Technical Report

CITY OF FULSHEAR

COST OF SERVICE AND RATE DESIGN STUDY

SEPTEMBER 9, 2022

Nelisa Heddin Consulting, LLC
P.O. Box 341855
Lakeway, TX 78734
(512) 589-1028
nheddin@nelisaheddinconsulting.com

COST OF SERVICE ANALYSIS

Nelisa Heddin Consulting, LLC (NH Consulting) is pleased to present the City of Fulshear (City) with the results of an update of a cost of service and rate design study performed for the City's water and wastewater utility. The City retained NH Consulting to perform a cost of service and rate design study for the City's water and wastewater utility. The study's intent is to achieve a water and wastewater rate structure that will assure equitable and adequate revenues for operations, debt service retirement, capital improvements and bond covenant requirements. Therefore ensuring the utility operates on a self-sustaining basis while considering the economic impact on the City's customers.

The project team has worked closely with City staff to develop revenue requirements and determine the cost of providing service to each of the City's customers. The project team identified that in order to meet future revenue requirements, the City needs to implement future water and wastewater rate increases. The analysis examined revenue requirements for a five-year study period, FY2023-FYE2027 and recommended rates sufficient to meet revenue requirements for the five-year study period. The recommended rates are outlined in Tables 1 through 3.

The recommended rates include a proposed change to the City's current billing methodology for residential customers for wastewater services. Specifically, the City currently bills residential customers for wastewater services based upon their metered water consumption, with a "cap" at 16,000 gallons of use. The project team recommends changing this policy to billing residential customers based upon winter averaging which is further discussed in this report.

Table 1: Recommended Water Rates, Minimum Bill

Proposed Base Fee	Current	2023	2024	2025	2026	2027
5/8" Meter	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
3/4" Meter	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
1" Meter	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
1 1/2" Meter	$ 5.50	$ 26.04	$ 26.04	$ 26.04	$ 26.04	$ 26.04
2" Meter	$ 5.50	$ 47.04	$ 47.04	$ 47.04	$ 47.04	$ 47.04
3" Meter	$ 8.80	$ 72.24	$ 72.24	$ 72.24	$ 72.24	$ 72.24
4" Meter	$ 16.50	$ 139.43	$ 139.43	$ 139.43	$ 139.43	$ 139.43
6" Meter	$ 27.50	$ 215.03	$ 215.03	$ 215.03	$ 215.03	$ 215.03

Table 2: Recommended Water Rates, Volumetric Rate

Water Volumetric Rate	Current	2023	2024	2025	2026	2027
0-5000	$ -	$ -	$ -	$ -	$ -	$ -
5,001-10,000	$ 2.00	$ 2.77	$ 2.77	$ 2.77	$ 2.77	$ 2.77
10,001-20,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
20,001-30,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
25,001-30,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
Above 30,001	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77

Table 3: Recommended Wastewater Rates

Wastewater	Current	2023	2024	2025	2026	2027
Base Fee	$ 5.50	$ 8.83	$ 17.07	$ 17.07	$ 17.07	$ 17.07
Volumetric Fee	$2.00-5.00	$ 8.56	$ 8.56	$ 8.56	$ 8.56	$ 8.56

COST OF SERVICE ANALYSIS

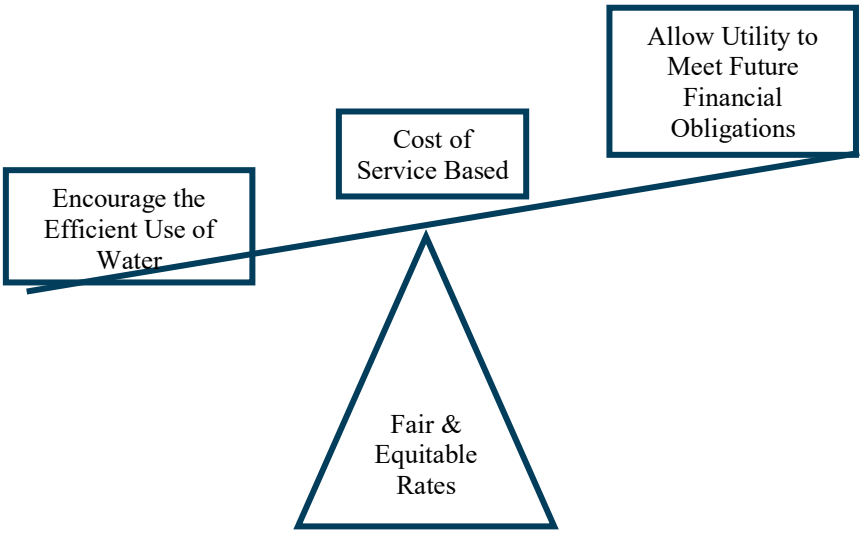
RATE SETTING THEORY

The American Water Works Association (AWWA) sets forth a methodology for rate setting based on cost-of-service principles. The premise of this methodology is to require users to pay the cost incurred by the utility to provide that user with water service.

This analysis utilizes a "cash-basis" methodology for determining customer rates. The "cash-basis" methodology sets customer rates to meet the annual cash requirements of the utility. Cash requirements include annual operations and maintenance expenses, annual debt service requirements and annual cash-capital outlay. The analysis does not include depreciation expense or a return on investment/profit.

Water Rate Setting Approach

RATE DESIGN GENERAL COMPONENTS



During rate analysis, the primary consideration is to determine rates that are fair and equitable among all customers. Rates should recover the cost associated with providing service to each customer from that particular customer. Determining rates that fully achieve this goal involves a detailed analysis of each individual customer's consumption pattern. Since this is an impractical feat for most utility systems, a typical rate design fits average conditions for groups of customers having similar service requirements. When grouping customer classes, one divides customers that utilize water in a similar pattern (such as residential, commercial, apartments and irrigation). Then, analysis of historical usage patterns for each customer grouping and assignment of costs accordingly.

The AWWA emphasizes, "Departure from rates based on cost of service is generally a decision made for political, legal or other reasons. Consideration of rates deviating from cost of service, therefore, is made by politicians, not the rate designer." In addition, the AWWA states that "when a deviation from cost-related rates is made, the reason for such modification should be explicitly understood so that the responsibility for such deviation is placed on legal and policy-making factors, and the public is not misled into believing that the resulting rates are fully cost-related when they are not."

It is important to consider when designing and implementing a new rate structure that, while the goal is to get as close as possible to cost of service based rates, with respect for each City's own political environment.

RATE COMPONENTS

Typically, billing for water services consists of a minimum bill and a volumetric component. The intention of the minimum bill is to recover the basic costs associated with providing service to the customer, regardless of the volume of the water utilized. The minimum bill (base fee) generally should recover the annual debt service of the utility as well as the cost of reading meters and customer billing. The second component of the rates is a volumetric charge. This charge is based on the amount of water utilized by the customer, and may fluctuate based on actual usage.

