

Recognizing and Mitigating Hazardous Trees on Scout Camp Properties

Conducting a safe outdoor program is an essential method of Scouting, and many of the activities that take place on our Scout camp properties occur in the woodland. Forested areas provide some of the best campsites and program areas. Forest trees provide shade and aesthetic beauty that significantly contribute to the camping experience. Trees are fantastic!

Unfortunately, sooner or later, every tree will eventually die or become weakened by decay or defect. When this occurs, these trees could become hazardous and should be evaluated and properly mitigated. It is important for Camp Rangers, Camp Directors, Council Conservation Committees and Properties Committees, as well as other property managers to be able to recognize hazardous trees that could potentially cause harm to buildings, recreation areas and most importantly, our camp visitors. This white paper provides valuable information related to hazardous trees that camp managers should consider when operating camp facilities in forested areas.

What is a hazardous tree?

A hazardous tree is simply a tree that contains a defect and is situated within striking distance of a target. A defect can be any condition that weakens the tree and could cause structural failure. A target is a facility or resource near the tree that could be damaged if the tree were to fail. A healthy, sound tree without defect, growing next to a cabin is a valuable resource and should be retained. Likewise, a tree with a significant defect growing in a distant area where there is no target is likely not hazardous.

Recognizing Hazardous Trees...

First, there is no perfect way to determine if, and when a tree is going to fail. For example, a perfectly sound tree can come down in a severe weather event, with no warning. Trees that are stressed by drought, and healthy trees growing in saturated soils can be more susceptible to failure or wind-throw. Newly created forest clearings, timber harvests or other disturbances can change wind currents in the forest canopy which can result in subsequent failure of seemingly healthy residual trees.

However, a trained eye can identify visible signs of defect that can be indicators of potential tree failure. We can identify signs of decay, structural concerns or other signs of potential failure and consider safety mitigations when warranted. *Photo: The base of this tree is severely decayed offering little structural support.*



Conducting a Hazardous Tree Assessment...

It is important to conduct an assessment prior to each camping season. A simple walk through, looking at all trees within striking distance of facilities and recreation areas can be done to identify conditions that should be mitigated. Be sure to evaluate at all sides and parts of the trees, including the sides of trees that are facing away from the recreational facility. Trees that are utilized on COPE Courses, particularly those with cabling and other hardware should be carefully evaluated. Reevaluate trees in recreational areas after severe weather events, forest fires, and forest harvest activities to ensure there are no broken tops, hanging branches or other structural issues, before opening the areas to recreation. Determine which trees should be removed or monitored. In some cases, it may be appropriate to relocate the tent or recreational site until the hazard is mitigated.

Here are some common signs that may cause a tree to be considered hazardous...

- Cavities and woodpecker damage are signs of decay and structural weakness.
- Mushrooms growing from the base of the tree or in the root zone, indicate potential root rot disease and decay.
- Shelf like fungi growing on the trunk of the tree is an indicator of internal decay.
- Sawdust or frass accumulating at the base of the tree could indicate the presence of wood boring insects and decay.
- Crown dieback or dead branches can be an indicator of tree decline and may pose a hazard.
- Unnatural lean or soil lifting on one side of the tree can indicate that the tree is potentially about to uproot.
- Ants or other insects take advantage of rotten heartwood and can be an indicator of a hollow or rotten core.



- Cracks, seams, and tight branch crotches are all poor structural arrangements that could lead to failure.
- Dead trees or snags will shed dead branches and eventually fail.

Photo: This tree contains a cavity and accumulated sawdust indicating rot and insect activity.



Where can I get technical assistance?

If you need a professional opinion, professional foresters and arborists can provide technical assistance.

Consider your state forestry agency or your service forester. Often, service foresters can visit the camp and give you some recommendations or local state-specific advice. Often technical assistance provided by the state is free or at a reduced rate. Private consulting foresters may also be available in your area. Foresters are certified by the Society of American Foresters (SAF) and may be required to possess a professional license in certain states. In most states, foresters are required to have completed a 4-year degree in forestry from an accredited college or university.

Arborists may also be available to conduct hazard tree evaluations. Arborists are certified by the International Society of Arboriculture (ISA) and may also be required to possess a professional license in certain states. Certified Arborists are highly qualified practitioners and must pass a difficult test based on knowledge and proficiency to become certified. When hiring a professional, it is important to confirm that the individual is insured and licensed if appropriate.

Photo (left): A vertical crack indicates imminent structural failure, and the proximity to a road creates a hazardous condition.

Consider salvage value...

Occasionally, there may be situations where hazardous trees have salvage value. Consider obtaining assistance from a professional forester if there are multiple large trees that need to be removed or if the trees have commercial value. Sometimes, the value of the trees to be removed can offset the cost of the removal, or even generate a profit for the camp. A forester can provide advice related to tree value, local markets and timber harvesting procedures in your state.



Photo (right): A partially uprooted tree is an obvious hazard.

Need additional assistance?

Subject matter experts, foresters and arborists are available through the BSA National Conservation Program.

Email conservation@scouting.org for assistance.