

APPENDIX C

Fire Management Plan

for the

Northern Coast Range Adaptive Management Area



FIRE MANAGEMENT PLAN

This plan is being proposed for adoption by management and will be subject to approval in compliance with the National Environmental Policy Act, following determination that it conforms with the appropriate land and resource management plans.

Risk from Ignition Sources

Fire occurrence in this assessment area between 1960 and 1996 was very low with 0.03 fires occurring per 1000 acres per year. These fires were predominantly human caused, with abandoned campfires and escaped slash burning from clearcuts and landings accounting for the majority of the fires. Twenty-one fires were caused by lightning over the 26 year period. A total of 700 acres burned, including 134 acres which resulted from escaped prescribed fires ignited by the federal agencies.

The most recent large fire in the area was the Rockhouse Fire which occurred in 1987. This human caused fire started on private land under abnormally dry conditions and strong east winds. A total of 5000 acres burned in this fire, including 376 acres of the eastern portion of LSR RO270, administered by the Bureau of Land Management.

Outside of the Rockhouse Fire the largest and highest intensity fires since 1970 were caused by escaped slash burns. These fires occurred on the outside edge of broadcast burned, clearcut harvested, sale areas. Generally the cause of these escapes can be attributed to burning under very dry conditions with east winds. This type of weather condition was necessary to meet objectives of the Oregon Smoke Management Plan, which was to avoid impacting the Willamette Valley with smoke. The objective for these prescribed fires was to prepare the site for reforestation and to a lesser extent to reduce the fire hazard created after the harvest.

Since broadcast burning of clearcut harvest units will not be a common activity within the federally managed portion of these LSRs, this cause of fire will be reduced. Management ignited prescribed fire will still be considered where appropriate for meeting LSR objectives (e.g. to maintain T&E species, to decrease excessive ladder fuels).

Prescribed fires that escape from private landowners onto federal land are still a possibility. This type of fire occurs regularly. In 1996 two of these fires burned National Forest System lands in LSR RO807, each burning less than two acres. Additionally in 1996, a third fire burned one acre of LSR RO270.

The Oregon Department of Forestry (ODF) regulates burning on private land. Considering fire danger and risk of the fire escaping, ODF issues a burning permit that requires specific fire fighting resources to be on the site of the burn. This greatly reduces the risk of a large scale fire event.

The remainder of human caused and lightning fires all burned at a very low intensity with little resource damage. The size of these fires ranged between 0.01 to 41 acres. The largest fire burned untreated clearcut slash before it could be treated.

Wildfire Strategies

To achieve the objective of protecting and enhancing conditions of late-successional forest ecosystems in the assessment area all wildfires will be suppressed by employing the control strategy, minimizing fire size and loss of habitat. Resource protection and maintenance of existing late-succession habitat will be the primary goals of the suppression action. Direction on fire suppression is found in Forest Service Manual (FSM) 5100 - Chapter 5130, Siuslaw National Forest Fire Management Action Plan, BLM Manual 9214 and Salem District Record of Decision and Resource Management Plan. During fire suppression activities, fire managers will consult with resource specialists familiar with the area (ROD C-17 and C-18) and ensure that habitat damage is minimized. The responsible Line Officer(s) will designate a resource advisor to the fire incident. The designated resource advisor will have responsibility equal to other members of the fire suppression organization and will be part of the team assembled by the Line Officer for development of the Escaped Fire Situation Analysis (EFSA) as described in FSM Manual 5132 and BLM Manual 9210.

The greatest threat appears to be in areas where patches of windthrow exceeding one acre in size are adjacent to private lands. Where economically feasible within these areas, removal of down wood within 50 feet of private ownership landlines is recommended. This would provide an anchor point from which fire managers could initiate the control strategy.

Suppression Techniques to Minimize Habitat Damage

- 1) Avoid the draw-down of pools of water in creeks and rivers during periods of low water flows.
- 2) Do not allow the use of heavy equipment in stream channels.
- 3) Avoid the use of retardant and heavy equipment in riparian areas.
- 4) Locate base and spike camps outside of known locations of threatened and endangered species.
- 5) Minimize the building of any new roads or widening of existing roads.
- 6) Include construction of waterbars as standard procedures on all firelines. All roads opened to provide access for fire equipment will be drained and seeded or obliterated.
- 7) Develop a fire rehabilitation plan through an interdisciplinary process. Select treatments on the basis of on site values, probability of successful implementation, social and environmental considerations (including protection of native plant community), and cost as compared to benefits.

