

**BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION
NASHVILLE, TENNESSEE**

PETITION OF SUPERIOR)	
WASTEWATER SYSTEMS, LLC TO)	
AMEND ITS EXISTING SERVICE)	DOCKET NO. 23-00051
TERRITORY IN WILLIAMSON)	
COUNTY)	

**SUPPLEMENTAL TESTIMONY
of
JOHN POWELL**

ON BEHALF OF SUPERIOR WASTEWATER SYSTEMS, LLC

1 ***Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE***
2 ***RECORD.***

3 ***A1.*** My name is John Powell, and my business address is PO Box 40, Arrington, TN
4 37014.

6 ***Q2. ARE YOU THE SAME JOHN POWELL WHO PRESENTED PRE-FILED***
7 ***DIRECT TESTIMONY IN THIS DOCKET?***

8 ***A2.*** Yes.

10 ***Q3. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY?***

11 ***A3.*** The purpose of my supplemental testimony is to present additional information to
12 the Commission regarding the one-time capital costs that will be charged to the
13 Triune-Area customers that choose to receive monthly wastewater service from
14 Superior Wastewater Systems, LLC (“Superior” or “the Company”). The rates
15 for these one-time capital charges were not available when my direct testimony
16 was filed.

18 ***Q4. WHAT ARE THE FORECASTED CAPITAL COSTS TO BUILD THE***
19 ***TRIUNE-AREA WASTEWATER SYSTEM?***

20 ***A4.*** As shown in Table 1 below, the Developer’s forecast for the capital costs to build
21 a 300,000 gallon per day wastewater system for the Triune-Area will be
22 approximately \$15.5 million.

23

Table 1 – Triune-Area Wastewater System Forecasted Capital Cost	
Item	Cost
Administrative Costs	\$259,140
Regulatory Costs	43,095
Land, Labor, and Piping Costs	10,482,583
Sewer Plant Costs	1,819,882
Sludge Processing Equipment Costs	514,952
Collection Line Costs	1,228,864
Pump Station Costs	1,112,820
Total Capital Costs	\$15,461,336

The details of these costs are shown in Supplemental Exhibit 1. Because these costs are compiled from the Developer’s personal experience with building these systems, we are asking that Supplemental Exhibit 1 be treated as proprietary.

Q5. WHAT CAPITAL COSTS WILL BE CHARGED TO THE TRIUNE-AREA CUSTOMERS?

A5. As mentioned earlier, the wastewater plant is designed with a capacity of 300,000 gallons per day. Therefore, the one-time capital cost charged to each customer is \$51.54 per gallon of capacity as shown below on Table 2.

Table 2 – Triune-Area Capacity Charge	
Item	Amount
Total Capital Costs	\$15,461,336
Wastewater Plant Capacity (Gallons/Day)	300,000
Capacity Charge per Gallon per Day	\$51.54

Q6. HOW IS THE DAILY CAPACITY FOR EACH CUSTOMER DETERMINED?

A6. The daily capacity for each customer generally comes from the tables published by the Tennessee Department of Environment and Conservation (“TDEC”) and are included here as Supplemental Exhibit 2. For residential customers, which

1 will represent most of the daily usage, the estimated capacity is 300 gallons per
2 day. For commercial customers, the daily capacity is dependent on the unique
3 usage requirements for each customer.
4

5 ***Q7. WHAT OTHER COSTS WILL BE CHARGED TO TRIUNE-AREA***
6 ***CUSTOMERS?***

7 ***A7.*** In addition to the Capital Costs described above, residential customers will also
8 need to install a wastewater collection tank on their premises. Finally, all
9 customers will be required to pay an allocated share of the Williamson County
10 Bonding Costs.
11

12 ***Q8. PLEASE EXPLAIN THE COSTS RELATED TO THE WASTEWATER***
13 ***COLLECTION TANK FOR RESIDENTIAL CUSTOMERS.***

14 ***A8.*** A 1,750-gallon underground wastewater collection tank is required for residential
15 installations to help reduce the amount of sludge in the processing facility. This
16 type of tank is identical to the ones installed on each lot at Kings Chapel
17 Subdivision. The cost for these tanks varies, but currently runs about \$6,700.
18

19 ***Q9. PLEASE EXPLAIN THE WILLIAMSON COUNTY BONDING COSTS***
20 ***THAT ARE CHARGED TO ALL CUSTOMERS.***

21 ***A9.*** Williamson County requires a 30% bond on the construction costs (excluding
22 land costs and internal labor) of the wastewater system that is applied to each
23 Phase of construction. As shown in Table 3 below, the base construction-only

1 forecasted capital costs are expected to be approximately \$5.1 million. When this
2 cost is applied to the bond percentage and the allocated capacity percentage, the
3 expected bond charge for a residential customer in Phase 1 of construction will be
4 \$508. This bond cost is eventually refunded to the customer when construction
5 has been completed and the bond is released by Williamson County.

