

CITY OF

Round Rock

Water and Wastewater Cost of Service Study

Final Report / January 2022



January 6, 2022

Mr. Michael Thane
Utilities Director
3400 Sunrise Road
Round Rock, TX 78665

Subject: Water and Wastewater Cost of Service Study Update

Dear Mr. Thane,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Water and Wastewater Cost of Service Study (Study) for the City of Round Rock (City). This report summarizes the key study findings and recommendations.

The critical outcomes of the study include the following:

1. A **financial plan** which establishes the level of revenues necessary to sustainably fund the ongoing provision of safe and reliable water and wastewater service.
2. A **cost of service analysis** which assigns responsibility for water and wastewater utility costs to customer classes, based on how each class uses the City's water and wastewater system.
3. **Rate recommendations** which involve adjusting the City's rates so that they reasonably align with class cost of service and achieve the City's objectives.

This report summarizes our key findings and recommendations related to the development of the financial plan, cost of service analysis and rate recommendations.

This report represents the culmination of months of work, not only on behalf of the Raftelis project team, but City staff as well. We truly appreciate you and your staff's responsiveness both in providing the information needed to complete the study and providing helpful feedback on study deliverables. It has been a pleasure working with you, and we thank you and City staff for the support provided during the course of this study.

Sincerely,

A handwritten signature in cursive script that reads 'Angie Flores'.

Senior Manager

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Executive Summary

Introduction

The City retained Raftelis Financial Consultants, Inc. (Raftelis) to complete a Water and Wastewater Utility Cost of Service Study (Study) to determine the necessary level of rate revenue required to meet annual operating expenses, payments on existing debt service, and fund the capital improvement program while maintaining financial performance metrics. The primary Study objectives are to:

- Update the water and wastewater financial plan for the 5-year study period, FY 2022 through FY 2026.
- Analyze the cost of providing water and wastewater service to customer classes.
- Determine water and wastewater rate adjustments for FY 2022 through FY 2024 to generate sufficient revenue to meet annual revenue requirements, fund capital improvements, sustain adequate cash reserves, and debt service coverage.

This report provides our Study assumptions, findings and recommendations. The Appendix to the report includes calculations supporting the Study findings.

Background

The City of Round Rock provides service to approximately 36,000 water and wastewater accounts in the greater Round Rock area. In addition to retail accounts, the City provides wholesale water and wastewater service to customers outside of the City. The City reviews and updates rates periodically for a three-year period. The City's water and wastewater funds are separate enterprise funds and are financially self-sufficient with funding for capital and operating requirements derived primarily from rates, impact fees, interest income, and other miscellaneous sources.

The wholesale customers include:

1. Aqua Texas, Inc.
2. Fern Bluff Municipal Utility District (MUD)
3. Paloma Lake MUD #1 and #2
4. R&R Joint Venture
5. Vista Oaks MUD
6. Walsh Ranch MUD
7. Williamson County MUD #10
8. Williamson County MUD #11
9. Round Rock Ranch Public Utility District (PUD)
10. Siena MUD #1 and #2

Operations and Maintenance (O&M), repair and replacement of depreciating assets, capital improvement plan (CIP), and debt service reserves and expenses are recovered through the City's monthly water and wastewater user charges. User charge revenue is designed to meet revenue requirements, debt service coverage, and maintain appropriate reserves.

Since the last study in 2017, the City has worked to improve resiliency and operational efficiency to reduce overall customers' costs at the utilities. The changes include:

- Refinanced existing debt at a lower interest rate using the City's AAA Bond Rating.
- Executed a lower fixed-rate electric contract.

- Operational changes that saved electric power and chemical usage costs.
- Cross-training of utility employees in multiple divisions within the operations department to minimize the need for additional personnel.
- Realized over \$1 million in cost savings taking over operations of regional wastewater treatment plant from a third-party.
- \$10 million decrease in project cost share for Brushy Creek Regional Wastewater System (BCRWWS) treatment plant expansion and improvements.

Assumptions

Raftelis incorporated the following key assumptions into the Study. Changes in these assumptions could have a material effect on Study findings.

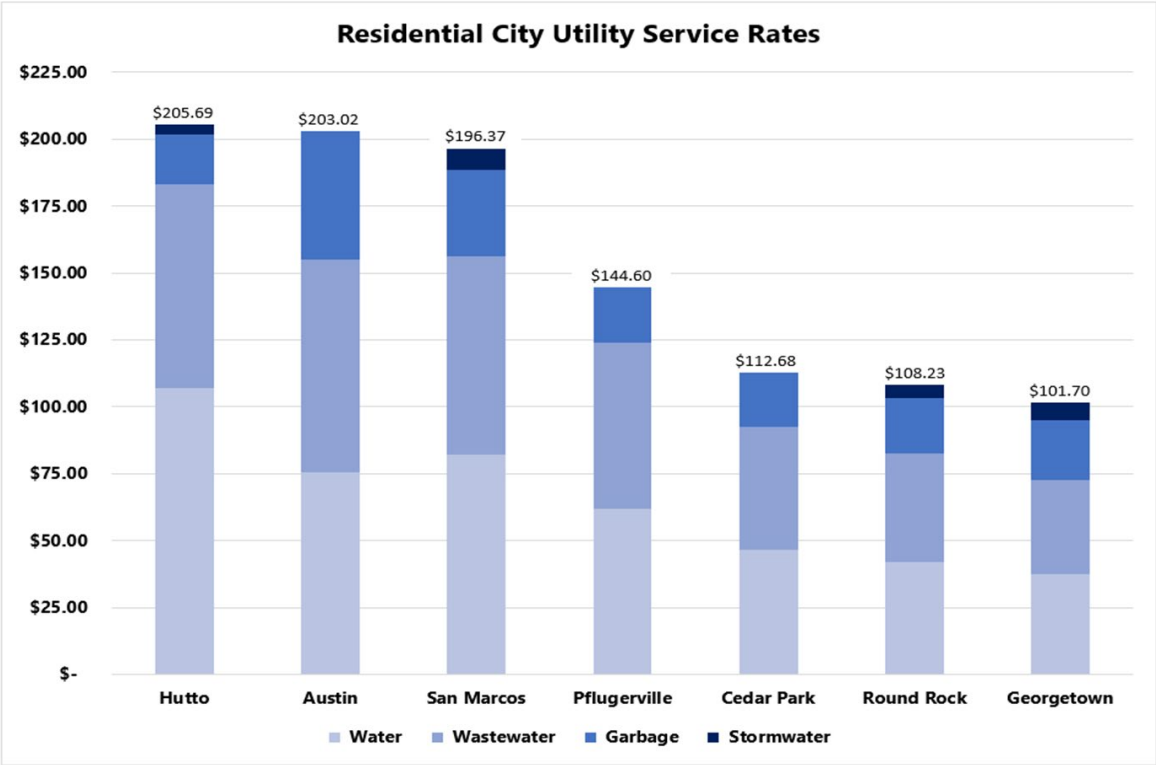
- The number of accounts for different customer classes increase as follows:
 - Residential accounts increase by 1.00%.
 - Non-Residential accounts (Commercial, Industrial, Other) increase by 1.00%.
 - Wholesale accounts do not increase.
- Consumption and peaking factors are based on a 4-year average.
- O&M costs are anticipated to increase between 1.0 and 3.0% annually, with the exception of the Brushy Creek Regional Utility Authority (BCRUA) O&M Obligation, which will increase at 5.0% annually.
- The water and wastewater utility will maintain the following minimum reserves:
 - Operating reserve of 120 days of annual operation and maintenance expense (O&M).
 - Minimum debt service coverage of 135%.

Financial Plan Findings and Recommendations

Key Finding: Current revenue levels are sufficient to sustainably fund the ongoing provision of safe and reliable water and wastewater service.

Recommendations: Raftelis recommends no retail rate revenue adjustments in FY 2022 – FY 2024 for water and a -8.8% decrease for the volume wastewater charge to retail and wholesale customers. Water wholesale rate adjustments are provided in more detail in the Cost of Service section. The City provides excellent service while keeping rates affordable for their customers. **Table 1** provides a comparison summary of similar utilities in the area.

Table 1: Residential Utility Service Rates



Financial Plan

The City's water and wastewater fund is a self-supporting enterprise fund. This section develops a financial plan forecast for the summary of the operating fund for the 5-year study period, FY 2022 through FY 2026. The financial plan provides the City with an outlook and overall recommended rate adjustments, if applicable.

The primary objective of financial planning involves comparing forecasted utility revenues under existing rates to forecasted expenditures and determining what annual adjustments to revenues are necessary to ensure the financial sustainability of the water and wastewater utility going forward. This involves three steps:

1. Forecast revenue under existing rates (Sources of Funds)
2. Forecast utility operating expenses and capital expenditures (Revenue Requirement)
3. Evaluate the sufficiency of existing revenues and adjustments needed to fund utility expenditures in a financially sustainable fashion

WATER FINANCIAL PLAN

The operating fund tracks financial activities associated with operating and maintaining the water system and funding the capital improvement program. The utility has several funds that support the operating fund and track the financial activities of capital expenditures. The funds include impact fee, construction, and a utility regional water fund.

Sources of Funds

Operating fund revenue is primarily derived from water rates, impact fees, miscellaneous revenues, and investment income. Water service revenue represents the most significant source of revenue to the operating fund, averaging approximately 92% of total revenue. The remaining 8% is contributed from impact fees, miscellaneous revenue, and investment income.

Water service revenue under existing rates is based on water customer consumption and a detailed analysis of historical utility billing records and discussions with City staff. A 4-year average consumption per connection by customer class (e.g., Residential, Non-Residential, Irrigation) was used to project consumption. The number of accounts for Residential and Non-Residential accounts are projected to grow on average at 1.00%, and Wholesale accounts are to remain constant. Miscellaneous revenues are held steady or increased slightly to be conservative and recognize the variability of such sources of income.

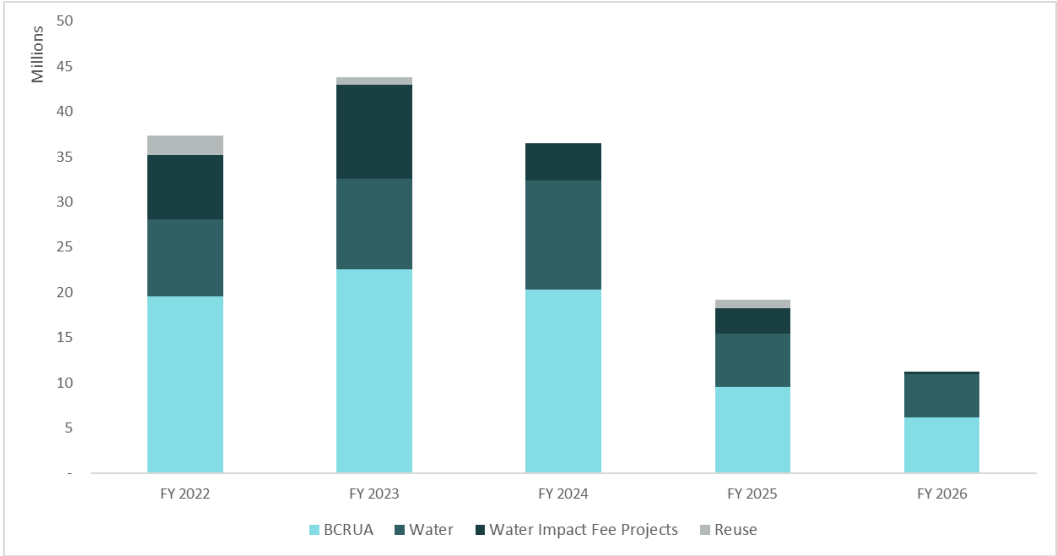
Uses of Funds

O&M, debt service, CIP, transfers to departmental and non-departmental funds, and financial performance metrics comprise operating fund revenue requirements. O&M consists of personnel, materials, supplies, and contractual services to supply, treat, and distribute water to customers. O&M also includes obligations from the purchase of Brushy Creek Regional Utility Authority (BCRUA) water and the cost of a raw water transmission line from Brazos River Authority (BRA). An annual inflation was based on historical trends and staff input for an allowance of 1.0 - 3.0% for O&M projections. BCRUA O&M obligations are projected to increase 5.0% annually.

The water utility has 4 debt obligations. As mentioned above, 3 debt obligations are related to BCRUA and BRA bonds and are considered part of O&M. The remaining debt obligation is a revenue bond issued by the water utility. Debt service includes principal and interest payments on a 2017 revenue refunding bond. The City does not plan on issuing debt over the Study period.

The City’s capital improvement program is cash financed using rate revenue and impact fees. Impact fees are used to pay for growth-related projects, such as the future 42-inch transmission waterline on Sam Bass Road. BCRUA projects are impact fee eligible and used for construction expansion and improvements at the regional water treatment plant. **Table 2** illustrates the projected CIP over the 5-year study period.

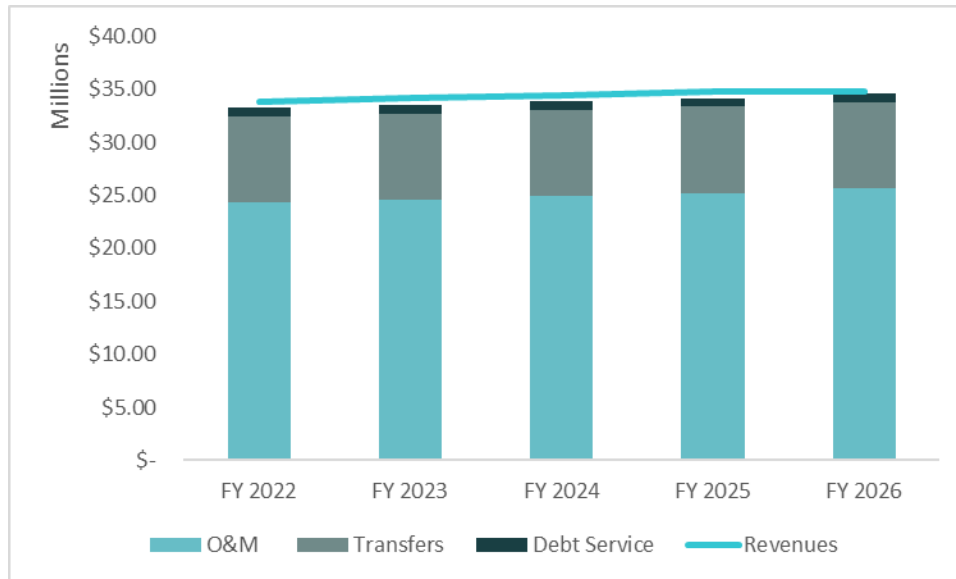
Table 2: Water Capital Improvement Projects



The City has budgeted allocations to the water construction fund and the utility regional water fund of approximately \$3.0 million and \$2.5 million, respectively. These allocations help fund the CIP program and eliminate the City from having to issue debt and pay interest costs which can significantly increase the costs of a project. The City also allocates funds for services provided by other departments within the City.

Revenue Sufficiency

The final step in the financial planning process involves compiling a cash flow forecast which identifies the revenue adjustments necessary to ensure financial sustainability. As indicated by **Table 3**, current revenue levels are sufficient to sustainably fund the ongoing provision of safe and reliable water.

Table 3: Revenue Sufficiency at Existing Rates

Raftelis recommends no rate adjustments for FY 2022 – FY 2024. The City should keep rates flat for retail customers in FY 2022- FY 2024 and re-assess the need for proposed adjustments for FY 2025 and FY 2026. The cost of service section will provide more details about the Wholesale customer recommended adjustments. The water utility will maintain a fund balance above the minimum recommendation of 120 days of expenditures and meet debt service coverage targets. Healthy reserves allow the City to fund capital improvements and any emergency that may arise while keeping rates affordable. **Table 4** provides a summary of the revenue sufficiency under existing rates.

Table 4: Revenues Sufficiency under Existing Rates

	2022	2023	2024	2025	2026
Revenues	\$33,839,687	\$34,136,642	\$34,435,094	\$34,742,218	\$34,841,848
O&M	\$24,285,057	\$24,577,510	\$24,916,780	\$25,245,023	\$25,691,422
Debt Service	877,000	882,250	875,500	777,250	777,000
Transfers	8,110,128	8,110,128	8,110,128	8,110,128	8,110,128
Total Expenditures	\$33,272,185	\$33,569,888	\$33,902,408	\$34,132,401	\$34,578,550
<i>Annual Surplus/(Deficiency)</i>	\$567,502	\$566,754	\$532,686	\$609,817	\$263,298

WASTEWATER FINANCIAL PLAN

The operating fund tracks financial activities associated with operating and maintaining the wastewater system and funding the capital improvement program. The utility has several funds that support the operating fund and tracks financial activities of capital expenditures. The funds include the impact fee and construction funds.

Sources of funds

Operating fund revenue is primarily derived from wastewater rates, impact fees, Brushy Creek Regional Wastewater System (BCRWWS) revenue and miscellaneous revenues. BCRWWS revenues are received from the other regional partners cities for their proportionate share of O&M expenses and offset costs incurred by the City for operating the BCRWWS wastewater treatment plant. Wastewater service revenue represents the most significant source of revenue

to the operating fund, averaging approximately 74% of total revenue. The remaining 26% is contributed from BCRWWS revenue, impact fees, miscellaneous revenue, and investment income.

