

Record of Decision

Deep Vegetation Management Project

USDA Forest Service
Paulina Ranger District, Ochoco National Forest
Crook and Wheeler Counties, Oregon

January 2004

Lead Agency:	USDA Forest Service Ochoco National Forest
Responsible Official:	Larry Timchak Forest Supervisor
For Further Information Contact:	Mike Lawrence, District Ranger or Lori Blackburn, Project leader Paulina Ranger District 7803 Beaver Creek Road Paulina, OR 97751 Phone: (541) 477-6900

Decision and Reasons for the Decision

This Record of Decision documents my decision and rationale for the selection of a course of action to be implemented for the Deep Vegetation Management Project. The Final Supplemental Environmental Impact Statement includes analysis and disclosure of a proposal to manage vegetation within the Deep Creek Watershed.

Location: The project area encompasses National Forest System lands within the Deep Creek Watershed. It is located in the western portion of the Paulina Ranger District within the Ochoco National Forest, approximately 60 miles east of Prineville, Oregon. It lies entirely within Crook and Wheeler Counties.

Deep Creek Watershed is located in the Upper Crooked River sub-basin, which is part of the larger Deschutes River Basin. Deep Creek empties into the North Fork Crooked River, which is a tributary to the Crooked River. The Crooked River flows west into the Prineville Reservoir before turning to the northwest and into the Deschutes River.

The watershed is defined by ridgelines that are in proximity to Forest Road 2630 to the north, Forest Road 4200 to the south, and Forest Road 1200 to the east. The boundary between the Paulina and Big Summit Ranger Districts defines the watershed to the west. The project area encompasses approximately 55,368 acres and includes four subwatersheds: Happy Camp, Jackson, Little Summit Prairie, and Lower Deep Creeks.

Based on the Deep Creek Watershed Analysis (USFS 1999), which describes the conditions in the watershed and provides recommendations for restoration and management, planning within the Deep Creek Watershed began in 1999. A notice of intent to prepare an Environmental Impact Statement was published in the Federal Register on December 23, 1999.

A Final Environmental Impact Statement and Record of Decision were issued in September 2001 for the Deep project. That decision was withdrawn. In order to incorporate additional information on the effects of the proposed alternatives and to provide for an additional public comment period, the Forest Supervisor decided to prepare a supplemental environmental impact statement. The Final Supplemental Environmental Impact Statement documents the analysis of 3 action alternatives to meet the purpose and need. Needs identified under the Deep Watershed Assessment selected to be analyzed under this FSEIS are as follows:

- There is a need to move the landscape-level diversity of vegetation species and stand structures that provide wildlife habitat closer to that which occurred historically. Analysis of current vegetation and associated wildlife habitat conditions within the Deep Watershed shows that wildlife habitats comprised of open grown old growth ponderosa pine stands are very rare. Conversely, those stands comprised of small diameter, true fir species are very abundant and are in excess of what would have been the historical composition of these landscapes. This finding is consistent with the vegetation analysis conducted as a part of the Interior Basin Ecosystem Management Project. Many of the wildlife species associated with the open grown ponderosa pine stands are also becoming increasingly rare because of a lack of habitat.
- Specifically, there is a need to reduce the percentage of shade tolerant fir species and increase the abundance of single-story stands. Regional Forester's Forest Plan Amendment # 2 (FP Amendment #2, 1995) requires characterization of watersheds for stand structures and seral stages. This characterization is to then be compared to the Historic Range of Variability (HRV). The existing condition shows that there is a critical shortage of large tree structure and single-story stands that provide a greater diversity of vegetation and wildlife habitat.
- There is a need to increase the amount of open-grown, large diameter ponderosa pine stands (LOS) within the Deep Planning Area and to bring the overall abundance of large tree structure closer to what occurred historically. Again, there is a critical shortage of old growth ponderosa pine stands that provide habitat for dependant species.

- There is a need to reduce the forest's susceptibility to moderate and high severity fires and bring the area's fuels closer to levels expected under natural fire disturbance regimes by lowering stand densities, increasing the relative abundance of fire tolerant species, treating existing fuels, and re-introducing fire into the watershed. The existing condition shows that the watershed has a high percentage of forest lands highly susceptible to moderate and high severity fires. We estimate that nearly 80% of this landscape was historically dominated by low severity fire regimes. Currently, over half of the forested area is outside of conditions that would support historical fire effects of low severity.
- There is a need to reduce the susceptibility of forested stands to insects, diseases, and wildfires by reducing their stocking levels. Existing conditions show that 37% of the forested stands are in the upper levels of their site capacity creating conditions where elevated levels of tree mortality are expected to occur. Another 60% of the stands are at stand densities exceeding historical conditions. Dense, multi-storied stands create a greater risk of being lost in wildfires and represent increased risk of insects and disease impacts. The potential to lose these stands to disturbance agents is higher than historically. There is a risk of loss of associated wildlife habitat with these stands.
- There is a need to enhance the vegetative conditions of aspen, riparian, upland shrub, and meadow communities by increasing the vigor of existing plants and increasing their abundance through reducing conifer encroachment, and re-introducing fire. Existing conditions show that aspen and shrubs occupy less of their historical land base. These vegetation types offer a unique aspect to vegetative diversity within the watershed. Many wildlife species utilize these plant associations.
- There is a need to reduce stream temperature by improving shade producing vegetation; lower sedimentation by recruiting large woody material (LWM) to improve energy dissipation during runoff events; and reduce sedimentation delivery from existing roads and dispersed recreation sites. Existing conditions show that several streams in this watershed do not meet State of Oregon standards for water temperature. Activities are needed to improve conditions that limit water temperatures.

