



Decay Can Cause Hazardous Defects in Trees

Tree failure is a major cause of residential property damage, as well as the leading cause of power outages nationwide. An ice storm can overload all the branches on a tree, a hurricane or high wind can blow down a tree if its roots are compromised, or a cracked tree can fail under its own weight.

We recently had two emergency calls within a week after the Deerfield Valley experienced a windstorm on October 31st. In both cases, evergreen trees had fallen on our client's houses. When the trees were removed, we discovered that there were hidden defects (decay) inside the trunk that had caused the tree to break.

Healthy trees are designed to withstand most storms, but all trees can fail and defective trees fail sooner than healthy trees. A sound tree becomes potentially dangerous when the tree's woody structure is weakened by one or more defects. During storms, pre-existing defects predispose trees to failure. There are seven categories of defects: decayed wood, cracks, root problems, weak branch unions, cankers, poor tree architecture, and dead trees, tops, or branches.

Healthy, well-maintained trees growing on suitable sites will be able to minimize the extent of decay and other defects. Trees that are stressed have reduced energy reserves, and therefore have less ability to deal with wounds and decay.

Most urban trees survive on construction-altered soils that may be compacted, poorly drained, high in clay, sand, or gravel, very alkaline or littered with construction debris. Additionally, many urban trees are subjected to chemicals such as deicing salts, herbicides and fertilizers commonly used in landscape maintenance. Poor tree maintenance is another contributor to stress. These cumulative stresses all take a toll on tree vitality and structural integrity, increasing the risk of failure.





Defects and Decay

All defective trees cannot be detected, corrected or eliminated. Although a professional arborist can readily recognize most defects, there are some root problems and some internal defects that are hidden. Homeowners should also keep in mind that defects change with time. A tree that looked fine three years ago may have severe problems today. Advanced decay and cavities result in less structural strength and reduced stability. Wood decay is an internal process with just a few external indications, such as mushrooms, conks, rotten or punky wood, cavities, hollows, holes, in-rolled cracks, and bulges in the wood. Unfortunately, there are sometimes no external indicators to warn you that there may be a problem.



We, at Black Diamond Tree Service, have an understanding of the factors that create or accelerate the development of defects in trees. We also understand that some species have growth characteristics that make them prone to certain defects. By doing regular inspections, arborists can successfully manage the risk of tree failure. If you are concerned about a tree, we are happy to assess it and work with you to determine the safest course of action.