



Winter Storm 2012



Forest Recovery Bulletin #1
Arkansas Forestry Commission – January 2013

Helping Trees Recover From Winter Storms

The devastating storm of 2012 damaged forests and community trees throughout Arkansas. Ice and snow accumulation adds extraordinary weight to trees, breaking stems and branches, or toppling them completely. Both pines and hardwoods were affected, from young stands to mature trees with large crowns. The ice storm killed many trees outright, but many damaged trees can survive if given the right care. Don't make hasty decisions! There are things that can be done to help many damaged trees recover.

***Practice Safety First!** Homeowners who work on their own trees should use extreme caution. Working with chainsaws or other tree care equipment and removing large trees or limbs is dangerous. Broken branches or leaning trees can be easily dislodged by the wind so wear safety gear. Don't work on ice-coated trees – let the ice melt. Do not climb a ladder with a chain saw. Do not climb into a heavily damaged tree and never touch any tree near electric wires. Assess your particular tree situation carefully and watch for safety hazards. Most tree work needs to be done by trained professionals, especially when the work requires climbing or the tree is leaning against another tree or structure, or where falling debris might put you or your property at risk.*

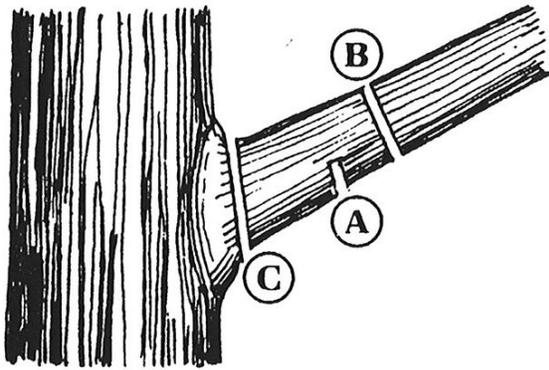
Eliminate immediate hazards first: Remove dead trees; trees leaning severely; trees with broken or cracked stems; trees with extensive broken roots; and any large dead or broken limbs that are still attached to the tree. Landowners with acreage should complete a damage assessment before salvaging any forest stands. Unfortunately, downed or damaged trees that could be salvaged will lose their value within a few months because of decay and discoloration. Marketing salvaged material will be more challenging because of the sheer volume of damaged trees in the region.



Hire an arborist: Hire a qualified arborist to get individual tree care work done properly and safely. Trained arborists are aware of proper pruning and removal procedures and can reduce the chance of further damage to the tree. Check to see that they are certified and ask for certificates of insurance, including proof of liability for personal and property damage and workman's compensation. Also request local references and get more than one estimate if possible.

Prevent additional damage: After the trees have begun to recover, you may want to do additional pruning to improve their appearance and further reduce hazards. If the top has been broken but the tree is otherwise salvageable, prune the top back to a strong lateral branch. Damaged branches should be pruned back to the branch collar using the “three-step method” shown below to minimize further injury. Topping or “de-horning” a tree generally leads to tree decline and increased maintenance needs, so avoid these destructive practices.

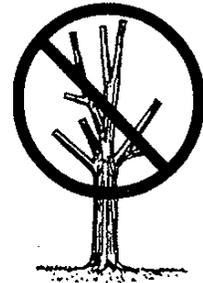
Steps in Proper Pruning



Because of its weight, a branch can tear loose during pruning, stripping the bark and creating jagged edges that invite insects and disease. That won't happen if you follow these steps.

- A. Make a partial cut from beneath, at a point several inches away from the trunk.
- B. Make a second cut from above, several inches out from the first cut, to allow the limb to fall safely.
- C. Complete the job with a final cut just outside the branch collar, the raised area that surrounds the branch where it joins the trunk.

Never “de-horn” or top a tree!



Never cut the main branches of a tree back to stubs. Ugly, weakly-attached limbs will often grow back higher than the original branches and be more likely to break off in a future storm.