Key Issues

In response to my proposed action and public scoping, the Forest Service and the public identified three key issues. Key issues were then used to develop alternatives to the Proposed Action. Issues include:

- **Water Quality and Fish Habitat:** Ten streams within the Deep Creek Watershed are 303(d) listed as water quality limited for temperature. Eight of these streams are also listed for habitat modification. No streams within the watershed are water quality limited for sedimentation. Management activities have the potential to affect stream temperature, sediment delivery to streams, and flow. Changes to riparian vegetation, stream flows, and sediment delivery have the potential to exhibit some positive or negative effect on water quality and associated fish habitat.
- **Vegetative Diversity:** Management activities can change the processes and structural components that contribute to both stand and landscape-level vegetative diversity. Activities could alter ecosystem components such as species composition, structure, canopy density, snag levels, down wood, and connectivity. Wildlife habitat, for a variety of species, is related to these ecosystem components.
- **Fire Hazard and Fuels:** Fire hazard and fuel levels in the Deep Planning Area are currently at moderate to high levels. The amount of area that is currently susceptible to higher severity fire has increased as a result of changes in the abundance and continuity of fuels in the planning

area. Management activities have the potential to affect the amount and the vertical and horizontal arrangement of fuels. They also have the potential to affect the area susceptible to higher severity fires within the watershed.

Decision

Based upon my review of all the alternatives, I have decided to implement Alternative C, which will include vegetation management activities to reduce stand densities through commercial and precommercial thinning; apply prescribed fire to reduce both fuel levels and levels of juniper encroachment for wildlife habitat; close and decommission roads; place large woody material in streams and riparian areas; treat meadows and aspen stands; plant riparian species and protect plantings; treat upland shrubs; and replace culverts.

It is my decision to select Alternative C as described in the Final Supplemental Environmental Impact Statement for implementing forest and watershed improvement work in the Deep project area, **with the following modifications:**

- Defer regeneration treatments including 60 acres of clearcut with reserve trees; 14 acres shelterwood harvest; and 58 acres of group selection and the associated road work.

Table R-1 shows all actions included in this decision in a comparison format with Alternative C.

Table R-1 Comparison and Summary of Proposed Management Actions for the Deep Vegetation Management Project, Paulina Ranger District

Treatments	Alternative C	Alternative C as Modified
Timber Harvest		
<u>Acres Treated by Silvicultural Prescription</u>		
Improvement Harvest ¹	5,688	5,688
Commercial Thinning	562	562
Group Selection ²	58	0
Clearcut w/Reserves ²	60	0
Shelterwood ²	14	0
Sanitation ³	11	11
Total Acres Timber Harvest	6,393	6,261
<u>Logging System (acres)</u>		
Tractor	3,754	3,696
Winter Logging	1,329	1,315
Helicopter	1,310	1,250
Skyline	0	0
Total Harvest Volume (MMBF)	13.8	12.8
Precommercial Thinning		
Inside harvest units	6,285	6,200
Outside harvest units	3,757	3,757
RHCA Conifer Treatments		
Commercial Harvest (acres)	24	24
Precommercial Thinning	354	354
Road Management		

Treatments	Alternative C	Alternative C as Modified
Road Construction (miles)	1.1	1.1
Road Reconstruction	23.9	16.3
Temporary Roads	5.9	5.0
Road Closure	16.2	16.2
Road Decommissioning	15.2	15.2
Fuels Reduction		
<u>Fuel Treatment within Harvest Areas (acres):</u>		
Broadcast Burn	132	0
Grapple Pile	768	768
Jackpot Burn	1,534	1,534
Leave-tops-attached/Grapple	10	10
Leave-tops-attached/Jackpot	0	0
Underburn	3,067	3,067
Total Fuels Treatment within Harvest Units	5,511	5,379
<u>Prescribed Fire Objectives (acres)</u>		
Natural Fuels Burning	4,192	4,192
Habitat Enhancement/Juniper Encroachment	4,549	4,549
Jackpot Burning for Fuel Break	0	0
Total Prescribed Fire	8,741	8,741
Vegetation & Watershed Enhancement		
Riparian Planting (miles)	28	28
Meadow Enhancement (acres)	825	825
Dispersed Rec. Site Rehabilitation (sites)	6	6
Aspen Stand Enhancement (acres)	81	81
Large Woody Material Placement (miles)	7.4	7.4
Culvert Replacement	8	8
Willow Protection (sites)	1	1
Willow Enhancement (sites)	1	1
Mountain Mahogany Enhancement (acres)	16	16
Road Closure (miles)	16.2	16.2
Road Decommissioning (miles)	15.2	15.2

¹ Improvement cutting is considered a type of intermediate thinning treatment.

