

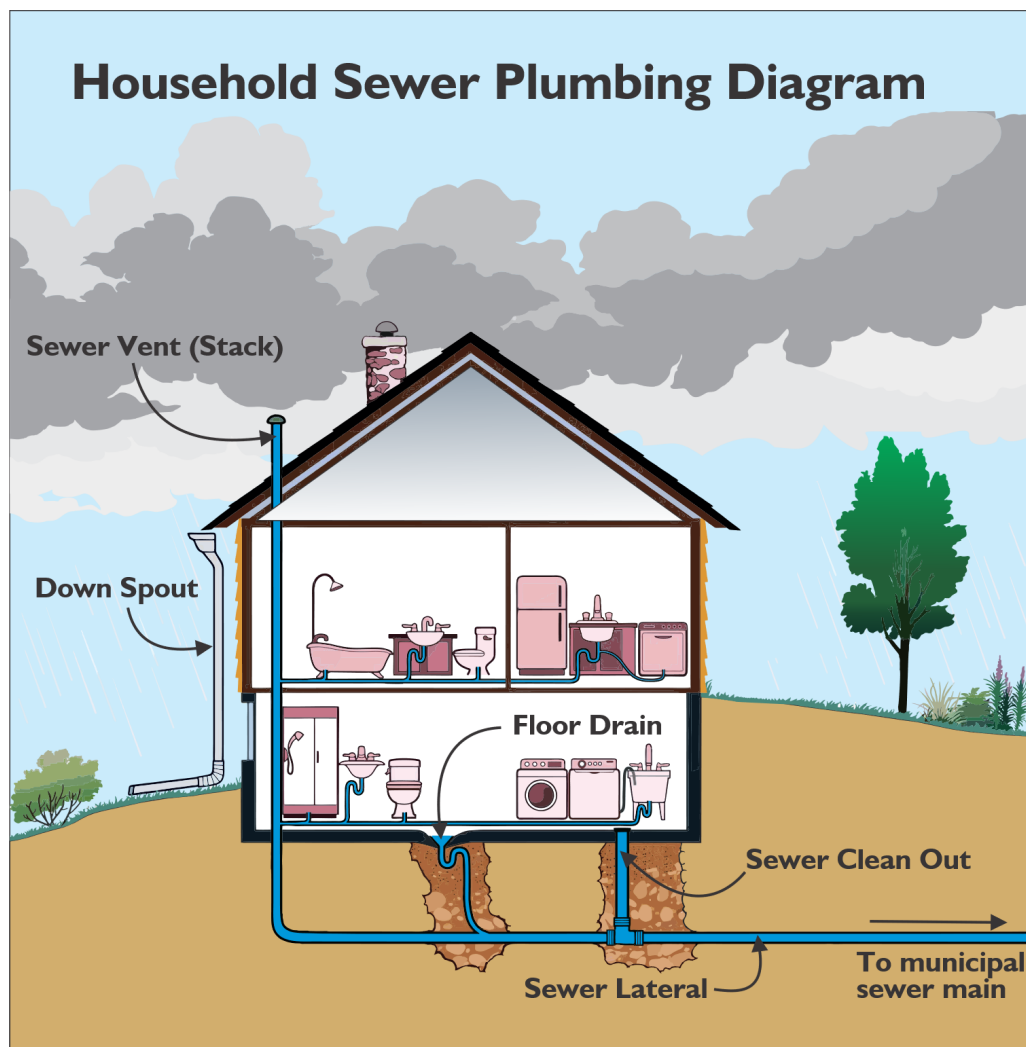
Smoke Testing – Frequently Asked Questions

What is smoke testing?

Smoke testing is a common test method used to identify sections of the sanitary sewer collection system that have defects such as cracks, leaks or faulty connections that allow rainwater to enter this underground pipe network. Since the sanitary sewer system is only designed to handle wastewater, the addition of rainwater/storm water causes many problems in the collection system. The Municipality intends to locate and repair as many of these defects as possible so that a heavy rain won't overwhelm the sanitary sewer system and cause raw wastewater overflows into Howe Sound.

During smoke testing, workers will blow a dense smoke into the sanitary sewer system. The smoke will escape through openings such as holes in manhole covers and plumbing vent pipes located on or near rooftops. Smoke will also escape through defects such as cracks or breaks, open or broken cleanout covers, damaged or defective manhole frame seals, illegally connected roof or area drains and any other opening(s).

Why is it important to remove rainwater from the sanitary sewers?

