IN THE TENNESSEE PUBLIC UTILITY COMMISSION
AT NASHVILLE, TENNESSEE

IN RE:	**)**	
	)	
JOINT PETITION OF SUPERIOR	**)**	
WASTEWATER SYSTEMS, LLC	**)**	**DOCKET NO. 22-00087**
AND TPUC STAFF (AS A PARTY) TO	**)**	
INCREASE RATES AND CHARGES	**)**	

PRE-FILED DIRECT TESTIMONY

OF

JOE SHIRLEY

Q. Please state your name, position and business address.

A. My name is Joe Shirley. I am the Director of Utility Audit & Compliance with the Tennessee Public Utility Commission. My business address is 502 Deaderick Street, Fourth Floor, Nashville, Tennessee 37243.

Q. Please provide a summary of your educational background and professional experience.

A. I have a B.S. in Accounting from Western Kentucky University, an M.B.A. from Middle Tennessee State University and a J.D. from the Nashville School of Law. I am a licensed attorney and C.P.A. in Tennessee. I have over thirty-seven years of professional experience as an attorney, utility consultant, financial analyst, and auditor, with twenty-four of those years in public utility ratemaking and regulation in the telephone, natural gas, water and wastewater industries. I have litigated various utility rate cases as the lead attorney, and I have testified in various utility rate hearings as an expert witness before the Tennessee Public Utility Commission and its predecessor agencies. I have also advised the leadership of the Commission and its predecessor agencies on a host of regulatory issues and have testified before the Tennessee General Assembly regarding public utility matters.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to present a summary of the forecasted cost of service and related revenue deficiency for Superior Wastewater Systems, LLC, and to recommend utility service rates and charges that will generate sufficient revenues to cover those forecasted costs and eliminate the projected revenue deficiency. The TPUC Party Staff Exhibit and Schedules referenced in my testimony below are attached to the pre-filed direct testimony of Party Staff witness Craig Cox.

Q. Please describe briefly the rate-setting methodologies used to forecast Superior Wastewater's cost of service in this case.

A. For ratemaking purposes, utility rates are designed to generate enough revenues to cover the utility's reasonable operating expenses, depreciation on utility plant and equipment, taxes and a fair profit to shareholders or owners. Revenues generated from all sources allowed by the Commission (e.g., service rates, late payment charges, disconnection fees, reconnection fees, etc.) are referred to as the utility's "Revenue Requirement." This ratemaking concept can be expressed through the following basic formula:

Revenue Requirement = Operating Expenses + Depreciation + Taxes + Fair Profit

"Operating Expenses" include items such as salaries and wages, professional and contractor services, administrative and office expenses, maintenance and repairs and purchased power. "Depreciation" recognizes the expense of consuming utility property, plant and equipment over their economically-useful lives. "Taxes" may include payroll taxes, property taxes, franchise and excise taxes, regulatory fees and income taxes.

In Tennessee, a "Fair Profit" for regulated wastewater companies may be determined under two methods – the "Rate Base Method" and the "Operating Margin Method." Under the Rate Base Method, a Fair Profit is deemed to be a reasonable return on equity for the owners' investment in the utility system (e.g., net utility plant that is used and useful in providing utility service). The Rate Base Method also includes an allowance for the reasonable costs of debt used to finance the utility system. Under the Operating Margin Method, a Fair Profit is deemed to be a reasonable return on operating expenses requiring a return factor.

In this case, I recommend computing the Fair Profit component of the Company's Revenue Requirement under the Operating Margin Method since the substantial majority of Superior Wastewater's plant is contributed by developers, thereby resulting in a *de-minimis* rate base attributable to owners' investment requiring a rate of return.

Q. **What operating margin are you recommending in this case to compute the Fair Profit component of the Company's Revenue Requirement?**

A. In Docket No. 20-00009, which was a staff-assisted rate case involving Tennessee Wastewater Systems, Inc., the Commission approved an Operating Margin Rate of 10.0%. More recently, the Commission approved an Operating Margin Rate of 10.0% for Aqua Green Utility, Inc., in Docket No. 21-00128. The 10.0% operating margin established by the Commission compares favorably to other jurisdictions that utilize the operating margin/ratio method for determining the revenue requirement of small water and wastewater utilities. For instance, in 2017 the Florida commission utilized a 10.0% operating margin for a water and wastewater company (see Florida Public Service Commission Docket No. 20170147-WS/ Order No. PSC-2018-0389-PAA-WS) and the Kentucky commission approved a 12% operating ratio (1.00/0.88) in 2018 for small water and wastewater utilities (see Kentucky Public Service Commission Case Nos. 2018-00314 and 2018-00339).

Sound financial planning and ratemaking principles recognize that appropriate reserves should be maintained; reserves that in this case could be used by the Company to meet future capital needs, extraordinary expenses or other unplanned financial exigencies that otherwise would cause financial hardship to the Company and ratepayers.

I am of the opinion that a 10.0% operating margin would provide Superior Wastewater with a reasonable level of reserves while maintaining wastewater service rates that are just and reasonable overall

Q. Briefly describe the procedure used to determine the other components of the Revenue Requirement in this case.

A. In Tennessee, utility rates are based on a utility's projected Revenue Requirement in a forward-looking period of time known as the "Attrition Period." The Attrition Period is typically the first year during which the new rates will be in effect. In this case, the parties have selected the Twelve Months Ending December 31, 2022 as the Attrition Period.

One of the first steps in projecting the various components of the Revenue Requirement is to identify an historical study period to be used as the foundation of the Attrition Period forecast. This twelve-month historical period is known as the “Test Period.” In this case, the parties used the Twelve Months Ended December 31, 2021, as the Test Period.

