



TREES AND VIEWS: TREE MANAGEMENT + PRUNING

Trees provide many benefits to us, to our neighbors, and to our communities both human and otherwise. Learn how to care for trees and enhance your views, limiting the need and cost for tree removal.

HEALTHY, MATURE TREES PROVIDE MANY HIDDEN SERVICES FOR YOUR PROPERTY:

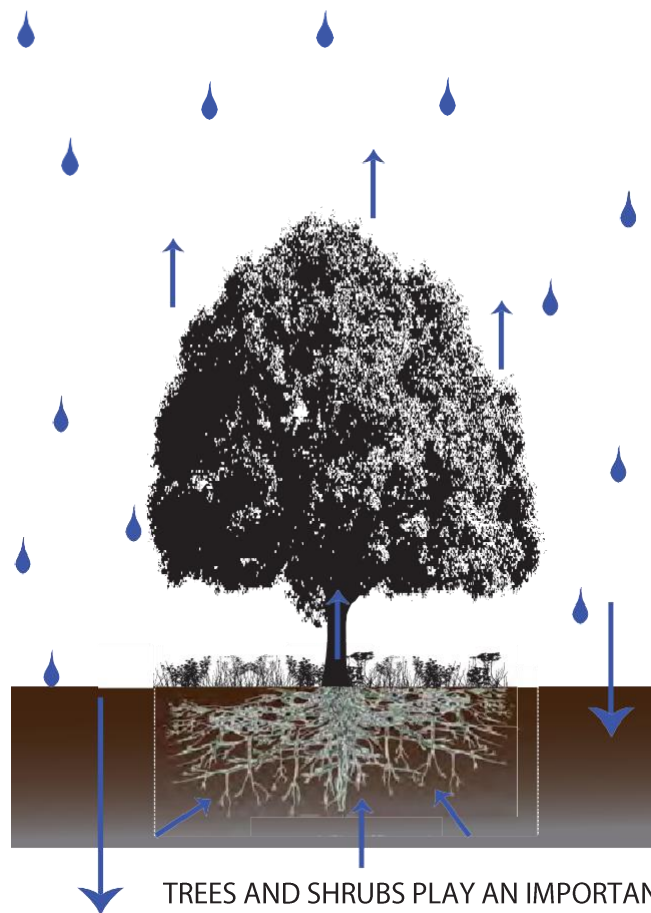
- enhance the look of a landscape, adding to overall property value.
- help to conserve energy, sequester carbon, and improve air quality.
- manage stormwater by intercepting rain and slowing it down, thus reducing soil erosion.
- capture water on leaf surfaces, allowing water to evaporate or drip slowly to the ground.
- support conditions where water soaks slowly into the soil, recharging groundwater and our drinking water aquifers.

GOOD TREE MANAGEMENT INCLUDES:

Proper Pruning Techniques- This guide offers basic advice on tree care and on when and how to prune to best protect your existing trees. While some pruning is straight forward, hiring a certified arborist is a great way to get excellent tree care.

Mulching- Place wood chips, bark chips, or tree leaves about 4 inches deep over the root zone to provide mulch for existing trees. Mulch reduces evaporation from the soil surface, helping to maintain soil moisture during the dry season. It limits soil compaction, protecting tree roots and promoting growth and water infiltration. Mulch contributes nutrients to the soil as organic matter is broken down. Leave a few inches directly around the tree trunk clear of mulch.

Root Zone Protection- Protecting the root zone of trees from compaction by cars and heavy equipment is important for long term tree health. Tree roots often extend beyond the tree canopy. Avoid driving and parking under trees.



TREES AND SHRUBS PLAY AN IMPORTANT ROLE IN STORMWATER MANAGEMENT

PERMITS

The Washington State Growth Management Act, Chapter 36.70A RCW, requires the protection of the following areas: wetlands, areas with a critical recharging effect on aquifers for potable water, aquatic and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas. **Vegetation removal on steep slopes is also prohibited.** Consult the Pierce County Resource Ordinance for county-specific guidance.