Minimum Bill

The AWWA provides guidelines for the determination of the minimum bill on a cost basis. Many utilities set their minimum bill based on policy initiatives. The utility may want to use the minimum charge to guarantee a certain percentage of revenue. Another strategy in setting a minimum bill

involves providing lifeline rates for customers, where the customer receives a certain amount of water included in the base charge fee. This allows the customer a higher degree of control over their water bill.

There are two (2) primary options available regarding the structure of the minimum bill:

Meter Size – As previously described, the utility is obligated under State Law to maintain system capacity based on the number and size of connections the utility serves. The reasoning is that the larger the meter a customer has, the greater the ability to place a larger demand on the system. Thus, regardless of the amount of water that a customer actually uses, the utility is still required to maintain the capacity to serve that customer based on their meter size.

Accordingly, a minimum bill based on meter size, in which the larger the meter, the higher the bill, recovers the cost the utility incurs due to the potential increased demand placed on the system by that particular customer. The AWWA provides "meter size equivalency factors," a scale of factors are applied to the base charge for a ⅝ inch connection to determine the minimum that should be charged to larger connections.

NH Consulting recommends the City set base fees utilizing the AWWA's meter equivalency ratios.

Equalized Minimum Bill – The alternative minimum bill structure would be an equalized minimum bill in which all customers pay the same fee, regardless of meter size. This very simple fee structure is easy to understand by the utility's customers. In addition, most billing systems are able to accommodate this fee structure. However, it may not be equitable among the utility's customers, depending on that particular utility's customer base.

Volumetric Rate

The second component of the fee structure is the volumetric rate. The basis for the volumetric fees is the actual volume of water each customer uses each month. The volumetric rates usually recover the variable costs associated with providing water to the utility's customers as well as a portion of fixed costs. Utilities also use volumetric rates as a pricing signal to encourage the efficient usage of water. Below are some volumetric rate design options for consideration.

Customer Class – Dclasses of customers utilize water in different ways. Some customers use large amounts of water seasonally for irrigation, while other customers' monthly water use varies only slightly. There is a significant cost implication to different water usage patterns. Those customers who use water irregularly throughout the year, such as those who irrigate, cause the utility's water system to have a higher peaking than those customers who use a consistent amount of water monthly. A case can be made that utilities should classify customers into like groupings (such as residential, commercial, apartments and irrigation) and charge those customers different rates based on their relative usage patterns. The AWWA has outlined a methodology for determining these rates called the Base-Extra Capacity methodology. The basic premise of this methodology is to isolate usage patterns based on customer classifications and allocate costs to those customers based on peaking patterns. While this is a complex task, it is arguably the most equitable means of charging customers for water usage.

The drawback to this methodology is that it is a slightly more complex fee structure that some customers may have difficulty understanding. Prior to implementation, the utility's billing system requires examination to ensure that it is capable of charging customers based on this structure.

Equalized Rate – An alternative to varying volumetric rates based on customer class is to charge all customers the same volumetric rate. This is appropriate for utilities that have a relatively homogenous customer base in which most customers use water in a similar pattern. This rate structure is easy for customers to understand, and usually most billing systems can accommodate equalized rates. The industry recommends that each utility examine its customer base to determine if it is a homogenous group of customers, or if there are customers who use water in different patterns. If the latter is the case, then equalized rates may not be equitable to some customer classifications.

Based upon the project team's review of historical use data, NH Consulting recommends the City continue to assess the same volumetric charge for all customer groups.

WATER CONSUMPTION

As of December 2021, the City provides water services to 6,221 retail, potable water customers. The City meters all active potable water connections. Annual metered water consumption was approximately 792 million gallons in 2021.

Table 4: Historical Water Consumption and Customer Count

Year	Customer Count	Consumption (Gal)
2019	4,623	621,248,070
2020	5,386	791,912,433
2021	6,221	791,741,381

WORK PLAN

In determining water rates, NH Consulting relies upon a methodology described by the American Water Works Association called the Base-Extra Capacity methodology. This methodology approximates the cost associated with serving various classifications of customers.

Essentially, the methodology utilizes a five-step approach:

Step 1: Revenue Requirement Determination
Step 2: Cost Functionalization
Step 3: Customer Cost Allocation
Step 4: Customer Count and Billing Unit Determination
Step 5: Rate Design

NH Consulting has performed each of these steps in coordination with City staff. The next sections describe each step along with the results.

STEP 1: REVENUE REQUIREMENT DETERMINATION

BASE YEAR REVENUE REQUIREMENT

WATER FUND

To account for the water utility operations, the City has an Enterprise Fund that accounts for water operational revenues and expenditures. To determine the water utility revenue requirements, NH Consulting relied on the City's budgeted and historical actual expenditures within the Water Enterprise Fund as a starting point.

SYSTEM EXPENDITURES

A base year estimate of costs helps to determine the City's future revenue requirements. This cost estimate is reflective of the normal operation of the water utility, and adjusted for known and measurable changes into the future. NH Consulting used the FY2023 Budget as the Test Year for the revenue requirement phase of the study. A comparison of FY2019 through FY2021 actual expenditures and FY2022 budgeted expenditures, to FY2023 budgeted expenditures has indicated that the FY2023 Budget provides a conservative estimate of the revenues and expenses associated with the operation of the water utility.

REVENUE OFFSETS

In order to isolate the revenues required by rates from all customers, it was necessary to capture all revenue offsets and remove the corresponding dollar amount from the gross revenue requirement to determine the net revenue requirement. Revenue offsets are items such as late fees and interest income that offset the City's expense.

BASE YEAR REVENUE REQUIREMENT

The base year total revenue requirement determined by the project team for the water utility for FY2023 was $4,494,897.

INFLATION

NH Consulting accounted for inflationary influences on annual expenditures by applying a 3% annual inflation rate for most expenditure categories in developing the five-year revenue requirement.

VARIABLE COSTS

Water purchases, chemicals, and electricity expenses were determined using a variable cost analysis. NH Consulting determined the actual cost per thousand gallons for the previous year, and applied that cost, plus inflation, to projected water production in the future.

CAPITAL IMPROVEMENT FUNDING

As outlined on Table 5, the City has identified approximately $71.3M in capital projects for the Water Utility. NH Consulting worked with City staff to establish a funding plan for these improvements.

It was identified that approximately $8.9M of the improvements have existing funding sources and therefore these projects will not impact customer rates.

The remaining $62.4M in capital improvements are projected to be funded through future debt issuances, Table 6. Debt service payments that are not otherwise recovered from impact fees, for debt projected to be issued in 2022 and 2023 have been included in this analysis. It is projected that payments associated with the Series 2027 and 2028 debt would not fall within the study period. If/when the City issues this debt, additional analysis should be performed to determine the impact these issuances would have on the rate structure. This analysis assumes the City adopts the maximum allowable impact fee as developed in the City's impact fee study dated July, 2022, thus the balance of the debt service not recovered through the water and wastewater rates as outlined in this report should be funded through the Impact Fee Fund.