Wastewater service revenue under existing and proposed rates is based on wastewater customer flows and strengths, a detailed analysis of historical utility billing records and discussions with City staff. A 4-year average flow per connection by customer class (e.g., Residential, Non-Residential, Wholesale) was used to reduce swings in consumption due to weather conditions and projected the consumption forward based on historical usage, staff input, and accounts. The number of accounts for Residential and Non-Residential accounts are projected to grow on average at 1.00% and Wholesale accounts are to remain constant. Miscellaneous revenues are held constant or increased slightly to be conservative and recognize the variability of such sources of income.

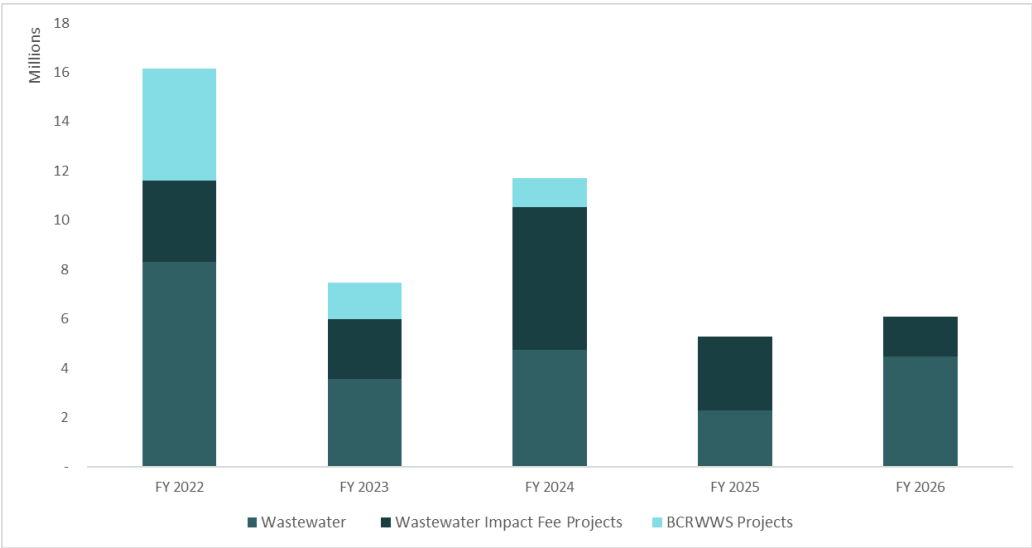
Uses of Funds

O&M, debt service, CIP, transfers to departmental and non-departmental funds, and financial performance metrics comprise operating fund revenue requirements. O&M consists of personnel, materials, supplies, maintenance, and contractual services to convey and treat wastewater. O&M also includes BCRWWS treatment plant costs which are shared by the partner cities in the regional system. An annual inflation for an allowance of 1.0 - 3.0%, based on historical trends and staff input, has been included in O&M projections.

The wastewater utility has 2 debt obligations. Debt service includes principal and interest payments on the 2016 and 2017 revenue refunding bonds. The City does not plan on issuing debt over the Study period.

The City’s capital improvement program is cash financed using rate revenue and impact fees. The capital improvements programs consist of improvements and upsizing of the wastewater system and BCRWWS Wastewater Treatment Plant (WWTP) expansion to treat 30 million gallons per day (MGD). **Table 5** illustrates the projected CIP over the 5-year study period.

Table 5: Wastewater Capital Improvement Projects



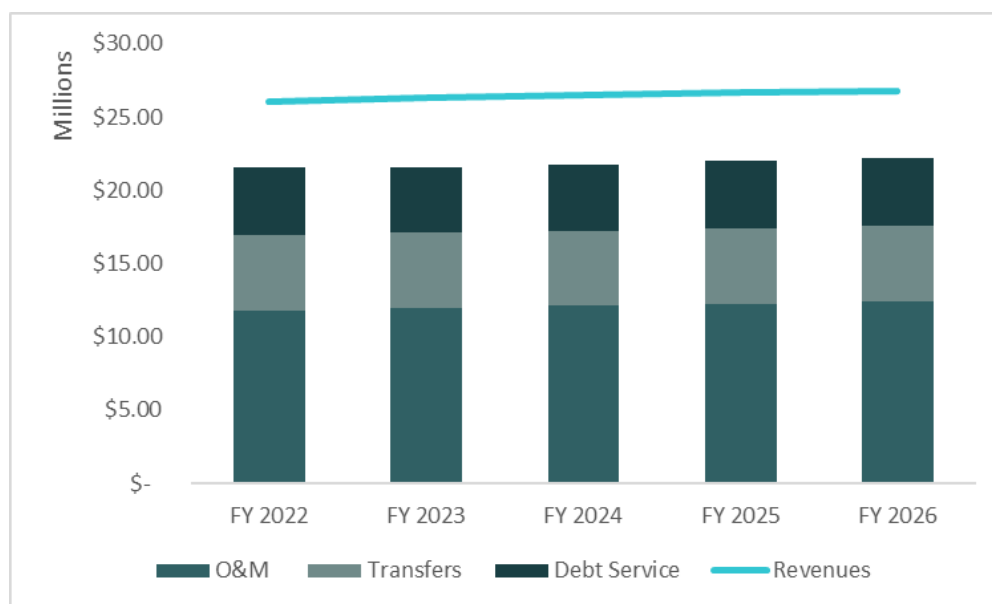
The City has budgeted allocations to the construction fund of approximately \$3.0 million. These allocations help fund the CIP program and eliminate the City from having to issue debt and pay interest costs which can significantly

increase the costs of a project. The City also allocates funds for services provided by other departments within the City.

Revenue Sufficiency

The final step in the financial planning process involves compiling a cash flow forecast which identifies the revenue adjustments necessary to ensure financial sustainability. As indicated by **Table 6** current revenue levels are sufficient to sustainably fund the ongoing provision wastewater treatment services.

Table 6: Revenue Sufficiency at Existing and Proposed Rates



Raftelis recommends an overall volume rate decrease of -8.8% in FY 2022. The City should approve the recommended adjustments for FY 2022 - FY 2024 and re-assess the need for proposed adjustments in FY 2025 and FY 2026. The wastewater utility will still maintain a fund balance above the minimum operating reserve of 120 days of expenditures and meet debt service coverage targets with the recommended decrease adjustment. Healthy reserves allow the City to fund capital improvements and any emergency that may arise while keeping rates affordable. **Table 7** provides a summary of the revenue sufficiency under the proposed rate decrease.

Table 7: Revenues Sufficiency under Proposed Rates

Proposed (Reduced)	2022	2023	2024	2025	2026
Revenues	\$24,946,511	\$25,161,561	\$25,340,194	\$25,520,551	\$25,584,159
O&M	\$11,784,506	\$11,942,252	\$12,103,084	\$12,267,064	\$12,433,367
Debt Service	4,632,650	4,518,700	4,518,250	4,612,200	4,609,700
Transfers	5,135,560	5,135,560	5,135,560	5,135,560	5,135,560
Total Expenditures	\$21,552,716	\$21,596,512	\$21,756,894	\$22,014,824	\$22,178,627
<i>Annual Surplus/(Deficiency)</i>	\$3,393,795	\$3,565,049	\$3,583,300	\$3,505,727	\$3,405,532

COMBINED UTILITY FINANCIAL PLAN

The City has 3 financial policies to ensure the financial stability of the utility. Evaluating financial sustainability involves key financial performance metrics: days expenditures, rate stabilization, and a debt service coverage ratio. The City maintains a policy of greater than 120 days O&M Expenditures, a balance of \$10 million for the rate stabilization fund, and a debt service coverage ratio of greater than 1.35 times. **Days Expenditures** is a measure of the utility's ability to deal with unanticipated declines in revenue or emergency expenditures without reducing service quality or dramatically increasing rates. Note that 90 days is the bare minimum and Fitch Ratings issued a special report about median performance metrics for utilities and highlighted systems on average have a debt service coverage of 200% and 525 days cash reserve of operating expenses.¹ Like Days Expenditure, the City also has the policy to maintain \$10.0 million in reserves to avoid rate shock if revenues don't meet expectations due to weather or other unforeseen events. Although, the City's policy is a 120-day target, as can be seen in **Table 8** the days expenditures is over 200 days for the forecast period. A **Debt Service Coverage Ratio** measures of how much current revenues exceed current debt service obligations after operating expenses are funded. A ratio above 1 indicates that current net revenues (operating revenues less expenses) are sufficient to meet current debt service obligations with room to spare for unforeseen emergencies. Coverage requirements vary by the type of debt issued, bond covenants and ratings agency criteria, but the financial plans developed for the City are based on maintaining a minimum 1.35 times debt service coverage ratio. As can be seen in **Table 8**, the City's debt service coverage ratio is forecasted at greater than 2.6 times although the policy is set at 1.35 times. **Table 8** summarizes the revenue sufficiency and final metrics for the combined utility.

Table 8: Combined Utility Revenue Sufficiency and Financial Metrics

	2022	2023	2024	2025	2026
Beginning Balance	\$47,245,732	\$29,707,030	\$33,838,833	\$37,954,819	\$34,070,364
Total Revenues	\$58,786,198	\$59,298,202	\$59,775,288	\$60,262,769	\$60,426,007
O&M	\$36,069,562	\$36,519,761	\$37,019,864	\$37,512,086	\$38,124,790
Debt Service	5,509,650	5,400,950	5,393,750	5,389,450	5,386,700
Transfers					
Admin Support	4,745,688	4,745,688	4,745,688	4,745,688	4,745,688
Construction	8,500,000	8,500,000	8,500,000	8,500,000	8,500,000
Total Expenses	\$54,824,900	\$55,166,399	\$55,659,302	\$56,147,224	\$56,757,178
Operating Balance (120 Days)	\$15,287,217	\$15,399,912	\$15,562,570	\$15,723,584	\$15,924,869
Rate Stabilization	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Additional Construction Transfer	21,500,000	-	-	\$8,000,000	-
Ending Balance	\$29,707,030	\$33,838,833	\$37,954,819	\$34,070,364	\$37,739,192
Days Cash	220	248	276	245	268
Debt Coverage Ratio	2.63	2.66	2.66	2.66	2.61

¹ Fitch Ratings, (2017). 2018 Water and Sewer Medians, <https://www.Fitchratings.com>

Cost of Service Analysis

Introduction

The key objective of the cost of service (COS) analysis is to determine each customer class's share of the cost based on how they use the City's water and wastewater systems. The COS analysis aligns responsibility for these costs with the customer classes that cause them to create equity in the system. The principle of using cost causation as a guide for water and wastewater rate setting is well established throughout the industry and is the basis for the methodology described in the American Water Works Association's (AWWA) Manual M1: Principles of Water Rates, Fees and Charges and Water Environmental Federation (WEF): Financing and Charges for Wastewater Systems.

Background & Methodology

There are two general approaches to determining revenue requirements as referenced in the American Water Works Association M1: the "cash needs" and the "utility" approach. Prior to 2009, the City used the cash needs approach for setting both retail and wholesale rates. In 2009, the City transitioned to the utility approach for setting wholesale water and wastewater rates. The City continues to use the utility basis approach for wholesale rate-setting.

The two methodologies for establishing wholesale rates, the "cash needs" and the "utility" approach, are consistent with industry standards and guidelines and are appropriate methodologies for calculating wholesale rates. The cash needs approach uses the total revenues required by the utility to meet its cash expenditures and is generally used by utilities when serving customers within their service area or geographical limits. The utility basis is particularly applicable to customers located outside the geographical limits of the government-owned utility.

The utility approach provides an effective methodology for compensating the utility for the risk associated with providing service to "non-owners" of the system. The City uses the utility approach for wholesale water and wastewater rates because the utility approach is often characterized as being more equitable in distributing the costs of facilities between future and current users. For wholesale users, the utility basis approach is generally considered more equitable, as these users pay depreciation and return on investment only on assets which are used and useful in providing them utility service. Retail customers are appropriately compensated for the risks associated with investing in utility assets used to serve wholesale customers. Therefore, wholesale cost of service is calculated under the utility basis and the projected revenues are then deducted from the overall cash needs revenue requirements of retail customers.

Under the utility approach, wholesale rates recover the following primary revenue requirements:

Operations and Maintenance Costs

- A proportionate share of direct operating & maintenance (O&M) expenses related to providing service to wholesale customers.

Capital Costs

- An appropriate portion of the annual depreciation expenses associated with these assets; and,
- A return on the investment made by the City in assets that are used and useful in providing service to wholesale customers.

The capital cost component of the utility method uses the original cost less depreciation (OCLD), or net book value (NBV), of all the fixed assets for the rate base. Recognizing that rates are being determined prospectively, depreciation on future assets (from the City's 5-year CIP plan) was added to the existing annual depreciation as well as anticipated

assets. Since wholesale customers pay impact fees, the rate base is adjusted to account for any assets paid for with impact fees since wholesale customers helped contribute to their purchase. After calculating the adjusted rate base, it was necessary to determine a return percentage to provide a fair return on the City's investment. This is typically done by summing the weighted cost of debt and weighted cost of equity for the utility to determine a weighted average cost of capital (WACC). The cost of debt is a straightforward calculation and involves analyzing the utility's outstanding bond issues and corresponding interest rates to arrive at the cost of debt, which equals 3.89%. The cost of equity is typically higher and involves a few more steps. A fair minimum for this opportunity cost of capital is the return that can be earned on a U.S. treasury security. To determine the cost of equity, Raftelis began with the Thirty-Year Treasury and added a 3.5% risk premium to compensate for investing the risk of providing service to wholesale customers. The result is a WACC of 5.31%. The 5.31% is then multiplied by wholesale's proportionate share of rate base.

Under the cash needs approach, retail recovers the following revenue requirements:

Operations and Maintenance Costs

- A proportionate share of direct O&M expenses related to providing service to retail customers.

Capital Costs

- Debt service expenses associated with the utility system.
- Cash funded CIP or transfers to the construction fund.

A COS methodology involves the following steps:

1. **Functionalize Revenue Requirement.** Applying the principle of cost causation requires a determination of how the costs incurred relate to the design and operation of the utility systems.
2. **Allocate Functionalized Revenue Requirement to Cost Drivers.** The cost of each function from Step 1 is driven by different types of customer demand. Step 2 attributes the functionalized costs to these cost drivers. The result is an understanding of the proportion of the revenue requirement for each utility which can be attributed to each type of customer demand. This allows for a distribution of the revenue requirement based on customer demands (Steps 3 through 5).
3. **Determine Customer Class Units of Service.** While Steps 1 and 2 allocate the revenue requirement according to the various types of customer demand, Step 3 determines the level of that demand for each customer class.
4. **Calculate of Unit Cost of Service.** This step divides the allocated revenue requirement determined in Step 2, by the customer class units of service determined in Step 3. The result is a unit cost of service for each type of customer demand.
5. **Distribute Revenue Requirement to Customer Classes.** This step multiplies the unit cost for each type of demand by the units of service for each customer class. The result is a determination of the cost to serve each customer class based on their share of demand.

WATER COST OF SERVICE

Cost of service is typically determined for a single test year. The test year establishes the total level of revenues which must be recovered from all customers, regardless of how that revenue is distributed. The cost of service analysis then apportions that revenue recovery to each customer class, based on that class's use of the City's water system.

Functionalize Revenue Requirement

Functionalization of the Revenue Requirement involves allocating the operating and capital components to the various functions performed by the City to provide utility service to customers. For water systems, these may include functions such as supply, treatment, pumping, storage, transmission, distribution, hydrants, services, meters, and billing and collection. According to industry standards, relevant functional categories for wholesale service include water supply, water treatment, transmission, and pumping.

Three approaches were used to functionalize the revenue requirement: direct allocation, allocation using net plant investment and indirect allocation.

Direct allocation is used where a specific cost can be attributed directly to a specific function. O&M costs are generally allocated to functional cost components that best reflect the function associated with that particular expense. For example, computer/phone user charges are associated with providing customer service to individual customers and are allocated to the billing portion of the customer cost component.

System assets. The use of System asset investment is common throughout the industry. Capital costs are generally allocated using plant investment, based on the presumption that the City will reinvest in the utility systems in proportion to the existing level of investment. The result is a smoother allocation of capital costs over time relative to allocating capital costs on a project specific basis. Raftelis reviewed the fixed asset records of each utility and assigned each asset to the functional categories to allocate the City's capital expenditures.

Indirect allocation was used for costs which are incurred to support all functions and are assumed to be incurred in proportion to all other costs allocated directly.

Water Revenue Requirements

The utility basis revenue requirement for wholesale customers is summarized in **Table 9**.

Table 9: Water Wholesale Revenue Requirements

Description	Operating Expense	Capital Cost	Total Costs
O&M	\$ 3,820,254		\$ 3,820,254
Depreciation		593,307	593,307
Return on Investment		371,582	371,582
Total Revenue Requirement	\$ 3,820,254	\$ 964,889	\$ 4,785,143

The total test year cost of service includes revenue requirements net of miscellaneous revenue, wholesale revenues, and change in fund balance while maintaining annual operating reserve requirements. Test year revenue requirements for the water utility net of wholesale equals \$26,960,525 and is summarized using the cash needs approach in **Table 10** below.

