United States
Department of
Agriculture

Forest
Service

October 2004

18 Fire Recovery Project

Final Environmental Impact Statement

Summary

18 FIRE RECOVERY PROJECT

Final Environmental Impact Statement

United States Department of Agriculture – Forest Service
Pacific Northwest Region – Deschutes National Forests

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Abstract:
This Final Environmental Impact Statement (FEIS) describes the effects of implementing 3 alternatives for the recovery of National Forest System lands that burned in the 18 Fire of 2003 on the Deschutes National Forest in Central Oregon. The fire burned approximately 3,810 acres of National Forest on the Bend/Fort Rock Ranger District. The preferred alternative (Alternative 2) would implement specific combinations of actions to promote the development of future forest on approximately 1,936 acres. This combination of actions includes salvage removal of fire-killed trees and reforestation.

In the other action alternative, reforestation without salvage harvest is proposed on approximately 1,936 acres.

Emergency Situation Determination: The Forest Supervisor is in the process of seeking a determination from the Regional Forester that an emergency situation exists in the 18 Fire Recovery Project area pursuant to 36 CFR 215.10(b). This emergency situation exists because substantial loss of economic value to the Federal Government would occur if implementation of the decision were delayed. The final determination by the Regional Forester will be published in the Record of Decision, 36 CFR 215.10(d).

18 FIRE RECOVERY PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT – SUMMARY

Introduction

This document is a summary of the 18 Fire Recovery Project Final Environmental Impact Statement (FEIS). The FEIS considers the effects of various alternatives to promote the recovery of the 18 Fire area that was burned by wildfire in July of 2003.

To request a copy of the full FEIS, contact:

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The full FEIS is also available on the internet at:
http://www.fs.fed.us/r6/centraloregon/projects/units/bendrock/18fire/18-feis.shtml

Changes Between Draft and Final EIS

The following Appendices were added:

- *Appendix H: Response to Comments*

The following Appendices were updated:

- *Appendix D: Biological Evaluation - Wildlife*
- *Appendix E: Wildlife Report*
- *Appendix F: Biological Evaluation – Botany*
- *Appendix G: Beschta*

Within Chapter 1, only minor edits have been made for the Final EIS.

Within Chapter 2, the following changes were made:

- A section on priority funding for Sale Area Improvement Projects (KV) has been added. Mitigation and Management Requirements were clarified as needed.
- USDA Forest Service Central Oregon Interagency Ecology Program has established monitoring plots in the 18 Fire to compare forest recovery in the salvage and non-salvage areas (see Monitoring).

Within Chapter 3, In addition to minor editing of all sections, the following changes to the FEIS have been made:

- A portion of the soil section has been updated to add more research information on soil biota populations and a listing of previous vegetation management activities (Table 3-3A).

- In the Wildlife section population trend information was updated in Table 3-6 for MIS and Species of Concern. Wildlife and Botany effects have been amended to reflect the revised Regional Forester's Sensitive Species List. The effects summary in the Wildlife Biological Evaluation was moved from Appendix D to Chapter 3.

- In the Air Quality section the potential effects of landing pile burning on the Three Sisters Wilderness Area Class I Airshed was further clarified.

