



Street Tree Care



City of St. Louis Forestry Division Informational Bulletin

Become A Street Tree's Best Friend

The City of St. Louis is home to a population of approximately 80,000 street trees. Some of these 80,000 trees are aging and have declining health that requires their removal. Therefore many homes and business cannot share the benefits that street trees provide. To sustain St. Louis's street tree population as aging trees are removed, and to offer the benefits of new street trees to homes and businesses the City of St. Louis Forestry Division plants 3000-5000 trees annually.

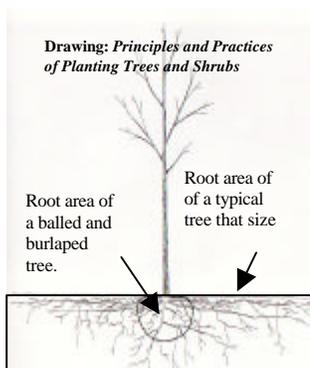
It is these newly planted street trees that need the assistance of property owners the most. Although property owners are not required to care for street trees, their assistance in providing some basic tree care can greatly increase the life of a street tree. The *Street Tree Care* informational bulletin was created to provide property owners with the necessary tree care information that can help them to become a street tree's best friend.

The care a property owner can provide for a street tree is not time consuming or expensive. Most activities involve no more effort than keeping street trees in mind while performing other activities such as turf maintenance around them. This handout provides information about general tree care activities, as well as, some specific care information for planting sites such as tree boxes.

Tree Care Activities For Newly Planted Trees

Watering

Proper watering is one of the most important tree care activities for a newly planted tree. Trees can lose as much as 70% of their roots when they are dug from the nursery. Roots are important because they absorb the water from the soil that a tree needs for survival and continuous growth. The drawing below depicts just how much of a tree's root system is lost when it is dug from the nursery as a balled and burlaped tree. Therefore, young trees are very susceptible to water stress during dry periods because their diminished root system cannot supply sufficient water to support the entire tree.



Drawing: Principles and Practices of Planting Trees and Shrubs

Water Stress Symptoms

Trees experiencing water stress will often show these symptoms:

- leaf scorch (leaves turn brown, starting first at the margins),
- leaf drop,
- early fall color and
- twig dieback.

The top of the tree often displays water stress symptoms first because it is the furthest from the roots.

A mature tree on a hot summer day can lose several hundred gallons of water due to the effects of transpiration.

Watering Tips

- Young and establishing trees need to be watered once every (7) days during dry periods. Trees do not need to be watered during the winter months when foliage is not present.
- Although watering recommendations may vary with conditions such as soil, these are some general guidelines to follow for meeting the water requirements of a young tree:

Approximately 1-1½ gallons (3.5-5.5 liters) of water per inch of tree diameter, trees planted by the Forestry Division are 2 ½" in diameter or;

If a garden hose is available, running the water at a trickle for 7-10 minutes at the base of tree.

- Be careful not to overwater, overwatering can kill a tree the same as not watering at all.

Need Something To Water A Tree With?

A five-gallon bucket is a handy watering tool. Fill the bucket ¾ of the way full (depicted in picture to right) when watering a newly planted tree. Make sure to use a safe bucket, as buckets that were used to store chemicals may have residues harmful to trees.



Infrequent and deep watering of a tree encourages a deeper root system as water penetrates deeper into the soil for root growth. Shallow and frequent watering encourages tree roots to grow closer to the soil surface where water is available. It is desirable to encourage deeper-rooted trees, as they are less likely to damage sidewalks, will be more stable in storms and will be more beneficial to the tree.

Avoiding Lawnmower Damage

In the United States lawnmower damage is one of the top ten killers of young trees. People become a tree's worst enemy when they bump and strike the trunk of a tree with lawn maintenance equipment. Lawnmower damage stresses a tree, reduces vigor and invites insects and other problems. Fortunately, lawnmower damage is a 100% preventable problem if one follows a few prevention guidelines.



Picture: Principles and Practices of Planting Trees and Shrubs



Help **Stop** Lawnmower Damage
Remember these prevention guidelines:

Place mulch around a tree trunk to create a turf free zone. Respect the "no zone", a 6" imaginary circle around the trunk of the tree where turf maintenance equipment should never enter. Turf and weeds inside the no zone should be removed by hand. Place a trunk guard on the tree. Be careful when operating turf maintenance equipment around trees.

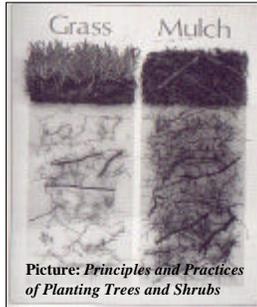
Mulching

Mulching is one of the most beneficial things you can do for any tree, not just a young one. Mulch adds organic matter and nutrients to the soil as it decomposes. In nutrient poor urban soils, this is a much needed benefit. Mulch also helps a tree to conserve water during the summer, eliminates turf competition for nutrients and water, and keeps lawnmowers away. The Forestry Division mulches all newly planted trees when they are planted. The property owner may want to provide additional mulch 2-3 years after a street tree is planted as the original mulch decomposes.

