

HAZARDS, DEAD TREES

ARE ONLY A FEW ISSUES TO CONSIDER FOLLOWING WILDFIRE

A landowner may face a bleak landscape and be unsure how to respond following a wildfire.

Safety is the most immediate concern. As suppression efforts wind down, crews will work to clear out some hazards, such as trees, that pose a danger of falling. This type of work is usually concentrated in higher-use areas, such as along roads, trails, fire lines, and public areas.

Remote or interior areas will likely have not been assessed or treated for hazards. Don't assume hazardous conditions have been addressed by fire crews prior to a landowner's return.

Burned Trees Post Multiple Hazards

Burned trees may pose a hazard in three ways. Fire does not just burn above ground; stumps and root systems are also consumed leaving holes and hollow areas below the ground. A person can easily stumble into these holes or have the earth give way above a burned-out root system. Immediately following a fire, these pockets may still be hot and pose a burn risk.

The fire may have consumed a significant portion of a tree's root system or lower trunk, although the tree is frequently left standing. These trees may fall at any time, even without wind. Fallen trees may get hung up in the branches of other trees and break away at a later time. Upper portions of the trunk and branches may have been partially consumed in the fire, yet still retain a fragile connection to the tree. Again, these may break away from the main tree without warning. Wind will exacerbate the problem.



Identify Potential Hazards

When first returning to a property following a wildfire, conduct a site assessment to identify potential hazards. Mark identified hazards with spray paint, flagging, or survey flags and notify other family members, guests, and contractors of their locations.

Hazardous trees close to structures, utility lines, main access routes, and any high-use area, should be addressed as soon as possible. In many cases, this work should be done by a professional because the tree's instability will make handling difficult and dangerous. Hazard abatement should continue outward from priority areas.

Most trees within the burn area will not pose an immediate hazard, although landowners should carefully consider future forest management needs and options. Tree survival and death is largely dependent on fire severity, which is influenced by factors such as live tree density, dead and down woody debris, terrain, and weather conditions. Trees may survive in a range of conditions from untouched to severely damaged.

Even in cases of severe fire behavior and high tree mortality, most trees are not completely consumed, and the main trunk will remain standing although the leaves/needles and branches may be gone.

Plan to Remove All Dead Trees

Dead trees, particularly in large numbers, will eventually pose a hazard and a nuisance. Landowners should consider having them removed within five years of the burn. All dead trees can be expected to eventually fall with the potential for death and injury, damage to buildings, property, and other infrastructure, and obstruction of roads and trails.

These dead trees will also contribute to fuel loading on the property and will significantly increase the future threat of wildfire. Cleanup of dead trees can represent a considerable cost to a landowner, although this should be weighed against such factors as injury, damage to structures and utilities, and continual maintenance needed to keep roads and trails open.

At a minimum, consider removing all dead trees in areas that receive regular human use and within a tree's length of structures, utilities, and access routes. This is especially important for smaller properties where uses are more concentrated.



Firefighter Brian Pickard watches for falling tree limbs while fighting a forest fire with his crew, Sunday July 8, 2012, near Big Piney. (Photo: Dave Weaver / Shutterstock.com)

Dead trees that were not severely burned may still have a use for timber, posts and poles, and firewood. Markets are currently weak and the glut of dead trees will depress values further, but salvaging the dead wood for products could possibly offset some of the cost of cleanup.

Following a wildfire, there is approximately a three- to five-year window in which the wood can be expected to be useable. What was usable for timber in year one may only be fit for firewood by year five. Some commercial operators dislike handling recently burned wood as it is hard on saws, and firewood customers don't like to purchase dirty firewood. If not salvaged quickly, wood borers may destroy a tree's timber value.

How to Know Which Trees to Keep?

Knowing which trees to remove and which to keep can be problematic. Damage assessment is not always straightforward. Color can be a good indicator of condition. If a tree retains a bright green color in most of its branches, that is a good indicator damage was slight and survival probable. A predominant yellow-green color indicates significant damage and, depending on the extent, the tree might survive in a weakened state or die later. Many trees "cook" rather than burn, exhibiting a rusty brown color, which usually indicates severe damage. If extensive, the tree is likely dead or will die soon. Judging tree survival is usually easier the next growing season after a fire, and a landowner may choose to wait a year to determine which trees to keep.

Mountain Pine Beetles Like Recent Wildfire Areas

Mountain pine beetle infestations are common following a wildfire. Trees weakened in a fire are particularly susceptible to MPB; this native beetle targets stressed trees. A key indicator of an MPB infestation is globs of pitch on the trunk. Given their stressed condition, these may be absent on infested trees. Another indicator of infestation is sawdust-like material (frass) that collects in bark crevices and at the base of the tree. Trees may be infested from late spring through the summer depending on the elevation. A new generation overwinters in the tree and emerges in late spring to early summer. An infested tree will fade and turn brown the summer following the year of infestation. The emerging beetles will normally infest trees near the original infestation.

Once infested, there is nothing a landowner can do for the infested tree. Infested trees are typically removed before the beetles can emerge and infest other trees. If MPB are active on or near a property, a landowner might consider preventively spraying trees with a chemical such as Carbaryl (trade name Sevin) or permethrins (trade names Astro, Dagnet). The chemical must be applied before infestation occurs. Spraying is an expensive option and should not be applied indiscriminately. Focus spray treatments selectively on high-value trees.

For more information, contact Wyoming State Forestry Division at lands.state.wy.us.

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