Table 10: Water Test Year Revenue Requirement

Description	Operating Expense	Capital Cost	Total Cost
Cash Basis Revenue Requirement			
Revenue Requirements			
O&M Expenses	\$ 24,916,780		\$ 24,916,780
Debt Service		875,500	875,500
Other Expenditures and Transfers:			
Transfers to Construction Fund		5,500,000	5,500,000
Administrative Support Allocation	2,610,128		2,610,128
Subtotal Gross Revenue Requirements	\$ 27,526,909	\$ 6,375,500	\$ 33,902,409
Less: Non Rate Revenues			
Non-Rate Operating Revenues			
Wholesale Revenues (Utility Basis)	\$ (4,785,143)		\$ (4,785,143)
Impact Fee Revenues		(860,000)	(860,000)
Non-Rate Revenues	(1,829,426)		(1,829,426)
Total Non Rate Revenues	\$ (6,614,569)	\$ (860,000)	\$ (7,474,569)
Surplus/(Deficit)	\$ 532,685		\$ 532,685
Net Revenue Requirements	\$ 21,445,025	\$ 5,515,500	\$ 26,960,525

Allocate Functionalized Revenue Requirement to Cost Drivers

Once costs have been functionalized, they must then be allocated to cost components. Cost components represent the drivers of utility costs, or the types of customer demand which drive the design, operation and—in turn—cost of the water system.

A water system is designed to treat and distribute water during periods of average customer demand as well as peak demand. Peak demand occurs when many customers are using water at the same time such as in the morning as they prepare for the day. Like the interstate highway system, a water system must be designed not only to meet the average demands (such as in the middle of the day), but also peak demands (such as during rush hour traffic). If peak demand is twice that of average demand, water infrastructure must be double the size. Put another way, if no peak demand existed, a much smaller, less costly system could be built to serve customers.

Given that additional costs are incurred to serve peak demand, the question then becomes who should pay for those incremental costs, and how much should they pay. The base-extra capacity methodology is the most common method for assigning such costs for water. The base-extra capacity method allocates maximum day and maximum hour costs based on the incremental demand above average day. Thus, customers whose demand drives the need for the larger system are allocated a greater share of costs.

The cost drivers related to customer demand are as follows:

- » Base – demand on an average day
- » Maximum Day Extra Capacity – maximum day demand excluding average day,
- » Maximum Hour Extra Capacity – maximum hour demand excluding maximum day demand and average day demand

In addition to these demand categories are costs incurred to serve a customer regardless of how much water they use. These customer related components are as follows:

- » Bills – costs driven by providing customer service (i.e., billing, collection, the provision of customer service)
- » Meters and Services – costs driven by installing and maintaining customer meters and service lines.

Determination of Allocation Factors

Based on the functional costs being allocated, there may be one-way, two-way, or three-way allocations:

Purchased water is a function of the amount of water used by customers on an annual basis, regardless of peak demand. Accordingly, it is allocated 100% to base demand.

Storage and distribution system costs, which are used to meet the peak demands of customers, are split between base demand, maximum day demand and maximum hour demand. This split is based on assumed system design criteria of 1.82 and 2.9 times the average day demand for maximum day and maximum hour, respectively.

For maximum day, it is assumed that the water system is designed to deliver water at 1.82 times the average day (base) rate on maximum day. In other words, the water system needs incremental capacity to deliver water on a maximum day as compared to an average day. Accordingly, costs incurred to support base and maximum day service are allocated between base and maximum day based on the proportion of each relative to the overall capacity requirement. 1.0 is related to base service and 0.82 is related to maximum day service. This results in an allocation of 55.08% ($1.00/1.82$) and 44.92% ($0.82/1.82$) for base and maximum day, respectively.

A similar approach is used for costs incurred to support base, maximum day and maximum hour service. Maximum hour demand represents the incremental demand above maximum day demand. Based on the design criteria outlined above the maximum hour allocation would be 37.39% ($1.08/2.90$). Base and maximum day would be 34.48% ($1.00/2.90$) and 28.13% ($0.82/2.90$).

Meters and services costs are a function of the number of customers at each meter size. These costs are allocated to equivalent meters, which recognizes difference in capacity and cost for meters of different sizes.

Due to the wholesale customers, Raftelis further allocated costs to Common to All customers and Retail only (non-wholesale). For example, the water treatment plant is allocated to Common to All customers because all customers benefit from the plant. Similarly, the distribution system is allocated to retail only.

Allocation of Water Cost of Service

Table 11 provides the allocation of FY 2024 O&M expenses to functional cost components. O&M costs are generally allocated to functional cost components that best reflect the function associated with that expense. Transmission and reservoir expenses are associated with the storage and transmission of raw water and are allocated to the base, and maximum day cost components. Functional categories such as distribution, which relates to smaller-sized, local infrastructure to service retail customers, are not included in the revenue requirements for determining wholesale rates because they are not used to provide wholesale service. Expenses not specifically assigned to a cost component are allocated in proportion to all other expense allocations, such as administrative costs.

Table 11: Water Allocation of O&M Expense

Category	Total	Common to All Customers			Retail Only				Reuse
		Base	Max Day	Bills	Base	Max Day	Max Hour	Meters	
Admin	\$ 5,017,380	2,867,048	\$ 1,136,245	\$ 243,005	\$ 225,463	\$ 183,907	\$ 244,472	\$ 52,526	\$ 64,714
Customer	1,090,195	-	-	1,090,195	-	-	-	-	-
Source of Supply	6,347,273	6,347,273	-	-	-	-	-	-	-
Pumping	-	-	-	-	-	-	-	-	-
Purchased Power	1,260,000	693,952	566,048	-	-	-	-	-	-
Water Plant	6,524,492	3,593,402	2,931,090	-	-	-	-	-	-
Chemicals	612,060	337,096	274,964	-	-	-	-	-	-
Storage	-	-	-	-	-	-	-	-	-
Transmission	3,216,192	1,890,744	1,325,447	-	-	-	-	-	-
Distribution	2,933,339	-	-	-	1,011,496	825,064	1,096,779	-	-
Meters	235,648	-	-	-	-	-	-	235,648	-
Fire	-	-	-	-	-	-	-	-	-
Reuse	290,329	-	-	-	-	-	-	-	290,329
Total O&M	\$ 27,526,909	\$ 15,729,515	\$ 6,233,795	\$ 1,333,200	\$ 1,236,959	\$ 1,008,971	\$ 1,341,251	\$ 288,174	\$ 355,043

System assets are typically allocated based on design parameters of a particular facility. For example, transmission mains are designed to meet maximum day requirements and capital costs associated with these mains are allocated to the base cost component and the maximum day cost component. The allocation is based on maximum day peaking parameters, as discussed in the Determination of Allocation Factors section. Similarly, distribution mains are associated with providing service to individual customers and are sized to meet maximum hour service requirements. Other assets are assigned directly to their respective cost components like meters or reuse. General plant assets are allocated based on a weighted average allocation of all other assets.

Table 12 illustrates the water assets allocations to each design parameter. The percent of capital assets to the Base Extra Capacity functions will be used to allocate capital costs to retail and wholesale customers. The wholesale related capital costs exclude debt service and cash funded CIP. The wholesale revenue requirements include their proportional share of annual depreciation (**Table 13**) expense and an annual return on investment related to assets used to serve wholesale customers (Common to All).

Table 12: Allocation of Water System Assets

Category	Total	Common to All Customers			Retail Only				Reuse
		Base	Max Day	Bills	Base	Max Day	Max Hour	Meters	
Storage	\$ 5,172,979	\$ -	\$ -	\$ -	\$ 1,783,786	\$ 1,455,011	\$ 1,934,183	\$ -	\$ -
Water Plant	13,967,486	7,692,674	6,274,812	-	-	-	-	-	-
Source of Supply	4,419,224	4,419,224	-	-	-	-	-	-	-
Transmission	11,838,169	6,519,940	5,318,229	-	-	-	-	-	-
Distribution	19,115,855	-	-	-	6,591,674	5,376,741	7,147,440	-	-
Pumping	5,212,916	2,871,044	2,341,872	-	-	-	-	-	-
Meters	-	-	-	-	-	-	-	-	-
Reuse	16,574,229	-	-	-	-	-	-	-	16,574,229
Other Water Assets	8,428,976	2,375,429	1,539,393	-	925,239	754,705	1,003,249	-	1,830,959
Total Rate Base	\$ 84,729,834	\$ 23,878,311	\$ 15,474,306	\$ -	\$ 9,300,700	\$ 7,586,457	\$ 10,084,872	\$ -	\$ 18,405,188

Table 13: Water Annual Depreciation

Category	Total	Common to All Customers		Retail Only				Reuse
		Base	Max Day	Base	Max Day	Max Hour	Meters	
Storage	\$ 501,784	\$ -	\$ -	\$ 173,029	\$ 141,137	\$ 187,618	\$ -	\$ -
Water Plant	1,181,828	650,898	530,929	-	-	-	-	-
Source of Supply	354,207	354,207	-	-	-	-	-	-
Transmission	985,126	542,564	442,562	-	-	-	-	-
Distribution	1,590,746	-	-	548,533	447,431	594,782	-	-
Pumping	431,586	237,698	193,887	-	-	-	-	-
Meters	159,584	-	-	-	-	-	159,584	-
Reuse	901,905	-	-	-	-	-	-	901,905
Other Water Assets	829,508	233,769	151,494	91,054	74,272	98,731	-	180,187
Total Depreciation	\$ 6,936,274	\$ 2,019,138	\$ 1,318,873	\$ 812,616	\$ 662,840	\$ 881,131	\$ 159,584	\$ 1,082,093

Allocation of Costs to Customer Classes

Water customers have been separated into Retail (Residential, Non-Residential, Irrigation, and City) and Wholesale classes. The classes group together customers with similar service requirement characteristics and provide a means for allocating costs to customers. Wholesale contract customers are considered each their own class and include: Aqua Texas, Inc, Fern Bluff MUD, Paloma Lake MUD #1 and #2, R&R Joint Venture, Vista Oaks MUD, Walsh Ranch MUD, Williamson County MUD #10, Williamson County MUD #11, and Round Rock Ranch PUD.

Water Units of Service

Class service requirements include average daily water use projections, maximum day and maximum hour demands, and metering and billing requirements. Class base cost responsibility relates to the quantity of water used under average day load conditions. Class responsibility for extra capacity costs varies maximum day and maximum hour demands. Average day usage and capacity factors represent the estimated relationship between individual class peak demand and average day usage and are used to develop extra capacity requirements for maximum day and maximum hour demands. Estimated capacity factors are based on an analysis of each class's monthly usage characteristics.

Raftelis used 4 years of historical data for calculating peaking factors to smooth out any outliers to create normal usage characteristics for each customer class. **Table 14** and **Table 15** summarize estimated wholesale and retail class units of service.

Table 14: Wholesale Water Units of Service

Description	Common to All Customers			
	Base	Max Day	Max Hour	Bills
Aqua Texas, Inc.	44,781	53,944	336,573	12
Fern Bluff MUD	294,280	307,052	1,856,194	12
Paloma MUD #1 & #2	243,291	246,956	1,485,512	12
R&R Joint Venture	12,858	6,586	39,364	12
Vista Oaks MUD	134,011	151,988	934,726	12
Walsh Ranch MUD	54,097	57,204	346,688	12
Williamson MUD #10	175,642	173,086	1,036,037	12
Williamson MUD #11	202,215	192,202	1,144,190	12
Round Rock Ranch PUD	8,073	6,704	39,318	12
Total Wholesale	1,169,248	1,195,722	7,218,602	108

Table 15: Retail Water Units of Service

Unit Cost Component	Common to All Customers				Retail Only				
	Base	Max Day	Max Hour	Bills	Base	Max Day	Max Hour	Meters	Reuse
Units of Service	(1,000 gal)	(1,000 gal)	(1,000 gal)	(no. bills)	(1,000 gal)	(1,000 gal)	(1,000 gal)	(eq. meters)	(1,000 gal)
Residential	3,390,241	8.79	52.32	410,382	3,390,241	9	52	34,408	
Non Residential	1,823,796	2.06	12.86	23,869	1,823,796	2	13	11,764	
Irrigation	587,390	1.92	11.98	8,960	587,390	2	12	2,937	
City	151,027	0.45	2.77	-	151,027	0	3	-	
Reuse	-								104,805
Total Retail	5,952,454	13	80	443,211	5,952,454	13	80	49,109	104,805

Unit Costs of Service

Wholesale

Table 16 combines all system units of service to identify wholesale's share of the common to all costs. For example, wholesale units of service make up 16.42% of all Base units and therefore are assigned 16.42% of Base costs. **Table 17** shows the development of the wholesale revenue requirements using each cost component of the utility method (O&M, Depreciation, Rate Base). The first step is to allocate wholesale's share of the utility method components using the percentages in **Table 16**. The return on rate base calculation requires one more step and multiplies the wholesale share of rate base by the system WACC of 5.31%.

Table 16: Water Wholesale Class Share of System

Description	Common to All Customers			
	Base	Max Day	Max Hour	Bills
	(1,000 gal)	(1,000 gal)	(1,000 gal)	(no. bills)
Total Retail	5,952,454	4,827,909	29,172,893	443,211
Total Wholesale	1,169,248	1,195,722	7,218,602	108
Total Units (1,000 Gal)	7,121,702	6,023,630	36,391,495	443,319
Wholesale Percent of System	16.42%	19.85%	19.84%	0.02%

Table 17: Water Wholesale Class Revenue Requirements²

Description	Common to All Customers			
	Total	Base	Max Day	Bills
Rate Base	84,729,834	23,878,311	15,474,306	-
Wholesale Share of Rate Base	6,992,096	3,920,366	3,071,730	
WACC	5.31%			
Total Return on Rate Base	\$ 371,582	\$ 208,341	\$ 163,242	
O&M	27,526,909	15,729,515	6,233,795	1,333,200
Depreciation	6,936,274	2,019,138	1,318,873	-
Wholesale Revenues Requirement				
O&M	\$ 3,820,254	\$ 2,582,488	\$ 1,237,440	\$ 325
Depreciation	593,307	\$ 331,504	\$ 261,803	
Return on Rate Base	371,582	208,341	163,242	-
Total	\$ 4,785,143	\$ 3,122,333	\$ 1,662,485	\$ 325

² Excludes Retail Only allocated costs for illustration purposes. For example, Rate Base total will not equal to \$84 million by adding Base and Max Day. Please see appendix for full calculation.

Retail

Table 18 shows the development of the cash needs basis COS for each functional cost component. Unit costs are calculated by dividing functionalized costs of service total cash basis revenue requirement **Table 18** total by applicable retail units of service **Table 15**. The unit costs of service at the bottom of **Table 18** is then multiplied by each retail customer class (e.g., residential, commercial) units of service to develop their respective COS.

Table 18: Cash Needs Water COS by Functional Cost Component

Unit Cost Component	Total	Common to All Customers			Retail Only				Reuse
		Base	Max Day	Bills	Base	Max Day	Max Hour	Meters	
Operating Expenses	\$ 27,526,909	\$ 15,729,515	\$ 6,233,795	\$ 1,333,200	\$ 1,236,959	\$ 1,008,971	\$ 1,341,251	\$ 288,174	\$ 355,043
Capital Expenses	6,375,500	1,855,897	1,212,246	-	746,919	609,252	809,894	146,682	994,609
Gross Revenue Requirement	33,902,409	17,585,413	7,446,041	1,333,200	1,983,878	1,618,223	2,151,145	434,856	1,349,652
Adjustments									
Wholesale Revenues (Utility Basis)	\$ (4,785,143)	\$ -	\$ -	\$ -	\$ (1,399,165)	\$ (1,141,281)	\$ (1,517,133)	\$ (325,963)	\$ (401,601)
Impact Fee Revenues	(860,000)	-	-	-	(132,908)	(108,411)	(144,114)	(436,419)	(38,148)
Non-Rate Revenues	(1,829,426)	-	-	-	(282,727)	(230,617)	(306,565)	(928,367)	(81,151)
Annual Surplus (Deficit)	532,685	304,389	120,633	25,799	23,937	19,525	25,955	5,577	6,871
Total Adjustments	(6,941,884)	304,389	120,633	25,799	(1,790,863)	(1,460,783)	(1,941,857)	(1,685,172)	(514,030)
Cash Basis Revenue Requirement	\$ 26,960,525	\$ 17,889,801	\$ 7,566,674	\$ 1,359,000	\$ 193,015	\$ 157,440	\$ 209,288	\$ (1,250,316)	\$ 835,623
Unit Cost of Service - \$ Per Unit		3.01	\$ 572,056	3.07	0.03	\$ 11,903	\$ 2,619	(25.46)	7.97

Water Customer Class Cost of Service

Total unit COS, applied to class service requirements, results in the allocated class COS, and **Table 19** shows the recommended rate adjustments by customer class. Retail class is at their cost of service and no adjustments are needed. For the wholesale class, Raftelis recommends any implementing overall decrease adjustment in FY 2022 and overall increase adjustments over a three-year period as shown in the last column using an Average Annual Change.

