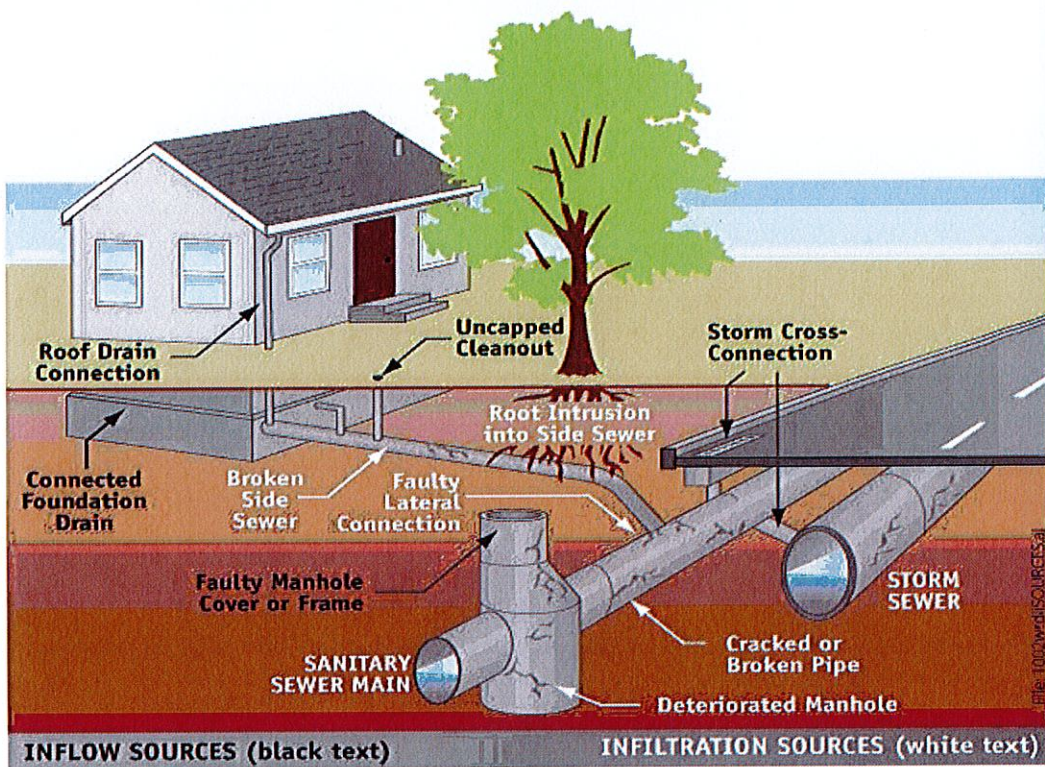


The Issues Of Inflow And Infiltration



WHAT IS INFLOW AND INFILTRATION?

Inflow and Infiltration (I&I) occurs when "clean" water (i.e. groundwater, surface water, stormwater, etc.) enters the wastewater collection system through aging infrastructure, illegal connections, etc. requiring treatment at the Wastewater Treatment Plant (WWTP).

WHY IS IT IMPORTANT?

By controlling Inflow & Infiltration, and eliminating illegal connections, we can improve operating procedures, potentially reducing operating maintenance, and capital expenses.

HOW CAN YOU HELP?

Homeowners are responsible for maintaining their building sewers on their private property. You, as a homeowner, can reduce I&I from your property. Continue reading to learn how you can help!

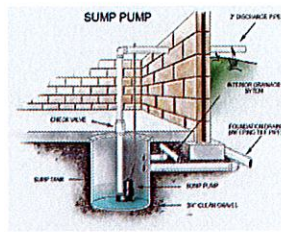
What is Inflow?

Additional unwanted water can enter sanitary sewer systems from above-ground sources. During storms or snow thaws, for example, large volumes of water may flow into systems through leaky manhole covers or combined stormwater/wastewater connections. In addition, private residences may have roof, cellar, yard, area, or foundation drains inappropriately connected to sanitary sewers. Any extra water flowing into wastewater collection systems from above ground sources, either intentionally or unintentionally is referred to as inflow.

What is Infiltration?

Infiltration is groundwater, or groundwater that is influenced by surface or sea water, that enters sewer pipes (interceptors, collectors, manholes (MH), or side sewers) through holes, breaks, joint failures, connection failures and other openings. Infiltration quantities often exhibit seasonal variation in response to groundwater levels.

ARE YOU PROPERLY CONNECTED?



A sump pump is a pump used to prevent flooding in your basement by removing groundwater from around the foundation. Once the sump pit fills to a predetermined level, the pump will come on and discharge the excess water. Where your house is located and the type of soil will determine how often your sump pump is running. Under no circumstances shall sump pumps be connected to your sanitary sewer service.

Correct Way to place sump pump and rain leader hose



Place the hose so that the water from your sump pump / roof leader drains: away from your house, preferably onto a grassy area or non-paved surface and is absorbed on your property. Tips: • Use water from the sump / roof to water grass and trees on your property. Move the hose often to avoid over-watering in any one area.

Incorrect Way to place sump pump and rain leader hose



Do NOT place your hose so that water from your pump / roof leader drains: Onto neighbouring properties, Directly onto streets / sidewalk, or Into the sanitary sewer

Why is I&I a Problem?

Inflow is the biggest problem for wastewater treatment plants because during major rain events it quickly consumes pipe capacity needed for future growth. In more extreme rain events, inflow can cause sewage backups into homes and businesses. Inflow and infiltration reduce the ability of sanitary sewer systems and treatment facilities to transport and treat domestic and industrial wastewater. As a result, wastewater treatment processes can be disrupted and may allow poorly treated wastewater to be discharged to the environment.

What is an illegal connection?

An illegal connection is a connection that permits extraneous storm related water or any clear water (water from sources other than sanitary fixtures) to enter the sanitary sewer system. The extraneous storm related water is water that should be going to the storm sewer or allowed to soak into the ground without entering the sanitary sewer.

Illegal connections include connections of roof downspouts, sump pumps, footing/foundation drains and basement drains to the house sanitary sewer lines. In addition, defective house sanitary sewer lines cause extraneous water to enter the sanitary sewers and thus they are also illegal connections.

How can I, as a homeowner, help reduce I&I?

- Check that gutters and outside drains are not connected to sanitary sewers.
- Avoid planting trees and shrubs over sewers. The roots can damage the structure of the sewer pipe and cause leaks.
- Keep caps on your cleanouts. Lawn mowers have a tendency to break the plastic caps. Replacement lids are available at your local hardware store.
- Ensure that basement drains and sump pumps are not connected to the sanitary sewer.
- Replace any known broken, leaky or problem sections of sewer pipe that are located on your property.

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