Table 3 – Triune-Area Bonding Costs	
Item	Amount
Adjusted Construction Costs	\$5,076,459
Williamson County Bonding Rate	30.00%
Total Bonding Cost	\$1,522,938
Phase 1 of 3 Percentage	33.33%
Phase 1 Bonding Cost	\$507,595
Typical Residential Capacity (Gallons/Day)	300
Total System-Wide Capacity (Gallons/Day)	300,000
Residential Customer Allocated Capacity	0.10%
Typical Residential Customer Bonding Cost	\$508

6 ***Q10. CAN YOU PROVIDE AN EXAMPLE FOR HOW THE TOTAL CAPITAL***
7 ***COST FOR A RESIDENTIAL CUSTOMER IS COMPUTED?***

8 ***A10.*** Yes. First, as shown below on Table 4, the residential customer capacity of 300
9 gallons per day is multiplied by the Capacity Charge of \$51.54 to produce a one-
10 time capital surcharge to the customer of \$15,462. Next the \$6,700 cost for the
11 wastewater collection tank and the \$508 cost for the Williamson County Bonding
12 Charge are included which brings the total installed cost to \$22,670 for a
13 residential customer.

1

Table 4 – Pro Forma Residential Customer Capacity Charge	
Item	Cost
Residential Daily Capacity (Gallons/Day)	300
Capacity Charge per Gallon per Day	51.54
Residential Customer Capital Surcharge	\$15,462
Wastewater Collection Tank	6,700
Williamson County Bond Cost (Refundable)	508
Total Residential Customer Cost	\$22,670

2 Except for the ongoing monthly operating cost charged by Superior, this \$22,670
3 is the only cost that is charged to the customer.

4

5 ***Q11. HAVE YOU DEVELOPED TARIFF LANGUAGE THAT REFLECTS***
6 ***THESE CAPACITY CHARGES?***

7 ***A11.*** Yes. We have updated our proposed tariff and included it here as Supplemental
8 Exhibit 3. The applicable tariff schedules now include the following language
9 that addresses the capital surcharges.

10 ***CAPITAL SURCHARGE, CAPITAL TANK COST AND CAPITAL BONDING***
11 *The Company has entered into an agreement with the developer of this service*
12 *territory to construct a wastewater system for a one-time Capital Surcharge of*
13 *\$51.54 per gallon of daily capacity. The Company has agreed to collect this*
14 *Capital Surcharge from its customers without any markup. The total amount of*
15 *daily capacity required for each customer is unique to that customer's particular*
16 *needs. The Company will work with each customer to determine the appropriate*
17 *amount of capacity needed in order to properly calculate the Capital Surcharge.*
18 *The Capital Surcharge is nonrefundable and must be paid before monthly*
19 *wastewater service can begin.*

20

21 *Residential customers are required to have a Wastewater Collection Tank installed*
22 *at their premises of sufficient quality and construction to the Company's*
23 *satisfaction. The current cost for these tanks is approximately \$6,700, but this cost*
24 *can vary over time. The Wastewater Collection Tank must be installed and paid*
25 *for before wastewater service can begin.*

26

1 *Williamson County requires a separate bonding charge on the construction of*
2 *wastewater systems. This bonding charge is fully refundable to the customer when*
3 *construction has been completed and the bond is released by Williamson County.*
4 *The bonding charge for each customer is based on each customer's daily capacity*
5 *as a percentage of the total daily capacity available and must be paid before*
6 *monthly service can begin.*

7 Although the capital cost for the Triune-Area wastewater system is not rate
8 regulated by the Commission, I believe that including the language shown above
9 in the tariff helps provide transparency for the customer over how their capital
10 charges are calculated.

11

12 ***Q12. DOES THIS COMPLETE YOUR SUPPLEMENTAL TESTIMONY?***

13 ***A12.*** Yes, it does.

