

Memorandum

DNRC Forest Land Management Division

To: Larry Ballantyne, Resource Program Manager
From: Dale Peters, Project Leader
Date: September 21, 2004
Re: Hot Springs prescription change

RECEIVED

SEP 23 2004

USDA Forest Service
Dale Peters

In the course of marking unit T4 of the proposed Hot Springs Timber Sale, it became evident that the original prescription of a Commercial Thinning for this unit would not be appropriate. Due to the extent of the insects/disease in the grand fir and the heavy infestation of mistletoe in the Douglas fir and western larch, it was determined that a seed tree/regeneration cut would be appropriate.

The DNRC staff biologist and hydrologist have submitted Memorandums that reflect this change and would be included in the Addendum to the Environmental Analysis. Mitigation measures as described by the biologist would be incorporated into the implementation of this Action Alternative. This change in prescription would not result in a change of the Covertypes Comparative Table or Total Acres as shown in Table 1 on page 27 of the Environmental Analysis.

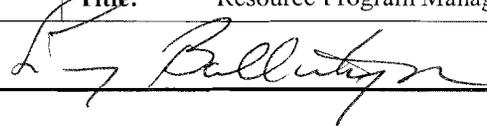
FINDING

NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

Addendum to EA Approved:	Name: Larry Ballantyne
	Title: Resource Program Manager
Signature: 	Date: 10-5-2004

Memo

Date: September 20, 2004
To: Dale Peters
Cc: Shawn Thomas; Larry Ballantyne; Norm Merz; Project File
From: Marc Vessar
RE: Hot Springs Timber Sale --changes to Unit T4

I completed a draft copy of the Hydrology, Fisheries and Soils analyses for the Hot Springs Timber Sale in March 2004. After comments were made and editing was completed, Larry Ballantyne, selected the action alternative in the signed decision document. The decision was signed on 6/29/2004.

During unit layout in July/August 2004, Project Leader Dale Peters discovered the original prescription of a selective harvest would not work because of the extent of the insects/disease in the grand fir and the mistletoe in the Douglas fir. For this reason a seed tree prescription was recommended. This memo is to address the changes in the Hydrology, Fisheries and Soils analysis if the decision maker approves the amendment to the EAC.

I have recalculated the estimated annual water yield given the newly recommended prescription in Unit T4. The cumulative modeled annual water yield would increase to 13.1%. This increase is due to the change from a selective harvest estimate of 60% crown removal to a seed tree harvest estimate of 92% crown removal, which increases the Equivalent Clearcut Acres from 102.6 to 165.9. Given that the threshold for this watershed was set at 14% (page 35, Hot Springs Timber Sale EA), it is unlikely that impacts to beneficial uses would be measurably different than those described in the EA.

Given that Best Management Practices for forestry are applied during all phases of the timber sale, impacts that would increase the potential for sediment delivery would not likely change from those described in the EA. By protecting water quality from sediment introduction by using BMPs, and minimizing adverse in-channel impacts by maintaining annual water yield increases below the recommended threshold, it is unlikely that impacts to fisheries resources would occur other than those disclosed in the EA.

Soils impacts would not change from those described in the EA because no additional acres are added into the sale.

If you have any questions, please give me a call at 406-751-2262.

Memorandum

To: Dale Peters
From: Norm Merz, Wildlife Biologist
Date: 9/17/2004
Re: Hot Springs prescription changes

I looked over the changes you proposed. It is my understanding that the changes proposed change the prescription in Unit T-4 from a commercial thin to a seed tree. Along with the proposed harvest change, visual screening would be retained along open roads and visual blocks (tree groupings) and several untreated slash piles would be scattered throughout the unit to break up sight distance and provide habitat diversity in the unit. The change in prescription is not expected to result in substantial changes of the effects discussed in the Environmental Assessment for the following species: bald eagle, gray wolf, grizzly bear, fisher, flammulated owl, and big game species. Additional effects are expected for Canada lynx, and pileated woodpecker.

