



City of Cleveland Memorandum
Department of Public Works
Division of Park Maintenance and Properties
Urban Forestry Section
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Treating Defective Sewer and Water Lines for Tree Roots

The City of Cleveland sometimes receives calls from distressed property owners who are experiencing sewer backups. Following a backup, property owners will discover roots in their sewers and place blame on street trees for their sewer problems.

Tree roots require water and oxygen to grow. They do not grow in pipes that are full of water, or where high groundwater conditions prevail. Roots naturally thrive in the warm, moist, nutrient rich soil well above sanitary sewers.

The flow of water inside a cracked or broken sewer service line causes water and oxygen to escape to the soil surrounding the pipe. Tree roots are attracted to the water and oxygen leaving a pipe, and they follow the trail to the source of the water and oxygen. Contrary to popular belief, it is a fact that **tree roots do not break water or sewer lines**. (Watson, et al. "The Management of Tree Root Systems in Urban and Suburban Settings II: A Review of Strategies to Mitigate Human Impacts" *Arboriculture & Urban Forestry* 40(5): Sept 2014: 249-271. Print.)

Much like gutters should be cleaned of debris to prevent gutter overflow, each homeowner is responsible for annual maintenance of their sewer laterals. This is the pipe that connects the sewer pipes in the house to the main sewer pipe, which is usually at the street. Because the pipes are buried and out of sight, homeowners usually don't have any clues to potential problems in their laterals until it is too late.

Should roots become a problem in your sewer line, consult the yellow pages under the heading, "Sewer Contractors," for companies that perform television inspections of pipes and offer root control options. The contractor can clear the roots out of the lines using an auger or similar boring instrument.

Other Options for Residents to Control Roots in Pipes

Snake sewer lines every 12-18 months to ensure proper flow. You can also use a foaming root killer. Follow the manufacturer's label instructions and use the appropriate amount for the application. Do not use rock salt or copper sulphate as it has been shown to be problematic in streams and sewers.

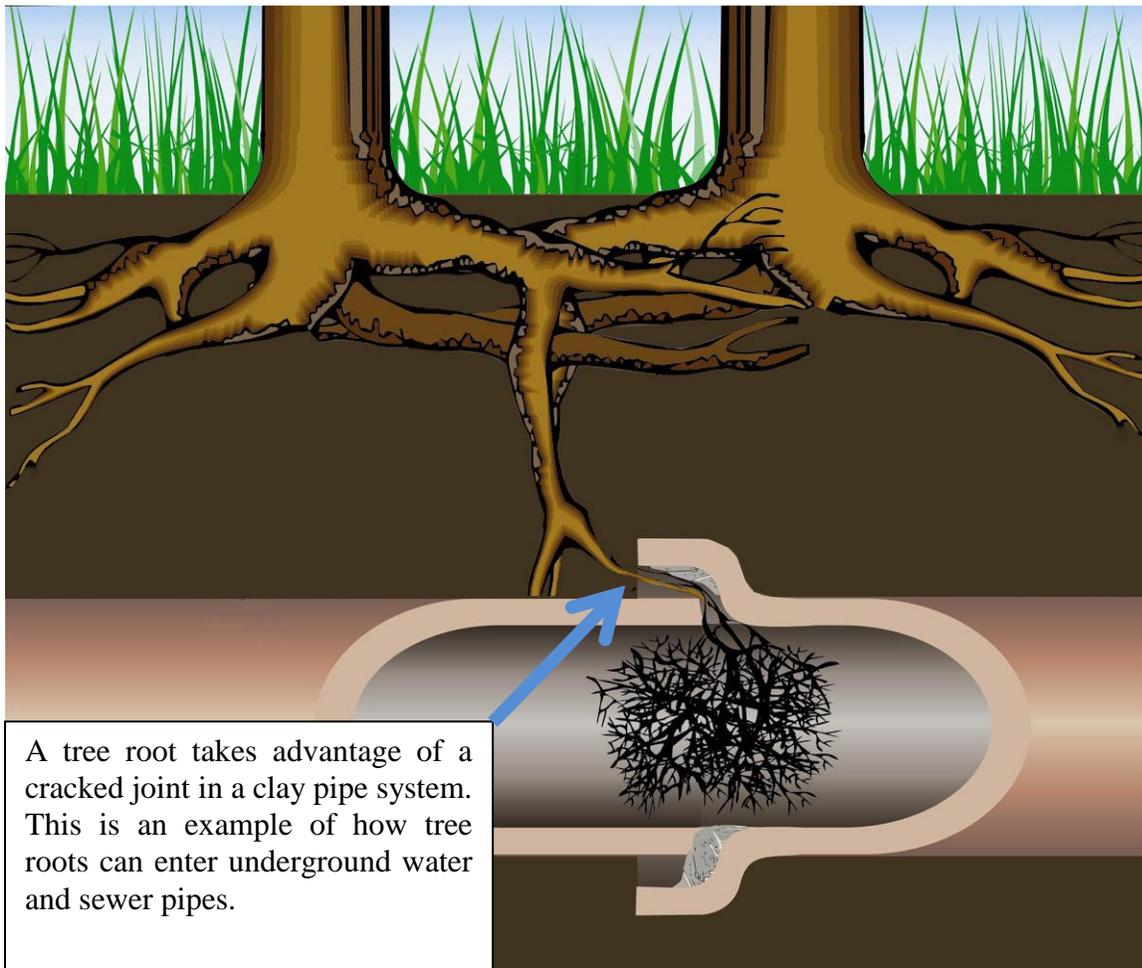
Sewer pipe replacement with PVC pipe will offer a more permanent solution to the problem. It is important to note that PVC pipe is only permissible for the connection from the structure to the City sewer, which includes Test tee riser to main sewer. The City sewer connection is always



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vitriified clay pipe per ordinance. Remember, removing the tree will not resolve the issue of cracked and broken pipes.

Tree Roots show no mercy and once they enter your sewer line you have a battle as a property owner. As time goes by the tree roots will begin spreading the joints allowing thicker tree roots to enter the sewer line. Start your preventative maintenance program and get foaming root killer working for you. Remember to follow the manufacturer's label for application rates.



A tree root takes advantage of a cracked joint in a clay pipe system. This is an example of how tree roots can enter underground water and sewer pipes.