AGRICULTURAL
MU Guide
PUBLISHED BY MU EXTENSION, UNIVERSITY OF MISSOURI-COLUMBIA extension.missouri.edu

First Aid for Storm-Damaged Trees

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In the aftermath of a severe ice or wind storm, many homeowners ask a simple question when it comes to their trees. Will they survive? Wrapped around that question is the initial impulse to "let's get this mess cleaned up." But hasty decisions can often result in removing trees that could have been saved. Follow these simple guidelines in administering first aid to your trees after a storm.

Be patient

Any medical first-responder will tell you Rule No. 1 is to stay calm. Doing the right things right can make the difference between giving your trees a good chance of survival and losing them unnecessarily.

City officials, utility workers and private tree care firms must focus first on dealing with hazards to life and property. After that, one of the city's major tasks is the removal of debris from the storm and the work of removing damaged branches and sometimes entire trees. Homeowners should remember that a tree between the street and sidewalk is typically city-owned and is the city's responsibility.

Trees are amazingly resilient and many recover with proper care and time. Despite the urge to do something immediately, try to be patient. As long as there isn't an immediate physical risk from a damaged tree, the advice is simple: if you're unsure about its condition, keep the tree for now.

Be safe

First aid measures for trees after a major storm almost always involve the use of chain saws. Pruning and removing limbs from storm-damaged trees ***is not*** the same thing as cutting firewood from a treetop already on the ground. Branches and trees that are twisted and bent are usually under tremendous strain that is undetectable to the untrained eye. The quick release of that stored energy by cutting with a chain saw can result in unpredictable and dangerous results. Bent trees and branches larger than six inches in diameter should probably be removed by someone with more experience than the weekend woodcutter.

Look up and look down. Be on the alert for hanging branches that look like they're ready to fall. Stay away from any downed utility lines. Low-voltage telephone or cable lines and even fence wires can become electrically charged when there are fallen or broken electrical lines nearby.

Figure 1. The nearest trees on the right in this Buffalo, Mo., neighborhood will need to be replaced, but those in the background will survive with proper care.
Photo credit: Mike Van Beck, MU Landscape Services.

If you decide to administer first aid using a chain saw, two excellent MU Extension publications should be read before pulling the starter rope. MU guide G1958, *Felling, Bucking and Limbing Trees,* covers the basics of felling a tree. MU guide G1959, *Basic Chain Saw Safety and Use*, provides safety reminders that should be followed each time you pick up a chain saw.

Don't be a victim of a scam

Whatever professional help you seek, make the decision wisely, as it will have long-term consequences for your trees. Be patient.

During large-scale disasters it may not be practical to use a local professional. Do not be pressured by people with chain saws knocking on your door and with a chain saw in hand offering to remove or "repair" your trees. Unfortunately, many such individuals have little or no training, and sometimes have little interest in removing anything but money from the pocketbooks of unsuspecting residents.

But, in some widespread disasters, many arborists from around the country may travel to help aid in

recovery. In these special cases, professional arborists may very well be knocking on doors as they participate in coordinated efforts to canvas large areas.

- If possible, check to see if they are part of an established business in the community or nearby area. If they are from out of town, look on the side of the truck for a company name and location. Then in either case check for a phone listing, usually under Tree Service.
- Ask for current certificates of insurance showing that they are fully insured for property damage, personal liability, and worker compensation. Call the insurer for verification.
- Ideally, the company should have someone on staff who is a member of a professional association such as the International Society of Arboriculture (ISA), the National Arborist Association (NAA), or the American Society of Consulting Arborists (ASCA). Certified arborists are trained and have access to current technical information on tree care, repair, and removal.

Assess the damage

Before writing off a damaged tree as a "goner," ask yourself the following questions:

Other than the storm damage, is the tree basically healthy and vigorous? If the tree is basically healthy, is not creating a hazard, and did not suffer major structural damage, it will generally recover if first aid measures are applied.

Are major limbs broken? The larger a broken limb is, the harder it will be for the tree to recover from the damage. If a majority of the main branches are gone, the tree may have little chance of surviving.

Has the leader (the main upward-trending branch on most trees) been lost? In species where a leader is important to upward growth or desirable appearance, it may have to be a judgment call. The tree may live without its leader, but at best would be a stunted or deformed version of the original.

Is at least 50 percent of the tree's crown (branches) still intact? This is a good rule of thumb on tree survivability. A tree with less than half of its branches remaining may not be able to produce enough foliage to nourish the tree through the coming growing season.

How big are the wounds where branches have been broken or bark has been damaged? The larger the wound is in relation to the size of the limb, the less likely it is to heal, leaving the tree vulnerable to disease and pests. A 2- to 3-inch wound on a 12-inch diameter limb will seal over with new bark within a couple of years.

Are there remaining branches that can form a new branch structure? The remaining limbs will grow more vigorously as the tree tries to replace its missing foliage. Look to see if branches are in place that can eventually fill out the tree's appearance.

Is the tree of a desirable species for its location? If the tree is in the wrong location (such as a potentially tall tree beneath a power line), or an undesirable species for the property (messy fruit, etc.), it may be best to remove it if it has serious damage.

Make a decision

The questions listed above will help you make informed decisions about your trees. In general, the answer as to what to do about a particular tree will fall into one of three categories.

1: Keep it

If damage is relatively slight, prune any broken branches, repair torn bark or rough edges around wounds, and let the tree begin the process of wound repair. A mature shade tree can usually survive the loss of one major limb. The broken branch should be pruned back to the trunk. In the months to follow, large wounds should be closely monitored for signs of decay.

Figure 2. Although the tree has been damaged, enough strong limbs may remain on a basically healthy tree to make saving it possible.