Table 5: Summary of Capital Improvements, Water

	Water
Construction and Engineering Design (2022 Dollars)	$ 63,993,192
Legal and Permitting Costs	926,371
Inflation Adjustments	6,409,266
Total Adjusted CIP	$ 71,328,829

Table 6: Summary of Projected Debt Issuances, Water

	Water
Series 2022	$ 28,254,631
Series 2023	883,748
Series 2027	25,355,640
Series 2028	7,949,681
	$ 62,443,700

REVENUE OFFSETS

Revenue-offset projections remained constant throughout the study period, for the benefit of conservative estimations.

FIVE-YEAR REVENUE REQUIREMENT

Table 7 outlines the five-year revenue requirement for the Water Utility. Schedule 1 shows each line item with details.

Table 7: Water Utility Five-Year Revenue Requirement.

	2023	2024	2025	2026	2027
Revenue Requirements	$4,494,897	$4,883,103	$5,296,045	$5,737,800	$6,287,371

STEP 2: COST FUNCTIONALIZATION

BACKGROUND ON COST FUNCTIONALIZATION

The American Water Works Association ("AWWA") and the Texas Commission on Environmental Quality ("TCEQ") have accepted the base-extra capacity methodology and it is commonly used in the water utility industry. This is a methodology of functionalization, allocating costs to service functions, and distributing costs to customer classes. It recognizes the differences in the cost of providing service due to variations in average rate of use and peak rate of use by a customer class. This method also distinguishes the effects of system diversity on costs. Generally, the three components of costs include:

- Base Costs
- Extra-Capacity Costs
- Customer Billing Costs

Base costs fluctuate with the total amount of water taken under average operating conditions. Extra-capacity costs are those costs incurred that are above the average operating conditions and are necessary to support peaking conditions. Customer billing costs are those costs associated with serving customers, such as meter reading and billing.

Cost Functionalization Analysis

The project team thoroughly analyzed The City's cost structure and functionalized the costs into appropriate categories. Table 8 presents the cost functionalization for the three-year study period.

Table 8: Cost Functionalization.

	2023	2024	2025	2026	2027
Base Costs	$ 2,376,922	$ 2,701,475	$ 3,073,403	$ 3,473,313	$ 3,980,241
Extra-Capacity Costs	1,610,825	1,659,692	1,685,558	1,711,898	1,738,680
Customer Costs	507,151	521,937	537,083	552,589	568,450
Total	$ 4,494,897	$ 4,883,103	$ 5,296,045	$ 5,737,800	$ 6,287,371

Step 3: Customer Cost Allocation

Customer Cost Allocation Background

The establishment of customer classes is important in setting equitable rates, so that costs designated for each class are appropriate. A customer class should include only those customers who:

a. Are in similar location in relation to the utility;
b. Use the same or similar facilities of the utility;
c. Receive similar service from the utility;
d. Place similar demands on the utility.

The objective of the distribution of costs to customer groups is to avoid cross-subsidization (inequities between customer classes). With this objective in mind, it is imperative to weigh all differences in service commitment and service requirements when determining the customer classes.

Once all appropriate customer classifications have been determined, the next step is to analyze usage patterns for each customer class. Usage analysis includes evaluating the average and peak usage for each customer class. Finally, the cost allocation to customer classes, based on relative usage patterns, is completed.

In analyzing the City's customers and historical use, NH Consulting recommends the City continue to utilize the customer class categories of residential, commercial and apartment.

Step 4: Customer Growth and Billing Units

Customer Growth

Population projections for a City should reasonably reflect anticipated future conditions within the City. NH Consulting worked closely with City staff to make projections of future growth within the City. In order to be conservative, these estimates are more conservative than those made by the City's engineer in its most recent Impact Fee Study.

Table 9: Projected Customer Count

	2023	2024	2025	2026	2027
Total Customer Count	8,256	9,682	11,340	12,981	15,022

Billing Unit Projection

Projecting future consumption first involves an in-depth examination of historical use for each classification of customer. Historical use is analyzed to determine the average use per connection in a "normal" rainfall year. This normalized average use is then applied to the future projected customer could in order to make a future projection of consumption.

Table 10: Projected Water Consumption (Gallons).

	2023	2024	2025	2026	2027
Annual Consumption	1,038,560,630	1,206,018,824	1,400,753,979	1,593,483,848	1,833,187,667

Step 5: Rate Design

There are many different rate design options regarding water rate development, however, the goal is to provide a fair and equitable rate for all customer classes, mitigate "rate-shock" on the City's customers and allow for the water utility to operate and remain self sufficient.

Minimum Bill

NH Consulting recommends that the City continue to bill water customers a minimum base charge which is based upon meter size. The recommended minimum bill for each customer class is outlined on Table 11 below.

Volumetric Rate

The volumetric rates for the City have been designed to recover revenue requirements not otherwise recovered through the base charge. The recommended volumetric rates are outlined on Table 12.

Table 11: Recommended Water Rates, Minimum Bill

Proposed Base Fee	Current	2023	2024	2025	2026	2027
5/8" Meter	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
3/4" Meter	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
1" Meter	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
1 1/2" Meter	$ 5.50	$ 26.04	$ 26.04	$ 26.04	$ 26.04	$ 26.04
2" Meter	$ 5.50	$ 47.04	$ 47.04	$ 47.04	$ 47.04	$ 47.04
3" Meter	$ 8.80	$ 72.24	$ 72.24	$ 72.24	$ 72.24	$ 72.24
4" Meter	$ 16.50	$ 139.43	$ 139.43	$ 139.43	$ 139.43	$ 139.43
6" Meter	$ 27.50	$ 215.03	$ 215.03	$ 215.03	$ 215.03	$ 215.03

Table 12: Recommended Water Rates, Volumetric Rates

Water Volumetric Rate	Current	2023	2024	2025	2026	2027
0-5000	$ -	$ -	$ -	$ -	$ -	$ -
5,001-10,000	$ 2.00	$ 2.77	$ 2.77	$ 2.77	$ 2.77	$ 2.77
10,001-20,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
20,001-30,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
25,001-30,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
Above 30,001	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77

Wastewater System

As of December 2021, the City had 5,901 wastewater connections. As wastewater is not typically metered, and for many residential customers, a portion of their water use is for outdoor irrigation purposes, their water use is not necessarily representative of what is coming back to the system as wastewater. As a result, it is necessary to employ a methodology for reasonably estimating wastewater use based on water consumption for residential customers.

For residential customers, a winter averaging methodology was utilized for estimating residential wastewater use.

Generally commercial customers are not irrigating, thus, their water use also comes back to the system as wastewater. For that reason, commercial customer billing uses water consumption as a foundation for wastewater billing.

