

City of Tomball, Texas

2023 Water, Wastewater and Natural Gas Rate Study and Long-Term Financial Plan



**CITY OF TOMBALL, TEXAS
 WATER, WASTEWATER AND NATURAL GAS
 RATE STUDY AND LONG-TERM FINANCIAL PLAN
 TABLE OF CONTENTS**

EXECUTIVE SUMMARY 4

SECTION I – INTRODUCTION AND OVERVIEW 19

Background 19

Report Organization 19

City Overview 21

Population – Current and Projected 21

SECTION II - WATER & WASTEWATER RATE STUDY..... 23

Water and Wastewater Current Rates 23

Water and Wastewater Rate Comparisons 25

Water and Wastewater Customers and Meters – Test Year and Forecast 27

Historical and Forecast Water Consumption 30

Peaking Factors 31

Historical and Forecast Wastewater Flows 32

Water & Wastewater Revenue Requirement - Test Year and Forecast 34

Water and Wastewater Operating Expenses and Capital Outlays – Test Year 34

Water and Wastewater Operating Expenses and Capital Outlays – Ten Year Forecast 36

North Harris Regional Water Authority 37

Water and Wastewater Capital Improvement Plan 39

Water and Wastewater Existing and Forecast Debt Service 41

Water and Wastewater Non-Rate Revenues 42

Water and Wastewater Net Revenue Requirement 43

Water Utility Cost Functionalization 44

Water Utility Cost Classification 45

Water Utility Cost Allocation 46

Wastewater Utility Cost Functionalization and Classification 47

Wastewater Utility Cost Allocation 47

Water and Wastewater Rate Design 49

Scenario 1 – “Fully Fund CIP” 50

Scenario 2 – “Fund 50% of CIP” 53

SECTION III - NATURAL GAS RATE STUDY 56

Natural Gas Current Rates 56

Natural Gas Rate Comparisons 57

Natural Gas Customers and Meters – Historical and Forecast 58

Historical and Forecast Natural Gas Consumption 60

Natural Gas Revenue Requirement - Test Year and Forecast 62

Natural Gas Operating Expenses and Capital Outlays – Test Year 62

Natural Gas Operating Expenses and Capital Outlays – Ten Year Forecast 64
Natural Gas Capital Improvement Plan 66
Natural Gas Existing and Forecast Debt Service 67
Natural Gas Non-Rate Revenues 67
Natural Gas Net Revenue Requirement 68
Natural Gas Utility Cost Functionalization 69
Natural Gas Utility Cost Allocation 70
Natural Gas Rate Design 71
Notes on Rate Recommendations 73

Appendix A – Water and Wastewater Rate Model Summaries
Appendix B – Natural Gas Rate Model Summaries

Acknowledgements

During the course of this rate study, several City of Tomball employees expended considerable time and effort in assisting the project team. These employees included the Mayor and Council, Mr. David Esquivel, Ms. Meagan Mageo, Ms. Jessica Rogers, Ms. Katherine Tapscott, Mr. William Goff, and Ms. Lauren Sykora. 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 of Tomball. Thus, the integrity of the study is largely dependent upon the accuracy of this financial and customer data. Every effort has been made by the project team to validate and confirm the information contained herein prior to the preparation of the final study documents. **This report presents no assurance or guarantee that the forecast contained herein will be consistent with actual results or performances.** These represent forecasts based on a series of assumptions about future behavior, and are not guarantees. Any changes in assumptions or actual events may result in significant revisions to the forecast and its conclusions. The 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 April 2023, the City of Tomball, Texas (the “City”) engaged Willdan Financial Services to conduct a water, wastewater and natural gas rate study and long-term financial plan. The City was interested in developing an updated comprehensive water, wastewater and natural gas rate plan for FY 2023 and beyond. The objective of this study is to develop a long-term rate plan that will enable the City to recover sufficient funds to meet operating expenses, capital outlays, debt service and coverage requirements, while at the same time to the best extent possible minimizing the impact of any adjustments on ratepayers.

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

- A comprehensive analysis and evaluation of the water, wastewater and gas systems’ current cost of service and revenue requirements.
- A forecast of operating expenses over the next decade, taking into consideration such factors as inflation, system growth, and potential changes in staffing levels.
- A thorough review of the water, wastewater and gas systems’ known capital improvement needs, as well as a determination of the need for funding capital requirements through the issuance of long-term debt for the existing identified capital improvements.
- An estimate of current and forecast accounts, volumes and billing units for the five-year forecast period.
- An analysis of alternative multi-year water, wastewater and gas rate plans that will distribute costs equitably.
- A detailed analysis and comparison of the City’s current and proposed rates to rates in other surrounding communities.

Water and Wastewater Rate Study

Water and Wastewater Rate Comparison

Table ES(W)-1 compare the City’s monthly water and wastewater charges to nearby cities in Texas. Volumes of 10,000 gallons for water and 5,000 gallons for wastewater were used for the residential comparison as it represents

typical usage levels for an average household. The comparison communities shown in the chart are those customarily selected by the City for all benchmarking and comparisons.

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

The following points are also notable:

- 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 use tax bonds to fund water/wastewater system construction. This results in lower rates but higher ad valorem taxes.

TABLE ES(W)-1

CITY OF TOMBALL					
MONTHLY RESIDENTIAL CHARGES -- 5,000 GALLONS WATER AND 5,000 WASTEWATER 3/4"					
	Population	Water	Wastewater	Additional Charges	Total
Tomball Current	13,585	\$ 26.65	\$ 28.08	\$ 20.50	\$ 75.23
Katy	25,253	10.72	8.44		19.16
Cypress	191,421	22.00	30.00		52.00
Magnolia	3,205	35.60	21.95		57.55
La Grange-Inside	4,487	38.40	22.09		60.49
Pinehurst	4727	29.50	36.00		65.50
Sealy-Inside	6,956	35.50	41.55		77.05
Jersey Village	7,939	39.85	41.68		81.53
Navasota-Inside	8,417	42.92	32.01	12.50	87.43
La Grange-Outside		76.80	27.86		104.66
Navasota-Outside		64.79	48.13	12.50	125.42
Sample Average		\$ 39.61	\$ 30.97	-	\$ 73.08
TX State Average-2023 TML Survey		\$ 52.91	\$ 45.66	-	\$ 98.57

Source: Municipal websites and ordinances

Water and Wastewater Customers and Meters – Test Year and Forecast

The majority of the water and wastewater accounts served by Tomball are residential accounts. **Table ES(W)-2** presents total water and wastewater connections (customers) by customer class for the City for the test year and forecast period. Overall water accounts are forecast to increase from **5,669** in the test year FY 2023 to **8,082** in FY 2032, an annual increase of 4.0% for all customer classes.

Similarly, wastewater accounts are forecast to increase from **4,425** in the test year to **6,847** in FY 2032. The addition of these new connections will result in both non-recurring connection fees and increasing monthly water and wastewater revenues.

TABLE ES(W)-2

CITY OF TOMBALL								
FORECAST TOTAL CUSTOMERS								
WATER Customer Classes								
	Residential	Commercial	Municipal	Residential Outside	Commerical Outside	HMW SUD Wholesale	Bulk Water Sales	Total
WATER Total Customers								
FY 2019	2,989	1,193	64	-	-	-	-	4,247
FY 2020	3,097	1,209	70	-	-	-	-	4,377
FY 2021	3,487	1,259	74	-	-	-	-	4,820
FY 2022	3,917	1,286	73	-	-	-	-	5,275
TY 2023	4,268	1,326	74	-	-	1	-	5,669
FY 2024	4,481	1,366	75	-	-	1	-	5,923
FY 2025	4,705	1,406	76	-	-	1	-	6,188
FY 2026	4,941	1,446	77	-	-	1	-	6,465
FY 2027	5,188	1,486	78	-	-	1	-	6,753
FY 2028	5,395	1,526	79	-	-	1	-	7,001
FY 2029	5,611	1,566	80	-	-	1	-	7,258
FY 2030	5,836	1,606	81	-	-	1	-	7,524
FY 2031	6,069	1,646	82	-	-	1	-	7,798
FY 2032	6,312	1,686	83	-	-	1	-	8,082
WATER Annual New Customers								
FY 2020	108	16	6	-	-	-	-	130
FY 2021	390	50	4	-	-	-	-	444
FY 2022	430	26	(1)	-	-	-	-	455
TY 2023	100	20	1	-	-	-	-	121
FY 2024	213	40	1	-	-	-	-	254
FY 2025	224	40	1	-	-	-	-	265
FY 2026	235	40	1	-	-	-	-	276
FY 2027	247	40	1	-	-	-	-	288
FY 2028	208	40	1	-	-	-	-	249
FY 2029	216	40	1	-	-	-	-	257
FY 2030	224	40	1	-	-	-	-	265
FY 2031	233	40	1	-	-	-	-	274
FY 2032	243	40	1	-	-	-	-	284

Net Revenue Requirement

Table ES(W)-3 presents the City’s forecast Net Revenue Requirement for the ten-year period FY 2023 through FY 2032. The water and wastewater net revenue requirement is expected to increase from **14,829,164** in FY 2023 to **\$23,961,228** in FY 2032. Detailed calculations are presented in the rate model contained in **Appendix A** of this report.

TABLE ES(W)-3

CITY OF TOMBALL

CURRENT AND FORECAST REVENUE REQUIREMENT						
Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"						
Total Operating Expenses	NHCRWA	Debt Service	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement	
WATER Revenue Requirement						
2023	\$ 3,995,008	\$ 4,045,341	\$ 719,864	\$ 8,760,213	\$ (660,150)	\$ 8,100,063
2024	3,648,225	3,706,339	654,837	8,009,401	(682,588)	7,326,813
2025	3,759,473	3,877,427	1,196,972	8,833,872	(705,967)	8,127,905
2026	4,132,353	4,243,287	1,633,883	10,009,523	(730,334)	9,279,189
2027	4,264,049	4,629,318	2,163,075	11,056,441	(755,738)	10,300,703
2028	4,399,883	5,014,355	2,383,710	11,797,948	(777,657)	11,020,291
2029	4,541,861	5,419,563	2,383,885	12,345,309	(800,307)	11,545,002
2030	4,690,327	5,658,122	2,383,710	12,732,159	(823,719)	11,908,440
2031	4,845,644	5,840,878	2,383,185	13,069,707	(847,923)	12,221,784
2032	5,008,202	6,028,255	2,383,285	13,419,741	(872,950)	12,546,791
WASTEWATER Revenue Requirement						
2023	\$ 4,024,794	\$ -	\$ 2,879,456	\$ 6,904,251	\$ (175,150)	\$ 6,729,101
2024	3,076,156	-	1,446,496	4,522,651	(175,157)	4,347,495
2025	3,181,141	-	2,425,644	5,606,785	(175,164)	5,431,621
2026	3,466,845	-	3,831,229	7,298,075	(175,171)	7,122,904
2027	3,588,442	-	5,143,034	8,731,475	(175,179)	8,556,296
2028	3,713,402	-	6,541,770	10,255,172	(175,185)	10,079,987
2029	3,843,908	-	7,320,301	11,164,209	(175,192)	10,989,016
2030	3,980,255	-	7,319,601	11,299,855	(175,199)	11,124,656
2031	4,122,757	-	7,317,501	11,440,258	(175,206)	11,265,052
2032	4,271,750	-	7,317,901	11,589,651	(175,214)	11,414,437
TOTAL WATER and WASTEWATER Revenue Requirement						
2023	\$ 8,019,803	\$ 4,045,341	\$ 3,599,320	\$ 15,664,464	\$ (835,300)	\$ 14,829,164
2024	6,724,381	3,706,339	2,101,332	12,532,053	(857,745)	11,674,308
2025	6,940,614	3,877,427	3,622,616	14,440,657	(881,130)	13,559,527
2026	7,599,198	4,243,287	5,465,112	17,307,597	(905,505)	16,402,093
2027	7,852,490	4,629,318	7,306,109	19,787,916	(930,917)	18,856,999
2028	8,113,285	5,014,355	8,925,480	22,053,120	(952,842)	21,100,278
2029	8,385,769	5,419,563	9,704,186	23,509,518	(975,499)	22,534,018
2030	8,670,582	5,658,122	9,703,311	24,032,015	(998,918)	23,033,096
2031	8,968,402	5,840,878	9,700,686	24,509,965	(1,023,129)	23,486,836
2032	9,279,952	6,028,255	9,701,186	25,009,393	(1,048,164)	23,961,228

As shown in these charts, NHCRWA charges are by far the largest annual expense paid by Tomball’s water utility. NHCRWA publishes little financial information and no rate projections. The project team utilized recently published rates for NHCRWA for the test year and increased the rates for the forecast period based on an average of forecast West Harris County Regional Water Authority and North Fort Bend Water Authority rate adjustments.

Any changes in NHCRWA forecast rate estimates used in determining the City’s water revenue requirement for this rate study could require significant changes to the rate plan presented in this report.

One of the key assumptions used in the development of the long-term revenue requirement is the City’s Capital Improvement Plan. The City’s CIP assumptions are summarized in **Table ES(W)-4**. The City is forecast to issue

revenue bonds totaling \$138,000,000 for the currently identified water and wastewater system in the next five years, of which \$35,246,312 is for water improvements and \$102,753,668 is for wastewater improvements.

Table ES(W)-4

CITY OF TOMBALL		
FIVE YEAR CAPITAL IMPROVEMENT PLAN		
Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"		
WATER		
	Total Cost	Timing
Projects Eligible to be Funded through Impact Fees		
Grand Parkway EST	\$ 5,677,800	2023-2024
S. Persimmon Water Line	445,300	2023
Main St. Water Line	5,100,000	2025-2026
Medical Complex	1,673,000	2027-2028
Water Line S. Persimmon	1,618,000	2025-2026
16" W Hufsmith	2,517,000	2024-2025
Rudolph Road Utilities	65,500	2023-2026
SCADA	30,000	2023
Total Impact Fee Funded Projects - Water	\$ 17,126,600	
Non Impact Fee Funded Projects		
Pine Street EST	\$ 849,000	2023-2024
East Water Plant	19,541,000	2023-2026
East Water Plant Baker Drive	6,856,000	2023-2025
Oak & Clayton Water Line	1,147,000	2024-2025
SCADA	215,850	2023-2024
Telge Easement Acquisition	750,000	2023-2024
Total Non Impact Fee Funded Projects - Water	\$ 29,508,961	
Total Water CIP	\$ 46,635,561	
WASTEWATER		
Projects Eligible to be Funded through Impact Fees		
FM 2920 Lift Station	\$ 1,500,000	2023-2025
Rudolph Road Utilities	157,088	2023-2025
SCADA	30,000	2023
Hicks Lift Station Expansion	1,410,000	2025-2026
S. Persimmon Gravity Line	4,341,000	2025-2026
Total Impact Fee Funded Projects - WW	\$ 7,438,088	
Non Impact Fee Funded Projects		
Critical Needs	\$ 5,400,900	2023
FM 2920 Lift Station	13,894,100	2023-2024
WWTP Expansion	69,870,022	2023-2027
SW Gravity Main - Telge	860,000	2026-2027
Lutheran Church Rd/FM 2920 Gravity Line	976,000	2025-2026
Sanitary Sewer Alma-James	3,970,000	2025-2026
N. Willow St.	2,474,000	2027-2028
SSES Phase I	4,317,000	2024-2025
SSES Phase 2	8,310,000	2026-2027
Rudolph Road Utilities	150,111	2023-2024
SCADA	215,850	2023-2024
Telge Easement Acquisition	750,000	2023
Total Non Impact Fee Funded Projects - WW	\$ 111,187,983	
Total Wastewater CIP	\$ 118,626,071	
TOTAL 5 YEAR W/WW CIP	\$ 165,261,631	

These assumptions are preliminary in nature and subject to change. Should the City Council materially revise its CIP or 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.

Water and Wastewater Rate Recommendations

The project team developed the following two scenarios for the city's consideration:

Scenario 1 – “Fully Fund CIP”

- The Scenario 1- “Fully Fund CIP” funds the city's CIP for FY 2024 – 2028 thru impact fees and rates.

Scenario 2 – “Fund 50% of CIP”

- Scenario 2 Fund 50% of the city's proposed CIP for FY 2024 – 2028. Under Scenario 2 the city will have to determine what projects will be funded or find alternative funding for all projects.

Scenario 1 and Scenario 2 both include the following assumptions which are notable:

- The proposed rate plans adopt a Uniform Monthly Base Charge for Residential and Commercial water customers.
- City staff and the project team discussed the adoption of a four-year rate plan. The proposed rate plan has water rate increases being automatically implemented on October 1 of each year beginning with October 2024 followed with October 2025, October 2026 and October 2027. Wastewater rate increases will also be automatically implemented on October 1st of each year beginning with October 2024 followed by October 2025, October 2026 and October 2027.
- The net revenue requirement on which the rate plans under both scenarios are based is for the years FY 2025 through FY 2028. The rate plans are based on revenue requirements going forward, not revenue requirements from past years. Therefore the FY 2023 test year and FY 2024 forecast year are the source of which the revenue requirements used to calculate the rate plans are estimated.
- Given the expected growth in the City and potential for unexpected events, the project team recommends that the City not commit itself to a rate plan beyond four years. Further, the project team recommends that the City periodically review these rates during the next four years, to incorporate any changes to costs, volumes or growth assumptions that may occur during that time.
- The largest 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 funded through impact fees and rates.
- The second largest impact on rates will be the costs from NHCRWA. Should NHCRWA costs be materially different than those forecast in the study, the City should undertake an immediate review of its rate plan

Tables ES(W)-5 presents a summary of the Scenario 1 – “Fully Fund CIP”, water and wastewater recommended rate plan proposed for the City of Tomball. **Table ES(W)-6** presents the impact of this rate plan on monthly customer charges.

TABLE ES(W)-5

CITY OF TOMBALL										
FORECAST RATE PLAN										
SCENARIO:		2024 01 15 -- Scenario I -- "Fully Fund CIP"								
		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27				
WATER RATES - RESIDENTIAL										
Base Charge	Current									
-	10,000	\$ 11.55	\$ -	\$ -	\$ -	\$ -				
10,001	15,000	13.29	-	-	-	-				
15,001	Above	15.29	-	-	-	-				
	Uniform	-	12.85	13.65	14.50	15.40				
Volume Rate Per 1,000 Gal										
-	10,000	3.02	3.20	3.39	3.60	3.81				
10,001	15,000	3.77	4.00	4.24	4.49	4.76				
15,001	Above	4.72	5.00	5.30	5.62	5.96				
NHCRWA Surcharge Per 1,000 Gal		3.60	3.80	4.00	4.20	4.40				
WATER RATES - COMMERCIAL										
Base Charge	Current									
-	5,000	19.56	-	-	-	-				
5,001	50,000	31.48	-	-	-	-				
51,001	Above	55.11	-	-	-	-				
	Uniform	-	29.10	30.85	32.75	34.75				
Volume Rate Per 1,000 Gal										
-	5,000	3.66	3.88	4.11	4.36	4.62				
5,001	50,000	4.58	4.85	5.15	5.45	5.78				
51,001	Above	5.72	6.06	6.43	6.81	7.22				
NHCRWA Surcharge Per 1,000 Gal		3.60	3.80	4.00	4.20	4.40				
WASTEWATER RATES - RESIDENTIAL										
Monthly Base Charge		\$ 10.23	\$ 13.15	\$ 16.85	\$ 21.60	\$ 25.95				
Volume Rate Per 1,000 Gal -- Winter Avg		3.57	4.57	5.85	7.49	8.98				
WASTEWATER RATES - COMMERCIAL										
Base Charge		24.91	31.95	40.90	52.40	62.90				
Volume Rate Per 1,000 Gal										
-	5,000	4.53	5.80	7.42	9.50	11.40				
5,001	51,000	5.65	7.23	9.26	11.85	14.22				
51,001	Above	7.07	9.05	11.58	14.83	17.79				

TABLE ES(W)-6

CITY OF TOMBALL		FORECAST RATE PLAN				
SCENARIO:	2024 01 15 -- Scenario I -- "Fully Fund CIP"	Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27
Residential Monthly Water/WW Charge						
5,000 Gallons W; 5,000 WW		\$ 54.73	\$ 64.85	\$ 76.71	\$ 91.52	\$ 105.33
NHCRWA Surcharge		18.00	19.01	20.02	21.02	22.02
Total		72.73	83.86	96.73	112.53	127.36
	Dollar Inc		\$ 11.13	\$ 12.87	\$ 15.81	\$ 14.82
	Percent Inc		15.3%	15.3%	16.3%	13.2%
10,000 Gallons W; 5,000 WW		\$ 69.83	\$ 80.86	\$ 93.68	\$ 109.50	\$ 124.40
NHCRWA Surcharge		36.00	38.02	40.03	42.03	44.05
Total		105.83	118.88	133.71	151.54	168.45
	Dollar Inc		\$ 13.05	\$ 14.83	\$ 17.83	\$ 16.91
	Percent Inc		12.3%	12.5%	13.3%	11.2%
Commercial Monthly Water/WW Charge						
20,000 Gallons W/ 20,000 WW		\$ 250.79	\$ 290.74	\$ 345.47	\$ 414.00	\$ 477.77
NHCRWA Surcharge		72.00	76.03	80.06	84.06	88.10
Total		322.79	366.77	425.53	498.07	565.87
	Dollar Inc		\$ 43.98	\$ 58.76	\$ 72.54	\$ 67.80
	Percent Inc		13.6%	16.0%	17.0%	13.6%

Tables ES(W)-7 presents a summary of the Scenario 2 – “Fund 50% of CIP”, water and wastewater recommended rate plan proposed for the City of Tomball. Table ES(W)-8 presents the impact of this rate plan on monthly customer charges.

Table ES(W)-9 illustrates a comparison of residential and commercial rate plan impacts between Scenario 1 – “Fully Fund CIP” and Scenario 2 – “Fund 50% CIP”.

TABLE ES(W)-7

CITY OF TOMBALL		FORECAST RATE PLAN					
SCENARIO:		2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"					
		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	
WATER RATES - RESIDENTIAL							
Base Charge	Current						
-	10,000	\$ 11.55	\$ -	\$ -	\$ -	-	
10,001	15,000	13.29	-	-	-	-	
15,001	Above	15.29	-	-	-	-	
	Uniform	-	12.50	12.90	13.30	13.70	
Volume Rate Per 1,000 Gal							
-	10,000	3.02	3.11	3.20	3.30	3.40	
10,001	15,000	3.77	3.88	4.00	4.12	4.24	
15,001	Above	4.72	4.86	5.01	5.16	5.31	
NHCRWA Surcharge Per 1,000 Gal		3.60	3.80	4.00	4.20	4.40	
WATER RATES - COMMERCIAL							
Base Charge	Current						
-	5,000	19.56	-	-	-	-	
5,001	50,000	31.48	-	-	-	-	
51,001	Above	55.11	-	-	-	-	
	Uniform	-	28.30	29.15	30.05	31.00	
Volume Rate Per 1,000 Gal							
-	5,000	3.66	3.77	3.88	4.00	4.12	
5,001	50,000	4.58	4.72	4.86	5.00	5.15	
51,001	Above	5.72	5.89	6.07	6.25	6.44	
NHCRWA Surcharge Per 1,000 Gal		3.60	3.80	4.00	4.20	4.40	
WASTEWATER RATES - RESIDENTIAL							
Monthly Base Charge		\$ 10.23	\$ 12.30	\$ 14.80	\$ 17.80	\$ 19.60	
Volume Rate Per 1,000 Gal -- Winter Avg		3.57	4.28	5.14	6.17	6.79	
WASTEWATER RATES - COMMERCIAL							
Base Charge		24.91	29.95	35.95	43.15	47.50	
Volume Rate Per 1,000 Gal							
-	5,000	4.53	5.44	6.52	7.83	8.61	
5,001	51,000	5.65	6.78	8.14	9.76	10.74	
51,001	Above	7.07	8.48	10.18	12.22	13.44	

TABLE ES(W)-8

CITY OF TOMBALL		FORECAST RATE PLAN				
SCENARIO: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27
Residential Monthly Water/WW Charge						
5,000 Gallons W; 5,000 WW		\$ 54.73	\$ 61.77	\$ 69.42	\$ 78.44	\$ 84.22
NHCRWA Surcharge		18.00	19.01	20.02	21.02	22.02
Total		72.73	80.78	89.44	99.46	106.25
	Dollar Inc		\$ 8.05	\$ 8.66	\$ 10.02	\$ 6.79
	Percent Inc		11.1%	10.7%	11.2%	6.8%
10,000 Gallons W; 5,000 WW						
10,000 Gallons W; 5,000 WW		\$ 69.83	\$ 77.33	\$ 85.44	\$ 94.95	\$ 101.22
NHCRWA Surcharge		36.00	38.02	40.03	42.03	44.05
Total		105.83	115.34	125.47	136.98	145.27
	Dollar Inc		\$ 9.51	\$ 10.13	\$ 11.50	\$ 8.29
	Percent Inc		9.0%	8.8%	9.2%	6.1%
Commercial Monthly Water/WW Charge						
20,000 Gallons W/ 20,000 WW		\$ 250.79	\$ 276.74	\$ 312.05	\$ 353.85	\$ 380.57
NHCRWA Surcharge		72.00	76.03	80.06	84.06	88.10
Total		322.79	352.77	392.12	437.92	468.67
	Dollar Inc		\$ 29.98	\$ 39.34	\$ 45.80	\$ 30.75
	Percent Inc		9.3%	11.2%	11.7%	7.0%

TABLE ES(W)-9

CITY OF TOMBALL		FORECAST RATE PLAN IMPACT COMPARISON				
		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27
Residential Monthly Water/WW Charge						
5,000 Gallons W; 5,000 WW AND NHCRWA Surcharge						
	Scenario 1 - "Fully Fund CIP"	\$ 72.73	\$ 83.86	\$ 96.73	\$ 112.53	\$ 127.36
	Scenario 2 - "Fund 50% of CIP"	72.73	80.78	89.44	99.46	106.25
	Dollar Difference		(3.08)	(7.29)	(13.07)	(21.11)
10,000 Gallons W; 5,000 WW AND NHCRWA Surcharge						
	Scenario 1 - "Fully Fund CIP"	\$ 105.83	\$ 118.88	\$ 133.71	\$ 151.54	\$ 168.45
	Scenario 2 - "Fund 50% of CIP"	105.83	115.34	125.47	136.98	145.27
	Dollar Difference		(3.54)	(8.24)	(14.56)	(23.18)
Commercial Monthly Water/WW Charge						
20,000 Gallons W/ 20,000 WW AND NHCRWA Surcharge						
	Scenario 1 - "Fully Fund CIP"	\$ 322.79	\$ 366.77	\$ 425.53	\$ 498.07	\$ 565.87
	Scenario 2 - "Fund 50% of CIP"	322.79	352.77	392.12	437.92	468.67
	Dollar Inc		(14.00)	(33.41)	(60.15)	(97.20)

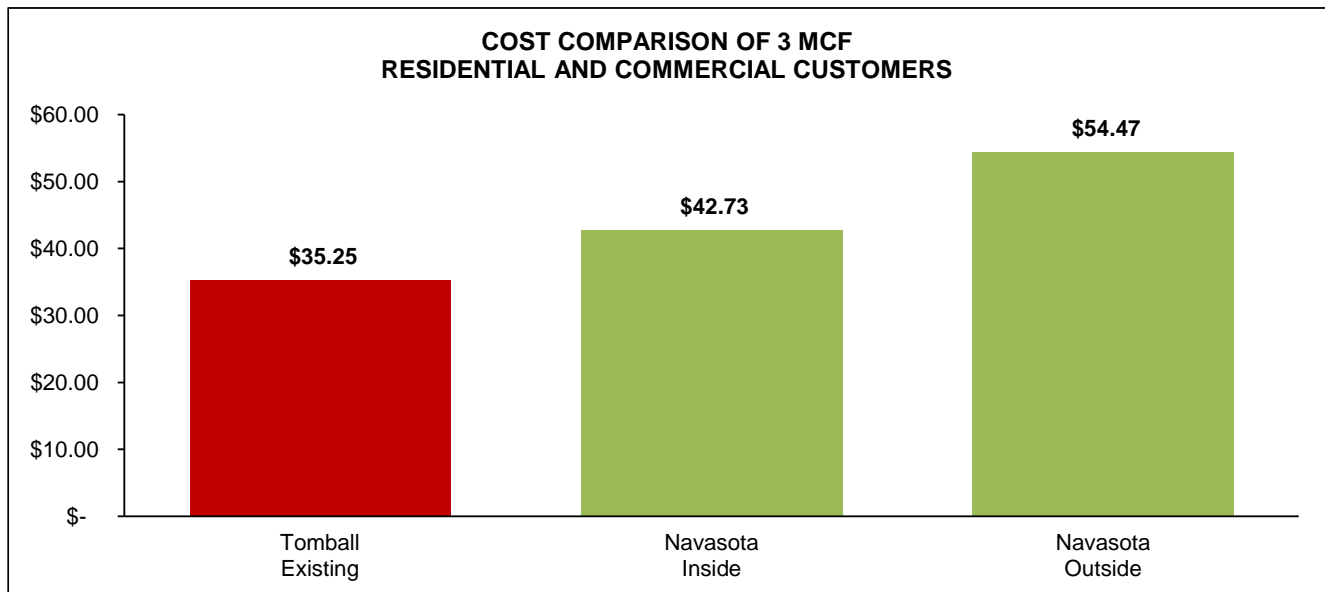
Natural Gas Rate Study

Natural Gas Rate Comparison

Chart ES(G)-1 compares the City’s monthly average cost for 3 MCF to the nearby city of Navasota, Texas. The average residential customer in the City uses a 12-month average of 3 MCF’s with summer usage averaging 1 MCF and winter usage averaging 6 MCF’s. Navasota has a rate structure that differs from Tomball. Navasota charges residential and commercial customers the same rates and also have rates specific to Small, Medium and Large Industrial, School District and Airport Hangar customer classes. Navasota charge customers a Purchased Gas Adjustment as part of the rates that fluctuates monthly based on the actual cost of purchased gas. And as the Chart shows, Navasota charges different rates for inside and outside customers.

It is important to keep in mind that with Navasota rates change monthly based on the Purchased Gas Adjustment and that the Chart below is a reflection of the annual average cost but these rate comparisons can fluctuate significantly based on the actual cost of gas. Tomball’s average cost remains flat over the year as the cost of gas is included in the flat rate.

Chart ES(G)-1

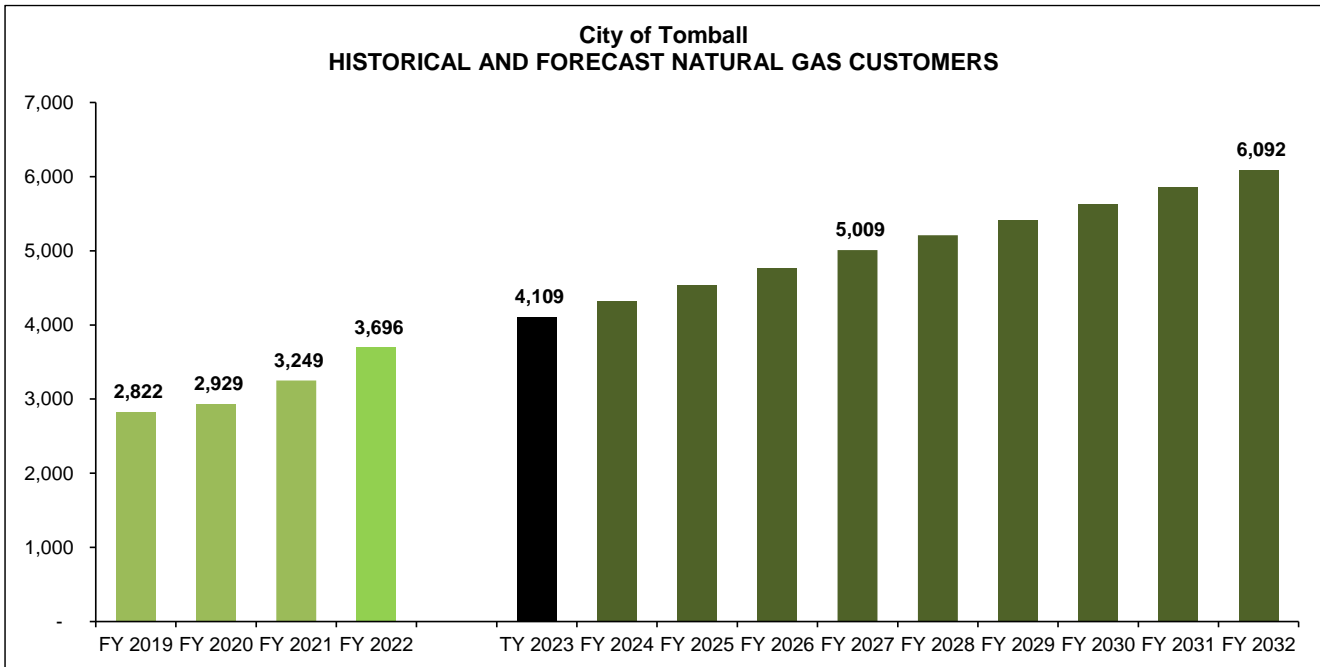


Natural Gas Customers and Meters – Test Year and Forecast

The majority of the gas accounts served by Tomball are residential accounts. **Chart ES(G)-2** reveals that the city is currently serves 4,109 total active gas accounts comprised of 3,682 residential and 416 commercial and 10 municipal accounts. As expected, residential customers represent the overwhelming majority of total customers, nearly 90.00%.

Staff requested that gas account growth rates mirror those of the Water Master Plan projections so for the purposes of this study it is assumed that gas accounts grow at an annual rate of 5.0% FY 2024 – 2027 and an annual rate of 4.0% FY 2028 – 2032.

TABLE ES(G)-2

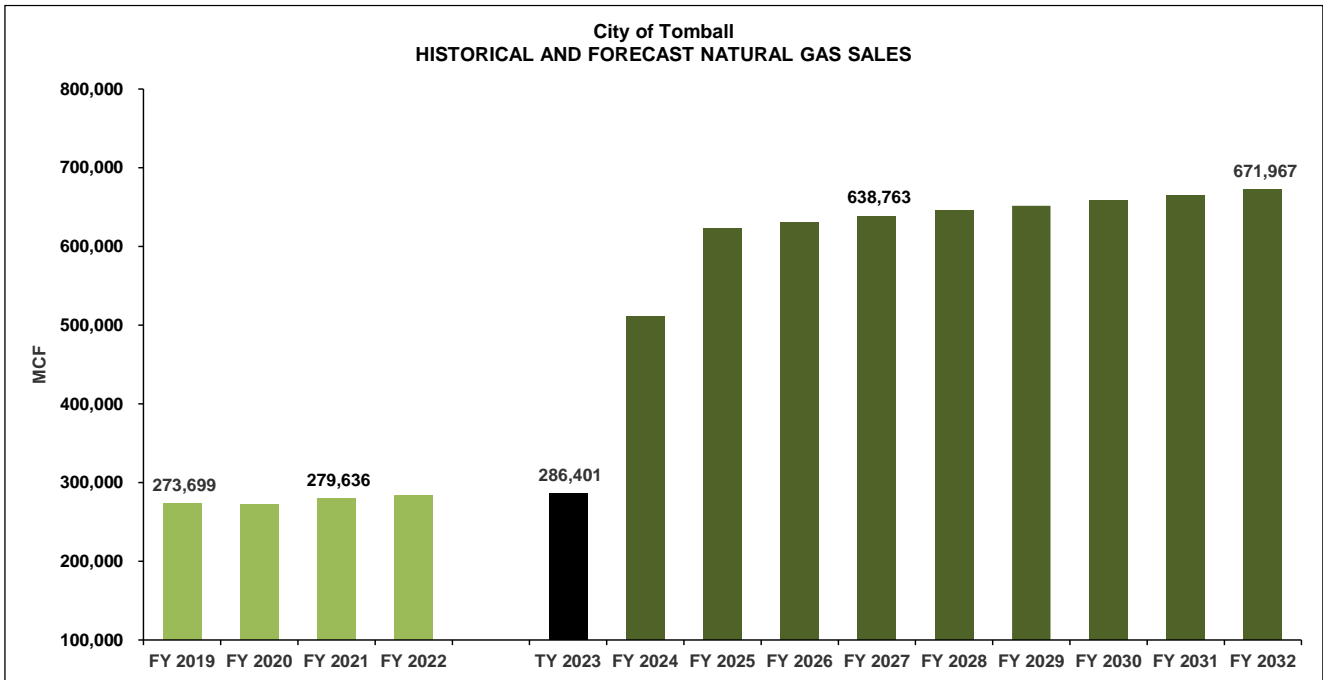


Natural Gas Sales – Test Year and Forecast

Total gas system sales data was analyzed over the same time period as customer data. The project team prepared a ten-year forecast of gas usage and sales based on the same principles on which customer accounts were projected for residential customers. The city is expecting a 1 new large industrial load to come on-line in October 2023, 1 new large commercial customer in March/April 2024, a new industrial area and shopping center in March/April 2024. In FY2025 there is 1 additional large commercial customer coming on-line. The assumption used for the rate study is that the industrial and two large commercial customers have a 50% load factor applied to the usage indicated in the Feasibility analysis provided to the city by Engineered Utility Solutions, Inc.