Remember that there are penalties for removing vegetation within critical areas. See: www.co.pierce.wa.us



HOW YOU CAN PROTECT YOUR TREES . . . AND YOUR VIEWS. STEPS FOR TREE PRUNING

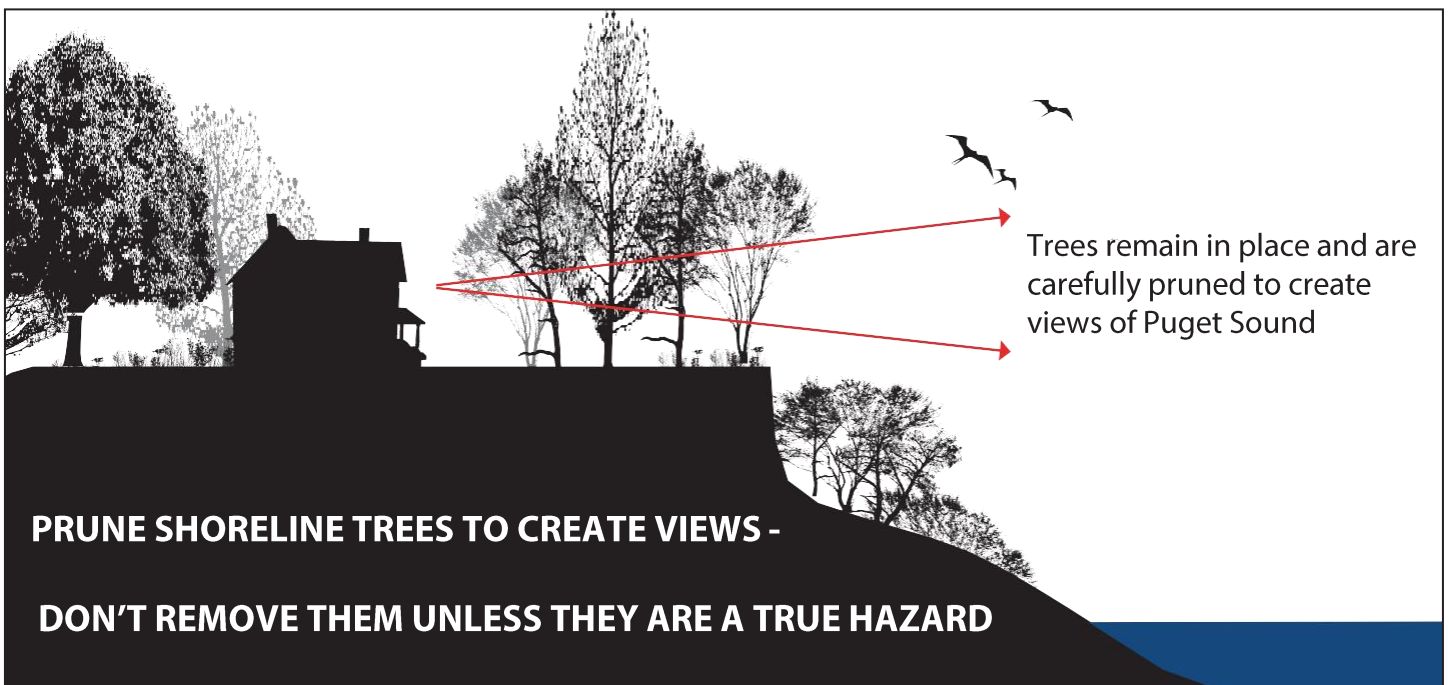
When should you prune? Winter, when trees are dormant is generally a good time to prune. However, pruning to remove weak, diseased, or dead limbs can be accomplished at any time during the year.

As a rule, growth is maximized and wound closure is fastest if pruning takes place before the spring growth flush. Avoid pruning just after the spring growth flush because your trees recently expended a great deal of energy to produce foliage and early shoot growth. Pruning will stress them.

Proper pruning is helpful in developing a tree with a strong structure and desirable form, particularly near a house or other structure. Trees that are thoughtfully pruned while young will require little corrective pruning when they mature. In rarely accessed forested areas, tree pruning is rarely needed.

