

**CITY OF
ROLLINGWOOD**

**WASTEWATER
COST OF SERVICE AND RATE
DESIGN STUDY**

**DRAFT REPORT
AUGUST 28, 2020**



Executive Summary

Nelisa Heddin Consulting, LLC (NH Consulting) is pleased to present the City of Rollingwood (City) with the results of a cost of service and rate design study performed for the City's wastewater utility.

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

The project team has worked closely with City staff and the City's Utility Commission to develop revenue requirements and determine the cost of providing service to each of the City's customers. The project team identified that in order to meet future revenue requirements and address inequities among customers, the City needs to implement future rate changes as outlined in this report.

The project team identified two primary policy issues that may lead to inequities among customers.

1. The City currently funds wastewater related annual debt service through the general fund versus the utility fund. This practice may create inequities among customers as a property's value and resultant property taxes are not necessarily reflective of their demands on the wastewater system.
2. The City currently utilizes a five-month winter averaging period with no adjustments applied for months with zero consumption. This has resulted in approximately 16% of customers receiving wastewater services for free (looking at 2019 actual consumption data). This issue is further compounded by the fact that the City does not charge a base-fee for wastewater services.

The analysis examined revenue requirements for a five-year study period, FYE2021-FYE2025 and recommended rates sufficient to meet revenue requirements for the five-year study period. The recommended rates include a transitional implementation plan whereby the City begins to fund 15% of the wastewater utility annual debt service in FYE2021 through wastewater user fees, and increases the amount funded by the wastewater user fees by 10% each year thereafter.

The recommended rates are outlined in Tables 1 and 2. These rates include three different scenarios/alternatives for estimating residential wastewater consumption?





Scenario 1 – Five-month winter average (status quo)

Scenario 2 – Five-month winter average, months with zero use excluded from average

Scenario 3 – Five-month winter average, minimum billing of at least 1,000 gallons.

Table 1: Recommended Base Fees

Base Fees	Current	2021	2022	2023	2024	2025
Residential	\$-	\$13.07	\$13.46	\$13.86	\$14.28	\$14.71
Commercial ¹	\$78.00	\$91.07	\$91.46	\$91.86	\$92.28	\$92.71

Table 2: Recommended Volumetric Rates

Volumetric Fees	Current	2021	2022	2023	2024	2025
Scenario 1	\$7.81	\$7.81	\$8.24	\$9.79	\$11.30	\$12.86
Scenario 2	\$7.81	\$7.81	\$7.81	\$8.72	\$10.07	\$11.46
Scenario 3	\$7.81	\$7.81	\$8.18	\$9.71	\$11.21	\$12.76

¹ Base fee per LUE

WASTEWATER SYSTEM

The City currently has approximately 530 residential and commercial wastewater connections. The City collects wastewater from its customers through the City's wastewater collection system. The wastewater is then diverted to the City of Austin where the wastewater is treated. Wastewater treatment services are provided to Rollingwood on a wholesale basis for fees set by the City of Austin. The City of Austin currently charges a monthly customer service fee of \$10.30, plus \$5.67 per thousand gallons of wastewater; these fees may be increased as necessary by the City of Austin.

Wastewater Utility





WORK PLAN

In determining rates for the City of Rollingwood's wastewater utility, NH Consulting utilized a three-step approach to determining the wastewater rates:

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

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

STEP 1: REVENUE REQUIREMENT DETERMINATION

BASE YEAR REVENUE REQUIREMENT

SYSTEM EXPENDITURES

A base year estimate of costs helps to determine the City's future revenue requirements. This cost estimate is reflective of the normal operation of the wastewater utility, and adjusted for known and measurable changes into the future. NH Consulting used the FYE2021 preliminary budget as the Test Year for the revenue requirement phase of the study. A comparison of the budget to the actual expenditures for FYE2017, FYE2018, and FYE2019 and the budgeted FYE2020 expenditures shows that the FYE2021 Budget provides a conservative estimate of the revenues and expenses associated with the operation of the wastewater utility.

WASTEWATER TREATMENT CHARGES

As previously described, the City's wastewater treatment fees paid to the City of Austin are subject to increase as determined necessary by the City of Austin. As such, the proposed revenue requirements assume a 5% annual increase in wastewater treatment charges.

VEHICLE REPLACEMENT FUND

NH Consulting recommends adding contributions of approximately \$5,619 to vehicle replacement fund to the revenue requirements, in accordance with the schedule outlined on Table 3 below. These monies should be set-aside annually such that in the event the City needs to replace vehicles in future years, these monies are available for these purposes.