Table ES(G)-3 shows an annual average increase in system usage of 1.1% annually between FY2019 and FY2023. The growth in residential, commercial and new loads is forecast to more than double gas sales between TY2023 and FY2032.

TABLE ES(G)-3



Natural Gas Net Revenue Requirement

Table ES(G)-4 presents the test year and ten-year forecast for the City’s net revenue requirement to be raised from rates for the natural gas utility for the test year 2023 and forecast period. The gas net revenue requirement is expected to increase from **\$3,862,143** in FY 2023 to **\$6,734,443** in FY 2032.

TABLE ES(G)-4

CITY OF TOMBALL		NATURAL GAS UTILITY FORECAST REVENUE REQUIREMENT									
GAS	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
Operating Expense	\$ 1,249,690	\$ 1,346,521	\$ 1,400,010	\$ 1,456,675	\$ 1,516,800	\$ 1,580,699	\$ 1,648,723	\$ 1,721,260	\$ 1,798,742	\$ 1,881,649	
Purchased Gas	1,239,105	2,131,938	2,651,368	2,734,677	2,821,084	2,903,550	2,988,770	3,076,844	3,167,876	3,261,974	
Transfers	823,348	712,854	750,823	791,920	836,479	884,871	937,510	994,860	1,057,437	1,125,820	
Capital Outlay	850,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	
Debt Service	-	-	-	-	-	-	-	-	-	-	
Total Cost of Service	\$ 4,162,143	\$ 4,956,314	\$ 5,567,201	\$ 5,748,273	\$ 5,939,363	\$ 6,134,120	\$ 6,340,003	\$ 6,557,964	\$ 6,789,055	\$ 7,034,443	
Less Non-Rate Revenue	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	
Net Revenue Requirement To be Raised from Rates	\$ 3,862,143	\$ 4,656,314	\$ 5,267,201	\$ 5,448,273	\$ 5,639,363	\$ 5,834,120	\$ 6,040,003	\$ 6,257,964	\$ 6,489,055	\$ 6,734,443	

Natural Gas Rate Recommendations

Tables ES(G)-5 presents a summary of the recommended rate plan proposed for the City of Tomball. Table ES(G)-6 presents the impact of this rate plan on monthly customer charges.

The City has not adjusted rates since 2011 despite annual increases in Administration, Utility Billing and Gas O&M costs. As the cost of natural gas has declined but expected to fluctuate this decrease has not completely offset the increase in other costs to run the utility.

The following is notable regarding this proposed rate plan:

- The most significant impact on rates will be the sales to new commercial and industrial loads and the cost of purchased gas. If usage varies significantly from that forecast or prices increase significantly then the rate plan will need to be re-evaluated.
- Another potential impact to the rate plan would be development of a gas utility CIP. Costs of projects and any potential debt financing would need to be factored into a study update and would impact the rate plan.

TABLE ES(G)-5

CITY OF TOMBALL		NATURAL GAS UTILITY RECOMMENDED RATE PLAN					
2023 09 22 - Scenario 1 - NG Cost of Service							
GAS	Current	Effective Dec-23	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	
Residential							
Base Charge Includes 1 MCF	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75
Usage Charge Per MCF	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75
Commercial							
Base Charge Includes 1 MCF	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75
Usage Charge Per MCF	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75

TABLE ES(G)-6

CITY OF TOMBALL		NATURAL GAS UTILITY IMPACT ON RESIDENTIAL MONTHLY CHARGES				
2023 09 22 - Scenario 1 - NG Cost of Service						
	Current	Effective Dec-23	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27
Residential and Commercial Monthly Charges						
3 MCF Change	\$ 35.25	\$ 35.25	\$ 35.25	\$ 35.25	\$ 35.25	\$ 35.25
		-	-	-	-	-
5 MCF Change	58.75	58.75	58.75	58.75	58.75	58.75
		-	-	-	-	-
35 MCF Change	411.25	411.25	411.25	411.25	411.25	411.25
		-	-	-	-	-

Forecast Summary

Table ES(S)-1 on the following page summarizes the Water, Wastewater and Natural Gas utilities’ rate revenues, non-rate revenues, and operating and capital expenses for the ten-year period FY 2023 – 2032 under Scenario 1.

Table ES(S)-2 presents total monthly utility charges under Scenario 1 for Residential ratepayers with the following average consumption levels: 10,000 gallons of water usage, 5,000 gallons wastewater usage, and 3 MCF of natural gas.

TABLE ES(S)-2

CITY OF TOMBALL		MONTHLY CHARGES UNDER SCENARIO 1				
	Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	
RESIDENTIAL Rates						
Water Rates						
10,000 Gallons	\$ 41.75	\$ 44.01	\$ 45.81	\$ 47.67	\$ 49.58	
NHCRWA Surcharge	36.00	38.02	40.03	42.03	44.05	
Wastewater Rates						
5,000 Gallons	28.08	35.16	43.99	55.01	66.04	
Gas Rates						
3 MCF	35.25	35.25	35.25	35.25	36.25	
TOTAL MONTHLY CHARGES	141.08	152.44	165.09	179.97	195.92	
Difference - \$		11.36	12.65	14.88	15.95	
Difference - %		7.4%	7.7%	8.3%	8.1%	

CITY OF TOMBALL
WATER, WASTEWATER AND GAS CONSOLIDATED RATE STUDY

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
WATER, WASTEWATER AND GAS										
<i>Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"</i>										
RATE REVENUES										
Water	\$ 8,343,128	\$ 8,230,797	\$ 8,675,359	\$ 9,530,718	\$ 10,456,253	\$ 11,404,111	\$ 12,295,818	\$ 12,976,642	\$ 13,408,034	\$ 13,989,006
Wastewater	3,053,766	3,222,398	4,253,016	5,715,291	7,680,247	9,721,173	10,822,395	11,617,199	12,218,234	13,068,297
Natural Gas	3,365,212	5,999,389	7,325,126	7,414,323	7,505,751	7,580,721	7,657,191	7,735,190	7,814,749	7,895,900
Total	\$ 14,762,105	\$ 17,452,585	\$ 20,253,501	\$ 22,660,332	\$ 25,642,251	\$ 28,706,005	\$ 30,775,403	\$ 32,329,031	\$ 33,441,018	\$ 34,953,203
NON-RATE REVENUES										
Water	\$ 660,150	\$ 682,588	\$ 705,967	\$ 730,334	\$ 755,738	\$ 777,657	\$ 800,307	\$ 823,719	\$ 847,923	\$ 872,950
Wastewater	175,150	175,157	175,164	175,171	175,179	175,185	175,192	175,199	175,206	175,214
Natural Gas	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Total	\$ 1,135,300	\$ 1,157,745	\$ 1,181,130	\$ 1,205,505	\$ 1,230,917	\$ 1,252,842	\$ 1,275,499	\$ 1,298,918	\$ 1,323,129	\$ 1,348,164
TOTAL REVENUES										
Water	\$ 9,003,278	\$ 8,913,385	\$ 9,381,326	\$ 10,261,051	\$ 11,211,992	\$ 12,181,767	\$ 13,096,125	\$ 13,800,361	\$ 14,255,957	\$ 14,861,956
Wastewater	3,228,916	3,397,555	4,428,180	5,890,462	7,855,426	9,896,358	10,997,587	11,792,398	12,393,440	13,243,511
Natural Gas	3,665,212	6,299,389	7,625,126	7,714,323	7,805,751	7,880,721	7,957,191	8,035,190	8,114,749	8,195,900
Total Revenues	\$ 15,897,405	\$ 18,610,329	\$ 21,434,632	\$ 23,865,837	\$ 26,873,168	\$ 29,958,847	\$ 32,050,902	\$ 33,627,949	\$ 34,764,147	\$ 36,301,367
COST OF SERVICE										
OPERATING EXPENSES										
Water	\$ 6,510,304	\$ 6,011,460	\$ 6,258,303	\$ 6,960,484	\$ 7,440,556	\$ 7,922,644	\$ 8,429,882	\$ 8,775,761	\$ 9,071,453	\$ 9,377,736
Wastewater	2,067,508	1,796,051	1,872,383	2,128,575	2,219,772	2,313,423	2,411,679	2,514,809	2,623,099	2,736,852
Natural Gas	2,488,795	3,478,459	4,051,378	4,191,353	4,337,884	4,484,249	4,637,493	4,798,104	4,966,618	5,143,623
Total	\$ 11,066,607	\$ 11,285,970	\$ 12,182,064	\$ 13,280,412	\$ 13,998,213	\$ 14,720,316	\$ 15,479,054	\$ 16,088,674	\$ 16,661,170	\$ 17,258,211
NON-DEPARTMENTAL EXPENSES (GENERAL FUND TRANSFERS)										
Water	\$ 1,148,645	\$ 1,183,104	\$ 1,218,597	\$ 1,255,155	\$ 1,292,810	\$ 1,331,594	\$ 1,371,542	\$ 1,412,688	\$ 1,455,069	\$ 1,498,721
Wastewater	977,286	955,105	983,758	1,013,271	1,043,669	1,074,979	1,107,228	1,140,445	1,174,659	1,209,898
Natural Gas	823,348	712,854	750,823	791,920	836,479	884,871	937,510	994,860	1,057,437	1,125,820
Total	\$ 2,949,279	\$ 2,851,064	\$ 2,953,178	\$ 3,060,346	\$ 3,172,958	\$ 3,291,444	\$ 3,416,281	\$ 3,547,994	\$ 3,687,165	\$ 3,834,439
CAPITAL OUTLAYS										
Water	\$ 381,400	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000
Wastewater	980,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000
Natural Gas	850,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000
Total	\$ 2,211,400	\$ 1,250,000	\$ 1,250,000	\$ 1,250,000	\$ 1,250,000	\$ 1,250,000	\$ 1,250,000	\$ 1,250,000	\$ 1,250,000	\$ 1,250,000

**CITY OF TOMBALL
WATER, WASTEWATER AND GAS CONSOLIDATED RATE STUDY**

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
WATER, WASTEWATER AND GAS										
<i>Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"</i>										
DEBT SERVICE										
Water	\$ 719,864	\$ 654,837	\$ 1,196,972	\$ 1,633,883	\$ 2,163,075	\$ 2,383,710	\$ 2,383,885	\$ 2,383,710	\$ 2,383,185	\$ 2,383,285
Wastewater	2,879,456	1,446,496	2,425,644	3,831,229	5,143,034	6,541,770	7,320,301	7,319,601	7,317,501	7,317,901
Natural Gas	-	-	-	-	-	-	-	-	-	-
Total	\$ 3,599,320	\$ 2,101,332	\$ 3,622,616	\$ 5,465,112	\$ 7,306,109	\$ 8,925,480	\$ 9,704,186	\$ 9,703,311	\$ 9,700,686	\$ 9,701,186
TOTAL EXPENSES										
Water	\$ 8,760,213	\$ 8,009,401	\$ 8,833,872	\$ 10,009,523	\$ 11,056,441	\$ 11,797,948	\$ 12,345,309	\$ 12,732,159	\$ 13,069,707	\$ 13,419,741
Wastewater	6,904,251	4,522,651	5,606,785	7,298,075	8,731,475	10,255,172	11,164,209	11,299,855	11,440,258	11,589,651
Natural Gas	4,162,143	4,956,314	5,567,201	5,748,273	5,939,363	6,134,120	6,340,003	6,557,964	6,789,055	7,034,443
Total	\$ 19,826,607	\$ 17,488,366	\$ 20,007,858	\$ 23,055,870	\$ 25,727,280	\$ 28,187,240	\$ 29,849,521	\$ 30,589,979	\$ 31,299,021	\$ 32,043,835
NET REVENUES AVAILABLE FOR CONTINGENCY										
Total Water Revenues	\$ 243,064	\$ 903,984	\$ 547,454	\$ 251,529	\$ 155,550	\$ 383,819	\$ 750,816	\$ 1,068,202	\$ 1,186,250	\$ 1,442,215
Total Wastewater Revenues	(3,675,335)	(1,125,096)	(1,178,605)	(1,407,613)	(876,049)	(358,813)	(166,622)	492,542	953,182	1,653,859
Total Gas Revenues	(496,931)	1,343,075	2,057,925	1,966,050	1,866,387	1,746,601	1,617,188	1,477,226	1,325,694	1,161,457
Total	\$ (3,929,201)	\$ 1,121,963	\$ 1,426,773	\$ 809,966	\$ 1,145,888	\$ 1,771,607	\$ 2,201,381	\$ 3,037,970	\$ 3,465,126	\$ 4,257,531
Percent of Total Revenues	-24.72%	6.03%	6.66%	3.39%	4.26%	5.91%	6.87%	9.03%	9.97%	11.73%

SECTION I

SECTION I – INTRODUCTION AND OVERVIEW

Background



In April 2023, the City of Tomball, Texas (the “City”) engaged Willdan Financial Services to conduct a water, wastewater and natural gas rate study and long-term financial plan. The City was interested in developing an updated comprehensive water, wastewater and natural gas rate plan for FY 2023 and beyond. The objective of this study is to develop a long-term rate plan that will enable the City to recover sufficient funds to meet operating expenses, capital outlays, debt service and coverage requirements, while at the same time to the best extent possible minimizing the impact of any adjustments on ratepayers.

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

- A comprehensive analysis and evaluation of the water, wastewater and gas systems’ current cost of service and revenue requirements.
- A forecast of operating expenses over the next decade, taking into consideration such factors as inflation, system growth, and potential changes in staffing levels.
- A thorough review of the water, wastewater and gas systems’ known capital improvement needs, as well as a determination of the need for funding capital requirements through the issuance of long-term debt for the existing identified capital improvements.
- An estimate of current and forecast accounts, volumes and billing units for the five-year forecast period.
- An analysis of alternative multi-year water, wastewater and gas rate plans that will distribute costs equitably.
- A detailed analysis and comparison of the City’s current and proposed rates to rates in other surrounding communities.

Report Organization

This report is organized into the following sections:

Section I – Introduction and Overview - outlines the background, objectives and scope of this rate study and long-term financial plan. It also presents the City’s current rate structure and a community profile of the City of Tomball. This includes a comparison of the City’s water, wastewater and gas charges with other Texas cities.

Section II – Water and Wastewater Rate Study

The Water and Wastewater **Test Year and Forecast Customer and Volume** sections analyze the City’s customer base, total accounts and current volumes of treated water and wastewater for the current year and a forecast five-years into the future. The **Test Year and Forecast Revenue Requirement** sections 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. This section discusses costs associated with the North Harris County Regional Water Authority. Using the test year as a basis, costs are forecast for a five-year period. Water and Wastewater **Rate Design** section presents rate recommendations for the City of Tomball City Council and Staff to consider which would enable it to meet its revenue requirements over the forecast period. This section also presents an analysis of the impact of this rate plan.

Section III – Gas Rate Study

The Gas **Test Year and Forecast Customer and Sales** sections analyze the City’s customer base, total accounts and current sales of natural gas. This section presents totals for the current year and a forecast five-years into the future. **Test Year and Forecast Revenue Requirement** sections outlines the process of analyzing the City’s current gas utility cost structure. The total current or “test year” revenue requirements are developed, and costs are functionalized between supply, distribution, administration and customer billing. This section discusses the historical and forecast cost of gas purchases. Using the test year as a basis, costs are forecast for a five-year period. The **Rate Design** section presents rate recommendations for the City of Tomball City Council and Staff to consider which would enable it to meet its revenue requirements over the forecast period. This section also presents an analysis of the impact of this rate plan.

Appendix A – presents a hard copy printout of the interactive Microsoft Excel spreadsheet model summary developed for the City of Tomball to calculate water and wastewater current and future revenue requirements. The model automatically generates all calculations based on a set of defined user inputs and has an executive dashboard for users to develop real-time “what-if” scenarios.

Appendix B – presents a hard copy printout of the interactive Microsoft Excel spreadsheet model summary developed for the City of Tomball to calculate gas current and future revenue requirements.

City Overview



The City of Tomball, Texas is located in northwest Harris County approximately 40 miles north of Houston. The City encompasses a land area of 12.29 square miles and has an estimated 2022 population of 13,585.

The City of Tomball has operated under a Council-Manager form of government since 1980 in which the elected Mayor and City Council Members establish policy. The Tomball City Council consists of five Council Members and the Mayor. The Council is elected on a non-partisan basis. Council members serve three-year terms, with two council members elected every year. The mayor is elected to serve a three-year term. All

Council members and the Mayor are elected at large.

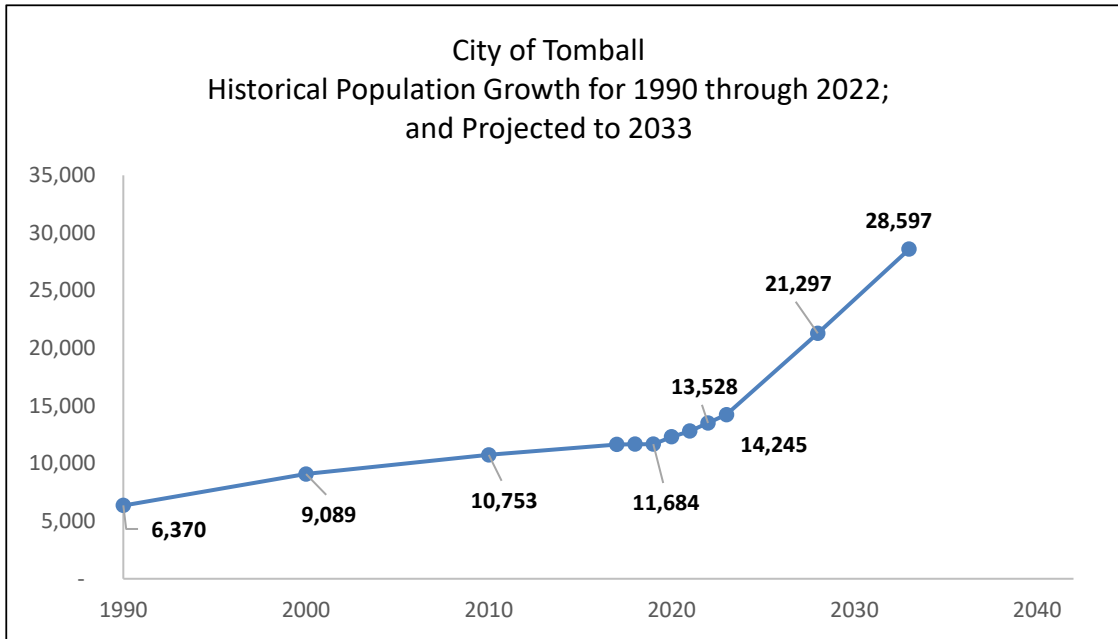
The City Manager operates in much the same way as a Chief Executive Officer of a corporation. The City Manager's Office is responsible for the day-to-day administration of Tomball's City government, including managing the City's budget, the City's departments and operations, and programs for communicating with residents and employees. The council is responsible for, among other things, passing ordinances, adopting the budget, appointing committees and hiring both the City Manager and the City Attorney.

The City provides water, sewer and gas services to approximately 5,500 customer accounts through use of a self-supporting water, gas and sewer enterprise fund. Rates charged for services must be adequate to support maintenance and operations, debt service on utility related debt, and pay as you go water and sewer line rehabilitation programs.

Population – Current and Projected

As with many other Southeast Texas communities, the City is experiencing a moderate rate of growth which is expected to continue throughout the forecast period. **Chart I-1** illustrates the rate of growth sustained by Tomball from 1990 – 2023, as well as population forecasts through 2033 from the City's recent Water and Wastewater Impact Fee Report completed by the engineering firm of Freese & Nichols. The City realized an average annual population rate of growth of 1.89% between the year 2000 and 2010, and a total increase in population since 2000 of 56.7%. An annual growth rate of 10.6% is forecast by City staff and their engineers between 2023 and 2028 changing to 7.7% annually from 2023-2033 an average annual growth rate of 8.05%. This residential growth of approximately 220 new accounts annually will be accompanied by commercial growth.

CHART I-1



It is important to note that these projections are always subject to shifts due to multiple factors beyond the City's control.

Section II

SECTION II

SECTION II - WATER & WASTEWATER RATE STUDY



In order to accurately forecast future revenues and expenses, and to develop a fair and reasonable set of rates, 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 Tomball, monthly water and wastewater records were reviewed for the period of October 2018 through March 2023. These records provided summary information on the monthly water volumes distributed system-wide as well as the number of accounts for each period by defined customer class and the associated revenues.

Additionally, these records provided the number of accounts and revenues monthly 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.

After thoroughly examining volume and customer data, the project team made no revisions to the City's existing rate classifications. The project team finds these 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 five-year projection of customers and usage will also be presented. These forecasts, along with the revenue requirements, will form the basis of the proposed rate designs.

Water and Wastewater Current Rates

Table II-1 summarizes the City of Tomball's current water rate structure. **Table II-2** summarizes the City's current wastewater rate structure. The City last adjusted its rates in October 2022.

TABLE II-1

CITY OF TOMBALL					
CURRENT WATER RATES					
Residential Water Monthly Rates		Commercial Water Monthly Rates			
Base Rate					
Small (0-10,000 Gallons)	\$	11.55	Small (0-5,000 Gallons)	\$	19.56
Medium (10,001-15,000 Gallons)		13.29	Medium (5,001-51,000 Gallons)		31.48
Large (15,001-Above Gallons)		15.29	Large (51,001-Above Gallons)		55.11
Usage Charge (per 1,000 Gallons)					
-	10,000	3.02	-	5,000	3.66
10,001	15,000	3.77	5,001	51,000	4.58
15,001	Above	4.72	51,001	Above	5.72
Bulk Water Sales		North Harris County Regional Water Authority Surcharge			
Base Rate	\$	92.27	The City collects additional surcharges, based on rates established by NHCROWA, adjusted as surcharge increases		
Usage Charge (per 1,000 Gallons)		5.12	10/1/2023 Surcharge (per 1,000 Gallons) \$ 3.60		

TABLE II-2

CITY OF TOMBALL					
CURRENT WASTEWATER RATES					
Customers Receiving Potable Water					
Residential Rates		Commercial Rates			
Base Rate	\$	10.23	Base Rate	\$	24.91
Volume Rate (per 1,000 Gallons)		3.57	Usage Charge (per 1,000 Gallons)		
			Small (0-5,000 Gallons)		44.53
			Medium (5,001-51,000 Gallons)		5.65
			Large (51,001-Above Gallons)		7.07
Customers Not Receiving Potable Water					
Residential Rates		Commercial Rates			
Base Rate	\$	41.93	Base Rate	\$	69.78
			Drain Charge (in excess of 15)		2.78
Note 1: Residential Volumetric Charges are based on the average of water usage in the winter months of November - February			Note 2: The City does not assess different rates for accounts of any rate class outside of City limits		

Water accounts served by Tomball are classified as Residential Inside, Residential Outside accounts, Commercial (includes Multi-Family), and HMW SUD Wholesale. Currently, there are no residential accounts outside of City

limits. The water rate structure assesses a base charge by customer class for all rate classes based on usage, and volume is billed based on tiered rates per 1,000 gallons.

All Residential and Commercial customers pay a North Harris County Regional Water Authority Surcharge for each 1,000 gallons used.

Residential wastewater rates are based on a winter average, which is a common billing practice for cities in Texas and throughout the United States. The concept behind **winter averaging** is that during the winter months (usually the months of November, December, January and February), residents are not as likely to water lawns, wash cars, or engage in other summer water uses that are not returned through the wastewater system. However, residents will continue to use water indoors (for bathing, drinking, etc.), in a volume similar to other months. Therefore, it is assumed that all water used during these winter months results in wastewater flows. Commercial wastewater accounts are assessed a tiered volume charge for all recorded water consumption.

Water and Wastewater Rate Comparisons

Chart II-3 and Table II-4 compare the City's monthly water and wastewater charges to nearby cities in Texas. Volumes of 10,000 gallons for water and 5,000 gallons for wastewater were used for the residential comparison as it represents typical usage levels for an average household. The comparison communities shown in the chart are those customarily selected by the City for all benchmarking and comparisons.

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

The following points are also notable:

- 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 use tax bonds to fund water/wastewater system construction. This results in lower rates but higher ad valorem taxes.

CHART II-3

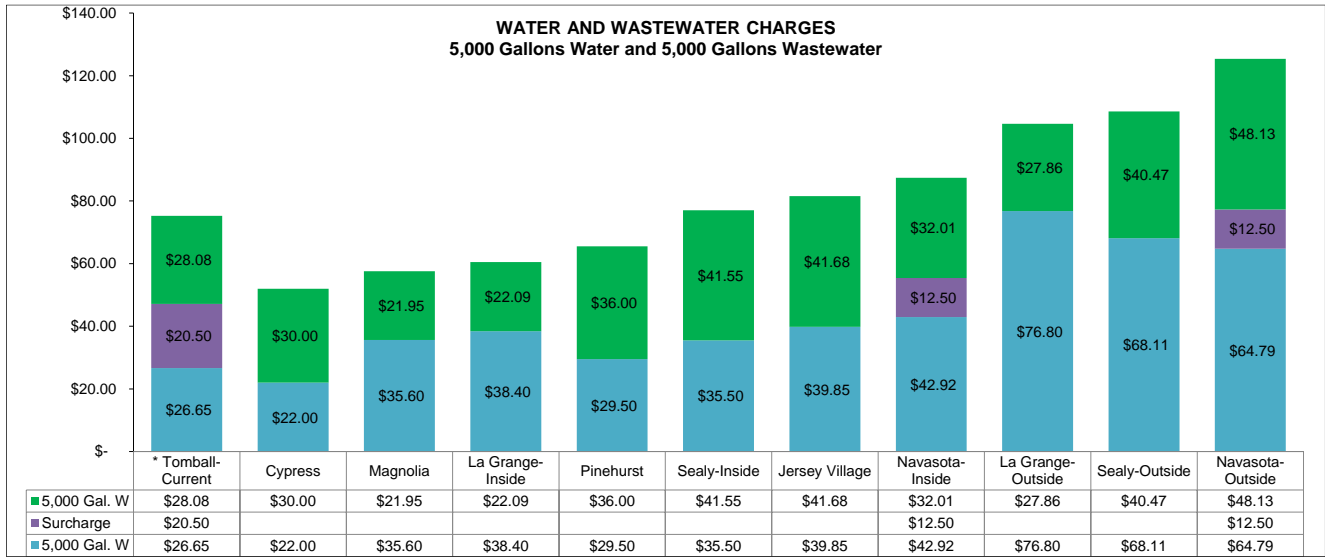


TABLE II-4

CITY OF TOMBALL					
MONTHLY RESIDENTIAL CHARGES -- 5,000 GALLONS WATER AND 5,000 WASTEWATER 3/4"					
	Population	Water	Wastewater	Additional Charges	Total
Tomball Current	13,585	\$ 26.65	\$ 28.08	\$ 20.50	\$ 75.23
Katy	25,253	10.72	8.44		19.16
Cypress	191,421	22.00	30.00		52.00
Magnolia	3,205	35.60	21.95		57.55
La Grange-Inside	4,487	38.40	22.09		60.49
Pinehurst	4,727	29.50	36.00		65.50
Sealy-Inside	6,956	35.50	41.55		77.05
Jersey Village	7,939	39.85	41.68		81.53
Navasota-Inside	8,417	42.92	32.01	12.50	87.43
La Grange-Outside		76.80	27.86		104.66
Navasota-Outside		64.79	48.13	12.50	125.42
Sample Average		\$ 39.61	\$ 30.97	-	\$ 73.08
TX State Average-2023 TML Survey		\$ 52.91	\$ 45.66	-	\$ 98.57

Source: Municipal websites and ordinances

Water and Wastewater Customers and Meters – Test Year and Forecast

Table II-5 and **Chart II-6** present total water accounts for the City for the test year and forecast period. 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 end to the next. Overall water accounts are forecast to increase from **5,669** in the test year FY 2023 to **8,082** in FY 2032, an annual increase of 4.0% for all customer classes.

The engineering firm of Freese and Nichols submitted their draft Water and Wastewater Master Plan Report to the City in November 2023. The calculations and projections included in this report were taken into consideration by the project team and discussed with City staff in the development of the account and consumption forecasts utilized in the water and wastewater rate model for this study.

TABLE II-5

CITY OF TOMBALL							
FORECAST TOTAL CUSTOMERS							
WATER Customer Classes							
Residential	Commercial	Municipal	Residential Outside	Commerical Outside	HMW SUD Wholesale	Bulk Water Sales	Total
WATER Total Customers							
FY 2019	2,989	1,193	64	-	-	-	4,247
FY 2020	3,097	1,209	70	-	-	-	4,377
FY 2021	3,487	1,259	74	-	-	-	4,820
FY 2022	3,917	1,286	73	-	-	-	5,275
TY 2023	4,268	1,326	74	-	-	1	5,669
FY 2024	4,481	1,366	75	-	-	1	5,923
FY 2025	4,705	1,406	76	-	-	1	6,188
FY 2026	4,941	1,446	77	-	-	1	6,465
FY 2027	5,188	1,486	78	-	-	1	6,753
FY 2028	5,395	1,526	79	-	-	1	7,001
FY 2029	5,611	1,566	80	-	-	1	7,258
FY 2030	5,836	1,606	81	-	-	1	7,524
FY 2031	6,069	1,646	82	-	-	1	7,798
FY 2032	6,312	1,686	83	-	-	1	8,082
WATER Annual New Customers							
FY 2020	108	16	6	-	-	-	130
FY 2021	390	50	4	-	-	-	444
FY 2022	430	26	(1)	-	-	-	455
TY 2023	100	20	1	-	-	-	121
FY 2024	213	40	1	-	-	-	254
FY 2025	224	40	1	-	-	-	265
FY 2026	235	40	1	-	-	-	276
FY 2027	247	40	1	-	-	-	288
FY 2028	208	40	1	-	-	-	249
FY 2029	216	40	1	-	-	-	257
FY 2030	224	40	1	-	-	-	265
FY 2031	233	40	1	-	-	-	274
FY 2032	243	40	1	-	-	-	284

CHART II-6

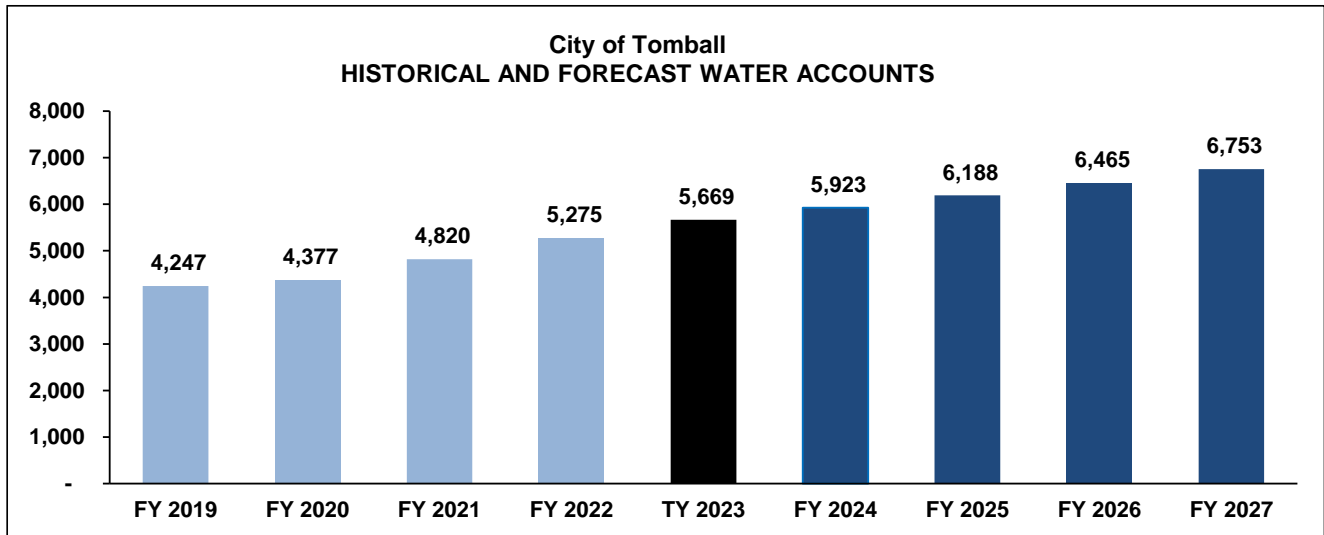


Table II-7 and **Chart II-8** presents wastewater accounts and classifications for the city wastewater accounts for the Test Year 2023 through Fiscal Year 2027. Historical wastewater account information was not available to the Study team due to the cyber-attack that the city experienced at the end of 2022.

