SILVICULTURAL CERTIFICATION FOR NMFA COMPLIANCE

IMP TIMBER SALE

The proposed regeneration treatments of stands 1, 3, 4, 5, 6, and 7 have been field verified by a certified silviculturist.

Based on my analysis, stand diagnosis and design criteria for the regeneration treatment, I recommend the following findings of facts pursuant to NMFA be made in this project decision:

There is reasonable assurance that if prescriptions are implemented as I have prescribed:

a. Soil, slope or other watershed conditions will not be irreversibly damaged.

b. Reforestation can be accomplished within 5 years of final harvest.

I further find that:

All lands within this project area that would be harvested are suitable for timber production.

Evenaged management is the optimal appropriate silvicultural system and regeneration is the optimum harvest method for those stands prescribed for regeneration treatment because it meets the objectives of the *NORTHWEST FOREST PLAN*, the *MT HOOD FOREST PLAN* and the recommendations of the *UPPER CLACKAMAS RIVER WATERSHED ANALYSIS*. These stands have reached culmination of mean annual increment for fiber production.

All units or combination of adjacent units and immediately adjacent existing plantations less than an average of 4.5 feet in height do not create openings greater than 60 acres in size.

/S/ *Glenda Goodwyne* August 21 2003

Silviculturist Date

SILVICULTURAL DIAGNOSIS

IMP TIMBER SALE

Existing Condition

Stands proposed for regeneration harvest in the Imp project area consist primarily of isolated late seral blocks that are 200 – 300 years of age. These stands are found on nearly level to relatively steep (10 – 35%) slopes. Elevations range from approximately 2800 to 3800 feet with variable aspects.

Primary plant associations found in the Imp project area include ABAM/RHMA/XETE (*Pacific silver fir/Pacific rhododendron/beargrass*), and TSHE/RHMA/BENE (*western hemlock/Pacific rhododendron/dwarf Oregon grape*). Common overstory and understory species include Douglas-fir (*Pseudotsuga menziesii*), Pacific silver fir (*Abies amabilis*), western white pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), noble fir (*Abies procera*), and western redcedar (*Thuja plicata*). Ground cover includes Pacific rhododendron (*Rhododendron macrophyllum*), beargrass (*Xerophyllum tenax*), dwarf Oregon grape *(Berberis nervosa*), vine maple (*Acer circinatum*), salal (Gaultheria shallon), and huckleberry (*Vaccinium spp.*). Western hemlock, noble fir, and Douglas-fir are the dominant species with minor amounts of western redcedar in units 1 and 3-6. Unit 7, however, is comprised mainly of Douglas-fir, western hemlock and a dominant western redcedar component.

Moderate to heavy infections of dwarf mistletoe (Arceuthobium tsugense, A. douglasii, A. campylopodum) can be found throughout these stands as well as minor amounts of Indian paint fungus (*Echinodontium tinctorium Ell. & Ev.)*. Small isolated pockets of laminated root rot (Phellinus wierii) are also present. Windthrow potential is low to high as categorized by the Soil Resource Inventory (SRI January, 1979).

These stands continue to weaken structurally and lose net growth to mortality caused by damaging agents. Due to the dense layer of brush that dominates the understory in most areas, young confiers are not becoming established to replace the overstory that is experiencing slow mortality. All of the stands considered for harvest are past culmination of mean annual increment, meaning that their growth has leveled off or has begun to decline. In terms of timber productivity, these stands are growing below their capability with site range between Site Classes II and III (Douglas-fir, Upper Limits of Site Indices for Dominant Trees, FSH June 1974).

Treatment Options

Proposed areas under consideration for treatment were field reviewed by a certified silviculturist and specific silvicultural systems were selected based on site specific analyses and management area goals and objectives. To meet the silvicultural objectives of these stands, several different treatments could be employed all options must be considered and addressed.

Treatment options considered in this analysis were: 1. no treatment, 2. thinning, and 3. regeneration harvest.

The **no treatment option** was not chosen because it would not move any of the stands closer to the desired future condition, nor would it address capturing growth potential and mortality in these stands. (Four-92, FW-382; Four-289; Four-292, C1-016).

The **thinning option** was not chosen as the treatment to achieve the desired goals because these stands have surpassed culmination of mean annual increment.

The **regeneration harvest option** was chosen as the optimal treatment to achieve the desired management goals for stands 1,3,4,5,6, and 7 because their growth rates have culminated and are not commensurate with the potential growth rates for the site, these isolated older stands surrounded by plantations, and are moderately to heavily infected with hemlock dwarf mistletoe. The Mt. Hood National Forest Plan states that timber stands should be considered for regeneration harvest when they have reached 95% of culmination of mean annual increment measured in cubic feet (Four-86, FW-306). This treatment method is considered the optimum harvest method for these stands to meet forest health and site productivity objectives of C1 and Matrix lands (Four-86, FW-315; Four-88, FW-348; Four-92, FW-382). Regeneration would reduce the risk of dwarf mistletoe infection in adjacent plantations and establish a young, healthy and vigorous stand in its place.