Table 19: Water COS Adjustments

	Allocated Cost of Service	Revenue Under Existing Rates	Overall Change %	Average Annual Change %
Retail	26,960,525	27,034,195	-0.3%	-0.1%
Wholesale				
Aqua Texas, Inc.	194,619	185,724	4.8%	1.6%
Fern Bluff MUD	1,212,787	1,171,483	3.5%	1.2%
Paloma MUD 1&2	993,072	1,032,656	-3.8%	-1.3%
R&R Joint Venture	43,530	43,572	-0.1%	0.0%
Vista Oaks MUD	569,213	529,255	7.5%	2.5%
Walsh Ranch MUD	224,030	217,693	2.9%	1.0%
Williamson MUD #10	709,720	686,653	3.4%	1.1%
Williamson MUD #11	807,257	826,994	-2.4%	-0.8%
Round Rock Ranch PUI	30,915	30,005	3.0%	1.0%

WASTEWATER COST OF SERVICE

In developing an equitable schedule of charges for wastewater service, the cost of service is allocated to the City's customer classes according to class-specific service requirements. Allocation of cost of service takes into account the volume of wastewater contributed, strength of wastewater and number of customers. Cost of service allocations are made for a test year representative of the period for which resultant rates are expected to be in effect.

Wastewater cost of service uses the same 5 step process as water for determining the cost of service. The difference is the cost functions performed by the City to provide wastewater utility service to customers. Wastewater functions include treatment, collections, lift stations, and meters.

Wastewater Revenue Requirements

The utility basis revenue requirement for wholesale customer is summarized in **Table 20**.

Table 20: Wastewater Wholesale Revenue Requirements

Description	Operating Expense	Capital Cost	Total Costs
O&M	\$ 1,085,014		\$ 1,085,014
Depreciation		597,834	597,834
Return on Investment		415,970	415,970
Total Revenue Requirement	\$ 1,085,014	\$ 1,013,804	\$ 2,098,818

The total retail test year cost of service includes revenue requirements net of miscellaneous revenue, wholesale revenues, and change in fund balance while maintaining annual operating reserve requirements. Test year revenue requirements for the wastewater utility net of wholesale equals \$17,938,459 and is summarized using the cash needs approach in **Table 21** below.

Table 21: Wastewater Test Year COS

Description	Operating Expense	Capital Cost	Total Cost
Cash Basis Revenue Requirement			
Revenue Requirements			
O&M Expenses	\$ 12,103,084		\$ 12,103,084
Debt Service		4,518,250	4,518,250
Other Expenditures and Transfers:			
Transfers to Construction Fund		3,000,000	3,000,000
Administrative Support Allocation	2,135,560		2,135,560
Subtotal Gross Revenue Requirements	\$ 14,238,644	\$ 7,518,250	\$ 21,756,894
Less: Non Rate Revenues			
Non-Rate Operating Revenues			
Wholesale Revenues	\$ (2,098,818)		\$ (2,098,818)
Impact Fee Revenues		(980,000)	(980,000)
BCRWWS Revenues	(2,983,261)		(2,983,261)
Non-Rate Revenues	(2,502,223)		(2,502,223)
Total Non Rate Revenues	\$ (7,584,302)	\$ (980,000)	\$ (8,564,302)
Surplus/(Deficit)	\$ 4,745,867		\$ 4,745,867
Net Revenue Requirements	\$ 11,400,209	\$ 6,538,250	\$ 17,938,459

Allocation Functionalized Revenue Requirement to Cost Drivers

Once costs have been functionalized, they must then be allocated to cost components. Cost components represent the drivers of utility costs, or the types of customer demand which drive the design, operation and—in turn—cost of the wastewater system.

The wastewater system is designed to collect, treat, and discharge customer sewage. The cost drivers related to customers are as follows:

- Volume – volume of customer sewage discharged
- Strength – concentration of strength into the system measured in biochemical oxygen demand (BOD), and total suspended solids (TSS).

In addition to these demand categories are costs incurred to serve a customer regardless of how much wastewater they use. These customer related components are as follows:

- Bills – costs driven by providing customer service (i.e., billing, collection, the provision of customer service)
- Meters and Services – shared costs with water and driven by maintaining customer meters and collection lines

Determination of Allocation Factors

Treatment costs are driven by the volume of customer sewage discharged by customers as well as the strength of pollutants, which must be removed via the physical and biological processes at the treatment plant. Strength costs vary with the strengths of biochemical oxygen demand (BOD), and total suspended solids (TSS) contributed. Treatment costs were allocated based on 50% to volume, 25% to biochemical oxygen demand (BOD), 25% to total suspended solids (TSS) contributed.

Collection system costs are driven by the volume of sewage discharged by customers both directly, via indoor water use, and indirectly via the infiltration and inflow (I/I). Minor costs on the collection system are attributed to strength. These costs were allocated 90% to volume, 5% BOD, and 5% TSS.

Billing costs are related to the provision of billing, collection and customer service, which is a function of the number of wastewater customers. Accordingly, these costs were allocated 100% to the bills cost driver.

Allocation of Wastewater Cost of Service Allocation

Table 22 shows the FY 2024 allocation of O&M expense to functional cost components. O&M expenses are generally allocated to the functional cost component that reflects the design parameter associated with the expense. Treatment related expenses are associated with wastewater treatment, and are allocated to volume, BOD, and TSS, cost components. Collection main expenses are associated with the cost of collecting wastewater from customers and delivering wastewater to the treatment plant. Expenses not specifically assigned to a cost component are allocated in proportion to all other expense allocations, such as administrative costs.

Table 22: Wastewater Allocation of O&M Expense

Category	Total	Common to All Customers				Retail Only	
		Volume	BOD	TSS	Bills	Volume	Meters
Admin	\$ 4,161,835	1,625,854	\$ 646,387	\$ 646,387	\$ 450,263	\$ 630,518	\$ 162,427
Customer	1,090,195	-	-	-	1,090,195	-	-
Wastewater Pumping	-	-	-	-	-	-	-
Purchased Power	-	-	-	-	-	-	-
Wastewater Plant	6,058,616	3,029,308	1,514,654	1,514,654	-	-	-
Chemicals	-	-	-	-	-	-	-
Common Collections	1,008,087	907,279	50,404	50,404	-	-	-
Local Collections	1,526,636	-	-	-	-	1,526,636	-
Lift Stations	-	-	-	-	-	-	-
Meters	393,274	-	-	-	-	-	393,274
BRRWWS	-	-	-	-	-	-	-
Total O&M	\$ 14,238,644	\$ 5,562,441	\$ 2,211,445	\$ 2,211,445	\$ 1,540,458	\$ 2,157,153	\$ 555,701

Wastewater system assets (and their accrued depreciation expense) are generally allocated to the functional cost component that reflects the design parameter associated with the asset. Treatment plant assets are designed to treat wastewater and are allocated equally to volume, BOD, and TSS cost components. Collection main assets, for example, are associated with collecting wastewater from customers and delivering it to the treatment plant. These costs are allocated equally between volume cost and local collector sewer cost components.

Table 23 illustrates the wastewater assets allocations to each design parameter. The percent of capital assets to volume and strength will be used to allocate capital costs to retail and wholesale customers. The wholesale related capital costs exclude debt service and cash funded CIP. The wholesale revenue requirements include their proportional share of annual depreciation (**Table 24**) expense and an annual return on investment related to assets used to serve wholesale customers (Common to All).

Table 23: Allocation of Wastewater System Assets

Category	Total	Common to All Customers				Retail Only	
		Volume	BOD	TSS	Bills	Volume	Meters
Wastewater Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Plant	\$ 42,845,291	\$ 21,422,646	\$ 10,711,323	\$ 10,711,323	\$ -	\$ -	\$ -
Common Collection	\$ 14,272,873	\$ 14,272,873	\$ -	\$ -	\$ -	\$ -	\$ -
Local Collection	\$ 21,614,669	\$ -	\$ -	\$ -	\$ -	\$ 21,614,669	\$ -
Lift Stations	\$ 749,575	\$ 749,575	\$ -	\$ -	\$ -	\$ -	\$ -
Contributed Wastewater							
WW Impact Fee Funded							
Other Wastewater Assets	\$ 5,688,068	\$ 2,608,151	\$ 766,544	\$ 766,544	\$ -	\$ 1,546,829	\$ -
Total Rate Base	\$ 85,170,476	\$ 39,053,245	\$ 11,477,866	\$ 11,477,866	\$ -	\$ 23,161,498	\$ -

Table 24: Wastewater Annual Depreciation

Category	Total	Common to All Customers				Retail Only	
		Volume	BOD	TSS	Bills	Volume	Meters
Wastewater Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Plant	\$ 2,377,405	\$ 1,188,702	\$ 594,351	\$ 594,351	\$ -	\$ -	\$ -
Common Collection	\$ 995,318	\$ 995,318	\$ -	\$ -	\$ -	\$ -	\$ -
Local Collection	\$ 1,507,298	\$ -	\$ -	\$ -	\$ -	\$ 1,507,298	\$ -
Lift Stations	\$ 68,309	\$ 68,309	\$ -	\$ -	\$ -	\$ -	\$ -
Contributed Wastewater							
WW Impact Fee Funded							
Other Wastewater Assets	\$ 574,698	\$ 263,517	\$ 77,448	\$ 77,448	\$ -	\$ 156,285	\$ -
CWIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Rate Base	\$ 5,523,028	\$ 2,515,846	\$ 671,800	\$ 671,800	\$ -	\$ 1,663,583	\$ -

Allocation of Costs to Customer Classes

Wastewater customers have been separated into Retail (Residential, Non-Residential, and City) and Wholesale classes. The classes group together customers with similar service requirement characteristics and provide a means for allocating costs to customers. Wholesale contract customers are considered having the same strengths and therefore are combined into the Wholesale class. The customers that make up the wastewater Wholesale class include Paloma Lake MUD #1 and #2, R&R Joint Venture, Siena MUD #1, Siena MUD #2, Vista Oaks MUD, Walsh Ranch MUD, Williamson County MUD #10, Williamson County MUD #11, and Round Rock Ranch PUD.

Wastewater Units of Service

Historical data and information provided from utility records were used to estimate projected units of service. Wastewater collected and treated consists of:

- Contributed sanitary and industrial wastewater flow, and
- Infiltration/inflow (I/I) of groundwater into the sewers.

Contributed wastewater flow is that portion of annual water use or other discharge of each customer class that enters the wastewater system. Estimates of class-specific contributed volume is based upon a 4-year average flow per connection. The winter average³ is used and therefore excludes volume that does not reach the wastewater system, such as volume used for lawn sprinkling and other outdoor use. The difference in volume is I/I of groundwater into

³ Each year, the City takes the average water use for the months of November, December, and January to calculate usage for the year.

the sewer system. It is estimated that flow entering the sewers through I/I will average approximately 18.5% of total wastewater flow reaching the treatment plant. Each customer class should bear its proportionate share of costs associated with I/I, as the wastewater system must be able to adequately convey and process total wastewater flow. I/I is allocated to customer classes on the premise that 100% of the total is distributable on the basis of volume contributed by each customer.

Total strength units are based on the City's projection of strength concentrations in wastewater contributed to the system during the FY 2024 test year. The average wastewater BOD concentration is estimated to be 270 milligrams per liter (mg/L) and TSS 330 mg/L. The wastewater utility's share of customer related billing and collection costs associated with wastewater billing is allocated based on the number of bills.

Table 25 and **Table 26** summarize estimated wholesale and retail class units of service.

Table 25: Wholesale Wastewater Units of Service

Description	Volume	BOD	TSS	Bills
Paloma 1&2	138,635	266,321	324,901	12
R&R Joint Venture	13,226	25,408	30,997	12
Siena MUD #1	103,891	199,578	243,477	12
Siena MUD #2	53,330	102,448	124,982	12
Vista Oaks MUD	89,894	172,689	210,673	12
Walsh Ranch MUD	31,095	59,735	72,874	12
Williamson MUD#10	121,409	233,231	284,533	12
Williamson MUD#11	138,427	265,923	324,416	12
Round Rock Ranch PUD	9,137	17,552	21,413	12
Total Wholesale	699,045	1,342,884	1,638,267	108

Table 26: Estimated Wastewater Units of Service

Unit Cost Component	Volume	Common to All Customers			Retail Only	
		BOD	TSS	Bills	Volume	Meters
Units of Service	(1,000 gal)	(1,000 gal)	(1,000 gal)	(no. bills)	(1,000 gal)	(1,000 gal)
Residential	2,286,506	4,392,442	5,358,610	410,382	2,286,506	34,408
Non Residential	1,527,282	2,933,951	3,579,307	23,869	1,527,282	11,764
Total Retail	3,813,788	7,326,393	8,937,917	434,251	3,813,788	46,172

Unit Costs of Service

Table 27 combines all system units of service to identify wholesale's share of the common to all costs. For example, wholesale units of service make up 15.49% of all volume units and therefore are assigned 15.49% of volume related costs. **Table 28** shows the development of the wholesale revenue requirements using each cost component of the utility method (O&M, Depreciation, Rate Base). The wastewater revenue requirement includes Non-Rate revenues related to BCRWWS and sludge dumping fees that are cost offsets from partner cities to Round Rock for operating the BCRWWS treatment plant. The first step is to allocate wholesales share of the utility method components using the percentages in **Table 27**. The return on rate base calculation requires one more step and multiplies the wholesale share of rate base by the system WACC of 5.31%.

Table 27: Wastewater Wholesale Class Share of System

Description	Common to All Customers			
	Volume	BOD	TSS	Bills
	(1,000 gal)	(lbs)	(lbs)	(no. bills)
Total Retail	3,813,788	7,326,393	8,937,917	434,251
Total Wholesale	699,045	1,342,884	1,638,267	108
Total Units (1,000 Gal)	4,512,833	8,669,277	10,576,184	434,359
Wholesale Percent of System	15.49%	15.49%	15.49%	0.02%

Table 28: Wastewater Wholesale class Revenue Requirements⁴

Description	Total	Volume	BOD	TSS	Bills
Rate Base	85,170,476	39,053,245	11,477,866	11,477,866	-
Wholesale Share of Rate Base	9,605,283	6,049,406	1,777,939	1,777,939	-
WACC	5.31%				
Total Return on Rate Base	\$ 415,970	\$ 321,485	\$ 94,485		
Wastewater O&M	\$14,238,644	\$ 5,562,441	\$ 2,211,445	\$ 2,211,445	\$ 1,540,458
Depreciation	5,523,028	2,515,846	671,800	671,800	-
Non-Rate Revenues (BCRWWS)	(5,485,484)	(1,491,631)	(745,815)	(745,815)	-
Total Expenses to Wholesale Class	\$12,401,974	\$ 6,586,657	\$ 2,137,429	\$ 2,137,429	\$ 1,540,458
Wholesale Revenues Requirement					
O&M	\$ 1,547,126	\$ 861,630	\$ 342,556	\$ 342,556	\$ 383
Depreciation	597,834	389,708	104,063	104,063	-
Non-Rate Revenues (BCRWWS)	(462,112)	(231,056)	(115,528)	(115,528)	-
Return on Rate Base	415,970	321,485	94,485	-	-
Total	\$ 2,098,818	\$ 1,341,768	\$ 425,576	\$ 331,091	\$ 383

Retail

Table 29 shows the development of the cash needs basis COS for each functional cost component. Unit costs are calculated by dividing functionalized costs of service total cash basis revenue requirement **Table 29** total by applicable retail units of service **Table 26**. The unit costs of service at the bottom of **Table 29** is then multiplied by each retail customer class units of service to develop their COS.

⁴ Excludes Retail Only allocated costs for illustration purposes. For example, Rate Base total will not equal to \$85 million by adding Volume, BOD, and TSS. Please see appendix for full calculation.

Table 29: Cash Needs Wastewater COS by Functional Cost Component

Unit Cost Component	Total	Common to All Customers				Retail Only	
		Volume	BOD	TSS	Bills	Volume	Meters
Operating Expenses	\$ 14,238,644	\$ 5,562,441	\$ 2,211,445	\$ 2,211,445	\$ 1,540,458	\$ 2,157,153	\$ 555,701
Capital Expenses	7,518,250	3,447,346	1,013,185	1,013,185	-	2,044,534	-
Gross Revenue Requirement	\$ 21,756,894	\$ 9,009,787	\$ 3,224,630	\$ 3,224,630	\$ 1,540,458	\$ 4,201,687	\$ 555,701
Adjustments							
Wholesale Revenues	\$ (2,098,818)	\$ -	\$ -	\$ -	\$ -	\$ (1,668,896)	\$ (429,922)
Impact Fee Revenues	(980,000)					(980,000)	-
Non-Rate Revenues	(5,485,484)	(1,491,631)	(745,815)	(745,815)	-	(2,502,223)	-
Annual Surplus (Deficit)	3,583,301	1,483,887	531,088	531,088	253,709	692,006	91,522
Total Adjustments	\$ (4,981,001)	\$ (7,743)	\$ (214,728)	\$ (214,728)	\$ 253,709	\$ (4,459,113)	\$ (338,399)
Cash Basis Revenue Requirement	\$ 16,775,892	\$ 9,002,043	\$ 3,009,903	\$ 3,009,903	\$ 1,794,168	\$ (257,425)	\$ 217,301
Unit Cost of Service - \$ Per Unit							
		\$ 2.36	\$ 0.41	\$ 0.34	\$ 4.13	\$ (0.07)	\$ 4.71

Wastewater Customer Class Cost of Service

Total unit COS, applied to class service requirements, results in the allocated class COS, and **Table 30** shows the recommended rate adjustments by customers class. Retail class is at their cost of service and no adjustments are needed; however, based on the financial health and cost saving of the utility, Raftelis recommends an -8.8% volume rate decrease for the Retail customer class. For the wholesale class, Raftelis recommends implementing an overall decrease adjustment of -8.8% in FY 2022.