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

TABLE II-7

CITY OF TOMBALL

HISTORICAL AND FORECAST TOTAL CUSTOMERS

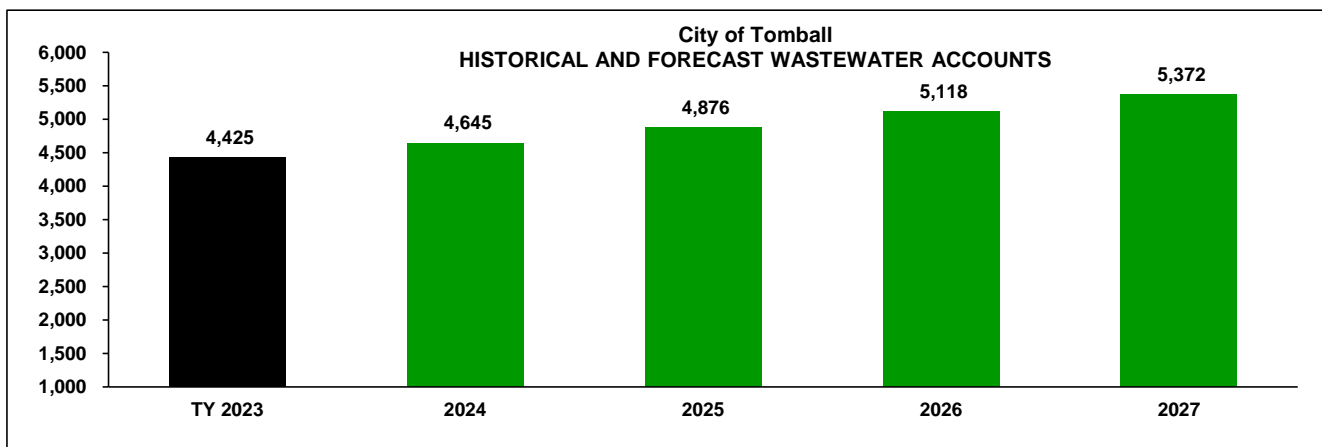
WASTEWATER Customer Classes

	Residential	Commercial	Municipal	Residential Sewer Only	Commercial Sewer Only	Total
TY 2023	3,558	819	23	20	5	4,425
FY 2024	3,736	860	24	20	5	4,645
FY 2025	3,923	903	25	20	5	4,876
FY 2026	4,119	948	26	20	5	5,118
FY 2027	4,325	995	27	20	5	5,372
FY 2028	4,541	1,045	28	20	5	5,639
FY 2029	4,768	1,097	29	20	5	5,919
FY 2030	5,006	1,152	30	20	5	6,213
FY 2031	5,256	1,210	31	20	5	6,522
FY 2032	5,519	1,271	32	20	5	6,847

WASTEWATER Annual New Customers

TY 2023	-	-	-	-	-	-
FY 2024	178	41	1	-	-	220
FY 2025	187	43	1	-	-	231
FY 2026	196	45	1	-	-	242
FY 2027	206	47	1	-	-	254
FY 2028	216	50	1	-	-	267
FY 2029	227	52	1	-	-	280
FY 2030	238	55	1	-	-	294
FY 2031	250	58	1	-	-	309
FY 2032	263	61	1	-	-	325

CHART II-8



Historical and Forecast Water Consumption

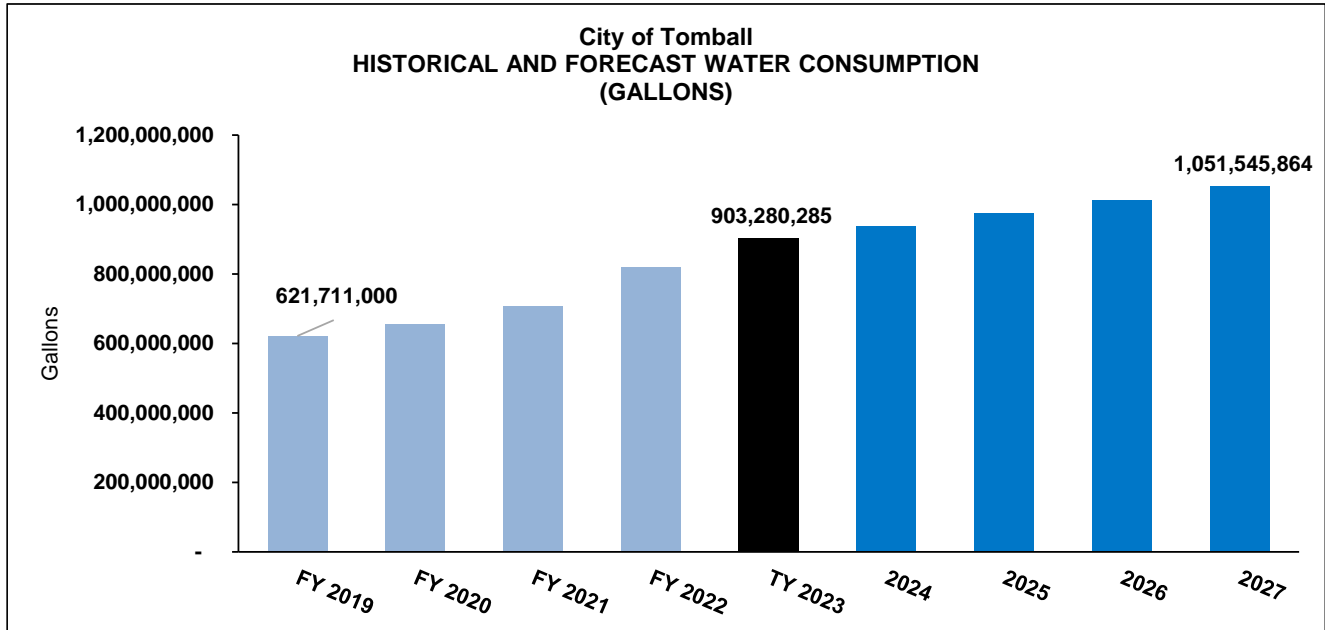
Total water system consumption data was analyzed over the same time period as customer data. The project team prepared a ten-year forecast of water usage based on the same principles on which customer accounts were projected. The results of this forecast are presented in **Table II-9** and **Chart II-10** which present consumption by rate classification for the City for the past three years and the forecast growth over the next decade.

Water usage is expected to increase at an average annual rate of approximately 3.5% over the next decade. By FY 2032 water usage is expected to reach **1,234,265,777** gallons.

TABLE II-9

CITY OF TOMBALL							
ACTUAL AND FORECAST BILLED CONSUMPTION							
WATER Customer Classes							
Residential	Commercial	Municipal	Residential Outside	Commerical Outside	HMW SUD Wholesale	Bulk Water Sales	Total
WATER Historical Volume							
FY 2019	246,923,000	370,005,000	4,783,000	-	-	-	621,711,000
FY 2020	290,109,000	359,035,000	6,251,000	-	-	-	655,395,000
FY 2021	308,678,000	388,168,000	8,247,000	-	-	-	705,093,000
FY 2022	388,355,000	421,988,000	7,738,000	-	-	-	818,081,000
WATER Forecast Volume							
TY 2023	432,470,869	452,353,833	8,930,685	-	-	9,524,897	903,280,285
FY 2024	454,094,413	465,999,499	9,051,370	-	-	9,524,897	938,670,179
FY 2025	476,799,134	479,645,165	9,172,055	-	-	9,524,897	975,141,251
FY 2026	500,639,090	493,290,832	9,292,740	-	-	9,524,897	1,012,747,559
FY 2027	525,671,045	506,936,498	9,413,425	-	-	9,524,897	1,051,545,864
FY 2028	546,697,887	520,582,164	9,534,110	-	-	9,524,897	1,086,339,057
FY 2029	568,565,802	534,227,830	9,654,795	-	-	9,524,897	1,121,973,324
FY 2030	591,308,434	547,873,496	9,775,479	-	-	9,524,897	1,158,482,307
FY 2031	614,960,772	561,519,162	9,896,164	-	-	9,524,897	1,195,900,996
FY 2032	639,559,202	575,164,828	10,016,849	-	-	9,524,897	1,234,265,777
INCREMENTAL HISTORIC AND FORECAST CONSUMPTION - GALLONS							
Residential	Commercial	Municipal	Residential Outside	Commerical Outside	HMW SUD Wholesale	Bulk Water Sales	Total
WATER Annual Historical Volumes							
FY 2020	43,186,000	(10,970,000)	1,468,000	-	-	-	33,684,000
FY 2021	18,569,000	29,133,000	1,996,000	-	-	-	49,698,000
FY 2022	79,677,000	33,820,000	(509,000)	-	-	-	112,988,000
WATER Annual Forecast Volumes							
TY 2023	44,115,869	30,365,833	1,192,685	-	-	9,524,897	85,199,285
FY 2024	21,623,543	13,645,666	120,685	-	-	-	35,389,895
FY 2025	22,704,721	13,645,666	120,685	-	-	-	36,471,072
FY 2026	23,839,957	13,645,666	120,685	-	-	-	37,606,308
FY 2027	25,031,955	13,645,666	120,685	-	-	-	38,798,306
FY 2028	21,026,842	13,645,666	120,685	-	-	-	34,793,193
FY 2029	21,867,915	13,645,666	120,685	-	-	-	35,634,267
FY 2030	22,742,632	13,645,666	120,685	-	-	-	36,508,983
FY 2031	23,652,337	13,645,666	120,685	-	-	-	37,418,688
FY 2032	24,598,431	13,645,666	120,685	-	-	-	38,364,782

CHART II-10



Peaking Factors

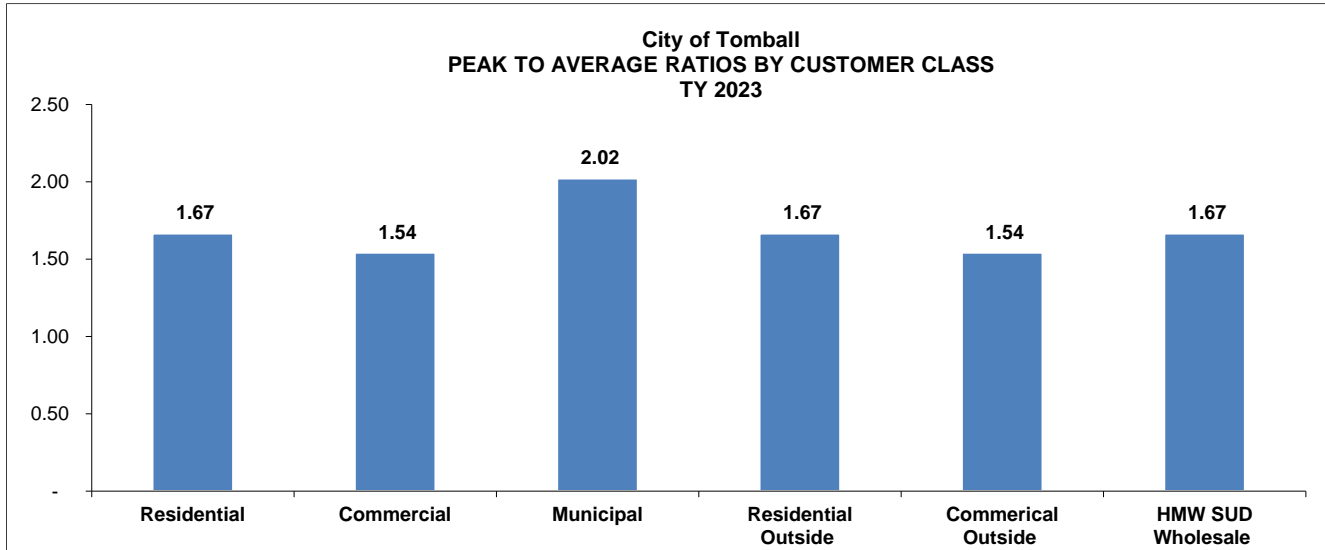
The cost of providing water to customers depends not only on the amount of water each class uses, but also on how that usage occurs over time. The maximum-day and maximum-hour peaking requirements of a water utility’s customers are an important influence on the utility’s costs. Because water utilities 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 the annualized water consumption by customer class for FY 2016. The calculations of the peaking factors by class are presented graphically in **Chart II-11**.

CHART II-11



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.

Historical and Forecast Wastewater Flows

The City currently calculates wastewater charges for all customers based on the winter average of their water consumption. All wastewater accounts are billed based on domestic strength, as the City does not have a high concentration of restaurants and apartments dumping high strength sewage into the 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-7**. The results of the forecast are presented in **Table II-12**.

TABLE II-12

CITY OF TOMBALL						
ACTUAL AND FORECAST BILLED CONSUMPTION						
WASTEWATER Customer Classes						
	Residential	Commercial	Municipal	Residential Sewer Only	Commercial Sewer Only	Total
WASTEWATER Forecast Volume						
TY 2023	231,209,391	279,395,015	2,887,894	1,299,659	1,705,708	516,497,667
FY 2024	242,776,359	293,381,822	3,010,992	1,299,659	1,705,708	542,174,541
FY 2025	254,928,173	308,050,913	3,134,091	1,299,659	1,705,708	569,118,546
FY 2026	267,664,835	323,402,288	3,257,190	1,299,659	1,705,708	597,329,680
FY 2027	281,051,326	339,435,946	3,380,288	1,299,659	1,705,708	626,872,927
FY 2028	295,087,646	356,493,028	3,503,387	1,299,659	1,705,708	658,089,429
FY 2029	309,838,779	374,232,394	3,626,486	1,299,659	1,705,708	690,703,027
FY 2030	325,304,725	392,995,185	3,749,584	1,299,659	1,705,708	725,054,862
FY 2031	341,550,466	412,781,401	3,872,683	1,299,659	1,705,708	761,209,918
FY 2032	358,640,986	433,591,042	3,995,782	1,299,659	1,705,708	799,233,178
INCREMENTAL HISTORIC AND FORECAST CONSUMPTION - GALLONS						
	Residential	Commercial	Municipal	Residential Sewer Only	Commercial Sewer Only	Total
WASTEWATER Annual Forecast Volumes						
TY 2023	-	-	-	-	-	-
FY 2024	11,566,968	13,986,808	123,099	-	-	25,676,874
FY 2025	12,151,815	14,669,091	123,099	-	-	26,944,004
FY 2026	12,736,661	15,351,374	123,099	-	-	28,211,134
FY 2027	13,386,491	16,033,658	123,099	-	-	29,543,247
FY 2028	14,036,321	17,057,083	123,099	-	-	31,216,502
FY 2029	14,751,133	17,739,366	123,099	-	-	32,613,598
FY 2030	15,465,946	18,762,791	123,099	-	-	34,351,835
FY 2031	16,245,741	19,786,216	123,099	-	-	36,155,056
FY 2032	17,090,520	20,809,641	123,099	-	-	38,023,259

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 of 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 5.0% over the forecast period.

Water & Wastewater Revenue Requirement - Test Year and Forecast



In this section of the water and wastewater rate study and long-term financial plan, the City of Tomball's test year and forecast water and wastewater utility revenue requirements are developed. The test year consists of the City's fiscal year, October 1, 2022 through September 30, 2023. The test year should not be used to set rates - all rate recommendations presented in this section are based on the City's forecast of future expenses.

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 Tomball's 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 summaries contained in **Appendix A** of 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.

Water and Wastewater Operating Expenses and Capital Outlays – Test Year

Table II-13 on the following page summarizes the test year FY 2023 water and wastewater system operating expenses and capital outlays in detail by department and expense category item.

The following is noteworthy about the table:

- There are four (4) Expense categories within the City's Utility Fund, each with their own budget: Water, Wastewater, Utility Administration, and Utility Billing.

- Utility Administration and Utility Billing, Water Department and Wastewater Department operating costs were divided to isolate **Personnel costs** including all salary, insurance and benefit expenses and payroll taxes from Non-Personnel costs in order to build forecast personnel additions into the rate model.
- Utility Administration, Utility Billing, Water Department and Wastewater Department (Non Personnel) **Operating and Maintenance costs** include one or more of the following expense categories:
 - **Supplies**, which includes postage, office equipment and supplies, IT costs, chemicals, etc.
 - **Repair and Maintenance**, which captures the primary operating expenses associated with the day-to-day management and maintenance of the water and wastewater operations.
 - **Services and Charges**, these expenses include such items as utility (electricity, gas, etc.) expense, fuels, small tools, maintenance supplies and contractual services.
 - North Harris Regional Water Authority (NHCRWA) cost
 - **Capital Improvements** funded through the water and wastewater utility budgets.
 - **Transfers**, includes transfers to the Fleet Replacement and Capital Project Funds for water and wastewater operations.

TABLE II-13

CITY OF TOMBALL				
TEST YEAR WATER AND WASTEWATER OPERATING EXPENSES, TRANSFERS AND CAPITAL OUTLAYS				
OPERATING EXPENSES				
WATER DEPARTMENT				
Utility Admin & Billing Personnel	\$ 559,884	\$ -	\$ -	\$ 559,884
Utility Admin & Billing Operating	217,479	-	-	217,479
Utility Admin & Billing Transfer	1,148,645	-	-	1,148,645
Water Personnel	756,400	-	-	756,400
Water Operating	931,200	-	-	931,200
Water Fund Transfers	-	-	-	-
N Harris Cnty Reg Water Authority	4,045,341	-	-	4,045,341
Total Water	7,658,949	-	-	7,658,949
WASTEWATER DEPARTMENT				
Utility Admin & Billing Personnel	-	205,840	-	205,840
Utility Admin & Billing Operating	-	175,568	-	175,568
Utility Admin & Billing Transfer	-	927,286	-	927,286
WW Personnel	-	697,000	-	697,000
WW Operating	-	989,100	-	989,100
WW Fund Transfers	-	50,000	-	50,000
Total Wastewater	-	3,044,794	-	3,044,794
TOTAL OPERATING EXPENDITURES and TRANSFERS	7,658,949	3,044,794	-	10,703,744
CAPITAL OUTLAYS				
Total Capital Outlays	381,400	980,000	-	1,361,400
TOTAL WATER AND WASTEWATER OPERATING EXPENSES, TRANSFERS AND CAPITAL OUTLAYS				
	\$ 8,040,349	\$ 4,024,794	\$ -	\$ 12,065,144

Water and Wastewater Operating Expenses and Capital Outlays – Ten Year Forecast

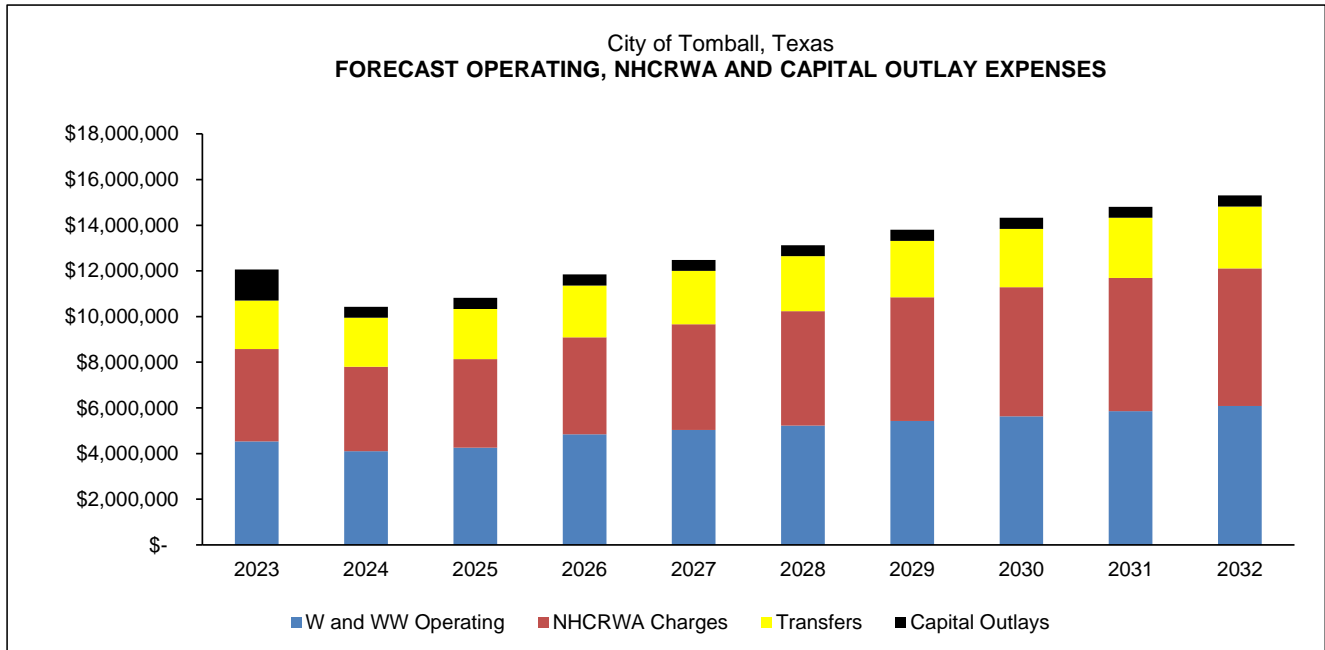
Table II-14 and Chart II-15 present the water and wastewater utility operating expense and capital outlay forecast for the ten-year period FY 2023 – FY 2032. Details behind these calculations can be found in the rate model contained in Appendix A. This forecast is based on the following set of assumptions:

- 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 above-inflation rates, to reflect the rapid rate of increase of these costs. These expenses include chemicals, workers’ compensation, Medicare and insurance.
- This forecast includes NHCRWA charges.
- Administrative Billing costs and Utility Billing costs are divided between water and wastewater based on their relative percentages of gross revenues.
- The Utility Transfers to the Fleet Replacement and Capital Project Funds were escalated at 3% annually throughout the forecast period.

TABLE II-14

CITY OF TOMBALL									
Scenario: FORECAST OPERATING EXPENSES AND CAPITAL OUTLAYS									
2023 11 20 – Scenario I – "Fully Fund CIP"									
	2024	2025	2026	2027	2028	2029	2030	2031	2032
Budget Operating Expenses/Capital Outlays									
WATER									
Personnel	\$ 1,360,559	\$ 1,413,939	\$ 1,726,555	\$ 1,795,468	\$ 1,867,819	\$ 1,943,819	\$ 2,023,696	\$ 2,107,694	\$ 2,196,075
Operating	944,562	966,937	990,642	1,015,770	1,040,470	1,066,501	1,093,943	1,122,881	1,153,405
NHCRWA Purchases	3,706,339	3,877,427	4,243,287	4,629,318	5,014,355	5,419,563	5,658,122	5,840,878	6,028,255
Transfers	1,183,104	1,218,597	1,255,155	1,292,810	1,331,594	1,371,542	1,412,688	1,455,069	1,498,721
Capital Outlays	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000
Total Operating/Capital Outlays	\$ 7,354,564	\$ 7,636,900	\$ 8,375,640	\$ 8,893,366	\$ 9,414,238	\$ 9,961,424	\$ 10,348,449	\$ 10,686,522	\$ 11,036,457
WASTEWATER									
Personnel	\$ 933,221	\$ 969,868	\$ 1,184,337	\$ 1,231,654	\$ 1,281,332	\$ 1,333,520	\$ 1,388,372	\$ 1,446,059	\$ 1,506,758
Operating	862,830	902,515	944,237	988,119	1,032,091	1,078,160	1,126,437	1,177,040	1,230,094
Transfers	955,105	983,758	1,013,271	1,043,669	1,074,979	1,107,228	1,140,445	1,174,659	1,209,898
Capital Outlays	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000
Total Operating/Capital Outlays	\$ 3,076,156	\$ 3,181,141	\$ 3,466,845	\$ 3,588,442	\$ 3,713,402	\$ 3,843,908	\$ 3,980,255	\$ 4,122,757	\$ 4,271,750
Water and Wastewater Total	\$ 10,430,720	\$ 10,818,041	\$ 11,842,485	\$ 12,481,808	\$ 13,127,640	\$ 13,805,332	\$ 14,328,704	\$ 14,809,280	\$ 15,308,207

CHART II-15



North Harris Regional Water Authority

On June 18, 1999, the bill that created the North Harris County Regional Water Authority (HB 2965) was signed into law, and called a special election for January 15, 2000 so voters could confirm the creation of the new Authority and elect Directors to lead it.

Following the election, the NHCRWA became the single entity empowered to negotiate for a secure, long-term, reliable, quality supply of wholesale drinking water for all the independent neighborhoods, municipal utility districts, small municipalities, and permitted well owners within its boundaries.

These boundaries are essentially US 290 on the west, the Harris County line on the north (Spring Creek), FM 1960 and Bammel-North Houston on the south and the western shores of Lake Houston on the east. The Authority is comprised of 335 square miles and includes approximately 710,000 residents.

The NHCRWA's primary assignment is to develop and implement a strategy for complying with the Harris-Galveston Subsidence District's Regulatory Plan that requires a reduction in groundwater usage to no more than 20 percent of total water demand by the year 2035.

The first phase of the District's mandate was completed in 2010, which reduced reliance on groundwater by 30 percent. The next deadline is 2025 – requiring 60 percent conversion to alternate (or surface) water. The Authority is also responsible for building the water pipelines to deliver treated water to the municipal utility districts (MUDs) to serve hundreds of thousands of residents. The current challenge is to complete the planning and engineering stage of the multipronged 2025 conversion system. A new alliance of regional water providers has teamed up to initiate the Luce Bayou Interbasin Transfer Project with the capacity to bring raw water from the Trinity River to Lake Houston and the City's North East Water Purification Plant. The partners include the City of Houston, the

North, West and Central Harris County Regional Water Authorities, the North Fort Bend Water Authority, and the Coastal Water Authority.

Construction on the 90-acre Capers Ridge Pump Station on the Trinity River's west bank is underway. When fully functional, it will be able to divert up to 500 million gallons of water a day from the Trinity River and pump it into side-by-side underground pipelines. To provide an idea of the size of these pipes, a Ford F150 pickup truck could drive through these 8 foot diameter pipes with room to spare. The water will flow through these pipelines to a storage and sedimentation basin, and then into a canal that runs to the northeastern tip of Lake Houston. In anticipation of more raw water coming into the San Jacinto/Lake Houston reservoir, regional water authorities and the City of Houston forged a partnership to accomplish an expansion of the Northeast Water Purification Plant with each paying its fair share of the costs. This multi-billion-dollar project — to be completed in phases over the next 6 to 9 years — will increase the treatment capacity from the current 80 million gallons a day to 400 million gallons a day. The expansion project is considered to be the largest design-build infrastructure project of its kind underway in the U.S. today. In addition to the cost of purchasing the surface water from the City of Houston, there are shared transmission, operations and maintenance expenses to be paid. All of these factors — coupled with the cost of constructing the NHCRWA's 2025 water supply system — will impact the future cost of water.

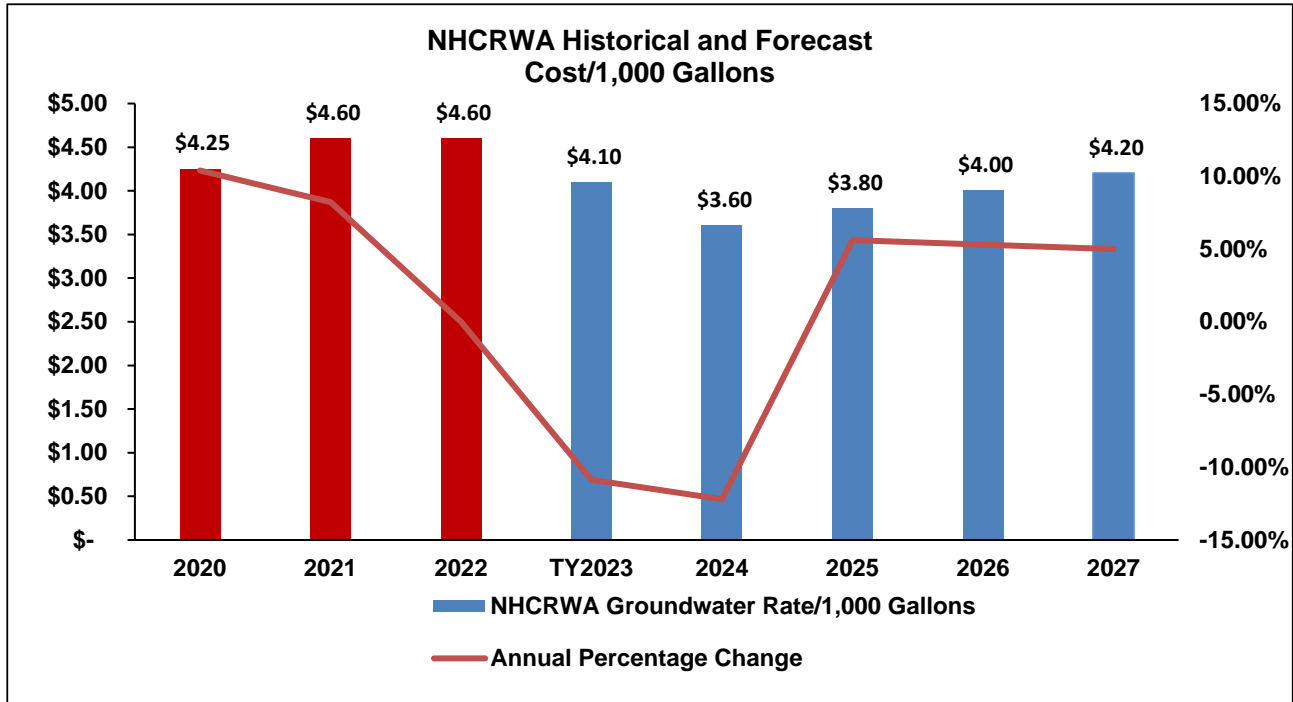
Since the Authority is not a taxing entity, funding for our future water supply and the infrastructure through which to deliver it is being accomplished through the sale of revenue bonds, and paid for by revenue from groundwater pumpage fees and water sales. While the Authority has pledged to keep the fees as low as possible, for as long as possible, we know that the cost of water will continue to go up in the future.

Table II-16 shows historical and forecast NHCRWA groundwater rates/1,000 gallon and the percentage change over the past 3 years and forecast thru FY2027. In September 2023, the NHCRWA Board voted to reduce water rates. The groundwater pumpage fee was reduced from \$4.10 to \$3.60 per 1,000 gallons. The new rates were effective October 1, 2023.

As shown in these charts, NHCRWA charges are by far the largest annual expense paid by Tomball's water utility. NHCRWA publishes little financial information and no rate projections. The project team utilized recently published rates for NHCRWA for the test year and increased the rates for the forecast period based on an average of forecast West Harris County Regional Water Authority and North Fort Bend Water Authority rate adjustments.

Any changes in NHCRWA forecast rate estimates used in determining the City's water revenue requirement for this rate study could require significant changes to the rate plan presented in this report.

TABLE II-16



Water and Wastewater Capital Improvement Plan

The City has developed a comprehensive long-term capital improvement plan (“CIP”) for the next five years. The current CIP is based on recently completed Water and Wastewater Master Plans. The capital improvement plan is an integral part of any long-term rate and financing plan. Much of the City’s planned capital improvements are directly related to the extensive growth in population. The CIP also includes plans to rehabilitate and maintain the existing system in addition to system expansions to service new growth. The City finances its capital improvements primarily through a combination of impact fees and revenue-funded long-term debt. Only the revenue bonds impact the City’s rate plan.

Table II-17 on the following page summarizes the City’s water and wastewater CIP. The water CIP includes storage expansion, repairs and upgrades to pumps and distribution lines, and the construction of pump stations. The wastewater CIP includes wastewater collection system construction and maintenance and WW Treatment Plant expansion.

TABLE II-17

CITY OF TOMBALL		
FIVE YEAR CAPITAL IMPROVEMENT PLAN		
Scenario: 2024 01 15 -- Scenario I – "Fully Fund CIP"		
WATER		
	Total Cost	Timing
Projects Eligible to be Funded through Impact Fees		
Grand Parkway EST	\$ 5,677,800	2023-2024
S. Persimmon Water Line	445,300	2023
Main St. Water Line	5,100,000	2025-2026
Medical Complex	1,673,000	2027-2028
Water Line S. Persimmon	1,618,000	2025-2026
16" W Hufsmith	2,517,000	2024-2025
Rudolph Road Utilities	65,500	2023-2026
SCADA	30,000	2023
Total Impact Fee Funded Projects - Water	\$ 17,126,600	
Non Impact Fee Funded Projects		
Pine Street EST	\$ 849,000	2023-2024
East Water Plant	19,541,000	2023-2026
East Water Plant Baker Drive	6,856,000	2023-2025
Oak & Clayton Water Line	1,147,000	2024-2025
SCADA	215,850	2023-2024
Telge Easement Acquisition	750,000	2023-2024
Total Non Impact Fee Funded Projects - Water	\$ 29,508,961	
Total Water CIP	\$ 46,635,561	
WASTEWATER		
Projects Eligible to be Funded through Impact Fees		
FM 2920 Lift Station	\$ 1,500,000	2023-2025
Rudolph Road Utilities	157,088	2023-2025
SCADA	30,000	2023
Hicks Lift Station Expansion	1,410,000	2025-2026
S. Persimmon Gravity Line	4,341,000	2025-2026
Total Impact Fee Funded Projects - WW	\$ 7,438,088	
Non Impact Fee Funded Projects		
Critical Needs	\$ 5,400,900	2023
FM 2920 Lift Station	13,894,100	2023-2024
WWTP Expansion	69,870,022	2023-2027
SW Gravity Main - Telge	860,000	2026-2027
Lutheran Church Rd/FM 2920 Gravity Line	976,000	2025-2026
Sanitary Sewer Alma-James	3,970,000	2025-2026
N. Willow St.	2,474,000	2027-2028
SSES Phase 1	4,317,000	2024-2025
SSES Phase 2	8,310,000	2026-2027
Rudolph Road Utilities	150,111	2023-2024
SCADA	215,850	2023-2024
Telge Easement Acquisition	750,000	2023
Total Non Impact Fee Funded Projects - WW	\$ 111,187,983	
Total Wastewater CIP	\$ 118,626,071	
TOTAL 5 YEAR W/WW CIP	\$ 165,261,631	

Table II-17 reveals that the City’s CIP over the next five years is estimated to be **\$46,635,561** for the water system and **\$118,626,071** for the wastewater system. The City is forecast to issue revenue bonds totaling **\$138,000,000** for the currently identified water and wastewater system in the next five years, of which **\$35,246,312** is for water improvements and **\$102,753,668** is for wastewater improvements.

Water and Wastewater Existing and Forecast Debt Service

Table II-18 presents current and forecast debt service assuming that the City issues the proposed new water and wastewater revenue bonds in FY 2024, 2025, 2026, 2027 and 2028 to fund the CIP. The City currently has one bond issue outstanding that were issued in the FY 2022 to fund water and wastewater system improvements. Future debt is assumed to have a 20-year term and level principal and interest payments.

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 II-18

CITY OF TOMBALL						
CURRENT AND FORECAST DEBT PAYMENTS						
Year	WATER		WASTEWATER		Total	
	Current	Forecast	Current	Forecast		
2023	\$ 719,864	\$ -	\$ 2,879,456	\$ -	\$ 3,599,320	
2024	263,886	390,951	1,055,545	390,951	2,101,332	
2025	263,311	933,661	1,053,245	1,372,399	3,622,616	
2026	263,461	1,370,422	1,053,845	2,777,384	5,465,112	
2027	263,311	1,899,764	1,053,245	4,089,789	7,306,109	
2028	263,836	2,119,874	1,055,345	5,486,425	8,925,480	
2029	264,011	2,119,874	1,056,045	6,264,256	9,704,186	
2030	263,836	2,119,874	1,055,345	6,264,256	9,703,311	
2031	263,311	2,119,874	1,053,245	6,264,256	9,700,686	
2032	263,411	2,119,874	1,053,645	6,264,256	9,701,186	

Water and Wastewater Non-Rate Revenues

Although sales revenues constitute the majority of the revenue received by the City of Tomball for water and wastewater service, a certain amount of revenue is accrued from non-rate sources. These revenues include other general revenues and miscellaneous charges. These non-rate revenues are subtracted from the overall budget to determine the revenue requirement to be raised from rates. Non-Rate Revenues not specifically and solely tied to either water or wastewater were allocated between the two utilities based on their respective percentages of gross revenues. These fees are projected to remain fairly stable over the forecast period. Annual non-rate revenue totals are presented in **Table II-19**.

TABLE II-19

CITY OF TOMBALL			
CURRENT AND FORECAST NON-RATE REVENUES			
FY	WATER	WASTEWATER	Non-Rate Rev. Total
2023	\$ 660,150	\$ 175,150	\$ 835,300
2024	682,588	175,157	857,745
2025	705,967	175,164	881,130
2026	730,334	175,171	905,505
2027	755,738	175,179	930,917
2028	777,657	175,185	952,842
2029	800,307	175,192	975,499
2030	823,719	175,199	998,918
2031	847,923	175,206	1,023,129
2032	872,950	175,214	1,048,164

Water and Wastewater Net Revenue Requirement

Table II-20 presents the test year and ten-year forecast for the City’s net revenue requirement to be raised from rates for the water and wastewater utility for the test year 2023 and forecast period. The water and wastewater net revenue requirement is expected to increase from **14,829,164** in FY 2023 to **\$23,961,228** in FY 2032.

