

Tree Maintenance - 52 Things You Can Do for Your Urban Forest

1. Remove grass from area around tree trunk.
2. Do selective pruning.
3. Place mulch around the base of a tree.
4. Aerate the roots of a tree.
5. Plant a tree - right tree in the right place
6. Speak with and support your local municipal arborist.
7. Become a member or partner in your local urban forest program. Join a tree board or a forestry council.
8. Talk with elected officials about the value of trees.
9. Speak up in city council meetings regarding the management of trees.
10. Speak with your mayor about trees.
11. Learn what your community is doing for trees.
12. Take a walk and notice the trees.
13. Count the topped trees in your neighborhood. Spread the word about not topping.
14. Identify and protect heritage and landmark trees.
15. Look closely at city, county, state and school district budgets for hidden funds related to trees and landscaping.
16. Pick up garbage.
17. Talk about the importance of trees with your children.
18. Ask your children to explain the values that they see in our trees.
19. Sketch out the organizational structure of people who control community natural resources in your area. If you don't know, find out.
20. Identify one change in your lifestyle that will have a positive ecological impact.
21. Remind neighbors to remove tree stakes.
22. Find a small piece of land and give it back the ability to sustain many lives.
23. Use the Internet to see what bills are proposed for the state legislature. Make your voice heard.
24. Volunteer to be a member of your school's/church's Building and Grounds Committee. If it doesn't have one, suggest one be created.
25. Pay your rent to the land on which you live.
26. Plan an Arbor Day celebration.
27. Speak to a school class or a youth group about trees.
28. Talk with your city council and mayor about becoming a Tree City USA.
29. Read a book about trees and share what you learn with somebody.
30. Create an Arbor Day poster contest.
31. Take a photograph of your favorite tree and publish a story about it in the local paper.
32. Write your representatives about the value of the urban forest in your life.
33. Learn about the native trees in your area.
34. Write a letter to the editor of your local paper appreciating the urban forest.
35. Create a Master Treescape Plan for downtown and other heavily used areas.
36. Engage children in planting something green and caring for it.
37. Inventory the trees in your yard, block, school, neighborhood, or city.
38. Teach others about the right tree in the right place.
39. Create native woodland spaces, with other native plants.

40. Adopt a tree.
41. Teach others about the many benefits of trees.
42. Create a local urban forestry organization.
43. Engage youth and adult service groups to sponsor projects to benefit the urban forest. Visit it often, care for it, and watch as it changes through seasons and years.
44. Create a local arboretum or botanical garden.
45. Contact a Tree Group for additional information, funding or to participate in ongoing events. Possible groups include the North Carolina Urban Forest Council (ncufc@aol.com), [National Arbor Day Foundation](#), [National Tree Trust](#), [TreeLink](#).
46. Inform the press about your activities on behalf of the urban forest.
47. Create community gardens on vacant lots.
48. Plant a tree in memory of a loved one.
49. Remove all the stakes and guy wires from trees planted more than one year ago in the common areas of your neighborhood.
50. Choose native plant material for any planting you'll be doing.
51. Write a poem to express why you appreciate trees.
52. Water a newly planted tree through its first growing season.

Information presented here provided by the [North Carolina Urban Forest Council](#) (ncufc@aol.com)

Tree Maintenance - Don't Top Trees

Topping is severely cutting limbs larger than 3" in diameter to stubs within the tree's crown so as to remove the normal canopy and disfigure the tree.

Reasons not to top:

Starvation

Good pruning practices rarely remove more than 1/2 to 1/3 of the crown, which in turn does not seriously interfere with the ability of a tree's leafy crown to manufacture food. Topping removes so much of the crown that it upsets an older tree's well-developed crown-to-root ratio and temporarily cuts off its food-making ability.

Shock

A tree's crown is like an umbrella that shields much of the tree from the direct rays of the sun. By suddenly removing this protection, the remaining bark tissue is so exposed that scalding may result. There may also be a dramatic effect on neighboring trees and shrubs. If these thrive in shade and the shade is removed, poor health or death may result.

Ugliness

A topped tree is a disfigured tree. Even with its regrowth it never regains the grace and character of its species. The landscape and the community are robbed of a valuable asset.