SUPPLEMENTAL EXHIBIT 1 - PUBLIC

Wastewater System Cost Calculation

The detailed cost calculation for the Triune-Area wastewater system is proprietary and filed under seal with the Tennessee Public Utility Commission.

SUPPLEMENTAL EXHIBIT 2

TDEC Daily Capacity Table



DWR-NPDES-SOP-G-02-WW Design Criteria Chapter 2-072020
Design Criteria for Review of Sewage Works Construction Plans and Documents
Chapter 2

APPENDIX 2-A

DESIGN BASIS FOR WASTEWATER FLOW AND LOADING

Typical Wastewater Flow Rates from Commercial and Industrial Sources

(Source: Crites and Tchobanoglous, 1998)

FACILITY	UNIT	Flow, gallons/unit/day	
		Range	Typical
Airport	Passenger	2-4	3
Apartment House	Person	40-80	50
Apartment, resort	Person	50-70	60
Assembly Hall	Seat	2-4	3
Automobile Service Station	Vehicle Served	8-15	12
	Employee	9-15	13
Bar	Customer	1-5	3
	Employee	10-16	13
Boarding House	Person	25-60	40
Bowling Alley	Alley	150-250	200
Camps:			
Pioneer Type	Person	15-30	25
Children's with central toilet/bath	Person	35-50	45
Day, with meals	Person	10-20	15
Day, without meals	Person	10-15	13
Luxury, private bath	Person	75-100	90
Trailer Camp	Person	75-125	125
Campground-developed	Person	20-40	30
Cocktail Lounge	Seat	12-25	20
Coffee Shop	Customer	4-8	6
	Employee	8-12	10
Country Club	Guests on-site	60-130	100
	Employee	10-15	13
Department Store	Toilet Room	400-600	500
	Employee	8-15	10
Dining Hall	Meal Served	4-10	7
Dormitory/bunkhouse	Person	20-50	40
Fairground	Visitor	1-2	2
Hospital, Medical	Bed	125-240	165
	Employee	5-15	10
Hospital, Mental	Bed	75-140	100
	Employee	5-15	10
Hotel	Guest	40-60	50
	Employee	8-13	10
Industrial Building (sanitary waste only)	Employee	7-16	13



DWR-NPDES-SOP-G-02-WW Design Criteria Chapter 2-072020
Design Criteria for Review of Sewage Works Construction Plans and Documents
Chapter 2

Laundry (self-service)	Machine	450-650	550
	Wash	45-55	50
Office	Employee	7-16	13
Picnic Park, flush toilets	Visitor	1-2	2
Prison	Inmate	80-150	120
	Employee	5-15	10
Public Lavatory	User	3-6	5
Rest Home	Resident	50-120	90
	Employee	5-15	10
Restaurant (with toilet) Conventional Short Order Bar/ cocktail lounge	Meal	2-4	3
	Customer	8-10	9
	Customer	3-8	6
	Customer	2-4	3
School, day only With cafeteria, gym, showers With cafeteria only Without cafeteria, gym or showers			
	Student	15-30	25
	Student	10-20	15
	Student	5-17	11
School boarding	Student	50-100	75
Shopping Center	Employee	7-13	10
	Parking Space	1-3	2
Store, resort	Customer	1-4	3
	Employee	8-12	10
Swimming Pool	Customer	5-12	10
	Employee	8-12	10
Theater	Seat	2-4	3
Visitor Center	Visitor	4-8	5

The flow for a residential house is typically 300 gallons/unit/day.

SUPPLEMENTAL EXHIBIT 3

Revised Tariff Pages

**Superior Wastewater Systems
Wastewater Service Billing Summary
Residential Service**

System	Monthly Charge
Ashby Communities – Sheet 2	\$50.10
Hill and Roberts Parcels – Sheet 3	54.34
Fox Parcel – Sheet 4	54.34
Taliaferro Road Parcel – Sheet 5	54.34
Triune-Residential – Sheet 6	70.00

Commercial Service

System	Volumetric Charge Per 1000 Gals
Triune-Low Strength Effluent Disposal – Sheet 7	\$8.11
Triune-Medium Strength Effluent Disposal – Sheet 8	10.38
Triune-High Strength Effluent Disposal – Sheet 9	15.66
Triune-Hotels – Sheet 10	10.38

**Superior Wastewater Systems
Triune Residential Billing Rates**

	Monthly Charge
Base Rate Charge	\$70.00
Escrow Charge	0.00
Bonding Charge	0.00
Total	\$70.00

AVAILABILITY

Available for all wastewater service furnished in the Triune Service Area to single private residences, including the separate private units of apartment houses and other multiple dwellings, actually used for residential purposes, irrespective of the fact that a person other than the resident: (1) is contractually bound to Superior Wastewater Systems (Company) for the charges, or (2) actually pays the charges, or (3) is billed for the charges. Use of wastewater service in hotel or motel units by transient occupants shall not constitute residential service.