² Regeneration harvest treatment.

³ Sanitation harvest is for the purpose of reducing the spread of damaging insects and protecting the residual stand.

This project will be implemented over a period of about 5-7 years, beginning in 2004.

My decision is based on components that were analyzed in the Final Supplemental Environmental Impact Statement. The overall impact of my decision to select and implement a modified Alternative C will result in reduced hydrological water quality impacts to sedimentation and peak flows from those described for

Alternative C in the Final Supplemental Environmental Impact Statement. Equivalent Harvest Area values for Alternative C never exceed 18% for the watershed. The Forest Plan threshold is 25% for the Deep watershed at which point the potential for negative peak flow increases.

Mitigation & Monitoring

My decision also includes the project design elements for the Deep Vegetation Management Project (pages 2-37 to 2-52 Final Supplemental Environmental Impact Statement) associated with implementation of the project's actions. The criteria are designed to mitigate effects of project actions in the watershed. For example, design elements such as seasonal restrictions and measures to reduce sediment will minimize the on-site effects to water quality, soils and wildlife disturbance.

My decision also includes adoption of the Monitoring Plan described in Appendix B of the Final Supplemental Environmental Impact Statement. The monitoring plan will be used to identify specific points of time during implementation for specialists to review activities. This monitoring will confirm that design criteria and activities are implemented as intended and that resource objectives are being met.

Other Alternatives Considered

In addition to the selected alternative, I considered 3 other alternatives, which are discussed below. Alternative C was the alternative preferred by the Forest Service. A more detailed comparison of these alternatives can be found in Chapter 2 of the EIS.

Alternative A (No Action)

Under the No Action alternative, current management plans would continue to guide management of the project area. Under the No Action Alternative, no management activities proposed in this document would occur. Ongoing activities such as recreation, normal road maintenance, and fire suppression would continue. Management activities resulting from previous environmental documents would still occur.

Alternative B (Proposed Action)

The Proposed Action is a mix of vegetation and fuel treatments. Thinning treatments would focus on stands with dense, small-sized trees and relatively high percentages of mid and late seral species. Stand densities would be reduced while the composition of species and quality of tree are improved. Prescribed burning of natural fuels is proposed over large areas of the watershed to reduce fuel levels and to move the watershed closer to historic fire regimes.

Alternative D

This alternative emphasizes limiting the potential for direct effects to streams by primarily reducing vegetation treatments that would promote stand resiliency; development of large diameter trees and large tree stand structures. Prescribed fire treatments that would reduce the number of acres at risk to catastrophic fires would also be reduced to limit potential for effects to streams. The amount, location, and access to proposed activities in relation to streams were reviewed, and the following changes made to the proposed action: no commercial harvest within the Riparian Habitat Conservation Areas would take place; this alternative treats the fewest individual units and acres, proposes the least amount of precommercial thinning, modifies proposed boundaries of treatment areas, has less treatment adjacent to Riparian Habitat Conservation Areas, and has less road development than the other alternatives due to changes in the commercial harvest treatments.

Alternatives Considered But Eliminated From Detailed Study

Numerous alternatives were considered by the ID Team as the analysis process progressed. Some of the alternatives were dropped from detailed study for the various reasons described below:

No Commercial Harvest Activities

An alternative was considered eliminating all commercial harvest activities. Upland vegetation management activities would have been accomplished primarily through pre-commercial thinning and prescribed burning. Watershed improvement projects such as road management, meadow system enhancement, riparian and upland hardwood community enhancement, dispersed recreation site rehabilitation, and large woody material placement would be incorporated.

This alternative would meet the objectives, in part, by improving riparian and upland hardwood plant communities, reducing natural fuel levels through prescribed burning, helping to attain some Riparian Management Objectives, and reducing ladder fuels. This alternative would not meet a major portion of the purpose and need for late and old stand structure abundance or effectively reducing elevated stand susceptibility to insects, disease and catastrophic wildfire. Stands identified as being at high to moderate risk would have only a part of the stand conditions modified through non-commercial, understory thinning. This type of vegetation treatment would only result in short-term changes to stand conditions such as stand density, species composition, and stand structure. Overstocking by late seral trees of commercial size would not be addressed. This type of treatment would not result in measurable gains towards developing late and old stand structure, reducing the risk of insects, disease, or moving the landscape toward the Historic Range of Variability in the stands most in need of treatment. It would do little in terms of developing single strata late and old structure stands. Large acreages of pre-commercial thinning to reduce stand densities would exacerbate the amount and arrangement of activity fuels on these acres and would do little to reduce the risk of stand replacement fire in a large portion of the planning area. The watershed restoration treatments proposed within this alternative have been incorporated into all of the action alternatives.

