0.79	0.55	0.69	0.93	0.94	0.86	0.74	0.85	0.94	1.03

<div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 auto;"> CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL </div>											
	Prior	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029

Water Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

1 Water Monthly Rates and Charges

W1 Residential

Monthly Minimum Charge

Base Charge	3/4"	\$	22.92	\$	25.21	\$	25.97	\$	26.75	\$	27.28	\$	27.83	\$	28.38	\$	28.38	\$	28.95	\$	28.95	\$	29.53
	1"		33.12		35.94		37.02		38.13		38.89		39.67		40.46		40.46		41.27		41.27		42.10
	1 1/2"		59.34		64.38		66.31		68.30		69.67		71.06		72.48		72.48		73.93		73.93		75.41
	2"		105.97		111.27		114.61		118.05		120.41		122.82		125.27		125.27		127.78		127.78		130.33

Volume Rate/1,000 Gal

-	10,000	\$	4.45	\$	4.78	\$	4.92	\$	5.07	\$	5.17	\$	5.28	\$	5.38	\$	5.38	\$	5.49	\$	5.49	\$	5.60
10,001	30,000		5.42		5.83		6.00		6.19		6.31		6.43		6.56		6.56		6.69		6.69		6.83
30,001	Above		6.64		7.14		7.35		7.57		7.73		7.88		8.04		8.04		8.20		8.20		8.36

W3 Commercial

Monthly Minimum Charge

	3/4"	\$	22.92	\$	25.21	\$	25.97	\$	26.75	\$	27.28	\$	27.83	\$	28.38	\$	28.38	\$	28.95	\$	28.95	\$	29.53
	1"		33.12		35.94		37.02		38.13		38.89		39.67		40.46		40.46		41.27		41.27		42.10
	1 1/2"		59.34		64.38		66.31		68.30		69.67		71.06		72.48		72.48		73.93		73.93		75.41
	2"		105.97		111.27		114.61		118.05		120.41		122.82		125.27		125.27		127.78		127.78		130.33
	3"		226.90		238.25		245.40		252.76		257.81		262.97		268.23		268.23		273.59		273.59		279.07
	4"		401.73		421.82		434.47		447.51		456.46		465.59		474.90		474.90		484.40		484.40		494.09

Volume Rate/1,000 Gal

-	10,000	\$	4.45	\$	4.78	\$	4.92	\$	5.07	\$	5.17	\$	5.28	\$	5.38	\$	5.38	\$	5.49	\$	5.49	\$	5.60
10,001	30,000		5.42		5.83		6.00		6.19		6.31		6.43		6.56		6.56		6.69		6.69		6.83
30,001	Above		6.64		7.14		7.35		7.57		7.73		7.88		8.04		8.04		8.20		8.20		8.36

2.1 Residential Monthly Charge

Gallons

5,000	Total	\$	45.17	\$	49.11	\$	50.58	\$	52.10	\$	53.14	\$	54.21	\$	55.29	\$	55.29	\$	56.40	\$	56.40	\$	57.52
	Dollar Inc				3.94		1.47		1.52		1.04		1.06		1.08		-		1.11		-		1.13
	Percent Inc				8.7%		3.0%		3.0%		2.0%		2.0%		2.0%		0.0%		2.0%		0.0%		2.0%
10,000	Total		67.42		73.01		75.20		77.46		79.01		80.59		82.20		82.20		83.84		83.84		85.52
	Dollar Inc				5.59		2.19		2.26		1.55		1.58		1.61		-		1.64		-		1.68
	Percent Inc				8.3%		3.0%		3.0%		2.0%		2.0%		2.0%		0.0%		2.0%		0.0%		2.0%
20,000	Total		131.32		141.81		146.06		150.45		153.46		156.52		159.65		159.65		162.85		162.85		166.10
	Dollar Inc				10.49		4.25		4.38		3.01		3.07		3.13		-		3.19		-		3.26
	Percent Inc				8.0%		3.0%		3.0%		2.0%		2.0%		2.0%		0.0%		2.0%		0.0%		2.0%
50,000	Total		354.92		382.21		393.68		405.49		413.60		421.87		430.31		430.31		438.91		438.91		447.69
	Dollar Inc				27.29		11.47		8.11		8.11		8.27		8.44		-		8.61		-		8.78
	Percent Inc				7.7%		3.0%		3.0%		2.0%		2.0%		2.0%		0.0%		2.0%		0.0%		2.0%

