

Trees and Sewers

The City of La Puente often 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. However, tree roots only invade sewer lines that have **already broken** due to earth settlement, dried joints or age, and leak sewage into the ground. Adjacent roots from trees or shrubbery, which need moisture and nutrients, soon invade the surrounding area. Roots enter the defective pipe and eventually block the flow. Contrary to popular belief, it is a fact that tree roots do not break water or sewer lines.

Why do tree roots seldom invade water lines? Water lines are commonly made of cast iron that is screwed together and designed not to break or leak. Sewer lines, on the other hand, are usually model clay tiles glued together. Clay is fragile and eventually will crack due to soil settlement, past construction activities, or earth tremors. When this happens, tree roots may enter the line.

If you suspect that a city tree or shrubbery roots are invading your broken sewer line, call the City of La Puente at (626) 855-1567 to obtain instructions on how to proceed.

As a preventive but **temporary** measure, the City of La Puente can install “RootX,” a chemical that will safely dissolve tree debris from your sewer line, can be installed every 12 months free of cost. However, roots will continue to enter the broken sewer lines and cause further damage until the sewer lines are repaired. It is the responsibility of the homeowner to repair the lateral sewer line (line leading from the home to the middle of the public street); the City of La Puente is responsible in repairing a sewer line when the breakage is located in the main line (the line in the middle of a street).

It is recommended that residents do the following:

1. Contact a licensed plumber and have the sewer line cleared. Please save your receipts.
2. Call our Department **WITHIN ONE HOUR OR SIX (6) WEEKS AFTER** clearing the sewer line is cleared so that our staff can install the Root X.

Please note that the best time to install Root X is within one hour from the time that the sewer line is cleared because after this, the tree automatically covers the new cutting with sap and this prevents the chemical from dissolving its bulk. The next best period of time is after six weeks when the new growth occurs.

3. You **CANNOT** run any type of water on the premises including flushing any toilet, and/or running water down any sink, or do any laundry for 4 to 6 hours after the Root X is installed.

Tree Related Sewer Problems May be Avoided

Tree roots growing inside sewer pipes may be the most expensive sewer maintenance problem experienced by homeowners. Sewer problems may be avoided if homeowners take some precautions.

- Know where your sewer line is located
- Do not plant trees or any deep rooted vegetation within 15 feet of sewer line
- Install a sewer clean out if you do not have one in the front of your residence
- Put grease and food scraps into the trash for disposal

- Use baskets or strainers in the sink drain to catch food scraps then dispose of it in the trash
- Be cautious of chemicals and additives that claim to dissolve grease. Some additives simply pass grease down pipes where it can clog sewer lines in another area.

Myths about Tree Root Damage

1. Tree roots break sewer lines. **False**

Roots grow best through soil when following favorable conditions of moisture, texture and oxygen are present. Under these conditions, most roots are found in the top 24 inches of soil, well away from sewer lines. A few, however, may grow deeply enough to be near a properly buried sewer line. Even so, nothing happens until the sewer pipe breaks or its joints leak, oozing nutrients and water into the surrounding soil. Nearby roots then begin to thrive and grow rapidly. They can enter the defective pipe and eventually block the flow of its sewerage.

As proof of this, consider the fact that tree roots are rarely associated with water line problems, even though new trees need water. The reason is because water lines are commonly made of cast iron, screwed together and designed not to break or leak. Sewer lines, on the other hand, are usually made of clay tiles that are glued together. Glue dries and sometimes separates, and clay is fragile and eventually cracks due to soil settlement or earth tremors. When these things happen, tree roots may enter the line.

2. Tree wound paint is necessary. **False**

Wound dressings are no longer recommended. In fact, studies have shown they cause more harm than leaving cuts unpainted. First, if fungus or bacteria gets to the cut before the paint, it gets sealed in, allowing it to incubate and take hold. Second, wound dressing disrupts the tree's natural mechanism for sealing off the wound, which leads to a condition known as "ram's horn," which weakens the structure of the branch and often leads to failure of the branch years down the road.

3. Trees need to be topped for fear they will get too big. **False**

Problems caused by topping:

- New growth is weak. At best, the wood of a new limb that sprouts after a larger limb is cut is more weakly attached than a limb that develops more normally. If rot exists or develops at the severed end of the limb, the weight of the sprout makes a bad situation even worse.
- Rapid new growth. The goal of topping is usually to control the height and spread of a tree. Actually, it has just the opposite effect. The resulting sprouts are far more numerous than the normal new growth and they elongate so rapidly that the tree returns to its original height in a very short time.
- Insects and disease. The large stubs of a topped tree have a difficult time forming a callus. The terminal location of these cuts, as well as their large diameter, prevent the tree's chemically based natural defense system from doing its job. The stubs are highly vulnerable to insect invasion and the spores of decay fungi.
- Sunscald can occur. Bark tissues suddenly exposed to full sun may be burned and develop into disease cankers.