Maximize Timber Sale Value

An alternative to maximize net sale value through commercial timber harvest was discussed but dropped from consideration. This alternative would have included substantial amounts of regeneration harvest and would not meet the purpose and need described in Chapter 1. This level of regeneration harvest would greatly increase the amount of the grass, forb and shrub seral/structural stage. Conventional logging systems would be low expense but would require additional road construction. This would lead to a higher potential for increased sedimentation and not address the water quality, fish habitat, or soils concerns.

Salvage Only

Salvage of only dead material was considered, however, it would not meet the purpose and need and would propose the harvest of snags in a subwatershed that is currently deficient in snags. Removal of hazard trees along the haul routes has been incorporated into all action alternatives considered in detail.

Minimize Road Construction

Consideration was also given to developing alternatives that would minimize road construction, emphasize wildlife habitat improvement projects, or minimize soil disturbance by emphasizing helicopter or winter logging. Elements of these objectives have been incorporated in alternatives considered in detail to better meet the purpose and need and project objectives as described in Chapter 1.

Rationale for the Decision.

I have reviewed the Deep Vegetation Management Project Final Supplemental Environmental Impact Statement, its appendices, and the associated specialist reports. I have reviewed information in the administrative record, including but not limited to the Ochoco Forest Plan; the Deep Creek Watershed Analysis; the Deep Creek Water Quality Restoration Plan; the Deep Creek Watershed Roads Analysis; public and other agency comments; and applicable laws and regulations. I have determined there is adequate information within these documents to provide a reasoned choice of action.

In making this decision, I have considered the ability of each alternative to: meet the stated purpose and need for action; comply with applicable laws, statutes, regulations, executive orders, and policies; and respond to the key issues, other issues, and public comments about the alternatives.

Alternative C as modified responds to each of the purpose and needs identified in the following ways:

1. There is a need to move the landscape-level diversity of vegetation and associated wildlife habitat closer to conditions that occurred historically. I considered the following in my decision to choose Alternative C as modified as the Selected Alternative:

- Alternative C as modified moves 9 percent of the forested land to within the historical range of conditions. This results in approximately 52 percent of the forested area moving to within HRV, as compared with the 43 percent under existing conditions. The Selected Alternative would improve the existing condition but it does not make quite as much progress toward HRV as Alternative B (54 percent). It does, however, move the landscape closer to HRV than Alternative D (50 percent) or Alternative A (no change from existing condition of 43%).
- Although the Selected Alternative does not address the vegetation-related purpose and need objectives to the same extent as the Proposed Action (Alternative B) I believe it does make significant progress in improving overall vegetative diversity and reducing risk of high severity fire, while addressing concerns related to water quality and fish habitat. I believe Alternative C as modified better meets the purpose and need than Alternatives A or D.

2. There is a need to increase the amount of late and old stand structure, specifically to reduce the deficiency of single-story, large diameter ponderosa pine stands. I considered the following in my decision to choose Modified Alternative C as the Selected Alternative:

- Consistent with the Forest Plan, no net loss of late and old stand structure or large diameter trees will occur under the Selected Alternative or any of the other alternatives.
- The Selected Alternative does not treat as many acres (2,191) of multi-strata stands to move them towards single-strata late and old stand structure conditions as Alternative B (3,424) but does contribute the next highest amount of movement towards historic open pine conditions.
- The Selected Alternative will result in more overall large trees and large tree stand structures on the landscape 50 years after harvest than Alternatives A, B and D. Selecting Alternative C as modified will result in more single-strata large tree stands than Alternatives A and D but less than Alternative B.

3. There is a need to reduce the forest's susceptibility to insects and diseases by reducing stand densities. I considered the following in my decision to choose Modified Alternative C as the Selected Alternative:

- The Selected Alternative treats 3,134 acres that are currently at risk from stand densities that are in the upper one third of site potential. Of this amount, it lowers the risk on 1,863 acres of late and old structure to help increase the resistance to insects and diseases and to lower the potential of effects from high severity wildfire. This is less than Alternatives B, but more than Alternatives A and D.
- Overall, the Selected Alternative reduces stand densities by proposing treatments on 22 percent of the existing high-risk stands within the watershed. This compares with Alternative A (0 percent), Alternative B (32 percent) and Alternative D (20 percent).
- Post-treatment, the Selected Alternative will lower the overall amount of the forested lands that are at high risk from 37 percent to 28 percent. Because of the reduced treatment under this alternative, it would not have as a dramatic reduction as Alternative B (25 percent) and is slightly

better than Alternative D. Alternative A (No Action) would contribute to current trends of overstocking and high risk.

