

## **HALLOWEEN WEEKEND SNOW STORM 2011**

The Halloween Weekend Snow Storm has been a rough one for trees. With the leaves still on many of the trees, we are seeing trees that usually do not present a problem, such as Pin Oak, that are severely damaged. We would like to remind everyone to inspect your clients' trees, especially those that are weak-wooded or have a tendency to grow poor branch attachments. For starters, make sure a qualified arborist does the inspections. The arborist should be a Massachusetts Certified Arborist (MCA) and have sufficient experience with tree failures and inspections. If you don't have a qualified arborist on staff, then hire a consulting arborist to help.

### **Inspection process for storm damaged area:**

Start by assessing that area on the property that is used most often. Remember to always inspect trees in a systematic fashion. An evaluator must inspect each part of the tree: crown, stem, and roots; and the tree should be viewed from all sides. The inspector should proceed in the inspection in the same manner each time, to achieve a pattern of investigation that will help make comparisons to other trees and defects.

In the crown, the inspector looks for problems with the branches. These can come in the form of dead, broken, hanging, cracked or branches with significant decay and cavities. It is recommended that a threshold for defective branch size be established, generally around two inches in diameter. Smaller defective branches may be present, but do not present a hazard risk because of their small size.

Weak branch attachments are also a common defect in trees. Weak branch attachments can be found not only between the stem and a lateral branch, but also between co-dominant leaders. Because tight, "V-shaped" attachments with included bark have little sound wood holding the branches together, they are more likely to fail when subjected to wind, ice, or snow loads. In fact, as the branches continue to increase in girth the included bark acts like a plate preventing the stems from supporting one another. Eventually, the respective growth pushes each other apart enough to cause cracking or failure.

In the trunk, look for cracks, cavities, and decay. Trunks that have been overloaded by the snow may not have completely failed, but cracks indicate that the tree is in the process of failing. When cracks go all the way through the tree, or when they occur on two sides of the trunk at right angles (like the north and east or the south and east sides of the trunk), this is a very dangerous situation. When decay or a cavity is present right next to a crack, the situation is also very dangerous. Be extremely careful about climbing such trees, as they may not be able to support a climber's weight, or the forces involved in rigging a tree for removal. When trees have severe structural defects, use a bucket truck and/or crane to minimize the risk to a climber.

In the root zone, the inspector should look for soil heaving or root plate lifting as a result of the ice/snow weight. The roots are ultimately responsible for a tree's structural stability and a final flaw to look for is the presence of a lean. When trees show signs of leaning, but have gradually straightened up over time, this is usually not a hazardous situation. Such leaning and straightening is due to a past impetus, but by straightening, the tree shows that it has regained apical dominance and, in most cases, will ultimately balance the crown. In scenarios where trees are unnaturally leaning as a result of wind, ice, or snow loads, a hazard may occur. Poor soil

conditions, mounding and cracking of the soil behind the leaning tree, and exposed roots protruding from the soil all identify an unnatural lean, this is where the tree is in danger of completely falling over.

During the inspection process the arborist needs to evaluate the tree and make a determination as to whether or not the tree can or should be saved. Trees that are severely disfigured or have lost much of their crown need to be removed. But trees that may only have several broken branches or a broken leader can and should be saved. If the tree has lost some of its crown but the root system is intact, removing damaged branches and pruning remaining leaders to encourage one to become apically dominant will help preserve the tree. Subsequent pruning will likely be necessary, as will continued tree risk inspections to ensure the tree has not become a hazard.

When pruning broken or damaged branches from the tree, make proper pruning cuts to help the tree callus over the wound. Natural target pruning will result in a healthier tree with fewer internal defects and less suckering around pruning cuts. In most cases the pruning of branches is accomplished with 3 cuts of the saw. By using 3 cuts instead of just one top cut we can eliminate any ripping of the bark down the trunk of the tree. With large branches, in addition to using 3 cuts, the weight of the branch will also have to be supported with a lowering rope. Bark rips are common in the springtime if the pruner is not careful.

Now is the time to take a look around the properties that you are responsible for, make sure that you inspect the trees and have a great season.

### **Find a professional!**

Lastly the MCA inspector needs to set up a management plan to deal with the problems found during the inspection process. For additional information and to determine what is best for your trees, contact the Tree Care Industry Association at 1-800-733-2622 or the Massachusetts Arborist Association at 508-653-3320.

H. Dennis P. Ryan, Ed.D. & Brian Kane, Ph.D.  
University of Massachusetts, Amherst  
Department of Environmental Conservation