

FINDING OF NO SIGNIFICANT IMPACT
for
QUARTZ FIRE PROJECT EA No. OR-110-02-001

Finding of No Significant Impact (FONSI)

The Bureau of Land Management's Medford District has analyzed, through the attached Quartz Fire Project Environmental Assessment, a proposal to salvage approximately 640 acres, commercially thin approximately 80 acres (total of approximately 720 acres), and to manage the transportation system (road maintenance, renovation, construction, decommissioning). In the future, prescribed fire would be used as a tool to maintain vegetation density and desired species composition within the range of natural variability. The proposed project area is in the Little Applegate 5th field watershed. This project would not have an adverse energy impact. Design features and analysis of this proposal are discussed and supported in the *Medford District Record of Decision and Resource Management Plan (RMP/ROD) (USDI 1995)*. This Resource Management Plan incorporates the *Record of Decision and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (NWFP/ROD) (USDA and USDI, 1994)* and the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (S&M/ROD) (USDA and USDI, 2001).

The proposed action and project design features are further described in the attached Environmental Assessment (EA). This FONSI and attached EA are tiered with the aforementioned RMP/ROD, NWFP/ROD, and S&M/ROD. All documents may be reviewed at the Medford District Office.

Through the EA process, the interdisciplinary team reviewed the following critical elements of the human environment as they relate to this project: air quality, Areas of Critical Environmental Concern (ACEC), cultural resources, environmental justice, farmlands, floodplains, Native American religious concerns, invasive nonnative species, threatened and endangered species, hazardous/solid wastes, water quality, wetlands/riparian zones, Wild and Scenic Rivers, and wilderness. No substantive site specific environmental changes would result from implementing the proposed action or alternatives as discussed in the associated EA. Should threatened or endangered plants or cultural or paleontological resources be discovered, they would be protected. The Quartz Fire Project EA was advertised for a 30 day public review period beginning on February 15, 2002. Written comment letters were received from 11 organizations and 19 individuals.. The BLM Interdisciplinary Team reviewed the comments and found no significant impact beyond that already analyzed and discussed in the attached Quartz Fire Environmental Assessment and associated tiered documents (RMP/ROD, NWFP/ROD, and S&M/ROD). This review provided the public with an opportunity to comment on the BLM's determination that there are no significant impacts associated with the proposed action, and an additional environmental impact statement is not necessary.

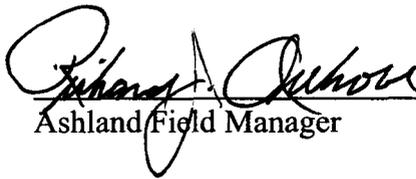
The project area is within the range of two threatened animals (northern spotted owl & Southern Oregon Northern California Coho Salmon). Formal consultation for the northern spotted owl was completed with the Biological Opinion (FWS), 1-7-01-F-032 (12 October 2001). Informal consultation for Southern Oregon Northern California Coho Salmon was completed by a letter of concurrence from the National Marine Fisheries Service dated April 22, 2002. The project area is within the range of one threatened plant (*Howellia aquatilis*) and one endangered plant (*Fritillaria gentneri*) as listed under the Endangered Species Act. However, no habitat for *Howellia aquatilis* occurs within the project area and no populations were found during surveys. Habitat for *Fritillaria gentneri* does occur within the project area, although much was lost to the fire, but no populations were found during the 1999 surveys. There is no effect to either of these listed species due to the proposed alternatives. Additionally, two plants proposed for listing as endangered (*Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora*) and the endangered plant, *Arabis macdonaldiana* occur on the Medford District. The project area is not within the range of these plants nor is there suitable habitat. Surveys did not discover any populations of these plants. There is no

effect to species due to the proposed alternatives.

The estimation of impacts was based on research, professional judgement, and the experience of the interdisciplinary team. This method of estimating effects on the environment reduces the uncertainties to a level involving no highly unknown or unique risks. The project design features identified in the attached EA would assure that no significant site specific nor cumulative impacts would occur to the human environment other than those already addressed in the associated tiered documents (RMP/ROD, NWFP/ROD, and S&M/ROD).

FONSI Determination

On the basis of the information contained in the EA and all other information available to me as summarized and above, including the review of the public comment letters, it is my determination that none of the alternatives analyzed constitute a significant impact affecting the quality of the human environment greater than those addressed in the Medford District Resource Management Plan /EIS. Therefore, a new EIS or a supplement to the existing EIS is unnecessary and will not be prepared.


Ashland Field Manager

04-24-02
Date

Decision Record
for the
Quartz Fire Project EA No. OR-110-02-001

DECISION RECORD

The decision is to implement the Proposed action minus the Late Successional Reserve known as the Spotted Owl Core as identified in the attached Quartz Fire Project EA No. OR-110-02-001. The attached decision map identifies the harvest location for this project. Implementation includes salvaging approximately 520 acres, commercially thinning approximately 80 acres (total of approximately 600 acres), and to manage the transportation system (road maintenance, renovation, construction, decommissioning). In the future, prescribed fire would be used as a tool to maintain vegetation density and desired species composition within the range of natural variability for this site. Road construction (upper ridge type and mid-sloped road) in Section 36, T39S,R2W will be constructed, used for salvage harvest, and put to bed (decommission the upper road, obliterate the lower road) during the same operating season.