Background

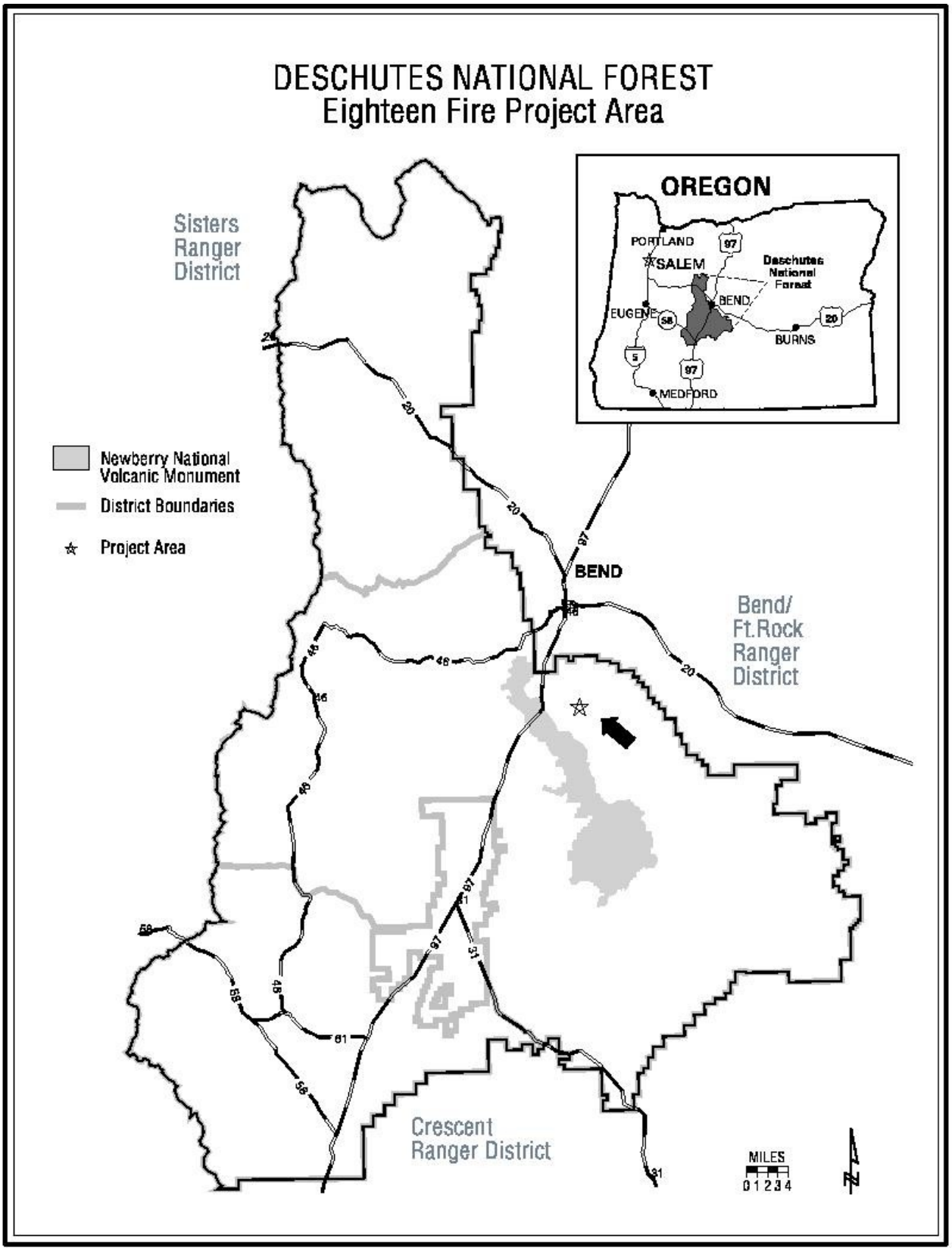
The 18 Fire area is located 3.5 miles southeast of Bend, Oregon. On the afternoon of July 23th, 2003 a human caused wildfire, of an undetermined specific cause, was ignited in an area of heavy needle cast and bitterbrush on the north side of the China Hat Road. The fire spread rapidly and burned approximately 3,810 acres of National Forest System lands before it was reported contained on July 24, 2003.

Fire intensity was moderate or high on over 64 percent of the 18 Fire. These areas experienced greater than 95 percent mortality**.**

The Project Area

The 18 Fire Recovery Project area totals approximately 3,810 acres of Deschutes National Forest lands within Deschutes County: T 19 S, R 12; Willamette Meridian. The project area is outside of the range of the northern spotted owl. The terrain is gentle. Elevations range from just over 4,200 feet to 5,120 feet at the summit of Luna Butte.