Rapid new growth

The goal of topping is usually to control the height and spread of a tree. Actually, it has just the opposite effect. The resulting sprouts (often called water sprouts) are far more numerous than normal new growth and they elongate so rapidly that the tree returns to its original height in a very short time - and with a far denser crown.

Insects and disease

The large stubs of a topped tree have a difficult time forming callus. The terminal location of these cuts, as well as their large diameter, prevents the tree's chemically based natural defense system from doing its job. The stubs are highly vulnerable to insect invasion and the spores of decay fungi. If decay is already present in the limb, opening the limb will speed the spread of the disease.

Cost

To a worker with a saw, topping a tree is much easier than applying the skill and judgment of good pruning. Therefore, topping may cost less in the short run. However, the true costs of topping are hidden. These include: reduced property value, the expense of removal and replacement if the tree dies, the loss of other trees and shrubs if they succumb to changed light conditions, the risk of liability from weakened branches, and increased

future maintenance.

Weak limbs

At best, the wood of a new limb that sprouts after a larger limb is cut is more weakly attached than a limb that develops more normally. If rot exists or develops at the severed end of the limb, the weight of the sprout makes a bad situation even worse.

Tree death

Some older trees are more tolerant to topping than others. Beeches, for example, do not sprout readily after severe pruning and the reduced foliage most surely will lead to death of the tree.

Alternatives to topping:

- Start out right by planting trees that will fit your available space when they reach maturity.
- Prune properly and regularly. A light pruning every three years will keep your tree in healthy condition.

Information presented here comes from the North Carolina Urban Forest Council (ncufc@aol.com), the [International Society of Arboriculture](#), and [Plant Amnesty](#).

Tree Maintenance - How to Hire an Arborist

Hiring a tree care specialist deserves all the consideration and caution that goes into selecting a banker or home builder. The right choice can assure health, beauty and longer life for your trees.

Twelve tips for Hiring an Arborist

1. Let your fingers do the walking. Check in the phone directory, usually under Trees, Tree Service or Tree Care Service. Although anyone can list themselves in the yellow pages, a listing at least indicates some degree of permanence.
2. What's your hurry? Never be rushed by bargains (If you sign an agreement today, I can take ten percent off the price...). Never pay in advance.
3. Look, listen and learn. Ask for local references - other jobs the company or individual has done. Take a look at some, and if possible, talk with the former client. Experience, education and a good reputation are signs of a good arborist.
4. Knock-knock, who's there? Beware of door knockers. Most reputable companies have all the work they can handle without going door-to-door. Door-knockers are especially common after storms when non-professionals see a chance to earn some quick money. Often, storm damage creates high-risk situations for both workers and homeowners, and there is opportunity for even more damage to trees and shrubs if work is not done correctly.
5. Let's see some I.D. Ask for certificates of insurance, including proof of liability for personal and property damage (such as your house and your neighbor's), and workman's compensation. Then phone the insurance company to make certain the policy is current. Under some circumstances, you can be held financially responsible if an uninsured worker is hurt on your property, or damage is done to a neighbor's property.
6. Leave your spikes at home. A conscientious arborist will not use climbing spikes if the tree is to remain in the landscape.
7. An arborist for all seasons. A good arborist will offer a wide range of services (pruning, fertilizing, cabling/bracing, lightning protection, pest control, etc.).
8. Licensed to prune. Find out if the arborist is certified through a state certification program or the International Society of Arboriculture. ISA's program is available to arborists nationwide and requires appropriate training, experience and knowledge as evidenced by successfully completing a standardized application and testing process. In some cities, arborists are required to have a license. Check with city hall, and then use only an arborist who is in compliance if licensing is included in your community's ordinances.
9. Remember membership. Determine if the arborist is a member of any organizations, such as the American Forestry Association, the American Society of Consulting Arborists, the International Society of Arboriculture or the National Arborist Association. Membership does not guarantee quality, but lack of membership casts doubt on the person's professionalism.
10. You'd better shop around. Have more than one arborist look at your job and give you estimates. Don't expect one to lower a bid to match another's, and be willing to pay for the estimate if necessary; but two or more opinions and cost estimates are worth your extra effort.

11. Stop the top. Avoid tree services that routinely top trees. Topping damages a tree's looks and health, eventually killing it. A good arborist can provide alternatives to topping that will keep the tree healthy, so it can be enjoyed for many years to come.
12. Eager beaver. Beware of an arborist who is eager to remove a living tree. Removal clearly should be a last resort.

