RECORD OF DECISION
And
Non-Significant Amendment #33

Eyerly Fire Salvage Project
Environmental Impact Statement

USDA Forest Service
Sisters Ranger District
Deschutes National Forest
Jefferson County, Oregon

Introduction

This Record of Decision (ROD) documents my decision and rationale for the selection of Alternative 2 to be implemented for the Eyerly Fire Salvage Project. It also includes a non-significant Deschutes Forest Plan amendment. The Forest Plan amendment designates substitute old growth areas that better provide habitat for associated indicator species.

Background

On the afternoon of July 9th, 2002 a wildfire was ignited by lightning on the north side of the Metolius arm of Lake Billy Chinook within the Confederated Tribes of Warm Springs Reservation. Despite fire crew line construction and helicopter water suppression, the fire grew rapidly in steep, rugged terrain. The fire was fueled by cheatgrass, juniper, bitterbrush, ponderosa pine and Douglas-fir. On July 11th, the fire spotted across the Metolius River burning onto the Sisters Ranger District and grew from 212 acres to approximately 2,000 acres. Extreme fire behavior was observed, and on July 13th the fire made a run toward Perry South campground expanding the burned area to approximately 10,000 acres.

Another extensive burning period began on July 14th. The fire was then estimated at 16,000 acres in size. For the next few days the fire grew steadily. As inversions lifted, the fire spread up the Street, Spring, and Bean Creek drainages. On July 23rd, the fire breached the crest of Green Ridge and burned approximately 50 acres on the west side.

At time of containment, the fire was estimated at 23,134 acres. Total National Forest system land consumed is estimated at 17,786 acres. Within the fires perimeter, 12,821 acres suffered from stand replacement severity. Land ownership within the Eyerly Fire perimeter and project vicinity is displayed in the map (*Map R-1*), and presented by acres and percent of the project area in *Table ROD-1*.

Table ROD-1. Land Ownership within the Eyerly Fire Area

Land Ownership within the Eyerly Fire area		
Ownership	**Acres**	**Percent**
Deschutes National Forest	17,786	77
Other Federal	158	<1
Private	3,614	16
Confederated Tribes of Warm Springs	1,576	7
Total	**23,134**	**100**

The project area is in the Lower Metolius watershed, which includes the subwatersheds listed below:

Lower Fly Creek
Spring Creek
Street
Metolius Horn
Metolius
Lower LBC Metolius

The Eyerly Fire affected some portions of all these subwatersheds; however, salvage is proposed in portions of the Lower Fly Creek, Spring Creek, Street, Metolius Horn, and Metolius subwatersheds.

The Eyerly Fire area (Map R-1) is located east of Green Ridge, south of the Metolius River and Lake Billy Chinook, west of County Road 64, and north of Prairie Farm Creek. The legal description is:

Township 11 South, Range 10 East, Sections 4, 5, 8 – 10, 14 – 17, 20 – 23, and 32 – 36
Township 12 South, Range 10 East, Sections 1 – 5
Township 11 South, Range 11 East, Sections 30 – 32
Township 12 South, Range 11 East, Sections 5 – 7

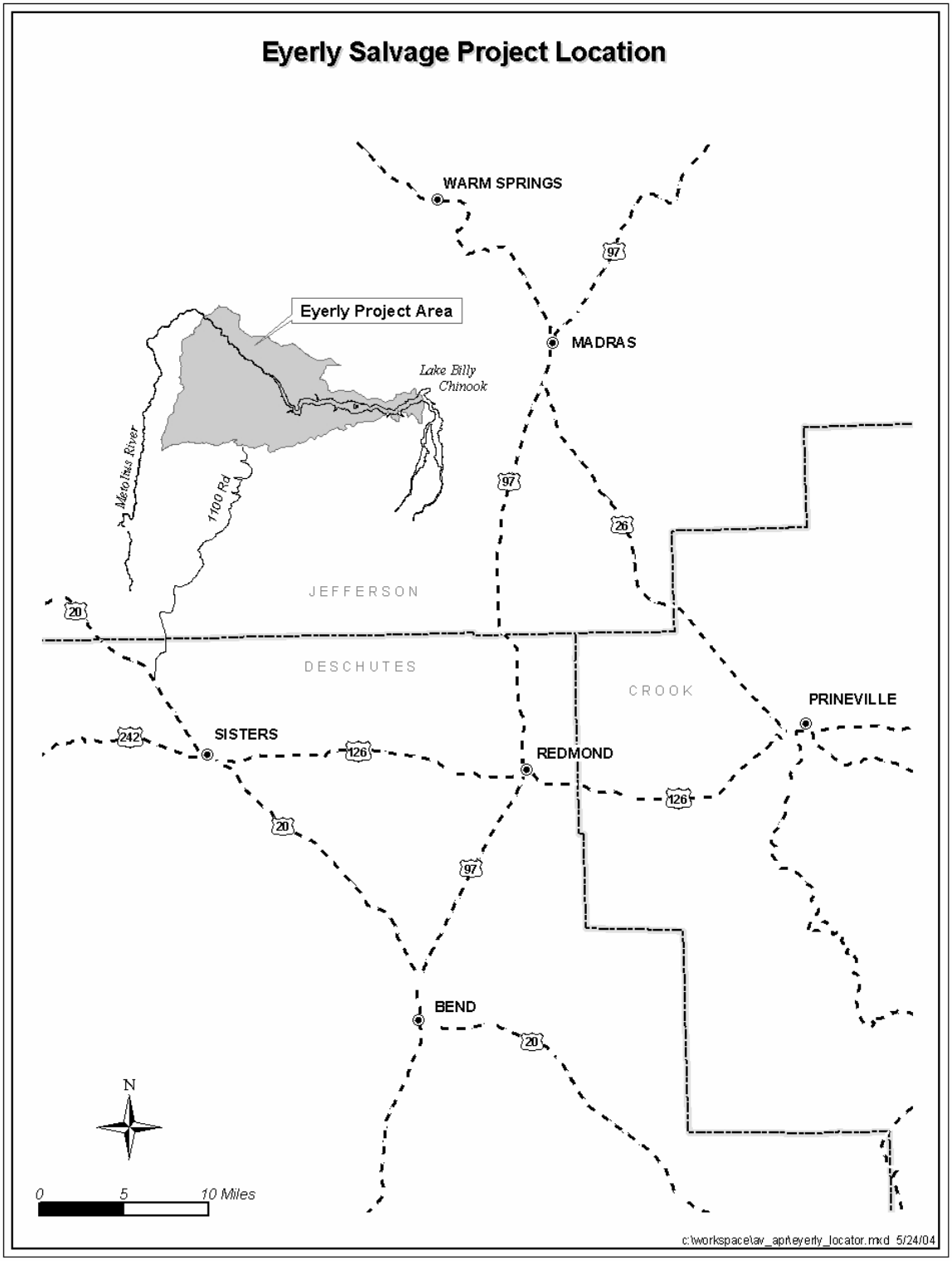
Future conditions within the Eyerly Fire area, in the absence of some form of active management, would be likely to perpetuate unstable or non-sustainable conditions. Since tree densities were high before the 2002 Eyerly Fire and the fire killed so many trees, the current amount of standing dead trees is well above historic norms. The future condition that would unfold over several decades, in the absence of active management, includes several elements that would contribute to non-historical, non-sustainable conditions.

- Due to extensive areas of stand replacing fire severity where all trees are dead, the amount of area without a conifer seed source is greater than would have occurred historically.

- After this stand replacing surface and crown fire, the fuel loadings that will be created when the standing dead trees fall over would have the practical effect of eliminating from consideration the use of prescribed fire. Prescribed fire is an important, ecological, and cost-effective tool in moving young early seral species stands (such as ponderosa pine) toward sustainable older stands. Areas of heavy fuel loading (either from large down fuels or concentrations of smaller fuels) present unacceptable risks in terms of control of prescribed fire, if they are left in place.

- In addition, if untreated, these future fuels conditions would be well above historical conditions but also above surface fuel loadings that existed just prior to the Eyerly Fire. In the event of a fire start over the next several decades, such conditions would contribute to another round of high intensity fire outside the historical pattern of low intensity fires. The potential for soils damage is higher with heavy fuels comprised of both large down trees and concentrations of smaller trees and shrubs close to the ground, than the damage that occurred during the Eyerly Fire.

Map R-1


Eyerly Salvage Project Location
WARM SPRINGS
97
Eyerly Project Area
MADRAS
Lake Billy Chinook
Metolius River
1100 Rd
97
26
JEFFERSON
20
DESCHUTES
CROOK
PRINEVILLE
242
SISTERS
126
REDMOND
126
20
97
BEND
20
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Purpose and Need for Action

The purpose and need for action in the Eyerly Fire Salvage project area are to:

- Recover the economic value of fire-killed and damaged trees expected die,
- Reduce future fuel loadings to be consistent with management direction,
- Accelerate the establishment of upland forest vegetation,
- Reduce hazards associated with danger trees along major roads, and
- Designate substitute old growth areas that were burned in the Eyerly Fire.

It is expected that the projects included with this decision will begin to be implemented in 2004. The underlying needs for action derive from the differences between current resource conditions and desired, sustainable, resource conditions as discussed in the Deschutes National Forest Land and Resource Management Plan (Forest Plan), as amended. The proposed action is designed to move current resource conditions closer to the desired conditions. There are five underlying needs for the project:

- *Recovery, through salvage, of the economic value of the burned timber and to provide timber products to the economy.*

For the Eyerly Project Area as a whole, this action is needed because the area is currently characterized by fire-killed and damaged ponderosa pine and mixed conifer trees. Mixed conifer stands are composed of a mixture of tree species including: ponderosa pine, white fir, western larch, incense cedar, and Douglas-fir. These species quickly lose commercial value and their suitability as the raw material for sawtimber rapidly deteriorates following fire mortality. This action responds to the goals and objectives for the Deschutes National Forest Land and Resource Management Plan (p. 4-2, and pp. 4-37 – 4-49). The purpose of this project is to recover value in the wood in a timely and economically efficient manner from a portion of the area burned by the Eyerly Fire by putting it to beneficial use in the local and regional communities. There is a need and demand for wood and various wood products used throughout the region. The proposed action utilizes the opportunity to salvage harvest the fire-killed trees or trees expected to die as a result of fire injury, and to help provide jobs and income.

Specifically for the portion of the project within the Metolius Late Succesional Reserve (LSR), there is a need to recover the timber volume in this instance where a catastrophic event clearly killed more trees (resulting in more snags and down logs in the short and long term) than are needed to maintain late-successional conditions, reference Northwest Forest Plan (NWFP) (NWFP ROD, p. 66). Removing fire-killed trees through salvage logging will provide sawtimber and other wood products to the local and regional economies (NWFP ROD, A-1).

- *Establish fuel conditions that will reduce the potential for future high-severity fires and restore fire as an ecosystem component.*

The majority of the Eyerly Fire Salvage project area is characterized as a short-interval fire adapted ecosystem (Fire Regimes I and IIIa). These fire regimes make up 83% of the project area. Under more characteristic fuel and vegetation conditions, frequent, low-intensity fires swept the forest floor and maintained fuel and vegetation conditions supporting this fire disturbance process. High intensity fires did occasionally occur, but on a much smaller scale than the Eyerly Fire.

Prior to the Eyerly Fire forest stands that historically were characterized by open large-sized ponderosa pine had changed and become dominated by denser stands of smaller trees often in multi-strata structures, and with increasing amounts of Douglas-fir and white fir. These stand conditions were accompanied by an accumulation of surface fuel loadings. Together these changes resulted in a condition that supported high intensity fire behavior with potentially damaging results to existing forest stands over a large portion of the

landscape. These stand and fuels conditions were present within the Eyerly Fire area in amounts and distribution that represent a substantial departure from historic conditions.