Figure 1-1. 18 Fire Project Location



Purpose and Need for Action

The overriding purpose of entering the 18 Fire is to:

- Recover commercial value.
- Expedite the establishment and restoration of a dry, ponderosa pine forest following a stand replacing fire.
- Reduce future fuel loadings to lessen the potential effects of future fire behavior potential.

Habitat recovery following a stand replacing fire within the dry ponderosa pine forest type has a number of factors to consider including shrub response (competition), browsing by big game, seed source, and future fuel loadings. Natural regeneration of ponderosa pine is dependent on seed dispersal from healthy, live trees. In many areas, particularly within the interior areas of the fire, adjacent seed sources are no longer available. The majority of the high mortality area is located within deer winter range (deer habitat). Based on shrub response, browse damage, and experience within adjacent wildfires, such as the Bessie Butte, Skeleton, and Evans West Fires of 1996, interior areas with high tree mortality would require reforestation by planting ponderosa pine in order to ensure and expedite forest restoration.

Lowering fuel loads to a level that reduces the future likelihood of a high severity fire occurring in the 18 Fire area could help promote the long-term survival and growth of planted trees. Over the next 20 years, the majority of the fire-killed, standing trees within the 2,420 acres of stand replacement will fall down and become a heavy surface fuel load of 38 to 62 tons per acre versus a desired level of 5 to 20 tons per acre for warm dry ponderosa pine (Brown 2003). A future fire ignition in the heavy surface fuels created by the 18 Fire could increase the duration of elevated temperatures to levels capable of altering soil properties and affecting site productivity in addition to complicating efforts to suppress a new fire in a young, reestablished ponderosa pine forest. This would also complicate the use of prescribed fire in the future.

Forest Plan Management Areas and Forest Plan Direction

The project area lies entirely within the Deschutes National Forest. Relevant management direction is found in the Deschutes National Forest Land and Resource Management Plan ("LRMP"), as amended by the 1995 Regional Forester's Eastside Forest Plans Amendments #2 and Inland Native Fish Strategy. The following summary presents a discussion of the Management Areas (MA).

MA7 – Deer Habitat (approximately 76% of the project area): To manage vegetation to provide optimum habitat conditions on deer winter and transition ranges while providing some domestic livestock forage, wood products, visual quality and recreation opportunities (Forest Plan, p. 4-113).

MA8 - General Forest (approximately 23% of the project area): Within the General Forest MA, timber production is to be emphasized while providing forage production, visual quality, wildlife habitat, and recreational opportunities for public use and enjoyment. The objective is to continue to convert unmanaged stands to managed stands with the aim of having stands in a variety of age classes with all stands utilizing the site growth potential (Deschutes LRMP, p 4-117).

MA9 - Scenic Views (approximately 1% of the project area): The project area contains scenic views in the foreground and midground. The goal of scenic views management areas is to provide high quality scenery that represents the natural character of Central Oregon. Landscapes seen from selected travel routes and use areas are to be managed to maintain or enhance their appearance. To the casual observer, results of activities either will not evident, or will be visually subordinate to the natural landscape (Deschutes LRMP, p 4-121). There will be no salvage harvesting of trees in the Scenic Views Management Area.

Scoping and Public Involvement

The 18 Fire Recovery Project was initially presented to the public in a letter dated November 14, 2003. A Notice of Intent to prepare an Environmental Impact Statement was published in the Federal Register on December 16, 2003. The proposed action also was placed on the Deschutes National Forest's public website and included in the Schedule of Proposed Action.

As a result of scoping, 8 written comments, electronic mail responses or phone calls were received. Additional public involvement took place throughout the winter and spring of 2004, including field tours with Oregon Natural Resources Council (Tim Lillebo, field representative), Blue Mountain Biodiversity (Karen Coulter), PROWL (Lisa Blanton), United States Fish and Wildlife (Sandra Ackley), and Oregon Department of Fish and Wildlife (Glenn Ardt).

The 45 day comment period that ended August 16, 2004, resulted in 11 sources of comments. The Interdisciplinary Team (IDT) specialists read all public responses and identified separate substantive comments within them that related to a particular concern, resource consideration, and/or requested management action. The IDT members provided responses to comments where appropriate. These responses are included as Appendix H to the FEIS.