TABLE II-20

CITY OF TOMBALL						
CURRENT AND FORECAST REVENUE REQUIREMENT						
Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"						
	Total Operating Expenses	NHCRWA	Debt Service	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
WATER Revenue Requirement						
2023	\$ 3,995,008	\$ 4,045,341	\$ 719,864	\$ 8,760,213	\$ (660,150)	\$ 8,100,063
2024	3,648,225	3,706,339	654,837	8,009,401	(682,588)	7,326,813
2025	3,759,473	3,877,427	1,196,972	8,833,872	(705,967)	8,127,905
2026	4,132,353	4,243,287	1,633,883	10,009,523	(730,334)	9,279,189
2027	4,264,049	4,629,318	2,163,075	11,056,441	(755,738)	10,300,703
2028	4,399,883	5,014,355	2,383,710	11,797,948	(777,657)	11,020,291
2029	4,541,861	5,419,563	2,383,885	12,345,309	(800,307)	11,545,002
2030	4,690,327	5,658,122	2,383,710	12,732,159	(823,719)	11,908,440
2031	4,845,644	5,840,878	2,383,185	13,069,707	(847,923)	12,221,784
2032	5,008,202	6,028,255	2,383,285	13,419,741	(872,950)	12,546,791
WASTEWATER Revenue Requirement						
2023	\$ 4,024,794	\$ -	\$ 2,879,456	\$ 6,904,251	\$ (175,150)	\$ 6,729,101
2024	3,076,156	-	1,446,496	4,522,651	(175,157)	4,347,495
2025	3,181,141	-	2,425,644	5,606,785	(175,164)	5,431,621
2026	3,466,845	-	3,831,229	7,298,075	(175,171)	7,122,904
2027	3,588,442	-	5,143,034	8,731,475	(175,179)	8,556,296
2028	3,713,402	-	6,541,770	10,255,172	(175,185)	10,079,987
2029	3,843,908	-	7,320,301	11,164,209	(175,192)	10,989,016
2030	3,980,255	-	7,319,601	11,299,855	(175,199)	11,124,656
2031	4,122,757	-	7,317,501	11,440,258	(175,206)	11,265,052
2032	4,271,750	-	7,317,901	11,589,651	(175,214)	11,414,437
TOTAL WATER and WASTEWATER Revenue Requirement						
2023	\$ 8,019,803	\$ 4,045,341	\$ 3,599,320	\$ 15,664,464	\$ (835,300)	\$ 14,829,164
2024	6,724,381	3,706,339	2,101,332	12,532,053	(857,745)	11,674,308
2025	6,940,614	3,877,427	3,622,616	14,440,657	(881,130)	13,559,527
2026	7,599,198	4,243,287	5,465,112	17,307,597	(905,505)	16,402,093
2027	7,852,490	4,629,318	7,306,109	19,787,916	(930,917)	18,856,999
2028	8,113,285	5,014,355	8,925,480	22,053,120	(952,842)	21,100,278
2029	8,385,769	5,419,563	9,704,186	23,509,518	(975,499)	22,534,018
2030	8,670,582	5,658,122	9,703,311	24,032,015	(998,918)	23,033,096
2031	8,968,402	5,840,878	9,700,686	24,509,965	(1,023,129)	23,486,836
2032	9,279,952	6,028,255	9,701,186	25,009,393	(1,048,164)	23,961,228

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 the City of Tomball staff. The results of the allocation process for the test year are summarized in **Table II-21**.

TABLE II-21

CITY OF TOMBALL			
TEST YEAR WATER COST FUNCTIONALIZATION			
FY 2023			
Function	Revenue Requirement	Percent	
Treatment	\$ 4,222,606	52.1%	
Distribution	1,904,951	23.5%	
Administration	1,500,061	18.5%	
Customer	<u>472,446</u>	<u>5.8%</u>	
Total	8,100,063	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. The peak to average factor is calculated by dividing the volume on the peak day of the year by the average daily volume. Facilities designed to meet maximum-day requirements, such as the treatment and distribution functions, are allocated 50% (1/2) to base, and 50% to extra capacity (Max Day). This means that facilities designed to meet maximum-day requirements, such as the treatment and distribution functions, are allocated 50% to base, and 50% to extra capacity.

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 rate-making practice to allocate these costs on an indirect basis to service characteristics.

The system-wide costs by service characteristic are shown in **Table II-22**. As with cost functionalization, these percentages are not expected to change significantly in the forecast period.

TABLE II-22

CITY OF TOMBALL			
TEST YEAR WATER COST CLASSIFICATION			
Function	FY 2023 Revenue Requirement		Percent
Base	\$	3,128,415	38.62%
Maximum Day		4,379,781	54.07%
Customer		<u>591,868</u>	<u>7.31%</u>
Total		8,100,063	100.0%

Water Utility Cost Allocation

Allocation of costs by service characteristic to customer classes is based on the proportionate use levels of each characteristic by each class. The total water utility costs by customer class for the test year are summarized in **Table II-23** and for the ten-year forecast period in **Table II-24**.

TABLE II-23

CITY OF TOMBALL			
TEST YEAR WATER COST ALLOCATION			
Function	FY 2023		Percent
	Revenue	Requirement	
Residential	\$	4,242,745	52.4%
Commercial		3,662,038	45.2%
Municipal		111,545	1.4%
HMW SUD Wholesale		83,734	1.0%
Total		8,100,063	100.0%

TABLE II-24

CITY OF TOMBALL					
FORECAST WATER COST ALLOCATION					
Year	Residential	Commercial	Municipal	HMW SUD Wholesale	Total
2023	\$ 4,242,745	\$3,662,038	\$ 111,545	\$ 83,734	\$ 8,100,063
2024	3,873,902	3,281,740	98,320	72,852	7,326,813
2025	4,339,138	3,604,717	106,294	77,757	8,127,905
2026	5,002,983	4,072,507	118,269	85,430	9,279,189
2027	5,610,095	4,471,361	127,961	91,286	10,300,703
2028	6,038,350	4,753,295	134,139	94,507	11,020,291
2029	6,365,688	4,945,779	137,703	95,832	11,545,002
2030	6,608,880	5,064,665	139,194	95,701	11,908,440
2031	6,828,363	5,158,308	140,003	95,111	12,221,784
2032	7,058,349	5,253,013	140,859	94,569	12,546,791

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 on **Table II-25**. As with the water utility, these percentages are not forecast to change significantly during the next ten years.

TABLE II-25

CITY OF TOMBALL			
TEST YEAR WASTEWATER COST FUNCTIONALIZATION			
Function		FY 2023 Revenue Requirement	Percent
Treatment	\$	758,602	11.3%
Collection		4,473,894	66.5%
Administration		1,173,489	17.4%
Customer		<u>323,116</u>	<u>4.8%</u>
Total	\$	6,729,101	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 for the test year are summarized in **Table II-26** and for the ten-year forecast period in **Table II-27**.

TABLE II-26

CITY OF TOMBALL		
TEST YEAR WASTEWATER COST ALLOCATION		
Function	FY 2023	
	Revenue Requirement	Percent
Residential	\$ 3,128,094	46.5%
Commercial	3,524,377	52.4%
Municipal	37,530	0.6%
Residential Sewer Only	17,583	0.3%
Commercial Sewer Only	21,516	0.3%
Total	\$ 6,729,101	100.0%

TABLE II-27

CITY OF TOMBALL						
FORECAST WASTEWATER COST ALLOCATION						
Year	Residential	Commercial	Municipal	Residential Sewer Only	Commercial Sewer Only	Total
2023	\$ 3,128,094	\$ 3,524,377	\$ 37,530	\$ 17,583	\$ 21,516	\$ 6,729,101
2024	2,066,123	2,233,279	24,047	11,061	12,984	4,347,495
2025	2,551,342	2,821,831	29,817	13,007	15,625	5,431,621
2026	3,323,202	3,725,183	38,736	16,136	19,648	7,122,904
2027	3,963,355	4,505,933	46,038	18,328	22,643	8,556,296
2028	4,649,825	5,330,616	53,561	20,479	25,505	10,079,987
2029	5,063,720	5,819,936	57,594	21,240	26,527	10,989,016
2030	5,131,124	5,890,043	57,425	20,500	25,564	11,124,656
2031	5,200,470	5,962,950	57,203	19,789	24,640	11,265,052
2032	5,274,221	6,040,385	56,956	19,113	23,762	11,414,437

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 AWWA and other industry cost of service rate-making principles. The water and wastewater rates developed in this section are designed to recover the test year and forecast revenue requirements while providing funding for the identified capital improvements and existing debt service. The project team developed the following two scenarios for the city's consideration:

Scenario 1 – “Fully Fund CIP”

- The Scenario 1- “Fully Fund CIP” funds the city's CIP for FY 2024 – 2028 thru impact fees and rates.

Scenario 2 – Fund 50% of CIP

- Scenario 2 Fund 50% of the city's proposed CIP for FY 2024 – 2028. Under Scenario 2 the city will have to determine what projects will be funded or find alternative funding for all projects.

Scenario 1 and Scenario 2 both include the following assumptions which are notable:

- The proposed rate plans adopt a Uniform Monthly Base Charge for Residential and Commercial water customers. The differing monthly charges based on total usage are eliminated.
- City staff and the project team discussed the adoption of a four-year rate plan. The proposed rate plan has water rate increases being automatically implemented on October 1 of each year beginning with October 2024 followed with October 2025, October 2026 and October 2027. Wastewater rate increases will also be automatically implemented on October 1st of each year beginning with October 2024 followed by October 2025, October 2026 and October 2027.
- The net revenue requirement on which the rate plans under both scenarios are based is for the years FY 2025 through FY 2028. The rate plans are based on revenue requirements going forward, not revenue requirements from past years. Therefore the FY 2023 test year and FY 2024 forecast year are the source of which the revenue requirements used to calculate the rate plans are estimated.
- Given the expected growth in the City and potential for unexpected events, the project team recommends that the City not commit itself to a rate plan beyond four years. Further, the project team recommends that the City periodically review these rates during the next four years, to incorporate any changes to costs, volumes or growth assumptions that may occur during that time.
- The largest 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 funded through impact fees and rates.
- The second largest impact on rates will be the costs from NHCRWA. Should NHCRWA costs be materially different than those forecast in the study, the City should undertake an immediate review of its rate plan.

Scenario 1 – “Fully Fund CIP”

Table II-28 presents a summary of the water and wastewater rate plans proposed for Residential and Commercial customers under Scenario 1. Table II-29 presents the customer rate impact of both the water and wastewater rate adjustments for representative Residential and Commercial accounts under Scenario 1.

TABLE II-28

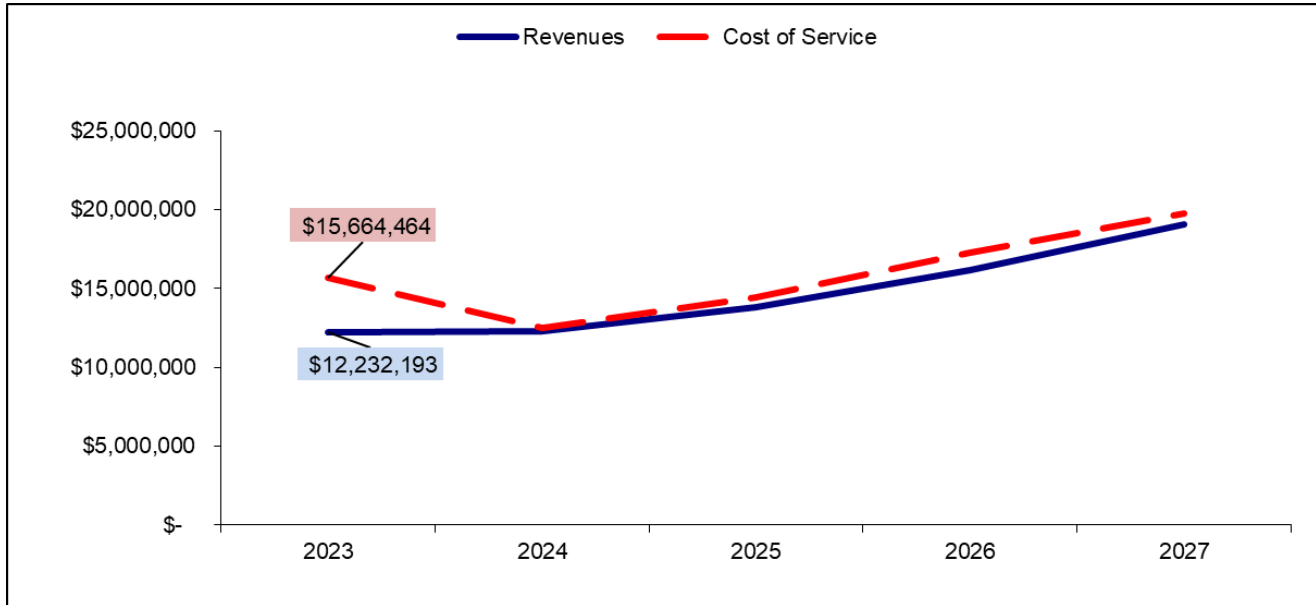
CITY OF TOMBALL										
FORECAST RATE PLAN										
SCENARIO: 2024 01 15 -- Scenario I -- "Fully Fund CIP"										
		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27				
WATER RATES - RESIDENTIAL										
Base Charge		Current								
-	10,000	\$ 11.55	\$ -	\$ -	\$ -	\$ -				
10,001	15,000	13.29	-	-	-	-				
15,001	Above	15.29	-	-	-	-				
	Uniform	-	12.85	13.65	14.50	15.40				
Volume Rate Per 1,000 Gal										
-	10,000	3.02	3.20	3.39	3.60	3.81				
10,001	15,000	3.77	4.00	4.24	4.49	4.76				
15,001	Above	4.72	5.00	5.30	5.62	5.96				
NHCRWA Surcharge Per 1,000 Gal		3.60	3.80	4.00	4.20	4.40				
WATER RATES - COMMERCIAL										
Base Charge		Current								
-	5,000	19.56	-	-	-	-				
5,001	50,000	31.48	-	-	-	-				
51,001	Above	55.11	-	-	-	-				
	Uniform	-	29.10	30.85	32.75	34.75				
Volume Rate Per 1,000 Gal										
-	5,000	3.66	3.88	4.11	4.36	4.62				
5,001	50,000	4.58	4.85	5.15	5.45	5.78				
51,001	Above	5.72	6.06	6.43	6.81	7.22				
NHCRWA Surcharge Per 1,000 Gal		3.60	3.80	4.00	4.20	4.40				
WASTEWATER RATES- RESIDENTIAL										
Monthly Base Charge		\$ 10.23	\$ 13.15	\$ 16.85	\$ 21.60	\$ 25.95				
Volume Rate Per 1,000 Gal -- Winter Avg		3.57	4.57	5.85	7.49	8.98				
WASTEWATER RATES - COMMERCIAL										
Base Charge		24.91	31.95	40.90	52.40	62.90				
Volume Rate Per 1,000 Gal										
-	5,000	4.53	5.80	7.42	9.50	11.40				
5,001	51,000	5.65	7.23	9.26	11.85	14.22				
51,001	Above	7.07	9.05	11.58	14.83	17.79				

TABLE II-29

CITY OF TOMBALL		FORECAST RATE PLAN				
SCENARIO: 2024 01 15 -- Scenario I -- "Fully Fund CIP"		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27
Residential Monthly Water/WW Charge						
5,000 Gallons W; 5,000 WW		\$ 54.73	\$ 64.85	\$ 76.71	\$ 91.52	\$ 105.33
NHCRWA Surcharge		18.00	19.01	20.02	21.02	22.02
Total		72.73	83.86	96.73	112.53	127.36
	Dollar Inc		\$ 11.13	\$ 12.87	\$ 15.81	\$ 14.82
	Percent Inc		15.3%	15.3%	16.3%	13.2%
10,000 Gallons W; 5,000 WW						
10,000 Gallons W; 5,000 WW		\$ 69.83	\$ 80.86	\$ 93.68	\$ 109.50	\$ 124.40
NHCRWA Surcharge		36.00	38.02	40.03	42.03	44.05
Total		105.83	118.88	133.71	151.54	168.45
	Dollar Inc		\$ 13.05	\$ 14.83	\$ 17.83	\$ 16.91
	Percent Inc		12.3%	12.5%	13.3%	11.2%
Commercial Monthly Water/WW Charge						
20,000 Gallons W/ 20,000 WW		\$ 250.79	\$ 290.74	\$ 345.47	\$ 414.00	\$ 477.77
NHCRWA Surcharge		72.00	76.03	80.06	84.06	88.10
Total		322.79	366.77	425.53	498.07	565.87
	Dollar Inc		\$ 43.98	\$ 58.76	\$ 72.54	\$ 67.80
	Percent Inc		13.6%	16.0%	17.0%	13.6%

The projected rate revenues show that over the FY 2024 -- FY 2027, rate revenues should be sufficient to fund the full cost of service including all existing and future debt service over the forecast period. In individual years rates may recover less than costs; the forecast surplus from other years is expected to make up the difference. **Chart II-30** presents the projected financial impact on the City’s utility fund under the proposed rate plan. The ending fiscal year projected utility fund balance is shown on the bottom of the chart. This highlights the importance of the implementation of each annual rate adjustment and future review of growth, operating and capital assumptions and actual financial results.

CHART II-30



	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Revenues	\$ 12,232,193	\$ 12,310,940	\$ 13,809,506	\$ 16,151,513	\$ 19,067,417
Cost of Service	15,664,464	12,532,053	14,440,657	17,307,597	19,787,916
Net Revenues	\$ (3,432,270)	\$ (221,112)	\$ (631,151)	\$ (1,156,084)	\$ (720,499)
Fund Balance	\$ 6,986,711	\$ 6,765,598	\$ 6,134,447	\$ 4,978,363	\$ 4,257,864
Days Op Exp	163	197	155	105	79
Debt Coverage	1.02	2.14	1.57	1.29	1.29

Scenario 2 – “Fund 50% of CIP”

Table II-31 presents a summary of the water and wastewater rate plans proposed for Residential and Commercial customers under Scenario 1. Table II-32 presents the customer rate impact of both the water and wastewater rate adjustments for representative Residential and Commercial accounts under Scenario 1.

TABLE II-31

CITY OF TOMBALL		FORECAST RATE PLAN					
SCENARIO:		2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"					
		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	
WATER RATES - RESIDENTIAL							
Base Charge	Current						
-	10,000	\$ 11.55	\$ -	\$ -	\$ -	-	
10,001	15,000	13.29	-	-	-	-	
15,001	Above	15.29	-	-	-	-	
	Uniform	-	12.50	12.90	13.30	13.70	
Volume Rate Per 1,000 Gal							
-	10,000	3.02	3.11	3.20	3.30	3.40	
10,001	15,000	3.77	3.88	4.00	4.12	4.24	
15,001	Above	4.72	4.86	5.01	5.16	5.31	
NHCRWA Surcharge Per 1,000 Gal		3.60	3.80	4.00	4.20	4.40	
WATER RATES - COMMERCIAL							
Base Charge	Current						
-	5,000	19.56	-	-	-	-	
5,001	50,000	31.48	-	-	-	-	
51,001	Above	55.11	-	-	-	-	
	Uniform	-	28.30	29.15	30.05	31.00	
Volume Rate Per 1,000 Gal							
-	5,000	3.66	3.77	3.88	4.00	4.12	
5,001	50,000	4.58	4.72	4.86	5.00	5.15	
51,001	Above	5.72	5.89	6.07	6.25	6.44	
NHCRWA Surcharge Per 1,000 Gal		3.60	3.80	4.00	4.20	4.40	
WASTEWATER RATES - RESIDENTIAL							
Monthly Base Charge		\$ 10.23	\$ 12.30	\$ 14.80	\$ 17.80	\$ 19.60	
Volume Rate Per 1,000 Gal -- Winter Avg		3.57	4.28	5.14	6.17	6.79	
WASTEWATER RATES - COMMERCIAL							
Base Charge		24.91	29.95	35.95	43.15	47.50	
Volume Rate Per 1,000 Gal							
-	5,000	4.53	5.44	6.52	7.83	8.61	
5,001	51,000	5.65	6.78	8.14	9.76	10.74	
51,001	Above	7.07	8.48	10.18	12.22	13.44	

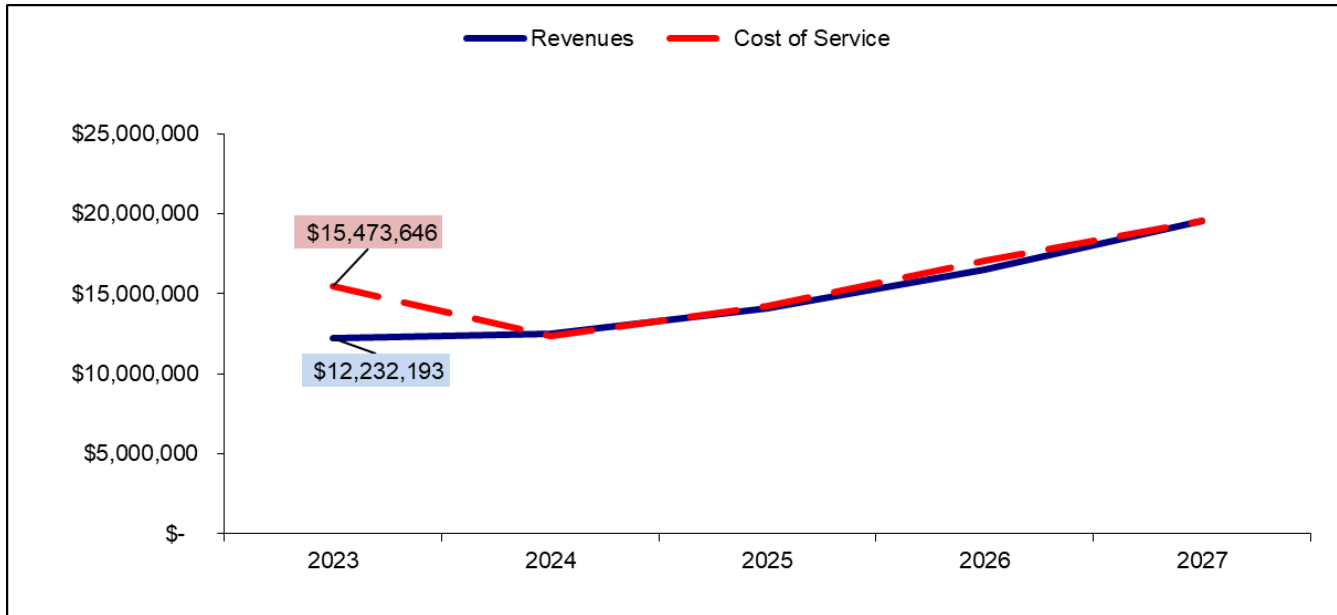
TABLE II-32

CITY OF TOMBALL						
FORECAST RATE PLAN						
SCENARIO:	2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"					
	Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	
Residential Monthly Water/WW Charge						
5,000 Gallons W; 5,000 WW	\$ 54.73	\$ 61.77	\$ 69.42	\$ 78.44	\$ 84.22	
NHCRWA Surcharge	18.00	19.01	20.02	21.02	22.02	
Total	72.73	80.78	89.44	99.46	106.25	
Dollar Inc		\$ 8.05	\$ 8.66	\$ 10.02	\$ 6.79	
Percent Inc		11.1%	10.7%	11.2%	6.8%	
10,000 Gallons W; 5,000 WW	\$ 69.83	\$ 77.33	\$ 85.44	\$ 94.95	\$ 101.22	
NHCRWA Surcharge	36.00	38.02	40.03	42.03	44.05	
Total	105.83	115.34	125.47	136.98	145.27	
Dollar Inc		\$ 9.51	\$ 10.13	\$ 11.50	\$ 8.29	
Percent Inc		9.0%	8.8%	9.2%	6.1%	
Commercial Monthly Water/WW Charge						
20,000 Gallons W/ 20,000 WW	\$ 250.79	\$ 276.74	\$ 312.05	\$ 353.85	\$ 380.57	
NHCRWA Surcharge	72.00	76.03	80.06	84.06	88.10	
Total	322.79	352.77	392.12	437.92	468.67	
Dollar Inc		\$ 29.98	\$ 39.34	\$ 45.80	\$ 30.75	
Percent Inc		9.3%	11.2%	11.7%	7.0%	

CITY OF TOMBALL						
FORECAST RATE PLAN IMPACT COMPARISON						
	Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	
Residential Monthly Water/WW Charge						
5,000 Gallons W; 5,000 WW AND NHCRWA Surcharge						
Scenario 1 - "Fully Fund CIP"	\$ 72.73	\$ 83.86	\$ 96.73	\$ 112.53	\$ 127.36	
Scenario 2 - "Fund 50% of CIP"	72.73	80.78	89.44	99.46	106.25	
Dollar Difference		(3.08)	(7.29)	(13.07)	(21.11)	
10,000 Gallons W; 5,000 WW AND NHCRWA Surcharge						
Scenario 1 - "Fully Fund CIP"	\$ 105.83	\$ 118.88	\$ 133.71	\$ 151.54	\$ 168.45	
Scenario 2 - "Fund 50% of CIP"	105.83	115.34	125.47	136.98	145.27	
Dollar Difference		(3.54)	(8.24)	(14.56)	(23.18)	
Commercial Monthly Water/WW Charge						
20,000 Gallons W/ 20,000 WW AND NHCRWA Surcharge						
Scenario 1 - "Fully Fund CIP"	\$ 322.79	\$ 366.77	\$ 425.53	\$ 498.07	\$ 565.87	
Scenario 2 - "Fund 50% of CIP"	322.79	352.77	392.12	437.92	468.67	
Dollar Inc		(14.00)	(33.41)	(60.15)	(97.20)	

The projected rate revenues show that over the FY 2024 -- FY 2027, rate revenues should be sufficient to fund the full cost of service including all existing and future debt service over the forecast period. In individual years rates may recover less than costs; the forecast surplus from other years is expected to make up the difference. By FY 2027, rate revenues should be sufficient to fund the wastewater full cost of service including all existing and future debt service over the forecast period. **Chart II-33** presents the projected financial impact on the City’s utility fund under the proposed rate plan. The ending fiscal year projected utility fund balance is shown on the bottom of the chart. This highlights the importance of the implementation of each annual rate adjustment and future review of growth, operating and capital assumptions and actual financial results.

CHART II-33



	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Revenues	\$ 12,232,193	\$ 12,506,415	\$ 14,090,471	\$ 16,552,446	\$ 19,584,762
Cost of Service	15,473,646	12,357,225	14,257,760	17,107,442	19,569,552
Net Revenues	\$ (3,241,452)	\$ 149,190	\$ (167,289)	\$ (554,996)	\$ 15,210
Fund Balance	\$ 7,177,529	\$ 7,326,719	\$ 7,159,430	\$ 6,604,434	\$ 6,619,643
Days Op Exp	169	216	183	141	123
Debt Coverage	1.07	2.32	1.70	1.40	1.39

Section III

SECTION III

SECTION III - NATURAL GAS RATE STUDY



This section of the consolidated rate study and long term financial plan focuses on the revenue and cost of service forecast for the City’s natural gas utility. This section will include analysis of the City’s cost of service for the purchase of natural gas and distribution to residential and commercial customer classes and the resulting rate recommendations.

Using cost of service and projected accounts as a base, revenues by customer class are forecast for the ten-year period. Total revenues include non-rate revenues from sources other than monthly natural gas rate revenues. The forecast also includes recommendations for the rate adjustments that will be required to

ensure that the utility recovers sufficient revenues to fund the supply of natural gas and operating expenses.

For the City of Tomball, monthly natural gas records were reviewed for the period of October 2017 through March 2023. These records provided summary information on the monthly gas purchases and sales as well as the number of accounts for each period by defined customer class and the associated revenues.

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 proposed rate designs.

Natural Gas Current Rates

The City has a very straight forward gas rate structure. Since 2011 the City has charged Residential and Commercial customers a Base or Minimum Charge of \$11.75 that includes 1,000 cubic feet or 1 MCF of gas. The Usage Charge for usage greater than 1,001 or 1 MCF is \$11.75. **Table III-1** summarizes the City’s current natural gas rate structure.

TABLE III-1

CITY OF TOMBALL	
NATURAL GAS RATES Effective 2011	
	All Customers
Minimum Charge Includes 1,000 Cubic Feet or 1 MCF	\$ 11.75
Usage Charge 1,001 Cubic Feet or >1 MCF	\$ 11.75

Gas accounts served by the City are classified as Residential accounts, Municipal and Commercial. Accounts outside of City limits are assessed the same rates as those inside City limits.

Natural Gas Rate Comparisons

Chart III-2 compares the City’s annual average cost per MCF to the nearby city of Navasota. Data in this chart is specific to Residential and Commercial customers. Both Navasota and Sealy have a rate structure that differs from Tomball. Navasota charges residential and commercial customers the same rates and also have rates specific to Small, Medium and Large Industrial, School District and Airport Hangar customer classes. Navasota charges customers a Purchased Gas Adjustment as part of the rates that fluctuates monthly based on the actual cost of purchased gas. And as the Chart shows, Navasota charges different rates for inside and outside customers.

It is important to keep in mind that with Navasota rates changing monthly based on the Purchased Gas Adjustment that the Chart below is a reflection of the annual average cost but these rate comparisons can fluctuate significantly based on the actual cost of gas. Tomball’s average cost remains flat over the year as the cost of gas is included in the flat rate.

CHART III-2

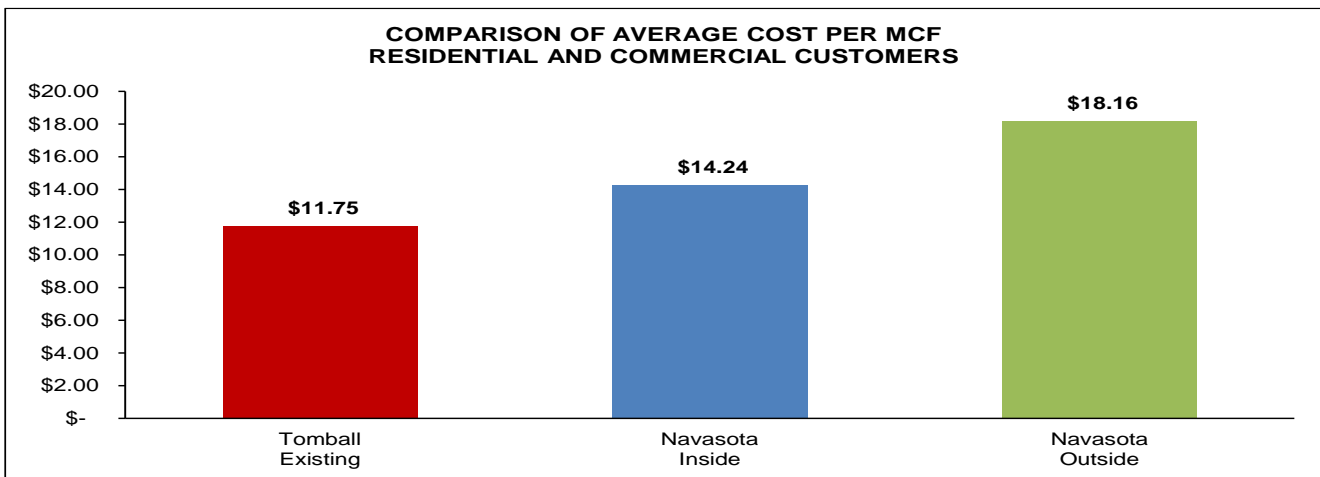
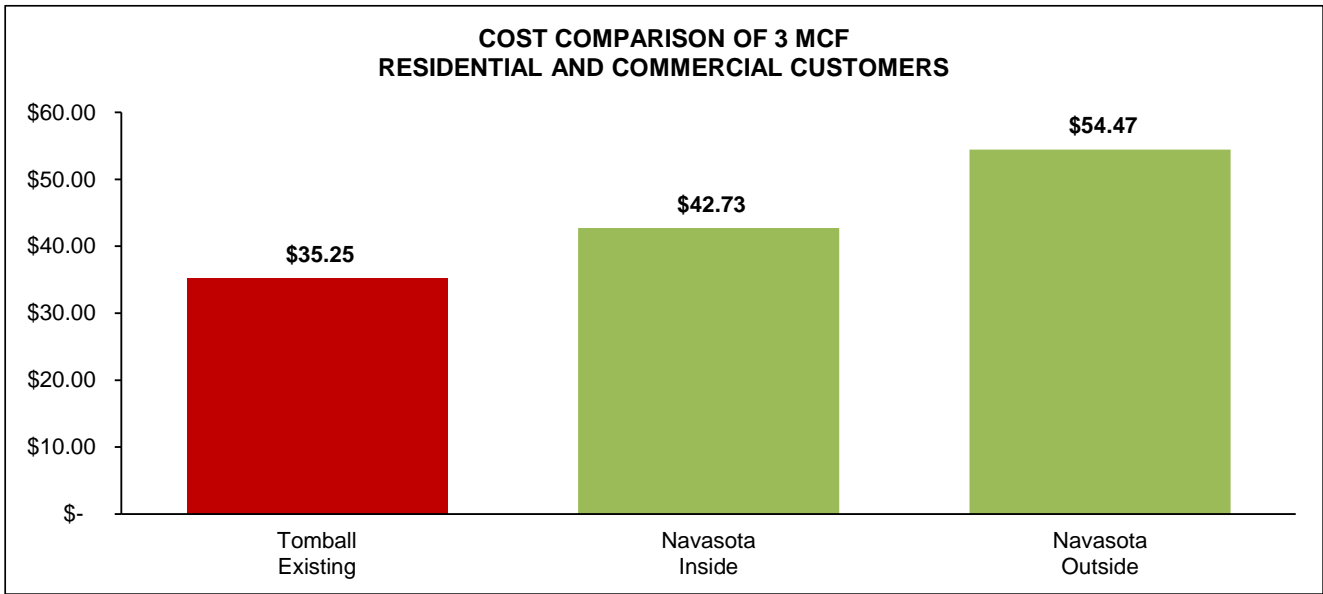


Chart III-3 compares the City’s monthly average cost for 3 MCF to Navasota. The average residential customer uses a 12-month average of 3 MCF’s with summer usage averaging 1 MCF and winter usage averaging 6 MCF’s.

CHART III-3



Natural Gas Customers and Meters – Historical and Forecast

Table III-4 presents total gas customers by class for test year FY 2023. Table III-4 reveals that the city is currently serves 4,109 total active gas accounts comprised of 3,682 residential and 416 commercial and 10 municipal accounts. As expected, residential customers represent the overwhelming majority of total customers, nearly 90.00%.

