



UI Extension Forestry Information Series II

Fire No. 7

Maintaining Fire Resistive Landscapes

Chris Schnepf and Tim Prather

Forest fire: not if, when. Forest fires are a natural part of Idaho's ecology. Historically, many forested areas now occupied by homes had ground fires every 5-40 years and crown fires every 200-250 years. Forest fire suppression and other factors have made fires even more likely. The question isn't if forest fires will occur but when! Rural Idaho residents should view wildfire the same way people in the Midwest view tornados - a common natural phenomenon that can devastate property and life - and prepare accordingly.



Many people have heeded the warning about fire in north Idaho landscapes and removed fuel ladders between their home and landscape and between trees in the surrounding landscape.

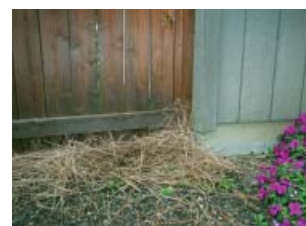
However, maintaining a fire-resistant landscape is not a one time-effort.

Nature abhors a vacuum. Creating more spaces between trees means more light will reach the forest floor. There will also be more moisture and nutrients available for plant growth. All of this means remaining understory plants and trees will grow larger and faster (especially younger trees), and new plants have a more favorable environment to germinate and grow. To make matters worse, the tree species that tend to regenerate in these partially shaded environments tend

to be shade tolerant species such as Douglas-fir and grand fir. Douglas-fir and grand fir are typically less resistant to insects, disease, drought, and fire than shade intolerant species such as pine or larch. To maintain a fire-resistive landscape, plants and plant litter must be continually monitored and modified or removed as needed.

Plant litter around structures. Research from the USDA Forest Service Forest Sciences Lab in Missoula indicates that fuels for fire and other factors closest to the home have the greatest influence on whether a home burns down in a forest fire.

Pay extra attention to flammable materials that contact the house. Keep the roof and gutters cleaned of needles and other debris.



Don't allow plant litter deposited by wind into corners or at the foundation of the house to accumulate - burning embers may easily collect in the same places!

Trees. If trees have just a few branches within 10 feet of each other, prune them back. If adjacent trees have many branches crowding together, it may be time to thin out a few more trees. This will also improve the health of the remaining trees. Prune dead branches as needed. Cut seed-

lings periodically after they emerge in the understory.

Grass. A green turf is very fire resistive, so if you can, keep your lawn well-watered through the summer. Longer watering cycles (1" to 1.5" of water per week in 1-2 waterings) will maintain a healthy sod for most soils. If you cannot keep the grass watered, keep it trimmed low, especially close to the house. At the edge of your landscape, establishing a low-maintenance, low-growing grass, such as sheep fescue or hard fescue (both of which are very competitive) will help reduce new tree or shrub establishment.

Brush. Mechanical Control. Fuel hazard from northern Idaho brush species can be reduced by cutting plants off at the base. Many Idaho shrubs will frequently re-sprout vigorously from latent buds in the root crown (an adaptation to top removal by fire), especially on stems smaller than 2 inches thick. Repeated trimming is usually necessary to maintain reduced fire risk. Mid-summer is the best time to do this.



Depending on the job, a variety of tools can be used for mechanically controlling brush, ranging from loppers and pruning shears on smaller jobs, to chainsaws or clearing saws for multiple stems or stems larger than 1 inch. For smaller diameter stems, brush mowers, brush hogs, or similar devices may be used. Regardless of the

tools used, take proper safety precautions (e.g., protective eyewear, chaps for chainsaw use, etc.)

Mulch. Mulch can help suppress understory plants but remember; bark, wood chips and other organic materials will burn - keep them away from the base of structures (use rock or other non-flammable material instead). Do not make the mulch deeper than one inch, to avoid interference with root activity and tree health.

Livestock. Sheep or goats may also help maintain brush at a low level. Time grazing to late spring or early summer (not early spring) to minimize soil impacts. Later grazing also reduces plants' ability to regenerate because of drier soils.

Herbicides¹. Herbicides control brush species efficiently, and if label directions are followed, the effects on other forest values (beyond removing the brush) are negligible. There are many methods of killing brush with herbicides, but the most common for landscape maintenance are stump treatments, basal bark treatments, and foliage treatments.

- **Stump treatments.** You can effectively reduce sprouting by immediately (within an hour) applying a very small amount of undiluted herbicide to the perimeter of freshly cut stump surfaces. Immediate application is important; otherwise the plant quickly develops a protective wax layer over the wound.
- **Basal bark treatments.** Some herbicides can be applied directly to the stems at the base of the plant. These applications usually require a specific additive (described on the herbicide label). They may be applied during either the growing season or dormant season. For example, both "Banvel" and "Forestry Garlon 4" labels have dormant stem treatments for small diameter brush. Brush would still have to be cut and removed after killing it to maintain fire resistance.
- **Foliar treatments.** Foliar sprays involve treating the whole plant after it is fully leafed out. Timing varies according to the herbicide used, and is important to make sure the herbicide is moved by the plant into the roots to minimize re-sprouting. Avoid applying the herbicide until the spray drips off the plant, since this indicates you are applying more herbicide than necessary. Again, brush would still have to be cut and removed after killing it to maintain fire resistance.

¹ To simplify information, trade names have been used. No endorsement of named products is intended nor is criticism implied of similar products not mentioned.

Herbicide Products. Several herbicide brands are sold to kill brush. Brush control herbicides available in local home & garden stores frequently include triclopyr (e.g., “Blackberry and Brush killer”, “Brush-B-Gon”) or glyphosate (e.g., “Round-up”).

Brush control herbicides targeted to larger forest owners or commercial contractors for forest use are often packaged differently (e.g. in larger containers) and may have to be specially ordered. These herbicides include: imazpyr (e.g., “Arsenal”), glyphosate (e.g., “Accord”), 2,4-D, triclopyr (e.g., “Garlon”), picloram (e.g., “Tordon”), dicamba (“Banvel” or “Clarity”), or combinations of these (e.g., 2,4-D and triclopyr in “Crossbow”). Some of these herbicides have specific state regulations such as requiring an applicator’s license and restrictions on how close they can be applied to a home. The herbicide labels will list plants controlled by the herbicide.

Regardless of the herbicide, always read and precisely follow the label recommendations before purchasing and using it. For current recommendations for specific brush species, consult the Pacific Northwest (“PNW”) Weed Management Handbook, which is updated annually by Pacific Northwest Land Grant Universities and available online at: <http://weeds.ippc.orst.edu/pnw/weeds>.



Maintenance now, not later. You never know whether this year will be the big fire season for your neighborhood. By maintaining a fire resistant home and landscape, you are always prepared for that fire. For more information on the topics discussed here stop into your local UI Extension office.

Recommended Maintenance Schedule

Continually keep lawns watered and mowed.

Annually replenish mulch as needed; clean needles and leaves from gutters, roof, and inside corners of house.

Every 2-3 years remove newly germinated seedlings and shrubs; trim brush and tree branches obscuring house signs.

Every 5 years trim trees branches that touch buildings and adjacent trees; check and maintain 10 foot clearance on sides of roads and driveways to ensure firefighter access.

This article first appeared in Woodland NOTES, Vol. 14, No. 2, Spring/Summer, 2003.

About the authors: Chris Schnepf is an Area Extension Educator – Forestry and Professor at the University of Idaho.

Tim Prather is an Extension Specialist – Weed Ecology and Associate Professor at the University of Idaho.