Young trees can sustain quite a bit of damage and still recover quickly. If the leader is intact and the structure for future branching remains, remove the broken branches and let the tree close over the wounds and recover itself.

2: Wait and see

Resist the temptation to simply cut the tree down and be done with it. In such cases, it may be best to stand back for a while and think it over. Remember that time is on your side. After careful pruning of broken branches, give the tree some time to recover. A final decision can be made later.

Resist the temptation to prune too heavily. Remember that the tree will need all the foliage it can produce in order to make it through the next growing season. Remove only the damaged limbs, wait and see what happens. With large trees, a professional arborist should be brought in to

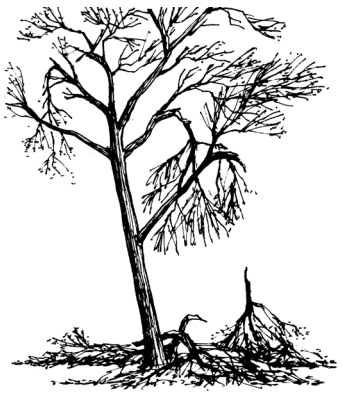


Figure 3. A healthy mature tree can recover even when several major limbs are damaged.

assess damage on a borderline situation, and to safely accomplish needed pruning and branch removal.

3: Replace it

Some trees simply can't be saved or are not worth saving. If the tree has already been weakened by disease, if the trunk is split, or more than 50 percent of the crown is gone, the tree has lost its survival edge (Figures 4–6).

Figure 5. About all that's left of this tree is its trunk. The few remaining branches can't provide enough foliage to enable the tree to make it through another growing season.

Figure 4. This otherwise healthy young tree has lost too much of its crown. It will probably not be able to grow enough new branches and leaves to provide needed nourishment, and will never be able to regain its former beautiful shape.

Figure 6. A rotten inner core in the trunk or structural weakness in branching patterns can cause a split trunk — the tree equivalent of a heart attack. The wounds are too large to ever mend, and the tree has lost its sap lifeline between roots and leaves. This tree is all but dead.

Basic tree first aid you can provide

Resist the urge to overprune

Don't worry if the tree's appearance isn't perfect. With branches gone, your trees may look unbalanced or naked. You'll be surprised at how fast they will heal, grow new foliage, and return to their natural beauty.

Remove any broken branches still attached to the tree

Removing the jagged remains of smaller broken limbs is one common repair that property owners can make after a storm. If done properly, it will minimize the risk of decay agents entering the wound. Smaller branches should be pruned at the point where they join larger ones. Large branches that are broken should be cut back to the trunk or a main limb. As you prune, make cuts in the sequence shown in Figure 7 so that you make clean cuts in the right places, helping the tree to recover faster.

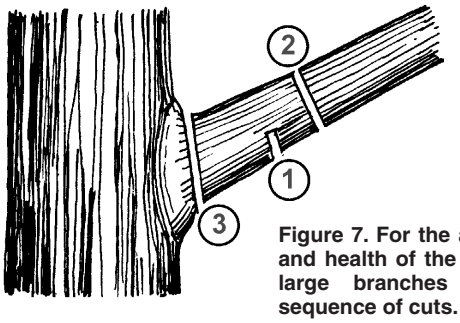


Figure 7. For the appearance and health of the tree, prune large branches with this sequence of cuts.

Repair torn bark

To improve the tree's appearance and eliminate hiding places for insects, carefully use a sharp chisel or knife to smooth the ragged edges of wounds where bark has been torn away (Figure 8). Try not to expose any more of the cambium (greenish inner bark) than is necessary, because these fragile layers contain the tree's food and water lifelines between roots and leaves.

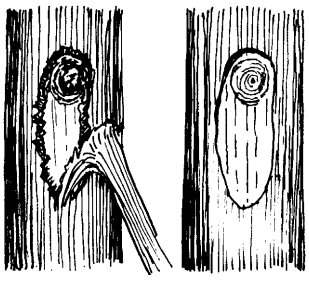
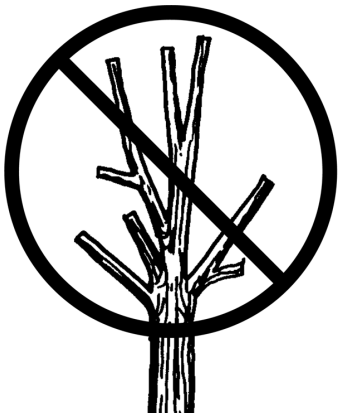


Figure 8. Avoid tearing the bark when pruning. Clean ragged wounds in the bark to avoid further damage.

Don't top your trees!

Untrained individuals may urge you to cut back all of the branches in the mistaken belief that reducing the length of branches will help avoid breakage in future storms. While storm damage may not always allow for ideal pruning cuts, professional arborists say that "topping" — cutting main branches back to stubs — is one of the worst things you can do for your trees. Stubs will tend to grow back many weakly attached branches that are even more likely to break when a storm strikes.



Also, the tree will need all its resources to recover from the stress of storm damage. Topping the tree will reduce the amount of foliage, on which the tree depends for the food and nourishment needed for re-growth. A topped tree that has already sustained major storm damage is more likely to die than repair itself. At best, its recovery will be retarded and it will almost never regain its original shape or beauty.

Acknowledgments: Artwork courtesy of the National Arbor Day Foundation.

For further information

MU Extension Publications 1-800-292-0969
http://muextension.missouri.edu/explore/

G1958, *Felling, Bucking and Limbing Trees*

G1959, *Basic Chain Saw Safety and Use*

G6866, *Pruning and Care of Shade Trees*

Missouri Department of Conservation
http://mdc.mo.gov/

F00071, *Basic Pruning Guidelines*

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