Under the proposed change, habitat for Canada lynx would be reduced in the short-term, while foraging habitat is expected to increase as these stands regenerate. The additional conversion of 170 acres of lynx habitat to temporarily unsuitable is still within the 15% guideline adopted by the CS&KT. Additionally, 3-4 untreated slash piles would be retained to provide potential den sites in the future stand. In the short-term, lynx habitat would be decreased over the initial EA, while increasing the amount of potential young foraging habitat in the longer-term.

For pileated woodpeckers, the change in prescription would remove an additional 170 acres of pileated woodpecker habitat. Retention of snags could provide feeding sites in the short-term and nesting structure in the long-term. In the distant future, more shade-intolerant trees could be available for pileated woodpecker habitat. The additional loss of habitat would be additive to that reported in the EA.

**PROPOSED HOT SPRINGS TIMBER SALE
AMENDED HARVEST UNIT PRESCRIPTION
Section 36, T22N, R25W**

Harvest Unit: T4 **Harvest Unit Acres:** 171

Elevation: 4720' – 5360' **Slope:** 15 – 45% **Aspect:** East

Habitat Types: ABGR/LIBO

Current Cover Type: Mixed Conifer
Appropriate Cover Type: Western Larch / Douglas-fir

Soil Type: Mitten gravelly silt loam, 15 to 35 percent.

Description of Existing Stand: This unit is located in the west side of the section, extending from the south section line, to the north section line. This Mixed Conifer site has scattered dominant ponderosa pine as the overstory. Overstory age averages 100, ranging from 85-140 years, 20" dbh ranging from 16-36" and 90 feet in height.

This intermediate stand's age averages 80 ranging from 65-120 years. It is made up of Douglas-fir (40%), averaging 11" dbh ranging from 6-20" and 65 feet in height; grand fir (30%), averaging 10" dbh ranging from 6-18" and 65 feet in height; western larch (20%), averaging 9" dbh ranging from 6-18" and 65 feet in height; with small volumes of other species.

The Douglas-fir shows varying degrees of dwarf mistletoe, *Arceuthobium douglasii*, from light to heavy in 50-60% of the trees with pockets of root rot. The grand fir shows evidence of the Fir Engraver beetle, *Scolytus ventralis*, Indian paint fungus, *Echinodontium tinctorium* and root-rot. Western larch is he affected by dwarf mistletoe, *Arceuthobium laricis*. Regeneration is almost nonexistent under this closed canopy. Fuel loading is moderate.

Treatment Objectives:

- Remove the merchantable grand fir to encourage movement toward the appropriate cover type.
- Promote a healthy stand of timber by significantly reducing the dwarf mistletoe affecting the Douglas-fir & western larch and the Douglas-fir affected by root-rot.

Prescribed Treatment:

(T4)

- Seed tree; regeneration harvest.
- Selection of seed trees by species designation (ponderosa pine 14" & greater) and leave tree marking (western larch & Douglas-fir) to accomplish desired variable spacing of 65-95 feet (leaving 5–10 TPA).
- Retention of snags 14" dbh & greater and a minimum of 2 cull trees per acre to remain standing, where present, if they are not a safety hazard.

Harvest Method:

- Ground based logging system. Conventional or mechanized systems are acceptable.
- Leave trees marked to leave in addition to species designated leave trees.

Hazard Reduction:

- Hazard reduction laws will be accomplished through the use of excavator piling and burning of piles.

Regeneration/Site Preparation:

- Scarification while piling; slashing of damaged residual prior to piling.
- Leave trees to provide seed source for natural regeneration.

Anticipated Future Treatments:

- Unit to be monitored annually for the establishment of natural regeneration. If natural regeneration fails 5 years after site preparation, planting will be scheduled.
- Evaluation for non-commercial thinning to take place in 15-20 years.
- Stand conditions monitored and evaluated at regular intervals, as per calendar recall. Salvage and/or sanitation operations to occur after evaluation of a site altering event.