Table III-4

CITY OF TOMBALL		
NATURAL GAS CUSTOMERS		
Residential	3,682	89.62%
Commercial	416	10.13%
Municipal	10	0.25%
Total	4,109	100.00%

The engineering firm of Freese and Nichols submitted their draft Water and Wastewater Draft Report to the City in August 2023. The calculations and projections included in this report were taken into consideration by the project team and discussed with City staff in the development of the account and consumption forecasts utilized in the gas rate model for this study. Staff requested that gas account growth rates mirror those of the Water Master Plan projections so for the purposes of this study it is assumed that gas accounts grow at an annual rate of 5.0% FY

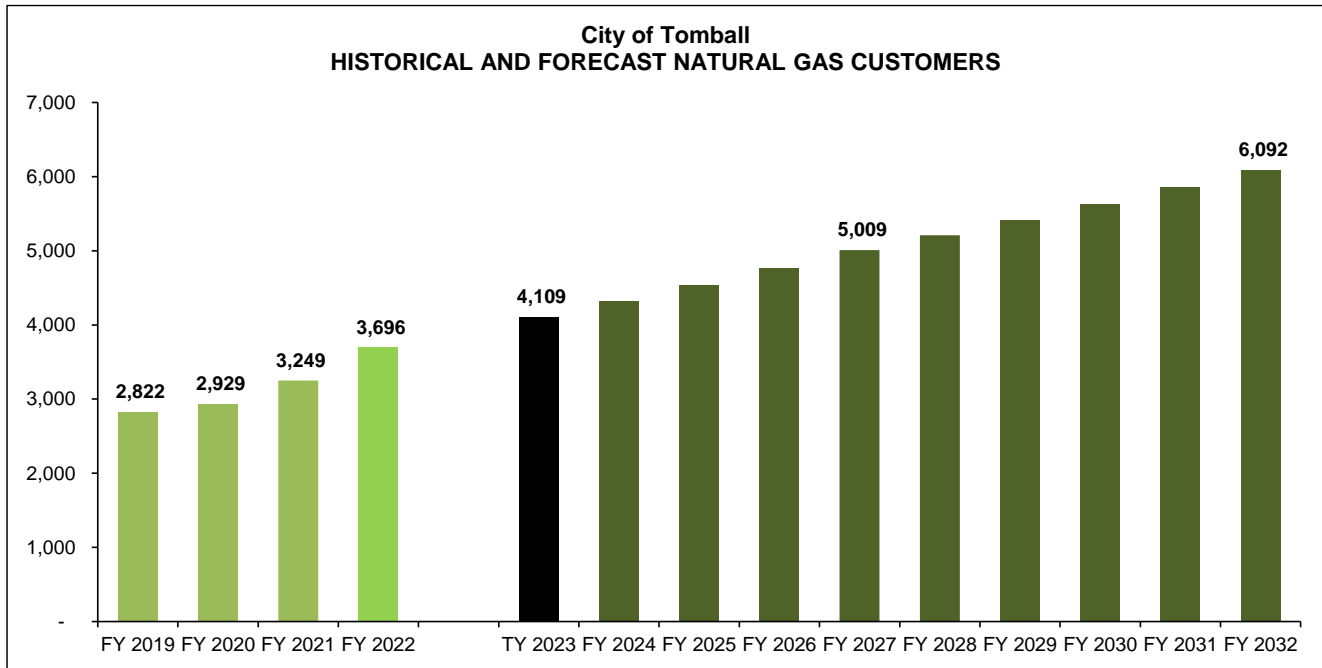
2024 – 2027 and an annual rate of 4.0% FY 2028 – 2032. This is the same growth rate as for the water and wastewater utility. **Table III-5 and Chart III-6** show historical, Test Year and Forecast Gas Accounts for the period 2019 – 2032.

It is important to note that between FY2020 and FY2023 the City average 291 new accounts per year and the 5% increase applied in FY2023 indicates an increase of 188 new accounts increasing to 217 new accounts in FY2024.

TABLE III-5

CITY OF TOMBALL		
NATURAL GAS ACCOUNTS TEST YEAR AND FORECAST		
	Total Accounts	New Accts
FY 2019	2,822	
FY 2020	2,929	107
FY 2021	3,249	320
FY 2022	3,696	447
TY 2023	4,109	188
FY 2024	4,326	217
FY 2025	4,545	219
FY 2026	4,771	227
FY 2027	5,009	238
FY 2028	5,209	200
FY 2029	5,417	208
FY 2030	5,633	216
FY 2031	5,858	225
FY 2032	6,092	234

CHART III-6



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

Historical and Forecast Natural Gas Consumption

Total gas system sales data was analyzed over the same time period as customer data. The project team prepared a ten-year forecast of gas usage and sales based on the same principles on which customer accounts were projected for residential customers. The city is expecting a new large industrial load to come on-line in October 2023, 1 new large commercial customer in March/April 2024, a new industrial area and shopping center in March/April 2024. In FY2025 there is forecast to be an additional large commercial customer coming on-line. The assumption used for this rate study is that the industrial and two large commercial customers have a 50% load factor applied to the usage indicated in the Feasibility analysis provided to the city by Engineered Utility Solutions, Inc.

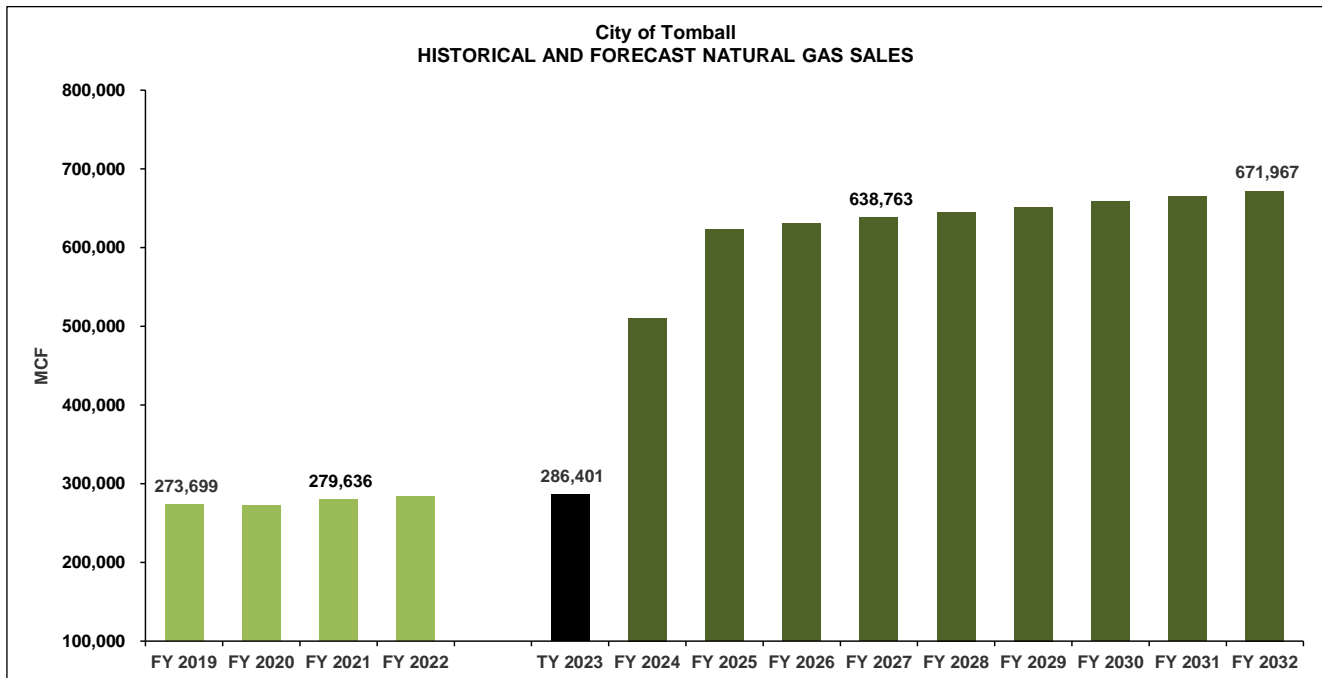
The results of this forecast are presented in **Table III-7 and Chart III-8** which present consumption by rate classification for the city for the past four years and the forecast growth over the next decade.

Table III-7 shows an annual average increase in system usage of 1.1% annually between FY2019 and FY2023. The growth in residential, commercial and new loads is forecast to increase the gas sales by 33% between TY2023 and FY2032.

TABLE III-7

CITY OF TOMBALL						
ACTUAL AND FORECAST NATURAL GAS SALES Test Year and Forecast Sales (MCF)						
	Residential	Commercial	Houston Poly	Commercial - New	Commercial - New	Total
FY 2019	94,413	179,286	-	-	-	273,699
FY 2020	90,542	182,267	-	-	-	272,809
FY 2021	102,001	177,635	-	-	-	279,636
FY 2022	105,754	177,492	-	-	-	283,246
TY 2023	112,767	173,634	-	-	-	286,401
FY 2024	115,586	180,374	179,580	35,040	-	510,580
FY 2025	118,476	185,175	179,580	70,080	70,080	623,391
FY 2026	121,438	189,805	179,580	70,080	70,080	630,982
FY 2027	124,474	194,550	179,580	70,080	70,080	638,763
FY 2028	126,963	198,441	179,580	70,080	70,080	645,144
FY 2029	129,502	202,409	179,580	70,080	70,080	651,652
FY 2030	132,092	206,458	179,580	70,080	70,080	658,290
FY 2031	134,734	210,587	179,580	70,080	70,080	665,061
FY 2032	137,429	214,798	179,580	70,080	70,080	671,967

CHART III-8



Natural Gas Revenue Requirement - Test Year and Forecast

In this section of the natural gas rate study and long-term financial plan, the City of Tomball's test year and forecast gas utility revenue requirements are developed. The test year consists of the City's fiscal year, October 1, 2022 through September 30, 2023. The estimates presented in this section are based on the City's proposed budget for FY 2023.

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.

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 summaries contained in **Appendix B** of 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.

Natural Gas Operating Expenses and Capital Outlays – Test Year

Table III-9 on the following page summarizes the test year FY 2018 natural gas operating expenses and capital outlays in detail by department and expense category item. The following is noteworthy about these tables:

- There are Three (3) Expense categories within the City's Utility Fund, each with their own budget: Utility Administration, Utility Billing and Gas.
- Utility Administration and Utility Billing and Gas operating costs were divided to isolate **Personnel costs** including all salary, insurance and benefit expenses and payroll taxes from Non-Personnel costs in order to build forecast personnel additions into the rate model.
- Projected staffing additions by department were discussed with City staff and the logic for related costs have been built into the model for forecasting purposes. Actual personnel additions will be reviewed and determined annually during the City's budgeting process.
- Utility Administration, Utility Billing, Gas Department (Non-Personnel) Operating and Maintenance costs include one or more of the following expense categories:
 - **Supplies**, which includes postage, office equipment and supplies, and the cost of purchased Gas.
 - **Repairs and Maintenance**, which captures the primary operating expenses associated with the day-to-day management and maintenance of the water and wastewater operations.

- **Services and Charges**, these expenses include such items as utility (electricity, gas, etc.) expense, fuels, small tools, maintenance supplies and contractual services.
- **Capital Outlays** funded through the gas utility budget.
- **Transfers**, includes transfers to the General Fund including a General and Administrative Overhead allocation to reimburse the General Fund for services provided for the utilities.

Table III-9 also allocates total budget expense based on function and general ratemaking principles. As the table show, total operating expenses, transfers, and capital outlays in the test year are \$4,162,143 for the gas utility.

TABLE III-9

CITY OF TOMBALL						
TEST YEAR NATURAL GAS OPERATING EXPENSES, TRANSFERS AND CAPITAL OUTLAYS						
	Net Budget	Gas Supply	Distribution	Admin	Customer Billing	
UTILITY ADMIN & BILLING						
<u>Operating & Maintenance</u>						
Personnel	\$ 248,601	\$ -	\$ -	\$ 137,160	\$ -	
Non-Personnel	127,489	-	-	46,557	80,932	
Subtotal Admin & Billing	\$ 376,090	\$ -	\$ -	\$ 183,717	\$ 80,932	
<u>Transfers</u>						
Transfers Out	\$ 490,200	\$ -	\$ -	\$ 490,200	\$ -	
Transfer to Emp Ben Trust	164,511	-	-	164,511	-	
Transfer to Fleet Replacement	18,637	-	-	18,637	-	
Subtotal Transfers	\$ 673,348	\$ -	\$ -	\$ 673,348	\$ -	
<u>Capital Outlay</u>	\$ -	\$ -	\$ -	\$ -	\$ -	
Total UTILITY ADMIN & BILLING						
Operating Expenses, Transfers and Capital Outlays	\$ 1,049,438	\$ -	\$ -	\$ 857,065	\$ 80,932	
GAS UTILITY						
<u>Operating & Maintenance</u>						
Personnel	\$ 482,600	\$ -	\$ 482,600	\$ -	\$ -	
Non-Personnel	391,000	-	256,000	135,000	-	
Subtotal Gas O&M	\$ 873,600	\$ -	\$ 738,600	\$ 135,000	\$ -	
Gas Supply	\$ 1,239,105	\$ 1,239,105	\$ -	\$ -	\$ -	
<u>Transfers</u>						
Transfers Out	\$ -	\$ -	\$ -	\$ -	\$ -	
Transfer to Emp Ben Trust	150,000	75,000	75,000	-	-	
Subtotal Transfers	\$ 150,000	\$ 75,000	\$ 75,000	\$ -	\$ -	
<u>Capital Outlay</u>	\$ 850,000	\$ -	\$ 850,000	\$ -	\$ -	
Total GAS/ADMIN & BILLING, Operating Expenses, Transfers and Capital Outlays						
	\$ 4,162,143	\$ 1,314,105	\$ 1,663,600	\$ 992,065	\$ 80,932	

Natural Gas Operating Expenses and Capital Outlays – Ten Year Forecast

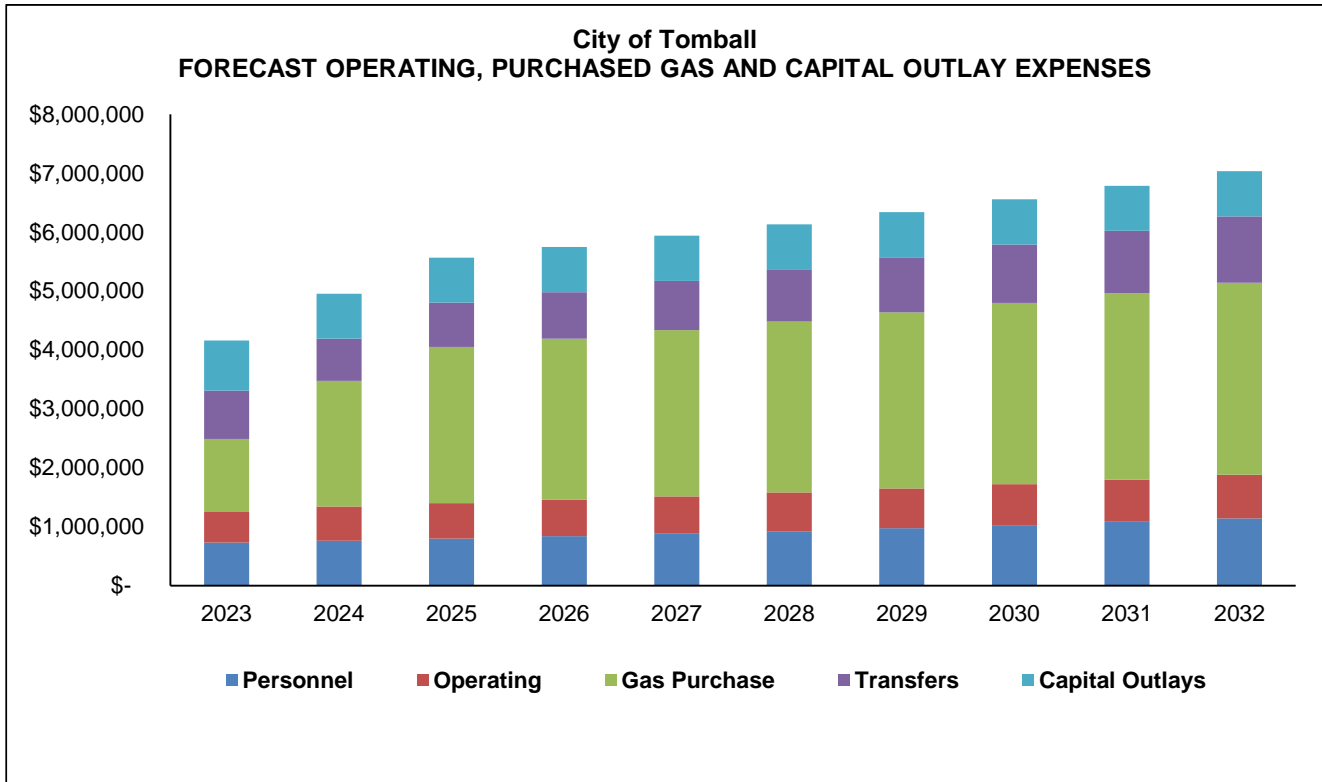
Table III-10 presents the gas utility operating expense and capital outlay forecast for the ten-year period FY 2023 – FY 2032. Details behind these calculations can be found in the rate model contained in **Appendix B**. This forecast is based on the following set of assumptions:

- Most operating costs are expected to increase at an annual rate of 3.0% - 8% annually based on industry standard and City staff recommendation.
- Based on City staff’s recommendation, certain expenses including FICA, TMRS-Employer and Workers Comp Insurance increase up to 12% annually.
- This forecast includes natural gas purchases based on the Joint Gas Purchase Contract that the City is a party to. The cost of purchased gas forecast is based on the average cost of gas change that is forecast from the U.S. Energy Information Administration C-SW Texas delivery and Henry Hub Futures. These will be examined in more detail later in this section.
- Utility Administrative, Utility Billing Costs, Non-Departmental costs and Transfers are divided between water, wastewater and gas utilities based on their relative percentages of personnel per utility department.
- The Utility Transfer to the General Fund is escalated 3% annually throughout the forecast period. The project team recommends that the City a Cost Allocation study following the completion of the current rate study to reassess the current transfer to the General Fund.

TABLE III-10

CITY OF TOMBALL										
Scenario: 2024 01 15 - Scenario 1 - NG Cost of Service										
FORECAST OPERATING EXPENSES AND CAPITAL OUTLAYS										
Budget Operating Expenses/Capital Outlays	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<i>Personnel</i>	\$ 731,201	\$ 764,828	\$ 800,866	\$ 839,557	\$ 881,168	\$ 925,998	\$ 974,381	\$ 1,026,688	\$ 1,083,332	\$ 1,144,778
<i>Operating</i>	518,489	581,693	599,144	617,119	635,632	654,701	674,342	694,572	715,410	736,872
<i>Gas Purchase</i>	1,239,105	2,131,938	2,651,368	2,734,677	2,821,084	2,903,550	2,988,770	3,076,844	3,167,876	3,261,974
<i>Transfers</i>	823,348	712,854	750,823	791,920	836,479	884,871	937,510	994,860	1,057,437	1,125,820
<i>Capital Outlays</i>	850,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000
Total GAS Operating/Capital Outlays	\$ 4,162,143	\$ 4,956,314	\$ 5,567,201	\$ 5,748,273	\$ 5,939,363	\$ 6,134,120	\$ 6,340,003	\$ 6,557,964	\$ 6,789,055	\$ 7,034,443

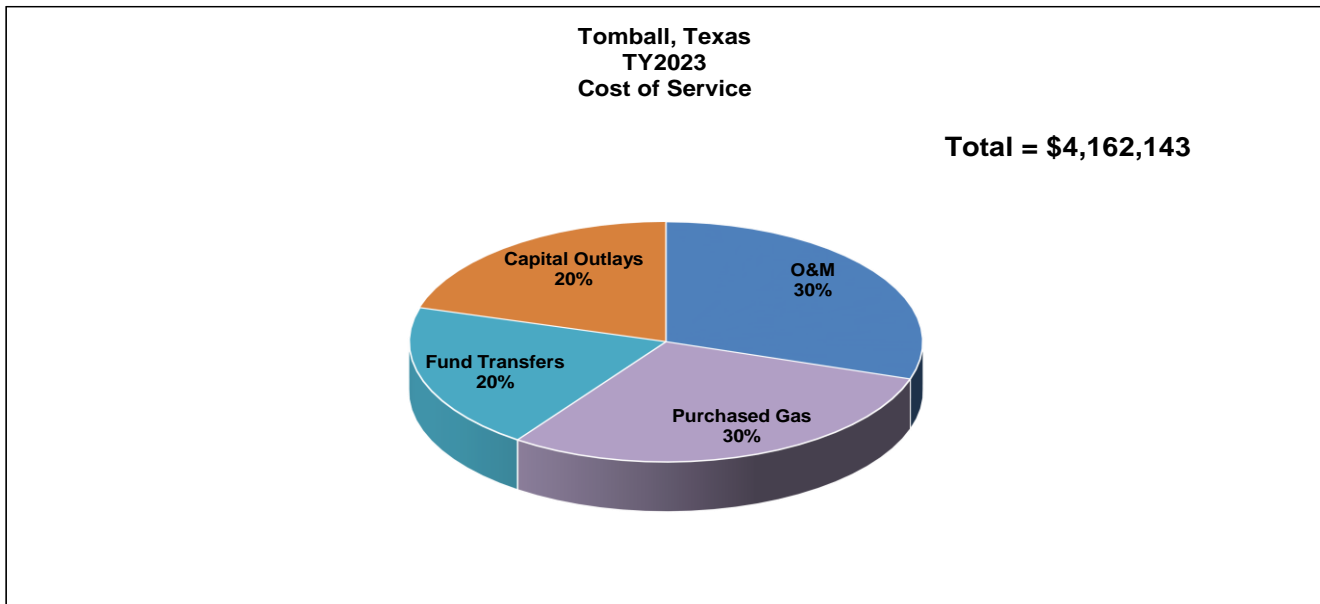
CHART III-11



As shown in these charts, Gas Purchase costs are by far the largest annual expense paid by Tomball’s gas utility.

Chart III-12 shows that for TY 2023 allocated costs account and gas utility Purchased Gas and O&M each account for 30% of the total gas utilities costs.

CHART III-12

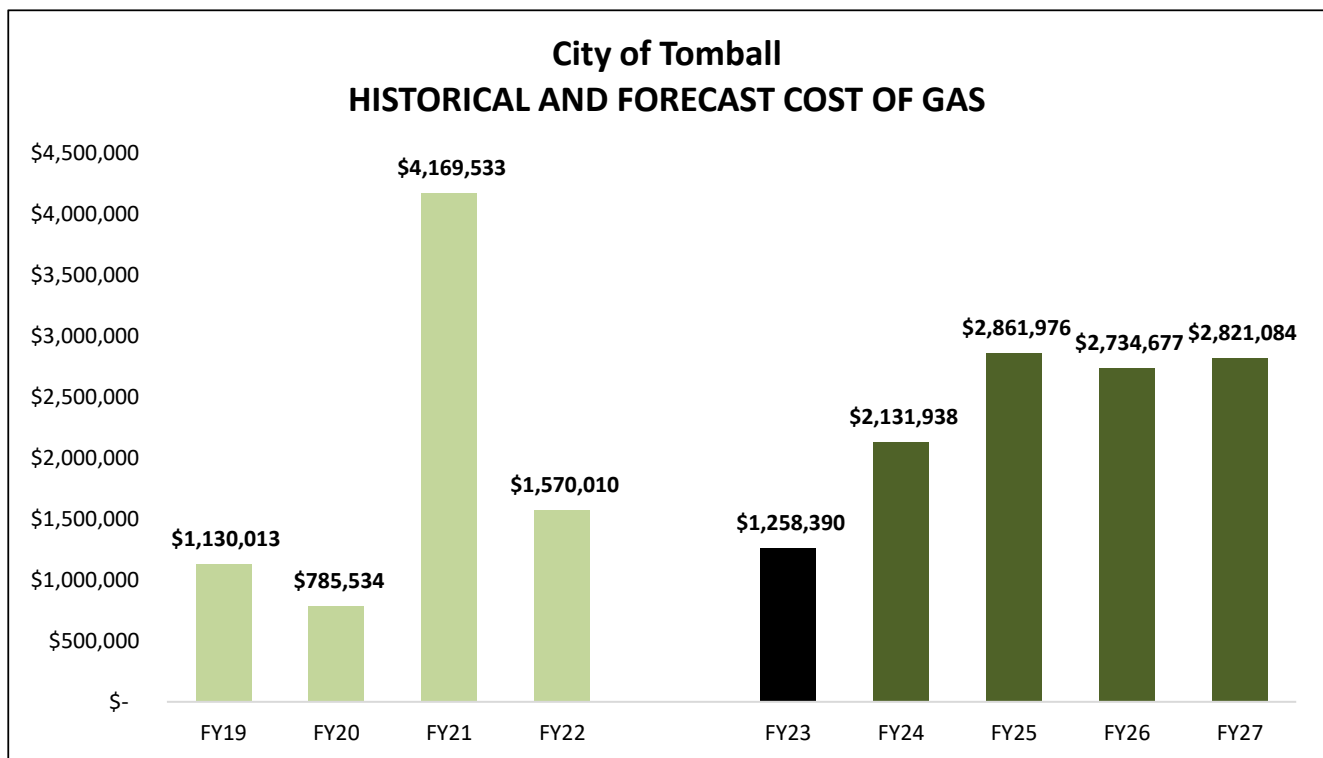


Since 2006 the City has participated in a Joint as Purchase Contract with the Texas Municipal Gas Corporation II, City of La Grange, Texas and Texas Local Governments. The contract is administered by the Municipal Gas Acquisition and Supply Corporation. Since November 2021 the contract has been served by Symmetry Energy and BP Energy Company as the dealer. The contract price includes transportation costs and is a pass thru, weighted average cost of Gas Daily Midpoint spot price supply. A discount is applied monthly by MuniGas to the gas billing for netting, aggregation or set off of purchases from the supplier. **Chart III-13** illustrates the actual cost of purchased gas from FY 2019 – FY2022 and the forecast cost of gas thru FY 2027. The historical and forecast cost of gas is inclusive of the MuniGas discount.

The significant cost of gas in FY21 was due to the once in 100 years weather event in Texas in February 2021.

The forecast cost of gas was calculated based on the average change as forecast from the U.S. Energy Information Administration delivery points C-SW Texas and Henry Hub futures. Annually Henry Hub gas prices are forecast to be subdued thru 2023 as supply remains higher than demand. However, month to month prices remain highly volatile. The average cost is expected to increase by 2% annually however the increase in total cost is from the new gas loads.

CHART III-13



Natural Gas Capital Improvement Plan

The city has developed a comprehensive long-term capital improvement plan (“CIP”) for the Water and Wastewater utilities based on the recently completed Master Plans. **Table III-14** details the Gas Utility Capital Improvement Plan between 2024 and 2027.

CHART III-14

CITY OF TOMBALL	
GAS DEPARTMENT CAPITAL IMPROVEMENT PLAN 2023 - 2027	
Grand Parkway Gas Gate - Gas Gate South	\$ 720,000
Cherry Street Main	403,200

TOTAL GAS DEPARTMENT CIP	\$ 1,123,200

Funding for the Capital Plan is from cost sharing, unobligated enterprise funds and other sources. No long-term debt is forecast to be issued to fund the CIP.

Natural Gas Existing and Forecast Debt Service

At the time of this rate study there is no debt service attributable to the natural gas utility and there is none forecast for the next 5-year period or beyond.

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.

Natural Gas Non-Rate Revenues

Although sales revenues constitute the majority of the revenue received by the City of Tomball for the gas service, a certain amount of revenue is accrued from non-rate sources. These revenues include other general revenues, new tap charges, miscellaneous charges and contractual receipts. These non-rate revenues are subtracted from the overall budget to determine the revenue requirement to be raised from rates. These fees are projected to remain fairly stable over the forecast period. Annual non-rate revenue totals are presented in **Table III-15**.

TABLE III-15

CITY OF TOMBALL		NATURAL GAS UTILITY FORECAST NON-RATE REVENUES									
	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	
Total GAS Non-Rate Revenues											
Gas Sales	-	-	-	-	-	-	-	-	-	-	
Gas Taps	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	
Penalties	-	-	-	-	-	-	-	-	-	-	
Other Income	-	-	-	-	-	-	-	-	-	-	
Other	-	-	-	-	-	-	-	-	-	-	
Total Forecast Non-Rate Revenues	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	

Natural Gas Net Revenue Requirement

Table III-16 presents the test year and ten-year forecast for the City’s net revenue requirement to be raised from rates for the natural gas utility for the test year 2023 and forecast period. The gas net revenue requirement is expected to increase from **\$3,862,143** in FY 2023 to **\$6,734,443** in FY 2032.

TABLE III-16

CITY OF TOMBALL		NATURAL GAS UTILITY FORECAST REVENUE REQUIREMENT									
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
GAS											
Operating Expense	\$ 1,249,690	\$ 1,346,521	\$ 1,400,010	\$ 1,456,675	\$ 1,516,800	\$ 1,580,699	\$ 1,648,723	\$ 1,721,260	\$ 1,798,742	\$ 1,881,649	
Purchased Gas	1,239,105	2,131,938	2,651,368	2,734,677	2,821,084	2,903,550	2,988,770	3,076,844	3,167,876	3,261,974	
Transfers	823,348	712,854	750,823	791,920	836,479	884,871	937,510	994,860	1,057,437	1,125,820	
Capital Outlay	850,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	
Debt Service	-	-	-	-	-	-	-	-	-	-	
Total Cost of Service	\$ 4,162,143	\$ 4,956,314	\$ 5,567,201	\$ 5,748,273	\$ 5,939,363	\$ 6,134,120	\$ 6,340,003	\$ 6,557,964	\$ 6,789,055	\$ 7,034,443	
Less Non-Rate Revenue	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)	
Net Revenue Requirement To be Raised from Rates	\$ 3,862,143	\$ 4,656,314	\$ 5,267,201	\$ 5,448,273	\$ 5,639,363	\$ 5,834,120	\$ 6,040,003	\$ 6,257,964	\$ 6,489,055	\$ 6,734,443	

Natural Gas Utility Cost Functionalization

Once the total gas system costs have been identified, the next step in the rate development process is to isolate the costs associated with each system function. The basic steps used to allocate the City’s gas revenue requirements include the following:

1. Each system’s costs (revenue requirements) are categorized by utility function (i.e. supply, 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. 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:

Supply – the contractual supply of natural gas received at the city gate delivery point

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 the City of Tomball staff. The results of the allocation process for the test year are summarized in **Table III-17**.

TABLE III-17

CITY OF TOMBALL			
TEST YEAR NATURAL GAS COST FUNCTIONALIZATION			
Function		FY 2023 Revenue Requirement	Percent
Supply	\$	1,314,105	31.57%
Distribution		1,663,600	39.97%
Administration		992,066	23.84%
Customer		<u>192,373</u>	<u>4.62%</u>
Total	\$	4,162,144	100.00%

Natural Gas Utility Cost Allocation

Allocation of costs by service characteristic to customer classes is based on the proportionate use levels of each characteristic by each class. The total gas utility costs by customer class for the test year are summarized in **Table III-18**.

TABLE III-18

CITY OF TOMBALL		
TEST YEAR GAS COST ALLOCATION		
Function	FY 2023	
	Revenue Requirement	Percent
Residential	\$ 2,229,129	53.56%
Commercial	1,917,764	46.08%
Municipal	<u>15,251</u>	<u>0.37%</u>
Total	\$ 4,162,144	100.00%

Natural Gas Rate Design

Rate design involves determining charges for each class of customers that will generate a desired level of revenue in accordance with industry cost of service rate-making principles. The gas rates developed in this section are designed to recover the test year and forecast revenue requirements while providing funding for the identified capital improvements and existing debt service. In this section the project team is presenting its recommended rate plan for the City.



projects and any potential debt financing would need to be factored into a study update and would impact the rate plan.

The City has not adjusted rates since 2011 despite annual increases in Administration, Utility Billing and Gas O&M costs. As the cost of natural gas has declined but expected to fluctuate this decrease has not completely offset the increase in other costs to run the utility.

Table III-19 presents a summary of this natural gas rate plan proposed for Residential and Commercial customers. **Table III-20** presents the customer rate impact of the rate adjustments for representative Residential and Commercial accounts. The following is notable regarding this proposed rate plan:

- The most significant impact on rates will be the sales to new commercial and industrial loads and the cost of purchased gas. If usage varies significantly from that forecast or prices increase significantly then the rate plan will need to be re-evaluated.
- Another potential impact to the rate plan would be development of a gas utility CIP. Costs of

TABLE III-19

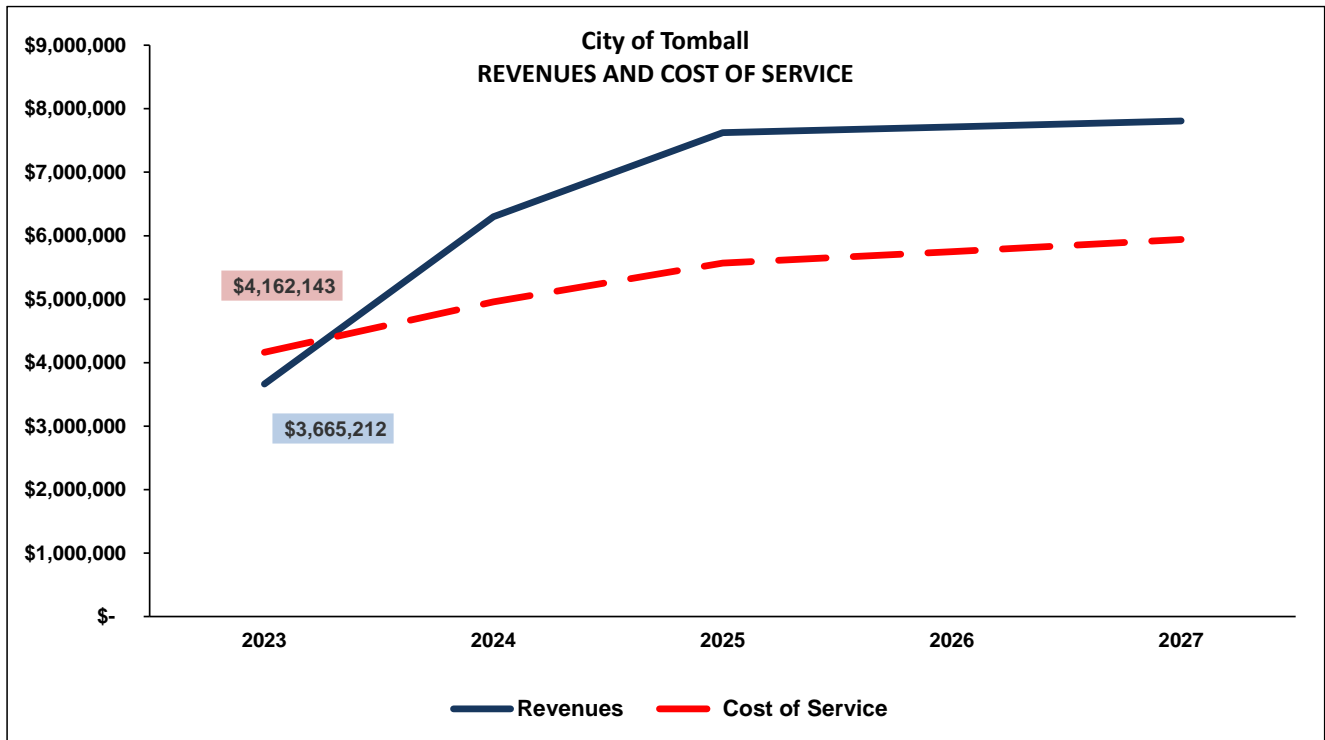
CITY OF TOMBALL		NATURAL GAS UTILITY RECOMMENDED RATE PLAN					
2023 09 22 - Scenario 1 - NG Cost of Service							
GAS	Current	Effective Dec-23	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	
Residential							
Base Charge Includes 1 MCF	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75
Usage Charge Per MCF	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75
Commercial							
Base Charge Includes 1 MCF	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75
Usage Charge Per MCF	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75

TABLE III-20

CITY OF TOMBALL		NATURAL GAS UTILITY IMPACT ON RESIDENTIAL MONTHLY CHARGES					
2023 09 22 - Scenario 1 - NG Cost of Service							
	Current	Effective Dec-23	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	
Residential and Commercial Monthly Charges							
3 MCF Change	\$ 35.25	\$ 35.25	\$ 35.25	\$ 35.25	\$ 35.25	\$ 35.25	\$ 35.25
5 MCF Change	58.75	58.75	58.75	58.75	58.75	58.75	58.75
35 MCF Change	411.25	411.25	411.25	411.25	411.25	411.25	411.25

The projected rate revenues developed in this section, are forecast to be sufficient to fund all operating and current scheduled capital obligations for the forecast period. **Chart III-21** presents the projected financial impact on the City’s utility fund under the proposed rate plan. The ending fiscal year projected utility fund balance is shown on the bottom of the chart. This highlights the importance of the implementation of each annual rate adjustment and future review of growth, operating and capital assumptions and actual financial results.