4. There is a need to enhance vegetative conditions of aspen, riparian, upland shrub and meadow communities. I considered the following in my decision to choose Modified Alternative C as the Selected Alternative:

- The purpose and need objectives identify the need to improve and enhance aspen, riparian shrubs and meadow communities as well as the need to increase the amount, distribution, and growth of riparian associated plants, increase stream shading, reduce sedimentation and increase recruitment of large woody material.
- The Selected Alternative incorporates 24 acres of commercial treatment to increase shade, large woody recruitment, lower fire risk, and promote understory forb development to promote channel stability. This is similar to Alternatives B and C. Alternatives A and D do not propose any commercial treatments to meet these riparian management objectives.
- The Selected Alternative would restore 81 acres of aspen sites and proposes willow treatment and protection (2 sites) within the Deep Creek Watershed, which is more than any other alternative considered. Similar to other action alternatives, 28 miles of riparian planting and 825 acres of meadow enhancement are proposed. With the No Action Alternative, a continued trend of loss of aspen and willow would occur.

5. There is a need to reduce the forest's susceptibility to moderate and high severity fires by reducing stand densities, reducing fuels and increasing the relative abundance of fire tolerant species. I considered the following in my decision to choose Modified Alternative C as the Selected Alternative:

- The Selected Alternative incorporates 8,741 acres of prescribed burning on the landscape within the Deep Creek Watershed. This level of prescribed burning will help reduce current fuel conditions, reduce the overall risk of effects from wildfires, and move the natural fuels conditions within the watershed closer to that which occurred historically. This is more than Alternative A (No Action), slightly more than Alternative D (8,476 acres), and less than Alternative B (20,692 acres).
- Overall, the Selected Alternative treats fuels on approximately 11,808 acres to reduce fire hazard within the Deep Planning Area. This is more than Alternatives A (No Action) and D (11,427), and less than Alternative B (25,796).
- The Selected Alternative reduces the area's susceptibility to elevated fire severity. It increases the acreage to where non-lethal effects would be expected by 2,658 acres, which is an improvement over the existing conditions or the No Action Alternative and Alternative D. Alternative B (4,475 acres) shows a greater movement toward historic conditions than Alternative C as modified (2,718 acres).

6. There is a need to reduce stream temperature by improving shade producing vegetation and lowering sedimentation from runoff events and roads. I considered the following in my decision to choose Modified Alternative C as the Selected Alternative:

- The Water Quality Restoration Plan (WQRP, Appendix D, FEIS) identifies specific activities to improve shade and subsequently improve stream temperatures. The selected alternative reduces future stream temperatures by incorporating elements of that plan such as riparian hardwood plantings and aspen restoration treatments. Additional sediment reduction activities of large wood placement, road decommissioning and hydrologic road closures and an additional culvert replacement are being implemented. Overall, Alternative C as modified treats 4 acres of additional aspen treatments, 1.9 miles of additional large woody placement, 1 additional site for willow enhancement; 16 additional acres of mountain mahogany enhancement; 7 additional miles of road closures; 3.5 additional miles of decommissioning; and 1 additional culvert replacement for water quality improvement activities than Alternatives A, B and D.

- Vegetation treatments have been designed to maintain existing shade or to enhance shade in riparian zones along perennial streams through time. Commercial and pre-commercial thinning within RHCA's will be accomplished using design elements that have been incorporated to maintain existing shade. Commercial treatments will promote growth of tree crown characteristics such as live crown ratios, crown volume and crown width. This will increase individual tree growth and overall canopy cover in the outer 50 feet of the RHCA's along perennial stream systems. Pre-commercial thinning will not occur within 15 feet of stream channels. Small trees (<7" dbh) outside of this 15-foot zone would be removed to reallocate the site's resources to trees capable of contributing to an increase in shade.
- Overall, with the implementation of the Alternative C as modified, stream temperatures are not expected to increase over the next 5-7 years as a result of stand treatment activities and, in the long term, will help improve stream temperatures by implementing riparian restoration as described in the WQRP.
- Alternative C as modified proposes a total of 16.3 miles of road reconstruction, 1.1 miles of new system road, 5.0 miles of temporary road construction, 16.2 miles of road closures and 15.2 miles of road decommissioning. Approximately 31 miles of road would be closed or decommissioned for every mile of new road constructed. Alternative A does not respond to the need to reduce potential sedimentation from roads.
- Overall, I have considered that there is a potential to increase sediment from the existing condition in the short-term, however, the potential for sediment production decreases over time for all the action alternatives. By 2010, the Selected Alternative is projected to have a lower overall potential for sediment production than any of the other alternatives (including No Action). This reflects the benefits of the additional road decommissioning and hydrologic road closures proposed under the Selected Alternative.
- Best Management Practices (BMP) and design elements are incorporated into this decision in order to address water quality concerns. By incorporating BMPs and design elements, the Selected Alternative meets State Water Quality Standards for turbidity.