CAPITAL SURCHARGE, CAPITAL TANK COST AND CAPITAL BONDING

The Company has entered into an agreement with the developer of this service territory to construct a wastewater system for a one-time Capital Surcharge of \$51.54 per gallon of daily capacity. The Company has agreed to collect this Capital Surcharge from its customers without any markup. The total amount of daily capacity required for each customer is unique to that customer’s particular needs. The Company will work with each customer to determine the appropriate amount of capacity needed in order to properly calculate the Capital Surcharge. The Capital Surcharge is nonrefundable and must be paid before monthly wastewater service can begin.

Residential customers are required to have a Wastewater Collection Tank installed at their premises of sufficient quality and construction to the Company’s satisfaction. The current cost for these tanks is approximately \$6,700, but this cost can vary over time. The Wastewater Collection Tank must be installed and paid for before wastewater service can begin.

Williamson County requires a separate bonding charge on the construction of wastewater systems. This bonding charge is fully refundable to the customer when construction has been completed and the bond is released by Williamson County. The bonding charge for each customer is based on each customer’s daily capacity as a percentage of the total daily capacity available and must be paid before monthly service can begin.

Incidental Rates:

Late Payment	5% of Bill.
Disconnection	\$10.00
Reconnection	\$15.00
Returned Check	\$20.00

Issued By:
John Powell, President & General Manager

**Superior Wastewater Systems
Triune Commercial Low-Strength Effluent Disposal Billing Rates**

	Volumetric Charge Per 1000 Gals
Base Rate Charge	\$8.11
Escrow Charge	0.00
Bonding Charge	0.00
Total	\$8.11

AVAILABILITY

Available for all wastewater service furnished in the Triune Service Area to commercial customers with low-strength sewage. Monthly charge per customer is determined based on daily flow rate and waste strength of the establishment being served. Establishments classified as low-strength include, but are not limited to, the following: office/professional buildings, retail stores, banks, beauty/barber shops, parks/recreation (indoor & out), churches, daycares, car washes, theater/auditorium with no food service. The Utility has the right in its sole discretion to determine billing adjustments as needed.

CAPITAL SURCHARGE AND CAPITAL BONDING

The Company has entered into an agreement with the developer of this service territory to construct a wastewater system for a one-time Capital Surcharge of \$51.54 per gallon of daily capacity. The Company has agreed to collect this Capital Surcharge from its customers without any markup. The total amount of daily capacity required for each customer is unique to that customer's particular needs. The Company will work with each customer to determine the appropriate amount of capacity needed in order to properly calculate the Capital Surcharge. The Capital Surcharge is nonrefundable and must be paid before monthly wastewater service can begin.

Williamson County requires a separate bonding charge on the construction of wastewater systems. This bonding charge is fully refundable to the customer when construction has been completed and the bond is released by Williamson County. The bonding charge for each customer is based on each customer's daily capacity as a percentage of the total daily capacity available and must be paid before monthly service can begin.

Incidental Rates:

Late Payment	5% of Bill.
Disconnection	\$10.00
Reconnection	\$15.00
Returned Check	\$20.00

Issued By:
John Powell, President & General Manager

Superior Wastewater Systems
Triune Commercial Medium-Strength Effluent Disposal Billing Rates

	Volumetric Charge Per 1000 Gals
Base Rate Charge	\$10.38
Escrow Charge	0.00
Bonding Charge	0.00
Total	\$10.38

AVAILABILITY

Available for all wastewater service furnished in the Triune Service Area to commercial customers with medium-strength sewage. Monthly charge per customer is determined based on daily flow rate and waste strength of the establishment being served. Establishments classified as medium-strength include, but are not limited to, the following: delis, coffee shops, self-serve laundromats, hotels/motels with no food services, bed & breakfasts, service stations, auto-repair/service with no steam cleaning, industrial launderers, schools, hospitals/medical offices, theater/auditorium with food. The Utility has the right in its sole discretion to determine billing adjustments as needed.

