TREE ROOTS VS. SEWER LINES

Root Growth in Pipes

Roots require oxygen to grow; they do not grow in pipes that are full of water or where high ground water conditions prevail. Roots thrive in the warm, moist nutrient rich atmosphere above the water surface inside sanitary sewers. The flow of warm water inside the sanitary sewer service pipe causes water vapor to escape to the cold soil surrounding the pipe. Tree roots are attracted to the water vapor leaving the pipe and they follow the vapor trail to the source of the moisture, which are usually cracks or loose joints in the sewer pipe.

Upon reaching the crack or pipe joint, tree roots will penetrate the opening to reach the nutrients and moisture inside the pipe. This phenomenon continues in winter even though trees appear to be dormant.

Problems Caused by Roots Inside Sewers

Once inside the pipe, roots will continue to grow and if not disturbed, they will completely fill the pipe with multiple hair-like root masses at each point of entry. The root mass inside the pipe becomes matted with grease, tissue paper, and other debris discharged from the residence or business. Homeowners will notice the first signs of a slow flowing drainage system by hearing gurgling noises from toilet bowls and observing wet areas around floor drains after completing the laundry. A complete blockage will occur if no remedial action is taken to remove the roots/blockage.

As roots continue to grow, they expand and exert considerable pressure at the crack or joint where they entered the pipe. The force exerted by the root growth will break the pipe and may result in total collapse of the pipe. Severe root intrusion and pipes that are structurally damaged will require replacement.

Tree Roots in Sewers

Tree roots growing inside sewer pipes are generally the most expensive sewer maintenance item experienced by City residents. Roots from trees growing on private property and on parkways throughout the City are responsible for many of the sanitary sewer service backups and damaged sewer pipes.

Homeowners should be aware of the location of their sewer service and refrain from planting certain types of trees and hedges near sewer lines. The replacement cost of a sanitary sewer service line as a result of damage from tree roots may be very expensive.

Pipes Susceptible to Root Damage

Some pipe materials are more resistant to root intrusion than others. Clay tile pipe that was commonly installed by developers and private contractors until the late 1980s was easily penetrated and damaged by tree roots. Concrete pipe and PVC pipe may also allow root intrusions to a lesser extent than clay tile pipe.

PVC pipe is more resistant to root intrusion because it usually has fewer joints. The tightly fitting PVC joints are less likely to leak as a result of settlement of backfill around the pipe.

Root Spread
During drought conditions and in winter, tree roots travel long distances in search of moisture. As a general rule, tree roots will extend up to 2.5 times the height of the tree, and some species of trees may have roots extending five to seven times the height of the tree.

What should I do to control roots in my Lateral?
Once roots are in your lateral they will likely eventually because a blockage. The best way to prevent this is to schedule regular cleaning of your sewer lateral. The common method of removing roots from sanitary sewer service pipes involves the use of augers, root saws, and high-pressure flushers. It is also important to keep your sewer lateral structurally sound. Any structural fault can allow roots into your sewer lateral. You may wish to hire a sewer cleaning company to video your sewer lateral to determine its condition and if any repairs are needed. Check the yellow pages in the phone book or search the internet for contact information.