 UI Extension Forestry Information Series

## Landscaping for Fire Prevention

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Towns and cities are spreading into the surrounding countryside as more and more people move out to the woods. If you live on forested property, or are considering building there, you are part of the growing *wildland-urban interface* – where the urban environment meets the wild.

Idaho is part of a large area of the United States with fire-based ecosystems. Fire has been a natural part of our ecological history, and will continue to be so. Wildfires can be very destructive, destroying homes and property and placing firefighters at risk. Residents of the forested areas of Idaho should view wildfire the same way residents of the Midwest view tornadoes – an expected natural phenomenon that can devastate property and life – and prepare accordingly.

**Landscape materials.** Before any discussion of fire resistive plant materials, this point should be made clear – *there is no plant species that will not burn*. All plants will burn if there is enough heat and other conditions are right. The term “fire resistive” is used when referring to plants that are *less* flammable than others.

Plants that readily ignite and burn intensely, known as *pyrophytes* or “fire-prone” plants, typically share similar characteristics. They:

- are usually blade-leaf or needle-leaf evergreens.
- have stiff, leathery, small, or fine lacy leaves.
- have leaves and wood containing volatile waxes, fats, terpenes, or oils.
- are typically aromatic (crushed leaves have strong odors).
- have gummy, resinous sap with a strong odor.
- usually accumulate fine, twiggy, dry, or dead material.

- may have pubescent (hair covered) leaves.
- may have loose or papery bark.
- are plants that flame (not smolder) when preheated and ignited with a match.

Plants that are “fire-resistive” share the following characteristics. They:

- have little or no seasonal accumulation of dead vegetation.
- have an open, loose branching habit.
- have non-resinous woody material.
- have a low volume of total vegetation.
- have high moisture content in leaves.
- are drought tolerant.
- are slow growing.
- are well maintained.

The single most effective way to protect your home from wildfire is by creating defensible spaces. Defensible space involves creating concentric zones around structures, with increasing fire resistiveness in zones closest to structures. Plants in each zone perform a distinct function. The transition areas between zones create breaks to slow advancing flames. A minimum distance of 100-150 feet around your home needs this type of comprehensive landscaping. Greater defense distances are necessary on steep slopes or windswept exposures. Figure 1 shows and describes the four defensible zones.

**Landscaping Maintenance Procedures that Reduce Fire Hazard.** In maintaining defensible space, you must actively reduce fuel accumulation by regular pruning, mowing, raking, and disposal. The less accumulated plant debris, the slower a fire will spread. Reducing the amount of fuel limits the fire’s

intensity and shortens the time until firefighters can directly attack the flames. To modify existing vegetation to reduce fire hazard:

- Remove, or mow, tall grassy fuels for 30 feet around all dwellings.
- Remove highly flammable shrubs form around each home for a distance of not less than 100 feet.
- Thin shrubs growing 100 feet and further from each house into individual plants. Such thinning should be carried out to a distance of five times shrub height.
- Apply all known cultural practices (irrigation, fertilization, etc.) that improve health and vigor of trees/shrubs around home sites.
- Shrubs should not be planted at the base of structures, and should be kept well-watered and pruned.
- Keep tree branches at least 15 feet away from chimneys and stove pipes, which should be covered by screens. Tree branches should also be kept at least 15 feet from utility lines and roofs.
- Store firewood 30 to 100 feet from any structure, and create a defensible space around the pile.
- Make sure you clean the debris from your roof and yard several times a year.
- Remove dead shrubs and trees.
- When possible, keep the surrounding forest healthy by thinning trees, controlling insect and disease problems, and reducing fuel accumulations.
- Eliminate “ladder fuel” configurations in vegetation growing 100 feet and further (ladder fuel configu-

ration refers to the growth of a plant community in a succession like the rungs of a ladder – leaves, grasses, short shrubs, tall shrubs, and trees of various sizes). Removal or alteration of these “rungs” reduces the chances for the fire laddering up into a more destructive crown fire.

- Thin trees to 10 feet or more between crowns to reduce the probability of fire moving laterally between crowns.
- Prune trees to raise the lowest level of the crowns 6 to 15 feet from the ground to reduce the probability of a surface fire getting into crowns. Prune out all dead branches.

Life on the urban-wildland interface is enjoyable, but not without danger. In western forest environments, wildfire should be anticipated and planned for, not unexpected and dismissed. Taking the steps presented here to protect your property will increase your chances of escaping serious damage and death from wildfire.

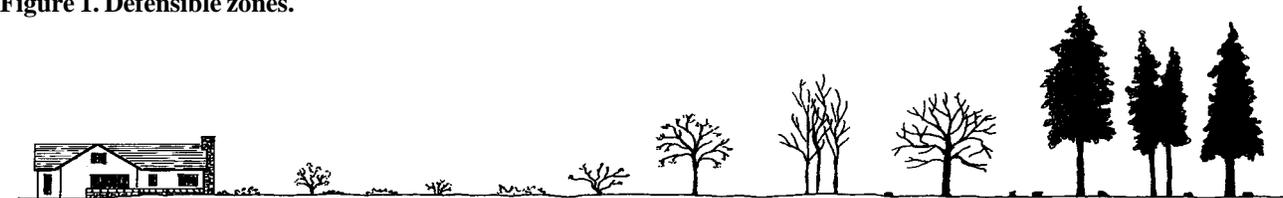
For more complete information contact your local Cooperative Extension Office or fire protection district.

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**Figure 1. Defensible zones.**



**Zone 1: Moist and trim.** In zone 1, low-growing plants which resist catching fire and provide little fuel are used. Turf, perennials, groundcovers, and annuals form a greenbelt that is regularly watered and maintained to eliminate dry plant litter. This zone may contain individual shrubs and trees located at least 10 feet from the house.

**Zone 2: Low and sparse.** In zone 2, slow growing, drought-tolerant shrubs and groundcovers are used to keep fire near ground level. Native vegetation can be retained here if it is low growing, does not accumulate dry, flammable material, and is irrigated.

**Zone 3: High and clean.** In zone 3, native trees or shrubs are thinned and dry debris on the ground is removed. this zone requires removing overgrowth and pruning trees every three to five years. Specimen trees can be planted at the edge of this zone, if well cared for.

**Zone 4: Natural area.** Zone 4 is composed of native plants that are selectively thinned. if possible, highly flammable vegetation is removed and replaced with less fire-prone species.