Fire intensity was high on about 73% of the Eyerly Fire resulting in stand replacement effects to the existing forest vegetation, an uncharacteristic event compared to the characteristic fire regimes. In large portions of the fire area, the fire consumed the litter layer, most of the existing down woody material and killed or severely damaged all of the standing trees.

Now, after the fire, a dead and standing fuel component remains. For the next 10 years a high intensity fire is unlikely because fuels will not have accumulated to sufficient levels, and will not have developed adequate continuity to carry fire. However, approximately 10 to 30 years following the Eyerly Fire, the accumulation of fuels will be more rapid as smaller diameter dead trees fall, and as shrubs and other understory species become established. Minimal duff will have accumulated, thus a high burn severity would primarily occur where fuel is concentrated and has decomposed enough to support prolonged burning. The maximum surface fuel loading is predicted to occur during the period of 30 – 35 years following the Eyerly Fire, and would persist for several decades. The average maximum surface fuel loading for stand replacement burned areas is estimated to reach 36 tons per acre for Ponderosa pine and 59 tons per acre for mixed conifer stands.

After 30 years large wood will have considerable decay, and a litter and duff layer will be established, resulting in a potential for high burn severity to soils due to prolonged burning of this layer. Additionally, existence of a conifer overstory could support a crown fire, which would retard or eliminate vegetation recovery. The development of vegetative communities could be altered, perpetuating the departure from historic conditions under a short-interval/low-intensity fire regime. The potential for re-introduction of fire in the future, either by prescribed burning or wildland fire use, would be reduced because fuel conditions would be too high.

Table ROD-2 displays the potential surface fuel loading (projected to occur in 30 – 35 years), which would result from no action, compared to desired levels. Desired levels are described in the Metolius Late Successional Reserve Assessment (LSRA) 1996. The last column in the table displays recent science regarding management of coarse wood debris in a recovering forest (Brown et al, 2003). The desired levels by plant association group from the Metolius LSRA would be appropriate to apply to the entire Eyerly Fire area.

Table ROD-2. Projected and Desired Surface Fuel Loading

Plant Association Group	Projected Maximum Surface Fuels, Under No Action Tons/acre	Desired Condition Tons/acre	Recent Science Brown et al, (2003) Tons/acre
Ponderosa Pine Climatic Climax	36	10 - 15	5 - 20
Ponderosa Pine Fire Climax	36	5 - 10	5 - 20
Mixed Conifer Climatic Climax	59	12 - 35	10 - 30
Mixed Conifer Fire Climax	59	8 - 12	10 - 30

Projections for no action indicate that maximum surface fuels would exceed desired levels, in some areas by as much as 400%. Based on the above comparison there is a desire and need to remove large standing dead trees that will eventually fall and add to surface fuel loading. The salvage of the standing dead and dying trees and fuel treatments within salvage units would help to reduce future burn duration and reduce fire severity of future prescribed or wildfire events.

Desired condition is described further within the Metolius LSRA:

> Bring fuel loads to a level that allows reintroduction of fire at the appropriate stages for the vegetation type. Move the Ponderosa Pine plant association group (PAG) towards fire-climax late-successional habitat conditions, and the Mixed Conifer PAG's to a mosaic of fire-climax and climatic climax late-successional habitats. Manage for late-successional habitat conditions in fire climax stands that allow for low-intensity/severity prescribed or natural fires (Metolius LSRA, p. 65).
>
> Remove dead material necessary to reduce the potential for catastrophic habitat loss from wildfire (Metolius LSRA, p. 65).

- *Accelerate reforestation of the desired species in areas where no seed source remains and to provide habitat to species associated with late and old structured forests.*

Natural regeneration of conifer species after a fire is dependent on seed dispersal from remaining live trees. For much of the Eyerly Fire area, particularly within the interior areas of the fire, adjacent seed will not be available for conifer species such as ponderosa pine, Douglas-fir, western larch or sugar pine. These areas will require reforestation by planting. Replanting with the appropriate species will ensure quicker establishment of species desirable for long-term objectives.

The restoration rate of late successional forest habitat can be increased with planting and competition reduction treatments. Without disturbances in a passive management scenario, it could take eighty (80) years for a conifer to grow to 10" diameter at breast height (dbh). However lack of seed source is a major concern for the Eyerly area and there would likely be large areas with no trees for a longer period of time without tree planting. With reforestation and active management such as low intensity prescribed fire, tree sizes are estimated to range up to 14" dbh in the same timeframe, and the primary species composition would be ponderosa pine and Douglas-fir. It is estimated that a 25" tree would be available in 125 - 150 years with intermediate treatments such as thinning and prescribed burning.

Planting densities and patterns should reflect potential natural regeneration and mortality expected over time. Spacing between planted trees could average 15 feet dependant upon available protected micro-sites. Table ROD-3 displays desired stand conditions for mixed conifer and ponderosa pine plant association groups at an estimated age of 60 years (Metolius LSRA, 1996). These represent sustainable conditions for short-interval fire return regimes and would apply to the entire Eyerly Fire area.

Table ROD-3. Estimated 60 yr. Stand Condition by PAG

Plant Association Group	Estimated Size (average diameter, inches)	Trees Per Acre
Mixed Conifer	10	150 - 177
Ponderosa Pine	10	92 - 145

- *Reduce hazards associated with danger trees along major roads and developed campgrounds.*

There is a need to improve public safety along major roads and areas of high concentrated use within the fire area. Dead trees posing a hazard to the public have been identified along Forest Roads 64 and 1170, and within Perry South and Monty Campgrounds. It is a forest management goal to provide safe, efficient access for the movement of people and materials involved in the use of the National Forest lands (LRMP, p. 4-2).

- *Designate substitute old growth areas that were burned in the Eyerly Fire.*

The Eyerly Fire burned through two designated old growth areas in the 1990 Deschutes Forest Plan and significantly altered the conditions such that these areas no longer meet the minimum habitat requirements for the indicator species. One old growth area was primarily mixed conifer and provided habitat for pine martin. The other old growth area was primarily ponderosa pine with Goshawk as the indicator species.

The need for designation of substitute areas is based on direction the Deschutes Forest Plan: "If the structure of an old growth area is significantly altered through a catastrophic event such as fire, windstorm, or insect epidemic, another stand would be substituted that meets the minimum requirements of the indicator species (Deschutes Forest Plan, p. 4-150).

The environmental impact statement documents the analysis of three alternatives to meet these needs.

Issues

The alternatives respond to the following key issues identified during scoping. The key issues are specific to the proposed action and the project area. Measures for each issue will help to evaluate how each of the alternatives address key issues.

Soils

There is concern for the effects on soils considering the proposed use of ground-based yarding systems for salvage (tractor yarding) and fuel treatment (grapple piling). Ground-based yarding systems and grapple piling may increase soils erosion, and may affect soils productivity by increasing soil compaction and displacement.

Water

Some comments suggest that any ground disturbing activity following a fire like Eyerly should be avoided. Others suggest that some level of activity can be conducted, such as salvage harvest, without interrupting the processes of long-term ecosystem recovery.

This issue centers on the concern that salvage harvest following a major wildfire could increase erosion and sediment delivery to streamcourses.

Fish Habitat

Bull Trout are listed as a threatened and endangered species. Fish surveys have found bull trout to inhabit Street Creek within the Eyerly Project Area.

The effects of the proposed activities on fish habitat are of concern expressed by several comments. This key issue is strongly associated with the issues described above for soils and water.

Wildlife Habitat

There are two active bald eagle nests within the Eyerly Project Area. Hazard tree removal within Bald Eagle habitat is a concern. Dead trees greater than 21 inches in diameter provide potential perch sites.

The current and future levels of snags and down wood 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.

Alternatives Considered

Two action alternatives and a no action alternative were analyzed in the Final Environmental Impact Statement (FEIS). The action alternatives considered in the FEIS examine varying combinations and degrees of harvest activities and other actions. Each was developed to address the key issues and the purpose and need. For additional details on these alternatives, see the FEIS, Chapter 2 (Alternative 1 No Action, Alternative 2 (Preferred Alternative), and Alternative 3).

A number of other fire restoration actions outside of activities proposed in the FEIS have been implemented or are being considered. These include: road management in the form of road decommissioning and inactivation, monitoring and treatment of noxious weeds, shrub planting to improve wildlife forage, and repair of wildlife water sources damaged in the fire. A more complete list of restoration projects outside the scope of this FEIS and ROD are listed in the Eyerly Fire Salvage Project FEIS on page 34.

Alternatives Considered but Eliminated from Detailed Study

An alternative was considered that included broader application of salvage and fuel treatment activities. In the case of fuels treatments, much of the increased area that would have been treated under this alternative would not have resulted in any timber material produced, and as such would not have met the purpose and need to salvage timber and provide products to the economy, nor would it provide for accelerated development of LSR late and old structure conditions.

The interdisciplinary team also considered an alternative that would have included salvage of burnt timber within the Metolius Roadless Area. This would have provided an estimated additional volume of 5 million board feet (MMBF). Due to steep slopes and erodible soils, salvage within this area would have required helicopter logging. This area could not have been harvested economically, helicopter logging would result in a net loss to the government, and hence was dropped from detailed analysis.

Some comments were received that expressed a desire for a “restoration only” alternative to be considered. A restoration only alternative would not have met the purpose and need to recover economic value of fire-killed and damaged trees. Additionally, the salvage activities proposed in this FEIS are part of a larger effort aimed at restoration of the resource conditions and economic recovery within the Eyerly Fire Salvage area. Several restoration projects are being considered, reference Chapter 1, pages 6 and 7. These restoration projects are not connected to the salvage proposal, and will be documented in separate environmental analyses. The selection of the No Action alternative would result in no salvage or connected actions being implemented, while the separate environmental analyses for other restoration projects could proceed unaffected.

Alternatives Considered in Detail

The following provides a brief description of the alternatives that are fully analyzed. These alternatives are described in more detail in Chapter 2 of the Eyerly Fire Salvage FEIS.

Alternative 1 – No Action

The No Action alternative does not propose salvage, fuel treatments, or reforestation within the project area. This alternative is the baseline against which all other alternatives are measured. Activities already planned for the project area, such as road management may be implemented based on separate decisions.

Alternative 2 – Preferred Alternative

Alternative 2 is the proposed action and was developed in response to the purpose and need identified in Chapter 1 of the FEIS, pages 9 - 13. Alternative 2 would implement salvage harvest, fuel treatments,

reforestation, hazard tree removal, and designation of substitute old growth areas. These actions help move the resources within the project area toward the desired conditions.

Alternative 2 would capture the economic value of approximately 23.3 million board feet (MMBF) of dead and dying timber. The harvest method would be implemented mostly with ground-based (74%) and to a lesser degree Cable/Skyline (18%), and helicopter (8%) logging systems. A total of 4,846 acres would be treated with salvage harvest. About 73% of the Eyerly Fire area on the Deschutes National Forest would remain untreated under Alternative 2.

Fuels treatment is proposed for all salvage harvest units for a total of 4,846 acres. Conifer tree planting would be done on about 3,918 acres.

No new system roads would be constructed. Several short temporary roads, totaling approximately 2.1 miles are proposed to access helicopter and cable/skyline landings. About 107.6 miles of road maintenance and 33.4 miles of reconstruction would be required for haul routes. Approximately 3.8 miles of road decommissioning are included in this alternative.

Alternative 3

Proposed activities in this alternative were designed in part to address the Soils, Water, Fish Habitat, and Wildlife key issues. Proposed activities emphasize reduced area of disturbance from post-fire activities within subwatersheds to limit effects on watershed health, while also promoting vegetative recovery within the fire perimeter to intercept rainfall and reduce overland flow magnitudes. The emphasis on reducing post-fire disturbance to resources would result in fewer units receiving salvage harvest and fuels treatment.