CHART III-21



	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Revenues	\$ 3,665,212	6,299,389	7,625,126	7,714,323	7,805,751
Cost of Service	4,162,143	4,956,314	5,567,201	5,748,273	5,939,363
Net Revenue	\$ (496,931.35)	1,343,075	2,057,925	1,966,050	1,866,387

Notes on Rate Recommendations

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

- Actual growth in accounts and consumed volumes is less than (or significantly greater than) forecast.
- Capital improvement plan funding costs increase significantly due to the rising cost of materials or other factors such as, for the water utility; NHCRWA costs.
- An unforeseen event impacts the City, 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.
- The City of Tomball's budget levels or priorities change significantly from those forecast in this study.
- The index cost of natural gas changing significantly from the current Energy Information Administration forecast.

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

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



City of Tomball

Ten Year Rate Analysis and Pro Forma

Fiscal Years 2023 - 2032



Utility System

Water
Sewer
Combined

Dashboard

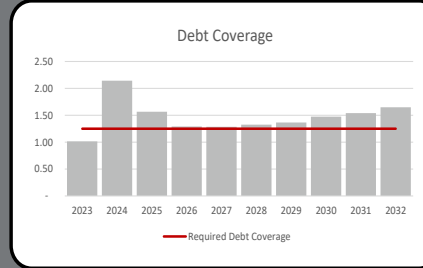
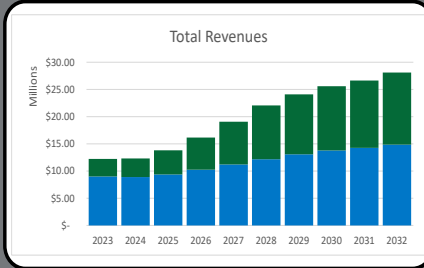
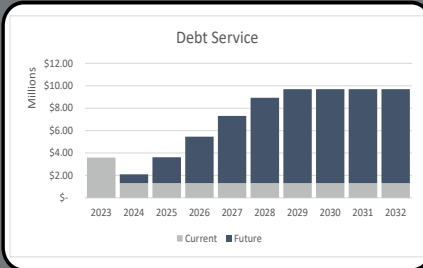
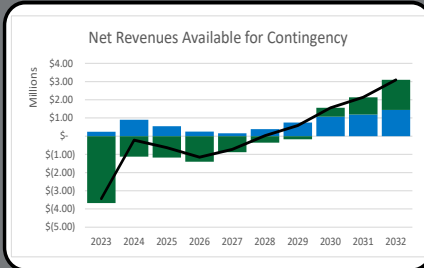
Projections
Bill Comparison
Comparable Utilities

Customer Class

All Classes

Years

10
5



Water Sewer Combined Projections

	Jan-23 2023	Dec-23 2024	Oct-24 2025	Oct-25 2026	Oct-26 2027	Oct-27 2028	Oct-28 2029	Oct-29 2030	Oct-30 2031	Oct-31 2032
Water Rate Adjustments										
Base Charge	0.00%	0.00%	6.00%	6.00%	6.00%	6.00%	4.00%	2.00%	0.00%	2.00%
Volume Charge	0.00%	0.00%	6.00%	6.00%	6.00%	6.00%	4.00%	2.00%	0.00%	2.00%
NHCRWA Surcharge	-11.00%	0.00%	4.00%	5.00%	4.00%	4.00%	4.00%	4.00%	1.00%	1.00%
		0	0.04	0.04	0.05	0.04	0.04	0.04	0.01	0.01
Sewer Rate Adjustments										
Base Charge	0.00%	0.00%	28.00%	28.00%	28.00%	20.00%	5.00%	2.00%	0.00%	2.00%
Volume Charge	0.00%	0.00%	28.00%	28.00%	28.00%	20.00%	5.00%	2.00%	0.00%	2.00%

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

1 Water and Wastewater Rates

Water Rates -- Residential - Inside

Monthly Base Charge - Current

10,000
10,001 15,000
15,001 Above

Specific To Usage Tier Per City Ordinance (see comment)

\$	10.90	\$	10.90	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
	12.54		12.54		-		-		-		-		-		-		-		-
	14.42		14.42		-		-		-		-		-		-		-		-

Monthly Base Charge - Proposed

5/8"
3/4"
1"
1 1/2"
2"
3"
4"
6"

	-		-	\$	12.10	\$	12.85	\$	13.65	\$	14.50	\$	15.40	\$	16.05	\$	16.40	\$	16.40	\$	16.75
	-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
	-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
	-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
	-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
	-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
	-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75

Volume Rate Per 1,000 Gal

10,000
10,001 15,000
15,001 Above

\$	3.02	\$	3.02	\$	3.02	\$	3.20	\$	3.39	\$	3.60	\$	3.81	\$	3.97	\$	4.04	\$	4.04	\$	4.13
	3.77		3.77		3.77		4.00		4.24		4.49		4.76		4.95		5.05		5.05		5.15
	4.72		4.72		4.72		5.00		5.30		5.62		5.96		6.20		6.32		6.32		6.45

NHCRWA Surcharge 1,000 Gal

Per 1,000 Gal

\$	4.60	\$	4.10	\$	3.60	\$	3.80	\$	4.00	\$	4.20	\$	4.40	\$	4.61	\$	4.61	\$	4.61	\$	4.61
----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------

Wastewater Rates -- Residential

Base Charge	\$	10.23	\$	10.23	\$	10.25	\$	13.15	\$	16.85	\$	21.60	\$	25.95	\$	27.25	\$	27.80	\$	27.80	\$	28.40
Usage Chg	-	Above	3.57	3.57	3.57	4.57	5.85	7.49	8.98	9.43	9.62	9.62	9.62	9.62	9.62	9.62	9.62	9.62	9.62	9.62	9.62	9.81

2 Residential - Inside W & WW Monthly Bill

5,000 Gal W & WW	Total	\$	54.08	\$	54.08	\$	55.30	\$	64.85	\$	76.71	\$	91.52	\$	105.33	\$	110.29	\$	112.53	\$	112.53	\$	114.85
NHCRWA Surcharge			23.00		20.50		18.00		19.01		20.02		21.02		22.02		23.04		23.04		23.04		23.04
Total		\$	77.08	\$	74.58	\$	73.30	\$	83.86	\$	96.73	\$	112.53	\$	127.36	\$	133.33	\$	135.57	\$	135.57	\$	137.89
	Increase -- \$			\$	(2.50)	\$	(1.28)	\$	10.56	\$	12.87	\$	15.81	\$	14.82	\$	5.97	\$	2.24	\$	-	\$	2.32
	Increase -- %				-3.2%		-1.7%		14.4%		15.3%		16.3%		13.2%		4.7%		1.7%		0.0%		1.7%
10,000 Gal W & 5,000 Gal WW	Total		69.18		69.18		70.40		80.86		93.68		109.50		124.40		130.12		132.76		132.76		135.48
NHCRWA Surcharge			46.00		41.00		36.00		38.02		40.03		42.03		44.05		46.08		46.08		46.08		46.08
Total		\$	115.18	\$	110.18	\$	106.40	\$	118.88	\$	133.71	\$	151.54	\$	168.45	\$	176.20	\$	178.83	\$	178.83	\$	181.55
	Increase -- \$			\$	(5.00)	\$	(3.78)	\$	12.48	\$	14.83	\$	17.83	\$	16.91	\$	7.75	\$	2.64	\$	-	\$	2.72
	Increase -- %				-4.3%		-3.4%		11.7%		12.5%		13.3%		11.2%		4.6%		1.5%		0.0%		1.5%
30,000 Gal W & 8,000 Gal WW	Total		173.06		173.06		170.76		189.60		211.96		238.74		264.53		276.13		281.68		281.68		287.38
NHCRWA Surcharge			138.00		123.00		108.00		114.05		120.09		126.10		132.15		138.23		138.23		138.23		138.23
Total		\$	311.06	\$	296.06	\$	278.76	\$	303.65	\$	332.05	\$	364.84	\$	396.68	\$	414.36	\$	419.91	\$	419.91	\$	425.61
	Increase -- \$			\$	(15.00)	\$	(17.30)	\$	24.89	\$	28.40	\$	32.79	\$	31.85	\$	17.67	\$	5.56	\$	-	\$	5.70
	Increase -- %				-4.8%		-5.8%		8.9%		9.4%		9.9%		8.7%		4.5%		1.3%		0.0%		1.4%

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

3 Fund Balance, Revenues and Expenses

Beginning Water & Sewer Fund Balance	\$ 10,418,981	\$ 6,986,711	\$ 6,765,598	\$ 6,134,447	\$ 4,978,363	\$ 4,257,864	\$ 4,282,870	\$ 4,867,064	\$ 6,427,808	\$ 8,567,240
Revenues and Expenses										
Water Rate Revenues	4,452,707	4,651,765	5,100,500	5,614,893	6,180,215	6,769,416	7,283,366	7,683,833	7,943,370	8,348,127
NHCRWA Surcharge Revenue	3,890,421	3,579,032	3,574,859	3,915,824	4,276,038	4,634,694	5,012,451	5,292,809	5,464,665	5,640,879
WW Rate Revenues	3,053,766	3,222,398	4,253,016	5,715,291	7,680,247	9,721,173	10,822,395	11,617,199	12,218,234	13,068,297
Non-Rate Revenues	835,300	857,745	881,130	905,505	930,917	952,842	975,499	998,918	1,023,129	1,048,164
Total Revenues	12,232,193	12,310,940	13,809,506	16,151,513	19,067,417	22,078,126	24,093,711	25,592,759	26,649,398	28,105,467
Operating Expenses	8,577,812	7,807,511	8,130,686	9,089,059	9,660,329	10,236,067	10,841,562	11,290,570	11,694,552	12,114,587
Net Revenues Available for Capital Outlays/Debt Service/Transfers	3,654,381	4,503,429	5,678,820	7,062,454	9,407,088	11,842,059	13,252,150	14,302,189	14,954,845	15,990,879
Fund Transfers	2,125,931	2,138,209	2,202,355	2,268,426	2,336,479	2,406,573	2,478,771	2,553,134	2,629,728	2,708,619
Capital Outlays	1,361,400	485,000	485,000	485,000	485,000	485,000	485,000	485,000	485,000	485,000
Total Transfers and Capital Outlays	3,487,331	2,623,209	2,687,355	2,753,426	2,821,479	2,891,573	2,963,771	3,038,134	3,114,728	3,193,619
Total Operating Expense/Transfers/Capital Outlays	12,065,144	10,430,720	10,818,041	11,842,485	12,481,808	13,127,640	13,805,332	14,328,704	14,809,280	15,308,207
Net Revenues Available for Debt Service	2,292,981	4,018,429	5,193,820	6,577,454	8,922,088	11,357,059	12,767,150	13,817,189	14,469,845	15,505,879
Debt Service	3,599,320	2,101,332	3,622,616	5,465,112	7,306,109	8,925,480	9,704,186	9,703,311	9,700,686	9,701,186
Total Cost of Service	15,664,464	12,532,053	14,440,657	17,307,597	19,787,916	22,053,120	23,509,518	24,032,015	24,509,965	25,009,393
	TRUE	-	-	-	-	-	-	-	-	-
Scenario I										
Contingency--Net Inc/(Dec) in Fund Balance	(3,432,270)	(221,112)	(631,151)	(1,156,084)	(720,499)	25,006	584,194	1,560,744	2,139,432	3,096,074
Percent of COS	-21.9%	-1.8%	-4.4%	-6.7%	-3.6%	0.1%	2.5%	6.5%	8.7%	12.4%
Drawdown of Fund Balance for Capital Projects	-	-	-	-	-	-	-	-	-	-
Ending Water & Sewer Fund Balance	6,986,711	6,765,598	6,134,447	4,978,363	4,257,864	4,282,870	4,867,064	6,427,808	8,567,240	11,663,314
Revenue Adequacy Tests										
Debt Coverage (Goal is 1.50 -- 1.25 is required)	1.02	2.14	1.57	1.29	1.29	1.33	1.37	1.47	1.54	1.65
Target Level Fund Balance = 18% of Op. Exp.	44.6%	54.0%	42.5%	28.8%	21.5%	19.4%	20.7%	26.7%	35.0%	46.6%
Days of Expenditures in Working Capital/Fund Balance	163	197	155	105	79	71	76	98	128	170

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

4 Total Accounts

<u>Water Accounts</u>										
Total Accounts	5,669	5,923	6,188	6,465	6,753	7,001	7,258	7,524	7,798	8,082
New Accounts	-	254	265	276	288	249	257	265	274	284
Avg. Annual Growth Rate		4.49%	4.47%	4.46%	4.46%	3.68%	3.67%	3.66%	3.65%	3.64%
<u>Wastewater Accounts</u>										
Total Accounts	4,425	4,645	4,876	5,118	5,372	5,639	5,919	6,213	6,522	6,847
New Accounts	-	220	231	242	254	267	280	294	309	325
Avg. Annual Growth Rate		4.97%	4.97%	4.96%	4.96%	4.97%	4.97%	4.97%	4.97%	4.98%

5 Annual Volume

<u>Water Volume</u>										
Residential	432,470,869	454,094,413	476,799,134	500,639,090	525,671,045	546,697,887	568,565,802	591,308,434	614,960,772	639,559,202
Commercial	452,353,833	465,999,499	479,645,165	493,290,832	506,936,498	520,582,164	534,227,830	547,873,496	561,519,162	575,164,828
Municipal	8,930,685	9,051,370	9,172,055	9,292,740	9,413,425	9,534,110	9,654,795	9,775,479	9,896,164	10,016,849
ResidentialOutside	-	-	-	-	-	-	-	-	-	-
CommericalOutside	-	-	-	-	-	-	-	-	-	-
HMW SUD Wholesale	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897
Bulk Water Sales	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	903,280,285	938,670,179	975,141,251	1,012,747,559	1,051,545,864	1,086,339,057	1,121,973,324	1,158,482,307	1,195,900,996	1,234,265,777
<u>Wastewater Billing Units</u>										
Residential	231,209,391	242,776,359	254,928,173	267,664,835	281,051,326	295,087,646	309,838,779	325,304,725	341,550,466	358,640,986
Commercial	279,395,015	293,381,822	308,050,913	323,402,288	339,435,946	356,493,028	374,232,394	392,995,185	412,781,401	433,591,042
Municipal	2,887,894	3,010,992	3,134,091	3,257,190	3,380,288	3,503,387	3,626,486	3,749,584	3,872,683	3,995,782
Residential Sewer Only	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659
Commercial Sewer Only	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	516,497,667	542,174,541	569,118,546	597,329,680	626,872,927	658,089,429	690,703,027	725,054,862	761,209,918	799,233,178

CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Revenue and Expense Summary
Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

1 Total Utility Fund Balance, Revenues and Expenses

Beginning Fund Balance	\$ 10,418,981	\$ 6,986,711	\$ 6,765,598	\$ 6,134,447	\$ 4,978,363	\$ 4,257,864	\$ 4,282,870	\$ 4,867,064	\$ 6,427,808	\$ 8,567,240
Revenues and Expenses										
Water Rate Revenues	4,452,707	4,651,765	5,100,500	5,614,893	6,180,215	6,769,416	7,283,366	7,683,833	7,943,370	8,348,127
NCHRWA Surcharge Revenue	3,890,421	3,579,032	3,574,859	3,915,824	4,276,038	4,634,694	5,012,451	5,292,809	5,464,665	5,640,879
WW Rate Revenues	3,053,766	3,222,398	4,253,016	5,715,291	7,680,247	9,721,173	10,822,395	11,617,199	12,218,234	13,068,297
Non-Rate Revenues	835,300	857,745	881,130	905,505	930,917	952,842	975,499	998,918	1,023,129	1,048,164
Total Revenues	12,232,193	12,310,940	13,809,506	16,151,513	19,067,417	22,078,126	24,093,711	25,592,759	26,649,398	28,105,467
Cost of Service										
Personnel	2,219,124	2,293,779	2,383,807	2,910,892	3,027,122	3,149,151	3,277,338	3,412,068	3,553,752	3,702,833
Operating	2,313,348	1,807,393	1,869,452	1,934,880	2,003,889	2,072,560	2,144,660	2,220,380	2,299,921	2,383,499
NHCRWA	4,045,341	3,706,339	3,877,427	4,243,287	4,629,318	5,014,355	5,419,563	5,658,122	5,840,878	6,028,255
Total Operating	8,577,812	7,807,511	8,130,686	9,089,059	9,660,329	10,236,067	10,841,562	11,290,570	11,694,552	12,114,587
Net Revenues for Transfer, Cap Outlays, Debt Service	3,654,381	4,503,429	5,678,820	7,062,454	9,407,088	11,842,059	13,252,150	14,302,189	14,954,845	15,990,879
Fund Transfer	2,125,931	2,138,209	2,202,355	2,268,426	2,336,479	2,406,573	2,478,771	2,553,134	2,629,728	2,708,619
Capital Outlays	1,361,400	485,000	485,000	485,000	485,000	485,000	485,000	485,000	485,000	485,000
Debt Service	3,599,320	2,101,332	3,622,616	5,465,112	7,306,109	8,925,480	9,704,186	9,703,311	9,700,686	9,701,186
Total Cost of Service	15,664,464	12,532,053	14,440,657	17,307,597	19,787,916	22,053,120	23,509,518	24,032,015	24,509,965	25,009,393
Contingency--Net Revenues	(3,432,270)	(221,112)	(631,151)	(1,156,084)	(720,499)	25,006	584,194	1,560,744	2,139,432	3,096,074
Percent of COS	-28.1%	-1.8%	-4.6%	-7.2%	-3.8%	0.1%	2.4%	6.1%	8.0%	11.0%
Ending Fund Balance	6,986,711	6,765,598	6,134,447	4,978,363	4,257,864	4,282,870	4,867,064	6,427,808	8,567,240	11,663,314
Revenue Adequacy Tests										
Debt Coverage	1.02	2.14	1.57	1.29	1.29	1.33	1.37	1.47	1.54	1.65
Days of Expenditures in Working Capital/Fund Balance	163	197	155	105	79	71	76	98	128	170

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

**Forecast Revenue and Expense Summary
Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"**

2 WATER Utility Revenues and Expenses

Revenues and Expenses

Water Rate Revenues	\$	4,452,707	\$	4,651,765	\$	5,100,500	\$	5,614,893	\$	6,180,215	\$	6,769,416	\$	7,283,366	\$	7,683,833	\$	7,943,370	\$	8,348,127
NHCRWA Surcharge Revenue		3,890,421		3,579,032		3,574,859		3,915,824		4,276,038		4,634,694		5,012,451		5,292,809		5,464,665		5,640,879
Non-Rate Revenues		660,150		682,588		705,967		730,334		755,738		777,657		800,307		823,719		847,923		872,950
Total Revenues		9,003,278		8,913,385		9,381,326		10,261,051		11,211,992		12,181,767		13,096,125		13,800,361		14,255,957		14,861,956

Cost of Service

Personnel		1,316,284		1,360,559		1,413,939		1,726,555		1,795,468		1,867,819		1,943,819		2,023,696		2,107,694		2,196,075
Operating		1,148,679		944,562		966,937		990,642		1,015,770		1,040,470		1,066,501		1,093,943		1,122,881		1,153,405
NHCRWA		4,045,341		3,706,339		3,877,427		4,243,287		4,629,318		5,014,355		5,419,563		5,658,122		5,840,878		6,028,255
Total Operating	TRUE	6,510,304		6,011,460		6,258,303		6,960,484		7,440,556		7,922,644		8,429,882		8,775,761		9,071,453		9,377,736
Net Revenues for Transfer, Cap Outlays, Debt Service		2,492,973		2,901,925		3,123,023		3,300,567		3,771,435		4,259,124		4,666,243		5,024,600		5,184,504		5,484,221
Transfers		1,148,645		1,183,104		1,218,597		1,255,155		1,292,810		1,331,594		1,371,542		1,412,688		1,455,069		1,498,721
Capital Outlays		381,400		160,000		160,000		160,000		160,000		160,000		160,000		160,000		160,000		160,000
Debt Service		719,864		654,837		1,196,972		1,633,883		2,163,075		2,383,710		2,383,885		2,383,710		2,383,185		2,383,285
Total Cost of Service	TRUE	8,760,213		8,009,401		8,833,872		10,009,523		11,056,441		11,797,948		12,345,309		12,732,159		13,069,707		13,419,741

Contingency--Net Revenues		243,064		903,984		547,454		251,529		155,550		383,819		750,816		1,068,202		1,186,250		1,442,215
Percent of COS		2.7%		10.1%		5.8%		2.5%		1.4%		3.2%		5.7%		7.7%		8.3%		9.7%
Debt Coverage		3.46		4.43		2.61		2.02		1.74		1.79		1.96		2.11		2.18		2.30
		30.60%		30.05%		26.06%		22.16%		18.65%		16.15%		15.15%		14.64%		14.43%		14.00%

3 WASTEWATER Utility Revenues and Expenses

Revenues and Expenses

Wastewater Rate Revenues	\$	3,053,766	\$	3,222,398	\$	4,253,016	\$	5,715,291	\$	7,680,247	\$	9,721,173	\$	10,822,395	\$	11,617,199	\$	12,218,234	\$	13,068,297
Non-Rate Revenues		175,150		175,157		175,164		175,171		175,179		175,185		175,192		175,199		175,206		175,214
Total Revenues		3,228,916		3,397,555		4,428,180		5,890,462		7,855,426		9,896,358		10,997,587		11,792,398		12,393,440		13,243,511

Cost of Service

Personnel		902,840		933,221		969,868		1,184,337		1,231,654		1,281,332		1,333,520		1,388,372		1,446,059		1,506,758
Operating		1,164,668		862,830		902,515		944,237		988,119		1,032,091		1,078,160		1,126,437		1,177,040		1,230,094
Total Operating		2,067,508		1,796,051		1,872,383		2,128,575		2,219,772		2,313,423		2,411,679		2,514,809		2,623,099		2,736,852
Net Revenues for Transfer, Cap Outlays, Debt Service		1,161,408		1,601,504		2,555,797		3,761,887		5,635,653		7,582,936		8,585,907		9,277,588		9,770,342		10,506,659
Transfers		977,286		955,105		983,758		1,013,271		1,043,669		1,074,979		1,107,228		1,140,445		1,174,659		1,209,898
Capital Outlays		980,000		325,000		325,000		325,000		325,000		325,000		325,000		325,000		325,000		325,000
Debt Service		2,879,456		1,446,496		2,425,644		3,831,229		5,143,034		6,541,770		7,320,301		7,319,601		7,317,501		7,317,901
Total Cost of Service		6,904,251		4,522,651		5,606,785		7,298,075		8,731,475		10,255,172		11,164,209		11,299,855		11,440,258		11,589,651

Contingency--Net Revenues		(3,675,335)		(1,125,096)		(1,178,605)		(1,407,613)		(876,049)		(358,813)		(166,622)		492,542		953,182		1,653,859
Percent of COS		-113.8%		-33.1%		-26.6%		-23.9%		-11.2%		-3.6%		-1.5%		4.2%		7.7%		12.5%
Debt Coverage	Com	0.40		1.11		1.05		0.98		1.10		1.16		1.17		1.27		1.34		1.44

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
---------	--------------	------	------	------	------	------	------	------	------	------

Water Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

1 Water Rates

Water Rates -- Residential

Monthly Base Charge

-	10,000	\$	11.55	\$	11.55	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-				
10,001	15,000		13.29		13.29		-		-		-		-		-		-		-				
15,001	Above		15.29		15.29		-		-		-		-		-		-		-				
5/8"			-		-	\$	12.10	\$	12.85	\$	13.65	\$	14.50	\$	15.40	\$	16.05	\$	16.40	\$	16.40	\$	16.75
3/4"			-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
1"			-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
1 1/2"			-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
2"			-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
3"			-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
4"			-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75
6"			-		-		12.10		12.85		13.65		14.50		15.40		16.05		16.40		16.40		16.75

Volume Rate Per 1,000 Gal

-	10,000	\$	3.02	\$	3.02	\$	3.02	\$	3.20	\$	3.39	\$	3.60	\$	3.81	\$	3.97	\$	4.04	\$	4.04	\$	4.13
10,001	15,000		3.77		3.77		3.77		4.00		4.24		4.49		4.76		4.95		5.05		5.05		5.15
15,001	Above		4.72		4.72		4.72		5.00		5.30		5.62		5.96		6.20		6.32		6.32		6.45
-	-		-		-		-		-		-		-		-		-		-		-		-

NHCRWA Surcharge 1,000 Gal

Per 1,000 Gal	\$	4.60	\$	4.10	\$	3.60	\$	3.80	\$	4.00	\$	4.20	\$	4.40	\$	4.61	\$	4.61	\$	4.61	\$	4.61
---------------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------

Water Rates -- Commercial

Base Charge - Current

-	5,000	\$	19.56	\$	19.56	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
5,001	50,000		31.48		31.48		-		-		-		-		-		-		-		-		-
51,001	Above		55.11		55.11		-		-		-		-		-		-		-		-		-

Base Charge - Proposed

5/8"			-		-	\$	27.45	\$	29.10	\$	30.85	\$	32.75	\$	34.75	\$	36.15	\$	36.90	\$	36.90	\$	37.65
3/4"			-		-		27.45		29.10		30.85		32.75		34.75		36.15		36.90		36.90		37.65
1"			-		-		27.45		29.10		30.85		32.75		34.75		36.15		36.90		36.90		37.65
1 1/2"			-		-		27.45		29.10		30.85		32.75		34.75		36.15		36.90		36.90		37.65
2"			-		-		27.45		29.10		30.85		32.75		34.75		36.15		36.90		36.90		37.65
3"			-		-		27.45		29.10		30.85		32.75		34.75		36.15		36.90		36.90		37.65
4"			-		-		27.45		29.10		30.85		32.75		34.75		36.15		36.90		36.90		37.65
6"			-		-		27.45		29.10		30.85		32.75		34.75		36.15		36.90		36.90		37.65

Volume Rate Per 1,000 Gal

-	5,000	\$	3.66	\$	3.66	\$	3.66	\$	3.88	\$	4.11	\$	4.36	\$	4.62	\$	4.81	\$	4.90	\$	4.90	\$	5.00
5,001	50,000		4.58		4.58		4.58		4.85		5.15		5.45		5.78		6.01		6.13		6.13		6.26
51,001	Above		5.72		5.72		5.72		6.06		6.43		6.81		7.22		7.51		7.66		7.66		7.81
-	-		-		-		-		-		-		-		-		-		-		-		-

NHCRWA Surcharge 1,000 Gal

Per 1,000 Gal	\$	4.60	\$	4.10	\$	3.60	\$	3.80	\$	4.00	\$	4.20	\$	4.40	\$	4.61	\$	4.61	\$	4.61	\$	4.61
---------------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

	Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
--	---------	--------------	------	------	------	------	------	------	------	------	------

Water Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

2A Residential Inside Monthly Bill

5,000 Gal Water	Total	\$ 26.65	\$ 26.65	\$ 27.20	\$ 28.86	\$ 30.62	\$ 32.48	\$ 34.46	\$ 35.88	\$ 36.62	\$ 36.62	\$ 37.38
NHCRWA Surcharge		23.00	20.50	18.00	19.01	20.02	21.02	22.02	23.04	23.04	23.04	23.04
Total		\$ 49.65	\$ 47.15	\$ 45.20	\$ 47.86	\$ 50.63	\$ 53.50	\$ 56.49	\$ 58.91	\$ 59.66	\$ 59.66	\$ 60.42
	Increase -- \$		\$ (2.50)	\$ (1.95)	\$ 2.66	\$ 2.77	\$ 2.87	\$ 2.99	\$ 2.43	\$ 0.75	\$ -	\$ 0.75
	Increase -- %		-5.0%	-4.1%	5.9%	5.8%	5.7%	5.6%	4.3%	1.3%	0.0%	1.3%
10,000 Gal Water	Total	\$ 41.75	\$ 41.75	\$ 42.30	\$ 44.86	\$ 47.58	\$ 50.47	\$ 53.53	\$ 55.70	\$ 56.84	\$ 56.84	\$ 58.00
NHCRWA Surcharge		46.00	41.00	36.00	38.02	40.03	42.03	44.05	46.08	46.08	46.08	46.08
Total		\$ 87.75	\$ 82.75	\$ 78.30	\$ 82.88	\$ 87.61	\$ 92.50	\$ 97.58	\$ 101.78	\$ 102.92	\$ 102.92	\$ 104.08
	Increase -- \$		\$ (5.00)	\$ (4.45)	\$ 4.58	\$ 4.74	\$ 4.89	\$ 5.08	\$ 4.20	\$ 1.14	\$ -	\$ 1.16
	Increase -- %		-5.7%	-5.4%	5.8%	5.7%	5.6%	5.5%	4.3%	1.1%	0.0%	1.1%
30,000 Gal Water	Total	\$ 135.14	\$ 135.14	\$ 131.95	\$ 139.89	\$ 148.31	\$ 157.24	\$ 166.71	\$ 173.41	\$ 176.91	\$ 176.91	\$ 180.47
NHCRWA Surcharge		138.00	123.00	108.00	114.05	120.09	126.10	132.15	138.23	138.23	138.23	138.23
Total		\$ 273.14	\$ 258.14	\$ 239.95	\$ 253.94	\$ 268.41	\$ 283.34	\$ 298.86	\$ 311.64	\$ 315.14	\$ 315.14	\$ 318.70
	Increase -- \$		\$ (15.00)	\$ (18.19)	\$ 13.99	\$ 14.47	\$ 14.93	\$ 15.52	\$ 12.78	\$ 3.50	\$ -	\$ 3.56
	Increase -- %		-5.5%	-7.0%	5.8%	5.7%	5.6%	5.5%	4.3%	1.1%	0.0%	1.1%

2B Commercial Monthly Bill

25,000 Gal Water	Total	\$ 141.38	\$ 141.38	\$ 137.35	\$ 145.59	\$ 154.33	\$ 163.64	\$ 173.50	\$ 180.45	\$ 184.08	\$ 184.08	\$ 187.78
NHCRWA Surcharge		115.00	102.50	90.00	95.04	100.08	105.08	110.12	115.19	115.19	115.19	115.19
Total		\$ 256.38	\$ 243.88	\$ 227.35	\$ 240.63	\$ 254.41	\$ 268.72	\$ 283.62	\$ 295.64	\$ 299.27	\$ 299.27	\$ 302.97
	Increase -- \$		\$ (12.50)	\$ (16.53)	\$ 13.28	\$ 13.78	\$ 14.31	\$ 14.90	\$ 12.02	\$ 3.64	\$ -	\$ 3.69
	Increase -- %		-4.9%	-6.8%	5.8%	5.7%	5.6%	5.5%	4.2%	1.2%	0.0%	1.2%
50,000 Gal Water	Total	\$ 255.88	\$ 255.88	\$ 251.85	\$ 266.96	\$ 282.99	\$ 300.01	\$ 318.05	\$ 330.78	\$ 337.42	\$ 337.42	\$ 344.18
NHCRWA Surcharge		230.00	205.00	180.00	190.08	200.15	210.16	220.25	230.38	230.38	230.38	230.38
Total		\$ 485.88	\$ 460.88	\$ 431.85	\$ 457.04	\$ 483.14	\$ 510.18	\$ 538.30	\$ 561.16	\$ 567.81	\$ 567.81	\$ 574.57
	Increase -- \$		\$ (25.00)	\$ (29.03)	\$ 25.19	\$ 26.10	\$ 27.04	\$ 28.12	\$ 22.86	\$ 6.64	\$ -	\$ 6.76
	Increase -- %		-5.1%	-6.3%	5.8%	5.7%	5.6%	5.5%	4.2%	1.2%	0.0%	1.2%

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
---------	-----------------	------	------	------	------	------	------	------	------	------

Water Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

3 Revenues and Expenses

Revenues and Expenses

Water Rate Revenues	\$ 4,452,707	\$ 4,651,765	\$ 5,100,500	\$ 5,614,893	\$ 6,180,215	\$ 6,769,416	\$ 7,283,366	\$ 7,683,833	\$ 7,943,370	\$ 8,348,127
NHCRWA Surcharge Revenue	3,890,421	3,579,032	3,574,859	3,915,824	4,276,038	4,634,694	5,012,451	5,292,809	5,464,665	5,640,879
Non-Rate Revenues	<u>660,150</u>	<u>682,588</u>	<u>705,967</u>	<u>730,334</u>	<u>755,738</u>	<u>777,657</u>	<u>800,307</u>	<u>823,719</u>	<u>847,923</u>	<u>872,950</u>
Total Revenues	9,003,278	8,913,385	9,381,326	10,261,051	11,211,992	12,181,767	13,096,125	13,800,361	14,255,957	14,861,956
Operating Expenses	<u>6,510,304</u>	<u>6,011,460</u>	<u>6,258,303</u>	<u>6,960,484</u>	<u>7,440,556</u>	<u>7,922,644</u>	<u>8,429,882</u>	<u>8,775,761</u>	<u>9,071,453</u>	<u>9,377,736</u>
Net Revenues Available for Capital Outlays/Debt Service	2,492,973	2,901,925	3,123,023	3,300,567	3,771,435	4,259,124	4,666,243	5,024,600	5,184,504	5,484,221
Fund Transfers	1,148,645	1,183,104	1,218,597	1,255,155	1,292,810	1,331,594	1,371,542	1,412,688	1,455,069	1,498,721
Capital Outlays	<u>381,400</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>
Total Operating Expense/Capital Outlays/Fund Transfers	8,040,349	7,354,564	7,636,900	8,375,640	8,893,366	9,414,238	9,961,424	10,348,449	10,686,522	11,036,457
Net Revenues Available for Debt Service	2,111,573	2,741,925	2,963,023	3,140,567	3,611,435	4,099,124	4,506,243	4,864,600	5,024,504	5,324,221
Debt Service	<u>719,864</u>	<u>654,837</u>	<u>1,196,972</u>	<u>1,633,883</u>	<u>2,163,075</u>	<u>2,383,710</u>	<u>2,383,885</u>	<u>2,383,710</u>	<u>2,383,185</u>	<u>2,383,285</u>
Total Cost of Service	8,760,213	8,009,401	8,833,872	10,009,523	11,056,441	11,797,948	12,345,309	12,732,159	13,069,707	13,419,741
	TRUE									

Contingency--Net Inc(Dec) in Fund Balance	243,064	903,984	547,454	251,529	155,550	383,819	750,816	1,068,202	1,186,250	1,442,215
Percent of COS	2.8%	11.3%	6.2%	2.5%	1.4%	3.3%	6.1%	8.4%	9.1%	10.7%
	0	-	-	-	-	-	-	-	-	-

Revenue Adequacy Tests

Debt Coverage	3.46	4.43	2.61	2.02	1.74	1.79	1.96	2.11	2.18	2.30
---------------	------	------	------	------	------	------	------	------	------	------

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

	Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
--	---------	-----------------	------	------	------	------	------	------	------	------	------

Water Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

5 Total Accounts

Water Accounts

Total Accounts	5,669	5,923	6,188	6,465	6,753	7,001	7,258	7,524	7,798	8,082
New Accounts	-	254	265	276	288	249	257	265	274	284
Avg. Annual Growth Rate		4.49%	4.47%	4.46%	4.46%	3.68%	3.67%	3.66%	3.65%	3.64%

6 Annual Volume

Water Volume

Residential	432,470,869	454,094,413	476,799,134	500,639,090	525,671,045	546,697,887	568,565,802	591,308,434	614,960,772	639,559,202
Commercial	452,353,833	465,999,499	479,645,165	493,290,832	506,936,498	520,582,164	534,227,830	547,873,496	561,519,162	575,164,828
Municipal	8,930,685	9,051,370	9,172,055	9,292,740	9,413,425	9,534,110	9,654,795	9,775,479	9,896,164	10,016,849
ResidentialOutside	-	-	-	-	-	-	-	-	-	-
CommericalOutside	-	-	-	-	-	-	-	-	-	-
HMW SUD Wholesale	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897
Bulk Water Sales	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	903,280,285	938,670,179	975,141,251	1,012,747,559	1,051,545,864	1,086,339,057	1,121,973,324	1,158,482,307	1,195,900,996	1,234,265,777

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current Current
2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