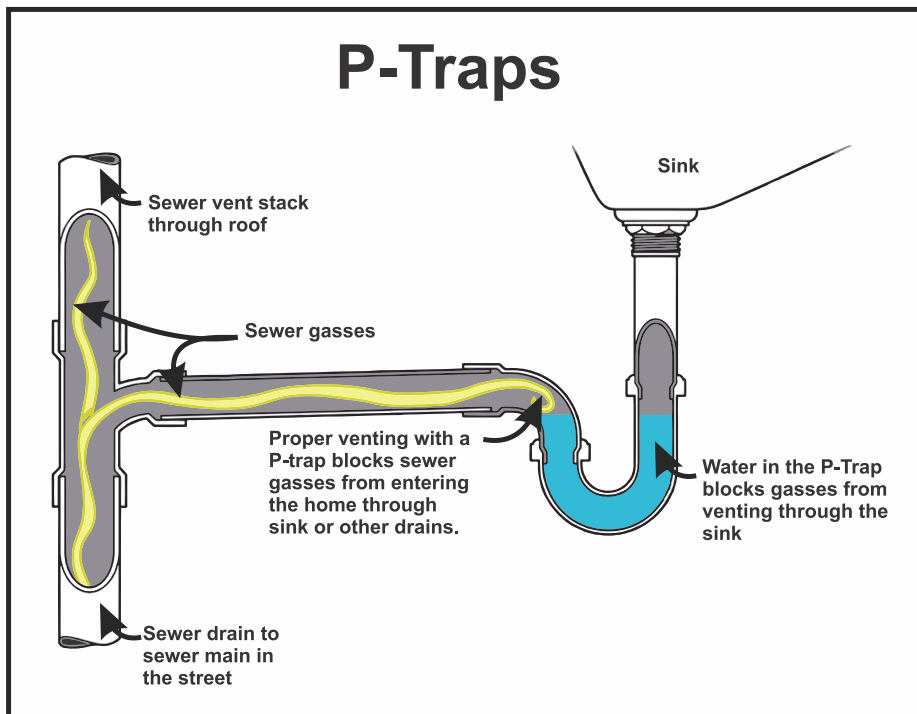


Excessive rainwater in the sanitary sewer essentially “robs” the pipe of its capacity. This space in the sewer pipe should be used to convey liquid waste to the sewer treatment plant, not rainwater. If the sewer pipe is at or near the design capacity, there is no available room to convey any excess rainwater. During a rainfall event lasting several days, or even a single day of heavy rain, the sewer pipes become surcharged or “over full”. Since there is no room for the extra water a backup or an overflow may occur. A backup causes wastewater to

“backup” into homes while a sewer overflow allows wastewater to escape from manholes or other openings resulting in a discharge of raw wastewater into the environment

What should I do to prepare?

Smoke should only enter your premises if the p-traps in your home are dry or defective, or if you have any uncapped or broken drainpipes. A p-trap is a u-shaped bend in the waste pipe of sinks and drains that connects these fixtures to the household sewer lines. Normally, p-traps always contain some water; however, if the fixture is unused for long periods of time, that water may evaporate. The most critical task of the p-trap is to prevent noxious gases such as methane from making their way into a home. The following diagram shows how a p-trap functions:



To prepare for the smoke testing, fill seldom used drains (such as floor drains, garage sinks, etc.) with water. Simply run the faucet for 30 to 60 seconds or pour about four (4) litres of water down the drain. This will ensure that p-trap is full of water and functioning as it's supposed to.

If you miss a drain and smoke starts entering your home, simply pour 4 litres of water down that drain to seal it and then open a window to vent the room. If smoke does enter your home and it's not

due to a dry p-trap, you should consult a licensed plumber. If smoke from the smoke testing can enter through faulty plumbing, so too can potentially dangerous sewer gases also enter your home.

Is the smoke safe?

YES. If you detect smoke in your home or on your premises, **PLEASE DO NOT BE ALARMED.** The smoke used during this process is simulated smoke that is **NONTOXIC, NON-STAINING AND IS SAFE FOR PLANTS AND ANIMALS.** It will dissipate quickly and will not leave a residue. Open a door or window for ventilation and call one of the numbers listed in your notification letter to report the smoke.

What does smoke testing look like?

On the following two pages are some examples of smoke testing results. Note the captions at the bottom of each photo for a description of the issue.



Smoke escaping from an inspection chamber (clean out) with a missing lid.



Smoke escaping from a manhole lid in an easement (sewer right of way)



Two leaking joints on the sewer lateral (red line) leading to the house.



Smoke escaping from a sewer vent (stack) on the roof of a home.