WORK PLAN

The determination of wastewater rates is somewhat simpler as the wastewater utility is not subject to the same influences of peaking as the water utility.
NH Consulting utilized a three-step approach to determining the wastewater rates:

Step 1: Revenue Requirement Determination
Step 2: Customer Count and Billing Unit Determination
Step 3: Rate Design

NH Consulting has performed each of these steps in coordination with City staff; below shows the description and results of each step.

STEP 1: REVENUE REQUIREMENT DETERMINATION

BASE YEAR REVENUE REQUIREMENT

WASTEWATER FUND

To account for the wastewater utility operations, the City has an Enterprise Fund that accounts for water operational revenues and expenditures. To determine the water utility revenue requirements, NH Consulting relied on the City's budgeted and historical actual expenditures within the Wastewater Enterprise Fund as a starting point.

SYSTEM EXPENDITURES

A base year estimate of costs helps to determine the City's future revenue requirements. This cost estimate is reflective of the normal operation of the wastewater utility, and adjusted for known and measurable changes into the future. NH Consulting used the FY2023 budget as the Test Year for the revenue requirement phase of the study. A comparison of FY2019 through FY2021 actual expenditures and FY2022 Budgeted expenditures, to FY2023 budgeted expenditures has indicated that the FY2023 Budget provides a conservative estimate of the revenues and expenses associated with the operation of the wastewater utility.

REVENUE OFFSETS

In order to isolate the revenues required by rates from all customers, it was necessary to capture all revenue offsets and remove the corresponding dollar amount from the gross revenue requirement to determine the net revenue requirement. Revenue offsets are items such as late fees and interest income that offset the City's expense.

BASE YEAR REVENUE REQUIREMENT

The base year total revenue requirement determined by the project team for the wastewater utility for FYE 2023 was $3,376,984.

INFLATION

NH Consulting accounted for inflationary influences on annual expenditures by applying a 3% annual inflation rate for most expenditure categories in developing the five-year revenue requirement.

VARIABLE COSTS

Sludge removal, chemicals, and electricity expenses were determined using a variable cost analysis. NH Consulting determined the actual cost per thousand gallons for the previous year, and applied that cost, plus inflation, to projected water production in the future.

CAPITAL IMPROVEMENT FUNDING

As outlined on Table 13, the City has identified approximately $103M in capital projects for the Wastewater Utility. NH Consulting worked with City staff to establish a funding plan for these improvements.

It was identified that approximately $1.9M of the improvements have existing funding sources and therefore these projects will not impact customer rates.

The remaining $101M in capital improvements are projected to be funded through future debt issuances, Table 14. Debt service payments for debt projected to be issued in 2022 and 2023 have been included in this analysis. It is projected that payments associated with the Series 2027 and 2028 debt would not fall within the study period. If/when the City issues this debt, additional analysis should be performed to determine the impact these issuances would have on the rate structure. This analysis assumes the City adopts the maximum allowable impact fee as developed in the City's impact fee study dated July, 2022, thus the balance of the debt service not recovered through the water and wastewater rates as outlined in this report should be funded through the Impact Fee Fund.

Table 13: Summary of Capital Improvements, Wastewater

	Water
Construction and Engineering Design (2022 Dollars)	$ 88,748,282
Legal and Permitting Costs	1,314,917
Inflation Adjustments	12,958,970
Total Adjusted CIP	$ 103,022,169

Table 14: Summary of Projected Debt Issuances, Wastewater

	Water
Series 2022	$ 8,089,724
Series 2023	26,730,642
Series 2027	62,993,992
Series 2028	3,401,979
	$ 101,216,337

REVENUE OFFSETS

Revenue-offset projections remained constant throughout the study period, for the benefit of conservative estimations.

FIVE-YEAR REVENUE REQUIREMENT

Table 15 outlines the five-year revenue requirement for the Wastewater Utility. Schedule 2 shows each line item with details.

Table 15: Wastewater Utility Five-Year Revenue Requirement.

	2023	2024	2025	2026	2027
Revenue Requirements	$ 3,376,984	$ 4,664,544	$ 4,981,364	$ 5,330,159	$ 5,743,367

STEP 2: CUSTOMER GROWTH AND BILLING UNITS

CUSTOMER GROWTH

The project team worked with City staff to develop reasonable growth projections for the wastewater utility.

Table 16: Wastewater Customer Count Projection.

	2023	2024	2025	2026	2027
Total Customer Count	7,832	9,080	10,505	11,986	13,723

BILLING UNIT PROJECTION

To anticipate usage for each customer classification requires an examination of historical billing units, also known as water consumption, to find the "normal" pattern for each class. Through a "normalized" average usage, per connection, per month, then multiplying the usage by the projected customer count, results in the estimated billing units and consumption. Table 17 presents wastewater billing projections.

Table 17: Wastewater Usage (Gallons)

	2023	2024	2025	2026	2027
Wastewater Billing Projection	671,997	767,601	876,793	990,369	1,123,437

STEP 3: DETERMINATION OF WASTEWATER RATES

The recommended wastewater rates are presented on Table 18 below.

It must be noted that the below rates include a recommendation for the City to change its billing policy for residential customers for wastewater services from its current policy of billing based upon metered water use, with a cap at 16,000 gallons. NH Consulting instead recommends that the City bill residential customers for wastewater services based upon the individual customer's winter average. The assumption is that in winter months, residential customers typically do not irrigate, and as such, their winter use is a reasonable proxy to estimate the demands each customer is placing on the wastewater system.

Table 18: Recommended Wastewater Rates

Wastewater	Current	2023	2024	2025	2026	2027
Base Fee	$ 5.50	$ 8.83	$ 17.07	$ 17.07	$ 17.07	$ 17.07
Volumetric Fee	$ 2.00-5.00	$ 8.56	$ 8.56	$ 8.56	$ 8.56	$ 8.56

ALTERNATIVES

As previously described, the recommended rates have assumed that the City will implement the maximum allowable impact fees as outlined in the Impact Fee Study dated July, 2022. In addition, the analysis has also assumed that the City will issue future debt with a 30-year term. These assumptions represent the project team's recommendations as they represent the least impact to the City's existing customers. The recommended rates are outlined on Schedule 3, and is referred to as "Option 1."

However, in order to allow the City to better understand its alternatives as it relates to the above assumptions, NH Consulting has also prepared the following rate design alternatives:

Option 2: 20-Year Debt – This option also assumes the City will implement the maximum allowable impact fees, however, instead of issuing 30-year debt, the project team has assumed the City will issue 20-year debt. The rates for this option are further outlined on Schedule 4.

Option 3: Implementation of 75% Impact Fee – Like Option 1, this option assumes the City will issue 30-year debt, however, it assumes that the City will adopt an impact fee equal to 75% of the maximum allowable level. The rates for this option are further outlined on Schedule 5.

Option 4: Implementation of 50% Impact Fee – Like Option 1, this option assumes the City will issue 30-year debt, however, it assumes that the City will adopt an impact fee equal to 50% of the maximum allowable level. The rates for this option are further outlined on Schedule 6.