1 Wastewater Rates

Wastewater Rates -- Residential

Base Charge	\$	10.23	\$	10.23	\$	10.25	\$	13.15	\$	16.85	\$	21.60	\$	25.95	\$	27.25	\$	27.80	\$	27.80	\$	28.40
Usage Charge	-	Above		3.57		3.57		4.57		5.85		7.49		8.98		9.43		9.62		9.62		9.81

Wastewater Rates -- Commercial

Base Charge		\$	24.91	\$	24.91	\$	24.95	\$	31.95	\$	40.90	\$	52.40	\$	62.90	\$	66.05	\$	67.40	\$	67.40	\$	68.75
	5/8"		24.91		24.91		24.95		31.95		40.90		52.40		62.90		66.05		67.40		67.40		68.75
	3/4"		24.91		24.91		24.95		31.95		40.90		52.40		62.90		66.05		67.40		67.40		68.75
	1"		24.91		24.91		24.95		31.95		40.90		52.40		62.90		66.05		67.40		67.40		68.75
	1 1/2"		24.91		24.91		24.95		31.95		40.90		52.40		62.90		66.05		67.40		67.40		68.75
	2"		24.91		24.91		24.95		31.95		40.90		52.40		62.90		66.05		67.40		67.40		68.75
	3"		24.91		24.91		24.95		31.95		40.90		52.40		62.90		66.05		67.40		67.40		68.75
	4"		24.91		24.91		24.95		31.95		40.90		52.40		62.90		66.05		67.40		67.40		68.75
	6"		24.91		24.91		24.95		31.95		40.90		52.40		62.90		66.05		67.40		67.40		68.75

Volume Rate Per 1,000 Gal		\$	4.53	\$	4.53	\$	4.53	\$	5.80	\$	7.42	\$	9.50	\$	11.40	\$	11.97	\$	12.21	\$	12.21	\$	12.45
	-		5,001		5,001		5,001		5,001		5,001		5,001		5,001		5,001		5,001		5,001		5,001
	5,001		51,000		51,000		51,000		51,000		51,000		51,000		51,000		51,000		51,000		51,000		51,000
	51,001		Above		Above		Above		Above		Above		Above		Above		Above		Above		Above		Above
	-		-		-		-		-		-		-		-		-		-		-		-

2 Residential Monthly Bill

5,000 Gal	Total	\$	28.08	\$	28.08	\$	28.10	\$	36.00	\$	46.10	\$	59.03	\$	70.87	\$	74.42	\$	75.91	\$	75.91	\$	77.47
WW only	Increase -- \$		-		0.02		7.90		10.10		12.94		11.84		3.55		1.49		-		1.56		
	Increase -- %		0.0%		0.1%		28.1%		28.1%		28.1%		20.1%		5.0%		2.0%		0.0%		2.1%		
10,000 Gal	Total		45.93		45.93		45.95		58.85		75.34		96.47		115.79		121.58		124.02		124.02		126.55
WW only	Increase -- \$		-		0.02		12.90		16.49		21.13		19.32		5.79		2.44		-		2.52		
	Increase -- %		0.0%		0.0%		28.1%		28.0%		28.0%		20.0%		5.0%		2.0%		0.0%		2.0%		
20,000 Gal	Total		81.63		81.63		81.65		104.54		133.83		171.34		205.63		215.92		220.24		220.24		224.69
WW only	Increase -- \$		-		0.02		22.89		29.29		37.50		34.30		10.28		4.32		-		4.45		
	Increase -- %		0.0%		0.0%		28.0%		28.0%		28.0%		20.0%		5.0%		2.0%		0.0%		2.0%		

2.1 Commercial Monthly Bill

25,000 Gal	Total	\$	135.65	\$	135.65	\$	160.60	\$	205.58	\$	263.15	\$	336.88	\$	404.27	\$	424.49	\$	433.01	\$	433.01	\$	441.67
	Increase -- \$		-		24.95		44.98		57.57		73.73		67.40		20.22		8.52		-		8.66		
	Increase -- %		0.0%		18.4%		28.0%		28.0%		28.0%		20.0%		5.0%		2.0%		0.0%		2.0%		
50,000 Gal	Total	\$	276.90	\$	276.90	\$	301.85	\$	386.38	\$	494.57	\$	633.10	\$	759.74	\$	797.73	\$	813.72	\$	813.72	\$	829.99
	Increase -- \$		-		24.95		84.53		108.19		138.53		126.64		37.99		15.98		-		16.28		
	Increase -- %		0.0%		9.0%		28.0%		28.0%		28.0%		20.0%		5.0%		2.0%		0.0%		2.0%		



**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
---------	-----------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

3 Fund Balance, Revenues and Expenses

Beginning Water & Sewer Fund Balance	\$ 10,418,981	\$ 6,986,711	\$ 6,765,598	\$ 6,134,447	\$ 4,978,363	\$ 4,257,864	\$ 4,282,870	\$ 4,867,064	\$ 6,427,808	\$ 8,567,240
Revenues and Expenses										
WW Rate Revenues	3,053,766	3,222,398	4,253,016	5,715,291	7,680,247	9,721,173	10,822,395	11,617,199	12,218,234	13,068,297
Non-Rate Revenues	175,150	175,157	175,164	175,171	175,179	175,185	175,192	175,199	175,206	175,214
Total Revenues	3,228,916	3,397,555	4,428,180	5,890,462	7,855,426	9,896,358	10,997,587	11,792,398	12,393,440	13,243,511
Operating Expenses	2,067,508	1,796,051	1,872,383	2,128,575	2,219,772	2,313,423	2,411,679	2,514,809	2,623,099	2,736,852
Net Revenues Available for Capital Outlays/Debt Service	1,161,408	1,601,504	2,555,797	3,761,887	5,635,653	7,582,936	8,585,907	9,277,588	9,770,342	10,506,659
Fund Transfers	977,286	955,105	983,758	1,013,271	1,043,669	1,074,979	1,107,228	1,140,445	1,174,659	1,209,898
Capital Outlays	980,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000
Total Operating Expense/Capital Outlays/Fund Transfers	4,024,794	3,076,156	3,181,141	3,466,845	3,588,442	3,713,402	3,843,908	3,980,255	4,122,757	4,271,750
Net Revenues Available for Debt Service	181,408	1,276,504	2,230,797	3,436,887	5,310,653	7,257,936	8,260,907	8,952,588	9,445,342	10,181,659
Debt Service	2,879,456	1,446,496	2,425,644	3,831,229	5,143,034	6,541,770	7,320,301	7,319,601	7,317,501	7,317,901
Total Cost of Service	6,904,251	4,522,651	5,606,785	7,298,075	8,731,475	10,255,172	11,164,209	11,299,855	11,440,258	11,589,651
Drawdown of Fund Balance for Capital Projects										
Contingency--Net Inc/(Dec) in Fund Balance	(3,675,335)	(1,125,096)	(1,178,605)	(1,407,613)	(876,049)	(358,813)	(166,622)	492,542	953,182	1,653,859
Percent of COS	-53.2%	-24.9%	-21.0%	-19.3%	-10.0%	-3.5%	-1.5%	4.4%	8.3%	14.3%
Ending Water & Sewer Fund Balance	6,986,711	6,765,598	6,134,447	4,978,363	4,257,864	4,282,870	4,867,064	6,427,808	8,567,240	11,663,314

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

	Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
--	---------	-----------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: 2024 01 15 -- Scenario I -- "Fully Fund CIP"

5 Total Accounts

Wastewater Accounts

Total Accounts	4,425	4,645	4,876	5,118	5,372	5,639	5,919	6,213	6,522	6,847
New Accounts	-	220	231	242	254	267	280	294	309	325
Avg. Annual Growth Rate		4.97%	4.97%	4.96%	4.96%	4.97%	4.97%	4.97%	4.97%	4.98%

6 Annual Volume

Wastewater Billing Units

Residential	231,209,391	242,776,359	254,928,173	267,664,835	281,051,326	295,087,646	309,838,779	325,304,725	341,550,466	358,640,986
Commercial	279,395,015	293,381,822	308,050,913	323,402,288	339,435,946	356,493,028	374,232,394	392,995,185	412,781,401	433,591,042
Municipal	2,887,894	3,010,992	3,134,091	3,257,190	3,380,288	3,503,387	3,626,486	3,749,584	3,872,683	3,995,782
Residential Sewer Only	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659
Commercial Sewer Only	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	516,497,667	542,174,541	569,118,546	597,329,680	626,872,927	658,089,429	690,703,027	725,054,862	761,209,918	799,233,178



City of Tomball

Ten Year Rate Analysis and Pro Forma

Fiscal Years 2023 - 2032



Utility System

- Water
- Sewer
- Combined

Dashboard

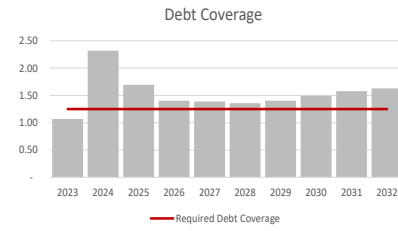
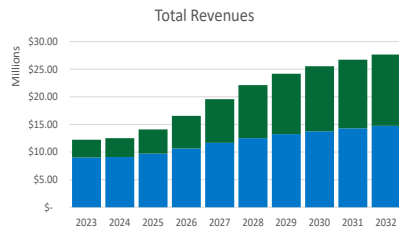
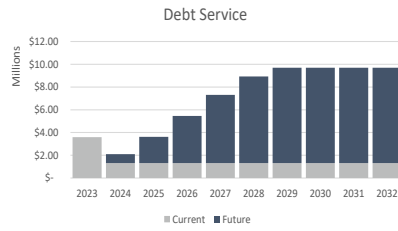
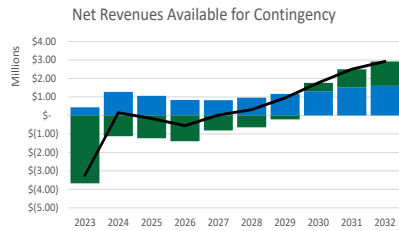
- Projections
- Bill Comparison
- Comparable Utilities

Customer Class

- All Classes

Years

- 10
- 5



Water Sewer Combined Projections

	Jan-23 2023	Dec-23 2024	Oct-24 2025	Oct-25 2026	Oct-26 2027	Oct-27 2028	Oct-28 2029	Oct-29 2030	Oct-30 2031	Oct-31 2032
Water Rate Adjustments										
Base Charge	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	2.00%	0.00%	2.00%	0.00%
Volume Charge	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	2.00%	0.00%	2.00%	0.00%
NHCRWA Surcharge	-11.00%	0.00%	4.00%	5.00%	4.00%	4.00%	4.00%	4.00%	1.00%	1.00%
	0	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.01	0.01
Sewer Rate Adjustments										
Base Charge	0.00%	0.00%	20.00%	20.00%	20.00%	10.00%	3.00%	0.00%	3.00%	0.00%
Volume Charge	0.00%	0.00%	20.00%	20.00%	20.00%	10.00%	3.00%	0.00%	3.00%	0.00%

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

1 Water and Wastewater Rates

Water Rates -- Residential - Inside

Monthly Base Charge - Current

10,000
10,001 15,000
15,001 Above

Specific To Usage Tier Per City Ordinance (see comment)

\$	10.90	\$	10.90	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
	12.54		12.54		-		-		-		-		-		-		-		-
	14.42		14.42		-		-		-		-		-		-		-		-

Monthly Base Charge - Proposed

5/8"
3/4"
1"
1 1/2"
2"
3"
4"
6"

\$	-	\$	-	\$	12.10	\$	12.50	\$	12.90	\$	13.30	\$	13.70	\$	14.00	\$	14.00	\$	14.30	\$	14.30
	-		-		12.10		12.50		12.90		13.30		13.70		14.00		14.00		14.30		14.30
	-		-		12.10		12.50		12.90		13.30		13.70		14.00		14.00		14.30		14.30
	-		-		12.10		12.50		12.90		13.30		13.70		14.00		14.00		14.30		14.30
	-		-		12.10		12.50		12.90		13.30		13.70		14.00		14.00		14.30		14.30
	-		-		12.10		12.50		12.90		13.30		13.70		14.00		14.00		14.30		14.30
	-		-		12.10		12.50		12.90		13.30		13.70		14.00		14.00		14.30		14.30

Volume Rate Per 1,000 Gal

10,000
10,001 15,000
15,001 Above

\$	3.02	\$	3.02	\$	3.02	\$	3.11	\$	3.20	\$	3.30	\$	3.40	\$	3.47	\$	3.47	\$	3.54	\$	3.54
	3.77		3.77		3.77		3.88		4.00		4.12		4.24		4.33		4.33		4.41		4.41
	4.72		4.72		4.72		4.86		5.01		5.16		5.31		5.42		5.42		5.53		5.53

NHCRWA Surcharge 1,000 Gal

Per 1,000 Gal

\$	4.60	\$	4.10	\$	3.60	\$	3.80	\$	4.00	\$	4.20	\$	4.40	\$	4.61	\$	4.61	\$	4.61	\$	4.61
----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------

Wastewater Rates -- Residential

Base Charge	\$	10.23	\$	10.23	\$	10.25	\$	12.30	\$	14.80	\$	17.80	\$	19.60	\$	20.20	\$	20.20	\$	20.85	\$	20.85
Usage Chg	-	Above	3.57	3.57	3.57	4.28	5.14	6.17	6.79	6.99	6.99	7.20	7.20	-	-	-	-	-	-	-	-	-

2 Residential - Inside W & WW Monthly Bill

5,000 Gal W & WW	Total	\$	54.08	\$	54.08	\$	55.30	\$	61.77	\$	69.42	\$	78.44	\$	84.22	\$	86.48	\$	86.48	\$	88.83	\$	88.83
NHCRWA Surcharge			23.00		20.50		18.00		19.01		20.02		21.02		22.02		23.04		23.04		23.04		23.04
Total		\$	77.08	\$	74.58	\$	73.30	\$	80.78	\$	89.44	\$	99.46	\$	106.25	\$	109.52	\$	109.52	\$	111.87	\$	111.87
	Increase -- \$				(2.50)		(1.28)		7.48		8.66		10.02		6.79		3.27		-		2.35		-
	Increase -- %				-3.2%		-1.7%		10.2%		10.7%		11.2%		6.8%		3.1%		0.0%		2.1%		0.0%
10,000 Gal W & 5,000 Gal WW	Total		69.18		69.18		70.40		77.33		85.44		94.95		101.22		103.82		103.82		106.51		106.51
NHCRWA Surcharge			46.00		41.00		36.00		38.02		40.03		42.03		44.05		46.08		46.08		46.08		46.08
Total		\$	115.18	\$	110.18	\$	106.40	\$	115.34	\$	125.47	\$	136.98	\$	145.27	\$	149.89	\$	149.89	\$	152.59	\$	152.59
	Increase -- \$				(5.00)		(3.78)		8.94		10.13		11.50		8.29		4.62		-		2.69		-
	Increase -- %				-4.3%		-3.4%		8.4%		8.8%		9.2%		6.1%		3.2%		0.0%		1.8%		0.0%
30,000 Gal W & 8,000 Gal WW	Total		173.06		173.06		170.76		182.52		195.98		211.42		222.48		227.71		227.71		233.08		233.08
NHCRWA Surcharge			138.00		123.00		108.00		114.05		120.09		126.10		132.15		138.23		138.23		138.23		138.23
Total		\$	311.06	\$	296.06	\$	278.76	\$	296.57	\$	316.07	\$	337.51	\$	354.63	\$	365.93	\$	365.93	\$	371.31	\$	371.31
	Increase -- \$				(15.00)		(17.30)		17.81		19.50		21.44		17.12		11.31		-		5.38		-
	Increase -- %				-4.8%		-5.8%		6.4%		6.6%		6.8%		5.1%		3.2%		0.0%		1.5%		0.0%

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

3 Fund Balance, Revenues and Expenses

Beginning Water & Sewer Fund Balance	\$ 10,418,981	\$ 7,177,529	\$ 7,326,719	\$ 7,159,430	\$ 6,604,434	\$ 6,619,643	\$ 6,932,234	\$ 7,877,942	\$ 9,643,348	\$ 12,143,097
Revenues and Expenses										
Water Rate Revenues	4,452,707	4,651,765	4,968,595	5,314,817	5,683,150	6,047,434	6,376,846	6,593,942	6,931,753	7,164,100
NHCRWA Surcharge Revenue	3,890,421	3,579,032	3,574,859	3,915,824	4,276,038	4,634,694	5,012,451	5,292,809	5,464,665	5,640,879
WW Rate Revenues	3,053,766	3,222,398	4,003,580	5,044,890	6,356,083	7,389,383	8,031,639	8,452,794	9,122,590	9,603,213
Non-Rate Revenues	835,300	1,053,220	1,543,436	2,276,915	3,269,491	4,057,673	4,778,649	5,190,983	5,215,194	5,240,229
Total Revenues	12,232,193	12,506,415	14,090,471	16,552,446	19,584,762	22,129,185	24,199,586	25,530,528	26,734,202	27,648,421
Operating Expenses	8,386,994	7,632,684	7,947,788	8,888,904	9,441,965	9,999,541	10,585,922	11,023,678	11,419,039	11,830,236
Net Revenues Available for Capital Outlays/Debt Service/Transfers	3,845,199	4,873,732	6,142,682	7,663,542	10,142,797	12,129,644	13,613,664	14,506,850	15,315,163	15,818,185
Fund Transfers	2,125,931	2,138,209	2,202,355	2,268,426	2,336,479	2,406,573	2,478,771	2,553,134	2,629,728	2,708,619
Capital Outlays	1,361,400	485,000	485,000	485,000	485,000	485,000	485,000	485,000	485,000	485,000
Total Transfers and Capital Outlays	3,487,331	2,623,209	2,687,355	2,753,426	2,821,479	2,891,573	2,963,771	3,038,134	3,114,728	3,193,619
Total Operating Expense/Transfers/Capital Outlays	11,874,326	10,255,893	10,635,144	11,642,330	12,263,444	12,891,114	13,549,692	14,061,811	14,533,767	15,023,855
Net Revenues Available for Debt Service	2,483,799	4,388,732	5,657,682	7,178,542	9,657,797	11,644,644	13,128,664	14,021,850	14,830,163	15,333,185
Debt Service	3,599,320	2,101,332	3,622,616	5,465,112	7,306,109	8,925,480	9,704,186	9,703,311	9,700,686	9,701,186
Total Cost of Service	15,473,646	12,357,225	14,257,760	17,107,442	19,569,552	21,816,594	23,253,878	23,765,122	24,234,452	24,725,041
	TRUE	-	-	-	-	-	-	-	-	-
Scenario I										
Contingency--Net Inc/(Dec) in Fund Balance	(3,241,452)	149,190	(167,289)	(554,996)	15,210	312,591	945,708	1,765,406	2,499,749	2,923,380
Percent of COS	-20.9%	1.2%	-1.2%	-3.2%	0.1%	1.4%	4.1%	7.4%	10.3%	11.8%
Drawdown of Fund Balance for Capital Projects	-	-	-	-	-	-	-	-	-	-
Ending Water & Sewer Fund Balance	7,177,529	7,326,719	7,159,430	6,604,434	6,619,643	6,932,234	7,877,942	9,643,348	12,143,097	15,066,477
Revenue Adequacy Tests										
Debt Coverage (Goal is 1.50 -- 1.25 is required)	1.07	2.32	1.70	1.40	1.39	1.36	1.40	1.50	1.58	1.63
Target Level Fund Balance = 18% of Op. Exp.	46.4%	59.3%	50.2%	38.6%	33.8%	31.8%	33.9%	40.6%	50.1%	60.9%
Days of Expenditures in Working Capital/Fund Balance	169	216	183	141	123	116	124	148	183	222

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

4 Total Accounts

<u>Water Accounts</u>										
Total Accounts	5,669	5,923	6,188	6,465	6,753	7,001	7,258	7,524	7,798	8,082
New Accounts	-	254	265	276	288	249	257	265	274	284
Avg. Annual Growth Rate		4.49%	4.47%	4.46%	4.46%	3.68%	3.67%	3.66%	3.65%	3.64%
<u>Wastewater Accounts</u>										
Total Accounts	4,425	4,645	4,876	5,118	5,372	5,639	5,919	6,213	6,522	6,847
New Accounts	-	220	231	242	254	267	280	294	309	325
Avg. Annual Growth Rate		4.97%	4.97%	4.96%	4.96%	4.97%	4.97%	4.97%	4.97%	4.98%

5 Annual Volume

<u>Water Volume</u>										
Residential	432,470,869	454,094,413	476,799,134	500,639,090	525,671,045	546,697,887	568,565,802	591,308,434	614,960,772	639,559,202
Commercial	452,353,833	465,999,499	479,645,165	493,290,832	506,936,498	520,582,164	534,227,830	547,873,496	561,519,162	575,164,828
Municipal	8,930,685	9,051,370	9,172,055	9,292,740	9,413,425	9,534,110	9,654,795	9,775,479	9,896,164	10,016,849
ResidentialOutside	-	-	-	-	-	-	-	-	-	-
CommericalOutside	-	-	-	-	-	-	-	-	-	-
HMW SUD Wholesale	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897
Bulk Water Sales	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	903,280,285	938,670,179	975,141,251	1,012,747,559	1,051,545,864	1,086,339,057	1,121,973,324	1,158,482,307	1,195,900,996	1,234,265,777
<u>Wastewater Billing Units</u>										
Residential	231,209,391	242,776,359	254,928,173	267,664,835	281,051,326	295,087,646	309,838,779	325,304,725	341,550,466	358,640,986
Commercial	279,395,015	293,381,822	308,050,913	323,402,288	339,435,946	356,493,028	374,232,394	392,995,185	412,781,401	433,591,042
Municipal	2,887,894	3,010,992	3,134,091	3,257,190	3,380,288	3,503,387	3,626,486	3,749,584	3,872,683	3,995,782
Residential Sewer Only	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659
Commercial Sewer Only	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	516,497,667	542,174,541	569,118,546	597,329,680	626,872,927	658,089,429	690,703,027	725,054,862	761,209,918	799,233,178

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Revenue and Expense Summary
Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

1 Total Utility Fund Balance, Revenues and Expenses

Beginning Fund Balance	\$ 10,418,981	\$ 7,177,529	\$ 7,326,719	\$ 7,159,430	\$ 6,604,434	\$ 6,619,643	\$ 6,932,234	\$ 7,877,942	\$ 9,643,348	\$ 12,143,097
Revenues and Expenses										
Water Rate Revenues	4,452,707	4,651,765	4,968,595	5,314,817	5,683,150	6,047,434	6,376,846	6,593,942	6,931,753	7,164,100
NCHRWA Surcharge Revenue	3,890,421	3,579,032	3,574,859	3,915,824	4,276,038	4,634,694	5,012,451	5,292,809	5,464,665	5,640,879
WW Rate Revenues	3,053,766	3,222,398	4,003,580	5,044,890	6,356,083	7,389,383	8,031,639	8,452,794	9,122,590	9,603,213
Non-Rate Revenues	835,300	1,053,220	1,543,436	2,276,915	3,269,491	4,057,673	4,778,649	5,190,983	5,215,194	5,240,229
Total Revenues	12,232,193	12,506,415	14,090,471	16,552,446	19,584,762	22,129,185	24,199,586	25,530,528	26,734,202	27,648,421
Cost of Service										
Personnel	2,219,124	2,293,779	2,383,807	2,910,892	3,027,122	3,149,151	3,277,338	3,412,068	3,553,752	3,702,833
Operating	2,313,348	1,807,393	1,869,452	1,934,880	2,003,889	2,072,560	2,144,660	2,220,380	2,299,921	2,383,499
NHCRWA	3,854,523	3,531,512	3,694,529	4,043,132	4,410,954	4,777,829	5,163,923	5,391,230	5,565,365	5,743,903
Total Operating	8,386,994	7,632,684	7,947,788	8,888,904	9,441,965	9,999,541	10,585,922	11,023,678	11,419,039	11,830,236
Net Revenues for Transfer, Cap Outlays, Debt Service	3,845,199	4,873,732	6,142,682	7,663,542	10,142,797	12,129,644	13,613,664	14,506,850	15,315,163	15,818,185
Fund Transfer	2,125,931	2,138,209	2,202,355	2,268,426	2,336,479	2,406,573	2,478,771	2,553,134	2,629,728	2,708,619
Capital Outlays	1,361,400	485,000	485,000	485,000	485,000	485,000	485,000	485,000	485,000	485,000
Debt Service	3,599,320	2,101,332	3,622,616	5,465,112	7,306,109	8,925,480	9,704,186	9,703,311	9,700,686	9,701,186
Total Cost of Service	15,473,646	12,357,225	14,257,760	17,107,442	19,569,552	21,816,594	23,253,878	23,765,122	24,234,452	24,725,041
Contingency--Net Revenues	(3,241,452)	149,190	(167,289)	(554,996)	15,210	312,591	945,708	1,765,406	2,499,749	2,923,380
Percent of COS	-26.5%	1.2%	-1.2%	-3.4%	0.1%	1.4%	3.9%	6.9%	9.4%	10.6%
Ending Fund Balance	7,177,529	7,326,719	7,159,430	6,604,434	6,619,643	6,932,234	7,877,942	9,643,348	12,143,097	15,066,477
Revenue Adequacy Tests										
Debt Coverage	1.07	2.32	1.70	1.40	1.39	1.36	1.40	1.50	1.58	1.63
Days of Expenditures in Working Capital/Fund Balance	169	216	183	141	123	116	124	148	183	222

CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL

Current 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Revenue and Expense Summary
Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

2 WATER Utility Revenues and Expenses

Revenues and Expenses

Water Rate Revenues	\$	4,452,707	\$	4,651,765	\$	4,968,595	\$	5,314,817	\$	5,683,150	\$	6,047,434	\$	6,376,846	\$	6,593,942	\$	6,931,753	\$	7,164,100
NHCRWA Surcharge Revenue		3,890,421		3,579,032		3,574,859		3,915,824		4,276,038		4,634,694		5,012,451		5,292,809		5,464,665		5,640,879
Non-Rate Revenues		660,150		878,063		1,172,797		1,415,545		1,705,620		1,837,594		1,860,244		1,883,656		1,907,860		1,932,887
Total Revenues		9,003,278		9,108,860		9,716,251		10,646,186		11,664,808		12,519,722		13,249,542		13,770,407		14,304,278		14,737,866

Cost of Service

Personnel		1,316,284		1,360,559		1,413,939		1,726,555		1,795,468		1,867,819		1,943,819		2,023,696		2,107,694		2,196,075
Operating		1,148,679		944,562		966,937		990,642		1,015,770		1,040,470		1,066,501		1,093,943		1,122,881		1,153,405
NHCRWA		3,854,523		3,531,512		3,694,529		4,043,132		4,410,954		4,777,829		5,163,923		5,391,230		5,565,365		5,743,903
Total Operating	TRUE	6,319,486		5,836,633		6,075,405		6,760,329		7,222,192		7,686,118		8,174,243		8,508,868		8,795,940		9,093,384
Net Revenues for Transfer, Cap Outlays, Debt Service		2,683,791		3,272,227		3,640,846		3,885,856		4,442,616		4,833,604		5,075,299		5,261,539		5,508,337		5,644,482
Transfers		1,148,645		1,183,104		1,218,597		1,255,155		1,292,810		1,331,594		1,371,542		1,412,688		1,455,069		1,498,721
Capital Outlays		381,400		160,000		160,000		160,000		160,000		160,000		160,000		160,000		160,000		160,000
Debt Service		719,864		654,837		1,196,972		1,633,883		2,163,075		2,383,710		2,383,885		2,383,710		2,383,185		2,383,285

Total Cost of Service	TRUE	8,569,395		7,834,574		8,650,974		9,809,368		10,838,077		11,561,422		12,089,670		12,465,267		12,794,194		13,135,390
Contingency--Net Revenues		433,882		1,274,286		1,065,277		836,818		826,731		958,300		1,159,872		1,305,140		1,510,083		1,602,476
Percent of COS		4.8%		14.0%		11.0%		7.9%		7.1%		7.7%		8.8%		9.5%		10.6%		10.9%
Debt Coverage		3.73		5.00		3.04		2.38		2.05		2.03		2.13		2.21		2.31		2.37
		30.60%		30.05%		27.16%		24.23%		21.48%		19.82%		19.04%		18.78%		18.13%		17.88%

3 WASTEWATER Utility Revenues and Expenses

Revenues and Expenses

Wastewater Rate Revenues	\$	3,053,766	\$	3,222,398	\$	4,003,580	\$	5,044,890	\$	6,356,083	\$	7,389,383	\$	8,031,639	\$	8,452,794	\$	9,122,590	\$	9,603,213
Non-Rate Revenues		175,150		175,157		370,639		861,371		1,563,871		2,220,080		2,918,404		3,307,327		3,307,334		3,307,342
Total Revenues		3,228,916		3,397,555		4,374,219		5,906,261		7,919,954		9,609,463		10,950,044		11,760,121		12,429,924		12,910,555

Cost of Service

Personnel		902,840		933,221		969,868		1,184,337		1,231,654		1,281,332		1,333,520		1,388,372		1,446,059		1,506,758
Operating		1,164,668		862,830		902,515		944,237		988,119		1,032,091		1,078,160		1,126,437		1,177,040		1,230,094
Total Operating		2,067,508		1,796,051		1,872,383		2,128,575		2,219,772		2,313,423		2,411,679		2,514,809		2,623,099		2,736,852
Net Revenues for Transfer, Cap Outlays, Debt Service		1,161,408		1,601,504		2,501,836		3,777,686		5,700,181		7,296,040		8,538,364		9,245,311		9,806,825		10,173,703
Transfers		977,286		955,105		983,758		1,013,271		1,043,669		1,074,979		1,107,228		1,140,445		1,174,659		1,209,898
Capital Outlays		980,000		325,000		325,000		325,000		325,000		325,000		325,000		325,000		325,000		325,000
Debt Service		2,879,456		1,446,496		2,425,644		3,831,229		5,143,034		6,541,770		7,320,301		7,319,601		7,317,501		7,317,901

Total Cost of Service		6,904,251		4,522,651		5,606,785		7,298,075		8,731,475		10,255,172		11,164,209		11,299,855		11,440,258		11,589,651
Contingency--Net Revenues		(3,675,335)		(1,125,096)		(1,232,566)		(1,391,814)		(811,521)		(645,709)		(214,165)		460,265		989,666		1,320,904
Percent of COS		-113.8%		-33.1%		-28.2%		-23.6%		-10.2%		-6.7%		-2.0%		3.9%		8.0%		10.2%
Debt Coverage	Com	0.40		1.11		1.03		0.99		1.11		1.12		1.17		1.26		1.34		1.39

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
---------	--------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

1 Water Rates

Water Rates -- Residential

Monthly Base Charge

-	10,000	\$ 11.55	\$ 11.55	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10,001	15,000	13.29	13.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15,001	Above	15.29	15.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/8"	-	-	\$ 12.10	\$ 12.50	\$ 12.90	\$ 13.30	\$ 13.70	\$ 14.00	\$ 14.00	\$ 14.00	\$ 14.00	\$ 14.30	\$ 14.30	\$ 14.30	\$ 14.30	\$ 14.30
	3/4"	-	-	12.10	12.50	12.90	13.30	13.70	14.00	14.00	14.00	14.00	14.30	14.30	14.30	14.30	14.30
	1"	-	-	12.10	12.50	12.90	13.30	13.70	14.00	14.00	14.00	14.00	14.30	14.30	14.30	14.30	14.30
	1 1/2"	-	-	12.10	12.50	12.90	13.30	13.70	14.00	14.00	14.00	14.00	14.30	14.30	14.30	14.30	14.30
	2"	-	-	12.10	12.50	12.90	13.30	13.70	14.00	14.00	14.00	14.00	14.30	14.30	14.30	14.30	14.30
	3"	-	-	12.10	12.50	12.90	13.30	13.70	14.00	14.00	14.00	14.00	14.30	14.30	14.30	14.30	14.30
	4"	-	-	12.10	12.50	12.90	13.30	13.70	14.00	14.00	14.00	14.00	14.30	14.30	14.30	14.30	14.30
	6"	-	-	12.10	12.50	12.90	13.30	13.70	14.00	14.00	14.00	14.00	14.30	14.30	14.30	14.30	14.30

Volume Rate Per 1,000 Gal

-	10,000	\$ 3.02	\$ 3.02	\$ 3.02	\$ 3.11	\$ 3.20	\$ 3.30	\$ 3.40	\$ 3.47	\$ 3.47	\$ 3.47	\$ 3.54	\$ 3.54	\$ 3.54	\$ 3.54	\$ 3.54	\$ 3.54
10,001	15,000	3.77	3.77	3.77	3.88	4.00	4.12	4.24	4.33	4.33	4.33	4.41	4.41	4.41	4.41	4.41	4.41
15,001	Above	4.72	4.72	4.72	4.86	5.01	5.16	5.31	5.42	5.42	5.42	5.53	5.53	5.53	5.53	5.53	5.53
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NHCRWA Surcharge 1,000 Gal

Per 1,000 Gal	\$ 4.60	\$ 4.10	\$ 3.60	\$ 3.80	\$ 4.00	\$ 4.20	\$ 4.40	\$ 4.40	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61
---------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

Water Rates -- Commercial

Base Charge - Current

-	5,000	\$ 19.56	\$ 19.56	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5,001	50,000	31.48	31.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51,001	Above	55.11	55.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Base Charge - Proposed

	5/8"	-	-	\$ 27.45	\$ 28.30	\$ 29.15	\$ 30.05	\$ 31.00	\$ 31.65	\$ 31.65	\$ 31.65	\$ 32.30	\$ 32.30	\$ 32.30	\$ 32.30	\$ 32.30	\$ 32.30
	3/4"	-	-	27.45	28.30	29.15	30.05	31.00	31.65	31.65	31.65	32.30	32.30	32.30	32.30	32.30	32.30
	1"	-	-	27.45	28.30	29.15	30.05	31.00	31.65	31.65	31.65	32.30	32.30	32.30	32.30	32.30	32.30
	1 1/2"	-	-	27.45	28.30	29.15	30.05	31.00	31.65	31.65	31.65	32.30	32.30	32.30	32.30	32.30	32.30
	2"	-	-	27.45	28.30	29.15	30.05	31.00	31.65	31.65	31.65	32.30	32.30	32.30	32.30	32.30	32.30
	3"	-	-	27.45	28.30	29.15	30.05	31.00	31.65	31.65	31.65	32.30	32.30	32.30	32.30	32.30	32.30
	4"	-	-	27.45	28.30	29.15	30.05	31.00	31.65	31.65	31.65	32.30	32.30	32.30	32.30	32.30	32.30
	6"	-	-	27.45	28.30	29.15	30.05	31.00	31.65	31.65	31.65	32.30	32.30	32.30	32.30	32.30	32.30

Volume Rate Per 1,000 Gal

-	5,000	\$ 3.66	\$ 3.66	\$ 3.66	\$ 3.77	\$ 3.88	\$ 4.00	\$ 4.12	\$ 4.20	\$ 4.20	\$ 4.20	\$ 4.29	\$ 4.29	\$ 4.29	\$ 4.29	\$ 4.29	\$ 4.29
5,001	50,000	4.58	4.58	4.58	4.72	4.86	5.00	5.15	5.26	5.26	5.26	5.36	5.36	5.36	5.36	5.36	5.36
51,001	Above	5.72	5.72	5.72	5.89	6.07	6.25	6.44	6.57	6.57	6.57	6.70	6.70	6.70	6.70	6.70	6.70
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NHCRWA Surcharge 1,000 Gal

Per 1,000 Gal	\$ 4.60	\$ 4.10	\$ 3.60	\$ 3.80	\$ 4.00	\$ 4.20	\$ 4.40	\$ 4.40	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61	\$ 4.61
---------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

	Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
--	---------	--------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