Alternative 3 would capture the economic value of approximately 10.9 million board feet (MMBF) of dead and dying timber. The harvest method would be implemented mostly with ground-based (74%) and to a lesser degree Cable/Skyline (17%), and helicopter (9%) logging systems. A total of 2,893 acres would be treated with salvage harvest. About 84% of the Eyerly Fire area on the Deschutes National Forest would remain untreated under Alternative 3.

Fuels treatment is proposed for all salvage harvest units for a total of 2,893 acres. Conifer tree planting would be done on about 2,532 acres.

No new system roads would be constructed. Several short temporary roads, totaling approximately 1.4 miles are proposed to access helicopter and cable/skyline landings. About 89.6 miles of road maintenance and 33.4 miles of reconstruction would be required for haul routes. Approximately 3.8 miles of road decommissioning are included in this alternative.

Decision and Rationale

It is my decision to select Alternative 2 as the Forest Service plan for the Eyerly Fire Salvage Project.

During the decision process for this project, I realized that I would not be able to satisfy all public concerns. In fact, many of them are mutually exclusive. I have selected an alternative that balances capturing the economic value of the dead and dying trees, while balancing the need to reduce future fuel loading and promote recovery of the burned landscape. Maps displaying the activities included in Alternative 2 are attached to the Record of Decision (ROD). In making this decision, I very carefully considered and balanced numerous factors. First, I had to determine if active or passive management was the best way to manage the area.

Active v. Passive Management

A concern that arose early in the process was how to manage a burned area. Scientific literature exists that could lead one to conclude either active or passive management may be best, depending upon circumstances. Beschta et al. (1995), suggested that "there is no ecological need for intervention on the post-fire landscape," and that post-fire logging, reseeding, and replanting should be conducted only under limited conditions. The Beschta report also states that there is a lack of knowledge pointing to detrimental ecological effects of salvage harvest measured in association with any particular wildfire. Similarly, in his response to Beschta et al., Everett (1995) comments on the lack of good information, but states that the "custodial" approach advocated by Beschta may be in many cases less desirable than more active management because of the possible soil degradation in the absence of seeding, and because of possible fuel buildup in the absence of timber harvest. In reaching my decision, I have incorporated ideas presented by Beschta, Everett and others.

The Eyerly Fire killed thousands of acres of trees that provided shade to streams; cover and forage for wildlife; timber for future harvest, as well as seed sources for new forests; and changed the scenery and recreation qualities many of you enjoyed prior to the fire. The sum of adverse ecosystem effects of the Eyerly Fire is considerable and many of these detrimental conditions will not self-correct in an acceptable period of time. In my judgment, active management is necessary for a portion of the Eyerly Fire. I have considered the conflicting viewpoints on active v. passive management and I consider active management to be an appropriate course of action for about 27% of the total Eyerly Fire area. This would leave about 73% of the fire area untreated at this time.

I have considered that all effects of the Eyerly Fire are not adverse, an example would be where fire intensity was generally lower and burned as a surface fire, reducing fuel loading with minimal effect to the overstory green trees. In these areas there was a beneficial effect that reduces the potential for high intensity fire for a time before fuels again accumulate to hazardous levels.

Portions of the Eyerly Fire burned at high intensity because of high fuel loads, dry fuel conditions, and a dense understory of ladder fuels across the landscape. These fuel loadings are largely due to our past fire suppression efforts, timber harvest, and other management activities. If some of the burned trees are not removed, we project that: 1) future fuel loads will be just as high or higher than they were before the Eyerly Fire; and 2) another fire with similar or greater devastating results will occur. If such a fire occurs, investments in recovery efforts and favorable gains in streamside shade, cover and habitat for wildlife, live root structures to hold soil in place, and scenery characteristics for recreationists will be lost.

Historically, short-interval fire adapted environments, such as are present for the majority of the Eyerly Fire area, experienced low to moderate severity wildfires. It is important to reduce fuel loads in some portions of these environments and decrease the risk of future high severity wildfires to some extent.

In order to pursue active management, I have to make this decision now. Commercial salvage is the most practical option for removing trees 12" dbh and greater and this can only be accomplished while the material has commercial value. Less than two years after the fire, the commercial value of the majority of the smaller trees less than 12"dbh is already gone. If I had decided not to remove some of the material now, I would not likely be able to remove it later in an cost effective and efficient manner.

In weighing this decision, I considered both fuel characteristics (amount, size, arrangement, continuity, and moisture content), likelihood of ignition plus impacts on soils during salvage harvest activities. Projected fuel loadings based on existing fire-killed trees are 2 to 4 times higher than the historical fuel loadings in the project area. Although the majority of this material is in the form of standing snags today, 10 to 30 years after the fire, most of this material is expected to be on the ground, and in a condition that could support a high severity wildfire. A high severity wildfire would likely kill or set back any riparian or coniferous vegetative recovery, again raising the potential for increased stream temperatures and sediment levels. Absent a source of ignition, high fuel loads would not be a problem. However, the Eyerly Fire area has incurred multiple wildfires per year: greater than 80 percent ignited by lightning. Based on these

conditions, I concluded that active restoration on a portion of this area to help reduce some of the risk is an appropriate course of action.

Implementing this decision will reduce fuel loadings of materials generally 12 inches and larger in diameter. In much of the fire area, heavy fuel loading of material 4 to 10 inches in diameter will still remain. Although this material is standing now, much of it will begin to fall over in the next 10 to 30 years. Additional site-specific fuel treatment needs, such as prescribed fire, may be identified during that time period. These needs could be addressed through separate analysis of specific proposals. I have not included these actions as a part of the action alternatives, or as a part of this decision because I do not yet know which areas will surface as problems first (i.e., where on-the-ground fuel concentrations will occur first), and because I did not want to implement this additional resource-impacting activity until further watershed recovery has taken place.

Eventually, I would like to reduce fuel loadings to the point where fire can be returned to its natural role, within these short-interval fire adapted environments. This would require that fuel loads be low enough to allow fire to burn through stands without severely damaging them. However, it is likely to be several decades before those reduced fuel loadings and vegetation characteristics can be achieved. Both fuel and vegetation conditions will need to be developed over time: i.e., reduced surface fuels and trees of sufficient size and species to support and be resilient to low intensity fire.

The Eyerly Fire Salvage Project alone will not bring about full recovery to the fire area. Future activities such as thinning timber stands, additional reforestation, decommissioning roads and implementing the Eyerly Roads Analysis recommendations are needed.

After I concluded that active restoration on some part of the post-fire landscape was appropriate, I weighed the pros and cons of each alternative based on the purpose and need and significant issues listed above. Following is a discussion of these considerations and my conclusions.

Response of the Alternatives to Purpose and Need:

Recovery of economic value of dead and dying trees

The analysis presented in the FEIS discloses that Alternative 2 would produce the highest output for both volume of timber and jobs supported. The following table displays the outputs for the alternatives. Alternative 2 best meets this purpose.

Table ROD-4. Economic Outputs

Economic Element	Alternative		
	1	2	3
Volume of Salvage (million BF)	0	23.3	10.9
Timber Jobs Supported	0	130.4	60.5

See the FEIS pages 308 – 320 for a full discussion of economic factors.

Reduce future fuel loadings

In evaluating the alternatives response to this purpose I considered the analysis presented in the FEIS.

While none of the alternatives would necessarily affect the chances for a fire start to occur, the un-manipulated fuel succession that would occur in untreated areas would produce persistent elevated fuel loadings. On untreated areas, within 20 – 30 years, much of the area would have high down fuel loads, in excess of desired levels. These conditions contribute to uncharacteristic fire behavior with increased flame lengths, longer burn duration, and increased potential for crowning and spotting. Fires with such behavior limit the effectiveness of suppression actions, and make the use of prescribed fire in the future difficult.

Re-introduction of low intensity fire is the best way to create forest habitat in the project area that can be sustained over time. If short-interval fire adapted environments are to be managed using a disturbance regime similar to that with which they evolved, the fuels must first be reduced to keep fire effects within an historic range.

The table below displays the alternatives' response to this purpose. Alternative 2 best meets this purpose. As displayed in Table ROD-5 Alternatives 1 and 3 have similar effects when comparing acres meeting desired fuel loading. Under Alternative 3, fuel loading is reduced where salvage and fuel treatment is proposed. However, because of the higher snag levels provided by Alternative 3, the resulting fuel loading exceeds the desired range.

Table ROD-5. Future Fuel Loadings

Fuels Element	Alternative		
	1	2	3
Acres by PAG meeting desired fuel loading (estimated for year 2032)			
PP PAG	1,518	5,058	1,518
MC PAG	1,345	2,308	1,345

Note: PP PAG: Ponderosa pine plant association group, MC PAG: Mixed Conifer plant association group

See the FEIS pages 321 - 346 for a full discussion of fire and fuel accumulation.

Accelerate establishment of upland forest vegetation

This purpose is closely related to the purpose for reducing fuel loadings. In the 2002 Eyerly Fire a substantial portion of the area burned as a high fire intensity, stand replacement event. Fire behavior such as torching, spotting and crowning occurred in a forest with a density and structure that was a significant departure from historically more open structure dominated by large size ponderosa pine forest conditions.

The no-action alternative would rely on natural regeneration, rather than planting. As noted above, due to extensive areas of tree mortality, the amount of area without a conifer trees seed source is greater than would have occurred historically. Most of the seed produced by ponderosa pine, a major species component of the forest in this area, does not disperse much farther than the height of the cone on the mother tree. Alternative 1 (No Action) is likely to result in a very incomplete initial reforestation, characterized by areas of dense young regeneration adjacent to live trees, interspersed with areas of brush, with much of the area overlain with heavy fuels in about 20 – 30 years. In this case, neither the character of the regeneration nor the fuels conditions would contribute to development of a sustainable structure.

In both Alternatives 2 and 3, tree planting is proposed. Planting trees now in portions of the Eyerly Fire area would accelerate the establishment of upland forest vegetation, and restore species composition similar to that which existed before the fire occurred. Planting density would be adjusted based on site-specific conditions so that development of overly dense stands would be avoided. Planting trees within the Metolius LSR would accelerate development of forest vegetation and will provide larger trees sooner than natural regeneration. Alternative 2 responds best to this purpose by planting more acres than Alternative 3.

The table below displays the alternatives response to elements of this purpose.

Table ROD-6. Upland Forest Vegetation Outputs

Upland Forest Vegetation	Alternative		
	1	2	3
Acres Planted	0	3,918	2,532
Estimated average diameter (inches) of conifers at 80 years	10	14	14

See the FEIS pages 346 – 363 for a full discussion of forest vegetation effects.

Reduce hazards associated with danger trees along major roads and campgrounds

Hazard tree removal is important to me in order to provide safe conditions along highly used roads and campgrounds within the Eyerly Fire area. Under Alternative 1 (No Action) hazard trees may be felled and left in place. Under Alternatives 2 and 3 hazard trees along the 1170 and 64 Roads, and within Perry South and Monty Campgrounds may be felled and removed for commercial utilization. The utilization of commercially valuable hazard trees would occur under Alternatives 2 and 3. Additionally, hazard trees along haul routes associated with the salvage proposed under Alternatives 2 and 3 would be felled and made available for commercial utilization.

Designate substitute old growth areas that were burned in the Eyerly Fire

Under Alternative 1 no substitution of designated old growth areas burned in the Eyerly Fire would occur. In order to meet direction in the Deschutes Forest Plan, I have determined that two substitute old growth areas be designated to replace those burned in the Eyerly Fire. Both Alternatives 2 and 3 propose the same designation of substitute old growth areas. The designation of substitute old growth areas is a non-significant amendment to the Deschutes Forest Plan, and is discussed in more detail in this ROD, p. 22.