Information presented here comes from the [North Carolina Urban Forest Council](#) and the [International Society of Arboriculture](#).

Tree Maintenance - How To Prune

Pruning is the removal of branches, living or dead, from woody plants. The first rule of pruning is do no cutting without a reason.

Improper pruning can cause damage that will last the lifetime of the tree - or even shorten the lifespan of the tree.

Pruning is the most common tree maintenance procedure. Pruning cuts must be made with an understanding of how the tree will respond to the cut. Improper pruning can cause damage, which continues for the life of the tree. Your goal should be pruning to yield a healthy, aesthetically pleasing tree.

Guidelines for Correct Pruning, by Dr. Alex Shigo

Correct pruning is the best thing you can do for your tree. Here are the guidelines ([see diagram](#)):

- Natural Target Pruning
- Locate the branch bark ridge (BBR)
- Find target A - outside BBR
- Find target B - where branch meets collar
- If B cannot be found, drop an imaginary line at AX. Angle XAC equals XAB.
- Stub cut the branch.
- Make final cut at line AB (with power saws make final cut on upstroke.)

Do Not:

- Make flush cuts behind the BBR
- Leave living or dead stubs
- Injure or remove the branch collar
- Paint cuts
- The best time to prune living branches is late in the dormant season or very early in spring before leaves form. Dead and dying branches can be pruned anytime. Use sharp tools! Make clean cuts. Be careful with all tools. Safety first! Here are some other pruning tips:

Think Twice

No branch should be removed without a reason. Common reasons for pruning are to remove dead branches, to remove crowded or rubbing limbs and to eliminate hazards.

Respect your Elders

Mature trees should require little routine pruning. A widely accepted rule of thumb is never to remove more than one fourth of a tree's leaf bearing crown. In a mature tree, pruning 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 and insect attack. The pruning of large, mature trees is usually limited to the removal of dead or potentially

hazardous limbs.

Think Small

A properly made pruning wound is the smallest wound that can be made, allowing closure to start promptly all the way around it. The smallest wound closes the fastest. An important principle to remember is that a tree can recover from several small pruning wounds faster than from one large wound.

It All Depends

The amount of live tissue that should be removed depends on the tree size, species and age, as well as the pruning objectives. Younger trees will tolerate the removal of a higher percentage of living tissue than mature trees.

Bleeding Heart

Dead and dying branches can be pruned anytime. Certain species, such as maples and birches, tend to "bleed" or drain sap from the pruning cuts. Although unattractive, this has little effect on the tree's health.

X Marks the Spot

Each cut should be made carefully, at the correct location, leaving a smooth surface with no jagged edges or torn bark. The correct anatomical location is just beyond the branch collar. The branch collar contains trunk or parent branch tissue and should not be damaged or removed. Properly pruned young trees will develop into structurally strong trees that should require little corrective pruning as they mature.

Ask the Pro

Pruning trees can be dangerous. Use sharp tools. Make clean cuts. Be careful with all tools. If pruning involves working above the ground or using power equipment, it is best to hire a professional arborist.

You're Just Too Much

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. Over-thinning reduces the tree's sugar production capacity and can create tip-heavy limbs that are prone to failure.

The Best Medicine

Wound dressings were once thought to accelerate healing, to protect against insects and diseases and reduce decay. Research has shown that dressings do not reduce decay or speed closure, and rarely prevent insect or disease infestations. Trees heal best when the clean wounds are left to heal themselves.

Perfectly Timed

The best time to prune living branches is late in the dormant season or very early in spring before leaves form. Heavy pruning just after the spring growth flush should be avoided. This is when trees have just expended a great deal of energy to produce foliage and early shoot growth. Removal of a large percentage of foliage at this time can stress the tree.

Baby Your Trees

Pruning of newly planted trees should be limited to corrective pruning. Remove torn or broken branches.

Information presented here comes from the [North Carolina Urban Forest Council](mailto:ncufc@aol.com) (ncufc@aol.com) and Dr. Alex Shigo.