Identification of Issues

Issues are points of discussion, debate, or dispute about environmental effects that may occur as a result of the proposed action. They provide focus and influence alternative development, including development of mitigation measures to reduce or eliminate impacts. The issues are also used to display differing effects between the alternatives. The IDT identified issues and categorized them as Key or Analysis. The following environmental components were analyzed in the FEIS to show effects and compare alternatives: Threatened and Endangered Species, Botany, Noxious Weeds, Cultural Resources, Fire and Fuels, Forest Vegetation and Timber Management (Beschta, Passive Recovery vs. Active Management), Recreation, Range, Economics and Social Analysis, Insects and Decay, Air Quality, Scenic Quality, Roads and Transportation, and Other Disclosures. Key Issues were used to develop the alternatives and design activities and are described as follows:

Effects on Soils Productivity

Salvage harvest and associated activities can potentially have adverse impacts on soil productivity through physical disturbances and adverse changes in organic matter levels. Past management practices, the 18 Fire, and fire suppression activities have affected the soil resource within the project area. The proposed salvage harvest and associated activities may cause cumulative increases in detrimental conditions by increasing compaction and soil displacement, reducing effective ground cover, and increasing the potential for accelerated erosion.

Effects to Wildlife Habitat

What are the effects of the proposed activities on wildlife habitat, specifically effects on deer winter range, snags and coarse woody debris habitat? Deer winter range is within the 18 Fire Recovery Project area. Effects of the alternatives are a concern for the deer winter range habitat. The current and future levels of snags and CWD habitat is a concern expressed by several commenters. There is a direct connection between the number of trees removed for salvage and those left to provide snag and down log habitat.

Comparison of Alternatives and Descriptions

The Key Issues led the agency to fully develop and analyze three alternatives. The two action alternatives (2 and 3) demonstrate a range of possible courses of action to meet the purpose of reforesting the post-fire landscape. Actions include salvage harvesting, fuels reduction, conifer planting, and road closing and decommissioning. The component that varies between the alternatives is salvage logging. Salvage logging is only considered with Alternative 2.

Alternative 1

No Action. This alternative is required by law and serves as a basis for comparison of the effects of all of the alternatives. Under Alternative 1 there would be no change in current management direction or in the level of ongoing management activities, such as road maintenance. Work previously planned in the analysis area would still occur.

Alternative 2 (Proposed Action)

This alternative includes minor adjustments made to the proposed action based on site-specific information derived from input received during scoping. For example, no live trees would be salvaged, no treatment would occur within scenic views, and clumps of dead snags associated with rock outcrops would be retained within salvage Units 1, 4, and 8.

Alternative 2 Actions

Commercial Salvage (acres)	
Ground-based	1,936
Reforestation (acres)	
Conifer Planting within Salvage Units	1,936
Fuels Treatments and Reductions (acres)	
Leave-tops-attached or whole-tree-yard	1,936
Road Management (miles)	
Road Closure	2.9
Road Decommissioning	7.0
Temporary Road Development	3.5

Alternative 3 (Reforestation) This alternative is similar to Alternative 2 except there is no timber salvage.

Alternative 3 Actions

Reforestation (acres)	
Conifer Planting within Salvage Units	1,936
Road Management (miles)	
Road Closure	2.9
Road Decommissioning	7.0

Mitigation and Resource Protection Measures

Mitigation and Management Requirements that apply to all action alternatives are detailed in the FEIS (Chapter 2, page 23). They include protective measures pertaining to wildlife, soils, water, recreation, scenery, and cultural resources.