Table 30: Wastewater Revenue Adjustments

	Allocated Cost of Service	Revenue Under Existing Rates	Overall Change %
Retail	\$ 17,938,459	17,736,624	1.1%
Wholesale			
Paloma 1&2	416,205	456,266	-8.8%
R&R Joint Venture	39,746	43,530	-8.7%
Siena MUD #1	311,909	341,920	-8.8%
Siena MUD #2	160,131	175,515	-8.8%
Vista Oaks MUD	269,891	295,853	-8.8%
Walsh Ranch MUD	93,387	102,339	-8.7%
Williamson MUD#10	364,497	399,575	-8.8%
Williamson MUD#11	415,582	455,584	-8.8%
RR Ranch PUD	27,470	30,070	-8.6%

APPENDIX A:

**WATER FINANCIAL PLAN
SUMMARY**

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
City of Round Rock					
<i>Financial Planning & Rate Model</i>					
Total System Cashflow					
Combined Utility	Budget	Projected	Projected	Projected	Projected
Revenues					
Retail Revenues	\$ 42,962,426	\$ 43,376,105	\$ 43,810,710	\$ 44,247,679	\$ 44,377,661
Wholesale Revenues	6,715,994	6,762,624	6,809,669	6,857,131	6,886,346
Impact Fee Revenues	1,840,000	1,840,000	1,840,000	1,840,000	1,840,000
Non-Rate Revenues	4,317,779	4,338,473	4,331,649	4,332,424	4,334,182
BCRWWS Revenues	2,950,000	2,981,000	2,983,261	2,985,534	2,987,818
Total: Revenues	\$ 58,786,198	\$ 59,298,202	\$ 59,775,288	\$ 60,262,769	\$ 60,426,007
System Expenditures	155,779				
Operations & Maintenance					
O&M	\$ 31,017,301	\$ 31,451,314	\$ 31,929,798	\$ 32,411,684	\$ 32,993,964
BRA - Debt Service	799,015	796,601	798,690	793,882	813,446
BCRA Debt Service	4,253,246	4,271,846	4,291,376	4,306,521	4,317,380
Input Adjustments	-	-	-	-	-
<i>Subtotal: Operations & Maintenance</i>	<i>\$ 36,069,562</i>	<i>\$ 36,519,761</i>	<i>\$ 37,019,864</i>	<i>\$ 37,512,086</i>	<i>\$ 38,124,790</i>
Net Revenues Available for Debt Service	\$ 22,716,636	\$ 22,778,441	\$ 22,755,424	\$ 22,750,682	\$ 22,301,217
Debt Service Requirements					
Existing Revenue Bonds Debt Service	\$ 5,509,650	\$ 5,400,950	\$ 5,393,750	\$ 5,389,450	\$ 5,386,700
Proposed Debt service	-	-	-	-	-
Subtotal: Debt Service Requirements	\$ 5,509,650	\$ 5,400,950	\$ 5,393,750	\$ 5,389,450	\$ 5,386,700
Total Debt Service Requirements	\$ 5,509,650	\$ 5,400,950	\$ 5,393,750	\$ 5,389,450	\$ 5,386,700
Transfers					
Transfer to Construction Fund	\$ 8,500,000	\$ 8,500,000	\$ 8,500,000	\$ 8,500,000	\$ 8,500,000
Administrative Support Allocation	4,745,688	4,745,688	4,745,688	4,745,688	4,745,688
Total Transfers	\$ 13,245,688	\$ 13,245,688	\$ 13,245,688	\$ 13,245,688	\$ 13,245,688
Total: System Expenditures	\$ 54,824,900	\$ 55,166,399	\$ 55,659,302	\$ 56,147,224	\$ 56,757,178
Surplus/Deficit	\$ 3,961,298	\$ 4,131,803	\$ 4,115,986	\$ 4,115,544	\$ 3,668,829
Total System Surplus/Deficit	\$ 3,961,298	\$ 4,131,803	\$ 4,115,986	\$ 4,115,544	\$ 3,668,829
Debt Service Coverage					
Total System Revenue	\$ 58,786,198	\$ 59,298,202	\$ 59,775,288	\$ 60,262,769	\$ 60,426,007
Less O&M Expenses	(36,069,562)	(36,519,761)	(37,019,864)	(37,512,086)	(38,124,790)
Less Administrative Support Allocation	(4,745,688)	(4,745,688)	(4,745,688)	(4,745,688)	(4,745,688)
Net Revenues Available for Coverage	\$ 17,970,948	\$ 18,032,753	\$ 18,009,736	\$ 18,004,994	\$ 17,555,529
Debt Service Coverage (Revenues Bonds)	4.12x	4.22x	4.22x	4.22x	4.14x
All-In Debt Coverage	2.63x	2.66x	2.66x	2.66x	2.61x

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
City of Round Rock					
<i>Financial Planning & Rate Model</i>					
	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>
<u>Water</u>	Budget	Projected	Projected	Projected	Projected
Water Revenues					
Retail Revenues	\$ 26,516,135	\$ 26,765,523	\$ 27,034,195	\$ 27,303,571	\$ 27,382,773
Wholesale Revenues	4,638,624	4,674,867	4,711,473	4,748,445	4,767,116
Impact Fee Revenues	860,000	860,000	860,000	860,000	860,000
Non-Rate Revenues	1,824,929	1,836,251	1,829,426	1,830,202	1,831,960
Total: Water Revenues	\$ 33,839,687	\$ 34,136,642	\$ 34,435,094	\$ 34,742,218	\$ 34,841,848
System Expenditures					
<u>Operations & Maintenance</u>					
O&M	\$ 19,232,795	\$ 19,509,062	\$ 19,826,715	\$ 20,144,620	\$ 20,560,597
BRA - Debt Service	799,015	796,601	798,690	793,882	813,446
BCRUA Debt Service	4,253,246	4,271,846	4,291,376	4,306,521	4,317,380
Input Adjustments					
<i>Subtotal: Operations & Maintenance</i>	<i>\$ 24,285,057</i>	<i>\$ 24,577,510</i>	<i>\$ 24,916,780</i>	<i>\$ 25,245,023</i>	<i>\$ 25,691,422</i>
Net Revenues Available for Debt Service	\$ 9,554,631	\$ 9,559,132	\$ 9,518,314	\$ 9,497,195	\$ 9,150,426
Debt Service Requirements					
Existing Revenue Bonds Debt Service	\$ 877,000	\$ 882,250	\$ 875,500	\$ 777,250	\$ 777,000
Proposed Debt service					
<i>Subtotal: Debt Service Requirements</i>	<i>\$ 877,000</i>	<i>\$ 882,250</i>	<i>\$ 875,500</i>	<i>\$ 777,250</i>	<i>\$ 777,000</i>
Total Debt Service Requirements	\$ 877,000	\$ 882,250	\$ 875,500	\$ 777,250	\$ 777,000
<u>Transfers</u>					
Transfer to Construction Fund (220)	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Transfer to Construction Fund (330)	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Administrative Support Allocation	\$ 2,610,128	\$ 2,610,128	\$ 2,610,128	\$ 2,610,128	\$ 2,610,128
Total Transfers	\$ 8,110,128	\$ 8,110,128	\$ 8,110,128	\$ 8,110,128	\$ 8,110,128
Total: System Expenditures	\$ 33,272,185	\$ 33,569,888	\$ 33,902,409	\$ 34,132,401	\$ 34,578,551
Surplus/Deficit	\$ 567,502	\$ 566,753	\$ 532,685	\$ 609,817	\$ 263,297
Total System Surplus/Deficit	\$ 567,502	\$ 566,753	\$ 532,685	\$ 609,817	\$ 263,297
Debt Service Coverage					
Total System Revenue	\$ 33,839,687	\$ 34,136,642	\$ 34,435,094	\$ 34,742,218	\$ 34,841,848
Less O&M Expenses	(24,285,057)	(24,577,510)	(24,916,780)	(25,245,023)	(25,691,422)
Less Administrative Support Allocation	(2,610,128)	(2,610,128)	(2,610,128)	(2,610,128)	(2,610,128)
Net Revenues Available for Coverage	\$ 6,944,502	\$ 6,949,003	\$ 6,908,185	\$ 6,887,067	\$ 6,540,297
Debt Service Coverage (Revenues Bonds)	10.89x	10.83x	10.87x	12.22x	11.78x
All- In Debt Coverage	2.46x	2.46x	2.45x	2.48x	2.42x

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
City of Round Rock					
<i>Financial Planning & Rate Model</i>					
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
	Budget	Projected	Projected	Projected	Projected
<u>Wastewater</u>					
Wastewater Revenues					
Retail Revenues	\$ 16,446,291	\$ 16,610,581	\$ 16,776,515	\$ 16,944,108	\$ 16,994,888
Wholesale Revenues	2,077,370	2,087,757	2,098,196	2,108,687	2,119,230
Impact Fee Revenues	980,000	980,000	980,000	980,000	980,000
Non-Rate Revenues	\$ 2,492,850	\$ 2,502,223	\$ 2,502,223	\$ 2,502,223	\$ 2,502,223
BCRWWS Revenues	2,950,000	2,981,000	2,983,261	2,985,534	2,987,818
Total: Wastewater Revenues	\$ 24,946,511	\$ 25,161,561	\$ 25,340,194	\$ 25,520,551	\$ 25,584,159
System Expenditures					
<u>Operations & Maintenance</u>					
O&M	\$ 11,784,506	\$ 11,942,252	\$ 12,103,084	\$ 12,267,064	\$ 12,433,367
Input/Adjustments					
<i>Subtotal: Operations & Maintenance</i>	<i>\$ 11,784,506</i>	<i>\$ 11,942,252</i>	<i>\$ 12,103,084</i>	<i>\$ 12,267,064</i>	<i>\$ 12,433,367</i>
Net Revenues Available for Debt Service	\$ 13,162,005	\$ 13,219,309	\$ 13,237,110	\$ 13,253,487	\$ 13,150,791
Debt Service Requirements					
Existing Revenue Bonds Debt Service	\$ 4,632,650	\$ 4,518,700	\$ 4,518,250	\$ 4,612,200	\$ 4,609,700
Proposed Debt service					
Subtotal: Debt Service Requirements	\$ 4,632,650	\$ 4,518,700	\$ 4,518,250	\$ 4,612,200	\$ 4,609,700
Total Debt Service Requirements	\$ 4,632,650	\$ 4,518,700	\$ 4,518,250	\$ 4,612,200	\$ 4,609,700
<u>Transfers</u>					
Transfer to Construction Fund	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Administrative Support Allocation	2,135,560	2,135,560	2,135,560	2,135,560	2,135,560
Total Transfers	\$ 5,135,560	\$ 5,135,560	\$ 5,135,560	\$ 5,135,560	\$ 5,135,560
Total: System Expenditures	\$ 21,552,715	\$ 21,596,511	\$ 21,756,894	\$ 22,014,823	\$ 22,178,627
Surplus/Deficit	\$ 3,393,796	\$ 3,565,050	\$ 3,583,301	\$ 3,505,727	\$ 3,405,532
Total System Surplus/Deficit	\$ 3,393,796	\$ 3,565,050	\$ 3,583,301	\$ 3,505,727	\$ 3,405,532
Debt Service Coverage					
Total System Revenue	\$ 24,946,511	\$ 25,161,561	\$ 25,340,194	\$ 25,520,551	\$ 25,584,159
Less O&M Expenses	(11,784,506)	(11,942,252)	(12,103,084)	(12,267,064)	(12,433,367)
Less: Administrative Support Allocation	(2,135,560)	(2,135,560)	(2,135,560)	(2,135,560)	(2,135,560)
Net Revenues Available for Coverage	\$ 11,026,446	\$ 11,083,750	\$ 11,101,551	\$ 11,117,927	\$ 11,015,232
Debt Service Coverage	2.38x	2.45x	2.46x	2.41x	2.39x

City of Round Rock
Financial Planning & Rate Model
Capital Improvement Projects

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>
Capital Improvement Projects					
Water	\$ 8,479,302	\$ 10,065,000	\$ 12,090,000	\$ 5,900,000	\$ 4,775,000
Water Impact Fee Projects	7,141,160	10,335,374	4,100,000	2,800,000	360,000
BCRUA	19,600,000	22,530,000	20,280,000	9,510,000	6,130,000
Wastewater	8,300,821	3,550,000	4,725,000	2,275,000	4,475,000
Wastewater Impact Fee Projects	3,300,000	2,431,000	5,794,000	3,000,000	1,602,000
BCRWWS Projects	4,538,000	1,500,000	1,200,000	-	-
Reuse	2,105,000	825,000	-	1,000,000	-
Total: Capital Improvement Projects	\$ 53,464,283	\$ 51,236,374	\$ 48,189,000	\$ 24,485,000	\$ 17,342,000

Capital Financing Sources

Cash Financing	\$ 53,464,283	\$ 51,236,374	\$ 48,189,000	\$ 24,485,000	\$ 17,342,000
Bond Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -
SRF Loans	\$ -	\$ -	\$ -	\$ -	\$ -
Grants	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal: Capital Financing Sources	\$ 53,464,283	\$ 51,236,374	\$ 48,189,000	\$ 24,485,000	\$ 17,342,000
Capital Financing Shortfall	\$ -	\$ -	\$ -	\$ -	\$ -

Revenue Bond Fund

<u>Beginning Balance</u>	\$ -	\$ -	\$ -	\$ -	\$ -
Additions:					
Bond Proceeds	-	-	-	-	-
Bond Proceed Override					
Bond Issuance Costs (Added to Issuance)	-	-	-	-	-
Subtractions:					
Capital Improvements	\$ -	\$ -	\$ -	\$ -	\$ -
Bond Issuance Costs	-	-	-	-	-
Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -

Calculation of Future Debt Service

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>
Revenue Bond Inputs					
Par Amount					
Premium					
Total Issued Amount	\$ -	\$ -	\$ -	\$ -	\$ -
Project Fund Deposits	\$ -	\$ -	\$ -	\$ -	\$ -
Principal	\$ -	\$ -	\$ -	\$ -	\$ -
Rate	4.00%	4.50%	4.50%	4.50%	4.50%
Term	20	20	20	20	20
Cost	1.0%	1.0%	1.0%	1.0%	1.0%
I/O	1	1	1	1	1
1st PMT	2022	2023	2025	2026	2027
Indenture	Senior	Senior	Senior	Senior	Senior

SRF Loan Inputs

Principal	\$ -	\$ -	\$ -	\$ -	\$ -
Rate	4.00%	4.50%	4.50%	4.50%	4.50%
Term	20	20	20	20	20
Cost	1.0%	1.0%	1.0%	1.0%	1.0%
I/O	0	0	0	0	0
1st PMT	2024	2025	2026	2027	2028
Indenture	Subordinate	Subordinate	Subordinate	Subordinate	Subordinate