Table 19 summarizes the assumptions for each of the 4 Options presented.

Table 19: Summary of Alternatives

	Debt Term (Years)	Impact Fee Level
Option 1	30	Max Allowable
Option 2	20	Max Allowable
Option 3	30	75%
Option 4	30	50%

City of Fulshear
Water and Wastewater Utility
Cost of Service and Rate Design Study

Schedule 1
Water Revenue Requirement Projection
FINAL

	2023	2024	2025	2026	2027	Inflation %	Notes
Expense							
Water/Wastewater Operations							
Personnel Costs							
Salaries	$ 175,360	$ 180,621	$ 186,039	$ 191,621	$ 197,369	3%	
Overtime	2,799	2,882	2,969	3,058	3,150	3%	
Payroll Expense	13,629	14,038	14,459	14,893	15,340	3%	
Employee Health Benefits	34,571	35,608	36,676	37,777	38,910	3%	
Retirement Contribution	14,253	14,680	15,120	15,574	16,041	3%	
Worker's Compensation	-	-	-	-	-	3%	
Supplies							
Supplies	3,000	3,090	3,183	3,278	3,377	3%	
Minor Tools & Equipment	7,500	7,725	7,957	8,195	8,441	3%	
Chemicals	114,304	139,371	169,968	203,022	245,240		Based on variable cost analysis
Uniforms	3,000	3,090	3,183	3,278	3,377	3%	
Telecommunications	-	-	-	-	-	3%	
Fuel/Oil	8,000	8,240	8,487	8,742	9,004	3%	
Auto Repair/Maintenance	5,600	5,768	5,941	6,119	6,303	3%	
Miscellaneous	-	-	-	-	-	3%	
Contractual Services							
	7,500	7,725	7,957	8,195	8,441	3%	
Prof Services - Comp Planning	35,000	36,050	37,132	38,245	39,393	3%	
Prof Services - Engineering	61,223	63,060	64,951	66,900	68,907	3%	
Real & Personal Pro Insurance	26,462	27,255	28,073	28,915	29,783	3%	
General Liability Insurance	5,000	5,150	5,305	5,464	5,628	3%	
Auto Liability Insurance	5,000	5,150	5,305	5,464	5,628	3%	
W/C Contribution - Insurance	11,000	11,330	11,670	12,020	12,381	3%	
Errors & Omissions	2,750	2,833	2,917	3,005	3,095	3%	
Merchant Service Fees	-	-	-	-	-	3%	
Electricity - Water Plant	402,397	490,644	598,361	714,724	863,351		Based on variable cost analysis
Electricity - Lift Station	-	-	-	-	-	3%	
Electricity - Sewer Plant	-	-	-	-	-	3%	
Telecom - Alarm Phones	-	-	-	-	-	3%	
Sludge Hauling	-	-	-	-	-		Based on variable cost analysis
Facilities Lease	389,340	401,020	413,051	425,442	438,206	3%	
Water Pumpage Fees	5,559,354	6,778,535	8,266,714	9,874,339	11,927,697		Based on variable cost analysis
Lab Testing	15,000	15,450	15,914	16,391	16,883	3%	
Facility Rental	-	-	-	-	-	3%	
Contract Labor	25,000	25,750	26,523	27,318	28,138	3%	
Other Charges							
Base - Contract W/S Operation	325,000	334,750	344,793	355,136	365,790	3%	
Admin Fees W/S Contract	3,250	3,348	3,448	3,551	3,658	3%	

Water System Maintenance	505,000	520,150	535,755	551,827	568,382	3%	
Lift Station Maintenance	-	-	-	-	-	3%	
Tapping Fees - W/S Contract	-	-	-	-	-	3%	
Meters & Supplies	-	-	-	-	-	3%	
Sewer System Maintenance	-	-	-	-	-	3%	
WWTP Maintenance	-	-	-	-	-	3%	
Builder Repairs & Maintenance	45,500	46,865	48,271	49,719	51,211	3%	
Tank Inspections	15,000	15,450	15,914	16,391	16,883	3%	
Asset Management Program - Water	120,000	123,600	127,308	131,127	135,061	3%	
Asset Management Program - Wastewater	-	-	-	-	-	3%	
Water Conservation Program	5,000	5,150	5,305	5,464	5,628	3%	
Permits	14,625	15,064	15,516	15,981	16,461	3%	
Travel & Training	4,000	4,120	4,244	4,371	4,502	3%	
Incode Software Maintenance	-	-	-	-	-	3%	
Vehicle Replacement Fee	9,988	10,288	10,596	10,914	11,242	3%	
Capital Outlay							
Vehicle	-	-	-	-	-	3%	
Building	-	-	-	-	-	3%	
Utility Services							
Personnel Costs							
Salaries	81,501	83,946	86,465	89,059	91,730	3%	
Overtime	1,278	1,317	1,356	1,397	1,439	3%	
Payroll Expense	6,332	6,522	6,718	6,920	7,127	3%	
Employee Health Benefits	17,740	18,273	18,821	19,386	19,967	3%	
Retirement Contribution	6,622	6,821	7,026	7,236	7,454	3%	
Supplies							
Supplies	1,026	1,057	1,089	1,121	1,155	3%	
Publications/Ref Materials	1,026	1,057	1,089	1,121	1,155	3%	
Postage	16,729	17,231	17,748	18,280	18,829	3%	
Minor Tools & Equipment	1,026	1,057	1,089	1,121	1,155	3%	
Uniforms/Shirts	513	529	544	561	578	3%	
Public Relations	-	-	-	-	-	3%	
Contractual Services							
Prof Services - Consulting	1,283	1,321	1,361	1,402	1,444	3%	
Merchant Service Fees	28,224	29,071	29,943	30,841	31,766	3%	
Telecommunications	-	-	-	-	-	3%	
Contract - Sanitation Services	-	-	-	-	-	3%	
Equipment Rental	-	-	-	-	-	3%	
Meter Testing	31,500	32,445	33,418	34,421	35,454	3%	
						3%	
Other Charges						3%	
Advertising	103	106	109	112	116	3%	
Printing	7,697	7,928	8,166	8,411	8,664	3%	
Dues & Memberships	321	330	340	350	361	3%	
Travel & Training	2,053	2,114	2,178	2,243	2,310	3%	
Equipment Maintenance	30,995	31,925	32,883	33,869	34,885	3%	
Software Maintenance	-	-	-	-	-	3%	
Annual Debt Service	1,244,880	1,285,519	1,285,519	1,285,519	1,285,519		Per debt service analysis
TOTAL EXPENSE	**$ 9,455,254**	**$ 10,892,417**	**$ 12,584,862**	**$ 14,409,833**	**$ 16,724,002**		