Table 3: Vehicle Replacement Fund Contributions

	Total Inventory	Useful Life	Annual Contribution	% Wastewater	Annual Contribution
Truck 1	\$30,000	7	\$4,285.71	33%	\$1,428.57
Truck 2	\$30,000	7	4,285.71	33%	1,428.57
Truck 3	\$30,000	7	4,285.71	33%	1,428.57
Tractor	\$30,000	10	3,000.00	33%	1,000.00
Trailer	\$10,000	10	1,000.00	33%	333.33
			\$16,857.14		\$5,619.05

INFLATION

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

REVENUE OFFSETS

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

ANNUAL DEBT SERVICE

The City has approximately \$725,000 in annual debt service related to the wastewater utility. Currently, the City funds this debt service through the general fund rather than the utility fund. As such, the City's residents and commercial businesses pay for the debt service as part of their property taxes. In general, this practice is discouraged within the industry as one's property value is not necessarily reflective of the burden they place on the wastewater utility. As such, the industry best-management practice is to instead collect utility related debt service through utility rates and fees. As such, NH Consulting recommends the City move towards recovering at least a portion of utility debt service through wastewater user fees. The revenue requirements reflect a transitional implementation plan whereby the City would recover 15% of annual utility debt service through wastewater user fees in FYE2021, and increase the amount recovered through wastewater rates annually, as outlined on Table 4.



Table 4: Annual Wastewater Debt Funding Transitional Implementation Plan

	2021	2022	2023	2024	2025
Series 2012A	\$317,520	\$315,735	\$313,235		
Series 2019	408,850	409,650	410,250	715,650	713,650
Total Annual Debt Service	\$726,370	\$725,385	\$723,485	\$715,650	\$713,650
% Funded through Rates	15%	25%	35%	45%	55%
Total Utility Funded Debt Service	\$108,956	\$181,346	\$253,220	\$322,043	\$392,508

FIVE-YEAR REVENUE REQUIREMENT

Table 5 outlines the five-year revenue requirement for the Wastewater Utility. Schedule 1 shows each line item with details.

Table 5: Wastewater Utility Five-Year Revenue Requirement.

2021	2022	2023	2024	2025
\$668,981	\$766,587	\$864,704	\$960,843	\$1,059,743



STEP 2: BILLING UNIT PROJECTION

Wastewater is typically billed based upon an estimate of consumption/usage. As wastewater flows are generally not metered, as water is, the City must adopt policies to be utilized in estimating wastewater use for each customer.

Commercial Customers

The City currently bills commercial customers for wastewater services based upon their actual metered water consumption. The assumption is that if a commercial customer were using water for irrigation purposes, which would not flow through as wastewater, that customer would typically have a separate irrigation meter. As such, the customer's metered water use is a good proxy for wastewater consumption. This is consistent with industry best-management practices; NH Consulting recommends that the City continue to bill commercial customers based upon this methodology.

Residential Customers

Residential customers generally do not have separate irrigation meters like commercial customers do. As residential customers usually irrigate, their year round water consumption is not a good proxy for wastewater demands. Industry best-management practices typically rely upon winter-averaging to estimate residential wastewater demands. The assumption is made that in-general, residential customers typically do not irrigate in winter months, thus, their winter water consumption is a descent proxy for wastewater demands on the system. The City currently uses a five-month winter average to estimate residential wastewater consumption.

In analyzing historical demands, it has been identified that in 2019, approximately 16% of the City's customers did not have water use in the winter months. As the City does not charge customers a base-fee for wastewater services, this means that these customers literally do not pay anything for wastewater for an entire year.

As it is highly unlikely that 16% of the City's customers do not actually send any wastewater into the system, NH Consulting recommends the City evaluate alternative policies for wastewater billing.

NH Consulting has provided three different scenarios/alternatives for the determination of wastewater consumption for residential customers:

- Scenario 1 – Five-month winter average (status quo)
- Scenario 2 – Five-month winter average, months with zero use excluded from average
- Scenario 3 – Five-month winter average, minimum billing of at least 1,000 gallons.



STEP 3: DETERMINATION OF WASTEWATER RATES

The recommended wastewater rates are presented on Tables 6 and 7 below. NH Consulting recommends the City charge a base fee for services for all customers. The recommended base fees recover the cost of utility billing.