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL												
		Prior	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water Summary												
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report												
2.2 Commercial Monthly Charge -- 1" Meter												
20,000	Total	141.52	152.54	157.12	161.83	165.07	168.37	171.73	171.73	175.17	175.17	178.67
	Dollar Inc		11.02	4.58	4.71	3.24	3.30	3.37	-	3.43	-	3.50
	Percent Inc		7.8%	3.0%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	2.0%
60,000	Total	431.52	464.34	478.27	492.62	502.47	512.52	522.77	522.77	533.23	533.23	429.57
	Dollar Inc		32.82	13.93	14.35	9.85	10.05	10.25	-	10.46	-	(103.66)
	Percent Inc		7.6%	3.0%	3.0%	2.0%	2.0%	2.0%	0.0%	2.0%	0.0%	-19.4%
3 Total Accounts												
	Total Accounts		3,386	3,515	3,636	3,761	3,890	4,017	4,148	4,275	4,406	4,533
	New Accounts			129	121	125	129	127	131	127	131	127
	Avg. Annual Growth Rate			3.8%	3.4%	3.4%	3.4%	3.3%	3.3%	3.1%	3.1%	2.9%
4 Annual Water Consumption												
W.1	Residential	174,802,000	181,794,080	188,338,667	195,118,859	202,143,138	209,016,004	216,122,549	223,038,470	230,175,701	237,080,972	237,080,972
W.3	Sprinkler/Irrigation	88,090,000	89,851,800	91,469,132	93,115,577	94,791,657	96,403,115	98,041,968	99,610,640	101,204,410	102,722,476	102,722,476
W.5	Commercial	139,643,000	145,228,720	150,456,954	155,873,404	161,484,847	166,975,332	172,652,493	178,177,373	183,879,049	189,395,420	189,395,420
W.6	Municipal	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000	11,453,000
W.7	Purple Pipe	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000	1,160,000
W.8	Bulk	882,000	882,000	882,000	882,000	882,000	882,000	882,000	882,000	882,000	882,000	882,000
W.4	Residential Outside	10,540,000	10,961,600	11,356,218	11,765,041	12,188,583	12,602,995	13,031,497	13,448,504	13,878,857	14,295,222	14,295,222
	Total System	427,887,000	442,700,880	456,534,959	470,837,953	485,626,219	500,067,223	514,971,825	529,450,412	544,367,215	558,775,315	558,775,315
			3.5%	3.1%	3.1%	3.1%	3.1%	3.0%	3.0%	2.8%	2.8%	2.6%

<div style="border: 1px solid black; padding: 5px; display: inline-block;"> CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL </div>											
	Prior	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029