City of Round Rock
Financial Planning & Rate Model
Existing Debt

System Debt Service	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>
<u>Current Debt Service</u>					
Revenue Bonds					
Revenue Refunding Bonds, Series 2017 (2006 Portion Only)					
Principal	\$ 695,000	\$ 735,000	\$ 765,000	\$ 705,000	\$ 740,000
Interest	\$ 182,000	\$ 147,250	\$ 110,500	\$ 72,250	\$ 37,000
Subtotal: Revenue Refunding Bonds, Series 2017 (2006 Portio	\$ 877,000	\$ 882,250	\$ 875,500	\$ 777,250	\$ 777,000
WW Revenue Refunding Bonds, Series 2016					
Principal	\$ 180,000	\$ 185,000	\$ 190,000	\$ 2,750,000	\$ 2,885,000
Interest	\$ 1,194,775	\$ 1,187,575	\$ 1,183,875	\$ 1,180,075	\$ 1,042,575
Subtotal: WW Revenue Refunding Bonds, Series 2016	\$ 1,374,775	\$ 1,372,575	\$ 1,373,875	\$ 3,930,075	\$ 3,927,575
WW Revenue Refunding Bonds, Series 2017 (2009 Portion Only)					
Principal	\$ 2,235,000	\$ 2,235,000	\$ 2,345,000		
Interest	\$ 1,022,875	\$ 911,125	\$ 799,375	\$ 682,125	\$ 682,125
Subtotal: WW Revenue Refunding Bonds, Series 2017 (2009 Portio	\$ 3,257,875	\$ 3,146,125	\$ 3,144,375	\$ 682,125	\$ 682,125
Total Revenue Bonds					
Principal	\$ 3,110,000	\$ 3,155,000	\$ 3,300,000	\$ 3,455,000	\$ 3,625,000
Interest	2,399,650	2,245,950	2,093,750	1,934,450	1,761,700
<i>Total Revenue Bonds</i>	\$ 5,509,650	\$ 5,400,950	\$ 5,393,750	\$ 5,389,450	\$ 5,386,700
Water %	16%	16%	16%	14%	14%
WW %	84%	84%	84%	86%	86%
Other					
BCRUA Aggregated Debt (Considered O&M)					
Principal	\$ 2,190,000	\$ 2,290,000	\$ 2,395,000	\$ 2,500,000	\$ 2,605,000
Interest	\$ 2,063,246	\$ 1,981,846	\$ 1,896,376	\$ 1,806,521	\$ 1,712,380
Subtotal: BCRUA Aggregated Debt (Considered O&M)	\$ 4,253,246	\$ 4,271,846	\$ 4,291,376	\$ 4,306,521	\$ 4,317,380
BRA Debt (Considered O&M)					
Principal	\$ 589,606	\$ 605,115	\$ 624,946	\$ 636,758	\$ 673,981
Interest	\$ 205,434	\$ 187,523	\$ 169,770	\$ 153,174	\$ 135,419
Service Fee	\$ 3,975	\$ 3,963	\$ 3,974	\$ 3,950	\$ 4,047
Subtotal: BRA Debt (Considered O&M)	\$ 799,015	\$ 796,601	\$ 798,690	\$ 793,882	\$ 813,446
<i>Other</i>	\$ 5,052,261	\$ 5,068,447	\$ 5,090,066	\$ 5,100,403	\$ 5,130,826
<i>Subtotal: Current Debt Service</i>	\$ 10,561,911	\$ 10,469,397	\$ 10,483,816	\$ 10,489,853	\$ 10,517,526

APPENDIX B:

WATER COST OF SERVICE

City of Round Rock
Financial Planning & Rate Model
Water Revenue Requirement
2024

Line No.	Description	Operating Expense	Capital Cost	Total Cost
Cash Basis Revenue Requirement				
Revenue Requirements				
1	O&M Expenses	\$ 24,916,780	\$	24,916,780
2	Debt Service		875,500	875,500
	Other Expenditures and Transfers:			
3	Transfers to Construction Fund		5,500,000	5,500,000
4	Administrative Support Allocation	2,610,128		2,610,128
5	Subtotal Gross Revenue Requirements	\$ 27,526,909	\$ 6,375,500	\$ 33,902,409
Non-Rate Operating Revenues				
6	Wholesale Revenues (Utility Basis)	\$ (4,785,143)	\$	(4,785,143)
7	Impact Fee Revenues		(860,000)	(860,000)
8	Non-Rate Revenues	(1,829,426)		(1,829,426)
9	Total Non Rate Revenues	\$ (6,614,569)	\$ (860,000)	\$ (7,474,569)
10	Surplus/(Deficit)	\$ 532,685	\$	532,685
11	Net Revenue Requirements	\$ 21,445,025	\$ 5,515,500	\$ 26,960,525

City of Round Rock
Financial Planning & Rate Model
Water Units of Service
FY 2024

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Max Day			Max Hour			Customer		Reuse
	Water Sales	Average Day	Peaking Factor	Total Capacity	Extra Capacity	Peaking Factor	Total Capacity	Extra Capacity	Bills	Cost Meters	Sales
	(1,000 Gallons)	(MGD)		(MGD)	(MGD)		(MGD)	(MGD)		(5/8" Eq.)	(1,000 Gallons)
Calculations		= (1) / (365)		= (2) x (3)	= (4) - (2)		= (4) x (6)	= (7) - (4)			
RETAIL UNITS											
Residential	3,390,241	9.29	1.95	18.08	8.79	3.89	70.41	52.32	410,382	34,408	
Non Residential	1,823,796	5.00	1.41	7.05	2.06	2.82	19.91	12.86	23,869	11,764	
Irrigation	587,390	1.61	2.20	3.53	1.92	4.39	15.51	11.98	8,960	2,937	
City	151,027	0.41	2.10	0.87	0.45	4.19	3.63	2.77	-		
Reuse											104,805
Public Hydrants		-									
Total Retail	5,952,454	16.31		29.54	13.23		109.46	79.93	443,211	49,109	104,805
WHOLESALE UNITS											
Aqua Texas, Inc.	44,781	0.12	2.20	0.27	0.15	4.41	1.19	0.92	12		
Fern Bluff MUD	294,280	0.81	2.04	1.65	0.84	4.09	6.73	5.09	12		
Paloma MUD #1	243,291	0.67	2.02	1.34	0.68	4.03	5.41	4.07	12		
R&R Joint Venture	12,858	0.04	1.51	0.05	0.02	3.02	0.16	0.11	12		
Sienna MUD #1	-	-	-	-	-	-	-	-	12		
Sienna MUD #2	-	-	-	-	-	-	-	-	12		
Vista Oaks MUD	134,011	0.37	2.13	0.78	0.42	4.27	3.34	2.56	12		
Walsh Ranch MUD	54,097	0.15	2.06	0.30	0.16	4.11	1.25	0.95	12		
Williamson MUD #10	175,642	0.48	1.99	0.96	0.47	3.97	3.79	2.84	12		
Williamson MUD #11	202,215	0.55	1.95	1.08	0.53	3.90	4.22	3.13	12		
Round Rock Ranch PUD	8,073	0.02	1.83	0.04	0.02	3.66	0.15	0.11	12		
Total Wholesale	1,169,248	3		6	3		26	20	132	-	
GRAND TOTAL WATER SYSTEM											
	7,121,702	20	-	36	17	-	136	100	443,343	49,109	104,805

City of Round Rock

Financial Planning & Rate Model

Operations and Maintenance Functionalization (Excludes Debt Service)

Line																		
No.	Description	Total	Admin	Customer	Pumping	Purchased Power	Water Plant	Chemicals	Storage	Transmission	Distribution	Meters	Fire	Reuse				
Operations and Maintenance																		
1	Utility Billings & Collections	\$ 1,090,195	\$ -	\$ 1,090,195	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
2	Fiscal Support Services	\$ 855,488	\$ 855,488	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
3	Utility Administration	\$ 1,242,266	\$ 1,242,266	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
4	Water Conservation Program	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ -				
5	Capital Outlay	8,135	-	-	-	-	-	-	-	-	-	8,135	-	-				
6	Water Treatment Plant - Admin	\$ 2,975,522	\$ -	\$ -	\$ -	\$ -	\$ 2,975,522	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
7	Raw Water Costs	624,831	-	-	-	-	-	-	-	-	-	-	-	-				
8	Reserves Water - Stillhouse	1,575,536	-	-	-	-	-	-	-	-	-	-	-	-				
9	Reserves Water LCRA	1,954,350	-	-	-	-	-	-	-	-	-	-	-	-				
10	O&M Lake Still House	836,482	-	-	-	-	-	-	-	-	-	-	-	-				
11	Power & Light	1,260,000	-	-	-	1,260,000	-	-	-	-	-	-	-	-				
12	Sludge Disposal	54,423	-	-	-	-	54,423	-	-	-	-	-	-	-				
13	Chemicals	612,060	-	-	-	-	-	612,060	-	-	-	-	-	-				
14	Contractual Obligation - BRA	798,690	-	-	-	-	798,690	-	-	-	-	-	-	-				
15	BCRUA Obligations	1,069,425	-	-	-	-	1,069,425	-	-	-	-	-	-	-				
16	Capital Outlay	127,513	-	-	-	-	-	-	-	-	-	127,513	-	-				
17	Reuse Facility	\$ 143,791	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 143,791				
18	Water Distribution	\$ 4,987,198	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,907,322	\$ 2,933,339	\$ -	\$ -	\$ 146,537				
Environmental Services																		
19	Environmental Services - Admin	\$ 309,498	\$ 309,498	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
O&M - Transfers & Debt Service																		
20	Other Service & Chgs (BCRUA Dbtsvc)	4,291,376	\$ -	\$ -	\$ -	\$ -	\$ 1,626,431	\$ -	\$ -	\$ 1,308,870	\$ -	\$ -	\$ -	\$ -				
21	Administrative Support Allocation	2,610,128	2,610,128	-	-	-	-	-	-	-	-	-	-	-				
22																		
23	Total O&M By Function	\$ 27,526,909	\$ 5,017,380	\$ 1,090,195	\$ -	\$ 1,260,000	\$ 6,524,492	\$ 612,060	\$ -	\$ 3,216,192	\$ 2,933,339	\$ 235,648	\$ -	\$ 290,329				
		\$ -																

City of Round Rock

Financial Planning & Rate Model

Line No.	Category	Total	Common to All Customers			Retail Only				Reuse	Fire Protection
			Base	Max Day	Bills	Base	Max Day	Max Hour	Meters		
1	Admin	\$ 5,017,380	2,867,048	\$ 1,136,245	\$ 243,005	\$ 225,463	\$ 183,907	\$ 244,472	\$ 52,526	\$ 64,714	\$ -
2	Customer	1,090,195	-	-	1,090,195	-	-	-	-	-	-
3	Source of Supply	6,347,273	6,347,273	-	-	-	-	-	-	-	-
4	Pumping	-	-	-	-	-	-	-	-	-	-
5	Purchased Power	1,260,000	693,952	566,048	-	-	-	-	-	-	-
6	Water Plant	6,524,492	3,593,402	2,931,090	-	-	-	-	-	-	-
7	Chemicals	612,060	337,096	274,964	-	-	-	-	-	-	-
8	Storage	-	-	-	-	-	-	-	-	-	-
9	Transmission	3,216,192	1,890,744	1,325,447	-	-	-	-	-	-	-
10	Distribution	2,933,339	-	-	-	1,011,496	825,064	1,096,779	-	-	-
11	Meters	235,648	-	-	-	-	-	-	235,648	-	-
12	Fire	-	-	-	-	-	-	-	-	-	-
13	Reuse	290,329	-	-	-	-	-	-	-	290,329	-
14	Total O&M	\$ 27,526,909	\$ 15,729,515	\$ 6,233,795	\$ 1,333,200	\$ 1,236,959	\$ 1,008,971	\$ 1,341,251	\$ 288,174	\$ 355,043	\$ -
			57%	23%	5%	4%	4%	5%	1%	1%	0%

Water Non-Rate Revenues Allocation Factors

Line No.	Description	Total	Common to All Customers				Retail Only					
			Base	Max Day	Bills	Base	Max Day	Max Hour	Meters	Reuse	Fire Protection	
	Service Charges											
1	Household Hazardous Waste Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2	Environmental Laboratory Fees	(145,000)	-	-	-	(42,398)	(34,583)	(45,972)	(9,877)	(12,169)	-	
3	Windemere Service Fees	-	-	-	-	-	-	-	-	-	-	
4	Industrial Pre-Trmnt Surcharge	-	-	-	-	-	-	-	-	-	-	
5	Connection & Transfer Fee	(125,000)	-	-	-	-	-	-	(125,000)	-	-	
	Miscellaneous											
6	Miscellaneous	(111,650)	-	-	-	(32,646)	(26,629)	(35,399)	(7,606)	(9,370)	-	
7	Increase / decrease fair value	-	-	-	-	-	-	-	-	-	-	
8	Interest Income	(550,000)	-	-	-	(160,819)	(131,178)	(174,378)	(37,466)	(46,160)	-	
	Utility Revenue											
9	Water Inspec & Meter Set Fee	(75,000)	-	-	-	-	-	-	(75,000)	-	-	
10	Water Penalty	(325,000)	-	-	-	-	-	-	(325,000)	-	-	
11	Reconnect Charges	(137,500)	-	-	-	-	-	-	(137,500)	-	-	
12	Meters & Fitting Sales	(200,000)	-	-	-	-	-	-	(200,000)	-	-	
13	Bulk Water / Hydrants (From Rates & Revenues Tab)	(160,276)	-	-	-	(46,864)	(38,227)	(50,816)	(10,918)	(13,451)	-	
14	Total Non Rate Revenues	\$ (1,829,426)	\$ -	\$ -	\$ -	\$ (282,727)	\$ (230,617)	\$ (306,565)	\$ (928,367)	\$ (81,151)	\$ -	
			0%	0%	0%	15%	13%	17%	51%	4%	0%	
15	Wholesale Revenues	\$ (4,785,143)				(1,399,165)	(1,141,281)	(1,517,133)	(325,963)	(401,601)		

City of Round Rock

FY 2024

Rate Base Allocation

Line No.	Category	Total	Common to All Customers		Retail Only					Reuse	Fire Protection
			Base	Max Day	Base	Max Day	Max Hour	Meters			
1	Storage	\$ 5,172,979	\$ -	\$ -	\$ 1,783,786	\$ 1,455,011	\$ 1,934,183	\$ -	\$ -	\$ -	
2	Water Plant	13,967,486	7,692,674	6,274,812	-	-	-	-	-	-	
3	Source of Supply	4,419,224	4,419,224	-	-	-	-	-	-	-	
4	Transmission	11,838,169	6,519,940	5,318,229	-	-	-	-	-	-	
5	Distribution	19,115,855	-	-	6,591,674	5,376,741	7,147,440	-	-	-	
6	Pumping	5,212,916	2,871,044	2,341,872	-	-	-	-	-	-	
7	Meters	-	-	-	-	-	-	-	-	-	
8	Reuse	16,574,229	-	-	-	-	-	-	16,574,229	-	
9	Other Water Assets	8,428,976	2,375,429	1,539,393	925,239	754,705	1,003,249	-	1,830,959	-	
10	Total Rate Base	\$ 84,729,834	\$ 23,878,311	\$ 15,474,306	\$ 9,300,700	\$ 7,586,457	\$ 10,084,872	\$ -	\$ 18,405,188	\$ -	
	%	100%	28.18%	18.26%	10.98%	8.95%	11.90%	0.00%	21.72%	0.00%	

Depreciation

Line No.	Category	Total	Common to All Customers			Retail Only				Reuse	Fire Protection
			Base	Max Day	Base	Max Day	Max Hour	Meters			
1	Storage	\$ 501,784	\$ -	\$ -	\$ 173,029	\$ 141,137	\$ 187,618	\$ -	\$ -	\$ -	
2	Water Plant	1,181,828	650,898	530,929	-	-	-	-	-	-	
3	Source of Supply	354,207	354,207	-	-	-	-	-	-	-	
4	Transmission	985,126	542,564	442,562	-	-	-	-	-	-	
5	Distribution	1,590,746	-	-	548,533	447,431	594,782	-	-	-	
6	Pumping	431,586	237,698	193,887	-	-	-	-	-	-	
7	Meters	159,584	-	-	-	-	-	159,584	-	-	
10	Reuse	901,905	-	-	-	-	-	-	901,905	-	
12	Other Water Assets	829,508	233,769	151,494	91,054	74,272	98,731	-	180,187	-	
15	Total Depreciation	\$ 6,936,274	\$ 2,019,138	\$ 1,318,873	\$ 812,616	\$ 662,840	\$ 881,131	\$ 159,584	\$ 1,082,093	\$ -	
16	%	100%	29%	19%	12%	10%	13%	2%	16%	0%	

	Category	Total	Common to All Customers		Retail Only					Fire Protection
			Base	Max Day	Base	Max Day	Max Hour	Meters	Reuse	
17	Storage	100%			34.5%	28.1%	37.4%			
18	Water Plant	100%	55.1%	44.9%						
19	Source of Supply	100%	100.0%							
20	Transmission	100%	55.1%	44.9%						
21	Distribution	100%			34.5%	28.1%	37.4%			
22	Pumping	100%	55.1%	44.9%						
23	Meters	100%						100.0%		
24	Contributed Water	0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%
25	W Impact Fee Funded	0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%
26	Reuse	100%			0.0%	0.0%	0.0%		100.0%	
27	Fire Protection	100%								100.0%
28	Other Water Assets	100%	28.2%	18.3%	11.0%	9.0%	11.9%	0.0%	21.7%	0.0%
29	CWIP	100%	28.2%	18.3%	11.0%	9.0%	11.9%	0.0%	21.7%	0.0%

City of Round Rock
Financial Planning & Rate Model
W Wholesale COS

Summary of Wholesale Class Revenue Requirement

Line No.	Description	Operating Expense	Base	Common to All Customers			Bills
				Max Day	Max Hour		
1	O&M	\$ 3,820,254	\$ 2,582,488	\$ 1,237,440	\$ -	\$ -	325
2	Depreciation		331,504	261,803	-	-	-
3	Return on Investment		208,341	163,242	-	-	-
4	Total Revenue Requirement	\$ 3,820,254	\$ 3,122,333	\$ 1,662,485	\$ -	\$ -	325
		4,785,624	3,122,603	1,662,696	-	-	325