Response of the Alternatives to Key Issues:

Soils

Soil impacts from ground skidding will be minimal and will meet Forest Plan standards following the removal of dead and dying trees by using the design and mitigation measures identified in Chapter 2. Our past harvest experience on similar soils conditions indicate a high probability of meeting soil standards. This is based on monitoring information from ground skidding on various projects on the Deschutes National Forest.

In deciding whether or not to actively pursue salvage harvest, reducing the potential for soil erosion and maintaining soil productivity were important considerations from the very beginning of our salvage planning effort. In the original design of Alternative 2 (Proposed Action) it was recognized that existing sensitive soil conditions on steeper slopes in the Eyerly would be an erosional problem if any ground skidding was proposed to remove the salvage. To avoid these erosional impacts, areas were either dropped (avoided) or helicopter yarding was identified as the logging system for these areas where economically feasible. The two harvest alternatives followed this logging design and have the same minimal risk of surface erosion. This approach was also followed in the design of the associated helicopter log landings and temporary roads for Alternatives 2, and 3. All the landings were located in stable upland areas.

Areas with tractor logging will also be below the 20% standard identified in the Forest Plan. This standard is appropriate for the soils found in the project area.

Conversely, if my only objective were to eliminate any potential of harvest-related soil disturbance and complete only separate unconnected restoration proposals, I would have selected Alternative 1. Alternative 1 would not salvage dead and dying trees, construct any temporary road, or plant conifers to re-establish conifer forest. Although Alternative 1 affords soils a high degree of protection, I did not select it because it does not respond fully to the purpose and need for action to recover the potential value of fire-killed and dying trees and does not reduce potential fuel loading or aid in the establishment of upland forest vegetation.

Alternative 1 (No Action) would provide the highest level of down woody material for soil productivity and would not generate any harvest-related soil disturbance. However, the watershed condition class would improve more slowly under Alternative 1 than under the action alternatives. I did not select this alternative because trees would not be planted, increasing the length of time to establish ground cover.

If the decision was based solely on erosion potential between the harvest alternatives, Alternative 3 has slight benefit with fewer acres of ground skidding. Though Alternative 3 has a lower effect on soils, I place a higher value on recovery of economic value and restoring fuels to within desired levels. In selecting Alternative 2, I have provided a balanced approach for managing the recovery area. This alternative provides for the salvage of dead and dying trees, minimizes harvest-related soil disturbance, and affords a lower risk of fire impacts to soil productivity by reducing fuel loading on more acres. Alternative 2 does the best job of responding to all the elements of the purpose of and need for action while providing a high level of protection for all resources, including soils. The effects of the alternatives on soils are described in the FEIS pages 74 – 118. Even under Alternative 2 about 73% of the area would remain untreated.

Water Quality

Concern expressed in response to the proposed Eyerly Fire Salvage Project is the risk of increasing erosion and sediment delivery through salvage logging. The FEIS contains extensive discussion of the effects of the alternatives on water quality including: Clean Water Act Section 303(d) listed water bodies, stream flow, sedimentation, channel network and condition, water temperature, and water chemistry (FEIS pp. 119 – 157).

For stream flow I have considered that the action alternatives would have a negligible effect on stream flow because only dead and dying trees would be removed and soil compaction is not at a magnitude that would significantly affect stream flow. Alternatives 2 and 3 would result in an increase in the amount of soils in a detrimental condition over Alternative 1 (No Action) (FEIS, p. 134). However the increase would be spatially dispersed and located away from streams, thereby reducing the effect on stream flow to negligible levels. I have also considered that Alternative 2, by reducing fuel loading and planting on more acres, reduces the risk of future wildfire effects on peak flow and enhances forest vegetation recovery.

In my decision, I considered a number of factors related to the risk of sediment delivery from salvage activities. These include: the number of potentially hydrologically connected road ditches, acres of proposed harvest within sediment transport zone, and proposed miles of road for timber haul within riparian reserves or riparian habitat conservation areas, the total level of activity (e.g., how many acres are being salvage harvested or acres of ground skidding); the logging systems to be used and associated mitigation; the location of activities relative to stream channels; and the erosion hazard and other soil characteristics of the lands being salvaged.

The No Action alternative does not include salvage logging or ground disturbing activities and does not present any additional risk of activity-related sediment. However, it does not correct existing road problems that would decrease long-term fine sediment levels associated with the decommissioning of the 1170-800 road system.

Alternative 2 and 3 include different levels of helicopter and tractor skidding. These alternatives require helicopter or cable/skyline yarding on steep slopes. There is no salvage proposed to occur within either riparian reserves or riparian habitat conservation areas (RHCA) in Alternatives 2 and 3. I have considered that Alternative 2 presents an estimated increase in sediment delivery of 4.1% over Alternative 1, while Alternative 3 presents an estimated increase of 1.5% (FEIS, p. 140). The differences between the alternatives are primarily related to the amount of harvest proposed within the sediment delivery zone (480 feet each side of stream channels).

The alternatives considered for the Eyerly Fire Salvage Project would not directly affect stream temperatures or channel condition.

I selected Alternative 2 because it represents a low risk of sedimentation during salvage harvest, decreases long-term fine sediment levels because roads are decommissioned in the 1170-800 road system sooner, and best meets fuels and economic objectives.

Fish Habitat

The effects of the alternatives on fish habitat are largely related to the effects noted above under Water Quality. Effects of the alternatives on bull trout critical habitat, redband trout and essential Chinook salmon habitat are a concern.

A detailed discussion of the effects of the alternatives on fish habitat is found in the FEIS, pp. 158 – 187. All alternatives are consistent with the Deschutes Forest Plan and Northwest Forest Plan aquatic strategy (FEIS, pp. 180 – 187). Common effects of the alternatives include:

- No changes to stream flow
- No changes in stream temperature
- No changes in channel condition
- Not likely to adversely affect (NLAA) for Endangered Species Act listed fish (Bull trout)
- May impact individuals, not likely to contribute to a trend towards listing (MIIH) for sensitive species (redband trout)
- No effect (NE) for Chinook salmon

My decision comes down to the risks associated with the various alternatives regarding potential increases in sediment delivery to streams. As described above under water quality I consider the risk of increased sediment for Alternative 2 to be low and that risk is outweighed by the economic, fuels reduction, and accelerated upland forest vegetation benefits that result from implementing Alternative 2.

The US Fish and Wildlife Service has concurred with the analysis for this project which states that Alternative 2 is Not Likely to Adversely Impact fish. In their review of the Draft Environmental Impact Statement for the Eyerly Fire Salvage Project the Environmental Protection Agency (EPA) gave a rating of "Lack of Objections".

Wildlife Habitat:

Bald Eagle

There is concern for the effects of the proposed salvage on bald eagle essential habitat. The northern bald eagle is listed as threatened under the Endangered Species Act. There are two bald eagle nest sites within the perimeter of the Eyerly Fire. Only hazard tree removal is proposed in Alternatives 2 and 3 within essential bald eagle habitat.

I have considered that removal of hazard trees along portions of Forest Roads 64 and 1170, and in portions of Perry South and Monty campgrounds, as proposed in Alternatives 2 and 3, would affect bald eagle essential habitat. Under Alternative 1, hazard tree felling would be done in these same areas, though felled trees would not be available for commercial utilization. Though there would be an effect on habitat for bald eagle, it is a higher priority for me to make these areas safe for use by the public by cutting and removing the dead and dying trees that represent a danger to the safety of users. There is no alternative treatment available to which would create safe conditions and not affect bald eagle essential habitat.

By selecting Alternative 2 for implementation, I am addressing the purpose and need of hazard tree removal within areas of high use, along Highway Safety Act Roads 64 and 1170, and within developed recreation sites, while providing a high level of economic, fuels reduction and accelerated upland vegetation benefit to portions of the Eyerly Fire area.

All of the alternatives are assigned the same determination of effect because the felling of hazard trees would occur within bald eagle habitat in all of the alternatives. The US Fish and Wildlife Service has concurred with the analysis for this project which states that Alternative 2 is assigned a May Effect – Likely to Adversely Affect determination.

Snags

One of the more complex issues to balance was the level of snags to be retained. Looking at the burned area today, there appear to be plenty of snags for wildlife needs. However, this is a short to mid-term condition lasting 10 to 30 years (FEIS pp. 231 - 232). Since the Eyerly Fire burned so hot and killed so many trees, once these snags fall over, there will be no replacement snags until the forest is re-established and reaches a size and age to provide snags again. Even with reforestation on some of the project area, it is anticipated this will take over 125 - 150 years to occur (FEIS p.359).

Snags are important for a number of primary cavity excavator species (FEIS, p. 203 - 205). The Deschutes Forest Plan, as amended, requires enough snags be provided to support populations of cavity dependent species at 100 percent of their population potential across the landscape and, where available, green trees be retained to replace those snags when they fall over or are otherwise no longer suitable.

To evaluate the effects on snag and down wood habitat across the landscape by each alternative, I considered the analysis information provided by an analysis tool known as DecAID which measures species use to different snag levels.

The DecAID tool displays cavity excavator use or tolerance levels as an overall range for cavity excavator species (FEIS pp.191 - 193). Values provide a relative difference between alternatives. Tolerance levels have less to do with viability of species and populations, and more to do with the distribution of individuals across a project area. The alternatives represent different levels of snag retention and distribution, and thus would affect woodpecker and other species presence and distribution. Alternative 1 would support the highest tolerance levels for most primary cavity excavators. Of the alternatives with salvage and/or thinning activities, Alternative 3 supports the highest tolerance levels for most primary cavity excavators.

There are no overwhelming differences between the alternatives. Any benefits of providing higher snag levels is short term and would be lost after about 30 years. Alternative 3 is only slightly better than Alternative 2 as it provides better distribution of snag habitat throughout the project and the most acres of protected habitat. Both Alternatives 2 and 3 provide snags at levels that meet Forest Plan standards and guidelines, including the portion of the area within the Metolius Late Successional Reserve.

My selection of Alternative 2 balances the need to capture economic value, reduce fuel loading, and retain snag habitat. Alternative 2 will retain 73% of the burned forest snag habitat and meet Forest Plan standards for snags on the treated areas, abundant snag habitat will be provided.

Down Wood

All of the alternatives provide levels of down wood to meet Deschutes Forest Plan, as amended, standards and guidelines for site productivity and wildlife habitat. Effects of the alternatives on down wood levels are described in the FEIS pages 233 through 235.

In selecting Alternative 2, I've chosen to reduce potential down wood levels on 4,846 acres in favor of recovering economic value of the dead and dying trees, and reducing future fuel loading. Down wood would not be affected on the untreated area of the Eyerly Fire about 12,940 acres, about 73% of the fire area on national forest system lands.

Other Public Concerns

In addition to the significant issues, concern was expressed during the public scoping and in the comments on the DEIS about the effects of the proposed actions on:

air quality
cultural or heritage resources
insects and decay

noxious weeds
inventoried roadless, and
salvage harvest of dead and dying trees.

Air Quality

I have considered the effects of the alternatives on air quality described in the FEIS, pages 295 – 298. I have determined that Alternative 2 meets Forest Plan standards and guidelines and applicable regulations and is consistent with the Clean Air Act.

Cultural Resources

The effects of the alternatives on cultural resources are described in the FEIS, pages 305 – 308. Alternatives 2 and 3 include mitigation measures to avoid impacts to cultural resource sites.

Insect and Decay

The effects of the alternatives on the actions of insects and decay are described in the FEIS pp. 364 – 369. I have reviewed the analysis and have determined that effects are considered in a comprehensive and accurate manner.

Noxious Weeds

The selection of Alternative 2 includes project design elements for noxious weed treatment (FEIS, pp. 60 – 62). I believe the design of Alternative 2 will adequately mitigate the risk of spreading noxious weeds.