Revenue Off-Sets							
Credit Card Fees	$ 40,343	$ 46,395	$ 53,354	$ 61,357	$ 70,561	15%	
NSF Fees	-	-	-	-	-		
Residential Water	-	-	-	-	-		
Commercial Water	-	-	-	-	-		
Builder Water	-	-	-	-	-		
Irrigation Water	-	-	-	-	-		
Residential Sewer	-	-	-	-	-		
Commercial Sewer	-	-	-	-	-		
Wholesale Water	-	-	-	-	-		
Water & Sewer Taps	-	-	-	-	-		
Builder Back charges	63,816	63,816	63,816	63,816	63,816		
Water/Sewer Infrastructure	-	-	-	-	-		
Penalties	44,011	50,613	58,204	66,935	76,975	15%	
Sanitation Revenue	-	-	-	-	-		
NFBWA Pumpage Fees	4,725,451	5,761,755	7,026,707	8,393,188	10,138,542		Based on variable cost analysis
Cap Recovery Fee	-	-	-	-	-		
Interest Revenue	8,069	8,069	8,069	8,069	8,069		
Sale of Assets	-	-	-	-	-		
NFBWA Rebate	75,000	75,000	75,000	75,000	75,000		
Miscellaneous Revenue	3,668	3,668	3,668	3,668	3,668		
Transfer In - Utility Capital Project Fund	-	-	-	-	-		
Total Revenues	$ 4,960,357	$ 6,009,314	$ 7,288,818	$ 8,672,032	$ 10,436,631		
TOTAL REVENUE REQUIREMENT	**$ 4,494,897**	**$ 4,883,103**	**$ 5,296,045**	**$ 5,737,800**	**$ 6,287,371**		
	TRUE						
2021 Estimated Actual Revenues	$ 1,600,000						

City of Fulshear
Water and Wastewater Utility
Cost of Service and Rate Design Study

Schedule 2
Wastewater Revenue Requirement Projection
FINAL

	2023	2024	2025	2026	2027	Inflation %	Notes
Expense							
Water/Wastewater Operations							
Personnel Costs							
Salaries	$ 175,360	$ 180,621	$ 186,039	$ 191,621	$ 197,369	3%	
Overtime	2,799	2,882	2,969	3,058	3,150	3%	
Payroll Expense	13,629	14,038	14,459	14,893	15,340	3%	
Employee Health Benefits	34,571	35,608	36,676	37,777	38,910	3%	
Retirement Contribution	14,253	14,680	15,120	15,574	16,041	3%	
Worker's Compensation	-	-	-	-	-	3%	
Supplies							
Supplies	3,000	3,090	3,183	3,278	3,377	3%	
Minor Tools & Equipment	7,500	7,725	7,957	8,195	8,441	3%	
Chemicals	80,971	97,115	116,476	138,142	164,538		Based on variable cost analysis
Uniforms	3,000	3,090	3,183	3,278	3,377	3%	
Telecommunications	-	-	-	-	-	3%	
Fuel/Oil	8,000	8,240	8,487	8,742	9,004	3%	
Auto Repair/Maintenance	5,600	5,768	5,941	6,119	6,303	3%	
Miscellaneous	-	-	-	-	-	3%	
Contractual Services							
	7,500	7,725	7,957	8,195	8,441	3%	
Prof Services - Comp Planning	35,000	36,050	37,132	38,245	39,393	3%	
Prof Services - Engineering	61,223	63,060	64,951	66,900	68,907	3%	
Real & Personal Pro Insurance	26,462	27,255	28,073	28,915	29,783	3%	
General Liability Insurance	5,000	5,150	5,305	5,464	5,628	3%	
Auto Liability Insurance	5,000	5,150	5,305	5,464	5,628	3%	
W/C Contribution - Insurance	11,000	11,330	11,670	12,020	12,381	3%	
Errors & Omissions	2,750	2,833	2,917	3,005	3,095	3%	
Merchant Service Fees	-	-	-	-	-	3%	
Electricity - Water Plant	-	-	-	-	-	3%	
Electricity - Lift Station	-	-	-	-	-	3%	
Electricity - Sewer Plant	224,143	268,833	322,429	382,405	455,474		Based on variable cost analysis
Telecom - Alarm Phones	-	-	-	-	-	3%	
Sludge Hauling	780,000	935,517	1,122,025	1,330,737	1,585,013		Based on variable cost analysis
Facilities Lease	-	-	-	-	-	3%	
Water Pumpage Fees	-	-	-	-	-	3%	
Lab Testing	45,000	46,350	47,741	49,173	50,648	3%	
Facility Rental	-	-	-	-	-	3%	
Contract Labor	25,000	25,750	26,523	27,318	28,138	3%	
Other Charges							
Base - Contract W/S Operation	325,000	334,750	344,793	355,136	365,790	3%	
Admin Fees W/S Contract	3,250	3,348	3,448	3,551	3,658	3%	

Water System Maintenance	-	-	-	-	-	3%	
Lift Station Maintenance	80,000	82,400	84,872	87,418	90,041	3%	
Tapping Fees - W/S Contract	-	-	-	-	-	3%	
Meters & Supplies	-	-	-	-	-	3%	
Sewer System Maintenance	495,000	509,850	525,146	540,900	557,127	3%	
WWTP Maintenance	235,000	242,050	249,312	256,791	264,495	3%	
Builder Repairs & Maintenance	45,500	46,865	48,271	49,719	51,211	3%	
Tank Inspections	-	-	-	-	-	3%	
Asset Management Program - Water	-	-	-	-	-	3%	
Asset Management Program - Wastewater	100,000	103,000	106,090	109,273	112,551	3%	
Water Conservation Program	-	-	-	-	-	3%	
Permits	43,875	45,191	46,547	47,943	49,382	3%	
Travel & Training	4,000	4,120	4,244	4,371	4,502	3%	
Incode Software Maintenance	-	-	-	-	-	3%	
Vehicle Replacement Fee	9,988	10,288	10,596	10,914	11,242	3%	
Capital Outlay							
Vehicle	-	-	-	-	-	3%	
Building	-	-	-	-	-	3%	
Utility Services							
Personnel Costs							
Salaries	77,321	79,640	82,030	84,490	87,025	3%	
Overtime	1,213	1,249	1,287	1,325	1,365	3%	
Payroll Expense	6,008	6,188	6,373	6,565	6,762	3%	
Employee Health Benefits	16,831	17,335	17,855	18,391	18,943	3%	
Retirement Contribution	6,283	6,471	6,665	6,865	7,071	3%	
Supplies							
Supplies	974	1,003	1,033	1,064	1,096	3%	
Publications/Ref Materials	974	1,003	1,033	1,064	1,096	3%	
Postage	15,871	16,347	16,837	17,343	17,863	3%	
Minor Tools & Equipment	974	1,003	1,033	1,064	1,096	3%	
Uniforms/Shirts	487	501	516	532	548	3%	
Public Relations	-	-	-	-	-	3%	
Contractual Services							
Prof Services - Consulting	1,217	1,254	1,291	1,330	1,370	3%	
Merchant Service Fees	26,776	27,579	28,407	29,259	30,137	3%	
Telecommunications	-	-	-	-	-	3%	
Contract - Sanitation Services	-	-	-	-	-	3%	
Equipment Rental	-	-	-	-	-	3%	
Meter Testing	-	-	-	-	-	3%	
						3%	
Other Charges						3%	
Advertising	97	100	103	106	110	3%	
Printing	7,303	7,522	7,747	7,980	8,219	3%	
Dues & Memberships	304	313	323	332	342	3%	
Travel & Training	1,947	2,006	2,066	2,128	2,192	3%	
Equipment Maintenance	29,405	30,287	31,196	32,132	33,096	3%	
Software Maintenance	-	-	-	-	-	3%	
Annual Debt Service	322,723	1,337,711	1,337,711	1,337,711	1,337,711		Per debt service analysis
TOTAL EXPENSE	**$ 3,435,078**	**$ 4,727,234**	**$ 5,049,341**	**$ 5,404,215**	**$ 5,824,414**		

