

Best Management Practices for an Urban Forest

Trees have many advantages including shade, aesthetics, screening, windbreak, as well as adding to a land's overall property value. However, the right tree in the wrong location can be a nuisance and be costly to maintain. The following is a summary of recommended tree care practices for planting and maintaining a healthy tree.

Before Planting:

1. Determine the site limitations and obstructions that will limit a tree's growth such as buildings and structures, impervious surfaces, and overhead and underground utilities.
2. Select a tree that is compatible with the location's soil, light, water availability, and temperature.
3. Consider a tree's size at maturity to make sure that will have adequate room to grow.
 - a. When planting in close proximity to utility lines or within confined areas choose a smaller tree that is no greater than 20 feet in height at maturity.
 - b. When planting large trees that reach 40 to 60 feet in height at maturity place them at least 35 feet away from buildings and structures.

Planting a Tree:

Proper planting techniques may mean the difference between a healthy tree and one that dies. By following a few simple recommendations, you will give your tree the best possible start to life.

1. Dig a hole one or two inches less than the soil level in the container or the depth of the rootball, so that the tree is planted one to two inches higher than the surrounding soil. Be sure not to plant the tree too deep. It is better to leave a few roots exposed than to cover the trunk of the tree with soil. Improper planting may lead to less growth or crown rot and eventually death of the tree.
2. Dig holes at least two times wider than the container or rootball. For bare-root trees, make the hole wide enough to accommodate the roots without having to bend them.
3. Roughen the sides of the hole to make it easier for the roots to penetrate. Check for twisted, circling or kinked roots. Cut and remove roots that wrap around or are broken or discolored.
4. Refill the hole with the original soil. Soil amendments like peat moss, compost, rice hulls or fir bark are not necessary. Keep the top of the rootball free of soil. Water the tree thoroughly after planting to settle the soil around the roots.

Staking a Tree:

Not all trees require staking. Improper staking may even cause serious damage to a tree. An unstaked tree with its top moving in the wind will develop a better root system, have a greater trunk taper and

thickness and have less wind resistance than a properly staked tree. Young trees may require staking for a short time to hold it upright until a strong trunk develops.

When staking use two stakes, one on either side of the rootball, approximately 18 inches from the trunk. To find the tie placement, move your hands up the tree trunk until the tree remains upright – place ties at this location. Ties should be of flexible material to protect the tree trunk from damage. Remove stakes as soon as the tree will stand on its own. Most trees do not need to be staked more than a year.

Proper Watering:

Newly planted trees require regular, deep watering. Construct a basin slightly larger than the rootball around the tree. Fill the basin once a week during hot weather and less often if it is cool or rains. (Do not over water. Soil should be dry one-foot below the surface before watering.) In winter or during long rain events open one side of the basin or remove the basin entirely, so water does not stand around the tree. After the first six weeks, the roots will have grown into the surrounding soil and the tree will require less watering.

Proper Pruning Practices:

Proper pruning helps trees maintain balance and integrity and can prevent more serious problems years later. Trees respond best to pruning when they are young (two to six years old). Trees younger than two years old generally should not be pruned. Mature trees respond best to periodic pruning every five years to thin the canopy (not tree topping). For more substantial pruning, particularly if it cannot be done from the ground, seek the expertise of a certified arborist.

Directions for Pruning:

In Winter:

1. **Competing Leaders:** If more than one limb competes to be the main trunk, choose the straightest or largest and remove the competition.
2. **Lower Limb on the Trunk:** If the tree grew well in the summer, and the upper limbs shade the lower trunk, remove 2 or 3 of the lower limbs.
3. **Creating and parallel limbs:** Prune limbs that grow directly above each other or cross one another.

Anytime:

1. **Dead branches:** Remove dry, brittle branches just below the dead wood.
2. **Broken branches:** Clean cuts heal better than ragged tears.
3. **Water sprouts:** Remove branches growing straight up from limbs.
4. **Suckers:** Prune growth coming from the rootball

DO NOT:

1. Do not apply wound paint. It can seal diseases into the tree.
2. Do not top the canopy of the tree. This causes weaker limbs to grow back, which can cause damage to property and reduces the tree's life expectancy.