

## **Prescribed Fire is a Valuable Tool**

### **By Rett Davis**

The graphic scenes of destroyed homes, lives lost, and acts of heroism in California have made us aware of the dangers living in or near woodlands. California and other western states are questioning current forest management practices and the wisdom of increased development into fire prone environments. The increased use of 'prescribed burning' or controlled burns is often touted as a means to reduce wildfires.

Each winter I get to burn the woods legally. With a drip torch filled with a mix of two-thirds diesel fuel and one-third gas, I lay down a strip of fire as I walk through the woods. Within minutes fire spreads behind me, and visibility lessens as the woods become filled with smoke. My orange vest and yellow hardhat disappear in the smoke. I communicate by radio as to my whereabouts and fire conditions. The fire boss (one of our foresters) is prepared to slow it down or bring it to a halt. He travels along an 8 foot plowed fire line on a four-wheeler. A bulldozer is idling nearby to stop the spread of the fire if needed.

Prescribed fire is a planned fire. The primary benefit of this kind of fire is wildlife habitat improvement and reduced danger of a wildfire. Burning leaves and organic matter exposes millions of seeds to the sun that have laid dormant for years. These are food sources for songbirds, rabbits, turkeys, deer and many other animal species. A secondary benefit is to reduce competing invasive plants and hardwoods in forests dominated by pines. During the winter months the thick bark of pines tolerate fire but hardwoods do not. Only their roots survive.

An additional benefit is to reduce fuel, better described as brush, dried grass and dead wood. Fuel is subject to burning from lightning, a tossed cigarette or a campfire, especially during the summer and fall. These are the traditional causes of wildfires. A planned controlled fire, which is generally done every three to five years to keep fuel levels low, dramatically reduces the risk of a wildfire.

Prescribed burns require a permit from the N.C. Forest Service. The location, fuel type (leaves, branches, dead wood) and the acreage must be reported. Next, a fire plan must be developed that identifies the objectives. Those objectives are usually to top kill hardwoods and to promote annual and perennial plant growth for wildlife. Weather parameters, including temperature, relative humidity, wind direction and smoke dispersal, must be listed.

Wind direction and transport winds are critical. Transport winds are the upper wind currents that mix and disperse smoke. They must be at least 2,500 feet high. Planned burns have been cancelled within hours due to a change in wind direction and smoke dispersion. Smoke must not land on highways, schools or areas of concentrated development.

Getting the woods to burn is not as easy as it would seem. We must wait until the humidity lowers to 30 to 40 percent. Then as if it were magic, the forest floor ignites, and my adrenalin explodes along with it. It is a long exhausting day. I reek of diesel fuel and smoke. The heat of the fire is intense. My backpack is full of bottled water, a peanut and jelly sandwich, and an apple. There is little time to rest. Deer and rabbit run by. A snake has slithered between my legs. One tried to crawl up my coworkers pant leg last year. I will stop to pick up box turtles and put them in my backpack to release later.

Strips of fire are lit against the wind, and distances between the strips are often modified during the day. The fire can be slowed down or sped up. If it gets too hot, the trees we want to protect can be injured and killed. Different firing techniques can be used to maintain a desired level of heat and more efficiently burn an area. Fire and its behavior is a legitimate science and requires certification especially if you want protection from the liability of damaging adjoining property, buildings and injury. As many disclaimers say, "Do not try this at home."

I had the privilege of hearing the director of Cal-Fire at a conference in Albuquerque, New Mexico this year. This California agency oversees forest management and fire suppression in California. I listened to his description of the Los Alamos fire in New Mexico that spread at the rate of one to two football fields a second. That is more than one acre a second. In 14 hours it covered 43,000 acres. The use of prescribed fires is just one of several management tools available to reduce wildfires but are difficult to perform especially in areas of development and where drought has prevailed.

It is important to know that fire in the woods is not a bad thing. Prescribed fire is a valuable tool for wildlife managers and foresters. Smokey Bear would wholeheartedly approve too.

Rett Davis is a retired Alamance County Extension Director and is employed by Henderson Forestry Consultants. You can email your questions to [Rett\\_Davis@ncsu.edu](mailto:Rett_Davis@ncsu.edu)