Water Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

5 Revenues and Expenses -- CASH BASIS

5.1 Water Revenues

Water Rate Revenue

W1	Residential	\$ 1,647,974	\$ 1,794,849	\$ 1,915,248	\$ 2,030,365	\$ 2,145,527	\$ 2,262,845	\$ 2,355,175	\$ 2,462,947	\$ 2,558,484	\$ 2,670,375
W2	Sprinkler/Irrigation	370,858.90	385,841.60	404,570.35	421,435.59	437,601.86	453,941.92	464,696.16	478,426.38	489,279.11	503,239.87
W3	Commercial	1,377,616	1,495,392	1,595,703	1,691,614	1,787,562	1,885,306	1,962,231	2,052,023	2,131,620	2,224,843
W4	Municipal	-	-	-	-	-	-	-	-	-	-
W5	Purple Pipe	5,099	5,329	5,488	5,616	5,728	5,843	5,881	5,960	5,999	6,079
W6	Bulk	17,640	17,993	18,533	18,964	19,343	19,730	19,860	20,125	20,257	20,527
W7	Residential Outside	88,928	129,410	154,972	164,286	173,605	183,098	190,568	199,289	207,019	216,073
	Sub-Total	3,518,739	3,844,224	4,112,968	4,351,844	4,590,040	4,832,566	5,021,105	5,242,501	5,437,310	5,666,866
	Non-Rate Revenues	255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600	255,600
	Total Revenues	3,774,339	4,099,824	4,368,568	4,607,444	4,845,640	5,088,166	5,276,705	5,498,101	5,692,910	5,922,466

Water Cost of Service

Cost Center Code

560	Water Services	850,525	877,674	905,739	934,753	964,754	995,777	1,027,863	1,061,050	1,095,382	1,130,903
561	Water Plant	942,626	994,721	1,046,348	1,100,721	1,157,998	1,217,838	1,280,862	1,346,672	1,415,976	1,488,316
562	Wastewater Services	-	-	-	-	-	-	-	-	-	-
563	Wastewater Plant	-	-	-	-	-	-	-	-	-	-
564	W_WW Irrigation Sustum	77,126	79,145	80,331	82,958	85,679	87,688	90,551	92,653	95,669	97,874
	Total	1,870,277	1,951,540	2,032,417	2,118,432	2,208,431	2,301,304	2,399,276	2,500,375	2,607,027	2,717,094

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL											
	Prior	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water Summary											
Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report											
Budget Code											
1	Personnel Svcs	\$ 849,712	\$ 875,849	\$ 902,822	\$ 930,660	\$ 959,394	\$ 989,055	\$ 1,019,676	\$ 1,051,291	\$ 1,083,937	\$ 1,117,651
2	Supplies	447,173	482,359	516,473	552,703	591,187	631,557	674,410	719,320	766,969	816,870
3	Maintenance	305,075	314,247	323,696	333,429	343,455	353,783	364,422	375,381	386,671	398,300
4	Services	226,793	236,313	245,373	256,264	267,658	278,770	291,186	303,312	316,847	330,092
5	Other	41,525	42,771	44,054	45,375	46,737	48,139	49,583	51,071	52,603	54,181
	Total	1,870,277	1,951,540	2,032,417	2,118,432	2,208,431	2,301,304	2,399,276	2,500,375	2,607,027	2,717,094
5.2	Total Operating Expenses	1,870,277	1,951,540	2,032,417	2,118,432	2,208,431	2,301,304	2,399,276	2,500,375	2,607,027	2,717,094
5.3	Net Revenues for Debt Service and Coverage	1,904,063	2,148,284	2,336,150	2,489,012	2,637,210	2,786,863	2,877,429	2,997,726	3,085,883	3,205,373
5.4	Capital Outlays	76,875	76,875	76,875	76,875	76,875	76,875	76,875	76,875	76,875	76,875
5.5	Transfers	183,000	188,490	195,522	202,482	210,006	226,058	242,688	251,643	260,758	270,412
5.6	Net Revenues Less Capital Outlays and Transfers	1,644,188	1,882,919	2,063,753	2,209,654	2,350,329	2,483,929	2,557,866	2,669,209	2,748,250	2,858,086
Debt Service											
	Debt Service -- Current	1,104,460	1,172,452	1,172,296	1,173,083	1,169,933	1,168,121	1,165,153	1,165,704	1,167,466	1,168,200
	Debt Service -- Future	-	-	294,051	294,051	294,051	294,051	294,051	294,051	294,051	294,051
5.7	Total Debt Service	1,104,460	1,172,452	1,466,347	1,467,134	1,463,984	1,462,172	1,459,204	1,459,755	1,461,517	1,462,251
5.8	Total Cost of Service	3,234,612	3,389,356	3,771,161	3,864,924	3,959,296	4,066,408	4,178,043	4,288,648	4,406,176	4,526,631
5.9	Net Revenues for Contingency and Coverage	539,728	710,468	597,406	742,520	886,345	1,021,758	1,098,662	1,209,454	1,286,734	1,395,835
	Percent of COS	14.3%	17.3%	13.7%	16.1%	18.3%	20.1%	20.8%	22.0%	22.6%	23.6%
	Debt Coverage (5.5/5.6)	1.72	1.83	1.59	1.70	1.80	1.91	1.97	2.05	2.11	2.19

