

## **Top 10 Terms to Understanding Your Sewer System**

1. **"SEWAGE" or "WASTEWATER."** This is the "used" water that contains human wastes from toilets and water from other sources such as sinks, showers, washing machines, etc. In addition to being odorous, sewage can contain large amounts of germs that cause disease. The term "wastewater" is often used in place of "sewage" to make things sound more pleasant when discussing this unpleasant subject.
2. **"SANITARY SEWER SYSTEM,"** also known as **"WASTEWATER COLLECTION SYSTEM,"** or **"SEWERS."** These are pipes through which sewage is carried from homes and businesses to a treatment plant. The sanitary sewer system includes the main sewer lines in the streets and the branch lines to individual sewer customers called "sewer laterals."

Sewer systems are generally designed to flow by gravity through sloped pipes until it reaches either the treatment plant or a sewage pumping station (which pumps the sewage up to another higher sewer or a treatment plant).

Although sewage is very unsanitary, the term "sanitary sewer" is used because the sewer pipes are separate from the pipes used for storm water drainage. This helps protect public health and the environment. In some older cities, sewage and rainwater flow through the same pipes. This can cause major environmental and public health problems because untreated or partially treated-sewage is discharged into streams, rivers and other water bodies during heavy rain.

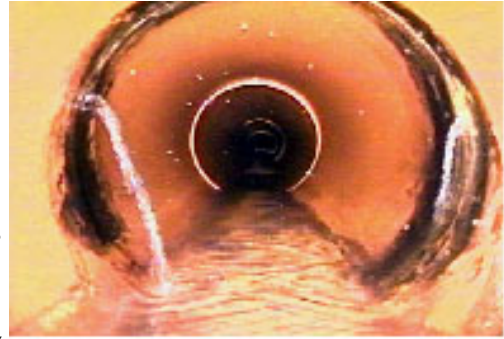
3. **"SEWER LATERAL."** This is the sewer pipe that connects a building's plumbing system to the main sewer line in the street. Maintenance of sewer lateral pipes located within private property is generally the responsibility of the property owner. Sewer laterals are also called "service laterals," "house laterals," or simply "laterals."
4. **"SEWER CLEANOUT."** This is a pipe rising from the sewer lateral to the ground surface with a removable cap or plug. It is used to access the sewer lateral to free blockages. A sewer cleanout is usually located just inside the property line. There may be additional sewer cleanouts at various other locations in your property.



**Typical sewer cleanout with properly installed plug.**

5. **"WASTEWATER TREATMENT PLANT" or "WASTEWATER RECLAMATION FACILITY".** These are facilities where organic matter, bacteria, viruses and solids are removed from sewage through physical, biological and chemical

processes. The treated wastewater (called effluent) may be disposed of by discharging it to water bodies (mainly the Trinity River in North Texas), injecting it into the ground, or reusing it for irrigation or other beneficial non-potable (non-drinking) uses.



**Water infiltrating into a sewer line.**

6. **"INFILTRATION."** This refers to groundwater (water found below the ground surface) that enters sewer pipes through cracks, pipe joints, and other system leaks. Because sewers in coastal areas are typically buried deep, they are often located below the water table. Since most sewer lines do not flow full (under pressure), groundwater "infiltrating" into the sewer line is actually more of a problem than sewage leaking out of the line. Storm events can raise groundwater levels and increase infiltration of groundwater into sewer pipes. The highest infiltration flows are observed during or right after heavy rain. Too much infiltration will overload the sewers and cause spills!

7. **"INFLOW."** This is rainwater that enters the sewer system from sources such as yard and patio drains, roof gutter downspouts, uncapped cleanouts, pond or pool overflow drains, footing drains, cross-connections with storm drains, and even holes in manhole covers. Inflow is greatest during heavy rainfall and like infiltration, can cause excessive flows and sewage spills.

8. **"PATHOGENS."** These are harmful germs in raw sewage that cause diseases such as cholera, dysentery, hepatitis and gastroenteritis.



9. **"MANHOLES."** Sewer manholes are underground structures used to provide access to underground sewer lines and are usually found in a street, parking area or sidewalk. Access is required to periodically inspect and clean the lines. Sewer manholes typically have heavy round covers with the words "Sanitary Sewer" on the cover.

10. **"SANITARY SEWER OVERFLOW."** Sewage spills are technically called "sanitary sewer overflows" since it involves the overflow of sewage from the sanitary sewer system. The word "sanitary" is used only because the overflow is from the sanitary sewer system, and not because the raw sewage is sanitary! For simplicity, we will use the terms "SSOs" or "sewage spill" or "sewage overflow."



Sewage overflows often occur from sewer manholes in the streets. Sewage can also

backup into homes through your toilets, showers and floor drains. Sewage spills are caused by sewage filling the sewer pipes behind the clog to the point where it spills out of an opening in the system (generally the lowest manhole, shower drain or other plumbing fixture).