

Tree Pruning

Introduction

This pruning guide is designed for beginning tree pruners and is written for the Puget Sound region of the Pacific Northwest (United States). Please use this to help you and your friends and neighbors understand correct pruning techniques. This guide is written in English, and is being translated into other languages, and was made possible by funding from the USDA Forest Service and the King County Department of Natural Resources.

Depending upon where you live, you may be required to get a permit for tree pruning and removal. These requirements vary from city to city, borough, county, state, and country. Please consult your local agriculture or forestry bureau for more information.

The City of Seattle requires a permit for removal of street trees or to hire a professional to prune. Permits are also required for pruning and removal of trees in critical areas (wetlands or steep slopes). For information, telephone **206.684.5008** or go to: <http://www.seattle.gov/transportation/forestry.htm>

Guidelines for When to Prune

- * Prune to remove broken branches or to get street and sidewalk clearance anytime.
- * Prune fruit trees when they are in winter dormancy before the buds swell or, in the summer.
- * Prune willow and poplar trees late in the summer.
- * Prune elm trees in the Pacific Northwest only between October 15th and April 15th (while leaves are off the tree) to minimize damage from the elm leaf borer and Dutch Elm Disease.
- * Prune birch, beech and maple trees after a hard frost to lessen sap flow.

Why Prune Trees?

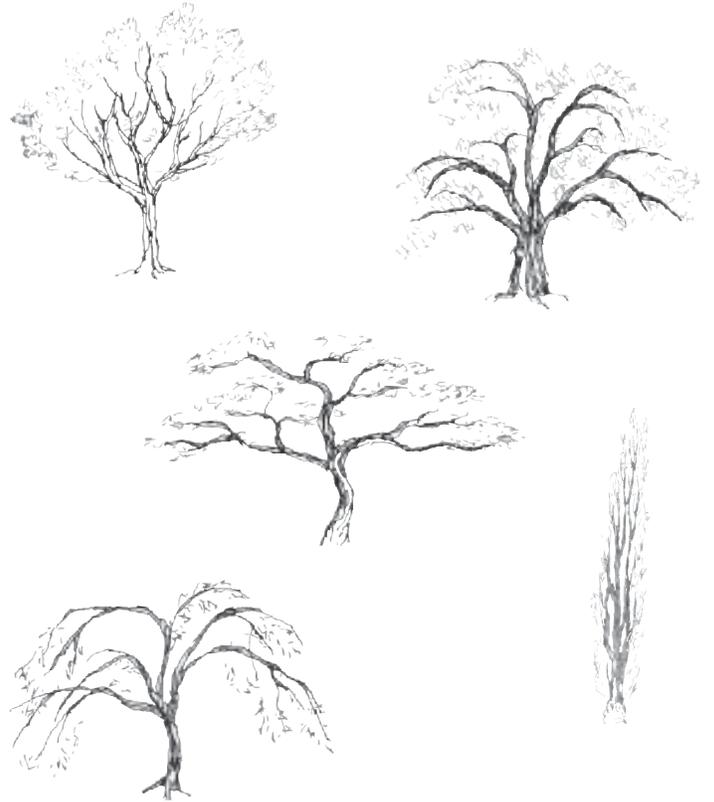
- * Prune to increase visibility and provide clearance for pedestrians and vehicles. In Seattle, street tree branches must provide 8 feet of clearance over the sidewalk and 14 feet above the street at the curb.
- * Prune to allow for light penetration or to frame a view.
- * Prune to remove broken, diseased, or dead branches and suckers from the roots or root collar.
- * Prune to direct growth and improve the structure in young trees.
- * To increase fruit production.

- * Prune trees to encourage and direct growth and accentuate a tree's beauty, not to inhibit growth.

By properly removing branches, we make sure that trees will mature to their natural shapes and preserve their natural beauty, vigor, and health. A little careful pruning early can protect your tree from branches breaking or becoming too crowded as the tree grows.

Most pruning involves removing a few lower branches and when done correctly, trees require less pruning as they mature. Good pruning never changes the shape of the tree.

Examples of the natural shape and form of trees

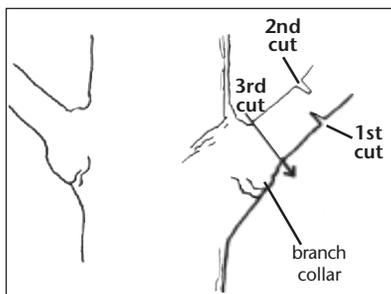


Natural Target Pruning - Learn Where and How to Make Pruning Cuts

By using the three step method when pruning, trees will respond by quickly closing over pruning cuts, remaining healthy, and looking nice. Branches are actually made from their own wood which is held onto the trunk by yearly wrappings of new growth. The branch collar is where the branch wood and the trunk wood meet. Making the pruning cut just outside this collar is important for tree health.