**CITY OF MARBLE FALLS
WATER/WASTEWATER COST OF SERVICE MODEL**

Prior **Current** 2021 2022 2023 2024 2025 2026 2027 2028 2029

Wastewater Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

1 Wastewater Monthly Rates and Charges

Residential

Monthly Charge	3/4"	\$ 18.15	\$ 18.88	\$ 21.15	\$ 23.68	\$ 26.53	\$ 28.91	\$ 31.51	\$ 32.77	\$ 34.09	\$ 35.45	\$ 36.87
	1"	18.15	18.88	21.15	23.68	26.53	28.91	31.51	32.77	34.09	35.45	36.87
	1 1/2"	18.15	18.88	21.15	23.68	26.53	28.91	31.51	32.77	34.09	35.45	36.87
	2"	18.15	18.88	21.15	23.68	26.53	28.91	31.51	32.77	34.09	35.45	36.87
Volume Rate/1,000 Gal		3.90	4.23	4.74	5.31	5.94	6.48	7.06	7.34	7.64	7.94	8.26
Volume Rate/1,000 Gal		3.90	4.23	4.74	5.31	5.94	6.48	7.06	7.34	7.64	7.94	8.26

Commercial

Monthly Charge	3/4"	18.15	18.88	21.15	23.68	26.53	28.91	31.51	32.77	34.09	35.45	36.87
	1"	18.15	18.88	21.15	23.68	26.53	28.91	31.51	32.77	34.09	35.45	36.87
	1 1/2"	18.15	18.88	21.15	23.68	26.53	28.91	31.51	32.77	34.09	35.45	36.87
	2"	18.15	18.88	21.15	23.68	26.53	28.91	31.51	32.77	34.09	35.45	36.87
	4"	18.15	18.88	21.15	23.68	26.53	28.91	31.51	32.77	34.09	35.45	36.87
Volume Rate/1,000 Gal		3.90	4.23	4.74	5.31	5.94	6.48	7.06	7.34	7.64	7.94	8.26

2.1 Residential Monthly Charge

5,000 Gallons	Total	\$ 37.65	\$ 40.03	\$ 44.83	\$ 50.21	\$ 56.24	\$ 61.30	\$ 66.82	\$ 69.49	\$ 72.27	\$ 75.16	\$ 78.17
	Dollar Inc		2.38	4.80	5.38	6.03	5.06	5.52	2.67	2.78	2.89	3.01
	Percent Inc		6.3%	12.0%	12.0%	12.0%	9.0%	9.0%	4.0%	4.0%	4.0%	4.0%
10,000 Gallons	Total	57.15	61.18	68.52	76.74	85.95	93.69	102.12	106.21	110.45	114.87	119.47
	Dollar Inc		4.03	7.34	8.22	9.21	7.74	8.43	4.08	4.25	4.42	4.59
	Percent Inc		7.1%	12.0%	12.0%	12.0%	9.0%	9.0%	4.0%	4.0%	4.0%	4.0%
20,000 Gallons	Total	96.15	103.48	115.90	129.81	145.38	158.47	172.73	179.64	186.82	194.30	202.07
	Dollar Inc		7.33	12.42	13.91	15.58	13.08	14.26	6.91	7.19	7.47	7.77
	Percent Inc		7.6%	12.0%	12.0%	12.0%	9.0%	9.0%	4.0%	4.0%	4.0%	4.0%
30,000 Gallons	Total	135.15	145.78	163.27	182.87	204.81	223.24	243.34	253.07	263.19	273.72	284.67
	Dollar Inc		10.63	17.49	19.59	21.94	18.43	20.09	9.73	10.12	10.53	10.95
	Percent Inc		7.9%	12.0%	12.0%	12.0%	9.0%	9.0%	4.0%	4.0%	4.0%	4.0%