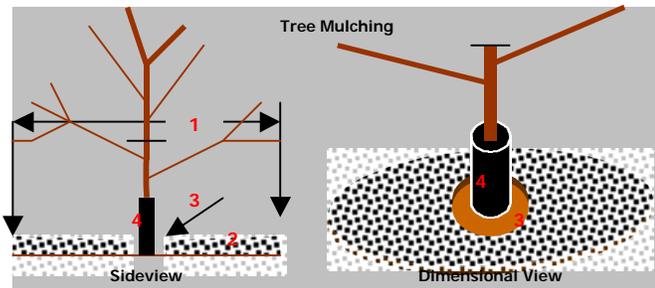
Mulching Your Trees

Keyed To *Tree Mulching Drawings*

- Wood chips make excellent mulch. St. Louis residents can obtain wood chips free of charge at several sites around the city. Please call the Compost Section of the Forestry Division at 868-1612 or 613-7200 for a location near you.
- Mulch should be placed out to the dripline of the tree (#1)
- Mulch should be placed 3-5" deep (#2) to discourage the growth of weeds and should form a bowl around a tree. This bowl encourages water to drain towards the tree.
- Do not place mulch around the trunk of a tree as this encourages rot from decay fungi and other problems. Try to leave a 3-5" (#3) mulch free ring around the trunk of a tree.
- A 10" tall black plastic drain tile (#4) makes an excellent trunk guard and helps protect the tree.



The picture above depicts tree root growth under grass and tree root growth under mulch. Root growth is much greater and denser when a tree does not have to compete for water and nutrients with turf.



Pruning

The Forestry Division conducts a District Trim Program where all street trees are pruned on a regular cycle. A property owner should not have to prune a street tree. If you observe a street tree in need of pruning please call the number to the right.

The three most important things you can provide for a newly planted tree are:

- (1) water,
- (2) mulch and
- (3) lawnmower protection.

Tree Don'ts

The care a property owner can provide for a street tree can be as important as the activities they don't perform.

Avoid striking tree trunks with lawnmowers.

Do not apply fertilizers to street trees. Fertilizer can have a harmful effect on newly planted trees. Fertilizers are not tree food.

Do not apply harmful de-icing chemicals to sidewalks and driveways (see below) adjacent to street trees.

Do not stake newly planted trees. Studies have shown that staking is not beneficial to a tree and should only be used in instances where a tree cannot stand upright w/out support.

Do not remove or prune street trees. The Forestry Division performs these activities. Pruning and removal cannot be performed on street trees by an adjoining property owner without a permit, issued at the discretion of the Forestry Commissioner.

Do not attach signs and other objects to a street tree. City Code prohibits the attaching of such items to a tree.

Avoid damaging street trees during construction. City Code requires property owners to protect street trees when construction activities occurring on their property may damage them.

De-icing Chemicals

Sodium chloride (rock salt) is harmful to trees and plants because it is an environmental contaminate. Although public safety is top priority several alternatives exist to using harmful de-icing chemicals. If a property owner uses deicing chemicals we ask that they consider the following alternatives:

- * Use environmentally safe de-icing chemicals such as calcium magnesium acetate (CMA).
- * When clearing a small area use a shovel, snowblower or other non-chemical method.

\$ The High Price of Rock Salt \$

Rock salt is an effective and cheap de-icing chemical. Prices for rock salt range from \$25-\$75 per ton. It is difficult to argue the effectiveness of rock salt but there is a hidden cost to its use. A study based on the effects of road salt used in New York State, factoring in the damage to roads, vehicles, utilities and the environment, places the cost of rock salt at \$1450 a ton.

Source: *Tree City USA Bulletin #32*

Tree Care Considerations For Tree Box Trees

Tree boxes create a stressful environment for trees planted within them. A typical tree box is 4'x4' in size, a confined root growing area of 16 square feet. Therefore, trees planted in tree boxes need to be closely monitored for watering needs because they do not have an extensive root system, capable of supporting a tree's water needs during periods of dry weather. Grates are often placed over tree boxes. If you observe a tree growing near (2" or less) or into a grate please call the number below and report the problem so the grate can be removed.

Where To Call For Assistance

Please direct all calls for street tree service to the Citizens' Service Bureau. This department handles service requests and generates work orders for the Forestry Division.

622-4800

Don't Top Trees

The practice of "topping" is extremely harmful to trees. A lot of things can kill a tree please, don't be one them. Spread the word not to top trees. Trees everywhere are counting on you.



Francis Slay, Mayor

Prepared By:
The City of St. Louis
Department of Parks, Recreation and Forestry
Gary Bess, Director

City of St. Louis Forestry Division
Greg Hayes, Forestry Commissioner

Forestry Division
1415 N. 4th St.
St. Louis, MO. 63106



Text, Pictures (unless noted w/picture) and Layout By: *Jamie Frank* 10/2/2001



The City of St. Louis
is a designated Tree City USA
by the National Arbor Foundation.