2A Residential Inside Monthly Bill

5,000 Gal Water	Total	\$ 26.65	\$ 26.65	\$ 27.20	\$ 28.05	\$ 28.92	\$ 29.80	\$ 30.70	\$ 31.34	\$ 31.34	\$ 31.98	\$ 31.98
NHCRWA Surcharge		23.00	20.50	18.00	19.01	20.02	21.02	22.02	23.04	23.04	23.04	23.04
Total		\$ 49.65	\$ 47.15	\$ 45.20	\$ 47.06	\$ 48.94	\$ 50.82	\$ 52.72	\$ 54.37	\$ 54.37	\$ 55.02	\$ 55.02
	Increase -- \$		\$ (2.50)	\$ (1.95)	\$ 1.86	\$ 1.87	\$ 1.88	\$ 1.90	\$ 1.65	\$ -	\$ 0.65	\$ -
	Increase -- %		-5.0%	-4.1%	4.1%	4.0%	3.8%	3.7%	3.1%	0.0%	1.2%	0.0%
10,000 Gal Water	Total	\$ 41.75	\$ 41.75	\$ 42.30	\$ 43.61	\$ 44.94	\$ 46.30	\$ 47.69	\$ 48.67	\$ 48.67	\$ 49.66	\$ 49.66
NHCRWA Surcharge		46.00	41.00	36.00	38.02	40.03	42.03	44.05	46.08	46.08	46.08	46.08
Total		\$ 87.75	\$ 82.75	\$ 78.30	\$ 81.62	\$ 84.97	\$ 88.33	\$ 91.74	\$ 94.75	\$ 94.75	\$ 95.74	\$ 95.74
	Increase -- \$		\$ (5.00)	\$ (4.45)	\$ 3.32	\$ 3.35	\$ 3.36	\$ 3.41	\$ 3.01	\$ -	\$ 0.99	\$ -
	Increase -- %		-5.7%	-5.4%	4.2%	4.1%	4.0%	3.9%	3.3%	0.0%	1.0%	0.0%
30,000 Gal Water	Total	\$ 135.14	\$ 135.14	\$ 131.95	\$ 135.95	\$ 140.05	\$ 144.26	\$ 148.59	\$ 151.59	\$ 151.59	\$ 154.64	\$ 154.64
NHCRWA Surcharge		138.00	123.00	108.00	114.05	120.09	126.10	132.15	138.23	138.23	138.23	138.23
Total		\$ 273.14	\$ 258.14	\$ 239.95	\$ 249.99	\$ 260.14	\$ 270.36	\$ 280.74	\$ 289.82	\$ 289.82	\$ 292.87	\$ 292.87
	Increase -- \$		\$ (15.00)	\$ (18.19)	\$ 10.04	\$ 10.15	\$ 10.22	\$ 10.38	\$ 9.08	\$ -	\$ 3.05	\$ -
	Increase -- %		-5.5%	-7.0%	4.2%	4.1%	3.9%	3.8%	3.2%	0.0%	1.1%	0.0%

2B Commercial Monthly Bill

25,000 Gal Water	Total	\$ 141.38	\$ 141.38	\$ 137.35	\$ 141.50	\$ 145.74	\$ 150.14	\$ 154.69	\$ 157.82	\$ 157.82	\$ 160.99	\$ 160.99
NHCRWA Surcharge		115.00	102.50	90.00	95.04	100.08	105.08	110.12	115.19	115.19	115.19	115.19
Total		\$ 256.38	\$ 243.88	\$ 227.35	\$ 236.54	\$ 245.82	\$ 255.22	\$ 264.82	\$ 273.01	\$ 273.01	\$ 276.18	\$ 276.18
	Increase -- \$		\$ (12.50)	\$ (16.53)	\$ 9.19	\$ 9.28	\$ 9.40	\$ 9.60	\$ 8.19	\$ -	\$ 3.17	\$ -
	Increase -- %		-4.9%	-6.8%	4.0%	3.9%	3.8%	3.8%	3.1%	0.0%	1.2%	0.0%
50,000 Gal Water	Total	\$ 255.88	\$ 255.88	\$ 251.85	\$ 259.43	\$ 267.22	\$ 275.26	\$ 283.56	\$ 289.27	\$ 289.27	\$ 295.07	\$ 295.07
NHCRWA Surcharge		230.00	205.00	180.00	190.08	200.15	210.16	220.25	230.38	230.38	230.38	230.38
Total		\$ 485.88	\$ 460.88	\$ 431.85	\$ 449.51	\$ 467.37	\$ 485.42	\$ 503.81	\$ 519.65	\$ 519.65	\$ 525.45	\$ 525.45
	Increase -- \$		\$ (25.00)	\$ (29.03)	\$ 17.66	\$ 17.86	\$ 18.05	\$ 18.39	\$ 15.83	\$ -	\$ 5.80	\$ -
	Increase -- %		-5.1%	-6.3%	4.1%	4.0%	3.9%	3.8%	3.1%	0.0%	1.1%	0.0%

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
---------	-----------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

3 Revenues and Expenses

Revenues and Expenses

Water Rate Revenues	\$ 4,452,707	\$ 4,651,765	\$ 4,968,595	\$ 5,314,817	\$ 5,683,150	\$ 6,047,434	\$ 6,376,846	\$ 6,593,942	\$ 6,931,753	\$ 7,164,100
NHCRWA Surcharge Revenue	3,890,421	3,579,032	3,574,859	3,915,824	4,276,038	4,634,694	5,012,451	5,292,809	5,464,665	5,640,879
Non-Rate Revenues	<u>660,150</u>	<u>878,063</u>	<u>1,172,797</u>	<u>1,415,545</u>	<u>1,705,620</u>	<u>1,837,594</u>	<u>1,860,244</u>	<u>1,883,656</u>	<u>1,907,860</u>	<u>1,932,887</u>
Total Revenues	9,003,278	9,108,860	9,716,251	10,646,186	11,664,808	12,519,722	13,249,542	13,770,407	14,304,278	14,737,866
Operating Expenses	<u>6,319,486</u>	<u>5,836,633</u>	<u>6,075,405</u>	<u>6,760,329</u>	<u>7,222,192</u>	<u>7,686,118</u>	<u>8,174,243</u>	<u>8,508,868</u>	<u>8,795,940</u>	<u>9,093,384</u>
Net Revenues Available for Capital Outlays/Debt Service	2,683,791	3,272,227	3,640,846	3,885,856	4,442,616	4,833,604	5,075,299	5,261,539	5,508,337	5,644,482
Fund Transfers	1,148,645	1,183,104	1,218,597	1,255,155	1,292,810	1,331,594	1,371,542	1,412,688	1,455,069	1,498,721
Capital Outlays	<u>381,400</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>	<u>160,000</u>
Total Operating Expense/Capital Outlays/Fund Transfers	7,849,531	7,179,737	7,454,003	8,175,485	8,675,002	9,177,712	9,705,785	10,081,557	10,411,009	10,752,105
Net Revenues Available for Debt Service	2,302,391	3,112,227	3,480,846	3,725,856	4,282,616	4,673,604	4,915,299	5,101,539	5,348,337	5,484,482
Debt Service	<u>719,864</u>	<u>654,837</u>	<u>1,196,972</u>	<u>1,633,883</u>	<u>2,163,075</u>	<u>2,383,710</u>	<u>2,383,885</u>	<u>2,383,710</u>	<u>2,383,185</u>	<u>2,383,285</u>
Total Cost of Service	8,569,395	7,834,574	8,650,974	9,809,368	10,838,077	11,561,422	12,089,670	12,465,267	12,794,194	13,135,390
	TRUE									

Contingency--Net Inc/(Dec) in Fund Balance	433,882	1,274,286	1,065,277	836,818	826,731	958,300	1,159,872	1,305,140	1,510,083	1,602,476
Percent of COS	5.1%	16.3%	12.3%	8.5%	7.6%	8.3%	9.6%	10.5%	11.8%	12.2%
	-	-	-	-	-	-	-	(0)	-	-

Revenue Adequacy Tests

Debt Coverage	3.73	5.00	3.04	2.38	2.05	2.03	2.13	2.21	2.31	2.37
---------------	------	------	------	------	------	------	------	------	------	------

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

	Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
--	---------	-----------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

5 Total Accounts

Water Accounts

Total Accounts	5,669	5,923	6,188	6,465	6,753	7,001	7,258	7,524	7,798	8,082
New Accounts	-	254	265	276	288	249	257	265	274	284
Avg. Annual Growth Rate		4.49%	4.47%	4.46%	4.46%	3.68%	3.67%	3.66%	3.65%	3.64%

6 Annual Volume

Water Volume

Residential	432,470,869	454,094,413	476,799,134	500,639,090	525,671,045	546,697,887	568,565,802	591,308,434	614,960,772	639,559,202
Commercial	452,353,833	465,999,499	479,645,165	493,290,832	506,936,498	520,582,164	534,227,830	547,873,496	561,519,162	575,164,828
Municipal	8,930,685	9,051,370	9,172,055	9,292,740	9,413,425	9,534,110	9,654,795	9,775,479	9,896,164	10,016,849
ResidentialOutside	-	-	-	-	-	-	-	-	-	-
CommericalOutside	-	-	-	-	-	-	-	-	-	-
HMW SUD Wholesale	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897	9,524,897
Bulk Water Sales	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	903,280,285	938,670,179	975,141,251	1,012,747,559	1,051,545,864	1,086,339,057	1,121,973,324	1,158,482,307	1,195,900,996	1,234,265,777

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

	Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
--	---------	--------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

1 Wastewater Rates

Wastewater Rates -- Residential

Base Charge		\$	10.23	\$	10.23	\$	10.25	\$	12.30	\$	14.80	\$	17.80	\$	19.60	\$	20.20	\$	20.20	\$	20.85	\$	20.85
Usage Charge	-	Above	3.57		3.57		3.57		4.28		5.14		6.17		6.79		6.99		6.99		7.20		7.20

Wastewater Rates -- Commercial

Base Charge		\$	24.91	\$	24.91	\$	24.95	\$	29.95	\$	35.95	\$	43.15	\$	47.50	\$	48.95	\$	48.95	\$	50.45	\$	50.45
	5/8"		24.91		24.91		24.95		29.95		35.95		43.15		47.50		48.95		48.95		50.45		50.45
	3/4"		24.91		24.91		24.95		29.95		35.95		43.15		47.50		48.95		48.95		50.45		50.45
	1"		24.91		24.91		24.95		29.95		35.95		43.15		47.50		48.95		48.95		50.45		50.45
	1 1/2"		24.91		24.91		24.95		29.95		35.95		43.15		47.50		48.95		48.95		50.45		50.45
	2"		24.91		24.91		24.95		29.95		35.95		43.15		47.50		48.95		48.95		50.45		50.45
	3"		24.91		24.91		24.95		29.95		35.95		43.15		47.50		48.95		48.95		50.45		50.45
	4"		24.91		24.91		24.95		29.95		35.95		43.15		47.50		48.95		48.95		50.45		50.45
	6"		24.91		24.91		24.95		29.95		35.95		43.15		47.50		48.95		48.95		50.45		50.45

Volume Rate Per 1,000 Gal		\$	4.53	\$	4.53	\$	4.53	\$	5.44	\$	6.52	\$	7.83	\$	8.61	\$	8.87	\$	8.87	\$	9.14	\$	9.14
	-		5,001		5,001		5,001		5,001		5,001		5,001		5,001		5,001		5,001		5,001		5,001
	-		51,001		51,001		51,001		51,001		51,001		51,001		51,001		51,001		51,001		51,001		51,001
	-		-		-		-		-		-		-		-		-		-		-		-

2 Residential Monthly Bill

5,000 Gal	Total	\$	28.08	\$	28.08	\$	28.10	\$	33.72	\$	40.50	\$	48.64	\$	53.53	\$	55.15	\$	55.15	\$	56.85	\$	56.85
WW only	Increase -- \$		-		0.02		5.62		6.78		8.14		4.88		1.62		-		1.70		-		-
	Increase -- %		0.0%		0.1%		20.0%		20.1%		20.1%		10.0%		3.0%		0.0%		3.1%		0.0%		0.0%
10,000 Gal	Total		45.93		45.93		45.95		55.14		66.21		79.49		87.46		90.09		90.09		92.84		92.84
WW only	Increase -- \$		-		0.02		9.19		11.07		13.28		7.97		2.64		-		2.75		-		-
	Increase -- %		0.0%		0.0%		20.0%		20.1%		20.1%		10.0%		3.0%		0.0%		3.0%		0.0%		0.0%
20,000 Gal	Total		81.63		81.63		81.65		97.98		117.62		141.18		155.32		159.99		159.99		164.83		164.83
WW only	Increase -- \$		-		0.02		16.33		19.64		23.56		14.14		4.67		-		4.84		-		-
	Increase -- %		0.0%		0.0%		20.0%		20.0%		20.0%		10.0%		3.0%		0.0%		3.0%		0.0%		0.0%

2.1 Commercial Monthly Bill

25,000 Gal	Total	\$	135.65	\$	135.65	\$	160.60	\$	192.73	\$	231.29	\$	277.55	\$	305.34	\$	314.53	\$	314.53	\$	324.00	\$	324.00
	Increase -- \$		-		24.95		32.13		38.56		46.27		27.79		9.19		-		9.47		-		-
	Increase -- %		0.0%		18.4%		20.0%		20.0%		20.0%		10.0%		3.0%		0.0%		3.0%		0.0%		0.0%
50,000 Gal	Total	\$	276.90	\$	276.90	\$	301.85	\$	362.23	\$	434.69	\$	521.63	\$	573.83	\$	591.07	\$	591.07	\$	608.84	\$	608.84
	Increase -- \$		-		24.95		60.38		72.46		86.95		52.20		17.24		-		17.76		-		-
	Increase -- %		0.0%		9.0%		20.0%		20.0%		20.0%		10.0%		3.0%		0.0%		3.0%		0.0%		0.0%



**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
---------	-----------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: **2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"**

3 Fund Balance, Revenues and Expenses

Beginning Water & Sewer Fund Balance	\$ 10,418,981	\$ 7,177,529	\$ 7,326,719	\$ 7,159,430	\$ 6,604,434	\$ 6,619,643	\$ 6,932,234	\$ 7,877,942	\$ 9,643,348	\$ 12,143,097
Revenues and Expenses										
WW Rate Revenues	3,053,766	3,222,398	4,003,580	5,044,890	6,356,083	7,389,383	8,031,639	8,452,794	9,122,590	9,603,213
Non-Rate Revenues	175,150	175,157	370,639	861,371	1,563,871	2,220,080	2,918,404	3,307,327	3,307,334	3,307,342
Total Revenues	3,228,916	3,397,555	4,374,219	5,906,261	7,919,954	9,609,463	10,950,044	11,760,121	12,429,924	12,910,555
Operating Expenses	2,067,508	1,796,051	1,872,383	2,128,575	2,219,772	2,313,423	2,411,679	2,514,809	2,623,099	2,736,852
Net Revenues Available for Capital Outlays/Debt Service	1,161,408	1,601,504	2,501,836	3,777,686	5,700,181	7,296,040	8,538,364	9,245,311	9,806,825	10,173,703
Fund Transfers	977,286	955,105	983,758	1,013,271	1,043,669	1,074,979	1,107,228	1,140,445	1,174,659	1,209,898
Capital Outlays	980,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000
Total Operating Expense/Capital Outlays/Fund Transfers	4,024,794	3,076,156	3,181,141	3,466,845	3,588,442	3,713,402	3,843,908	3,980,255	4,122,757	4,271,750
Net Revenues Available for Debt Service	181,408	1,276,504	2,176,836	3,452,686	5,375,181	6,971,040	8,213,364	8,920,311	9,481,825	9,848,703
Debt Service	2,879,456	1,446,496	2,425,644	3,831,229	5,143,034	6,541,770	7,320,301	7,319,601	7,317,501	7,317,901
Total Cost of Service	6,904,251	4,522,651	5,606,785	7,298,075	8,731,475	10,255,172	11,164,209	11,299,855	11,440,258	11,589,651
Drawdown of Fund Balance for Capital Projects										
Contingency--Net Inc/(Dec) in Fund Balance	(3,675,335)	(1,125,096)	(1,232,566)	(1,391,814)	(811,521)	(645,709)	(214,165)	460,265	989,666	1,320,904
Percent of COS	-53.2%	-24.9%	-22.0%	-19.1%	-9.3%	-6.3%	-1.9%	4.1%	8.7%	11.4%
Ending Water & Sewer Fund Balance	7,177,529	7,326,719	7,159,430	6,604,434	6,619,643	6,932,234	7,877,942	9,643,348	12,143,097	15,066,477

**CITY OF TOMBALL
WATER/WASTEWATER COST OF SERVICE MODEL**

Current	Current 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
---------	-----------------	------	------	------	------	------	------	------	------	------

Forecast Summary

Scenario: 2024 01 15 -- Scenario 2 -- "Fund CIP with Half Rates and Half Tax Revenue"

5 Total Accounts

Wastewater Accounts

Total Accounts	4,425	4,645	4,876	5,118	5,372	5,639	5,919	6,213	6,522	6,847
New Accounts	-	220	231	242	254	267	280	294	309	325
Avg. Annual Growth Rate		4.97%	4.97%	4.96%	4.96%	4.97%	4.97%	4.97%	4.97%	4.98%

6 Annual Volume

Wastewater Billing Units

Residential	231,209,391	242,776,359	254,928,173	267,664,835	281,051,326	295,087,646	309,838,779	325,304,725	341,550,466	358,640,986
Commercial	279,395,015	293,381,822	308,050,913	323,402,288	339,435,946	356,493,028	374,232,394	392,995,185	412,781,401	433,591,042
Municipal	2,887,894	3,010,992	3,134,091	3,257,190	3,380,288	3,503,387	3,626,486	3,749,584	3,872,683	3,995,782
Residential Sewer Only	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659	1,299,659
Commercial Sewer Only	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708	1,705,708
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	516,497,667	542,174,541	569,118,546	597,329,680	626,872,927	658,089,429	690,703,027	725,054,862	761,209,918	799,233,178

**CITY OF TOMBALL
GAS COST OF SERVICE MODEL**

Oct-22 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

1 GAS Rates

Residential

Base Charge	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	
Includes 1,000 Mcf																					
Variable Monthly Charge	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	
Usage Charge	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	

2 Residential Inside Monthly Bill

3 MCF	Total	Base Charge	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75
		Usage Charge		23.50		23.50		23.50		23.50		23.50		23.50		23.50		23.50		23.50
		Variable Monthly Ch:		-		-		-		-		-		-		-		-		-
		Total		35.25		35.25		35.25		35.25		35.25		35.25		35.25		35.25		35.25
	Increase			-		-		-		-		-		-		-		-		-
5 MCF	Total	Base Charge	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75
		Usage Charge		47.00		47.00		47.00		47.00		47.00		47.00		47.00		47.00		47.00
		Variable Monthly Ch:		-		-		-		-		-		-		-		-		-
		Total		58.75		58.75		58.75		58.75		58.75		58.75		58.75		58.75		58.75
	Increase			-		-		-		-		-		-		-		-		-
10 MCF	Total	Base Charge	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75	\$	11.75
		Usage Charge		105.75		105.75		105.75		105.75		105.75		105.75		105.75		105.75		105.75
		Variable Monthly Ch:		-		-		-		-		-		-		-		-		-
		Total		117.50		117.50		117.50		117.50		117.50		117.50		117.50		117.50		117.50
	Increase			-		-		-		-		-		-		-		-		-

**CITY OF TOMBALL
GAS COST OF SERVICE MODEL**

Oct-22 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary
Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

3 Fund Balance, Revenues and Expenses

Revenues and Expenses

Gas Rate Revenues	\$ 3,365,212	\$ 5,999,389	\$ 7,325,126	\$ 7,414,323	\$ 7,505,751	\$ 7,580,721	\$ 7,657,191	\$ 7,735,190	\$ 7,814,749	\$ 7,895,900
Non-Rate Revenues	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Total Operating Revenues	3,665,212	6,299,389	7,625,126	7,714,323	7,805,751	7,880,721	7,957,191	8,035,190	8,114,749	8,195,900
Operating Expenses - O&M	\$ 1,249,690	\$ 1,346,521	\$ 1,400,010	\$ 1,456,675	\$ 1,516,800	\$ 1,580,699	\$ 1,648,723	\$ 1,721,260	\$ 1,798,742	\$ 1,881,649
Gas Purchase Cost	1,239,105	2,131,938	2,651,368	2,734,677	2,821,084	2,903,550	2,988,770	3,076,844	3,167,876	3,261,974
Total Operating Expense	2,488,795	3,478,459	4,051,378	4,191,353	4,337,884	4,484,249	4,637,493	4,798,104	4,966,618	5,143,623
Net Revenues Available for Transfers/Capital Outlays/Debt Service	1,176,417	2,820,930	3,573,747	3,522,970	3,467,866	3,396,472	3,319,698	3,237,086	3,148,131	3,052,277
Fund Transfers	823,348	712,854	750,823	791,920	836,479	884,871	937,510	994,860	1,057,437	1,125,820
Capital Outlays	850,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000	765,000
Total Transfers and Capital Outlays	1,673,348	1,477,854	1,515,823	1,556,920	1,601,479	1,649,871	1,702,510	1,759,860	1,822,437	1,890,820
Total Operating Expense/Transfers/Capital Outlays	4,162,143	4,956,314	5,567,201	5,748,273	5,939,363	6,134,120	6,340,003	6,557,964	6,789,055	7,034,443
Net Revenue Available for Debt Service	3,312,143	4,191,314	4,802,201	4,983,273	5,174,363	5,369,120	5,575,003	5,792,964	6,024,055	6,269,443
Debt Service	-	-	-	-	-	-	-	-	-	-
Total Cost of Service	4,162,143	4,956,314	5,567,201	5,748,273	5,939,363	6,134,120	6,340,003	6,557,964	6,789,055	7,034,443
	TRUE									
Contingency--Net Inc(Dec) in Fund Balance	\$ (496,931)	\$ 1,343,075	\$ 2,057,925	\$ 1,966,050	\$ 1,866,387	\$ 1,746,601	\$ 1,617,188	\$ 1,477,226	\$ 1,325,694	\$ 1,161,457
Percent of Revenues	-13.6%	21.3%	27.0%	25.5%	23.9%	22.2%	20.3%	18.4%	16.3%	14.2%

Revenue Adequacy Tests

Debt Coverage	-	-	-	-	-	-	-	-	-	-
---------------	---	---	---	---	---	---	---	---	---	---

**CITY OF TOMBALL
GAS COST OF SERVICE MODEL**

Oct-22 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

Forecast Summary

Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

5 Total Accounts

Gas Accounts

Total Accounts	4,109	4,326	4,545	4,771	5,009	5,209	5,417	5,633	5,858	6,092
New Accounts	-	217	219	227	238	200	208	216	225	234
Avg. Annual Growth Rate		5.29%	5.06%	4.99%	4.99%	3.99%	3.99%	3.99%	3.99%	3.99%

6 Annual Volume

Gas Volume

Residential	112,767	115,586	118,476	121,438	124,474	126,963	129,502	132,092	134,734	137,429
Commercial	173,634	180,374	185,175	189,805	194,550	198,441	202,409	206,458	210,587	214,798
Municipal	1,189	1,189	1,189	1,189	1,189	1,189	1,189	1,189	1,189	1,189
Industrial - New	-	179,580	179,580	179,580	179,580	179,580	179,580	179,580	179,580	179,580
Commercial - New	-	35,040	70,080	70,080	70,080	70,080	70,080	70,080	70,080	70,080
Commercial - New	-	-	70,080	70,080	70,080	70,080	70,080	70,080	70,080	70,080
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Total System	287,590	511,769	624,580	632,171	639,952	646,333	652,841	659,479	666,250	673,156

CITY OF TOMBALL											
GAS COST OF SERVICE MODEL											
2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		

Input Area -- Rates Input

Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

Gas Rates

Month of Adjustment (October = 1)	Oct-23	Oct-24	Oct-25	Oct-26	Oct-27	Oct-28	Oct-29	Oct-30	Oct-31	Oct-22
	3	3	1	1	1	1	1	1	1	1

Ave. Cost to City	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
--------------------------	------	------	------	------	------	------	------	------	------	------

Base Charge Annual Adjustment

Residential	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Municipal	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Industrial - New	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial - New	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial - New	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

City does not charge Muni Customers

Add to Cost Volumetric Adjustment- Annual

Residential	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Municipal	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Industrial - New	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial - New	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial - New	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

<div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 auto; width: 60%;"> CITY OF TOMBALL GAS COST OF SERVICE MODEL </div>												
			2023	2024	2025	2026	2027	2028	2029	2030	2031	2032

Input Area -- Rates Input

Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

Residential

Base Charge			\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750
Variable Monthly Charge			-	-	-	-	-	-	-	-	-	-
Usage Charge	1,001	Above	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750
	na	na	-	-	-	-	-	-	-	-	-	-
	na	na	-	-	-	-	-	-	-	-	-	-

Commercial

Base Charge			\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750
Variable Monthly Charge			-	-	-	-	-	-	-	-	-	-
Usage Charge	1,001	Above	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750
	na	na	-	-	-	-	-	-	-	-	-	-
	na	na	-	-	-	-	-	-	-	-	-	-

Municipal

Base Charge			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Variable Monthly Charge			-	-	-	-	-	-	-	-	-	-
Usage Charge	1,001	Above	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	na	na	-	-	-	-	-	-	-	-	-	-
	na	na	-	-	-	-	-	-	-	-	-	-

CITY OF TOMBALL GAS COST OF SERVICE MODEL											
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	

Input Area -- Rates Input

Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

Industrial - New

Base Charge			\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.750
Variable Monthly Charge			-	-	-	-	-	-	-	-	-	-
Usage Charge	1,001	Above	11.750	11.750	11.750	11.750	11.750	11.750	11.750	11.750	11.750	11.750
	na	na	-	-	-	-	-	-	-	-	-	-
	na	na	-	-	-	-	-	-	-	-	-	-

Commercial - New

Base Charge			\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75
Add-on			-	-	-	-	-	-	-	-	-	-
Usage Charge	1,001	Above	11.750	11.750	11.750	11.750	11.750	11.750	11.750	11.750	11.750	11.750
	na	na	-	-	-	-	-	-	-	-	-	-
	na	na	-	-	-	-	-	-	-	-	-	-

Commercial - New

Base Charge			\$ 11.75	\$ 11.750	\$ 11.750	\$ 11.750	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75	\$ 11.75
Add-on			-	-	-	-	-	-	-	-	-	-
Usage Charge	1,001	Above	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75
	na	na	-	-	-	-	-	-	-	-	-	-
	na	na	-	-	-	-	-	-	-	-	-	-

Summary of Results -- Rate Calculator

Revenues Less Revenue Requirement	(496,931)	1,343,075	2,057,925	1,966,050	1,866,387	1,746,601	1,617,188	1,477,226	1,325,694	1,161,457
Debt Coverage	-	-	-	-	-	-	-	-	-	-

CITY OF TOMBALL GAS COST OF SERVICE MODEL										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032

Input Area -- Rates Input

Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

GAS Rate Revenues

Residential

Base	\$	519,211	\$	545,172	\$	572,431	\$	601,052	\$	631,105	\$	656,349	\$	682,603	\$	709,907	\$	738,303	\$	767,835
Volume		805,801		812,966		819,660		825,841		831,461		835,468		839,050		842,179		844,825		846,955
Total	\$	1,325,012	\$	1,358,138	\$	1,392,091	\$	1,426,893	\$	1,462,566	\$	1,491,817	\$	1,521,653	\$	1,552,086	\$	1,583,128	\$	1,614,791

Commercial

Base	\$	58,673	\$	63,228	\$	66,594	\$	69,924	\$	73,420	\$	76,357	\$	79,411	\$	82,587	\$	85,891	\$	89,326
Volume		1,981,527		2,056,168		2,109,214		2,160,279		2,212,538		2,255,321		2,298,900		2,343,290		2,388,504		2,434,556
Total	\$	2,040,200	\$	2,119,396	\$	2,175,808	\$	2,230,203	\$	2,285,958	\$	2,331,677	\$	2,378,311	\$	2,425,877	\$	2,474,394	\$	2,523,882

Municipal

Base	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Volume		-		-		-		-		-		-		-		-		-		-
Total	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

Industrial - New

Base	\$	-	\$	71	\$	71	\$	71	\$	71	\$	71	\$	71	\$	71	\$	71	\$	71
Volume		-		2,109,995		2,109,995		2,109,995		2,109,995		2,109,995		2,109,995		2,109,995		2,109,995		2,109,995
Total	\$	-	\$	2,110,065	\$	2,110,065	\$	2,110,065	\$	2,110,065	\$	2,110,065	\$	2,110,065	\$	2,110,065	\$	2,110,065	\$	2,110,065

Commercial - New

Base	\$	-	\$	71	\$	141	\$	141	\$	141	\$	141	\$	141	\$	141	\$	141	\$	141
Volume		-		411,720		823,440		823,440		823,440		823,440		823,440		823,440		823,440		823,440
Total	\$	-	\$	411,791	\$	823,581	\$	823,581	\$	823,581	\$	823,581	\$	823,581	\$	823,581	\$	823,581	\$	823,581

Commercial - New

Base	\$	-	\$	-	\$	141	\$	141	\$	141	\$	141	\$	141	\$	141	\$	141	\$	141
Volume		-		-		823,440		823,440		823,440		823,440		823,440		823,440		823,440		823,440
Total	\$	-	\$	-	\$	823,581	\$	823,581	\$	823,581	\$	823,581	\$	823,581	\$	823,581	\$	823,581	\$	823,581

Total Gas Revenue

	\$	3,365,212	\$	5,999,389	\$	7,325,126	\$	7,414,323	\$	7,505,751	\$	7,580,721	\$	7,657,191	\$	7,735,190	\$	7,814,749	\$	7,895,900
--	----	-----------	----	-----------	----	-----------	----	-----------	----	-----------	----	-----------	----	-----------	----	-----------	----	-----------	----	-----------

Less Net Revenue Requirement

		3,862,143		4,656,314		5,267,201		5,448,273		5,639,363		5,834,120		6,040,003		6,257,964		6,489,055		6,734,443
--	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------

Net Revenues

		(496,931)		1,343,075		2,057,925		1,966,050		1,866,387		1,746,601		1,617,188		1,477,226		1,325,694		1,161,457
--	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------

<div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 auto; width: 60%;"> CITY OF TOMBALL GAS COST OF SERVICE MODEL </div>										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032

Input Area -- Rates Input

Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

Coverage Calculation

Revenues

Gas Rate Revenues	\$	3,365,212	\$	5,999,389	\$	7,325,126	\$	7,414,323	\$	7,505,751	\$	7,580,721	\$	7,657,191	\$	7,735,190	\$	7,814,749	\$	7,895,900
Non-Rate Revenues		<u>300,000</u>		<u>300,000</u>		<u>300,000</u>		<u>300,000</u>		<u>300,000</u>		<u>300,000</u>		<u>300,000</u>		<u>300,000</u>		<u>300,000</u>		<u>300,000</u>
		3,665,212		6,299,389		7,625,126		7,714,323		7,805,751		7,880,721		7,957,191		8,035,190		8,114,749		8,195,900

Expenses

Total Gas System Expenses		<u>3,312,143</u>		<u>4,191,314</u>		<u>4,802,201</u>		<u>4,983,273</u>		<u>5,174,363</u>		<u>5,369,120</u>		<u>5,575,003</u>		<u>5,792,964</u>		<u>6,024,055</u>		<u>6,269,443</u>
		3,312,143		4,191,314		4,802,201		4,983,273		5,174,363		5,369,120		5,575,003		5,792,964		6,024,055		6,269,443

Net Revenues Available for Debt Service		353,069		2,108,075		2,822,925		2,731,050		2,631,387		2,511,601		2,382,188		2,242,226		2,090,694		1,926,457
---	--	---------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------

Debt Service		-		-		-		-		-		-		-		-		-		-
--------------	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---

Debt Coverage		-		-		-		-		-		-		-		-		-		-
----------------------	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---

CITY OF TOMBALL												
GAS COST OF SERVICE MODEL												
			2023	2024	2025	2026	2027	2028	2029	2030	2031	2032

Input Area -- Rates Input

Scenario: 2023 11 20 - Scenario 1 - NG Cost of Service

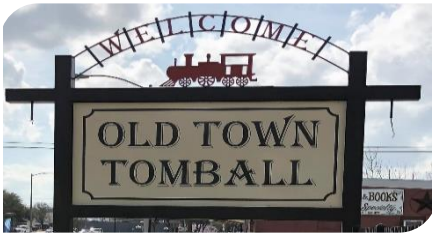
GAS -- Customer and Usage Data

Net Annual Volume after Minimum:

Category	Sub-Category	Rate	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Residential	All	100.0%	68,579	69,189	69,758	70,284	70,763	71,104	71,409	71,675	71,900	72,081
	na	0.0%	-	-	-	-	-	-	-	-	-	-
	na	0.0%	-	-	-	-	-	-	-	-	-	-
		100.0%	68,579	69,189	69,758	70,284	70,763	71,104	71,409	71,675	71,900	72,081
Commercial	All	100.0%	168,641	174,993	179,508	183,854	188,301	191,942	195,651	199,429	203,277	207,196
	na	0.0%	-	-	-	-	-	-	-	-	-	-
	na	0.0%	-	-	-	-	-	-	-	-	-	-
		100.0%	168,641	174,993	179,508	183,854	188,301	191,942	195,651	199,429	203,277	207,196
Municipal	All	100.0%	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067
	na	0.0%	-	-	-	-	-	-	-	-	-	-
	na	0.0%	-	-	-	-	-	-	-	-	-	-
		100.0%	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067
Industrial - New	All	100.0%	-	179,574	179,574	179,574	179,574	179,574	179,574	179,574	179,574	179,574
	na	0.0%	-	-	-	-	-	-	-	-	-	-
	na	0.0%	-	-	-	-	-	-	-	-	-	-
		100.0%	-	179,574	179,574	179,574	179,574	179,574	179,574	179,574	179,574	179,574
Commercial - New	All	100.0%	-	35,040	70,080	70,080	70,080	70,080	70,080	70,080	70,080	70,080
	na	0.0%	-	-	-	-	-	-	-	-	-	-
	na	0.0%	-	-	-	-	-	-	-	-	-	-
		100.0%	-	35,040	70,080	70,080	70,080	70,080	70,080	70,080	70,080	70,080
Commercial - New	All MCF	100.0%	-	-	70,080	70,080	70,080	70,080	70,080	70,080	70,080	70,080
	na	0.0%	-	-	-	-	-	-	-	-	-	-
	na	0.0%	-	-	-	-	-	-	-	-	-	-
		100.0%	-	-	70,080	70,080	70,080	70,080	70,080	70,080	70,080	70,080
Total			238,286	459,862	570,066	574,939	579,864	583,846	587,860	591,904	595,977	600,078
	1	Above	100.0%	238,286	459,862	570,066	574,939	579,864	583,846	587,860	591,904	600,078
	15,001	25,000	0.0%	-	-	-	-	-	-	-	-	-
	25,001	Above	0.0%	-	-	-	-	-	-	-	-	-
		100.0%	238,286	459,862	570,066	574,939	579,864	583,846	587,860	591,904	595,977	600,078

Customer Class Units -- Total Bills

Residential	Total	44,188	46,398	48,717	51,153	53,711	55,859	58,094	60,418	62,834	65,348
Commercial	Total	4,993	5,381	5,668	5,951	6,248	6,498	6,758	7,029	7,310	7,602
Municipal	Total	122	122	122	122	122	122	122	122	122	122
Industrial - New	Total	-	6	6	6	6	6	6	6	6	6
Commercial - New	Total	-	6	12	12	12	12	12	12	12	12
0	Total	-	-	-	-	-	-	-	-	-	-
Total System		49,304	51,913	54,537	57,257	60,112	62,510	65,005	67,599	70,297	73,102



5500 Democracy Drive, Suite 130
Plano Texas 75024
800.755.6864 | Fax: 888.326.6864
www.willdan.com