**CITY OF MARBLE FALLS
WATER/WASTEWATER COST OF SERVICE MODEL**

Prior **Current** 2021 2022 2023 2024 2025 2026 2027 2028 2029

Wastewater Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

2.2 Commercial Monthly Bill -- 1 1/2" Meter

30,000 Gallons	Total	135.15	145.78	163.27	182.87	204.81	223.24	243.34	253.07	263.19	273.72	284.67
	Dollar Inc		10.63	17.49	19.59	21.94	18.43	20.09	9.73	10.12	10.53	10.95
	Percent Inc		7.9%	12.0%	12.0%	12.0%	9.0%	9.0%	4.0%	4.0%	4.0%	4.0%
60,000 Gallons	Total	252.15	272.68	305.40	342.05	383.10	417.57	455.16	473.36	492.30	511.99	532.47
	Dollar Inc		20.53	32.72	36.65	41.05	34.48	37.58	18.21	18.93	19.69	20.48
	Percent Inc		8.1%	12.0%	12.0%	12.0%	9.0%	9.0%	4.0%	4.0%	4.0%	4.0%

3 Total Accounts

Total Accounts		3,237	3,367	3,488	3,614	3,744	3,871	4,002	4,131	4,263	4,391
New Accounts		129	129	121	126	130	127	132	128	132	128
Avg. Annual Growth Rate			4.00%	3.60%	3.60%	3.60%	3.40%	3.40%	3.20%	3.20%	3.00%

4 Annual Wastewater Billing Units

WW1 Residential	98,521,000	102,461,840	106,150,466	109,971,883	113,930,871	117,804,520	121,809,874	125,707,790	129,730,439	133,622,353
WW2 Commercial	142,590,000	148,293,600	153,632,170	159,162,928	164,892,793	170,499,148	176,296,119	181,937,595	187,759,598	193,392,386
WW3 Municipal	-	-	-	-	-	-	-	-	-	-
WW4 Residential Outside	-	-	-	-	-	-	-	-	-	-
Total System	241,111,000	250,755,440	259,782,636	269,134,811	278,823,664	288,303,668	298,105,993	307,645,385	317,490,037	327,014,738

5 Revenues and Expenses -- CASH BASIS

5.1 Wastewater Revenues

Wastewater Rate Revenue

WW1 Residential	\$ 873,090	\$ 999,679	\$ 1,159,948	\$ 1,345,910	\$ 1,532,767	\$ 1,727,520	\$ 1,885,792	\$ 2,023,983	\$ 2,172,300	\$ 2,326,968
WW2 Commercial	844,087	969,459	1,124,882	1,305,223	1,486,431	1,675,297	1,828,784	1,962,797	2,106,631	2,256,623
WW3 Municipal	-	-	-	-	-	-	-	-	-	-
Sub-Total	1,717,177	1,969,138	2,284,830	2,651,134	3,019,198	3,402,817	3,714,576	3,986,780	4,278,931	4,583,591
Non-Rate Revenues	274,750	274,750	272,849	273,850	274,887	274,244	275,236	274,427	275,367	274,381
Total Revenues	1,991,927	2,243,888	2,557,679	2,924,984	3,294,084	3,677,060	3,989,812	4,261,206	4,554,297	4,857,972

