

A Natural Prescription

FIRE BY DESIGN

By Monte Mitchell

While fire often is thought of as harmful to woodlands and forests – remember Smokey Bear’s gruff warning that only YOU can prevent wildfires – resource managers have learned that there are good fires and bad fires.

Fighting fire with fire in a way that may seem contrary to Smokey’s message, forest service managers are applying fire to the land under carefully prescribed conditions.

Prescribed burning is the planned and skillful application of fire under predetermined fuel and weather conditions to a specific land area to accomplish specific objectives.

Hundreds of years ago, Native Americans used prescribed fires to improve hunting grounds, increase natural food supplies, and make travel easier in forested areas. Early European settlers adopted the practice to clear land for homesteads and farming.

Unfortunately, those early prescribed fires were sometimes applied indiscriminately, resulting in wildfires that had negative effects on natural resources and threatened life and property. Attitudes about fire changed. With the founding of the Maryland Forest Service in 1906, Forest Wardens were commissioned, and regulations passed, to prevent wildfires by keeping prescribed fires in check.

Today, prescribed fire operations in Maryland must comply with COMAR regulation 08.07.04 Forest Fire Protection, and all other federal, state, or local jurisdiction requirements.

Prescribed fire is a very complex tool and should only be applied by those who have been trained in its proper use and application. It requires knowledge of local forest fuels, weather conditions, fire behavior, fire effects, and firing and suppression techniques.

PLAN CAREFULLY

DNR regulations require that a prescribed burn plan be prepared and reviewed and approved by



the Forest Service. The plan must outline the specific objectives of the burn, size and location, acceptable fuel, and weather conditions under which the burn can occur, and the measures that will be used to carry out the prescribed burn in a safe and efficient manner.

Good smoke dispersion is necessary so as not to affect air quality, adjacent properties,

highways, and smoke sensitive areas such as airports. Planning and preparations should be done well in advance, so that when the right conditions occur, the burn can be executed as planned.

Burn objectives can include the reduction of hazardous fuels or the removal of the accumulation of fuels on the forest floor, wildlife



TOP LEFT: *Strip Firing Ignition on Chesapeake Forest Lands*

LOWER LEFT: *Fire spreading from ignition*

ABOVE: *Site after a completed burn showing reduced fuel accumulation and new growth*

habitat improvement, disposal of logging debris, site preparation for tree planting, managing competing or invasive vegetation, controlling insect or disease outbreaks, improving access or aesthetics, nutrient cycling, or to perpetuate fire-dependant species. Often multiple resource objectives can be accomplished in a single prescribed burn.

This spring, five understory burns were completed on 339 acres of Chesapeake Forest Lands in Dorchester and Worcester Counties. Understory is the term for the area of a forest which grows in the shade of the emergent or forest canopy.

The burns took place in loblolly pine forest, with objectives to remove 25 percent of competing vegetation and to reduce by 40 percent the accumulation of fuels on the forest floor. A meadow restoration burn was also completed on 34 acres that removed slash and woody debris from the site to allow the return of native grasses and other plant species.

A TYPICAL PRESCRIBED BURN

As mentioned, planning and preparation should be completed well in advance, including all the firelines that will contain the burn area.

On the day of the burn, the burn boss completes a checklist to ensure weather conditions and all other aspects of the burn are according to plan. If it's a go, the burn boss briefs the assembled burn crew on objectives, assignments, equipment on site, tactics, safety, weather conditions and contingency plans.

A small test burn is ignited to evaluate burning conditions at the site. The main burn is then started, with fire being applied in a strip firing method that burns out successive strips or sections of the area to be burned.

The burn boss constantly evaluates the progress of the burn, fire behavior, and weather conditions. If any one parameter drops out of prescription the burn will be halted.

10 FIREWISE Tips for Homeowners

1. **Address** - Make sure your address is visible from the road, even at night.
2. **Trees** - Remove trees within 30 feet of buildings so that tree tops are at least 10 feet apart.
3. **Roof** - Clear the roof and gutters of leaves and other debris every fall.
4. **Foundation** - Trim grass and clear dead vegetation away from all buildings.
5. **Decks** - Clear out lumber and other flammable debris from under and around decks.
6. **Firewood** - Move the firewood pile at least 30 feet from buildings.
7. **Access** - Clear your driveway at least 12 feet wide by 14 feet high to allow emergency vehicles to reach your home.
8. **Yard** - Maintain a well-watered lawn at least 30 feet around your house and outbuildings and mow it regularly.
9. **Tools** - Put a hose on a rack and attach it to an outside faucet. Have a shovel and rake within easy access.
10. **Prepare** - Check your fire extinguishers regularly. Discuss and practice a family emergency plan. Participate in your community's disaster mitigation planning.

After the burn is completed the crew “mops up” or extinguishes any remaining hot spots along the perimeter of the burn to secure the fireline. A post burn evaluation is completed to assess the objectives accomplished.

Over the past five years, the Maryland Forest Service has successfully completed 179 prescribed burns on 5,087 acres, including both state and private lands, to achieve important natural resource benefits. ❖

For more information on prescribed fire, contact the Forest Service: www.dnr.maryland.gov/forests/wfm.asp

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