Mitigating Measures 1 and 2, eliminate proposed road construction from the Proposed Action (EA page 32) are not accepted.

DECISION RATIONAL

Mitigating Measure 1 and 2 are not accepted because the construction of 0.9 miles of new roads will reduce erosion by breaking up the hydrophobic soils and increase revenues to the United States by an estimated \$80,000.00. Road construction, salvage logging with decommissioning the upper road and obliterating the lower road within the same operating season will minimize the hydrologic risk and associated risks to downstream fisheries.

Based on concerns from public review of the EA, the following clarification is based on the EA and supporting documents in the 1792 EA File.

Restoration-only alternative

The restoration of the Quartz Fire area was planned for in the separate *Burned Area Emergency Stabilization and Rehabilitation Plan (ESR)* immediately following the fire event (EA pg. 1). In the Executive Summary of this plan it states, in part, “This plan addresses emergency stabilization and rehabilitation of fire suppression and fire damages. The burned area emergency stabilization and rehabilitation team of scientists conducted an analysis of fire damages throughout the lands impacted by the fire and potentially impacted areas down stream.” This rehabilitation plan covers the restoration activities planned for the Quartz Creek Fire area and received approval for four years of funding starting in FY 2001 and concluding in FY 2004. The total cost approved was \$899,000. Implementation of this plan successfully began in 2001. The ESR Plan will be implemented regardless of the alternative, including the NO ACTION alternative. Implementation of the ESR Plan, without implementing the proposed action, would result in an economic loss of approximately \$300,000 to \$400,000 to the federal government as damaged federal property (trees) would not be recovered.

Aquatic Conservation Strategy Objectives

The Quartz Fire Project meets the Aquatic Conservation Strategy Objectives. I have reviewed this report and it is located in the Quartz Fire Project 1792 EA File.

Little Applegate Watershed Analysis

The EA is new, site-specific information which updates the Little Applegate Watershed Analysis.

“Wildfire and Salvage Logging”, commonly referred to as the “Beschta report” (“the Report”)

The Report was considered and discussed by the interdisciplinary team, in the process of preparing the

Quartz Fire Project EA. The recommendations and issues in the Report were addressed in the EA as follows:

1). Regarding fire management and salvage logging, the Report's observation that **"on-going human activity and the residual effect of past activity continue to threaten watershed ecosystem integrity"** certainly is the case, and will remain so in the future. Because of this, the EA addressed issues related to cumulative effects throughout the document, incorporating them in the development of alternatives, formulation of project design features, and the analysis of the effects (EA pg.16, 17, 26, 29, 30, 34, 38, 42-52, 54, 56-60). Many of the activities that pose the greatest threat to watershed integrity in the Little Applegate occur on private lands (EA pages 16, 29, 34, 38, 44, 48, 52), and are the result of practices beyond the control of federal land management agencies. Often the ability of federal land managers to effect significant change in a given watershed is very limited. Federal land management should attempt to minimize further disruption of ecosystem processes, however, short term risks may be necessary to bring about long-term improvements. The EA identifies ecological conditions brought on by fire suppression policies and past management (both active (harvest) and passive (doing nothing) that resulted in smaller, denser, more fire-prone stands as one of the largest threats from past and on-going human activities (EA pg. 16, 17, 26, 29, 30, 42, 43, 45, 46, 47). Road density across the landscape and the ability of roads to channel sediment and flow directly to streams is another major concern, and is addressed by the interdisciplinary team throughout the EA (EA pg. 1, 8, 5-7, 10-12, 22, 24, 27-30, 33-38, 43-50, 54, 55, 58, 60, 64, 66-69, 76).

2). The Report makes the observation that **"fires are an inherent part of the disturbance and recovery patterns to which native species have adapted."** The EA addressed this observation in development of the alternatives, formulation of project design features, and the analysis of the effects. While the observation is true for individual species, areas such the Quartz Fire project have many species now present on a given site that are not well adapted to the type of fire they may experience or at densities not historically present as a result of the shift from frequent, low-severity fire to infrequent, high-severity fire. Fire exclusion over the past century and logging practices not well suited to the fire regime have caused and continue to support a shift in the vegetation composition, structure and density (EA pg. 16, 17, 26, 29, 30, 42, 43, 45, 46, 47). Combined with current social constraints on management of public lands, passive recovery of the ecosystem to a condition characterized by frequent low-severity fire is not possible (EA pg. 37, 38, 41, 42, 43, 49, 50).