Some tree damage may not be immediately apparent. Hidden cracks may cause branches to droop when leaves come out in the spring. Stem decay or cracks may lead to structural loss, causing the tree or large branches to become hazardous. Avoid climbing severely damaged trees. Root damage may not be evident until twigs or branches in the upper crown begin dying after two or three growing seasons. Stressed, dying and dead trees attract insect pests, such as borers and bark beetles. Remove insect-infested trees to reduce risk to healthy trees nearby.

Acknowledgments: Arkansas Forestry Commission appreciates the use of the format and much of the text prepared by the USDA Forest Service in Durham, New Hampshire, following their 1998 ice storm and the Oklahoma Forestry Services. Artwork courtesy of the National Arbor Day Foundation.

Don't panic! Stop, think and be patient!

Practice safety first and foremost.

Get professional advice.



For more information contact
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501-296-1940
or check the AFC website at
<http://forestry.arkansas.gov>
and www.treesaregood.org



Winter Storm 2012



Forest Recovery Bulletin #2
Arkansas Forestry Commission – January 2013

Will My Trees Survive?

The severe storm of 2012 heavily damaged forests and community trees across a wide region in Arkansas. Tree owners face the dilemma of deciding whether a tree can be saved or whether it is damaged beyond repair. The information in this bulletin will help guide homeowners, landowners and tree consultants in assessing the impact of damage to hardwood trees so they can better determine their treatment options.

Some damage will not become evident until after the leaves emerge in the spring. Determining the full consequences of the storm will require periodic monitoring of tree health and external indicators of stress, such as the appearance of decay fungi and insect pests, over the next several years.

Safety considerations require prompt removal of hazardous trees and branches. Once those are removed, harvesting other damaged trees may actually cause more damage to the remaining trees and lead to decreased timber values in the long run. Damaged trees may eventually develop symptoms of decay and wood discoloration that can affect tree value. However, this can take from one to several years to occur.



Don't be rushed into making rash decisions about trees that are not presently posing any hazard. First eliminate the safety concerns, then carefully and thoughtfully assess the remaining trees before taking any further action.

The likelihood that a damaged tree will survive the winter storm is closely related to the extent of loss of the live crown (the branches that make up the top of the tree). In general, the greater the crown loss, the less likely the tree will survive. However, other factors also influence survival, such as tree age (young trees may recover and old trees may not), species (weak-wooded species such as elm, maple and Bradford pear suffered the most damage) and its condition before the storm (healthy trees handle stress better than unhealthy ones).

The rules of thumb that follow will help you recognize which trees have the best chance of surviving the ice storm and the tree stresses that are likely to follow.

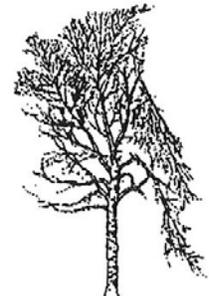
Damage Categories and Percent of Crown Loss

Light Damage: Less than 50% of the live crown is damaged



35% Damage

Trees have a high chance of survival. Growth in some trees will slow due to loss of crown. Growth in lightly damaged or undamaged trees on the edges of disturbed areas may actually increase due to the reduced competition.



40% Damage

Moderate Damage: From 50 to 75% of the live crown is damaged



50% Damage

Many trees will survive with varying degrees of internal infections and growth reduction, depending on where in the crown breaks occur. Outer branch breakage will result in limited infection. Breakage of large tops and/or lower branches will result in more extensive infection. Shattered branch bases and torn bark increase the chances of infection. These trees will need periodic monitoring.



65% Damage

Heavy Damage: More than 75% of the live crown is damaged.



80% Damage

Trees have a low chance of survival. Surviving trees will probably become infected. Weigh wildlife habitat potential against hazardous conditions before removal. If trees are removed, replace them with species that can handle the ice.



75% Damage

Acknowledgments: Dr. Walter Shortle and Dr. Kevin Smith, USDA Forest Service, Durham, NH

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