Prescribed Fire

As described in Chapter II, most of the assessment area had long fire return intervals and fires were often large. Implementation of Prescribed Natural Fire (PNF) would be risky due to the large private land holdings within and adjacent to the federal lands within this assessment area. Further development or use of PNF is not recommended at this time.

Management ignited prescribed fire will still be considered where appropriate for meeting LSR or special habitat objectives with less risk. Many of sites appropriate for management ignited prescribed fire are located in the eastern fringe of the Interior Soil/Climate Zone and in the Valley Margin, or in meadows scattered throughout the assessment area.

Short term Risks

Thinning and creation of coarse woody material (CWD) in managed stands will increase the risk of large scale fire events due to the increase in fuels created by these activities. Factors affecting the level of increased fire hazard include size and quantity of fuel input, time since input, stand age and density, spacing between treated areas, and yarding method in areas which are thinned. The expected fine dead fuel loading after thinning should range between seven and 25 tons per acre, depending on the number of trees that will be thinned from the stand. Fine dead fuels are defined as dead vegetative materials three inches in diameter or less. Fine fuels are an important consideration in the risk of a fire event since they are the component of the fuel profile that most influences the rate at which a fire will spread. The fine fuels should decompose to background levels, within three to ten years after thinning. This portion of the fuel profile by itself represents a temporary risk that is acceptable as long as contiguous slash is not present over large areas and adjacent to main travel routes.

All of the human caused fires in these LSRs over the last 36 years have occurred in close proximity to roads. Over the next five to ten years, up to 50 percent fewer roads will be maintained for public travel on Forest Service administered lands within this assessment area (Siuslaw National Forest Access and Travel Management Plan). The decrease in available roads will concentrate traffic on the roads that are maintained and left open. When roads that are left open are adjacent to thinning areas an increased potential for a fire start will exist. Due to the mixed ownership surrounding the lands managed by the BLM, there will continue to be a higher risk for human caused fires adjacent to road corridors.

South aspects are another area of concern where risk of a fire is high. A review of 269 fire reports from 1970 through 1995 on the Siuslaw National Forest showed that 64 percent of the fires were on a south aspect, nineteen percent on a west aspect, twelve percent on an east aspect and five percent on a north aspect.

Short term Risk Reduction Treatments

Acceptable methods to accomplish short term risk reduction include: hand piling; grapple piling; swamper burning; yarding; lop and scatter; and chipping. The following treatments may be prescribed when a thinning occurs adjacent to a private property lines or an open primary or secondary road:

- 1) Piling and burning of material more than two feet long and up to three inches in diameter at the large end, within 50 to 100 feet of the road prism and the private property line will be allowed.
- 2) Burning will only occur outside of the summer months during moist soil and fuel conditions.
- 3) Treated areas on south aspects will be wider than 100 feet, depending on slope and fuel loading below the treated area.

Long term Risks

The greatest risk of a large scale fire event occurring in these LSRs is the propagation of a sustained independent crown fire. Current research indicates that when tree spacing is less than twenty feet by twenty feet (tree density is greater than 110 trees per acre), then sustaining a crown fire is possible. Thinning prescriptions that reduce tree density to less than 100 trees per acre will reduce the threat of a running crown fire. The creation of coarse woody debris (CWD) will add a longer term duration of risk than the fine fuel load created by the thinning. The first additional risk associated with CWD is that of resistance to control. Resistance to control is defined as the relative difficulty of constructing and holding a control line as affected by resistance to line construction and by fire behavior. CWD would hinder the use of direct handline fireline construction. Heavy equipment may be necessary in some areas to construct fireline due to contiguous concentrations of CWD. The greatest risk with CWD would be in areas that have an excess of 40 pieces per acre, a minimum diameter at the small end of the log of fourteen inches and a minimum length of 40 feet.

The second additional risk would come from the increased risk of crowning potential. The amount and condition of fuels at or near the forest floor and the intensity at which they burn greatly influences the propagation of a crown fire. Increasing the amount of CWD would increase the intensity and duration of surface fires, raising the likelihood of crown fires.