3). The Report's assertion that **"there is no ecological need for immediate intervention on the post-fire landscape"** is true provided the recovery mechanisms are intact and functional. There is scientific consensus throughout the western United States that the dry forests in this part of the country have severely disrupted recovery mechanisms that function poorly at best. This scientific consensus provides much of the basis for both the National Fire Plan and the Federal Cohesive Strategy. Again, the advent of fire exclusion over the past century and logging practices not well suited to the fire regime have caused and continue to support a shift in the vegetation composition, structure and density within the Quartz Fire project area (EA pg. 16, 17, 26, 29, 30, 42, 43, 45, 46, 47). Taking a passive recovery approach in the project area would amount to a continuation of the same impacts that have occurred over the past century. Making a decision to continue these impacts by taking a "no action" approach would result in quite certain and well known risks (severe fire outside the range of natural variability), and this effect would be highly controversial. Combined with current social constraints on management of public lands, passive recovery of the ecosystem to a condition characterized by frequent low-severity fire is not possible (EA pg. 37, 38, 41, 42, 43, 49, 50). There is an economic need for immediate action, as well, to meet one of the EA's stated objectives of providing a sustainable supply of timber (EA page 2). The economic value of burned wood in the Quartz Fire area is deteriorating rapidly, making immediate intervention necessary to capture as much of the value as possible.

4). The Report's recommendation that **“existing condition should not be used as “baseline” or “desired” conditions upon which to base management objectives”** is a recurring theme throughout the EA, incorporated in development of the alternatives, formulation of project design features, and the analysis of the effects. A primary premise of the EA suggests that conditions before, during, and after the fire are outside the range of natural variability. These conditions are a result of fire suppression and vegetation management activities of the past century that caused a shift from the frequent, low-intensity fire and corresponding vegetation density and stand structure that would characterize natural baseline conditions in this area to a regime of infrequent, high-intensity fire that would not be present under the range of natural variability (EA pg. 8, 26, 29, 41, 42, 43, 45-47, 51).

5). The Report recommends that **“fire suppression throughout forest ecosystems should not automatically be a management goal of the highest priority; the overall management goal must be to preserve (and reestablish) the fire and other disturbance regimes that maintain ecological systems and processes, while protecting human life and property.”** General fire suppression recommendations were not considered by the interdisciplinary team, as they are beyond the scope of this environmental assessment.

6). Regarding post-fire management, the Report makes the recommendation to **“allow natural recovery and recognize the temporal scales involved with ecosystem evolution; human intervention should not be permitted unless and until it is determined that natural recovery processes are not occurring, as well as to “not take actions which impede natural recovery of disturbed systems.”** While the Report correctly states that native plants can recover well on their own, this recovery depends on the fire having been a characteristic fire with intensities and severities within the range of natural variability for the fire regime involved and that sufficient individuals are both present and survive the fire to provide adequate seed sources. The intensity and severity of the Quartz Fire were not within the range of natural variability (EA pg. 8, 14, 17, 25, 26, 29, 55).

Due to fire exclusion and past management practices, action will be required to restore the very ecosystem processes the Report promotes (see the earlier discussion on the ecological need for immediate intervention on the post-fire landscape). Science findings associated with the Interior Columbia Basin Ecosystem Management Project, the Sierra Framework, the Quincy Library Group, the Forest Service Cohesive Strategy, the draft Federal Cohesive Strategy, and Defenders of Wildlife (Brown 2000) all discuss the need for active human intervention to deal with ecosystem problems in dry forests and woodlands if restoration of ecosystem processes similar to those in operation prior to Euro-American settlement is to be achieved. The interdisciplinary team considered this recommendation as well as site-specific information in development of the alternatives, formulation of project design features, and the analysis of the effects. As stated previously, the advent of fire exclusion over the past century and logging practices not well suited to the fire regime have caused and continue to support a shift in the vegetation composition, structure and density within the Quartz Fire project area (EA pg. 16, 17, 26, 29, 30, 42, 43, 45, 46, 47). The EA recognized that salvage would negatively impact soil productivity recovery on moderately and high severity sites, but the short-term impact was outweighed by the long-term impacts to the ecosystems from not taking action. Natural recovery mechanisms are severely disrupted in the Quartz Fire area and function poorly at best. Taking a “no human intervention” approach would result in quite certain and well known risks (severe fire outside the range of natural variability, gradual decline in riparian condition, declining levels of large woody debris input, increased flashiness of streams, and elevated sediment delivery levels), and these effects would be highly controversial. The disrupted state of the natural recovery mechanisms combined with current social constraints on management of public lands contribute to the condition where passive recovery of the ecosystem characterized by frequent low-severity fire is not possible (EA pg. 37, 38, 41, 42, 43, 49, 50).

7). The Report makes the recommendation to **“protect soils; no management activity should be undertaken that does not protect soil integrity.”** Protecting soils and soil integrity was widely discussed and incorporated into the EA in development of the alternatives, formulation of project design features, and the analysis of the effects (EA pg. 1, 2, 4, 6, 7, 8, 9, 11, 12, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 39, 40, 42, 44, 46, 47, 48, 49, 50, 51, 53, 54, 55, 56, 58, 60, 63, 64, 75). As defined by the BLM Medford Resource Management Plan no Fragile Soils are found on the BLM portion of the Quartz Fire (EA page 25). Detrimentially burned soils as defined in Region 6 by USDA Forest Service have not yet been found on the Quartz fire (EA page 21).