Inventoried Roadless Areas

The Eyerly project area includes a portion of an inventoried roadless area, the Metolius Breaks Roadless Area. This roadless area was addressed in Appendix C of the Deschutes National Forest Plan FEIS. None of the alternatives propose any salvage or related actions within the Metolius Breaks Roadless Area. There would be no direct effects from either Alternative 2 or 3. Alternatives 2 and 3 would have some short term effects from the sights and sounds of harvest activities on adjacent lands (FEIS p. 374).

Effects of the alternatives on the recreation experience, and recreation opportunity spectrum (ROS) is addressed in the FEIS pp. 369 – 375.

Salvage of Dead and Dying Trees

A number of public comments were received relating to our proposal to include the harvest of both dead and dying trees. The concerns were raised that many of these dying trees could survive and should be retained. From the beginning of the project, our silviculturist worked closely with Forest Service scientists to assess which of the fire damaged trees were likely to survive. These scientists have developed a rating system that provides an aid in making these survival determinations (FEIS, pp. 56 – 58). The Area Entomologist also spent time in the field with the silviculturist on the Eyerly project area to review some of the damaged stands and go over the rating system. Using this rating system those trees likely to survive will be retained.

Changes in Environmental Conditions between the Draft and Final EIS

The following changes were made between the Eyerly Draft and Final EIS. This list does not include minor grammatical corrections, editorial formatting, and clarification of data previously presented. The changes were driven by public comment and a comprehensive internal review.

1. A Past, Present, and Foreseeable Actions section is added
2. Cumulative effects analysis includes wildfires which occurred in the Summer 2003, which were not included in the Draft EIS.
3. Alternatives 2 and 3 include the decommissioning of 3.8 miles of the 1170-800 road system following harvest activities.
4. Revised section analysis data in response to public comments and newly acquired information (Economics and Social; Fire and Fuels Accumulation).

Cumulative Effects from Ongoing and Proposed Activities

In selecting Alternative 2, I directed the IDT to consider the likely effects of past, present, and future activities in combination with the proposed activities of the Eyerly Fire Salvage Project within the Metolius Watershed. Recent large fires including the 2002 Cache Mountain Fire and the 2003 Link and B&B Fires were special concerns in many of the DEIS comment letters. Since the completion of the Metolius LSR Assessment in 1996, 10 fires (greater than 10 acres in size) have occurred, impacting 43% of the LSR. Salvage is being planned for the B&B Fire area, however insufficient development has been completed to evaluate the effects. This still leaves a large area of snag habitat that will be available over the next 10 - 30 years within the Eyerly Fire area. This effectively limits the cumulative effects of salvage harvest on snag habitats. Cumulative effects to water quality, fish habitat, or soil productivity were considered.

The large number of other ongoing and proposed actions contributed to my decision to select a balanced resource protective alternative, even though the actual analysis of effects (FEIS, Chapter 3) did not indicate significant cumulative effects.

Consultation/Conferencing with USFWS

Aquatic Species

All alternatives are consistent with the Endangered Species Act (FEIS Vol.2, Appendix C, Aquatic Species Biological Evaluation). All alternatives will have **May Effect – Not Likely to Adversely Affect on Columbia River Bull Trout**. Based on this effect call, consultation with the US Fish and Wildlife Service (USFWS) was necessary.

Based on USFWS' review of the biological evaluation and supporting information provided in Level 1 team meetings, and field trips to the fire and project areas, USFWS concurred with the Forests' effect determinations for bull trout.

Terrestrial Wildlife

All alternatives will have **May Effect – Likely to Adversely Affect on Bald Eagle, May Effect – Not Likely to Adversely Affect on Northern Spotted Owl.** Based on these effect calls, consultation with the US Fish and Wildlife Service (USFWS) was necessary. All alternatives will have **No Effect** on lynx.

Also based on USFWS' review of the biological evaluation and supporting information provided in Level 1 team meetings, and field trips to the fire and project areas, USFWS concurred with the Forests' effect determinations for bald eagle and northern spotted owl.

Plants

Surveys show there are no known federally listed threatened or endangered plant species within the project area. No consultation with the regulatory agencies such as the USFWS was needed.

Legal Requirements and Policy

In reviewing the EIS and actions involved in Alternative 2, I have concluded that my decision is consistent with the following laws and requirements:

The Preservation of American Antiquities Act, June 1906

All surveyed and inventoried cultural resource sites in the Eyerly Fire Salvage Project area will be protected from entry and excluded from any resource management activities. New sites discovered during operations will be protected by avoidance or mitigation provisions in the timber sale contract (C6.24#) (Reference FEIS p. 64, and pp. 305 – 308).

The National Historic Preservation Act: The Oregon State Historic Preservation Officer (SHPO)

SHPO has been consulted concerning proposed activities in the Eyerly Fire Salvage Project area. The Advisory Council on Historic Preservation (ACHP) will be consulted about measures to protect significant archaeological sites from adverse affects, should any be identified.

The section 106 compliance report for Eyerly Fire Salvage project was received by the Oregon SHPO on March 22, 2004. The report described a no effect determination to any significant cultural resource sites for any of the alternatives. No response has been received from SHPO. According to the 1995 programmatic agreement between the Forest Service and Oregon SHPO, SHPO concurrence will be implied if no written response is received within 30 days of receipt by SHPO of the section 106 compliance report.

The National Environmental Policy Act (NEPA), 1969

NEPA establishes the format and content requirements of environmental analysis and documentation, such as the Eyerly Fire Salvage Project. The entire process of preparing an environmental impact statement was undertaken to comply with NEPA.

The Endangered Species Act of 1973, as amended

Biological Evaluations have been prepared to document possible effects of proposed activities on endangered and threatened species in the Eyerly Fire area. Appropriate coordination, conferencing, and consultation with USFWS have been completed (See previous section of ROD, Consultation/ Conferencing with USFWS).

Clean Air Act Amendments, 1977

The Selected Alternative is designed to meet the National Ambient Air Quality standards through avoidance of practices that degrade air quality below health and visibility standards. The Oregon State Implementation Plan and the Oregon State Smoke Management Plan will be followed to maintain air quality (FEIS, pp.295 - 298).

The Clean Water Act, 1982

The Selected Alternative will meet and conform to the Clean Water Act as amended in 1982. This act establishes a non-degradation policy for all federally proposed projects (FEIS, p. 121). The Selected Alternative meets anti-degradation standards agreed to by the State of Oregon and the Forest Service, Region 6, in a Memorandum of Understanding (Forest Service Manual 1561.5). This will be accomplished through planning, application, and monitoring of Best Management Practices (BMPs). Site-specific BMPs have been designed to protect beneficial uses (FEIS, Appendix D).

Satisfaction of State Forest Worker Safety Codes

The Oregon Occupational Safety and Health Code for Forest Activities (OAR 437, Division 6) regulations will be met when the Selected Alternative is implemented. Salvage strategies are designed to provide for worker safety by providing for appropriately sized openings to facilitate safe operation of yarding equipment or by clumping dead trees that are retained.

Environmental Justice

Executive Order 12898 on environmental justice requires federal agencies to identify and address any disproportionately high and adverse human health or environmental effects on minority and low income populations (FEIS, pp. 308 – 320). The analysis focuses on potential effects from the project to minority populations, disabled persons, and low-income groups.

Implementing Alternative 2 will provide a variety of opportunities for potential contracts. The alternatives would have no impact on the contracting process or the USDA Small Business Administration program for reserving contracts for minority groups for tree planting. Employment and income would be available to all groups of people, subject to existing laws and regulations for set-asides, contract size, competition factors, skills and equipment, etc.

Opportunities for all groups of people to collect species from disturbed and non-disturbed sites would be maintained by Alternative 2, and no disproportionate effect is anticipated to subsets of the general population.

I find that Alternative 2 would not have disproportionately high and adverse environmental effects on minority populations, low-income populations, or Indian tribes.

Other Policy or Guiding Documentation

Biological Evaluations were prepared to assess potential effects to sensitive species as identified by the Regional Forester. This evaluation for aquatic species and terrestrial wildlife determined that while there may be impacts to individual sensitive species, those effects are not likely to contribute to a trend towards federal listing or loss of viability of the population or species.

The FEIS for Managing Competing and Unwanted Vegetation, November 1988, Record of Decision signed December 1988, and the requirements of the Mediated Agreement, signed May 1989, and the USDA Forest Service Guide to Noxious Weed prevention Practices (2001), guide the policies for managing competing and unwanted used in this decision. This project will use prevention as the main strategy to manage unwanted and competing vegetation, and will incorporate all measures contained in the above documents. Specifics of managing competing and unwanted vegetation are documented in the FEIS (pages 60 – 63), and in the silvicultural prescriptions for this project.

The Deschutes National Forest Land and Resource Management Plan, as amended, provided the framework for the development of all the alternatives. I have reviewed the Metolius Late Successional Reserve Assessment and have incorporated principles from it and the nearly completed Metolius Watershed Analysis. My decision was based on using active management to restore a portion of a burned area that is not capable of self correcting in a time period I find acceptable. The actions proposed for the Metolius

LSR in Alternative 2 have been reviewed, and found consistent with Northwest Forest Plan standards and guidelines by the Regional Ecosystem Office.

The selected alternative is consistent with direction in the Northwest Forest Plan and recommended management actions in the Metolius Watershed Assessment (including the Aquatic Conservation Strategy Objectives) (FEIS pages 180 – 187), Metolius Late-Successional Reserve Assessment (FEIS pages 387 – 392) and the Metolius Wild and Scenic River Plan (FEIS, page 369).

The Record of Decision to Remove Survey and Manage (S&M) Mitigation Measure Standards and Guidelines was signed on March 22, 2004 and became effective on April 21, 2004. As surveys for the Eyerly Fire Salvage Project were in progress when the ROD was signed, Survey and Manage Standards and Guidelines for Survey and Manage species will be followed for all species (Category A through F). Botany and wildlife surveys have been completed for all required species. While surveys are not required for all S&M species, protection measures will be implemented as appropriate to maintain viable populations for all S&M species located during surveys.

Public Participation

The NEPA scoping process (40 CFR 1501.7) was used to invite public participation, to refine the scope of this project, and to identify preliminary issues to be addressed. The Forest Service sought information, comments, and assistance from Federal, State, and local agencies, the tribes, and other groups and individuals interested in or affected by the Proposed Action. The initial project scoping period lasted 30 days. The public was provided opportunities to participate in the Eyerly Fire Salvage Project (FEIS, p.25).

A DEIS was distributed for comment to the tribes, the public, and other organizations and agencies in December 2003. Numerous newspaper articles also occurred throughout the project planning process. In response to the DEIS, about 40 comments were received in a timely manner (FEIS, Appendix I, p. 485). Responses to these comments are found in Appendix I of the FEIS.

The Environmentally Preferable Alternative

Under the National Environmental Policy Act, the agency is required to identify the environmentally preferable alternative (40 CFR 1505.2(b)). This is interpreted to mean the alternative that would cause the least damage to the biological and physical components of the environment, and, which bests protects, preserves, and enhances, historic, cultural, and natural resources (Council on Environmental Quality, *Forty Most Asked Question Concerning CEQ's National Environmental Policy Act Regulation*s, 46 FR 18026). Factors considered in identifying this alternative include: (1) fulfilling the responsibility of this generation as trustee of the environment for future generations, (2) providing for a productive and aesthetically pleasing environment, (3) attaining the widest range of beneficial uses of the environment without degradation, (4) preserving important natural components of the environment, including biodiversity, (5) balancing population needs and resource use, and (6) enhancing the quality of renewable resources.