- Starvation. Good pruning practices rarely remove more than 1/3 of the crown, which does not seriously interfere with the ability of a tree's leafy crown to manufacture food. Topping removes so much of the crown that it upsets an older tree's well-developed crown to root ratio and temporarily cuts off its food making ability.



3. There is no such thing as too much mulch. False

Mulch is definitely a good thing. It helps reduce competing weeds, it helps retain the moisture in the soil and protects the tree trunk from lawnmower and string trimmer damage. However, too much mulch can suffocate tree roots. Mulch that is piled up against the tree trunk will keep the tree trunk moist and allow for insects and disease to enter into the bark. When a tree has been properly mulched, the mulch is no deeper

than three to four inches and is pulled away from the trunk of the tree.

4. Most trees do not have a taproot; they tend to be more shallow-rooted than you might think. True

Many people envision and were taught that a tree's root system is a mirror image of the tree's crown but underground. The reality is that tree roots spread where soil conditions allow access to soil's nutrients, moisture and oxygen. This results in 90 percent of the tree's roots being in the top 24 inches of soil.

5. If there is a hole in your tree, you should fill it up with cement. False

Filling of hollow trees, a process called "cavity filling," was practiced by arborists for many years. Thanks to modern research, it has been discovered that cavity filling is not needed to support or improve the health of hollow trees.

Tree experts have found that cavity filling with cement can actually damage a hollow tree. According to Bob Rouse, Staff Arborist at the National Arborist Association, "The column of cement created in the tree by a cavity fill doesn't move, just like a column on a building, but the tree is always moving. It sways with the wind constantly. The rubbing created by the swaying tree and the solid column of cement further damages the tree."

Decay organisms, such as rot fungi, that created the hollow in the first place are able to take advantage of the new injuries created by the rubbing and invade the healthy tissue of the tree. Rouse adds, "If that wasn't bad enough, the cement holds moisture, creating a favorable environment in the filled cavity for the decay organisms!" Tree experts explain that it is much the same as when carpenters place a vapor barrier between a house's foundation and the wooden sills. If they put the sills directly on the concrete foundation, the wood will rot rapidly. If you place cement in a tree cavity, it will speed the wood decay! If cavity filling is desired for aesthetic reasons, there are some new synthetic foams that can be sprayed into the cavity by professional arborists. These materials will bend with the swaying tree, but Rouse



warns, "There is really no reason to fill a cavity; it doesn't improve the tree's health and doesn't offer any added support. If structural support of a tree is required, a professional arborist will recommend cables, braces, or tree guys, not cavity filling." Source: National Arborist Association

6. Fertilizer is tree food. Partially True

This is a half truth where the wrong half has become the accepted part. Fertilizers provide elements that are essential for growth. Fertilizers do **not** provide an energy source for trees and other plants. A food is any substance that provides the essentials for life; an adequate source of elements that are essential, but do not provide energy, and other types of elements that do provide energy (carbohydrates). Unlike animals, trees are able to trap the energy of the sun in a molecule called glucose. **This** is the essential energy source for the tree.

Source: Dr. Alex L. Shigo, Twelve Tree Myths

7. Trees can save energy. True

According to researchers, tree planting is the most cost-effective way to conserve energy resources in both winter and summer. In winter, properly placed trees can help reduce heating costs by serving as windbreaks, conserving between 10 and 50 percent of the energy needed for heating a home. In summer, shade trees on the south and west sides of a house can reduce air conditioning costs by as much as 30 percent.

8. It is OK to have vines growing up your tree. False

Vines can cause damage in several ways. Vines compete with trees for water and sunlight. Many vines send out runners into the soil to seek available water. When vines grow atop a tree, they cause shade, which may suppress photosynthesis, weakening and killing the tree. The weight of a vine can cause twigs and branches to twist and break, deforming the tree's shape. This affects the tree's wind resistance. Vine-covered branches are in the greatest danger of snapping off in strong winds or heavy snows.

It is also important to note that when the trunk of a tree has been completely covered by a vine, it is impossible to see what is happening to the trunk of the tree. Problems could be occurring on the obscured trunk of the tree. Grapevine, Japanese honeysuckle, and kudzu are the most destructive vines to North American trees; however, English Ivy, Wisteria and other vines can cause just as much damage.

You can kill vines by cutting their stems at the ground. Be careful not to cut into the tree. Sever the vine completely. The top of the vine will then die and eventually fall apart. Wait until the vine is dead before pulling it off the tree. Pulling live vines off of trees could cause bark damage.

If you have any questions or concerns you may contact the CITY OF LA PUENTE, MAINTENANCE DEPARTMENT at (626) 855-1567.