

Smoke Testing

The process of smoke testing is one way to identify problems that exist in the Village's sanitary sewer lines. The process begins by injecting a non-toxic vapor, referred to as smoke, into a segment of sewer line. Once the smoke is injected a large blower, or fan, forces the smoke through the line. Field Technicians then look for smoke exiting the sewer system in locations that are not normal such as storm drains, down spouts, and clean outs. These locations allow unwanted rainfall or ground water to enter the sanitary sewer which leads to sanitary sewer overflows (SSO's).

Smoke Testing, Frequently Asked Questions FAQ's

1. What are smoke tests?

Smoke tests are one way to specifically locate problems in a sewer system. A white vapor (smoke) is blown into the sewer main and will exit thru deficiencies in the system. Such deficiencies are missing or broken clean outs, storm drains connected to sewer lines, down spouts connected, or cracks in sewer mains, etc. These problems lead to what the profession calls I and I or Inflow and Infiltration. Inflow is where surface water enters the system by the way of clean out or storm drain. Infiltration is where ground water enters the system either through manholes or broken pipes. Field Technicians note the locations for repairs.



Smoke exiting storm drain

2. What is the Purpose of Smoke Testing?

Smoke testing is the most efficient and economical way to identify sewer system defects.



Roof drain connected to sewer

3. Is The Smoke Hazardous?

The smoke is utilized throughout the United States by other private sewer consulting firms and municipal governments. Contact should be avoided but is not harmful. Minor irritation to the eyes and nose is possible but will be alleviated when exposure is ceased. A copy of the Material Safety Data Sheet is available on this site.

4. Will Smoke Enter My House?

Smoke will not enter your house unless you have a pipe or plumbing defect. The most frequent way smoke will enter your house is through dry traps. A trap is located under most drains whether it is a sink or a floor drain. The purpose of a trap is to "trap" water and create a seal between the sink and the rest of the plumbing system to prevent odors entering your house. The Village will notify you no less than 72 hours prior to conducting a test. This is to give homeowners plenty of time to make sure all traps are full of water. Running water for approximately 10 seconds or pouring a gallon of water in a drain will be enough to assure the trap is full. See figure below.



5. What other methods are used to locate I & I?

Other methods are flow monitoring and using close circuit television (CCTV).

6. Will anyone contact me with the test results?

The Village of Rantoul Public Works Department will not contact you unless there is a defect or problem found associated with your property. However we will answer questions you may have with regards to the testing.



Smoke exiting ground