Tree Maintenance - The Right Tree for the Right Place

A tree's requirements to thrive, its form or shape, its size at maturity, and its function in your landscape help determine the best tree to plant

The Tree's Purpose

Shade

Trees provide a greater cooling effect than man-made structures because not only are the rays of the sun blocked, but water is added to the air through transpiration. Plant for where you want the shadow during the hottest time of the year and the time of day you desire the shade. High, wide-crowned trees with deciduous leaves are the best providers of shade.

Aesthetics

For visual accent, select a tree that contrasts with the landscape in one or more of the design elements - form, size, color or texture. The more contrasts, the stronger the accent.

Windbreaks and Screens

Low-branching conifers are most effective for screening and privacy. Tall, densely planted trees with fleshy, broad leaves best reduce noise. Dust and noise can be reduced with a combined planting with conifers. Windbreaks can be made most effective through a dense, step-like arrangement of both conifers and deciduous trees. For protection on south and east sides of a house, deciduous species work best because they allow incoming solar radiation in winter.

Boundaries

Trees can help to visually delineate your property. Small, narrow-crowned species will do the job while not invading your neighbor's space.

Environmental Factors

Minimum Temperature

Low temperatures can freeze and kill the living cells in trees. Select a tree species suitable to the hardiness zone where you live.

Moisture

Special attention must be given to your selection if the site periodically is flooded, subjected to very dry conditions or is continually exposed to the drying effect of wind.

Soil

Soil factors are probably the most overlooked element when selecting a tree. Soil depth, structure and pH, in addition to soil moisture, can make the difference between success or failure after planting. Each tree species has a tolerance range related to acidity and alkalinity just as it does for shade. Compaction of any soil due to heavy pedestrian or vehicle use often reduces a tree's growth and size potential.

Air Pollution

The ability of a species to tolerate air pollution is becoming more important. The best course of action is to ask a local professional if there are problems in your town and what species are affected.

Light

Each tree species has a requirement for light. Match the tree's need for light to the planting site.

Pests

Every locality has its problems with particular insects or diseases. The best way to avoid trouble is to avoid the species that host these pests. Ask a professional for their recommendations.

Here's a tip: Local nurseries generally carry trees that are compatible with the local climate. However, for site factors other than climate, it is pretty much a matter of "buyers beware." Get the answers before you buy and look around your neighborhood to see what may be growing well.

Size and Location

Available space is probably the consideration most often overlooked or misunderstood when deciding what tree to plant. Before planting, know what the tree will look like as it nears maturity. Consider its height, crown spread and root space. Think about walkways and drainage pipes below the planting. Take into account electrical wires, other trees, and structures above. Also think about the change to your scenic views and how the planting will affect your neighbors.

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TREE REMOVAL POLICY

An Administrative Policy based on Chapter 21 of Durham's City Code (Tree Ordinance)

INTRODUCTION

The streets of the City of Durham are shaded with thousands of trees. These trees provide cooling in the summer, clean our air by capturing floating particles, reduce greenhouse gases, and add to our quality of life by buffering noise. Maintenance of the trees on city rights-of-way is the responsibility of the Urban Forestry Section. Urban Forestry plants, prunes, maintain, and remove trees on city property.

Citizens may request tree maintenance and/or removal by contacting Urban Forestry. Requests for the removal of dead trees may be made by phone; requests for removal of live trees must be made in writing. Upon receipt of the request, the tree in question will be evaluated within 3 days, and an appropriate plan of action will be implemented. The citizen will be notified of the findings from the inspection, what course of action will be taken, and when that action will occur. In the case of a request for removal of a live tree, the notification will be in writing. All other notifications will be made by telephone. It should be noted that, per Chapter 21, section 14 of Durham's City Code, abuse or mutilation of city trees to facilitate the removal of the tree is a violation, and may result in penalties. In order to facilitate proper work response, this policy has been developed.

