

Why Do I Have Sewer Smells In My Home or Business?

Many of the homes and businesses in BASA's service do not have outside vents and traps. This is one of the most efficient and effective ways to eliminate Public Sewer odors from entering the building. The installation of a building trap on the exterior of the building will greatly reduce or eliminate odors from getting into the building. In addition, the need to worry about "dry" traps as a cause of odors would be greatly reduced, because each time a toilet is flushed, a sink or tub is drained, a dishwasher runs, or a shower is used, the water in the bowl of the exterior trap would be replenished allowing the trap to function as intended.

So why may you be getting smells through your drain pipe, let's first take a look at how your plumbing is supposed to work. Properly constructed and maintained plumbing will prevent sewer smells from entering your pipes.

How Your Plumbing is Supposed to Work

What comes in must go out, and about half of the interior plumbing is about getting rid of waste. The sewage plumbing system inside your home or any building consists of a network of pipes, vents and traps. These are the least visible and least glamorous elements of your home's plumbing. But this system of pipes that carry off liquid and solid wastes is just as important as the incoming domestic water system. Each plumbing fixture (toilet, sink, shower, floor drain, etc.) is connected to the sewage system of pipes that carry the wastewater to the Public Sewer. In the BASA service area the private sewer system stretches from the road right-of-way or inspection tee located in the sidewalk to the house or business. This system safely removes waste from your home or business for treatment by BASA. This system also provides a critical barrier that keeps sewer odors in the Public Sewer system from entering into your home or business.

How Vents and Traps Work

At first glance, drains seem to work even without traps and vents. Plenty of do-it yourselfers leave out these key components, without understanding their importance. However, the traps and vents provide a several key functions:

1. Traps hold enough water to form an airlock against sewer odors.
2. The trap attached to each fixture, when properly vented, provides a liquid seal that prevents sewer odors from entering the building.
3. Vents allow sewer odors to flow up the piping and exit the system through an open pipe on the roof, without coming into your home through plumbing fixtures.
4. Vents equalize pressure to aid drainage and allow sewer odors to escape to the outer air.
5. The vent system also allows outside air into the drain system to keep vacuums from forming in the drains. Think of vents as upside-down drains with odors rising in the pipes in the same way that the water flows down them.

6. Without venting, high pressure in the drains may force sewer odor out through traps and toilets. At which time, you'll probably hear gurgling and bubbling in the fixtures, and you may also smell the vile bacteria odor mixed with sewer odor.
7. Without proper venting, lower pressure in the drains may cause siphoning in the traps whenever you drain fixtures.
8. If the traps are dry, sewer odor from your plumbing system or the Public System may vent directly into the house.

I Do Get Sewer Smells, What Do I Do Now?

There are a variety of reasons that sewer smells may be entering a home or business. These include:

1. The most common reason is the lack of required traps or vents. Every fixture should have a trap and a vent pipe to keep smells from entering the home. If traps and vent pipes are missing, you may need the help of a plumber to install them.
2. A frequent cause for inside odors is a dry trap. Pouring a quart of water into all sinks, showers/tubs and floor drains may correct this problem. All drains to a sewer system should have a "P" shaped trap that is usually filled with water. The trap provides a seal to keep out sewer odor. If your basement floor drain is rarely used, water evaporates from the trap over time. Eventually the seal is eliminated, allowing sewer odor (and smell) into your house. The solution is easy: pour water into the drain.
3. If you have an old "house trap" in your basement the trap may be cracked or broken allowing smells to seep through the cracks and into your home.
4. There may be a small leak in one of the vent lines of the plumbing system, or a small leak around the base of a toilet or other fixture. You may need the help of a plumber to check for loose fittings, corrosion, or holes in vent piping.
5. The top side of horizontal drain pipes may be rusted, while it may never leak liquid, it will leak sewer odor. Drain lines made of copper, steel or cast iron may all exhibit this problem. You may need a plumber to perform an internal inspection of the pipes to detect this problem.
6. If you have older cast iron piping, you may be getting smells through cracks in your pipes. This type of piping has a habit of forming a crack along the topside of the pipe over time, and this could be where your smell is coming from. You may need to inspect every inch of piping for cracks or openings where the smell is coming from, and then make the repair from there. If an entire length of pipe is cracked (quite common), you should replace it using PVC drain pipe of the same size.
7. In addition to allowing smells to seep through the cracks, these cracks may also allow the raw sewage to escape from the piping system over time, saturating and contaminating the soil under the basement flooring, causing a continuous source of odor.
8. Another cause for inside odors is a clogged vent. You may need the help of a plumber or a handyman to disconnect the vent pipes inside your home and clean your vents all the way through the roof.

Typical Sewer Lateral with vent trap