Keep these few simple principles in mind before pruning a tree:

- Each cut has the potential to change the growth of the tree. Always have a purpose in mind before making a cut.
- Proper technique is essential. Poor pruning can cause damage that lasts for the life of the tree. Learn where and how to make the cuts before you start.
- Trees do not heal the way people do. When a tree is wounded, it must grow over and compartmentalize the wound. As a result, the wound is contained within the tree forever.
- Small cuts do less damage to the tree than large cuts. For that reason, proper pruning (training) of young trees is most effective. Waiting to prune a tree until it is mature can create the need for large cuts that the tree cannot easily close.





TYPES OF PRUNING

Specific types of pruning may be necessary to maintain a mature tree in a healthy, safe, and attractive condition. A professional arborist will be your best source of guidance on which strategy to choose.

Cleaning is the removal of dead, dying, diseased, crowded, weakly attached, and low-vigor branches.

Thinning is the limited removal of branches to increase light penetration and air movement through the crown. Thinning opens the foliage of a tree, reduces weight on heavy limbs, and helps retain the tree's natural shape. Over-thinning will weaken the tree by reducing leaves available for photosynthesis.

Raising (often called "limbing up") removes the lower branches from a tree in order to provide clearance for buildings, vehicles, pedestrians, and vistas. This is a popular practice for improving views through mature evergreen trees.

Reduction reduces the size of a tree, often for clearance for utility lines. Reducing the height or spread of a tree is best accomplished by a professional arborist. Compared to topping, reduction helps maintain the form and structural integrity of the tree. *This technique is not appropriate for evergreen trees.*

Creating "Windows" involves careful removal of specific branches to create views while maintaining the health and balance of the tree.

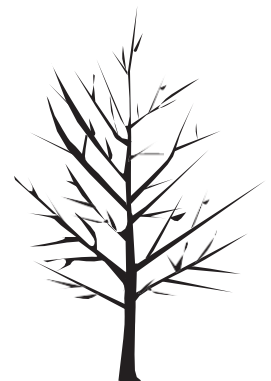
Topping is the removal of a tree's central leader or all branches and vegetation above a certain height. **Avoid this practice** which weakens trees and often makes them hazardous.



Unpruned tree



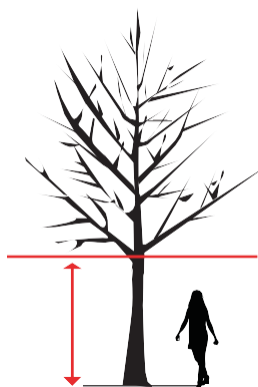
Cleaning



Thinning



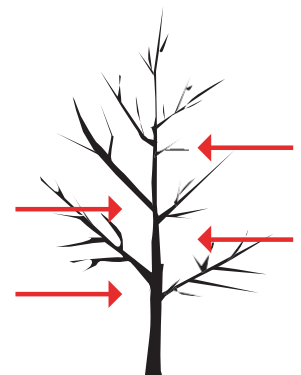
Topping



Raising / Limbing Up



Reduction



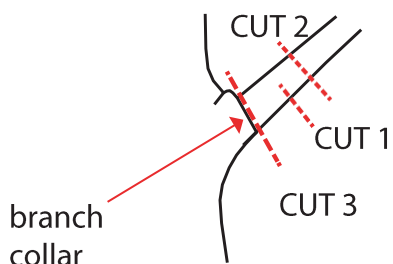
Creating "Windows"



GUIDANCE ON PRUNING CUTS:

- *Cut next to the branch collar:* pruning cuts should be made just outside the branch collar, which is the rounded area circling the base of the branch next to the trunk. Never make a cut flush to the tree trunk. (see graphic below) The branch collar contains trunk or parent branch tissue and should not be damaged or removed. If the trunk collar has grown out on a dead limb to be removed, make the cut just beyond the collar.
- *Large limbs:* to remove a large limb, first remove its weight. Make an undercut about 12 to 18 inches from the limb's point of attachment. Make a second cut from the top, directly above or a few inches farther out on the limb. Doing so removes the limb, leaving the 12- to 18-inch stub. Remove the stub by cutting back to the branch collar. This technique reduces the possibility of tearing the bark, which creates a place for disease and problems to establish.