Wastewater Cost of Service

Cost Center Code

560 Water Services	-	-	-	-	-	-	-	-	-	-
561 Water Plant	-	-	-	-	-	-	-	-	-	-
562 Wastewater Services	574,614	591,826	608,170	627,277	647,021	666,143	687,146	707,487	729,844	751,503
563 Wastewater Plant	736,827	758,932	781,700	805,151	977,515	1,158,607	1,193,366	1,229,167	1,266,042	1,304,023
564 W_WW Irrigation System	77,126	79,145	80,331	82,958	85,679	87,688	90,551	92,653	95,669	97,874
Total	1,388,567	1,429,903	1,470,200	1,515,386	1,710,215	1,912,439	1,971,063	2,029,306	2,091,555	2,153,400

CITY OF MARBLE FALLS WATER/WASTEWATER COST OF SERVICE MODEL											
	Prior	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029

Wastewater Summary

Scen: 2020 12 10 Scenario I -- Status Quo -- FINAL Report

Budget Code	Prior	Current 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1 Personnel Svcs		641,566	661,354	681,779	702,863	823,054	949,266	978,539	1,008,754	1,039,944	1,072,144
2 Supplies		96,125	99,234	102,454	105,790	124,204	143,552	148,189	152,991	157,967	163,122
3 Maintenance		373,050	384,242	395,769	407,642	419,871	432,467	445,441	458,804	472,569	486,746
4 Services		243,552	249,771	253,837	261,637	304,510	347,420	357,968	366,603	377,657	386,667
5 Other		34,275	35,303	36,362	37,453	38,577	39,734	40,926	42,154	43,419	44,721
6 Administration		-	-	-	-	-	-	-	-	-	-
Total		1,388,567	1,429,903	1,470,200	1,515,386	1,710,215	1,912,439	1,971,063	2,029,306	2,091,555	2,153,400
5.2 Total Operating Expenses		1,388,567	1,429,903	1,470,200	1,515,386	1,710,215	1,912,439	1,971,063	2,029,306	2,091,555	2,153,400
5.3 Net Revenues for Debt Service and Coverage		603,360	813,985	1,087,479	1,409,598	1,583,869	1,764,622	2,018,749	2,231,900	2,462,742	2,704,572
5.4 Capital Outlays		19,015	19,015	19,015	19,015	19,015	19,015	19,015	19,015	19,015	19,015
5.5 Transfers		183,000	188,490	195,522	202,482	210,006	226,058	242,688	251,643	260,758	270,412
5.6 Net Revenues Less Capital Outlays and Transfers		401,345	606,480	872,941	1,188,101	1,354,849	1,519,549	1,757,046	1,961,242	2,182,970	2,415,145
Debt Service											
Debt Service -- Current		1,104,460	1,172,452	1,172,296	1,173,083	1,169,933	1,168,121	1,165,153	1,165,704	1,167,466	1,168,200
Debt Service -- Future		-	-	-	333,258	666,516	1,215,412	1,215,412	1,215,412	1,215,412	1,215,412
5.7 Total Debt Service		1,104,460	1,172,452	1,172,296	1,506,341	1,836,449	2,383,532	2,380,565	2,381,115	2,382,877	2,383,611
5.8 Total Cost of Service		2,695,042	2,809,859	2,857,033	3,243,224	3,775,685	4,541,044	4,613,331	4,681,079	4,754,205	4,826,438
5.9 Net Revenues for Contingency and Coverage		(703,115)	(565,972)	(299,354)	(318,240)	(481,601)	(863,984)	(623,519)	(419,873)	(199,908)	31,534
Percent of COS		-35.3%	-25.2%	-11.7%	-10.9%	-14.6%	-23.5%	-15.6%	-9.9%	-4.4%	0.6%
Debt Coverage (5.5/5.6)		0.55	0.69	0.93	0.94	0.86	0.74	0.85	0.94	1.03	1.13



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