Table 6: Recommended Base Fees

Base Fees	Current	2021	2022	2023	2024	2025
Residential	\$-	\$13.07	\$13.46	\$13.86	\$14.28	\$14.71
Commercial ²	\$78.00	\$91.07	\$91.46	\$91.86	\$92.28	\$92.71

Table 7: Recommended Volumetric Rates

Volumetric Fees	Current	2021	2022	2023	2024	2025
Scenario 1	\$7.81	\$7.81	\$8.24	\$9.79	\$11.30	\$12.86
Scenario 2	\$7.81	\$7.81	\$7.81	\$8.72	\$10.07	\$11.46
Scenario 3	\$7.81	\$7.81	\$8.18	\$9.71	\$11.21	\$12.76

² Base fee per LUE

**City of Rollingwood
Wastewater Utility
Cost of Service and Rate Design Study**

**Schedule 1
Five-Year Projection of Revenue Requirements
DRAFT**

	2021	2022	2023	2024	2025	% Inflation	Notes
Expenditures							
Salary	\$ 118,743	\$ 122,305	\$ 125,974	\$ 129,753	\$ 133,646	3%	
Training	1,030	1,061	1,093	1,126	1,159	3%	
Health Insurance	20,085	20,688	21,308	21,947	22,606	3%	
Workers Comp Insurance	3,914	4,031	4,152	4,277	4,405	3%	
Social Security/Medicare Tax	9,676	9,966	10,265	10,573	10,890	3%	
Unemployment Comp Insurance	-	-	-	-	-	3%	
TMRS	16,733	17,235	17,752	18,285	18,834	3%	
Uniform & Accessories	258	265	273	281	290	3%	
Office Equipment Repair	-	-	-	-	-	3%	
Grinder Pump Maint/Replacement	1,030	1,061	1,093	1,126	1,159	3%	
Maintenance & Repairs	41,200	42,436	43,709	45,020	46,371	3%	
Vehicle Operations	2,060	2,122	2,185	2,251	2,319	3%	
Vehicle Maintenance & Repairs	-	-	-	-	-	3%	
Vehicle Insurance	258	265	273	281	290	3%	
Administrative Fees	28,840	29,705	30,596	31,514	32,460	3%	
Legal Services	515	530	546	563	580	3%	
Annual Televising/Smoke Testing	19,055	19,627	20,215	20,822	21,447	3%	
Utility Billing/Collection	21,630	22,279	22,947	23,636	24,345	3%	
Utility Billing - Collect Add'l	61,800	63,654	65,564	67,531	69,556	3%	
Project Management	11,845	12,200	12,566	12,943	13,332	3%	
Information Security	20,600	21,218	21,855	22,510	23,185	3%	
Insurance - Prop & Gen Liability	-	-	-	-	-	3%	
Engineering	2,575	2,652	2,732	2,814	2,898	3%	
Rate Consulting Services	2,575	2,652	2,732	2,814	2,898	3%	
Wastewater Fees	271,438	285,009	299,260	314,223	329,934		Based on Variable Cost Analysis
Industrial Waste Surcharges	-	-	-	-	-	3%	
Miscellaneous	515	530	546	563	580	3%	
Bond Cost Issuance	-	-	-	-	-	3%	

City of Rollingwood
Wastewater Utility
Cost of Service and Rate Design Study

Schedule 1
Five-Year Projection of Revenue Requirements
DRAFT

	2021	2022	2023	2024	2025	% Inflation	Notes
Bond Discount	-	-	-	-	-	3%	
Computer Software & Support	3,193	3,289	3,387	3,489	3,594	3%	
Technology Expense	-	-	-	-	-	3%	
Municipal Bldg. Improvement & Planning	-	-	-	-	-	3%	
Total Annual Debt Service	108,956	181,346	253,220	322,043	392,508		Based on actual annual debt service
Vehicle Replacement Fund	5,619	5,619	5,619	5,619	5,619		
Annual Reserve Fund Contribution	-	-	-	-	-		Per Reserve Fund Analysis
	<u>\$ 774,141</u>	<u>\$ 871,747</u>	<u>\$ 969,864</u>	<u>\$ 1,066,003</u>	<u>\$ 1,164,903</u>		
Revenues							
Interest Income	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	0%	
Wastewater Revenues	-	-	-	-	-	0%	Removed from analysis
Commercial LUE's	-	-	-	-	-	0%	
Capital Recovery/Hook-Up Connections	3,500	3,500	3,500	3,500	3,500	0%	
Fund Balance Transfer In	-	-	-	-	-	0%	Removed from analysis
Industrial Waste Surcharge Fee	-	-	-	-	-	0%	
PUD Wastewater Surcharge	<u>98,160</u>	<u>98,160</u>	<u>98,160</u>	<u>98,160</u>	<u>98,160</u>	0%	
	<u>\$ 105,160</u>	<u>\$ 105,160</u>	<u>\$ 105,160</u>	<u>\$ 105,160</u>	<u>\$ 105,160</u>		
Total Revenue Requirement	\$ 668,981	\$ 766,587	\$ 864,704	\$ 960,843	\$ 1,059,743		