In making my decision, I gave careful consideration to all issues and considered the competing interests, opinions, and values of the public. I considered the degree each alternative meet each Purpose and Need identified for this analysis. The selected alternative meets each Purpose and Need to a degree I feel is reasonable while considering the competing resource issues. I feel Alternative C as modified sufficiently meets each Purpose and Need, provides a balance of resource use, and protects important components of the forest such as vegetative diversity, wildlife habitat and water quality from uncharacteristic wildfire. This decision to select Alternative C as modified will also further address issues raised during scoping and in public comments made to the Draft SEIS on water quality and regeneration treatments.

Deep Creek is a very important watershed on the Ochoco National Forest, providing miles of habitat for redband trout. Like many other areas on the Ochoco National Forest, tree densities within stands in this watershed have increased. The mix of species has changed due to the absence of fire on the landscape. The result is an increasing risk of uncharacteristic high intensity stand replacement fires. These high intensity fires may damage watersheds, soils, forest productivity and wildlife habitat.

By re-introducing fire to the landscape and by thinning from below to help maintain and restore more open stands of large trees, we reduce the risk of high intensity fires and help ensure the productivity of the forests and watershed over the long term.

Although Alternative C as modified does not address the vegetation diversity and wildlife habitat-related purpose and need objectives to the same extent as the Proposed Action (Alternative B) or the Preferred Alternative identified in the DEIS (Alternative C), it does make significant progress in improving overall diversity for upland vegetation by reducing fir species and promoting ponderosa pine and western larch which are under represented on this landscape. The change in vegetation conditions for the watershed

from harvest activities is expected to move from 43 percent to 52 percent for a 9 percent increase towards the historic range of variability.

Dropping the regeneration treatments will reduce the amount of diseased stands treated by 132 acres. However, it is my decision to defer regeneration treatments at this time in order to implement only those forest health treatments that are thinning and improvement harvests. I feel this change will better meet the intent of the Regional Forester's Forest Plan Amendment #2 by retaining this decadent habitat for the short-term. The trade-off in maintaining these stands over the short term is both the reduction of treatment of diseased stands and the postponement of stand regeneration that would increase the abundance of early seral species such as western larch. Small scale openings that create new forage opportunities would also not be created at this time and would be deferred. In addition, should a fire event occur before regeneration and management of these stands, the fire will likely be stand replacement with little to no retention of large tree structure.

Alternative C as modified also promotes a greater amount of large tree structure than Alternative A or D over the next 50 years. Landscape and stand treatment designs proposed for LOS stands would contribute towards meeting the Purpose and Need by incrementally reducing the amount of multi-story stand structure and increasing the amount of single-story open pine stands. Alternative B proposes to treat approximately 4234 acres of LOS while Modified Alternative C proposes to treat approximately 3,315 acres of LOS. Alternative D proposes to treat approximately 2819 acres of LOS.

I feel that significant progress is made to reduce fuels in Alternative C as modified through the amount and types of fuels treatments. Commercial harvest treatments would also contribute to reductions of stand densities and reduction of stand conditions that support high risk of high severity wildfires. The amount of prescribed fire for natural fuels reduction and forage enhancement is reduced by 11,951 acres in Alternative C as modified from Alternative B to also address potential water quality effects from sedimentation. This reduction of fuels treatment acres is a trade-off in the emphasis between water quality and fuels reduction and forage enhancement issues and in meeting purpose and need. Alternative C as modified treats 265 acres more than Alternative D and 8,741 acres more than Alternative A (No Action) with prescribed fire for natural fuels reduction and forage enhancement.

The effects on water quality factored heavily into my decision. I considered the existing condition of the watershed as described in the Deep Watershed Analysis (1998), the Affected Environment (FEIS, Chapter 3), and the Water Quality Restoration Plan (WQRP), (FEIS, Appendix D) carefully in making my decision. The Forest Plan threshold for the Equivalent Harvest Area within Deep Creek Watershed is 25 percent. This threshold harvest level is the lowest (most conservative) identified in the Forest Plan. In choosing the Selected Alternative, I have decided to move slowly and use a more conservative threshold to specifically address the potential for cumulative effects from this action. The Selected Alternative results in EHA values for the Deep Creek Watershed at or below 18 percent over the next decade. Its peak of 18 percent is lower than any of the action alternatives. By distributing activities and addressing the timing of activities within the watershed, the Selected Alternative also keeps peak Equivalent Harvest Area values at or very close to 20 percent within each of the four subwatersheds, which will help address the potential for effects on a more localized scale.

