



## Procedures for Sewer Leakage Testing of Private Systems

(May 3, 2019)

The requirement for sewer leakage testing of existing private systems was incorporated into the standard conditions of approval for storm water management permits to complement the District's efforts to reduce inflow and infiltration in the public system. Leakage testing of existing sewers is not presently mandated by EPA, DEP, or Broward County and is up to the utility service provider.

### Applicability

Leakage testing of existing and new components of the sewer system is required by the Coral Springs Improvement District as a standard condition of approval for storm water management licenses. The applicant is to conduct leakage testing of the private sewer systems (laterals and mains) up to the point of connection with the District system and demonstrate leakage (into or out of the system) is less than 100 GPDIDM (20x the allowed leakage for new systems).

### Testing protocols – Systems less than 500 ft. total length

For systems less than 500 ft. total length (laterals and mains), compliance may be demonstrated by submitting an engineer's certification (with supporting record of video inspection) that the system was inspected and found to be free of defects or damage that is resulting in leakage. Visible leaks or evidence of root intrusion is grounds for rejection and must be corrected.

### Testing protocols – Systems >500 ft.

Systems longer than 500 ft. will need to have flows measured, utilizing industry accepted flow meters at the point of connection to the District's facilities or at an alternate location agreed to by the District. Flow testing is to be performed during periods of minimal sewer flow (water use) by the facility. Sewer meter readings are converted to sewer flow (GPH) by dividing the flow by the elapsed time. Allowable leakage is based on the length diameter of the system. Length and diameter are to be determined from record plans or measured in the field. The

difference between measured sewer flow and domestic consumption (if any) is computed. Leakage in excess of the computed allowance must be addressed.

## **Computation of Domestic Consumption**

Domestic meter readings are to coincide with the start and end of sewer flow meter readings to the greatest extent possible. When the interval between initial and final domestic meter readings is less than the duration of sewer metering, then up to 80% of domestic consumption may be deducted from sewer flows before calculating the sewer flow rate. When the interval between initial and final domestic meter readings exceeds the duration of the sewer flow metering, then the domestic consumption is converted to an hourly rate. Of the domestic consumption, up to 80% may be deducted from the sewer flow rate when computing infiltration.

## **Required Actions**

- Sewer leakage that is less than 100 GPDIDM rate requires no additional action. Passing tests are valid for 10 years.
- Tests with leakage rates between 100 and 500 GPDIDM require no immediate action but must be retested within 5 years.
- Leakage greater than 500 GPDIDM (100 times the allowable for new systems) but less than 2,000 GPDIDM requires action. The location(s) of the leak(s) must be tracked down and identified (preferably by televising the system). Visible breaks and significant point source contributions must be corrected. Non-point sources of infiltration will need to be noted and potential repairs evaluated, but not necessarily corrected at this time.
- Leaks in excess of 2,000 GPDIDM require immediate corrective action to bring the system into compliance. We recommend the owner's engineer televise the system, develop and present proposed corrective action to the District for evaluation prior to implementing.
- Following corrective action, the system shall be retested to demonstrate the effectiveness of the repairs and certified by the owner's engineer as complying with District Standards.