Revenue Off-Sets						
Credit Card Fees	$ 14,657	$ 16,855	$ 19,383	$ 22,291	$ 25,635	15%
NSF Fees	-	-	-	-	-	
Residential Water	-	-	-	-	-	
Commercial Water	-	-	-	-	-	
Builder Water	-	-	-	-	-	
Irrigation Water	-	-	-	-	-	
Residential Sewer	-	-	-	-	-	
Commercial Sewer	-	-	-	-	-	
Wholesale Water	-	-	-	-	-	
Water & Sewer Taps	-	-	-	-	-	
Builder Back charges	23,184	23,184	23,184	23,184	23,184	
Water/Sewer Infrastructure	-	-	-	-	-	
Penalties	15,989	18,387	21,146	24,317	27,965	15%
Sanitation Revenue	-	-	-	-	-	
NFBWA Pumpage Fees	-	-	-	-	-	
Cap Recovery Fee	-	-	-	-	-	
Interest Revenue	2,931	2,931	2,931	2,931	2,931	
Sale of Assets	-	-	-	-	-	
NFBWA Rebate	-	-	-	-	-	
Miscellaneous Revenue	1,332	1,332	1,332	1,332	1,332	
Transfer In - Utility Capital Project Fund	-	-	-	-	-	
Total Revenues	$ 58,094	$ 62,691	$ 67,977	$ 74,056	$ 81,048	
TOTAL REVENUE REQUIREMENT	**$ 3,376,984**	**$ 4,664,544**	**$ 4,981,364**	**$ 5,330,159**	**$ 5,743,367**	
	TRUE					
2021 Estimated Actual Revenues	1,490,000					

City of Fulshear
Water and Wastewater Utility
Cost of Service and Rate Design Study

Schedule 3
Option 1, Maximum Allowable Impact Fee, 30 Year Debt
FINAL

Table 1: Base Fee - Water (Includes 5,000 Gallons in Base Fee)

Base Fee - Water	Meter Equivalent Multiplier	2023 Non-Residential Meters	2023 Residential Meters	Current	2023	2024	2025	2026	2027
5/8" Meter	1.00	10	12	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
3/4" Meter	1.00	629	6,799	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
1" Meter	1.00	60	569	$ 5.50	$ 13.44	$ 13.44	$ 13.44	$ 13.44	$ 13.44
1.5" Meter	5.00	38	1	$ 5.50	$ 26.04	$ 26.04	$ 26.04	$ 26.04	$ 26.04
2" Meter	8.00	86	18	$ 5.50	$ 47.04	$ 47.04	$ 47.04	$ 47.04	$ 47.04
3" Meter	16.00	7	-	$ 8.80	$ 72.24	$ 72.24	$ 72.24	$ 72.24	$ 72.24
4" Meter	25.00	5	-	$ 16.50	$ 139.43	$ 139.43	$ 139.43	$ 139.43	$ 139.43
6" Meter	50.00	7	-	$ 27.50	$ 215.03	$ 215.03	$ 215.03	$ 215.03	$ 215.03
8" Meter	80.00	11	-	$ 55.00	$ 425.02	$ 425.02	$ 425.02	$ 425.02	$ 425.02
10" Meter	115.00	2	-	$ 88.00	$ 677.00	$ 677.00	$ 677.00	$ 677.00	$ 677.00

Table 2: Volumetric Fee - Water (per 1,000 Gallons)

Proposed Volumetric Rates	Current	2023	2024	2025	2026	2027
0-5000	$ -	$ -	$ -	$ -	$ -	$ -
5,001-10,000	$ 2.00	$ 2.77	$ 2.77	$ 2.77	$ 2.77	$ 2.77
10,001-15,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
15,001-20,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
20,001-25,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
25,001-30,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
30,001-35,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
35,001-40,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
40,001-45,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
45,001-50,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
Above 50,001	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77

Table 3: Wastewater Rates

Proposed Wastewater Rates	Current	2023	2024	2025	2026	2027
Base Charge (Includes 5,000 Gallons)	$ 5.50	$ 8.83	$ 17.07	$ 17.07	$ 17.07	$ 17.07
Volumetric Rate	$2-5	$ 8.56	$ 8.56	$ 8.56	$ 8.56	$ 8.56

*Based on winter averging for residential, 100% water use for non-residential

City of Fulshear
Water and Wastewater Utility
Cost of Service and Rate Design Study

Schedule 4
Ooption 2 - Maximum Allowable Impact Fee, 20 Year Debt
FINAL

Table 1: Base Fee - Water (Includes 5,000 Gallons in Base Fee)

Base Fee - Water	Meter Equivalent Multiplier	2023 Non-Residential Meters	2023 Residential Meters	Current	2023	2024	2025	2026	2027
5/8" Meter	1.00	10	12	$ 5.50	$ 15.56	$ 15.56	$ 15.56	$ 15.56	$ 15.56
3/4" Meter	1.00	629	6,799	$ 5.50	$ 15.56	$ 15.56	$ 15.56	$ 15.56	$ 15.56
1" Meter	1.00	60	569	$ 5.50	$ 15.56	$ 15.56	$ 15.56	$ 15.56	$ 15.56
1.5" Meter	5.00	38	1	$ 5.50	$ 31.33	$ 31.33	$ 31.33	$ 31.33	$ 31.33
2" Meter	8.00	86	18	$ 5.50	$ 57.62	$ 57.62	$ 57.62	$ 57.62	$ 57.62
3" Meter	16.00	7	-	$ 8.80	$ 89.16	$ 89.16	$ 89.16	$ 89.16	$ 89.16
4" Meter	25.00	5	-	$ 16.50	$ 173.27	$ 173.27	$ 173.27	$ 173.27	$ 173.27
6" Meter	50.00	7	-	$ 27.50	$ 267.90	$ 267.90	$ 267.90	$ 267.90	$ 267.90
8" Meter	80.00	11	-	$ 55.00	$ 530.76	$ 530.76	$ 530.76	$ 530.76	$ 530.76
10" Meter	115.00	2	-	$ 88.00	$ 846.18	$ 846.18	$ 846.18	$ 846.18	$ 846.18

