



Identifying Hazard Trees

Christopher Reeves, Forestry

Trees provide unique benefits such as natural beauty and wildlife habitat, and can enhance property values. However, trees with significant internal rot or damage could pose threats to life and property. With proper planting, maintenance, and pruning, a majority of the rot or damage could be minimized. This factsheet will help to identify hazardous trees and what actions to take to prevent future creation. However, this factsheet does not replace professional assistance. Consider contacting a professional forester or arborist for specific recommendations on hazard trees.

Where to Look

Trees that are near structures or areas where people congregate should be prioritized for inspection and identification. Trees near picnic areas, ATV trails, horse-

back riding areas, houses, camping areas, and other recreation sites should be routinely inspected because of the greater potential for devastating losses. While there may be hazardous trees throughout an entire woodlands, frequent inspection of all of these trees would be costly and time consuming. Trees far from the areas people frequent are less likely to cause damage and are not considered true hazards. Focus your attention on improved property and areas people use for recreation to find priority hazard trees.

as loose bark are a warning sign of a hazard tree. Piles of sawdust or crumbling wood at the base of trees indicate that there is some form of damage within the tree. Unlike regular wood, rotten wood is soft, mushy, crumbling, or may be completely missing, leaving a hollow or cavity. Small amounts of decay and rot do not necessarily mean the tree is hazardous, but large amounts of rotten wood should not be ignored.



The presence of rotten wood or a hollow cavity could mean that this tree is a hazard.

Christopher Reeves, UK Forestry Extension

Dead branches may also be present in the canopy of trees.

Dead branches are easy to spot in the spring and summer before leaves are present. Once the leaves have fallen, healthy trees can be determined by the presence of fine, small branches. These smaller branches are commonly the first to break when a tree is injured or dies. Heavy winds will snap off the inflexible dead branches.

Large cracks that go into and below the bark into living or dead wood should raise immediate red flags that signal a hazard tree. These cracks indicate that the wood and tree are beginning to fail and could potentially damage life and property.

Trees that exhibit poor form are susceptible to creating hazards. Trees should have full, balanced, and symmetrical crowns. Bad pruning, topping (a complete removal of the upper branches of a tree), improper planting, and storm



Large cracks demand immediate attention.

Joseph O'Brien, USDA Forest Service, Bugwood.org



A tree is only a hazard if it has the potential to harm life or property.

René Williams, UK Forestry Extension

Characteristics

Several factors indicate that a tree is hazardous. The first and most obvious is rotten wood: Is there exposed wood that is rotten or decayed? External indicators such



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damage can cause poor form. Trees that lean are at a greater risk of falling and creating a hazard. Trees with abnormal shapes, such as those with more branches on one side, could be hazard trees. Trees that have multiple branches sprouting from a single location (maples, elms, and pear trees commonly have this condition) often are susceptible to breaking at these weak unions.

Prevent Damage to Trees

Most of the damage agents that cause hazardous trees can be prevented by a few simple actions. Inspect your potential hazard trees often, particularly after wind, thunder, or snow storms. Proper pruning can limit or prevent characteristics of hazard trees from developing. In addition to removing the immediate danger of



During the spring and summer potential hazard trees are easy to spot because they have dead leaves or no leaves at all.

Reneé Williams, UK Forestry Extension

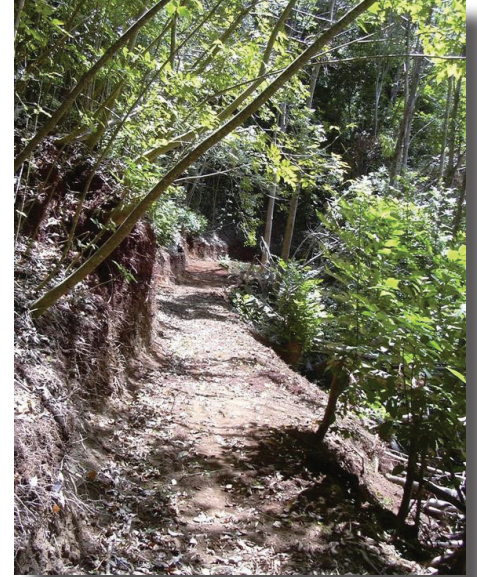
a dead branch, pruning can remove and prevent decay from spreading to the rest of the tree. Avoid stripping bark off the main stem, and do not flush cut branches or leave stubs when pruning. (Review *Pruning Trees* [FORFS17-07] for a description of proper techniques.)

Minimize soil disturbance around trees to avoid the creation of hazard trees. Avoid building trails, roads, or other construction near trees. If a road is built directly under the canopy of a tree, there's a good chance the tree will eventually die or have significant damage. A new road could disturb and compact the native soil as well as remove some of the tree's root system. When nearby construction does take place, consider erecting a physical barrier to protect specific trees. Temporary fencing or caution tape stretched between poles or stakes should

be installed to ensure that trees are protected during construction activities.

Take Action

If a hazard tree is suspected or identified take action as soon as possible. The tree can be pruned to remove dead branches or completely cut down. Contact a forester or professional arborist for their expert opinion, potential treatment options, and safe removal options. Work with an arborist who is certified through the International Society of Arboriculture. Arborists can be found through internet searches, the yellow pages, or word-of-mouth recommendations.



Trail and road construction can seriously damage the root system of trees and create hazard trees.

Forest and Kim Starr, Starr Environmental, Bugwood.org

For More Information

Kentucky Division of Forestry:
<http://tinyurl.com/KDFUrbanForestry>

International Society of Arboriculture:
<http://www.isa-arbor.com/>

References

How to Recognize Hazardous Defects in Trees:
NA-FR-01-96. Radnor, PA: U.S. Forest Service, Northeastern Area State and Private Forestry. http://na.fs.fed.us/spfo/pubs/howtos/ht_haz/ht_haz.pdf.

Hazard Tree Prevention:
www.pnwisa.org/media/htp/index.html.