Adenus Technologies

849 Aviation Parkway
Smyrna, TN 37167

Case Study
Rutherford County, TN

Located southeast of Nashville along Interstate 24, Rutherford Co. is rapidly growing. The pace of growth has been fueled by its proximity to Nashville and by the location of major companies in the area, such as Nissan and Verizon. The countywide water utility, Consolidated Utility District (CUD), has helped create development in areas where municipal sewer systems were not available or were not economically feasible.

As of November 2007, CUD has the following systems online or under construction:

- 32 recirculating sand filters in operation – capacity 4100 homes
- 9 recirculating sand filters under construction – capacity 1900 homes
- 9 recirculating sand filters under design – capacity 1350 homes

David Jones, Wastewater Manager for CUD, made the following statements about recirculating sand filters with watertight STEP (Septic Tank Effluent Pump) collection systems:

1. The state requires testing of effluent from recirculating sand filters only once per quarter, which is very reasonable in comparison to the testing requirements for other types of treatment systems.
2. Allows a developer to fully utilize land. These systems allow for 3 homes per acre vs. 1 home per 5 acres (conventional septic tank with field lines).
3. These systems are very public-friendly:
    a. Dispose of the treated water on site, typically via drip emitter piping, so no EPA discharge permits are required.
    b. No noticeable odors are produced.
    c. These are environmentally friendly systems.
4. The pump at each home runs an average of only 60 hours per year, so the reliability and longevity of STEP systems is not a concern.
5. Commercial development is starting to move into the areas where these subdivisions are located.
6. Virtually no customer issues since systems were first installed in the spring of 2000.

For a sewer bill, CUD charges its customers a flat $28 per month.

Since starting construction on the first system in the spring of 2000, CUD has seen rapid growth and these treatment systems have been met with widespread acceptance. CUD has concluded that recirculating sand filters with STEP collection systems are a cost effective and environmentally friendly way to bring sewer service to an area. CUD is positioned to be a major player for years to come, helping meet the needs of this rapidly developing community.