Allocate Rate of Return and Expenses to Wholesale Class

Line No.	Description	Total	Base	Common to All Customers			Bills	Retail Only					Reuse	Fire Protection
				Max Day	Max Hour			Base	Max Day	Max Hour	Meters			
1	Rate Base	84,729,834	23,878,311	15,474,306	-	-	-	9,300,700	7,586,457	10,084,872	-	18,405,188	-	-
2	Wholesale Share of Rate Base	6,992,096	3,920,366	3,071,730										
3	WACC	5.31%												
4	Total Return on Rate Base	\$ 371,582	\$ 208,341	\$ 163,242										
5	O&M	23,296,511	15,729,515	6,233,795	-	1,333,200		1,236,959	1,008,971	1,341,251	288,174	355,043	-	-
6	Depreciation	3,338,010	2,019,138	1,318,873	-	-		812,616	662,840	881,131	159,584	1,082,093	-	-
7	Total Expenses to Wholesale Class	\$ 26,634,521	\$ 17,748,653	\$ 7,552,668	\$ -	\$ 1,333,200								
Wholesale Revenues Requirement														
8	Expense	4,413,561	\$ 2,913,992	\$ 1,499,244	\$ -	\$ 325								
9	Return on Rate Base	371,582	208,341	163,242	-	-								
10	Total	\$ 4,785,143	\$ 3,122,333	\$ 1,662,485	\$ -	\$ 325								

City of Round Rock

Financial Planning & Rate Model

W Wholesale COS

Wholesale Class Units of Service

Line No.	Description	Common to All Customers			
		Base (1,000 gal)	Max Day (1,000 gal)	Max Hour (1,000 gal)	Bills (no. bills)
11	Total Retail	5,952,454	4,827,909	29,172,893	443,211
12	Total Wholesale	1,169,248	1,195,722	7,218,602	108
13	Total Units (1,000 Gal)	7,121,702	6,023,630	36,391,495	443,319
14	Wholesale Percent of System	16.42%	19.85%	19.84%	0.02%

Revenue Requirement By Wholesale Customer

Line No.	Customer	Total	Base	Max Day	Max Hour	Bills
1	Aqua Texas, Inc.	\$ 194,619	\$ 119,582	\$ 75,001	\$ -	\$ 36
2	Fern Bluff MUD	1,212,787	785,838	426,913	-	36
3	Paloma MUD #1 & #2	993,072	649,678	343,358	-	36
4	R&R Joint Venture	43,530	34,337	9,157	-	36
5	Vista Oaks MUD	569,213	357,859	211,318	-	36
6	Walsh Ranch MUD	224,030	144,459	79,534	-	36
7	Williamson MUD #10	709,720	469,031	240,653	-	36
8	Williamson MUD #11	807,257	539,991	267,230	-	36
9	Round Rock Ranch PUD	30,915	21,558	9,321	-	36
10		\$ 4,785,143	\$ 3,122,333	\$ 1,662,485	\$ -	\$ 325

COS Comparison

Line No.	Customer	COS	Revenue Under Current Rates	Change \$	Change %	Average Annual Change %
1	Aqua Texas, Inc.	\$ 194,619	185,724	8,895	4.8%	1.6%
2	Fern Bluff MUD	1,212,787	1,171,483	41,304	3.5%	1.2%
3	Paloma MUD #1 & #2	993,072	1,032,656	(39,584)	-3.8%	-1.3%
4	R&R Joint Venture	43,530	43,572	(42)	-0.1%	0.0%
5	Vista Oaks MUD	569,213	529,255	39,958	7.5%	2.5%
6	Walsh Ranch MUD	224,030	217,693	6,336	2.9%	1.0%
7	Williamson MUD #10	709,720	686,653	23,067	3.4%	1.1%
8	Williamson MUD #11	807,257	826,994	(19,736)	-2.4%	-0.8%
9	Round Rock Ranch PUD	30,915	30,005	909	3.0%	1.0%
10		\$ 4,785,143	\$ 4,724,035	\$ 61,107	1.3%	

City of Round Rock
Financial Planning & Rate Model
W COS

Line No.	System Coincidental De Value
1	Peak Day to Average 1.8
2	Peak Hour to Average 2.9

Line No.	System Coincidental De	Factor	Allocation
Max Day Extra Capacity			
1	Base	1.00	55.08%
2	Max Day	0.82	44.92%
3	Total	1.82	100.00%
Max Hour Extra Capacity			
4	Base	1.00	34.48%
5	Max Day	0.82	28.13%
6	Max Hour	1.08	37.39%
7	Total	2.90	100.00%

2021 Rate Analysis				
Water System				
	2018	2019	2020	Use
Maximum Day (M)	36.37	37.25	37.216	
Maximum Hour (H)	60.61	57.797	58.725	
Average Day (MGI)	20.9	19.93	20.25	
Max Day Extra Rat	1.74	1.87	1.84	1.82
Max Hour Extra Ri	2.90	2.90	2.90	2.90

Cash Basis Revenue Requirements

Line No.	Unit Cost Component	Total	Common to All Customers				Retail Only				Reuse	Fire Protection
			Base	Max Day	Max Hour	Bills	Base	Max Day	Max Hour	Meters		
1	Operating Expenses	27,526,909	15,729,515	6,233,795	-	1,333,200	1,236,959	1,008,971	1,341,251	288,174	355,043	-
2	Capital Expenses	6,375,500	1,855,897	1,212,246	-	-	746,919	609,252	809,894	146,682	994,609	-
3	Loss Revenue Requirement	33,902,409	17,585,413	7,446,041	-	1,333,200	1,983,878	1,618,223	2,151,145	434,856	1,349,652	-
Adjustments												
4	Wholesale Revenues (Utility Basis)	(4,785,143)	-	-	-	-	(1,399,165)	(1,141,281)	(1,517,133)	(325,963)	(401,601)	-
5	Impact Fee Revenues	(860,000)	-	-	-	-	(132,908)	(108,411)	(144,114)	(436,419)	(38,148)	-
6	Non-Rate Revenues	(1,829,426)	-	-	-	-	(282,727)	(230,617)	(306,565)	(928,367)	(81,151)	-
7	Annual Surplus (Deficit)	532,685	304,389	120,633	-	25,799	23,937	19,525	25,955	5,577	6,871	-
8	Total Adjustments	(6,941,884)	304,389	120,633	-	25,799	(1,790,863)	(1,460,783)	(1,941,857)	(1,685,172)	(514,030)	-
9	Cash Basis Revenue Requirement	26,960,525	17,889,801	7,566,674	-	1,359,000	193,015	157,440	209,288	(1,250,316)	835,623	-

City of Round Rock

Financial Planning & Rate Model

W COS

Line No.	Unit Cost Component	Total	Common to All Customers				Retail Only					Reuse	Fire Protection
			Base	Max Day	Max Hour	Bills	Base	Max Day	Max Hour	Meters			
	Units of Service		(1,000 gal)	(1,000 gal)	(1,000 gal)	(no. bills)	(1,000 gal)	(1,000 gal)	(1,000 gal)	(eq. meters)		(1,000 gal)	
1	Residential		3,390,241	8.79	52.32	410,382	3,390,241	9	52	34,408			
2	Non Residential		1,823,796	2.06	12.86	23,869	1,823,796	2	13	11,764			
3	Irrigation		587,390	1.92	11.98	8,960	587,390	2	12	2,937			
4	City		151,027	0.45	2.77	-	151,027	0	3	-			
5	Reuse		-									104,805	
6	Total Retail		5,952,454	13	80	443,211	5,952,454	13	80	49,109		104,805	
7	Unit Cost of Service - \$ Per Unit		3.01	\$ 572,056	-	3.07	0.03	\$ 11,903	\$ 2,619	(25.46)		7.97	-
Unit Costs of service - Base-extra capacity method (test year)													
Residential													
8	Units of Service		3,390,241	9	52	410,382	3,390,241	9	52	34,408	-		
9	Cost of Service - \$	\$ 15,954,005	\$ 10,189,200	\$ 5,030,865	\$ -	\$ 1,258,337	\$ 109,932	\$ 104,677	\$ 137,014	\$ (876,021)	\$ -	\$ -	-
Non Residential													
10	Units of Service		1,823,796	2	13	23,869	1,823,796	2	13	11,764	-		-
11	Cost of Service - \$	\$ 6,548,497	\$ 5,481,327	\$ 1,176,216	\$ -	\$ 73,189	\$ 59,139	\$ 24,473	\$ 33,667	\$ (299,515)	\$ -	\$ -	-
Irrigation													
12	Units of Service		587,390	2	12	8,960	587,390	2	12	2,937	-		-
13	Cost of Service - \$	\$ 2,891,658	\$ 1,765,371	\$ 1,100,291	\$ -	\$ 27,473	\$ 19,047	\$ 22,894	\$ 31,362	\$ (74,780)	\$ -	\$ -	-
City													
14	Units of Service		151,027	0	3	-	151,027	0	3	-	-		-
15	Cost of Service - \$	\$ 730,742	\$ 453,903	\$ 259,302	\$ -	\$ -	\$ 4,897	\$ 5,395	\$ 7,245	\$ -	\$ -	\$ -	-
Reuse													
16	Units of Service		-	-	-	-	-	-	-	-		104,805	-
17	Cost of Service - \$	\$ 835,623	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 835,623	\$ -
Total		\$ 26,960,525	\$ 17,889,801	\$ 7,566,674	\$ -	\$ 1,359,000	\$ 193,015	\$ 157,440	\$ 209,288	\$ (1,250,316)	\$ 835,623	\$ -	

City of Round Rock

Financial Planning & Rate Model

W COS

Allocated Cost of Service

Line No.	Customer	Allocated Cost of Service	Reallocation of City Costs	Reuse Reallocation	Total
1	Residential	\$ 15,954,005	459,092		\$ 16,413,098
2	Non-Residential	6,548,497	188,440	417,013	7,153,949
3	Irrigation	2,891,658	83,210	184,143	3,159,011
4	City	730,742	(730,742)		-
5	Reuse	835,623	-	(601,156)	234,467
	Wholesale				-
7	Aqua Texas, Inc.	194,619	-		194,619
8	Fern Bluff MUD	1,212,787	-		1,212,787
9	Paloma MUD #1 & #2	993,072	-		993,072
10	R&R Joint Venture	43,530	-		43,530
11	Vista Oaks MUD	569,213	-		569,213
12	Walsh Ranch MUD	224,030	-		224,030
13	Williamson MUD #10	709,720	-		709,720
14	Williamson MUD #11	807,257	-		807,257
15	Round Rock Ranch PU	30,915			30,915
16	Total	\$ 31,745,668	\$ -	\$ -	\$ 31,745,668

Allocated Cost of Service

Line No.	Customer	Allocated Cost of Service	Revenue Under Existing Rates	Revenue Change	Overall Change %	Average Annual Change %
1	Retail	26,960,525	27,034,195	(73,670)	-0.3%	-0.1%
	Wholesale					
2	Aqua Texas, Inc.	194,619	185,724	8,895	4.8%	1.6%
3	Fern Bluff MUD	1,212,787	1,171,483	41,304	3.5%	1.2%
4	Paloma MUD 1&2	993,072	1,032,656	(39,584)	-3.8%	-1.3%
5	R&R Joint Venture	43,530	43,572	(42)	-0.1%	0.0%
6	Vista Oaks MUD	569,213	529,255	39,958	7.5%	2.5%
7	Walsh Ranch MUD	224,030	217,693	6,336	2.9%	1.0%
8	Williamson MUD #10	709,720	686,653	23,067	3.4%	1.1%
9	Williamson MUD #11	807,257	826,994	(19,736)	-2.4%	-0.8%
10	Round Rock Ranch PUD	30,915	30,005	909	3.0%	1.0%

APPENDIX C:

**WASTEWATER COST OF
SERVICE**

City of Round Rock
Financial Planning & Rate Model
Water Revenue Requirement
FY 2024

Line No.	Description	Operating Expense	Capital Cost	Total Cost
Cash Basis Revenue Requirement				
Revenue Requirements				
1	O&M Expenses	\$ 12,103,083.91		\$ 12,103,083.91
2	Debt Service		\$ 4,518,250.00	\$ 4,518,250.00
	Other Expenditures and Transfers:			
3	Transfers to Construction Fund		\$ 3,000,000.00	\$ 3,000,000.00
4	Administrative Support Allocation	\$ 2,135,559.60		\$ 2,135,559.60
5	Subtotal Gross Revenue Requirements	\$ 14,238,643.51	\$ 7,518,250.00	\$ 21,756,893.51
Less: Non Rate Revenues				
Non-Rate Operating Revenues				
6	Wholesale Revenues	\$ (2,098,818.05)		\$ (2,098,818.05)
7	Impact Fee Revenues		\$ (980,000.00)	\$ (980,000.00)
8	BCRWWS Revenues	\$ (2,983,261.25)		\$ (2,983,261.25)
9	Non-Rate Revenues	\$ (2,502,222.50)		\$ (2,502,222.50)
10	Total Non Rate Revenues	\$ (7,584,301.80)	\$ (980,000.00)	\$ (8,564,301.80)
11	Surplus/(Deficit)	\$ 4,745,867.39		\$ 4,745,867.39
12	Net Revenue Requirements	\$ 11,400,209	\$ 6,538,250	\$ 17,938,459

City of Round Rock
Financial Planning & Rate Model
Wastewater Units of Service
FY 2024

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Units	Annual Billed	I/I	I/I	Capacity	Class	I/I	Class	I/I	Total	Class	I/I	Class	I/I	Total	Bills	Cost
Calculations	Volume	%	Volume	Requirement	Strength	Strength	BOD	BOD	BOD	Strength	Strength	TSS	TSS	TSS		Meters
	(1,000 Gallons)		(1,000 Gallons)	(1,000 Gallons)	(mg/L)	(mg/L)	(lbs.)	(lbs.)	(lbs.)	(mg/L)	(mg/L)	(lbs.)	(lbs.)	(lbs.)		(1/8" eq.)
			= (1) x (2)	= (1) x (3)			= (1) x (5) x (.00835)	= (3) x (6) x (.00835)	= (7) x (8)			= (1) x (10) x (.00835)	= (3) x (11) x (.00835)	= (12) x (13)		
RETAIL UNITS																
Residential	1,929,541	18.5%	356,965	2,286,506	270	15	4,347,756	44,685	4,392,442	330	15	5,313,924	44,685	5,358,610	410,382	34,408
Non Residential	1,288,846	18.5%	238,436	1,527,282	270	15	2,904,103	29,848	2,933,951	330	15	3,549,460	29,848	3,579,307	23,869	11,764
Total Retail	3,218,387			3,813,788			7,251,860	74,533	7,326,393			8,863,384	74,533	8,937,917	434,251	46,172
WHOLESALE UNITS																
Paloma 1&2	116,991	18.5%	21,643	138,635	270	15	263,612	2,709	266,321	330	15	322,192	2,709	324,901	12	
R&R Joint Venture	11,161	18.5%	2,065	13,226	270	15	25,150	258	25,408	330	15	30,739	258	30,997	12	
Siena MUD #1	87,672	18.5%	16,219	103,891	270	15	197,547	2,020	199,578	330	15	241,447	2,020	243,477	12	
Siena MUD #2	45,004	18.5%	8,326	53,330	270	15	101,406	1,042	102,448	330	15	123,940	1,042	124,982	12	
Vista Oaks MUD	75,860	18.5%	14,034	89,894	270	15	170,932	1,757	172,689	330	15	208,917	1,757	210,673	12	
Walsh Ranch MUD	26,241	18.5%	4,855	31,095	270	15	59,127	608	59,735	330	15	72,267	608	72,874	12	
Williamson MUD#10	102,455	18.5%	18,954	121,409	270	15	230,858	2,373	233,231	330	15	282,160	2,373	284,533	12	
Williamson MUD#11	116,816	18.5%	21,611	138,427	270	15	263,217	2,705	265,923	330	15	321,710	2,705	324,416	12	
Round Rock Ranch PUD	7,710	18.5%	1,426	9,137	270	15	17,373	179	17,552	330	15	21,234	179	21,413	12	
Total Wholesale	589,911			699,045			1,329,222	13,661	1,342,884			1,624,605	13,661	1,638,267	108	-
GRAND TOTAL WASTEWATER SYSTEM	3,808,298		-	4,512,833			8,581,082	88,194	8,669,277			10,487,989	88,194	10,576,184	434,359	46,172

	BOD	TSS
Residential	270	330
Non Residential	270	330
Wholesale	270	330
I&I Strength	15	15

Operations and Maintenance Functionalization (Excludes Debt Service)