Some soils considerations taken into account include

- Ground cover types besides duff and litter include rocks, needle fall from burnt trees, woody debris from slashed brush from logging activities, and surface treatments placed by man such as mulches, netting, and erosion blankets. (EA page 22).
- Micro-topography can have a mitigating affect on erosion, types discussed (EA page 22).
- A study showed that salvage had a positive effect by increasing ground cover, with slash (EA page 22).
- Studies found that postfire logging had little effect on runoff or soil loss compared to that resulting from the wildfire only (EA page 22 and 23).
- Salvage logging can improve watershed conditions by adding ground cover (EA page 23).
- In a controlled study using tractors and cable logging, there was no difference in sediment output between logged and unlogged units (EA page 23).
- A study that took place within the fire perimeter found that yarding small-diameter Douglas-Fir with a small tractor produced no detrimental soil compaction. Soil types as found on this study constitute 85 percent of the soils on the BLM administered portion of the Quartz Fire (EA page 23), BLM uses same standard.
- Salvage logging would decrease sedimentation by breaking up hydrophobic soil (EA page 54).
- Salvage logging would add an immediate input of limbs and sawdust to the soil surface. This organic matter would lower sedimentation rates (EA page 54).
- The entire length of new road construction is in the Resistant Metavolcanic geomorphic unit. This Landscape unit has a low-moderate erosion potential (EA page 53).

8.) The Report makes the recommendation to **“Preserve capabilities of species to naturally regenerate.”** Most of the work on the Quartz Fire area involving replanting and reseeding is part of the ESR plan (EA pg.1), and therefore falls outside the scope of this EA. The issues behind this recommendation were addressed in development of the alternatives, formulation of project design features, and the analysis of the effects. While native plants can generally recover well on their own following natural disturbance, this recovery depends on the fire having been a characteristic fire with intensities and severities within the range of natural variability for the fire regime involved and that sufficient individuals are both present and survive the fire to provide adequate seed sources. The intensity and severity of the Quartz Fire were not within the range of natural variability (EA pg. 8, 14, 17, 25, 26, 29, 55). While it appears that the capability of the hardwood species and shrubs to naturally regenerate is not greatly impaired, as observed by the re-sprouting of many species (EA pg. 26), the ability of the area to naturally regenerate with a diverse mixture of conifer species is. This is due to the absence of a live seed source in much of the fire area, and a shift in vegetation composition, structure and density brought about by fire exclusion over the past century and logging practices not in sync with the fire regime (EA pg. 16, 17, 26, 29, 30, 42, 43, 45, 46, 47). Combined with current social constraints on management of public lands, passive recovery of the area to a condition characterized by frequent low-severity fire is not possible (EA pg. 37, 38, 41, 42, 43, 49, 50). Planting native trees and grasses (EA pg. 1), will enhance the capability of these species to naturally regenerate in the long term. Trees planted are collected from seed adapted for that site. Promptly planting and establishing a

diverse mixture of native conifer and hardwood trees will help impede, through shading, the establishment of non-native plants. Future prescribed fire would be used as a tool to maintain vegetation density and desired species composition within the range of natural variability (EA pg. 5). The project design features (EA pg. 5-12) as well as the Coarse Woody Material Prescription and Marking Guidelines (EA pg. 71-76) include limitations aimed at maintaining species and natural recovery processes. Further, as part of the Applegate Adaptive area and within the commercial forest land base, the RMP (pg. 72) states that timber resources are an objective; *to provide a sustainable supply of timber and other forest products, and, manage developing stands on available lands to promote tree survival and growth and to achieve a balance between wood volume production, quality of wood, and timber value at harvest.* Planting is a portion of the forest development program designed to meet these objectives in the RMP.

9). The Report recommends that **“salvage logging be prohibited in severely burned areas and areas with unstable, fragile, erosive or potentially erosive soils”**. These recommendations are oriented at protecting soils and reducing or eliminating erosion and sediment delivery to streams. The interdisciplinary team addressed these issues in development of the alternatives, formulation of project design features, and the analysis of the effects (EA pg. 2, 6-8, 11, 12, 20-25, 27, 30, 35, 36-39, 43- 45, 47, 48, 53-56, 64, 72). The EA identified the following conditions:

- a. high severity fire affected 70% of BLM lands within the project boundary (EA pg. 14),
- b. there is very little litter and duff remaining on the forest floor (EA pg. 24),
- c. without any further disturbance, stream embeddedness is expected to increase due to natural causes (EA pg. 29),
- d. there would be increased sedimentation from hauling activities (EA pg.11),
- e. salvage activities would increase the opportunities for invasion of noxious weeds (EA pg.36), would result in a reduction in this habitat component for many bryophytes, fungi and vascular plants (EA pg. 36), and
- f. removal of wood would negatively impact soil productivity recovery on moderate and high severity sites (EA pg. 54) and have moderate to moderately high negative cumulative effects on soil productivity (EA pg. 55).