BASIC PRUNING CUTS - ESPECIALLY FOR LARGE LIMBS



CUT 1 - undercut, part way through branch

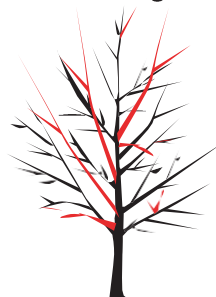
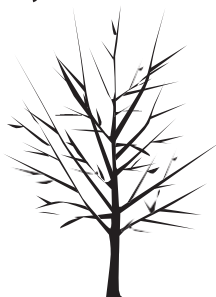
CUT 2 - top cut from above, remove most of branch

CUT 3 - final cut located just past the branch collar, to remove the remaining section of branch with a clean cut

ESTABLISH A STRONG TRUNK AND BRANCHING STRUCTURE IN YOUNG TREES

- Different Species have different growth habits. Learn about your tree's natural form before pruning. For most young trees, maintain a single dominant leader growing upward. Do not prune back the tip of this leader.
- Watch for "co-dominant" stems of equal size, originating from the same point on the tree - they will create a 'V' shape at the point of connection. "Included" bark describes bark pinched between the two stems. This creates a weak union because the bark inclusion prevents any physical connection between the two stems. The two stems push each other apart as they grow and a crack develops. It is best to remove one of the stems while the tree is still young.
- A good structure of primary scaffold branches should be established while the tree is young, usually the first 15-25 years. The scaffold branches provide the framework of the mature tree. Properly trained young trees will develop a strong structure that requires less corrective pruning as they mature.
- The goal is to establish a strong trunk with sturdy, well-spaced branches. The strength of the branch structure depends on the relative sizes of the branches, the branch angles, and the spacing of the limbs. Naturally, those factors vary with the growth habit of the tree. Good pruning techniques remove structurally weak branches while maintaining the natural form of the tree.

PRUNE FOR
LONG-TERM
SHAPE AND
HEALTH



Single leader

Scaffold
branches
nicely spaced

Prune to remove competing leaders, crossing branches, co-dominant stems.



PERMANENT BRANCH SELECTION

Nursery trees often have low branches that may make the tree appear well-proportioned when young, but low branches are seldom appropriate for large-growing trees near a home or an active area. Most landscape trees require only about 8 feet of clearance. The spacing of branches, both vertically and radially is also important. Branches selected as permanent scaffold branches must be well-spaced along the trunk. Maintain radial balance with branches growing outward in each direction.

- A good rule of thumb for the vertical spacing of permanent branches is to maintain a distance equal to 3 percent of the tree's eventual height. Thus, a tree that will be 50 feet tall should have permanent scaffold branches spaced about 18 inches apart along the trunk.
- Avoid allowing two scaffold branches to arise one above the other on the same side of the tree.
- Strong branches have a "U-shaped" union and a prominent branch collar. You should prune branches with weak attachments and included bark (stems with "V-shaped" unions) while they are young.

HOW MUCH TO PRUNE?

- Young trees tolerate the removal of a higher percentage of living tissue better than mature trees. A tree will recover from several small pruning wounds faster than from one large wound.
- A common mistake is to remove too much inner foliage and small branches. It is important to maintain an even distribution of foliage along large limbs and in the lower portion of the crown. The leaves of each branch must manufacture enough food to keep that branch alive and growing. In addition, each branch must contribute food to grow and feed the trunk and roots. Removal of too many leaves can "starve" the tree, reduce growth, and make the tree unhealthy. A good rule of thumb is to maintain at least half the foliage on branches arising in the lower two-thirds of the tree.
- Mature trees should require little pruning. A widely accepted rule of thumb is to remove less than 1/4 of a tree's leaf-bearing crown, but even this can have negative effects. Removing even a single, large-diameter limb can create a wound that the tree may not be able to close. The older and larger a tree becomes, the less energy it has in reserve to close wounds and defend against decay or insect attack. Try to limit pruning for large mature trees to the removal of dead or hazardous limbs.

WOUND DRESSINGS

Most experts now recommend that wound dressings not be used. Research has shown that there are few, if any, benefits. Save your money for better uses!