CAPITAL SURCHARGE AND CAPITAL BONDING

The Company has entered into an agreement with the developer of this service territory to construct a wastewater system for a one-time Capital Surcharge of \$51.54 per gallon of daily capacity. The Company has agreed to collect this Capital Surcharge from its customers without any markup. The total amount of daily capacity required for each customer is unique to that customer’s particular needs. The Company will work with each customer to determine the appropriate amount of capacity needed in order to properly calculate the Capital Surcharge. The Capital Surcharge is nonrefundable and must be paid before monthly wastewater service can begin.

Williamson County requires a separate bonding charge on the construction of wastewater systems. This bonding charge is fully refundable to the customer when construction has been completed and the bond is released by Williamson County. The bonding charge for each customer is based on each customer’s daily capacity as a percentage of the total daily capacity available and must be paid before monthly service can begin.

Incidental Rates:

Late Payment	5% of Bill.
Disconnection	\$10.00
Reconnection	\$15.00
Returned Check	\$20.00

**Superior Wastewater Systems
Triune Commercial High-Strength Effluent Disposal Billing Rates**

	Volumetric Charge Per 1000 Gals
Base Rate Charge	\$15.66
Escrow Charge	0.00
Bonding Charge	0.00
Total	\$15.66

AVAILABILITY

Available for all wastewater service furnished in the Triune Service Area to commercial customers with high-strength sewage. Monthly charge per customer is determined based on daily flow rate and waste strength of the establishment being served. Establishments classified as high-strength include, but are not limited to, the following: full-service restaurants; fast food restaurants; cafeterias; diners; seafood & butcher shops; bakeries – including donuts, pies & pastries; ice cream parlors; clubs with dining rooms service; alcoholic beverage producers – including breweries, wineries, distilleries; supermarkets/grocery stores; shopping centers with supermarkets and/or restaurants; hotels/motels with restaurants; mortuaries; travel centers with food services. The Utility has the right in its sole discretion to determine billing adjustments as needed.

CAPITAL SURCHARGE AND CAPITAL BONDING

The Company has entered into an agreement with the developer of this service territory to construct a wastewater system for a one-time Capital Surcharge of \$51.54 per gallon of daily capacity. The Company has agreed to collect this Capital Surcharge from its customers without any markup. The total amount of daily capacity required for each customer is unique to that customer’s particular needs. The Company will work with each customer to determine the appropriate amount of capacity needed in order to properly calculate the Capital Surcharge. The Capital Surcharge is nonrefundable and must be paid before monthly wastewater service can begin.

Williamson County requires a separate bonding charge on the construction of wastewater systems. This bonding charge is fully refundable to the customer when construction has been completed and the bond is released by Williamson County. The bonding charge for each customer is based on each customer’s daily capacity as a percentage of the total daily capacity available and must be paid before monthly service can begin.

Incidental Rates:

Late Payment	5% of Bill.
Disconnection	\$10.00
Reconnection	\$15.00
Returned Check	\$20.00

Issued By:
John Powell, President & General Manager

**Superior Wastewater Systems
Triune Hotel Billing Rates**

	Volumetric Charge Per 1000 Gals
Base Rate Charge	\$10.38
Escrow Charge	0.00
Bonding Charge	0.00
Total	\$10.38

AVAILABILITY

Available for all wastewater service furnished in the Triune Service Area to hotels or motels. Monthly charge per customer is determined based on daily flow rate and waste strength of the establishment being served.

CAPITAL SURCHARGE AND CAPITAL BONDING

The Company has entered into an agreement with the developer of this service territory to construct a wastewater system for a one-time Capital Surcharge of \$51.54 per gallon of daily capacity. The Company has agreed to collect this Capital Surcharge from its customers without any markup. The total amount of daily capacity required for each customer is unique to that customer’s particular needs. The Company will work with each customer to determine the appropriate amount of capacity needed in order to properly calculate the Capital Surcharge. The Capital Surcharge is nonrefundable and must be paid before monthly wastewater service can begin.

Williamson County requires a separate bonding charge on the construction of wastewater systems. This bonding charge is fully refundable to the customer when construction has been completed and the bond is released by Williamson County. The bonding charge for each customer is based on each customer’s daily capacity as a percentage of the total daily capacity available and must be paid before monthly service can begin.

Incidental Rates:

Late Payment	5% of Bill.
Disconnection	\$10.00
Reconnection	\$15.00
Returned Check	\$20.00

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