Appropriate amounts of coarse woody material would be left to assure maintenance of ecological functions, including site productivity (EA pg. 50). The excess wood would be removed to reduce the intensity of future fires (EA pg. 51), and salvage logging would add an immediate input of organic matter to the soil surface, lowering sedimentation rates. Soil disturbance from falling and yarding activities would also help break up hydrophobic soil layers (EA pg. 54). If the wood was left rather than removed, and if a severe fire is avoided in this area within the time it takes for the woody debris on site to completely decompose, the amount of large wood biomass available would make a significant contribution to recovery and productivity of the soils in the Riparian Reserves. This would help offset the impact the soil resource suffered from the burn (EA pg. 42).

These identified potential negative impacts due to salvage logging must be weighed against the ecological necessity of taking action in this area. Without some reduction in the fuel loading in this area, future fire duration would be greatly increased, with negative impacts to the soil and present vegetation (EA pg. 38), and conditions in Riparian Reserves and the uplands would be placed on the same trajectory they have been on for much of the recent past. This trajectory would be characterized by short intervals of recovery punctuated by severe, stand-replacing fires, a fire regime far outside the range of natural variability (EA page 42). While large fires of varying severity were common in this area, high severity fires were not common

(EA pg. 17). Consequently, small streams would continue to be at high risk for sudden changes in peak flow, sediment input, and down-cutting due to concentrated runoff following wildfires, loss of fallen wood on the forest floor, and loss of any future source of large wood input (EA pg. 42). Although the Report's statement that salvage in and of itself is unlikely to decrease the probability of reburn, reduction of the amount of dead woody material to a level within the range of natural variability will decrease the severity of any subsequent reburns and is necessary if a low-severity fire regime is to be restored or future fire impacts outside the range of natural variability are to be avoided (EA pg. 5, 8, 10, 17, 25, 26, 29, 37, 39- 43, 45-47, 51-53). If severe reburn occurs it may influence peak flow, sediment input and erosion if downed wood and any newly created duff layers keep getting consumed by fire. Reintroduction of fire on a regular basis through prescribed fire programs may alleviate this concern (EA pg. 43), but such reintroduction of prescribed fire may not be possible without also increasing the risk of significant new impacts if fuel loading is not first reduced (EA pg.10, 42). Salvage is one of several treatments necessary to help restore ecological function (EA pg. 5, 8, 10, 12, 30, 38, 43, 44, 45, 50). In preparing the EA, the interdisciplinary team has adequately addressed the risks and effects involved under various alternatives. While the EA indicated that the long-term results of implementing this project are not *precisely* known, the action will begin moving the project landscape from it's current ecological condition outside the range of natural variability to a condition that falls within that range. The project will also begin returning the riparian areas in the project area to properly functioning condition (EA pg. 40). The risks and effects are neither highly uncertain, unknown nor likely to be highly controversial. While the EA identifies risk of erosion, sedimentation, and soil damage to severely burned areas and areas with unstable, fragile, erosive or potentially erosive soils, the degree of risk is minimized through implementation of numerous project design features and best management practices (EA pg. 5-12, 39, 43-48, 51, 53, 54). The risks and effects of much more intensive post-fire land management after severe fires are readily observable at numerous locations in the region, including the 1987 fires (including the Star, Silver, and Galice Complex fires), the 1992 East Evans Creek Fire, and the 1994 Hull Mountain Fire.

10). The Report recommended that “**salvage logging be prohibited in roadless areas.**” This recommendation was not considered by the interdisciplinary team, as there are no federally-defined roadless areas within or adjacent to the project.

11). The Report recommended that “**no salvage logging take place within riparian areas.**” The interdisciplinary team considered this recommendation, and based on site-specific information collected both before and after the fire, recommended under all alternatives that salvage logging not occur within the riparian areas of any Riparian Reserve. Riparian area and Riparian Reserve condition, function, and treatments including salvage were considered in development of the alternatives, formulation of project design features, and the analysis of the effects (Pages 1, 2, 5, 7-12, 14, 21, 25-30, 33, 34, 37, 40-50, 52, 57, 60, 66, 71-73, 75). Although the team determined that some treatments might be warranted within the riparian areas themselves, the recommendation was made to stay out of these areas for a period of time at least until other fire and suppression effects had been given time to begin recovery.

In the EA, the interdisciplinary team determined (as stated previously) that without treatments to restore ecological conditions, the portions of Riparian Reserves that fall outside of riparian areas would be placed on the same trajectory they have been on for much of the recent past. This trajectory would be characterized by short intervals of recovery punctuated by severe, stand-replacing fires, a fire regime far outside the range of natural variability (EA page 42). While large fires of varying severity were common in this area, high severity fires were not common (EA pg. 17). Consequently, small streams would continue to be at high risk for sudden changes in peak flow, sediment input, and down-cutting due to concentrated runoff following

wildfires, loss of fallen wood on the forest floor, and loss of any future source of large wood input (EA pg. 42).