PRUNING TOOLS

It is important to have the right tool for the job. For small trees, most of the cuts can be made with hand pruning shears (secateurs). Scissor-type (bypass blade hand pruners), are preferred over the anvil type. They make cleaner, more accurate cuts. Cuts larger than one-half inch in diameter should be made with lopping shears or a pruning saw. Never use hedge shears to prune a tree. Whatever tool you use, make sure it is clean and sharp.

EXPERT HELP: PROFESSIONAL ARBORISTS

If you are concerned about the safety or process of pruning, hire a professional. Arborists are trained to assess and care for trees and do so with the right tools and safety equipment. Visit the International Society of Arboriculture online to find local arborists.

<http://www.isa-arbor.com/faca/findArborist.aspx>

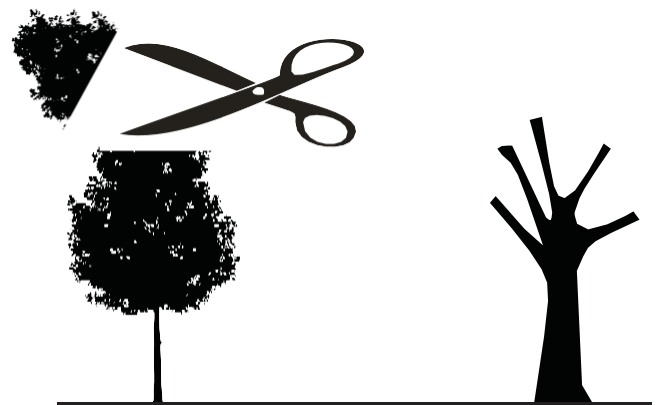
WHEN HIRING A PROFESSIONAL:

- Check for ISA arborist certification. Certified Arborists are experienced professionals who have passed an extensive examination covering all aspects of tree care.
- Also check for membership in professional organizations such as the Tree Care Industry Association (TCIA), or the American Society of Consulting Arborists (ASCA). Such membership demonstrates a willingness on the part of the arborist to stay up to date on the latest techniques and information.
- Ask for proof of insurance.
- Ask for a list of references, and don't hesitate to check them.
- Get the agreement for work to be performed up front and do not hesitate to place all items discussed in the contract, including clean up and any accidental damage to additional trees, landscape, driveways and sidewalks.
- If you have room for mulch, request that the pruned material be chipped and left on site!
- Make no payments until the entire job is satisfactorily completed.
- Avoid tree care providers that recommend topping your trees.

PROTECT YOUR TREES:

AVOID TOPPING

Tree topping is a harmful practice that reduces a tree's height by removing the top half of a tree. This opens the tree up to severe stress, disease, and structural weakness that inevitably lead to greater problems and additional expense. If a tree has grown too large for your property and correct pruning techniques can't address your concerns, it may be better to remove and replace it with a more appropriate species. Before doing so, be sure you understand any regulatory limits such as those related to slopes and critical areas. In very limited cases (a steep bluff), with expert guidance, topping may be an acceptable tool.



AVOID TOPPING YOUR TREES!

AVOID

- Tree care companies that advertise tree "topping," a very harmful pruning practice that causes permanent damage to the tree.
- Avoid companies that use tree climbing spikes to climb trees for pruning- this also causes unnecessary damage. Spikes should be limited to use during tree removal.



PRUNING EXAMPLES WHERE VIEWS AND VEGETATION ARE COMPATIBLE



ADDITIONAL RESOURCES

- International Society of Arboriculture, Consumer brochures available at: <http://www.treesaregood.com>
- *Illustrated Guide to Pruning*. Gilman, E. F. 2002. , 2nd edition. Delmar Publishers, Albany NY.
- Information on Pruning Landscape Plants at: <http://hort.ifas.ufl.edu/woody/pruning>
- Casey Trees has great guidance information at: <http://caseytrees.org/for-homeowners/>



ACKNOWLEDGEMENTS:

Adapted with permission from ISA's consumer publications, titled "Why Topping Hurts Trees" <http://www.treesaregood.com/treecare/topping.aspx> , "Pruning Young Trees" http://www.treesaregood.com/treecare/pruning_young.aspx , and "Pruning Mature Trees" http://www.treesaregood.com/treecare/pruning_mature.aspx, Copyright International Society of Arboriculture.

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