Line No.	Description	Total	Admin	Customer	Wastewater Pumping	Purchased Power	Wastewater Plant	Chemicals	Collection	Lift Stations	Meters	BCRWWS
Operations and Maintenance												
1	Finance											
2	Utility Billings & Collections	\$ 1,090,195	\$ -	\$ 1,090,195	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fiscal Support												
3	Fiscal Support Services	\$ 699,945	\$ 699,945	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Utilities												
4	Utility Administration	\$ 1,016,399	\$ 1,016,399	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	Capital Outlay	6,656	-	-	-	-	-	-	-	-	6,656	-
Wastewater												
6	Wastewater Treatment Plant - Admin	\$ 2,567,137	\$ -	\$ -	\$ -	\$ -	\$ 2,567,137	\$ -	\$ -	\$ -	\$ -	\$ -
7	Sludge Disposal	2,216,052	-	-	-	-	2,216,052	-	-	-	-	-
8	Power & Light	1,000,000	-	-	-	-	1,000,000	-	-	-	-	-
9	Chemicals	275,427	-	-	-	-	275,427	-	-	-	-	-
10	Capital Outlay	386,618	-	-	-	-	-	-	-	-	386,618	-
11	Wastewater System Support	433	433	-	-	-	-	-	-	-	-	-
12	Wastewater Collections	2,534,723	-	-	-	-	-	-	2,534,723	-	-	-
Environmental Services												
13	Environmental Services - Admin	\$ 309,498	\$ 309,498	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
O&M - Transfers & Debt Service												
14	Admirative Support Allocation	2,135,560	2,135,560	-	-	-	-	-	-	-	-	-
15	Total O&M By Function	\$ 14,238,644	\$ 4,161,835	\$ 1,090,195	\$ -	\$ -	\$ 6,058,616	\$ -	\$ 2,534,723	\$ -	\$ 393,274	\$ -

City of Round Rock
Financial Planning & Rate Model

Line No.	Category	Total	Volume	Common to All Customers				Retail Only		
				BOD	TSS	Bills	Volume	Meters		
1	Admin	\$ 4,161,835	1,625,854	\$ 646,387	\$ 646,387	\$ 450,263	\$ 630,518	\$ 162,427		
2	Customer	1,090,195	-	-	-	1,090,195	-	-		
3	Wastewater Pumping	-	-	-	-	-	-	-		
4	Purchased Power	-	-	-	-	-	-	-		
5	Wastewater Plant	6,058,616	3,029,308	1,514,654	1,514,654	-	-	-		
6	Chemicals	-	-	-	-	-	-	-		
7	Common Collections	1,008,087	907,279	50,404	50,404	-	-	-		
8	Local Collections	1,526,636	-	-	-	-	1,526,636	-		
9	Lift Stations	-	-	-	-	-	-	-		
10	Meters	393,274	-	-	-	-	-	-	393,274	
11	BRRWWS	-	-	-	-	-	-	-		
			-	-	-	-	-	-		
			-	-	-	-	-	-		
			-	-	-	-	-	-		
			-	-	-	-	-	-		
12	Total O&M Expenditures	\$ 14,238,644	\$ 5,562,441	\$ 2,211,445	\$ 2,211,445	\$ 1,540,458	\$ 2,157,153	\$ 555,701		
		\$ -								
			7,838,440	42,971	42,971	1,059,008	1,802,670	1,015,759		

City of Round Rock
Financial Planning & Rate Model

Wastewater Non-Rate Revenues Allocation Factors

Line No.	Description	Total	Volume	Common to All Customers				Retail Only		
				BOD	TSS	Bills	Volume	Meters		
Service Charges										
1	Household Hazardous Waste Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2	Environmental Laboratory Fees	(145,000)	-	-	-	-	-	(145,000)	-	
3	Windemere Service Fees	(11,000)	-	-	-	-	-	(11,000)	-	
4	Industrial Pre-Trmnt Surcharge	(400,000)	-	-	-	-	-	(400,000)	-	
5	Connection & Transfer Fee	(125,000)	-	-	-	-	-	(125,000)	-	
Miscellaneous										
6	Miscellaneous	(91,350)	-	-	-	-	-	(91,350)	-	
7	Increase / decrease fair value	-	-	-	-	-	-	-	-	
8	Interest Income	(450,000)	-	-	-	-	-	(450,000)	-	
Utility Revenue										
9	Water Inspec & Meter Set Fee	-	-	-	-	-	-	-	-	
10	Water Penalty	-	-	-	-	-	-	-	-	
11	Sewer Service-BCRWWS	(824,373)	-	-	-	-	-	(824,373)	-	
12	Sewer Inspection Fee	(75,000)	-	-	-	-	-	(75,000)	-	
13	Sewer Discharge Permits	(8,000)	-	-	-	-	-	(8,000)	-	
14	Sewer Penalty	(235,000)	-	-	-	-	-	(235,000)	-	
15	Reconnect Charges	(137,500)	-	-	-	-	-	(137,500)	-	
16	Meters & Fitting Sales	-	-	-	-	-	-	-	-	
Non-Rate Revenues										
17	Sewer Service -BCRWWS	(2,528,750)	(1,264,375)	(632,188)	(632,188)	-	-	-	-	
18	Sludge Dumping Fees	(454,511)	(227,256)	(113,628)	(113,628)	-	-	-	-	
19	Interest Income	-	-	-	-	-	-	-	-	
20	Increase/Decrease in Fair Valu	-	-	-	-	-	-	-	-	
21	Total Non Rate Revenues	\$ (5,485,484)	\$ (1,491,631)	\$ (745,815)	\$ (745,815)	\$ -	\$ -	(2,502,223)	\$ -	
22	Wholesale Revenues	\$ (2,098,818)						(1,668,896)	(429,922)	

City of Round Rock, TX
Financial Planning and Rate Model
Wastewater Rate Base By Cost Driver
FY 2024

Category	Total	Volume	Common to All Customers		Bills	Retail Only	
			BOD	TSS		Volume	Meters
Wastewater Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Plant	\$ 42,845,291	\$ 21,422,646	\$ 10,711,323	\$ 10,711,323	\$ -	\$ -	\$ -
Common Collection	\$ 14,272,873	\$ 14,272,873	\$ -	\$ -	\$ -	\$ -	\$ -
Local Collection	\$ 21,614,669	\$ -	\$ -	\$ -	\$ -	\$ 21,614,669	\$ -
Lift Stations	\$ 749,575	\$ 749,575	\$ -	\$ -	\$ -	\$ -	\$ -
Contributed Wastewater							
WW Impact Fee Funded							
Other Wastewater Assets	\$ 5,688,068	\$ 2,608,151	\$ 766,544	\$ 766,544	\$ -	\$ 1,546,829	\$ -
CWIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Rate Base	\$ 85,170,476	\$ 39,053,245	\$ 11,477,866	\$ 11,477,866	\$ -	\$ 23,161,498	\$ -
%	100%	46%	13%	13%	0%	27%	0%

Category	Total	Volume	Common to All Customers		Bills	Retail Only	
			BOD	TSS		Volume	Meters
Wastewater Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Plant	\$ 2,377,405	\$ 1,188,702	\$ 594,351	\$ 594,351	\$ -	\$ -	\$ -
Common Collection	\$ 995,318	\$ 995,318	\$ -	\$ -	\$ -	\$ -	\$ -
Local Collection	\$ 1,507,298	\$ -	\$ -	\$ -	\$ -	\$ 1,507,298	\$ -
Lift Stations	\$ 68,309	\$ 68,309	\$ -	\$ -	\$ -	\$ -	\$ -
Contributed Wastewater							
WW Impact Fee Funded							
Other Wastewater Assets	\$ 574,698	\$ 263,517	\$ 77,448	\$ 77,448	\$ -	\$ 156,285	\$ -
CWIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Rate Base	\$ 5,523,028	\$ 2,515,846	\$ 671,800	\$ 671,800	\$ -	\$ 1,663,583	\$ -
%	100%	46%	12%	12%	0%	30%	0%

City of Round Rock, TX
Financial Planning and Rate Model
Wastewater Rate Base By Cost Driver
FY 2024

Category	Total	Volume	Common to All Customers		Bills	Retail Only	
			BOD	TSS		Volume	Meters
Wastewater Pumping	100%	100%					
Wastewater Plant	100%	50%	25%	25%			
Collection	100%	100%					
Local Collection	100%					100%	
Lift Stations	100%	100%					
Contributed Wastewater	0%	0%	0%	0%	0%	0%	0%
WW Impact Fee Funded	0%	0%	0%	0%	0%	0%	0%
Other Wastewater Assets	100%	46%	13%	13%	0%	27%	0%
CWIP	100%	46%	13%	13%	0%	27%	0%

City of Round Rock
Financial Planning & Rate Model
W Wholesale COS

Summary of Wholesale Class Revenue Requirement

Line No.	Description	Total	Volume	Common to All Customers				Bills
				BOD	TSS			
1	O&M	\$ 1,085,014	\$ 630,575	\$ 227,028	\$ 227,028			\$ 383
2	Depreciation	597,834	389,708	104,063	104,063			-
3	Return on Investment	415,970	321,485	94,485	-			-
4	Total Revenue Requirement	\$ 2,098,818	\$ 1,341,768	\$ 425,576	\$ 331,091			\$ 383

Allocate Rate of Return and Expenses to Wholesale Class

Line No.	Description	Total	Volume	Common to All Customers			Retail Only		
				BOD	TSS	Bills	Volume	Meters	
1	Rate Base	85,170,476	39,053,245	11,477,866	11,477,866	-	23,161,498	-	
2	Wholesale Share of Rate Base	9,605,283	6,049,406	1,777,939	1,777,939	-			
3	WACC	5.31%							
4	Total Return on Rate Base	\$ 415,970	\$ 321,485	\$ 94,485					
5	Wastewater O&M	14,238,644	5,562,441	2,211,445	2,211,445	1,540,458	2,157,153	555,701	
5	Depreciation	5,523,028	2,515,846	671,800	671,800	-	1,663,583	-	
5	Non-Rate Revenues	(5,485,484)	(1,491,631)	(745,815)	(745,815)	-	(2,502,223)	-	
6	Impact Fee	(980,000)					(980,000)	-	
7	Total Expenses to Wholesale Class	\$ 12,401,974	\$ 6,586,657	\$ 2,137,429	\$ 2,137,429	\$ 1,540,458			
Wholesale Revenues Requirement									
8	Expense	1,682,848	\$ 1,020,283	\$ 331,091	\$ 331,091	\$ 383			
8	Return on Rate Base	415,970	321,485	94,485	-	-			
9	Total	\$ 2,098,818	\$ 1,341,768	\$ 425,576	\$ 331,091	\$ 383			

City of Round Rock

Financial Planning & Rate Model

W Wholesale COS

Wholesale Class Units of Service

Line No.	Description	Volume	BOD	TSS	Bills
1	Paloma 1&2	138,635	266,321	324,901	12
2	R&R Joint Venture	13,226	25,408	30,997	12
3	Siena MUD #1	103,891	199,578	243,477	12
4	Siena MUD #2	53,330	102,448	124,982	12
5	Vista Oaks MUD	89,894	172,689	210,673	12
6	Walsh Ranch MUD	31,095	59,735	72,874	12
7	Williamson MUD#10	121,409	233,231	284,533	12
8	Williamson MUD#11	138,427	265,923	324,416	12
9	Round Rock Ranch PUD	9,137	17,552	21,413	12
10	Total Wholesale	699,045	1,342,884	1,638,267	108
11	Total Retail (1,000 Gal)	3,813,788	7,326,393	8,937,917	434,251
12	Total Wholesale (1,000 Gal)	699,045	1,342,884	1,638,267	108
13	Total Units (1,000 Gal)	4,512,833	8,669,277	10,576,184	434,359
14	Wholesale Percent of System	15%	15%	15%	0%

Revenue Requirement by Wholesale Customer by Cost Driver

Line No.	Description	Total	Volume	BOD	TSS	Bills
1	Paloma 1&2	\$ 416,205	\$ 266,100	\$ 84,400	\$ 65,662	\$ 43
2	R&R Joint Venture	39,746	25,387	8,052	6,264	43
3	Siena MUD #1	311,909	199,412	63,249	49,206	43
4	Siena MUD #2	160,131	102,363	32,467	25,259	43
5	Vista Oaks MUD	269,891	172,545	54,727	42,577	43
6	Walsh Ranch MUD	93,387	59,685	18,931	14,728	43
7	Williamson MUD#10	364,497	233,037	73,914	57,504	43
8	Williamson MUD#11	415,582	265,702	84,274	65,564	43
9	RR PUD	27,470	17,537	5,562	4,327	43
		\$ 2,098,818	\$ 1,341,768	\$ 425,576	\$ 331,091	\$ 383

Revenue Requirement by Wholesale Customer

Line No.	Description	COS	Revenue Under Current Rates	Change \$	Change %
1	Paloma 1&2	\$ 416,205	\$ 456,266	(40,061)	-8.8%
2	R&R Joint Venture	39,746	43,530	(3,784)	-8.7%
3	Siena MUD #1	311,909	341,920	(30,011)	-8.8%
4	Siena MUD #2	160,131	175,515	(15,385)	-8.8%
5	Vista Oaks MUD	269,891	295,853	(25,962)	-8.8%
6	Walsh Ranch MUD	93,387	102,339	(8,953)	-8.7%
7	Williamson MUD#10	364,497	399,575	(35,078)	-8.8%
8	Williamson MUD#11	415,582	455,584	(40,001)	-8.8%
9	RR PUD	27,470	30,070	(2,600)	-8.6%
		\$ 2,098,818	\$ 2,300,653	(201,835)	-8.8%

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Cash Basis Revenue Requirements

Line No.	Unit Cost Component	Total	Volume	Common to All Customers			Retail Only	
				BOD	TSS	Bills	Volume	Meters
1	Operating Expenses	14,238,644	5,562,441	2,211,445	2,211,445	1,540,458	2,157,153	555,701
2	Capital Expenses	7,518,250	3,447,346	1,013,185	1,013,185	-	2,044,534	-
3	Gross Revenue Requirement	21,756,894	9,009,787	3,224,630	3,224,630	1,540,458	4,201,687	555,701
	Adjustments	-						
4	Wholesale Revenues	(2,098,818)	-	-	-	-	(1,668,896)	(429,922)
5	Impact Fee Revenues	(980,000)					(980,000)	-
6	Non-Rate Revenues	(5,485,484)	(1,491,631)	(745,815)	(745,815)	-	(2,502,223)	-
7	Annual Surplus (Deficit)	4,745,867	1,965,320	703,394	703,394	336,023	916,521	121,216
8	Total Adjustments	(3,818,434)	473,689	(42,421)	(42,421)	336,023	(4,234,598)	(308,706)
9	Cash Basis Revenue Requirement	17,938,459	9,483,476	3,182,209	3,182,209	1,876,481	(32,911)	246,995

	Unit Cost Component	Total	Volume	Common to All Customers			Retail Only	
				BOD	TSS	Bills	Volume	Meters
	Units of Service		(1,000 gal)	(1,000 gal)	(1,000 gal)	(no. bills)	(1,000 gal)	(1,000 gal)
1	Residential		2,286,506	4,392,442	5,358,610	410,382	2,286,506	34,408
2	Non Residential		1,527,282	2,933,951	3,579,307	23,869	1,527,282	11,764
3	City		-	-	-	-	-	-
4	Retail		3,813,788	7,326,393	8,937,917	434,251	3,813,788	46,172
5	Unit Cost of Service - \$ Per Unit		\$ 2.49	\$ 0.43	\$ 0.36	\$ 4.32	\$ (0.01)	\$ 5.35

	Unit Costs of service - Base-extra capacity method (test year)							
	Residential							
6	Units of Service		2,286,506	4,392,442	5,358,610	410,382	2,286,506	34,408
7	Cost of Service - \$	\$ 11,439,064	\$ 5,685,692	\$ 1,907,851	\$ 1,907,851	\$ 1,773,338	\$ (19,731)	\$ 184,063
	Non Residential							
8	Units of Service		1,527,282	2,933,951	3,579,307	23,869	1,527,282	11,764
9	Cost of Service - \$	\$ 6,499,395	\$ 3,797,784	\$ 1,274,358	\$ 1,274,358	\$ 103,144	\$ (13,180)	\$ 62,932
	City							
10	Units of Service		-	-	-	-	-	-
11	Cost of Service - \$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Total	\$ 17,938,459	\$ 9,483,476	\$ 3,182,209	\$ 3,182,209	\$ 1,876,481	\$ (32,911)	\$ 246,995

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Allocated Cost of Service

Line No.		Total Allocated Cost of Service
1	Residential	\$ 11,439,064
2	Non-Residential	6,499,395
Wholesale		
3	Paloma 1&2	416,205
4	R&R Joint Venture	39,746
5	Siena MUD #1	311,909
6	Siena MUD #2	160,131
7	Vista Oaks MUD	269,891
8	Walsh Ranch MUD	93,387
9	Williamson MUD#10	364,497
10	Williamson MUD#11	415,582
11	RR Ranch PUD	27,470
12		\$ 20,037,277

Allocated Cost of Service Comparison Under Existing Rates

Line No.		Allocated Cost of Service	Revenue Under Existing Rates	Revenue Change	% Change
1	Retail	\$ 17,938,459	17,736,624	201,835	1.1%
Wholesale					
2	Paloma 1&2	416,205	456,266	(40,061)	-8.8%
3	R&R Joint Venture	39,746	43,530	(3,784)	-8.7%
4	Siena MUD #1	311,909	341,920	(30,011)	-8.8%
5	Siena MUD #2	160,131	175,515	(15,385)	-8.8%
6	Vista Oaks MUD	269,891	295,853	(25,962)	-8.8%
7	Walsh Ranch MUD	93,387	102,339	(8,953)	-8.7%
8	Williamson MUD#10	364,497	399,575	(35,078)	-8.8%
9	Williamson MUD#11	415,582	455,584	(40,001)	-8.8%
10	RR Ranch PUD	27,470	30,070	(2,600)	-8.6%