12). The Report's recommendation that **“on portions of the post-fire landscape determined to be suitable for salvage logging, limitations aimed at maintaining species and natural recovery processes should apply”** was broadly incorporated into the EA by the interdisciplinary team in development of the alternatives, formulation of project design features, and the analysis of the effects. The project design features (EA pg. 5-12) as well as the Coarse Woody Material Prescription and Marking Guidelines (EA pg. 71-76) address this issue specifically. Limitations to minimize the risk of erosion, sedimentation, and soil damage to severely burned areas and areas with unstable, fragile, erosive or potentially erosive soils by implementing numerous project design features and best management practices (EA pg. 5-12, 39, 43-48, 51, 53, 54), to maintain and restore natural recovery processes in Riparian Reserves (Pages 1, 2, 5, 7-12, 14, 21, 25-30, 33, 34, 37, 40-50, 52, 57, 60, 66, 71-73, 75), and to assure levels of large wood within the range of natural variability (EA pg. 2, 4, 8-10, 14, 16, 24, 26-30, 37, 38, 42-51, 53, 54, 57, 58, 60, 71, 72) are addressed throughout the EA.

13). The Report's recommendation that **“because of the wide range of chronic ecological effects associated with road building, the building of new roads in burned landscapes should be prohibited.”** The ecological problems with roads were recognized and discussed by the interdisciplinary team in development of the alternatives, formulation of project design features, and the analysis of the effects (pg. 1, 4, 6, 7, 11, 12, 24, 27-30, 33-35, 37, 38, 43-50, 54, 55, 58, 67). Because of concerns over additional undesirable disturbance, helicopter logging is the proposed method for yarding a majority of the Quartz Fire. Other roads and a cable yarding system were originally proposed but dropped from the project for ecological reasons, i.e., crossing of Riparian Reserves and many springs. Streams in the portion the project with no proposed roads are not anadromous streams.

The Report recommends that cable yarding is an acceptable method of yarding post-fire salvage. The entire length of proposed new road construction is in the Resistant Metavolcanic geomorphic unit. This Landscape unit has a low-moderate erosion potential (EA page 53). Water-repellent soils (hydrophobic soils) have been found along the lower road corridor; these conditions can last for at least four (4) years (EA page 22). As stated in the EA, **decreased infiltration induced by hydrophobicity can result in increased surface runoff, production of more erosion and redistributed subsurface water** (EA page 22). In Ice and Beschta, 1999, Beschta states that the use of ground-based yarding systems may assist in disrupting surface hydrophobic conditions (EA page 22). Consequently, the building of these roads, logging (skyline yarder) and decommissioning the upper road and obliteration of the lower road within the same operating season would make it possible to break up water repellent layers by using a skyline yarder*, resulting in

- decreased surface runoff
- decreased erosion, and
- restoration of the natural subsurface water flow.

* For the existing topography, skyline corridors will use best management practices to mitigate erosion in acres with hydrophobic soils.

Helicopter yarding will not have the desired effect of breaking up hydrophobic layers as compared to skyline yarding, consequently the use of helicopters will result in

- increased surface runoff
- increased sedimentation into Glade Creek, an anadromous fishery, and

- continued redistribution of subsurface water.

The need for roads on this project, as well as the negative impacts of not building the roads was discussed in the EA on pages 4, 33, 57. Additionally,

- The great amount of helicopter use on the rest of the Quartz Salvage is expensive and with the current log market increases the risk of a no-bid sale, resulting in a de facto no-action alternative. The no-action alternative will increase the potential for a severe reburn, compounding impacts to the soil and other resources.
- Consequently, there is an immediate need that this sale be sold and salvaged in the near future. A no-bid situation would delay implementation and increase subsequent deterioration of dead trees which also increases the possibility of a no-bid or de facto no-action alternative.
- These temporary roads will decrease the cost of the sale, increase revenues to the Government and increase the viability of the Quartz Salvage.

Taking into consideration the ecological and economic impacts related to the roads, the interdisciplinary team discussed the reduction of negative ecological road impacts in the EA on pages 1, 5, 6, 7, 10, 11, 30, 33-35, 37, 45-49, 55, 57, 58, 60, 66, 68.

Maloney, et. al., 1995, found that new post-fire temporary roads can be built without accelerated erosion or sediment transport, when best management practices are followed (EA page 54).

The proposed new roads, totaling 0.9 miles, will:

- not enter any Riparian Reserves, sensitive soils or sensitive areas
- be as narrow as possible
- use best management practices
- be built and decommissioned before the following winter (most new road runoff occurs during the first major storm of the winter, this road will be decommissioned before winter sets in), and
- be tied to the success of the salvage (see helicopter yarding, above).

14). The Report's recommendation that "**active reseeding and replanting should be conducted only under limited conditions**" is only partially within the scope of this EA. Most work on the Quartz Fire area involving replanting and reseeding is part of the ESR plan (EA pg. 1) rather than this EA. Under this EA, active reseeding and replanting will only be used to stabilize sites that are disturbed by actions undertaken in this project, such as road reconstruction and decommissioning (EA pg. 6, 7, 10, 11, 55, 64), and is not being used for purposes of fire rehabilitation. The Report claims that reseeding and planting often results in a shift to a new ecosystem dominated in non-native plants. While certainly true in the past, both the Forest Service and the BLM have shifted to emphasize preference of native species over non-native in restoration and rehabilitation-related seedings, and when non-natives are used, to use sterile varieties that provide short-term cover but will be unable to dominate a site in the long-term. Native grass was seeded on some sites as part of implementation of the ESR plan (EA pg. 1). Native grass would be the first choice for ongoing stabilization efforts (EA pg. 6, 11).