PROCEDURES FOR TREE REMOVAL

City tree crews will remove a tree when:

1. **The tree is a "city tree".** A "city tree", as defined by Chapter 21, section 1 of Durham's City Code, is a "tree located on city property or right-of-way or planted by the City on private property pursuant to and for the duration of an agreement between the City and the private property owner."; and
2. **The tree is hazardous.** A hazardous tree, as defined by the International Society of Arboriculture, is a tree with a condition which makes failure imminent, the size to do damage if the tree falls, and a target which will be damaged by the fall; or
3. **The tree will be made hazardous by publicly funded construction and the project cannot be reasonably re-routed away from the tree.** Any of the following conditions would result in a hazardous tree: 1/3 or more of the root system is removed or damaged by construction; or work is performed within 4' of the buttress, and 4 roots greater than 4" in diameter are removed; or
4. **If the removal request is due to a sight distance problem, the tree will be removed if no other cost-effective alternatives exist.** In the event that the removal request is due to a tree that is causing a blind corner at an intersection, Urban Forestry will work with the Transportation Division to best address the situation. Options that will be evaluated may include pruning, installing stop or other signage, or installing traffic signals. Removal of the tree will be performed only if no cost effective alternatives exist.

The City will allow a tree to be removed at the requester's expense when:

1. **The tree is a "city tree";** and
2. **A permit has been issued by the Urban Forestry office,** per Chapter 21, sections 5-8. There is no charge for these permits; and

3. **Removal of the tree is consistent with the interest of Durham's citizens in city trees**, and will not detrimentally affect the city's urban forest, as determined by the Urban Forestry Manager. Reasons for removal may include, but not be limited to, irreparable decline of the tree, resulting in the death of more than 50% of the canopy; the tree is planted under powerlines, and the repeated pruning of the tree has severely disfigured it; etc.; ; and
4. **If the request for removal is based on proposed privately funded construction, the proposed construction project can not be reasonably re-routed away from the tree.** This applies to any type of construction, including all utility construction. Any of the following conditions would result in a hazardous tree: 1/3 or more of the root system is removed or damaged by construction; or work is performed within 4' of the buttress, and 4 roots greater than 4" in diameter are removed. Prior to issuing a permit, the Urban Forestry Manager may meet with the permit requester on site to evaluate the scope of the project and the tree in question, and to assess potentials for re-routing the construction project; and
5. **The permittee agrees to any and all conditions on the permit.** Conditions may include, but not be limited to, the following:
 - a. Showing proof of statutory benefits for Worker's Compensation;
 - b. · Showing proof of automobile liability insurance of \$500,000 per accident (minimum);
 - c. · Showing proof of general liability insurance of \$500,000 per occurrence minimum, the City of
 - d. Durham must be named as additional insured as its interest may appear. An original endorsement to effect this coverage must be provided along with the certificate evidencing all the required insurance;
 - e. · Showing proof that all tree workers on the job are ANSI certified line clearance tree workers;
 - f. · Grinding the stump to a depth of 6" to 12" below grade;
 - g. · Legally disposing of all debris generated by the removal;
 - h. · Paying for a replacement tree in a location to be determined by the Urban Forestry Manager.

The City may require the removal of a tree growing on private property by the property owner if:

1. **The tree is growing on private property**, and
2. **The tree endangers the life, health, safety or property of the public.**
3. This type of tree shall be declared a public nuisance, and the owner or agent of the owner shall be notified by certified mail (return receipt requested), and shall be given a specific period of time of thirty (30) days or less to correct or remove the nuisance. If the nuisance is not corrected within the specified time, the City shall correct or remove the nuisance, and the cost of correction or removal will be billed to the property owner.

The City may require the removal of a tree growing on public property by the property owner if:

1. **The tree was not planted by the City**; and
2. **The tree was planted on public property without first securing a permit for planting from Urban Forestry**, and
3. **The trees are determined to be a nuisance to the public.**
4. The person who planted the tree will be notified and shall be ordered to remove the tree and restore the site to its condition before the tree was planted within ten (10) days. If the tree has not been removed within ten days, the City will remove the tree, **and the cost of removal will be billed to the property owner.**

The City will not allow the removal of a city tree when:

1. **The tree is not hazardous, or**
2. **No construction project is scheduled which would alter the health of the tree.** Per Chapter 21, section 14 of Durham's City Code, abuse or mutilation of city trees to facilitate the removal of the tree is a violation, and may result in penalties.

APPEALS

Per Chapter 21, Section 17 of the Durham Code, any person who is dissatisfied with the decision of the Urban Forestry Manager may file a written appeal to the Environmental Affairs Board. Any person who is dissatisfied with the decision of the Environmental Affairs Board may file a written appeal to City Council. Decisions of the Council are final.