Again, after reviewing the FEIS and its associated documents, I have decided that it is important to select an alternative that takes a more conservative approach to protect water quality. I recognize that the Selected Alternative does not respond as fully to some of the purpose and need objectives for vegetation and reducing susceptibility to moderate and high severity fires as well as Alternatives B. This is a trade-off that I feel is necessary. Like Alternative D, Alternative C as modified does address the potential for cumulative effects to water quality. Alternative C as modified will further reduce potential sedimentation from roads than Alternative D. Alternative C as modified better responds to the vegetation-related purpose and need objectives than Alternative A or D. It also incorporates more watershed restoration related work than any of the action alternatives and will help improve overall conditions within the Deep Creek Watershed. Alternative A (No Action) would leave the current water quality trends and conditions to continue which does not meet the purpose and need identified for this watershed or Forest Plan direction.

In summary, each of the action alternatives meets the Purpose and Need for action and responds to the key issues while emphasizing different aspects of the objectives and issues. Although Alternative C as modified does not address the vegetation-related purpose and need objectives quite as well as the Proposed Action (Alternative B), I believe that Alternative C as modified is the best balance of activities suited for meeting the identified needs of the Deep Watershed at this time. Furthermore, I believe this alternative balances water quality issues while improving upland and riparian vegetation conditions and reducing susceptibility to moderate and high severity fires. This action alternative is expected to meet State Water Quality Standards and is consistent with elements found in the Deep Creek Water Quality Restoration Plan (Appendix D, FEIS).

Environmentally Preferred Alternative

It is required by law that one or more environmentally preferable alternatives be disclosed. The environmentally preferred alternative is not necessarily the alternative that will be implemented and it does not have to meet the underlying purpose and need for the project. It does however, have to cause the least damage to the physical and biological environment and best protects, preserves, and enhances historical, cultural, and natural resources (Section 101 NEPA; 40 CFR 1505.2(b)).

I have determined that Alternative C Modified, the selected alternative, is the environmentally preferred alternative. Although Alternative D has the least potential to directly impact water quality, Alternative C Modified combines more watershed restoration activities and includes the highest level of road decommissioning and hydrologic road closures. In addition, dropping regeneration harvests will also result in fewer acres of broadcast burning and fewer miles of road reconstruction and temporary road building. This will further reduce potential effects to water quality. This alternative will also reduce overall sediment production within the watershed, improve bank stability, and improve overall shade within riparian areas through time to a greater degree than Alternatives B, C and D. Treatments to enhance aspen clones and improve willows will also improve the diversity of habitat in riparian areas.

Alternative B is not the environmentally preferable alternative because it exhibits moderate potential to allow negative responses within certain subwatersheds to increases in peak flow. The No Action Alternative does not propose any direct actions, but has the consequence of inaction by allowing current trends to continue across the entire watershed. For example, the deviation from HRV in seral and structural stages means that the stands that are overly dense are out of proportion in the watershed. These stands would have a higher chance of being lost to insects, disease, or catastrophic wildfire under the No Action Alternative.

Public Involvement

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. Scoping for the Deep Vegetation Management Project began in 1999 during the EIS process. The Forest Service sought information, comments, and assistance from federal, state, and local agencies, the Confederated Tribes of the Warm Springs Reservation of Oregon, and other groups and individuals interested in or affected by the proposed action. The scoping period lasted 30 days. In addition, the project was first listed in the Schedule of Proposed Actions, a quarterly publication, in the spring of 1999. A Notice of Intent to Prepare an Environmental Impact Statement was published in the Federal Register on December 23, 1999. The Notice of Availability of the Final Environmental Impact Statement was published on October 12, 2001 in the local newspapers of the Burns Times Herald, The Times-Journal, The Bulletin and the Central Oregonian. The public had opportunity to participate in the project during the Draft EIS, Final EIS Statement and Draft Supplement to the FEIS comment periods.

A Notice of Intent to prepare a Supplemental Environmental Impact Statement was published in the *Federal Register* on May 28, 2002. The proposal was provided to the public and other agencies for

comment during scoping on July 10, 2002. Publication of notices of this comment period for the Draft Supplement occurred in the local newspapers of the Burns Times Herald, The Times-Journal, The Bulletin and the Central Oregonian. In addition, as part of the public involvement process, the agency listed the project in the *Schedule of Projects for the Ochoco and Deschutes National Forests*. The public comment period for the DSEIS lasted from July 10, 2002 to September 3, 2002. A summary of the comments and the responses are located in Appendix C of the Final Supplemental Environmental Impact Statement.