15). The Report recommended that "**structural post-fire restoration is generally to be discouraged**", a recommendation directed at hard instream structures such as sediment traps, weirs, gabions, check dams and the like. None of these kinds of structures are proposed as part of this project. The Report's discussion of this recommendation calls for reducing or eliminating anthropogenic sediment sources prior to their

initiation, and gave examples including stream crossing improvements to prevent culvert failure, and providing for natural recruitment of large woody debris on hillslopes and in stream. This recommendation was incorporated throughout the EA in development of the alternatives, formulation of project design features, and the analysis of the effects (EA pg 2, 4, 5-12, 14, 16, 24, 26-30, 37-39, 42-51, 53, 54, 57, 58, 60, 71-76).

16). The Report's observation that "**post-fire management will generally require reassessment of existing management**" is incorporated throughout the EA in development of the alternatives, formulation of project design features, and the analysis of the effects. Most of the previously discussed items from the Report are encompassed by this recommendation; the entire EA represents a reassessment of the Quartz project area.

17). The Report's recommendation that "**continued research efforts are needed to address ecological and operational issues**" was not considered by the interdisciplinary team, as it is beyond the scope of this environmental assessment. Very large salvage operations may provide opportunities for research, such as the Bitterroot fires of 2000. Since this recommendation was prepared, considerable research has begun regarding fire ecology, fire effects, fire risks, fire recovery, and restoration as part of the Joint Fire Science Program and the National Fire Plan. There is already a considerable body of research regarding the environmental effects of salvage, road construction and management, and site preparation effects and the role of downed wood in terrestrial ecosystems.

18). The Report's recommendation that "**additional information must be provided to the public regarding natural fires and post-burn landscapes to provide balance to the "Smokey Bear" perspective of fires and forests**" was not considered by the interdisciplinary team, as it is beyond the scope of this environmental assessment. The recommendation fails to recognize that public information and education campaigns on the benefits of fire and fire ecology had begun before 1995. However, such campaigns take time to begin to have a significant impact on policy and budget direction as provided by Congress and the Administration. Fire education efforts continue, but since relatively few people are directly affected by fire management decisions, this type of information is not often assimilated by the largely urban populations of the Pacific Northwest.

Recent studies on public understanding of fire and fuels issues conducted by Oregon State University found that while most people have heard of the issues, few have much understanding of them and other factors are more important to them, such as those related to the economy and employment.

Experience has shown that even when popular support for wildland fire use is high, this support is largely intellectual. An emotional response is more typical once a fire happens where these same people can see it every day. Tolerance for the fire drops rapidly, especially for long duration fires that produce direct impacts from smoke and when fires threaten to move into wildland-urban interface areas.

19). Regarding fire management, the Report states that "**fire suppression activities should be conducted only when absolutely necessary and with utmost care for the long-term integrity of the ecosystem and the protection of natural recovery processes.**" This recommendation was not considered by the interdisciplinary team, as it is beyond the scope of this environmental assessment. The discussion that accompanies this recommendation fails to recognize standard operating procedures that were already in place at the time the recommendation was written to protect smaller water bodies from excessive removal of

water and riparian areas from damage due to suppression activities. There is no scientific or operational evidence that use of water from small streams and ponds has not proven to be effective; the opposite is often true, particularly on small fires and specific segments of large fires.

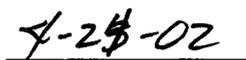
20). As the project contains no wilderness areas, the recommendations in the Report regarding wilderness areas are not applicable to this assessment.