In the case of the Eyerly Fire Salvage Project, I have determined that the environmentally preferable alternative is Alternative 2 based on these six factors. Long-term, Alternative 2 combines the best fire restoration activities with the lowest risk of additional watershed damage to protect this fragile environment for future generations. Road decommissioning corrects known sediment problems; salvage harvest reduces potential down fuels, and includes the largest amount of tree planting between the alternatives. In the short term, the No Action alternative offers the least risk of sedimentation that effects water quality but does nothing to provide the widest range of beneficial uses or reduce severity of future fires since there is no salvage harvest. The No Action also does not include road decommissioning or tree planting. Alternative 2 is similar to Alternative 3, but has a slightly, but not significant, greater risk of sedimentation due to a larger number of acres of salvage harvest and fuel treatment.

Over the long term as the dead trees fall to the ground near open roads there is potential risk to public safety. During high winds, the trees could blow over on vehicles or recreation sites, though this is a low probability. All alternatives equally minimize this safety risk.

Alternatives 2 and 3 plant a portion of the area restoring conifer vegetation at a faster rate and help to restore the aesthetics and productivity of the burned area. Alternatives 2 and 3 utilize the dead and dying timber for beneficial economic uses, provide long-term benefits of fuels reduction and reforestation activities and include less environmental risks and still provide for wildlife needs. Alternative 1 retains all the dead and dying trees that in the short to mid-term are providing the best beneficial wildlife snag habitat use but does not address long-term fuel reduction and may not be the best for a wide diversity of species.

Preservation of the known cultural resource sites is an important factor. Since no activities are proposed under Alternative 1, it offers the best protection of the cultural resource sites within the project area. However, Alternative 2 and 3 strictly avoid ground disturbance to these sites and that also provides adequate protection.

The balancing of population and resource use needs is similar for Alternatives 2 and 3. Alternative 2 provides the greatest economic value from the dead and dying timber by providing jobs and logs to timber companies while still providing protection of the environment. Alternative 3 captures less economic value while providing some additional protection to critical resource values such as water quality and fish habitat, though Alternative 2 will not adversely impact these resources. Alternative 1 does not capture the economic value of dead and dying timber.

The quality of the forested landscape will be improved in Alternative 2 by promoting the recovery of burned forest by planting the most acres providing a greater diversity in forest habitat, and reducing future potential fuels. In conclusion, upon full consideration of the elements of Section 101 of NEPA, I have determined that Alternative 2 represents the environmentally preferable alternative for the Eyerly Fire Salvage Project.

Design Measures/Mitigation Measures

Design measures and mitigation actions are site-specific management activities designed to avoid or reduce the adverse impacts of timber harvest and associated activities. These measures will be implemented through project design and layout, contract specifications, contract administration, and monitoring by Forest Service officers. I have decided to implement 3.8 miles of road decommissioning as a mitigation measure in Alternative 2.

As part of my decision, I am choosing to implement these design and mitigation measures identified in the FEIS (FEIS, pp.46-64). These selected measures will adequately prevent adverse effects for the following reasons: the selected mitigation measures are practices we have used successfully in the past; they are State-recognized best management practices for protecting water quality; or they are based on current research (e.g., the snag management approach). I have decided to monitor the implementation of these measures and, in some instances, to monitor their effectiveness, as described in the following section.

Monitoring

Monitoring of the Eyerly Fire Salvage Project is designed to accomplish three purposes: 1) to assure that all aspects of the project are implemented as intended; 2) to determine, for certain critical activities, that the effects of the activities are consistent with the intent; and 3) to allow adaptation if it is found that activities are not being implemented correctly or are not having the desired effects. For example, if monitoring watershed conditions indicates unexpected or excessive sediment transport to streams, the result of that monitoring would be used to add more mitigation, such as additional sediment traps; road closures; implement seasonal or emergency closures; or modify or delay activities. Additional details of the monitoring items are found in the FEIS, pp. 64 and 65.

Forest Plan Consistency

I believe Alternative 2 to be consistent with long term management objectives as discussed in the Deschutes National Forest Plan, as amended. However there is one aspect of Alternative 2 that is inconsistent with existing standards and guidelines. I have decided to designate two substitute old growth areas for areas burned in the Eyerly Fire. The 1990 Deschutes Forest Plan will be amended to reflect this change in management allocation. There would be no change to land allocations made in the Northwest Forest Plan.

Non-Significant Forest Plan Amendment

The purpose of the non-significant amendment is to designate substitute old growth areas that were burned in the Eyerly Fire. The designation of substitute areas is based on direction in the Deschutes Forest Plan, specifically the standard and guideline M15-5 (page 4-150):

> If the structure of an old growth area is significantly altered through a catastrophic event such as a fire, windstorm, or insect epidemic, another stand would be substituted that meets the minimum requirements for the indicator species. The original area could then be salvaged and reforested.
>
> An old growth area will be considered significantly altered if it no longer meets the minimum habitat needs of the indicator species.

The need for the designation of substitute old growth areas comes as a result of the effects of the Eyerly Fire. The purpose of the designation is to meet the direction in the forest plan. It is the change in land allocations that is the amendment to the Deschutes Forest Plan of 1990.

The evaluation of proposed substitute (replacement) old growth areas is described in the FEIS, pp. 225 – 226. The location of existing and replacement old growth areas are displayed on Map R-5, attached to this ROD. Effects of the change in Forest Plan management allocation are summarized below.

Table ROD-7. Description of Old Growth Non-significant Amendment

Old Growth Area	Forest Type	Acres	Forest Plan Amendment action
Existing Location T11S, R11E, Section 31 and T11S, R10E, Section 36	Ponderosa pine	208	Re-designate this area as MA-7 Deer Habitat. Less than 10 acres of salvage is proposed within this area.
Substitute Location T11S, R10E, Sections 4 & 5	Ponderosa Pine	231	Currently allocated to MA-20 Metolius Wildlife Primitive. This area is outside of the Eyerly Fire Perimeter.
Existing Location T11S, R10E, Section 33	Mixed Conifer	145	Re-designate this area as MA-8 General Forest. Approximately 130 acres of salvage is proposed in this area.
Substitute Location T11S, R10E, Sections 8 & 9	Mixed Conifer	183	Currently allocated to MA-8 General Forest. This area is outside of the Eyerly Fire Perimeter.

As shown in the table above there are four Deschutes Forest Plan management allocations involved in this non-significant amendment. This amendment would result in a net increase in area allocated to MA-15 Old Growth of 61 acres. Area allocated to MA-7 Deer Habitat would increase by 208 acres. There would be a net decrease in area allocated to MA-8 General Forest of 38 acres. There would be a decrease in area allocated to MA-20 Metolius Wildlife/Primitive of 231 acres.

Determination that the Forest Plan Amendment is Not Significant under NFMA

I have determined that this amendment is not a significant amendment under the National Forest Management Act implementing regulations [36 CFR 219.10(f)]. In reaching this conclusion, I considered the following factors [from Forest Service Handbook (FSH) 1909.12]:

Timing - A change is less likely to result in a significant plan amendment if the change takes place after the plan period (first decade). The proposed changes are taking place after the first decade of the current 1990 plan, but will be enacted before the next scheduled revision. The next scheduled revision of the Deschutes Forest Plan is scheduled to begin in 2006. Therefore, the timing of the change in this amendment is not significant because of how late this change is occurring under current Forest Plan direction.

Location and Size – The smaller the area affected, the less likely the change is to be a significant change to the Forest Plan. All of the changes in allocations are within the general vicinity of the Eyerly Fire, reference Map R-5, and are within a distance of 10 miles from each other. For the Deschutes Forest Plan as a whole, the effect on the management allocations is shown below.

Table ROD-8. Summary of Management Area Changes

Management Area	Current Forest-Wide Acres*	New Forest-Wide Acres	Net Change (Acres)	Net Change (%)
MA-7 Deer Habitat	208,900	209,108	+208	+0.1%
MA-8 General Forest	626,300	626,262	-38	-.01%
MA-15 Old Growth	32,800	32,861	+61	+0.2%
MA-20 Metolius Wildlife/Primitive	13,100	12,869	-231	-1.8%

*Current Forest-wide acres based on Table 4-31, p. 4-89 Deschutes Forest Plan.

Goals, Objectives, and Outputs – An action is more likely to be a significant Forest Plan amendment if it alters the long-term relationship between the levels of goods and services projected by the Forest Plan and particularly if it would forego the opportunity to achieve an output in later years. The amendment is part of my decision to accelerate recovery of the fire area, and do not change any goals and objectives stated in the Forest Plan.

Management Prescriptions – A change is more likely to require a significant amendment if it would apply to future decisions throughout the planning area. Although the changes to the management areas will apply to future management in and immediately adjacent to the project area, it will not alter the desired future condition of the land and resources, standards, and guidelines, or the anticipated goods and services to be produced. The decision complies with Forest Plan standards for MA-15. The planned activities will not detract from or jeopardize any of the Forest Plan goals because of the small magnitude of change, as displayed in Table ROD-8.

Other Factors - After review of the environmental impact statement and project record, I have determined that there are no other factors or unique circumstances affecting the Forest Plan from this amendment.

Since I have determined that there is not significant change based on the factors, I conclude that this amendment is not a significant change to the overall Forest Plan direction as defined in the 1990 Deschutes Land and Resource Management Plan and its Record of Decision, as amended. Therefore, an environmental impact statement for a forest plan revision following the 10 step planning process found at 36 CFR 219.12 does not need to be prepared.

Consistency with NFMA Requirements

In all other respects, I find this decision to be consistent with the Deschutes Forest Plan, as amended and with the requirements of the National Forest Management Act implementing regulations; specifically:

Silvicultural Practices

In Alternative 2, there is no timber salvage on lands classified as unsuitable for timber production. Forest Plan amendment (described above) makes this possible by re-designating areas of old growth allowing harvest in previously unsuitable areas. Alternative 2, in conjunction with the Forest Plan amendment is consistent with 36 CFR 219.27(c)(1).

Even-aged Management/Clearcutting

The Selected Alternative includes salvage of timber killed by a catastrophic wildfire and follow0-up reforestation. According to the requirements of 36 CFR 219.27(d) and 16 USC 1604(k), the limits on opening size do not apply because the opening is a result of natural catastrophic conditions. The reforestation of the openings will result in even-aged stands where the fire killed all the live trees.

Vegetative Manipulation/Management Requirements

The selected action is consistent with the seven management requirements from 36 CFR 219.27 and the vegetation requirements from 36 CFR 219.27(b).

Maintaining Viable Populations of Fish and Wildlife Species

The selected action is consistent with the viable population requirements of 36 CFR 219.19.

Implementation

I have reviewed the Eyerly Fire Salvage Project FEIS and associated appendices. I feel there is adequate information within these documents to provide a reasoned choice of action. I am fully aware of the possible adverse environmental effects that cannot be avoided, and the irreversible/irretrievable commitment of resources associated with the Selected Alternative. I have determined that these risks will be outweighed by the likely benefits. Implementing the Selected Alternative will cause no unacceptable cumulative impact to any resource. There will be no significant impact to cultural resources, consumers, civil rights, minority groups, or women. The FEIS adequately documents how compliance with these requirements is achieved (FEIS, Chapter 3).

An emergency situation status was granted on July 27, 2004. Harvest activities on a portion of the selected alternative will be implemented immediately.

Correction to the FEIS

FEIS, page 1, the text “Table 2.11-3. Numbers of Snags by DecAID Tolerance Level” appears above the chapter heading. This is erroneous text.

In the FEIS, Chapter 1, page 10, about the middle of the first paragraph, Deschutes National Forest Land and Resource Management Plan timber goals and objectives are referenced (beginning on page 17), the correct reference should be Goals (page 4-2) and timber objectives (pages 4-37 – 4-49).

In the FEIS, Chapter 2, Section 2.2, page 33, the numbered list (7-12) is incorrectly numbered. The list should be numbered 1 though 6.

