## 18 Spring 2009 Applegater









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The primary reason for doing controlled burns is public safety. Removing forest fuels and lessening fire intensity can reduce the risks and hazards to homeowners and firefighters during a wildfire. The majority of BLM lands are well within the wildland urban interface (WUI) and the protection of homes and firefighters is high on our priority list. Every controlled burn that you see is the result of years of planning and coordination by a team of experts. Controlled burns are strategically located in high priority treatment areas that are determined by community fire plans, county fire plans, and the latest computer modeling programs.

Secondly, controlled burning can improve forest health. The BLM is trying to reintroduce fire into an ecosystem that has been knocked out of whack by decades of fire exclusion. Fire exclusion became very effective after the 1910 fires that burned huge tracts of land in Idaho and western Montana. Congress called for firefighting crews to be hired and stationed all over the west. Forests grew thick, and woody biomass accumulated as each natural fire cycle was prevented. Firefighters did their job well. In southern Oregon the average natural fire frequency on a particular piece of ground may have been every 35 years or less. Many areas have "missed" several natural fire cycles. Now, by utilizing controlled burns in the periods fire behavior. Eventually, the strips of fire reach the before and after wildland fire season, we can slowly reverse bottom of the unit and personnel begin to "mop-up" this accumulation of woody fuel. Controlled burning can along the edges putting water on hot spots and critical make forests more fire resilient. Low intensity fire can reduce the ground fuels and smaller vegetation that can act as a "ladder" for fire to climb into the forest canopy. Some areas are thinned to open the forest canopy enough to prevent fire from burning tree top to tree top. These treatments can be effective. For example, preliminary results from research in Northern California indicated that stand thinning followed by controlled burns resulted in much lower wildfire severity than stands left untreated or thinned stands without follow-up controlled burning. Additionally, wildfire quickly dropped from the crowns of trees to the ground when it reached treated areas (Skinner et al. 2004). Now let's look at **how** controlled burning is done. Every individual burn has a specific burn plan that has been written by an expert and then reviewed by peers and land managers. The plan is custom to that particular location and examines factors such as vegetation, topography, proximity to water sources, natural barriers such as rock outcrops, proximity to homes, access roads and trails, hazards, special protection areas, and much more. The burn plan also prescribes an environmental "window" in which the burn must occur. This prescription window is defined by allowable temperature, wind speed, relative humidity and resultant fuel moisture conditions. The plan also spells out the minimum number of personnel and types of equipment that must be present on burn day.

In the days before the burn there are many a multitude of cooperators. The burn boss (the person in charge on burn day) consults with the weather service, smoke management officials, and contingency resources. Contingency resources are personnel and equipment that will be "on call" during the burn. There are pre-burn checklists too long to describe here that must be completed and approved by several levels of management. Each burn is conducted by a team of experts that use an incident command organization to get the job done. The burn boss must adhere to a burn plan that was written and approved well in advance of the burn day. Multiple agencies and contractors are working in cooperation on any given controlled burn such as the BLM, US Forest Service, Oregon Department of Forestry, National Weather Service, and local fire departments.

The method or "ignition pattern" chosen to burn a particular location is spelled out in the burn plan with actual diagrams. The burn boss can make minor adjustments on burn day due to factors such as a wind direction shift or changing fuel moisture conditions. The burn team uses topography and wind to their advantage. Generally, the team will start at the top of the burn area and begin lighting a small strip of fire along the upper edge called the "head strip". This strip of fire is allowed to gently back down the hill with control lines and personnel keeping the fire in check along the top and flanks of the burn unit. When the head strip is established and is wide enough the burn boss directs firing personnel to take additional "strips" of fire across the unit in a side hill fashion. These strips of fire can vary in width depending on conditions and observed holding areas. After the burn a smaller workforce is assigned to monitor and patrol the burn area until the burn boss declares the unit "out". This may take days or weeks.In Southern Oregon wildfire is a natural process that we cannot ignore. It is not a question of "if", but "when" will the forest burn again? So, thank you for tolerating those smoky days in the spring and fall. For controlled burning to be successful the BLM will need your continued tolerance of a few less than perfect air quality days. The payoff could be immense during the next fire season.

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Photo 1: Low intensity fire during controlled burn. Fire is gently and slowly backing down the hill. Area has been previously treated by cutting and piling brush and burning the piles.

Photo 2: Flank fire being brought down control line. Charged hoses are ready to spray water to cool hot spots. This control line was scraped to mineral soil with hand tools.

Photo 3: Controlled burn personnel are bringing strips of fire across the burn area by moving sideways across the slope.

Photo 4: After a controlled burn. Low intensity burning can be patchy in nature and doesn't always turn everything black. An occasional pocket of burned trees is expected and mimics what might have occurred historically.