

Tree Talk



Summer 2009

A PARTNERSHIP WORKING TOWARD
SUSTAINABLE COMMUNITY FORESTS

Tree Safe Zones

Establishing Safe Zones

Community Canopy recommends a grass and weed-free safe zone be established for at least 18" from the trunks of trees. That would be a 36" diameter area for a newly planted tree. An outer barrier, such as plastic edging or cement curbing, could be used.

If there is already turf in this area, establish the safe zone by removing the grass and roots by hand. Alternatively, use a contact herbicide, such as Round-Up, to kill the grass, taking care not to get spray on the tree or tree roots.

A composted mulch layer will help reduce the germination and growth of weeds. It has many added benefits, such as maintaining soil moisture and improving soil fertility. Mulch should be at least 2, but no more than 4 inches deep, tapering to zero as it approaches the tree trunk.

Periodic maintenance will be needed. As in establishment, this can be done by hand or by use of an appropriate herbicide.



A "Safe Zone" is an area around a tree trunk in which grass and weeds are excluded in order to prevent damage to trees from the use of lawn equipment close to the tree trunk.

The point is to keep mowers and weed whips well away from tree trunks. Weed whips can cut through the bark and into the vascular layers that are essential to tree health and growth. The damage often extends all the way around the tree. Mowers are more likely to take a chunk out of the trunk. The damage does not extend all the way around the tree, but it can be much deeper. To appreciate the extent of damage that can be done in just a few seconds, an understanding of tree anatomy is helpful.

Cells are the basic building blocks of trees. New cells arise from the division of existing cells in specialized structures called *meristems*. Trees grow by elongation of shoots and roots, as well as by increasing in diameter. The meristem cells that contribute to diameter growth are the cambium and the cork cambium.

The *cork cambium* produces cells that become bark. The function of bark is to moderate the temperature inside the stem, reduce water loss, and provide defense against injury. Cutting the bark of the tree is removing the tree's first line of defense. Cutting the cork cambium, which lies behind the bark, can affect the tree's ability to replace the bark.

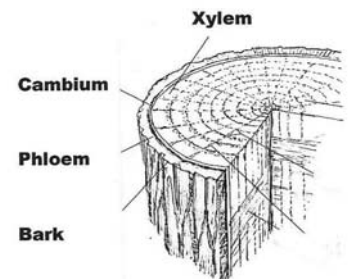


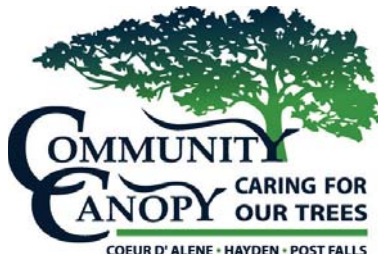
Illustration Source: Tree City USA Bulletin,
The National Arbor Day Foundation

The *cambium* is a thin, continuous sheet of dividing cells that produce the cells that become the vascular system of the tree. It produces phloem to the outside and xylem to the inside. The *phloem* transports sugars, produced in the leaves, to other parts of the plant for storage or use. This includes transport of sugars to the roots for use in root maintenance and growth.

The *xylem* is the wood of the tree. It has four functions: conduction of water and mineral elements from roots to leaves, support of the weight of the tree, storage of reserves, and defense against the spread of disease and decay. The growth rings visible in a cut stump are the result of the annual production of the xylem.

Therefore, cuts in the trunk that go beyond the bark and cork cambium will first disrupt the downward flow of sugars from the leaves, leaving the roots without needed resources for health and growth. A little further, and damage

(Continued on page 2)



Tree Care Web Links

Community Canopy: www.communitycanopy.org

International Society of Arboriculture: www.treesaregood.com

National Arbor Day Foundation: www.arborday.org

Contact Community Canopy at:

Coeur d'Alene 208/769-2266

Post Falls 208/292-2315

Hayden 208/772-4411

Spokane County Conservation

Dist.--509/535-7274

Web Page: www.communitycanopy.org

Write: c/o Urban Forestry, City of Cd'A

710 E. Mullan Avenue

Coeur d'Alene, ID 83814

Upcoming Events

Community Canopy Fall Workshops: Friday, November 13th

- Soils & Community Trees
- Tree Pruning

Set aside this date and look for more details in October !!

Safe Zones *(Continued from page 1)*



occurs to the cambium, the very cells on which the tree is dependent for producing more phloem and xylem. A little further, and the flow of water and minerals from the roots to the leaves is disrupted. Damage to the xylem will also affect tree support, storage ability, and defense against the spread of disease and decay.

The total effect of damage to a tree by turf maintenance equipment also depends on the width and depth of the damage, as well as the size of the tree. Taking a half inch deep chunk out of a mature pine tree will probably not go beyond the bark, but the same chunk out of a newly-planted tree can extend well past the xylem. Weed whipping all the way around a young tree, cutting in only a small fraction of an inch, can fully disrupt the phloem, cutting off sugars needed for root growth. This will in turn limit the amount of water and nutrients the root system can take up, which will limit top growth. The result is a tree that is barely hanging on, one that dies, or one that may fall over.

“Better to be safe than sorry” is definitely true in this case. Provide a safe zone for all of your trees and prevent one second of “oops” from wiping out a sizeable investment of money and time.

Water, Water, Water

It is important to provide new trees with water, especially in dry, hot weather. Measure the trunk diameter at 6” above ground level. Provide a minimum of 5 gallons of water per inch diameter each week to the root area of new trees. Adjust the amount for weather and soil type. Don't depend on shallow watering for turf. Water slowly and deeply by:

- Installing drip irrigation, or 
- Using a soaker hose, or 
- Placing and filling a 5 gallon bucket, with very small drip holes in bottom, over root area.

But don't over water either! To determine if trees are getting enough water, and how deep it is going, purchase an inexpensive water meter at your home and garden store.



Planting ground covers or mulched shrub beds around trees can protect them from turf care equipment as well as conserve water.

Available Resources

The following are a few of the resources that Community Canopy has for providing information about tree care. Contact us about these by calling 208/415-0415 or any of the contacts listed above.

“**Helping Trees Thrive**” tree care sheet outlines three critical tree care practices for successfully establishing new trees: planting correctly, providing adequate water, and protecting trees from turf equipment damage. These tree care basics, in simple terms with illustrations, are useful for giving to homeowners who have new trees.

Tree Planting DVD: This 12 minute DVD highlights good tree planting practices for container trees. It can be played on a regular DVD/TV set-up, or on a computer that has DVD capability.

Tree Planting Details: These are the tree planting standards for the Cities of Coeur d'Alene, Hayden, and Post Falls, as well as the Spokane County Conservation District. They cover bare root, container, and B&B trees. They are available on the Community Canopy web site or we can provide you with hard copies. CAD file format is also available.