In the FEIS, Chapter 3, page 159, Figure 3.4.1 “Bull Trout Redds…” is incorrectly identified. The figure should be 3.5-1.

FEIS, Appendix A: Glossary of Abbreviations and Terms, add the abbreviation AWA: Admistratively Withdrawn Area.

FEIS, Appendix A: Glossary of Abbreviations and Terms, add the definition of term, Administratively Withdrawn Area: areas in the NWFP where scheduled timber harvest is precluded in the National Forest or District plans to achieve some other purpose.

Procedure for Change during Implementation

Minor changes may be needed during implementation to better meet on-site resource management and protection objectives.

In determining whether and what kind of further NEPA action is required, the Responsible Official will consider the criteria for whether to supplement an existing Environmental Impact Statement in 40 CFR 1502.9(c) and FSH 1909.15, sec. 18, and in particular, whether the proposed change is a substantial change to the intent of the Selected Alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated proposed changes regarding particular areas or specific activities will be considered together in making this determination. The cumulative impacts of these changes will also be considered.

The intent of field verification prior to my decision was to confirm inventory data and to determine the feasibility and general design and location of a road or unit, not to locate the final boundaries or road locations. For example, salvage unit prescriptions may be modified if site conditions dictate and if other resource objectives can be met. Minor adjustments to unit boundaries may be needed during final layout for resource protection, to improve logging system efficiency, and to better meet the intent of my decision. Many of these minor changes will not present sufficient potential impacts to require any specific documentation or action to comply with applicable laws.

Appeal Rights

Organizations or members of the general public may appeal my decision according to Title 36 CFR Part 215. The 45-day appeal period begins the day following the date the legal notice of this decision is published in the Bend Bulletin, Bend, Oregon, the official newspaper of record. The Notice of Appeal must be filed with the Reviewing Officer at:

Appeal Deciding Officer
Pacific Northwest Region
USDA Forest Service
Attn. 1570 Appeals
333 S.W. First Avenue
PO Box 3623
Portland, OR 97208-3623

Appeals can also be filed electronically at: appeals-pacificnorthwest-regionaloffice@fs.fed.us, or hand delivered to the above address between 7:45 AM and 4:30 PM, Monday through Friday except legal holidays. The appeal must be postmarked or delivered within 45 days of the date the legal notice for this decision appears in the Bend Bulletin newspaper. The publication date of the legal notice in the Bend Bulletin newspaper is the exclusive means for calculating the time to file an appeal and those wishing to appeal should not rely on dates or timeframes provided by any other source.

Electronic appeals must be submitted as part of the actual e-mail message, or as an attachment in Microsoft Word (.doc), rich text format (.rtf) or portable document format (.pdf) only. E-mails submitted to e-mail addresses other than the one listed above or in other formats than those listed or containing viruses will be rejected. Only individuals or organizations who submitted substantive comments during the comment period may appeal.

It is the responsibility of those who appeal a decision to provide the Regional Forester sufficient written evidence and rationale to show why my decision should be changed or reversed. The appeal must be filed with the Appeal Deciding Officer § 215.8 in writing. At a minimum, an appeal must include the following:

1. Appellant's name and address (§ 215.2), with a telephone number, if available;

2. Signature or other verification of authorship upon request (a scanned\ signature for electronic mail may be filed with the appeal);

3. When multiple names are listed on an appeal, identification of the lead appellant (§ 215.2) and verification of the identity of the lead appellant upon request;

4. The name of the project or activity for which the decision was made, the name and title of the Responsible Official, and the date of the decision;

5. The regulation under which the appeal is being filed, when there is an option to appeal under either this part or part 251, subpart C (§ 215.11(d));

6. Any specific change(s) in the decision that the appellant seeks and rationale for those changes;

7. Any portion(s) of the decision with which the appellant disagrees, and explanation for the disagreement;

8. Why the appellant believes the Responsible Official’s decision failed to consider the substantive comments and;

9. How the appellant believes the decision specifically violates law, regulation, or policy.

On July 27, 2004, Forest Service Regional Forester, Linda Goodman determined the Eyerly Fire Salvage Project to be an emergency situation and exempted it from stay pursuant to 36 CFR 215.10. This means that my decision may be implemented immediately following publication in the Bend Bulletin, the newspaper of record. This emergency exemption is based on the economic value the government would lose if the project was delayed during the appeal period. The value loss is estimated at over $200,000. The exemption from stay during the appeal period applies only to the portion of the project implemented with the Heleyerly-Baked Timber Sale.

Contact Persons

For additional information concerning the specific activities authorized with my decision, you may contact:

Dave Owens
IDT leader
Ochoco National Forest
P.O. Box 490
Prineville, OR 97754
(541) 416-6425

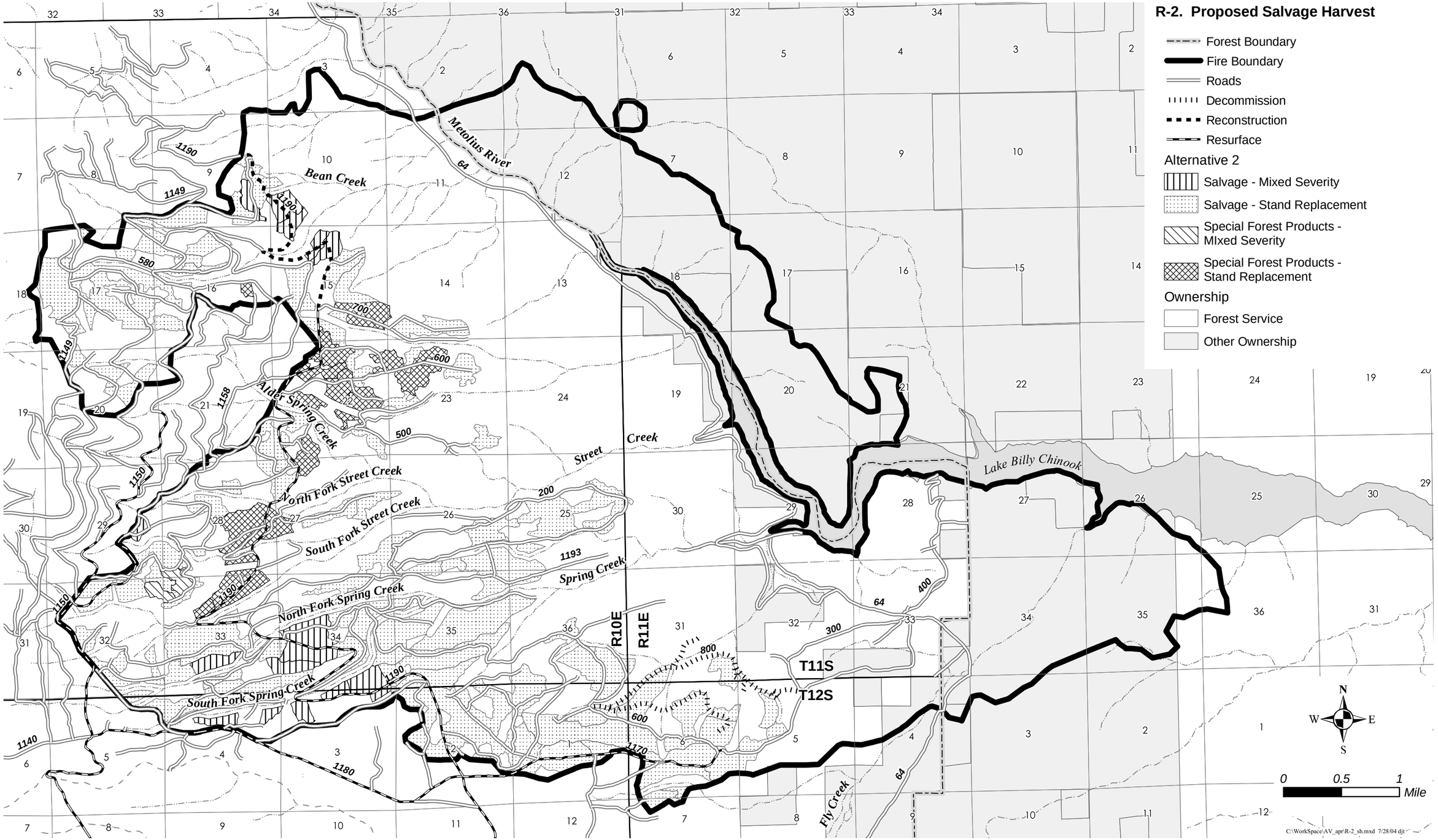
Bill Anthony
District Ranger
Sisters Ranger District
P.O. Box 249
Sisters, OR 97759
(541) 549-7701

Responsible Official:

/s/ Leslie A.C. Weldon August 2, 2004

LESLIE A.C. WELDON Date
Forest Supervisor
U.S. Department of Agriculture
Deschutes National Forest
P.O. Box 6010
Bend, OR 97708-6010

Eyerly Fire Salvage
Proposed Salvage Harvest



R-2. Proposed Salvage Harvest

- Forest Boundary
- Fire Boundary
- Roads
- Decommission
- Reconstruction
- Resurface

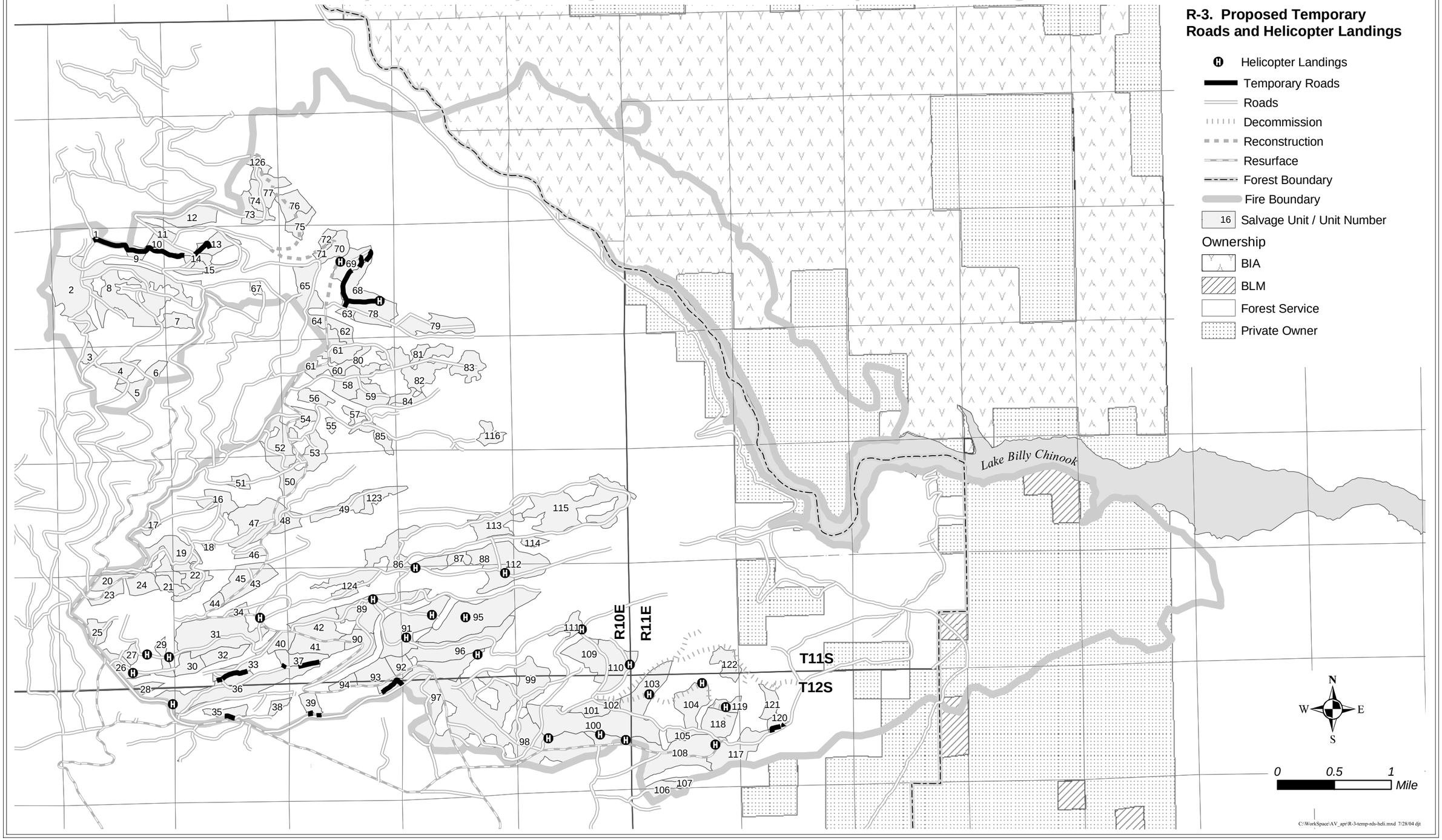
Alternative 2

- Salvage - Mixed Severity
- Salvage - Stand Replacement
- Special Forest Products - MIxed Severity
- Special Forest Products - Stand Replacement