The angle of your pruning cut should expose the least amount of surface area. Use the three cut method to ensure that the bark does not tear as the branch falls away, causing a bigger injury to the trunk.

Three Cut Method for Removing Large Branches



Use the three cut method to remove branches larger than $\frac{3}{4}$ inch or 2 centimeters. On narrow angled branch attachments, you may have to cut entirely from the outside upwards.



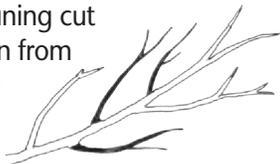
non selective heading cut results in lots of sprouts

Note: Head cuts are only used to change the direction of growth when a thinning cut will remove too much wood. Always cut above a bud facing the direction of the desired new growth.

Types of Pruning Cuts

Thinning Cuts

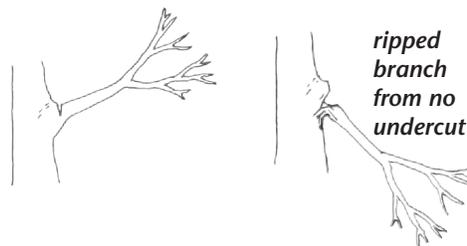
Thinning cuts are better for the health of a tree. Remove an entire branch by making a good pruning cut where the branch would have grown from a bud on another branch or the tree trunk. Thinning cuts are used to open or raise the tree canopy and can also be used to remove select branches to improve views.



Note: Thinning removes an entire branch back to another branch or to the trunk of the tree.

Good Tips to Avoid Bad Pruning

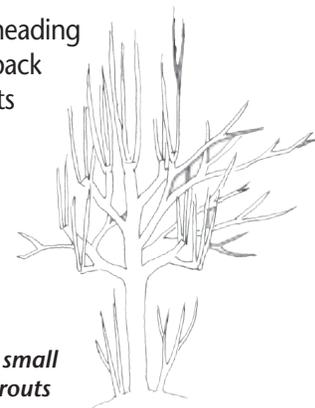
Use the 3 cut method to shorten branches before removal. This will prevent the branch from damaging the trunk as it falls to the ground, as shown in drawings below.



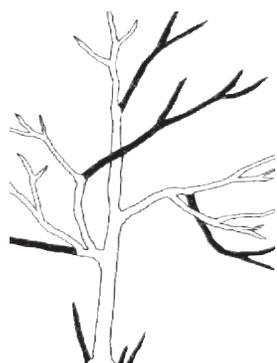
ripped branch from no undercut

Do Not Top Trees!

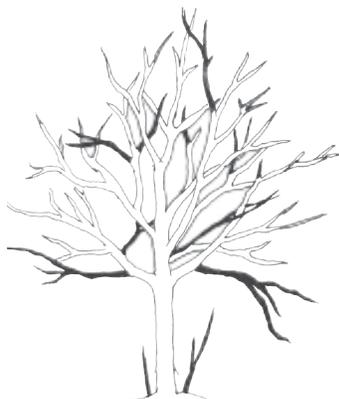
Topping cuts are a non selective heading cut that causes the branch to dieback or form weak, rapid, bushy sprouts that are unsightly. If these sprouts are allowed to grow, they can become unsafe from being so heavy and yet just attached to the outer bark.



regrowth of topped small tree with lots of sprouts



pruned small tree



pruned older tree

Note: Do not remove more than 25% of the canopy of the tree in one growing season or over a five year period otherwise you stimulate sprouts that grow quickly and are unhealthy and unsightly and could be unsafe.

Heading Cuts

Selective heading cuts are used to shorten the branch and change its direction of growth. Prune the branch just above a bud that points in the desired direction or to a side branch that is at least half the diameter of what you are removing.



selective heading cuts

Making a **non selective** heading cut removes a branch that leaves a stub and open end that can either take a long time to cover with bark or be a point of entry for disease. These cuts are hardest on a tree and usually result in a quick regrowth of lots of shoots.

*Trees give us so much
Please keep them healthy and safe!*

Reproduction encouraged! This Tree Pruning Guide was made possible by a grant from the King County Department of Natural Resources and Parks and funds from the USDA Forest Service and Washington Department of Natural Resources, with other assistance from the City of Seattle, awarded through the Natural Resource Stewardship Network. Assistance was also provided from PlantAmnesty, the University of Nevada Cooperative Extension, Forestry students at the University of Washington, and students in the Wilderness Inner-city Leadership Development program.

It is intended to help more people understand how to prune trees. If you have concerns with the translation, please email trees@seattle.gov or telephone 206.684.TREE.