The Test Period's financial and operational data are studied and adjusted to reflect a "normal year" by removing non-recurring items that are not expected to repeat in the future, out-of-period items that are not attributable to the utility's operations during the Test Period or items that are disallowed for ratemaking purposes (e.g., lobbying expenses, contributions, advertising, fines and penalties, etc.)

Once the Test Period has been normalized, the operational and financial data are adjusted further to account for "known and measurable changes" that are likely to occur through the Attrition Period. In order to develop a sound Attrition Period forecast, it is essential to examine the utility's business plans, budgets and prior performance, as well as various drivers and economic indicators of future capital investments, revenues and expenses.

After the Attrition Period forecast has been computed, the forecasted earnings at present rates are compared to the level of forecasted earnings that are required to achieve the Fair Profit component of the projected Revenue Requirement to determine the amount of any earnings surplus or deficiency. If application of the present rates results in an earnings deficiency, service rates should be increased in order to give the utility a fair opportunity to achieve its projected Revenue Requirement in the Attrition Period.

The process of determining the particular rate adjustments that are needed to generate the projected Revenue Requirement is known as "rate design" and generally involves application of various rate policies and precedents.

Q. Please summarize the Revenue Requirement calculation for Superior Wastewater in this case.

A. Party Staff witness Craig Cox presents the testimony, exhibits and workpapers that support the calculation of the Company's Revenue Requirement for the Attrition Period in this case. Mr. Cox also discusses the forecast of operating expenses and taxes in his pre-filed direct testimony. Party Staff witness Cole McCormick discusses the details of the forecast of operating revenues in his pre-filed direct testimony.

Generally speaking, the calculations, assumptions and adjustments necessary to determine the Company's Attrition Period forecast were based on review and examination of Superior Wastewater's books, records and underlying source documents maintained by the Company, as well as discussions with Company representatives and management. The Company's Test Period earnings and Attrition Period forecast are summarized on TPUC Party Staff Exhibit, Schedule 2. The Attrition Period net operating loss of $57,150 represents the projected loss by Superior Wastewater for the Twelve Months Ending December 31, 2022 at presently approved rates. The Attrition Period net operating loss is computed by deducting forecasted operating expenses and taxes of $158,597 from forecasted operating revenues at present rates of $101,447.

Q. Please summarize how the Company's revenue deficiency was computed.

A. As shown on TPUC Party Staff Exhibit, Schedule 1, the Attrition Period operating expenses were multiplied by the recommended operating margin of 10% to determine the required operating income (or "fair profit") of $15,860. This amount, together with the forecasted Attrition Period net operating loss of $57,150, results in an operating income deficiency of $73,010. The income deficiency was then converted to a revenue deficiency through application of a Gross Revenue Conversion Factor of 1.069519. As reflected in TPUC Party Staff Exhibit, Schedule 5, this conversion factor recognizes the impact of state excise taxes on each new $1 of revenue. Since Superior Wastewater is organized as an LLC pass-through entity for federal income tax purposes, no federal income tax provision was computed for this case. Applying the revenue conversion factor to the operating income deficiency resulted in a projected revenue deficiency of $78,086, which is the amount by which Superior Wastewater's service rates should be increased.

Q. How was Superior Wastewater's proposed rate design calculated in order to eliminate the projected revenue deficiency?

A. The Company serves only residential customers and recovers its cost of service through a fixed monthly service rate. Thus, the rate design calculation for this case is a simple, straightforward computation of the number of projected customer bills for the Attrition Period multiplied by the fixed monthly service rate that is required to eliminate the forecasted revenue deficiency. The rate design calculations are shown on TPUC Party Staff Exhibit, Schedule 7.

A review of the rate design calculations indicates that monthly service rates should be increased from $24.98 to $44.21, which is the fixed monthly service rate that the parties are recommending for approval.

It should be noted that the Company's existing escrow charges of $10.13 per month remain unchanged. The proposed rate design, therefore, maintains the currently approved escrow charges that the Company is required to earmark and hold in reserve for future use in accordance with the Commission's financial security rules, see TPUC Rule 1220-4-13-.07. The parties are therefore recommending a combined monthly rate for service and escrow of $54.34 ($44.21 service rate + $10.13 escrow charge), which represents an increase from the current combined monthly rate of $35.11 ($24.98 service rate + $10.13 escrow charge). These rates and charges do not include the annual pass-through bonding costs or currently authorized surcharges and taxes.

The Company's service rates and escrow charges have not been increased since it began operations seventeen years ago in 2005 (Superior Wastewater formerly operated under the name of King's Chapel Capacity, LLC). The current rates and charges were approved by Commission order entered on January 3, 2006, in Docket No. 04-00335. The Company's operating expenses and taxes have materially increased since the rates were first approved, and it is to the point that Superior Wastewater can no longer continue routine operations without experiencing financial losses.

When examined on an annual basis, the proposed combined monthly amount of $54.34 represent about a 2.6% per annum increase ($35.11 * 1.02603^17). Further, the proposed rates for residential wastewater service are comparable to other wastewater service rates of jurisdictional utilities. For instance, in the staff-assisted rate case completed in December 2021 for Aqua Green Utility, Inc., Docket No. 21-00128, the Commission approved a monthly service rate of $45.50 and a monthly escrow charge of $10.13, for a combined monthly rate of $55.63.

For these reasons, I am of the opinion that the rates proposed in this proceeding are reasonable and recommend that they be approved by the Commission effective October 10, 2022. Proposed tariffs implementing the requested rates are being filed for approval in this docket under separate cover.

Q. **Does this conclude your testimony?**

A. Yes it does.