Ownership

- Forest Service
- Other Ownership

Eyerly Fire Salvage
Proposed Temporary Roads and Helicopter Landings



R-3. Proposed Temporary Roads and Helicopter Landings

- Helicopter Landings
- Temporary Roads
- Roads
- Decommission
- Reconstruction
- Resurface
- Forest Boundary
- Fire Boundary
- 16 Salvage Unit / Unit Number

Ownership

- BIA
- BLM
- Forest Service
- Private Owner

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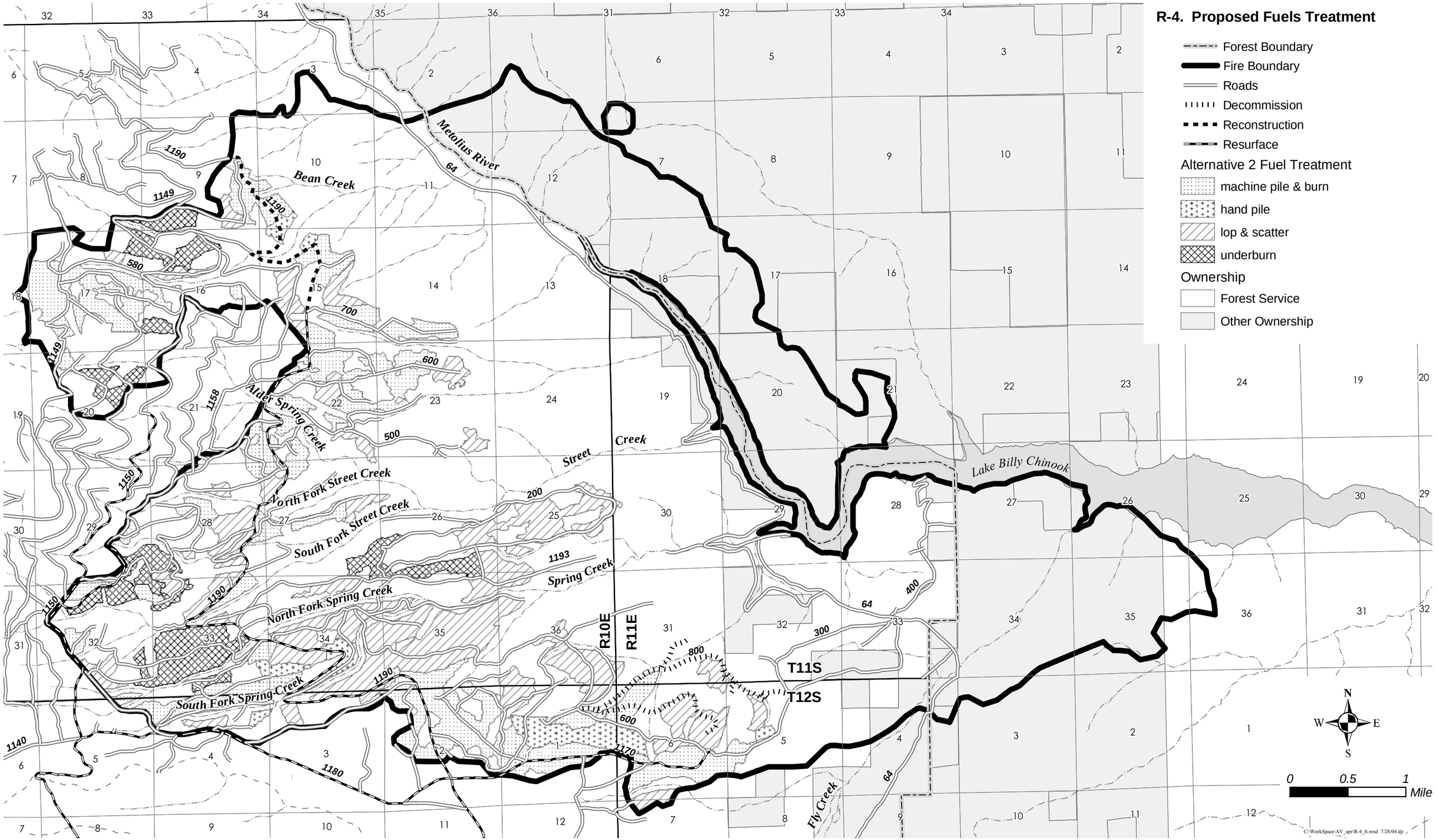
Eyerly Fire Salvage
Proposed Fuels Treatment



R-4. Proposed Fuels Treatment

- Forest Boundary
- Fire Boundary
- Roads
- Decommission
- Reconstruction
- Resurface

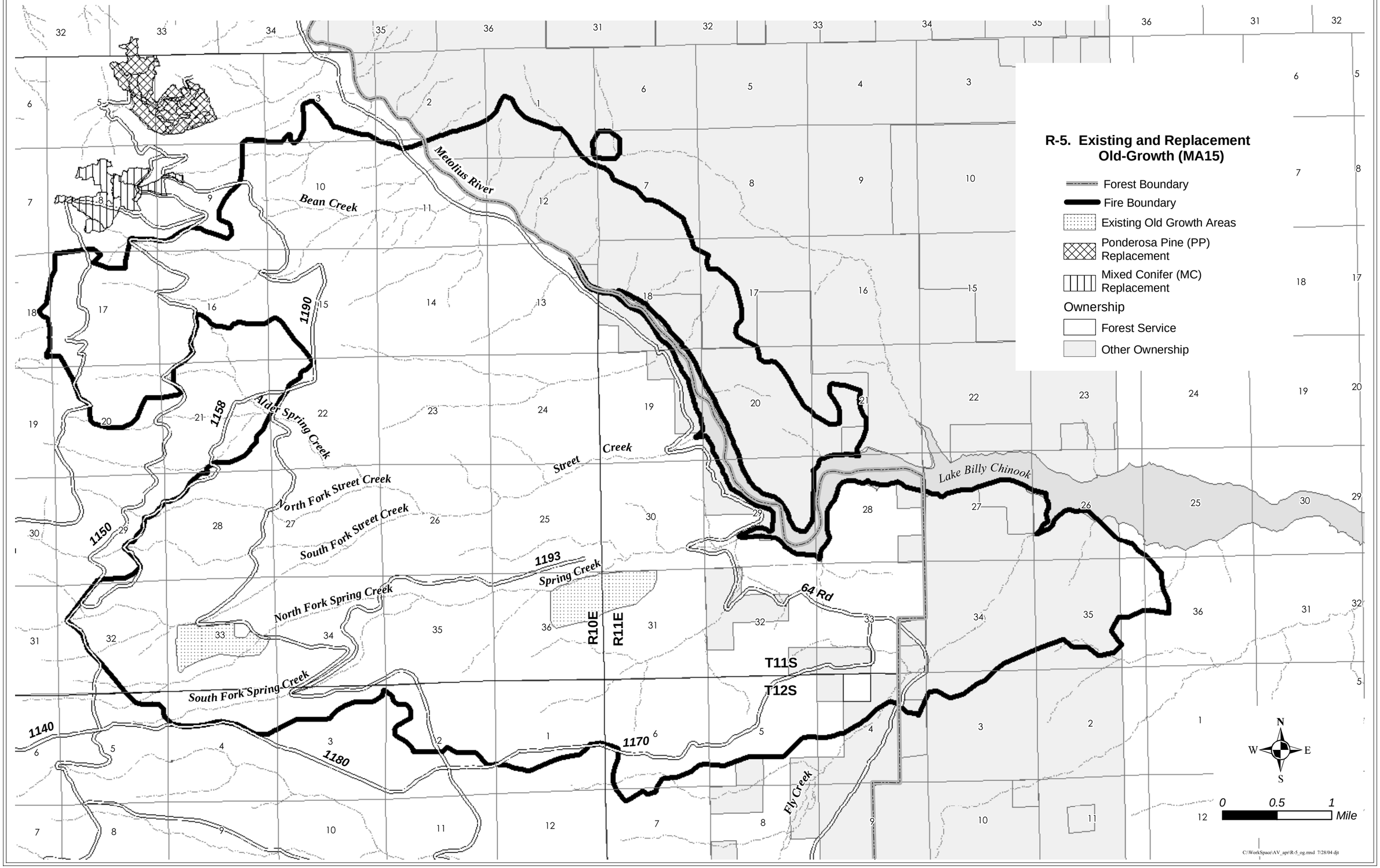
Alternative 2 Fuel Treatment

- machine pile & burn
- hand pile
- lop & scatter
- underburn

Ownership

- Forest Service
- Other Ownership

Eyerly Fire Salvage
Existing and Replacement Old-Growth (MA15) Areas



Eyerly Fire Salvage
Proposed Hazard Tree Utilization

R-6. Proposed
Hazard Tree Utilization

- Forest Boundary
- Hazard Tree Utilization (100' corridor either side of road)
- Fire Boundary
- Roads
- Decommission
- Reconstruction
- Resurface

Ownership

- Forest Service
- Other Ownership

N
W E
S

0 0.5 1 Mile

Monty Campground

Perry South Campground

Metolius River

Creek Street

Spring Creek

Fly Creek

Lake Billy Chin

64

600

200

1193

400

300

800

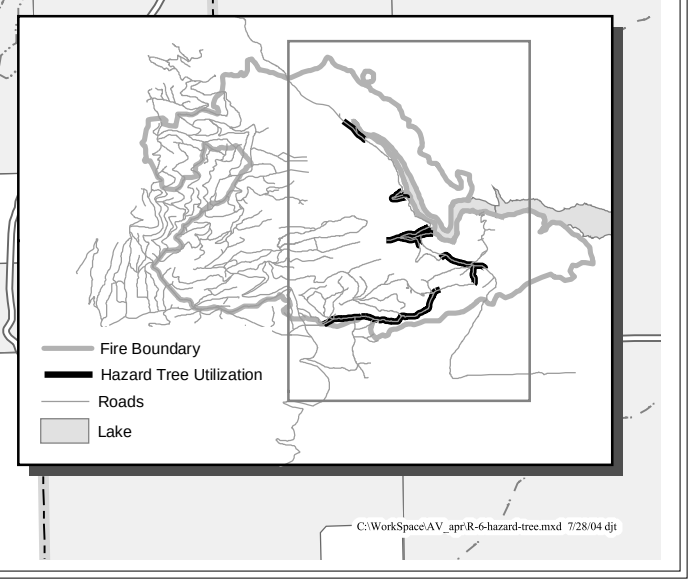
1170

T11S

T12S

R10E

R11E



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