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Prescribed Burning: A Natural Way to Manage Ecosystems

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Prescribed or controlled burning is a term most people have heard, but don't necessarily understand. Smokey Bear and Woodsy Owl taught us that fire is "bad" for the forest and it's inhabitants and we should prevent and extinguish forest fires. Actually, fire is a natural process in forest ecosystems. Fires can rejuvenate plants, release and recycle nutrients, reduce hazardous fuel accumulations, and improve wildlife habitat and forest diversity.

Fire is a common natural disturbance. Prescribed fires may be ignited by people or lightning, and are allowed to burn under designated weather and fuel conditions that meet management objectives. These fires burn within a designated area that prevents damage to people and property.

Although fires are generally less frequent now than during the 1700 and 1800's, fires are common in forest ecosystems. Most plants and animals are well adapted to survive fires, and usually thrive under post fire conditions. Prescribed burns can:

- *Reduce fuels.* Burning fuels before they can feed a damaging fire is often done following timber harvests. Prescribed fire can be used with thinning, pruning, and clearing brush and logs to remove fuels from around homes. This creates defensible spaces and helps safeguard homes from wildfire and assists fire fighters in controlling them.
- *Prepare sites for reforestation.* Preparing sites for natural or artificial regeneration of trees is a common use of prescribed burning.
- *Improve grazing.* Prescribed fires are widely used on rangelands and forests to promote the growth of more nutritious forage.
- *Maintain specific plant species or ecological communities.* Fires can be prescribed to favor plant and animal species that thrive in more open conditions.

Prescribed burning is only applied in stands of trees that are tall enough for the foliage to escape the heat from the fire and have thickened, heat resistant bark on the lower trunk. The burn should be carefully planned and conducted by experienced individuals. The area being burned should be carefully mapped, with special attention to the topography. Areas with pronounced slopes will create sufficient updrafts during the fire to burn with no wind. Level terrain will burn more efficiently with a gentle, steady wind. The treated area should be isolated by firebreaks completely free of vegetation and surface litter.

Weather conditions must be chosen carefully to burn safely and economically. These conditions include low relative humidity, little or no wind, cool daytime temperatures, and the proper moisture content of the fuels and soil.

Other factors to consider are: the accessibility of the site; the amount of fuels on the ground; the method of ignition; and the time of year. Idaho air quality regulations are becoming more strict and may prevent scheduled burning if air quality is rated poor. The North Idaho Smoke Management group coordinates burning activities among federal and state agencies and private industrial land managers in limiting smoke production to maintain air quality.

Typical methods of prescribed burning include *backfires* set to back into prevailing winds, or downslope or *strip head* fires, which are ignited in narrow strips and burn uphill or with the wind until they reach a

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firebreak or a previously burned strip. Prescribed burning details vary according to the species and burn objectives.

Several forestry consulting firms offer prescribed burning services. Their prices vary according to the site to be burned, the acreage and difficulty of the burn, amount of fuels, time of year, availability of water, method of ignition, and who will assume the liability should the fire burn out of control.

Next time you see a fire in the woods, remember; it may not be the disaster that Smokey Bear taught us. It may be someone using a sound, natural forest management practice to improve their forested land.

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