Table 2: Volumetric Fee - Water (per 1,000 Gallons)

Proposed Volumetric Rates	Current	2023	2024	2025	2026	2027
0-5000	$ -	$ -	$ -	$ -	$ -	$ -
5,001-10,000	$ 2.00	$ 2.77	$ 2.77	$ 2.77	$ 2.77	$ 2.77
10,001-15,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
15,001-20,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
20,001-25,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
25,001-30,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
30,001-35,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
35,001-40,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
40,001-45,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
45,001-50,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
Above 50,001	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77

Table 3: Wastewater Rates

Proposed Wastewater Rates	Current	2023	2024	2025	2026	2027
Base Charge (Includes 5,000 Gallons)	$ 5.50	$ 9.61	$ 19.85	$ 19.85	$ 19.85	$ 19.85
Volumetric Rate	$2-5	$ 8.56	$ 8.56	$ 8.56	$ 8.56	$ 8.56

*Based on winter averging for residential, 100% water use for non-residential

City of Fulshear
Water and Wastewater Utility
Cost of Service and Rate Design Study

Schedule 5
Ooption 3 - 75% Impact Fee, 30 Year Debt
FINAL

Table 1: Base Fee - Water (Includes 5,000 Gallons in Base Fee)

Base Fee - Water	2023 Non-Residential Meters	2023 Residential Meters	Current	2023	2024	2025	2026	2027
5/8" Meter	10	12	$ 5.50	$ 15.68	$ 15.68	$ 15.68	$ 15.68	$ 15.68
3/4" Meter	629	6,799	$ 5.50	$ 15.68	$ 15.68	$ 15.68	$ 15.68	$ 15.68
1" Meter	60	569	$ 5.50	$ 15.68	$ 15.68	$ 15.68	$ 15.68	$ 15.68
1.5" Meter	38	1	$ 5.50	$ 31.63	$ 31.63	$ 31.63	$ 31.63	$ 31.63
2" Meter	86	18	$ 5.50	$ 58.21	$ 58.21	$ 58.21	$ 58.21	$ 58.21
3" Meter	7	-	$ 8.80	$ 90.11	$ 90.11	$ 90.11	$ 90.11	$ 90.11
4" Meter	5	-	$ 16.50	$ 175.17	$ 175.17	$ 175.17	$ 175.17	$ 175.17
6" Meter	7	-	$ 27.50	$ 270.86	$ 270.86	$ 270.86	$ 270.86	$ 270.86
8" Meter	11	-	$ 55.00	$ 536.69	$ 536.69	$ 536.69	$ 536.69	$ 536.69
10" Meter	2	-	$ 88.00	$ 855.67	$ 855.67	$ 855.67	$ 855.67	$ 855.67

Table 2: Volumetric Fee - Water (per 1,000 Gallons)

Proposed Volumetric Rates	Current	2023	2024	2025	2026	2027
0-5000	$ -	$ -	$ -	$ -	$ -	$ -
5,001-10,000	$ 2.00	$ 2.77	$ 2.77	$ 2.77	$ 2.77	$ 2.77
10,001-15,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
15,001-20,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
20,001-25,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
25,001-30,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
30,001-35,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
35,001-40,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
40,001-45,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
45,001-50,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
Above 50,001	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77

Table 3: Wastewater Rates

Proposed Wastewater Rates	Current	2023	2024	2025	2026	2027
Base Charge (Includes 5,000 Gallons)	$ 5.50	$ 9.87	$ 21.15	$ 21.15	$ 21.15	$ 21.15
Volumetric Rate	$2-5	$ 8.56	$ 8.56	$ 8.56	$ 8.56	$ 8.56

City of Fulshear
Water and Wastewater Utility
Cost of Service and Rate Design Study

Schedule 6
Ooption 4 - 50% Impact Fee, 30 Year Debt
FINAL

Table 1: Base Fee - Water (Includes 5,000 Gallons in Base Fee)

Base Fee - Water	2023 Non-Residential Meters	2023 Residential Meters	Current	2023	2024	2025	2026	2027
5/8" Meter	10	12	$ 5.50	$ 18.19	$ 18.19	$ 18.19	$ 18.19	$ 18.19
3/4" Meter	629	6,799	$ 5.50	$ 18.19	$ 18.19	$ 18.19	$ 18.19	$ 18.19
1" Meter	60	569	$ 5.50	$ 18.19	$ 18.19	$ 18.19	$ 18.19	$ 18.19
1.5" Meter	38	1	$ 5.50	$ 37.91	$ 37.91	$ 37.91	$ 37.91	$ 37.91
2" Meter	86	18	$ 5.50	$ 70.77	$ 70.77	$ 70.77	$ 70.77	$ 70.77
3" Meter	7	-	$ 8.80	$ 110.20	$ 110.20	$ 110.20	$ 110.20	$ 110.20
4" Meter	5	-	$ 16.50	$ 215.36	$ 215.36	$ 215.36	$ 215.36	$ 215.36
6" Meter	7	-	$ 27.50	$ 333.66	$ 333.66	$ 333.66	$ 333.66	$ 333.66
8" Meter	11	-	$ 55.00	$ 662.28	$ 662.28	$ 662.28	$ 662.28	$ 662.28
10" Meter	2	-	$ 88.00	$ 1,056.62	$ 1,056.62	$ 1,056.62	$ 1,056.62	$ 1,056.62

Table 2: Volumetric Fee - Water (per 1,000 Gallons)

Proposed Volumetric Rates	Current	2023	2024	2025	2026	2027
0-5000	$ -	$ -	$ -	$ -	$ -	$ -
5,001-10,000	$ 2.00	$ 2.77	$ 2.77	$ 2.77	$ 2.77	$ 2.77
10,001-15,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
15,001-20,000	$ 3.00	$ 3.77	$ 3.77	$ 3.77	$ 3.77	$ 3.77
20,001-25,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
25,001-30,000	$ 4.00	$ 4.77	$ 4.77	$ 4.77	$ 4.77	$ 4.77
30,001-35,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
35,001-40,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
40,001-45,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
45,001-50,000	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77
Above 50,001	$ 5.00	$ 5.77	$ 5.77	$ 5.77	$ 5.77	$ 5.77

Table 3: Wastewater Rates

Proposed Wastewater Rates	Current	2023	2024	2025	2026	2027
Base Charge (Includes 5,000 Gallons)	$ 5.50	$ 10.99	$ 25.58	$ 25.58	$ 25.58	$ 25.58
Volumetric Rate	$2-5	$ 8.56	$ 8.56	$ 8.56	$ 8.56	$ 8.56