For more information about the environmental benefits of controlled burning check out the Fire Learning Network web page at www.tncfire.org

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controlled burning

for Healthy Forest Management in the Appalachians

What is a Controlled Burn?

A controlled burn is a planned burn used to accomplish specific goals. These goals are documented in a burn plan, or prescription. Land managers use fire as a management tool to improve forest and grassland health. The plan is tailored to each burn area because differences in fuels, weather, and topography alter fire behavior. It also documents the acceptable weather conditions for burning and describes the techniques that should be used. The controlled burn plan ensures all precautions are taken to manage the fire safely.

Why Burn?

Land managers now recognize that fire used in controlled situations can promote healthy natural systems. A series of low intensity fires can thin crowded forests, resulting in less severe disease and pest outbreaks. Fire promotes native grasses and wildflowers and helps to regenerate oaks, which in turn increases wildlife populations. Controlled burns also reduce leaf litter and woody fuels that increase wildfire intensity. Fire, in the right place at the right time, is a land management tool that can offer numerous benefits for wildlife.

History of Fire in the Appalachians

Fire has a long history of transforming landscapes by influencing vegetation. Lightning-caused fires are uncommon in the Appalachians, but Native Americans intentionally set fires for thousands of years. They burned to help open the forest understory, which increased plant diversity, improved browse for wildlife, and made travelling easier. As a result, most forest communities have been shaped by fire.

Early European settlers continued to use fire as a tool to shape their surroundings. They used fire to clear land and saw that occasional fires kept ridgetops open and sunny, which increased wild blueberry crops and also provided benefits for grazing livestock. However, as time went on and human populations began to increase, fires began to be seen as destructive and state and federal agencies were created to promote fire suppression. Over time, this exclusion of fire has led to a dramatic change in our forests. Most of today's forests have a dense understory, less plant diversity, and are composed largely of fire intolerant tree species. This change in vegetation has in turn caused decrease in species diversity with a shift in wildlife species favoring those that tolerate closed canopy forest.

Controlled Burns Accomplish Specific Management Goals

Fire benefits upland oak-hickory forests, woodlands, and pine-oak savannahs by increasing the sunlight reaching the ground and promoting seed germination. Also, periodic fires reduce competition of fire intolerant species such as maples, beech, and white pine. Over time, upland oaks and pines gradually disappear from the landscape unless this competition is reduced. Studies of forest history show fire intolerant species were uncommon on these upland areas prior to fire suppression.

Historical records also indicate some plants and animals difficult to find in the Appalachians today were once commonly found. When fire is reintroduced, plants sometimes reappear where they have not been recorded in decades. Evidence shows a great many plant and animal species respond favorably in a fire-mediated habitat. The controlled use of fire, under the direction of skilled resource managers, promotes wildlife and healthy forests.