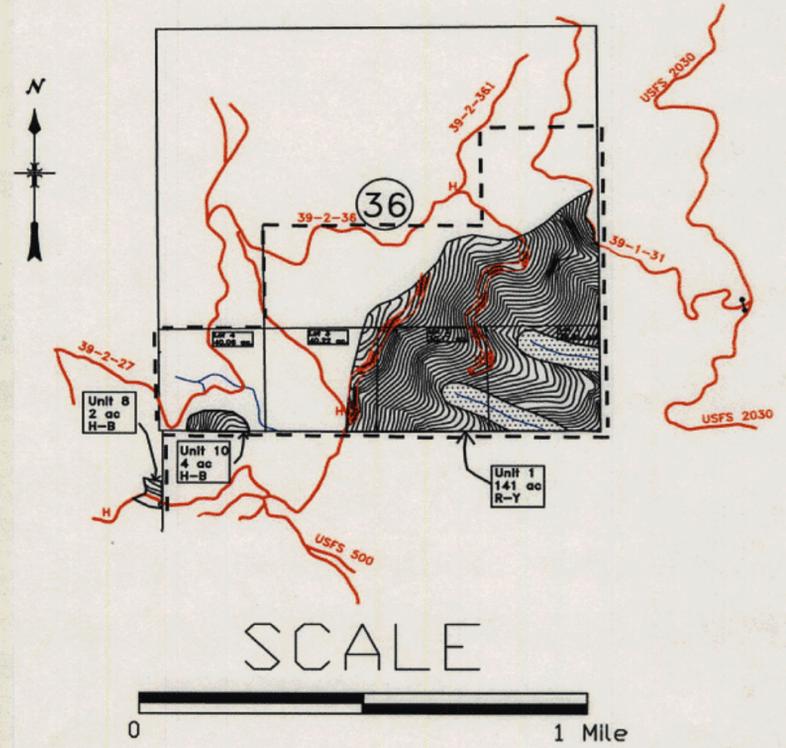
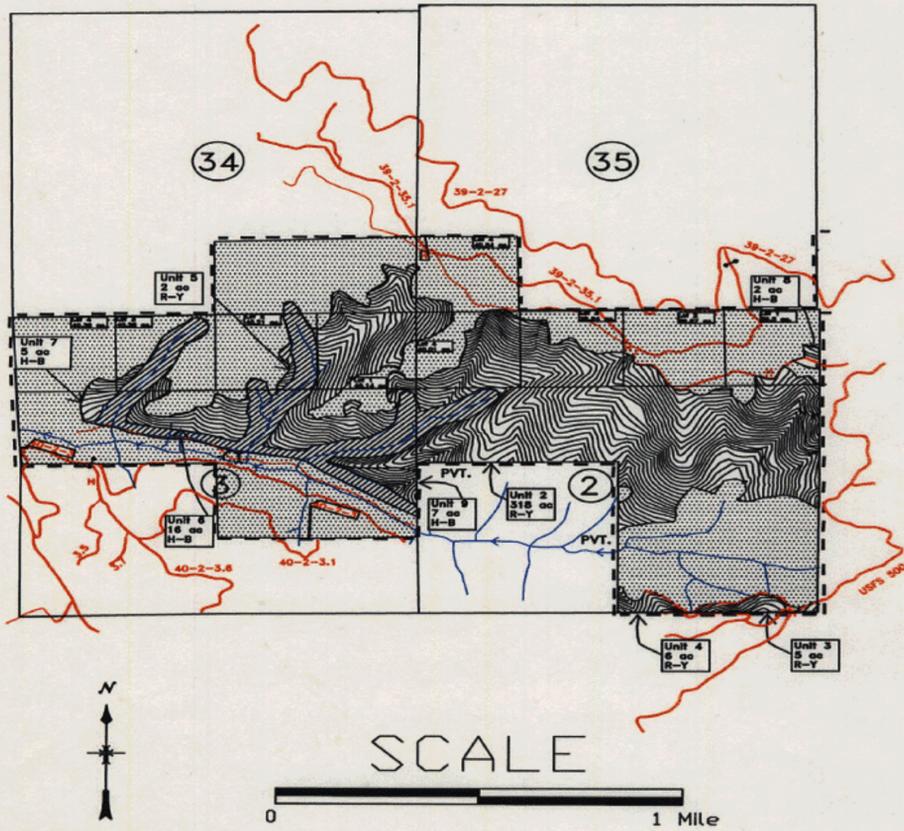
21). Another fire management recommendation in the Report states **“when land ownerships are mixed, the federal land management agencies should establish policies to prevent conflicts between re-establishment of natural disturbance regimes on federal land and the protection of private property.”** This recommendation was not considered by the interdisciplinary team, as it is beyond the scope of this environmental assessment, as well as beyond the scope of federal land use plans. The federal land management agencies do not have authority to issue wildland fire insurance policies to private landowners. Further, fire protection on private lands is the responsibility of the State of Oregon.

The information presented above addresses the major concerns outlined in the Beschta Report, and presents a determination of the site-specific applicability of the Report to conditions and issues in the Quartz Fire project area.

The decision to implement the proposed action described in the attached EA will not have an adverse energy impact as described in Executive Order 13212 and I have determined that this action is in conformance with the Medford District Resource Management Plan.


Ashland Field Manager


Date



LEGEND

	BARRICADE		EXISTING ROAD
	GATES		CORNER PUBLIC MONUMENT
PVT.	PRIVATE, NON-BLM LANDS		STREAMS
	CONTRACT AREA BOUNDARY		
	PROPOSED NEW ROAD CONSTRUCTION	R/W UNIT	= 3 ACRES
	R-Y, RESERVED TREES MARKED WITH YELLOW PAINT	UNITS 1, 2, 3, 4, & 5	= 482 ACRES
	H-B, HARVEST TREES MARKED WITH BLUE PAINT	UNITS 6, 7, 8, 9, & 10	= 34 ACRES
	HARVEST TREES MARKED WITH WHITE PAINT		= 77 ACRES
	RESERVE AREA		= 724.91 ACRES
	TOTAL CONTRACT AREA		= 1320.91 ACRES