Findings Required by Other Laws and Regulations

In reviewing the Final Supplemental Environmental Impact Statement and actions involved in Alternative C, including my modifications, I have concluded that my decision is consistent with the following laws, requirements, and current or proposed policies:

The National Forest Management Act. I have reviewed the management requirements and I find that Alternative C Modified is consistent with the seven management requirements listed in 36 CFR 219.27 for protecting resources. All proposed activities utilize Forest Plan Standards and Guidelines and incorporate design criteria that provide for resource protection (FSEIS, 2-36-2-52; 4-59; 4-60; 4-61; 4-80; 4-86; 4-87).

The National Historic Preservation Act. A cultural resource inventory has been completed for the project area. Activities have been designed to have No Effect or No Adverse Effect to cultural resource sites through both protection and avoidance. The Oregon State Historic Preservation Officer (SHPO) was consulted on the selected alternative in the Deep Vegetation Management Project.

The Endangered Species Act. A Biological Assessment has been prepared to document possible effects of proposed activities on endangered and threatened species in the Deep Vegetation Management Project Area. Potential effects to Bull Trout, Mid-Columbia Steelhead, Chinook Salmon – Essential Fish Habitat, Northern Bald Eagle, and Canada Lynx were assessed (FEIS, Appendix B). The BA concluded that there would be No Effect to Bull Trout, Mid-Columbia Steelhead, or Chinook Salmon – Essential Fish Habitat. The proposed activities are Not Likely to Adversely Affect the Northern Bald Eagle or Canada Lynx. Consultation has been completed.

Air Quality. The selected alternative is designed to be consistent with the Interim Air Quality Policy on Wildland and Prescribed fires (FSEIS, pg. 4-36-38). Appendix E of the Final Supplemental Environmental Impact Statement describes the methods to be used to implement prescribed fire activities that will meet Air Quality Standards. The Forest Service in cooperation with the Oregon Department of Forestry, Oregon Department of Environmental Quality (DEQ), and the Bureau of Land Management signed a Memorandum of Understanding (MOU) to establish a framework for implementing an air quality program in northeast Oregon. The MOU includes a prescribed burn emission limit of 15,000 tons PM10 per year for the four Blue Mountain National Forests (Malheur, Ochoco, Umatilla, and Wallowa-Whitman). All prescribed fire treatments would be conducted under the State of Oregon Smoke Management System to track smoke produced and would be coordinated with the other Blue Mountain Forests to meet smoke management objectives for total emissions.

The Clean Water Act. The selected alternative will meet and conform to the Clean Water Act, which establishes a non-degradation policy for all federally proposed projects (FSEIS, pg 4-12). Standards will be met by applying and monitoring best management practices and other design elements described in Chapter 2 of the Final Supplemental Environmental Impact Statement. The Final Supplemental Environmental Impact Statement identified and completed an analysis of effects to section 303(d) listed water quality limited water bodies in the project area. The greatest concern is with potential for loss of shade. Design elements are incorporated to reduce or prevent the risk of this occurring. Future stream shade recruitment will be enhanced and stream temperatures are not expected to increase over the long term. 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) and implementation of elements of the Water Quality Restoration Plan that has been prepared

concurrently with this EIS. Site-specific BMPs have been designed to protect beneficial uses. Chapter 2 of the FEIS includes both design elements and monitoring that is common to all action alternatives. Appendix D contains a summary of the Water Quality Restoration Plan.

Implementation Date

Implementation of this project may begin no sooner than 45 days plus 5 business days after the date of publication of a notice of decision and availability of the Final Supplemental Environmental Impact Statement in *The Bend Bulletin* (Paper of Record). Additionally, a decision documented in a ROD can be implemented no sooner than 30 days following the date the Environmental Protection Agency publishes the Notice of Availability of the Final Supplemental Environmental Impact Statement in the Federal Register. If an appeal is filed, implementation will not occur for a minimum of 15 days following disposition of the appeal. If multiple appeals are filed, the disposition date of the last appeal will control the implementation date.

Administrative Review or Appeal Opportunities

My decision is subject to administrative appeal pursuant to 36 CFR 215. Any written notice of appeal must be consistent with 36 CFR 215.14, content of an appeal, including the reasons for the appeal. Any appeal must be filed with the Regional Forester, USDA Forest Service, Pacific Northwest Region, ATTN: 1570 Appeals, P.O. Box 3623, Portland, Oregon 97208-3623. Appeals must be filed within 45 days of the date that the legal notice appears in *The Bulletin* newspaper, Bend, Oregon.

If an appeal is submitted electronically, the Notice of Appeal must be emailed to:
appeals-pacificnorthwest-regional-office@fs.fed.us

It is the responsibility of those who appeal a decision to provide the Regional Forester sufficient written evidence and rationale to support their appeal.

Contact Person

For additional information concerning this decision or the Forest Service appeal process, contact Mike Lawrence, District Ranger or Lori Blackburn, Natural Resources Team Leader, Paulina Ranger District, 7803 Beaver Creek Road, Paulina, OR 97751; (541) 477-6900.

LAWRENCE TIMCHAK
Ochoco National Forest Supervisor

DATE

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.