

## REDUCING HAZARDOUS FUELS ON WOODLAND PROPERTY

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# Pruning

**P**runing is removing the lower branches of trees (Figure 1). Increasing the distance between the ground and the lowest tree branches reduces the likelihood that a fire on the ground will use the branches as a ladder to move into tree crowns. A crown fire is more difficult to control and can advance much more rapidly than a surface fire, under certain weather conditions.

Pruning is a particularly effective fuels-reduction technique when combined with other forms of treatment such as thinning.

Dead and live branches are removed with a hand-held pruning saw or with loppers. A pole saw allows removing branches up to 10 feet from the ground (Figure 2). Pruning can be done on sapling-size and larger trees. To maintain tree vigor, pruning should remove no more than 50 percent of the live crown.

Pruning adds fuel to the forest floor. To reduce the risk of this added fuel, the branches can be chipped and scattered or piled and burned (Figure 3). Make burn piles in openings away from trees, to avoid scorching tree crowns.

Commercial pruning costs range from \$50 to \$250 per acre depending on pruning height and number of trees per acre to be pruned. Pruning is particularly cost-effective around structures,

where other forms of fuels reduction might be too dangerous or otherwise impractical.



Figure 3. Pruned stand, in which branches are piled and ready for burning. Photo: Stephen Fitzgerald.



Figure 1. Pruned ponderosa pine. Photo: Stephen Fitzgerald.



Figure 2. Pruning Douglas-fir with a pole saw. Photo: Stephen Fitzgerald.

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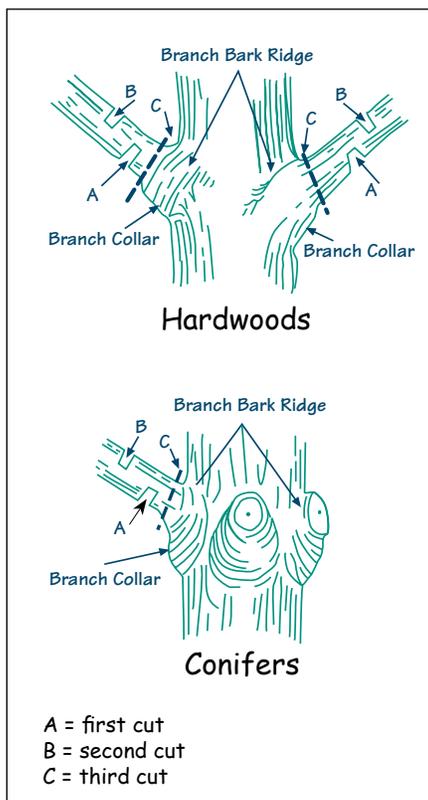


Figure 4. Pruning technique. Prune flush with the branch collar. Avoid leaving stubs, and avoid pruning flush with the trunk; both will prolong the healing process.

## Pruning guidelines

- To remove ladder fuels, prune limbs up to 8 to 10 feet from the ground.
- Avoid pruning more than 50 percent of the live crown at any one time. Be sure to leave the tree with at least a one-third live-crown ratio (that is, with a live, green crown that is at least one-third of the tree's total height).
- Use a sharp tool and make clean cuts.
- Use proper pruning techniques; avoid flush cuts and “coat hangers” (Figure 4).
- In hardwoods, prune during the dormant season.
- In conifers, avoid pruning in spring and early summer, when the sap is flowing, to reduce the potential for pitch moth attack.
- Don't paint pruning wounds with dressing. It's not effective and might even seal in decay organisms.
- Dispose of pruning slash to reduce fire risk (see *Reducing Hazardous Fuels on Woodland Property: Disposing of Woody Material*, EC 1574-E).

Table 1.—Summary of considerations in pruning.

Consideration	Details
Objective and effectiveness	Remove ladder fuels. Particularly effective around structures and in young stands where live branches are low.
Other treatment required?	Chipping, or piling and burning pruned branches
Use near home?	Yes
Equipment needed	Loppers, pruning saw, and/or pole saw
Suitable vegetation types	All conifer and broadleaf trees
Topography limit	None
Use in riparian zone?	Suitable
Production potential (number of trees/day)	Depends on pruning height and number of trees per acre
Cost range	\$50–\$250 per acre
Site disturbance	Minimal
Insects and diseases	Best done October through February when pitch flow, which can attract harmful insects, is minimal.
Maintenance	Repeat every 3 to 5 years until lowest branch is above reach of pole saw.