

Willistown Township

SEWER RATE STUDY UPDATE



System Overview

Willistown Township's wastewater system is made up of four primary districts. Properties not in these districts are serviced either by AQUA or an on-site system.

Penns Preserve: 195 Customers (residential only), 4,000 Feet of Sewers, 1 Pump Station, Penns Preserve Treatment Plant (Spray Irrigation).

East Goshen Township: 20 Customers (residential only), 1,200 Feet of Sewers, Treatment at the East Goshen Ridley Creek Wastewater Treatment Plant.

Easttown Township (Whitegate Farms): 5 Customers (residential only), 1,870 Feet of Sewers (To Be Maintained by HOA), Treatment at Valley Forge Sewer Authority.

Valley Forge Sewer Authority: 2,102 Customers, 157,925 Feet of Sewers, 7 Pump Stations, Conveyance via AQUA's Valley Creek Trunk Sewer, Treatment at Valley Forge Sewer Authority Treatment Plant.

**Based on current township data.*

Rate Study Goal

What the Rate Study Will Accomplish

Equitable Distribution of Sewer Budget Costs to Customers so Rates and Charges Cover the Sewer Budget.

Budget Costs Include:

- Operation and Maintenance – Cost to Run the Sewer System on an Annual Basis.
- Conveyance Charges (VFSA District) – Charges From AQUA (per Gallon Basis).
- Treatment Charges (VFSA District) – Cost to Treat Wastewater at VFSA (per Gallon Basis).
- Debt Service – Principal and Interest on the Sewer System Debt.
- Capital Reserve – Set Aside for Future Replacement of Sewer System Components.

**Budget Costs Vary by District.*

Rate Options Under Consideration

Usage Only:

- Customers Pay Based on the Amount of Water Usage.
- Customers are Charged a Rate per 1,000 Gallons of Metered Water Usage.
- The Rate per 1,000 Gallons is the Total Budget Costs ÷ Total Annual Metered Water Usage of all Customers.

Advantage:

A Simple Calculation Method.

Disadvantage:

Customers Using Low Amounts of Water Do Not Cover Their Share of the Basic Cost for the Township to Own and Operate the Sewer System, Independent of the Amount of Sewage Generated.

Rate Options Under Consideration - 2

Fixed Charge Only (Typically Known as Flat Rate):

- Customers Pay Budget Costs Based on Fixed Customer Units.

Advantage:

A Simple Calculation Method.

Disadvantage:

Depending on the Calculation Method Requires the Township to Obtain and Analyze Water Usage Data to Calculate Each Customer's Number of Fixed Customer Units.

**Currently Used for Penns Preserve, East Goshen, and Easttown (All Residential Customers).*

Rate Options Under Consideration - 3

Fixed and Usage Combination:

- Customers Pay a Fixed Charge and a Usage Charge for Budget Cost Components Outlined Above.

Advantage:

Customers Pay Conveyance and Treatment Costs (per Gallon Basis) Based on Their Metered Usage. Customers Using Low Amounts of Water Cover Their Share of the Basic Cost for the Township to Own and Operate the Sewer System Via the Fixed Charge.

**Currently Used for Valley Forge Sewer Authority Customers.*

Fixed and Usage Options (Non-Residential Customers):

Multiple Fixed Charges – Number of Units Used by A Customer Based on the Customer's Quarterly Usage ÷ Average Quarterly Residential Usage.

Single Customer Charge – All Customers Pay 1 Fixed Charge Independent of the Customer's Usage.

Rate Components

Fixed Charge = Budget Costs ÷ Total Fixed Customer Units. Budget Costs are Typically Operation and Maintenance, Debt Service, and Capital Reserve.

Usage Charge = Budget Costs ÷ Total System Usage (Metered Water Usage). Budget Costs are Typically Conveyance and Treatment.

Fixed Customer Unit - Number of Units Used by a Customer Based on the Customer's Quarterly Usage ÷ Average Quarterly Residential Usage.

Single Family Residential Customers are 1 Unit. All Other Customers are 1 or More Units.

**Metered Water Usage is an Estimate of Actual Sewage Discharged to the Sewer System for the Purpose of Calculating Customer Units and Usage Charges.*

Initial Recommendations

After review of the various rate structures, Carroll Engineering recommends the following structures for the various districts:

Penns Preserve, East Goshen, and Easttown Districts – Continue Using the Fixed Charge.

These Districts Are Comprised of Only Residential Customers. Budget Costs Specific to Each District Apply Only to Each District's Customers. Rates Charged are the District's Budget Cost ÷ Total Customers in the District.

VFSA District– Revise Fixed Rate and Usage Rate Based on the Final Rate Study.

What's Next

- Finalization of the 2024 Sewer Budget
- Final Rate Calculation
- Public meeting: October 26, 2023 – Presentation of estimated rates

Questions?