

Frequently Asked Questions

Sanitary Sewer Smoke Testing

What is the purpose of smoke testing?

The purpose of smoke testing is to find potential points of inflow and infiltration in the public portion of the sanitary sewer system that could lead to high flows during storms and snow melt events. Smoke testing can also help identify the following:

- Buildings that have downspout, cellar, yard or basement drains, and sump pumps
- Points of groundwater or surface water intrusion into the sewer
- Any cross connections between sanitary sewers and storm drains
- Defective sewer connections that could allow sewer gases into a building

How does smoke testing work?

The City of Hamilton will notify property owners /residents by mail and door hangers, which will be placed in work areas 1- 4 days prior to testing. The City will inform the local fire and police departments of where they will be conducting smoke testing each day. During smoke testing, field crews blow air and smoke into the sanitary sewer system in the street and monitor where smoke escapes the system. The smoke under pressure will fill the main line, as well as any connections, and then follow the path of any leak to the ground surface, quickly revealing the source of the problem. For instance, if smoke permeates up through a yard, it indicates breaks in the sewer line. Only enough force to overcome atmospheric pressure is required, and smoke should escape from building roof vents. If you have any doubt as to the source of the smoke in your home or yard, phone 911 immediately.

What are the benefits of smoke testing?

Smoke testing is the most efficient and cost effective way to locate and identify improper clean water connections to the sanitary sewer system. The smoke is harmless and will disappear after only a few minutes. The testing is also a cost-effective way to identify areas of the sewer system that may need improvement. Smoke testing will also help identify plumbing leaks in buildings. Sewer gases can potentially cause health problems for building occupants.

Is the smoke harmful?

NO. The "smoke" is not true smoke, but rather a mist containing a large percentage of atmospheric moisture that is highly visible at low concentrations. It will not harm your health or leave a stain and will disappear rapidly without leaving an odor. Since any vapor can be an irritant, direct exposure to the "smoke" may cause minor respiratory irritation in some people. Individuals with respiratory problems such as chronic asthma, emphysema, or other respiratory conditions should avoid direct exposure to the smoke. Please contact the City of Hamilton at (513) 785-7100 to discuss smoke testing in further detail. If smoke enters your home, it may make you cough, but the smoke is

- Non-toxic
- Non-staining and odorless
- Harmless to humans, pets, plants, food and material goods
- Does not create a fire hazard

I am a pet owner, and I will not be at home during the testing. Should I be concerned?

The smoke is not harmful to pets. As long as windows are left open, any smoke that enters the building will dissipate in a few minutes.

Will smoke testing of the sewers allow smoke to get into my home?

No, provided that your plumbing is installed and functioning properly, and provided that “traps” are filled with water. Drains that are used frequently should require no action. If you are not sure, simply run water down the drain for a minute to ensure that the trap is not dry. It is important to identify dry traps as they may allow sewer gas to enter the home. Dry traps are often found in basement floor drains and other infrequently used plumbing fixtures. Please thoroughly check your traps.

What does it mean if smoke enters my house?

If smoke enters your home during the test, it may indicate plumbing deficiencies that may potentially allow harmful sewer gas to enter.

How may the smoke enter my house?

Since plumbing fixtures in your home or business are connected to the sanitary sewer system, smoke may enter if drains are not connected properly, particularly under the following circumstances:

- Vents connected to building sewer pipes are inadequate, defective, or improperly installed.
- Traps under sinks, bathtubs, basins, showers and other drains are dry, defective, or improperly installed.
- Pipes, connections, or seals in the wastewater drain system in and/or under your building are damaged, defective, have plugs missing, or are improperly installed.

What should I do if smoke gets into the house?

- Do not become alarmed.
- Open windows to allow ventilation and note the location of the smoke emission; smoke will clear within a few minutes.
- Exit the building and notify smoke testing personnel in the area.

If the smoke is not harmful, why do you recommend evacuating the structure?

We recommend evacuating as a precautionary measure in case the smoke is due to fire rather than a smoke test, and also since smoke in your house from this test indicates sewer gas may also be entering the building.

How long will the testing take?

While crews might be in your area for a few hours, each actual smoke test takes approximately 15 minutes to complete. Most houses will only be within the testing area for one or two tests.

What should I do to prepare for smoke testing?

When you receive notice that smoke testing will take place in your area, you should:

- Check to see that all drain traps under basins, washing facilities and floor drains contain water, flush toilets, and run or pour water into all drains, including infrequently used fixtures and floor drains.

Do I have to be home during testing?

No. Inspection crews will not need to enter your home unless smoke is present and you want them to help identify the defect.

How will I know if smoke enters my house if I am not home during testing?

The purpose of the smoke test is to identify improper clean water connections to the sanitary sewer system. While it is also beneficial to note deficient plumbing connections on private property, it is not the purpose of the smoke test. It is the homeowner’s responsibility to maintain private plumbing connections.

Why can’t you tell me in advance exactly what date my home will be tested?

Smoke tests cannot be conducted during rain events or very windy conditions, so tests may be delayed. Also, other activities in the project may take less time than anticipated, so it can sometimes be sooner than expected. The schedule may also shift if more or fewer defects than expected are located and need to be documented.

Will rodents be smoked out?

No. However, smoke testing may identify broken building sewers where there is a potential for rodent access.

Can smoke testing activate smoke alarms?

Yes, smoke alarms may be activated during smoke testing. If possible, open windows and/or doors for ventilation. If you have any doubts about the origin of the smoke, please call 911.

Can smoke plug the sewer?

No. The smoke is a vaporized substance that quickly dissipates.

Where does the smoke appear?

Smoke may escape roof vents, building foundations, manhole covers, or yard cleanouts. Smoke coming from home roof vents is a normal and indicates to crews that smoke has filled all sewers.

Customers are encouraged to contact Customer Service at (513) 785-7100 with any additional questions or concerns regarding sanitary sewer system smoke testing.