Table S-1. Comparison of the Alternatives Based on the Key Issues

Issue and Indicators	Alternative 1	Alternative 2	Alternative 3
Soil Productivity			
Detrimental soil condition within activity areas. *Coarse woody debris (CWD) retention.* *Effectiveness of project design implementation*	No additional detrimental impacts to the soil resource in the short-term. Detrimental soil conditions would remain 3% or less. Long-term risks include elevated coarse woody debris levels capable of incurring heat damage during subsequent wildfire events. Approximately 64% of fire area would exceed 35 tons per acre of biomass with a CWD footprint of 8.1 percent. Approximately 36% of fire area would average approximately 20 tons per acre with a CWD footprint of 4.1%.	Alt 2 would incur the greatest extent of detrimental disturbance by treating 1,936 acres with ground-based systems. Detrimental soil conditions would be 16% or less after salvage harvest is completed. High effectiveness. Approximately 64% of fire area would exceed 35 tons per acre of biomass with a CWD footprint of 8.1 percent. Approximately 100% of fire area would average approximately 15 to 20 tons per acre with a CWD footprint of 3.2 to 4.1%.	Similar to Alternative 1.
Wildlife Habitat			
Snag and down log levels. *Open road density* *Acres reforested*	This alternative provides an average of 64 snags/ac ≥ 7.5" across the 2,420 acres of stand replacement (64% of fire area) with a future CWD level of 8.1%. In non stand replacement, an average of 40 snags/ac ≥ 7.5" across 1,390 acres (36 % of fire area) with a future CWD of 4.1% would be retained. This alternative leaves 100% of the project area untreated. Acres reforested zero. Open road density 3.6 miles per sq. mile.	This alternative provides an average of 33 snags/ac ≥ 7.5" across the 1.936 acres of stand replacement salvage with a future CWD level of 3.2%; 64 snags/ac ≥ 7.5" across the 411 acres of stand replacement non salvage with a future CWD level of 8.1%; an average of 40 snags/ac ≥ 7.5" across 1,390 acres of non stand replacement with a future CWD of 4.1%. Acres reforested 1,936. Open road density 1.9 miles per sq. mile.	Snag and down wood levels are identical to Alternative 1. Open road density and acres reforested are identical to Alternative 2.

Table S-2. Comparison of the Alternatives Based on the Purpose and Need

Purpose and Need	Alternative 1	Alternative 2	Alternative 3
Recover commercial value.	No recovery of value in the form of wood products would occur.	Up to 7 Million Board Feet would be recovered in the form of wood products..	No recovery of value in the form of wood products would occur.
Expedite restoration of a dry ponderosa pine forest.	No planting of ponderosa pine would occur.	Ponderosa pine would be planted on 1,936 acres.	Ponderosa pine would be planted on 1,936 acres.
Reduce fuel loadings to lessen the potential effects of future fire behavior.	At year 20, biomass projections for untreated stands range from 35 to 60 tons per acre. Fire intensity and resistance to control are considered high with potentially higher effects to soils than in Alternative 2.	Fuel loadings would be reduced to between 15 to 20 tons per acre with less resistance to control, fire intensity and soils effects.	Similar to Alternative 1.

Scope of the Project and Decision Framework

The scope of the project and the decision to make are limited to: commercial salvage; snag retention; fuels reduction; reforestation; road management; hazard reduction; and mitigation and monitoring within areas burned by the fire of 2003. Chapter 2 details the designs of these actions. The project is limited to National Forest System lands within the project area.

The Responsible Official for this proposal is the Forest Supervisor of the Deschutes National Forest. After completion of the Draft EIS, there was a 45-day public comment period. Based on comments to the draft EIS and the analysis disclosed in the Final EIS, the Responsible Official will make a decision and document it in a Record of Decision (ROD) which will accompany the Final EIS. The Responsible Official can decide to:

- Select the proposed action, or
- Select an action alternative that has been considered in detail, or
- Modify an action alternative, or
- Select the no-action alternative
- Identify what mitigation measures will apply.

The decision regarding which combination of actions to implement will be determined by comparing how each factor of the project purpose and need is met by each of the alternatives and the manner in which each alternative responds to the key issues raised and public comments received during the analysis. The alternative which provides the best mix of prospective results in regard to the purpose and need, the issues and public comments, will be selected for implementation.