Treatment Proposal

- Harvest by reserve shelterwood method approximately 88 acres of isolated/fragmented stands
- site prep reserve shelterwood units
- plant trees in reserve shelterwood units
- retain in patches, approximately 10% of the harvest area in each unit for GTR
- retain large trees scattered at a rate of 10-12 per acre in each unit

/S/ *Glenda Goodwyne* August 21 2003

Silviculturist Date

DecAID Advisor

The following is a summary of snag data contained in the DecAID advisor for three different tolerance levels for both the Western Lowland Conifer Hardwood Forest Oregon Cascades and the Montane Mixed Conifer Forest. The data for each of these habitat types is given for three different structural conditions, which are basically similar to the three different seral conditions identified in the watershed analysis for the Upper Clackamas.

DecAID – Snag Density and Sizes for 3 Different Tolerance Levels

"Western Lowland Conifer Hardwood Forest Oregon Cascades" vegetative condition best fits with the Western Hemlock And Pacific Silver fir Plant Series

Vegetative Conditions Western Lowland Conifer Hardwood Forest Oregon Cascades	80% Tolerance Level for Snag Density and Diameter	50% Tolerance Level for Snag Density and Diameter	30% Tolerance Level for Snag Density and Diameter l
Larger (Late Seral)	36.4/acre > 10 in. with more than 14/acre > 20 in.	18.6/acre > 10 in. with more than 8.1/acre > 20 in.	5.3/acre > 10 in. with more than 4.8/acre > 20 in.
Small/Medium (Mid Seral)	36.4/acre > 10 in. with more than 15/acre > 20 in.	18.6/acre > 10 in. with more than 8.1/acre > 20 in.	5.3/acre > 10 in. with more than 4.8/acre > 20 in.
Open Canopy (Early Seral)	26/acre > 10 in. with more than 12.5/acre > 20 in.	9.4/acre > 10 in. with more than 4.2/acre > 20 in.	5/acre > 10 in. with more than 2.1/acre > 20 in.

"Montane Mixed Conifer Forest" vegetative condition best fits with the Mountain Hemlock Plant Series

Vegetative Conditions Montane Mixed Conifer Forest	80% Tolerance Level for Snag Density and Diameter	50% Tolerance Level for Snag Density and Diameter	30% Tolerance Level for Snag Density and Diameter l
Larger (Late Seral)	27/acre > 10 in. with more than 15/acre > 20 in.	15/acre > 10 in. with more than 9/acre > 20 in.	11/acre > 10 in. with more than 6.5/acre > 20 in.
Small/Medium (Mid Seral)	32/acre > 10 in. with more than 9.5/acre > 20 in.	16.6/acre > 10 in. with more than 4.2/acre > 20 in.	10/acre > 10 in. with more than 2.7/acre > 20 in.
Open Canopy (Early Seral)	23/acre > 10 in. with more than 5.3/acre > 20 in.	8.5/acre > 10 in. with more than 2.1/acre > 20 in.	4/acre > 10 in. with more than 1.1/acre > 20 in.

The following tables contain a summary of the snag data provided in the Upper Clackamas watershed analysis. The data in the watershed analysis is summarized in a slightly different manner than the information in the DecAID advisor. The watershed analysis separates snags into large (> 21 inches) and small (15 to 21 inches). The DecAID advisor generally uses large (>20 inches) and small (10 to 20 inches). In terms of comparison, the watershed analysis under estimates the amount of snags.

The following analysis compares the snag data from the watershed analysis to the tolerance levels for the different wildlife habitat types and structural conditions identified in the DecAID advisory tool. It displays the percentage of the watershed in each structural condition and the tolerance level for snags. The percentages are based on all past, present and foreseeable future actions. Since the NFP was implemented, approximately 1087 acres within the Upper Clackamas 5th field watersheds have been or would be converted from late-seral snag habitat to early-seral snag habitat.

Average Snag Levels and Tolerance levels for Unmanaged and Managed Stands* within the Upper Clackamas 5th Field Watershed

Plant Series and Seral Stage	Large Snags per acre > 21 in.	Small Snags per acre 15 to 21 in.	Current Tolerance Level at the Landscape Scale	Percent of Watershed
Western Hemlock Late Seral	6.2	1.7	> 30%	15.6%
Western Hemlock Mid Seral	0.1	13.0	> 30% but lacks large snags	2.1%
Pacific Silver Late Seral	7.8	4.8	Between 30% and 50%	24.4%
Pacific Silver Mid Seral	1.9	3.2	Less than 30%	12.4%
Mountain Hemlock Late Seral	3	0.1	Less than 30%	4.5%
Mountain Hemlock Mid Seral	0.9	0.7	Less than 30%	13.1%
All Plant Series In Early Seral Plantations	1.5	0.5	Less than 30%	30.7%
All Plant Series in Mid Seral Plantations	0.1	0.1	Less than 30%	5.8%

*Unmanaged stands include both unharvested and partially harvested stands that have not had a regeneration harvest such as a clearcut or shelterwood harvest.

*Managed stands include only stands that have had a regeneration harvest such as a clearcut or shelterwood harvest.

NOAA MEMO

--- Forwarded by Robert Bergamini/R6/USDAFS on 09/09/2003 07:52 AM -----

"Ron Lindland" <Ron.Lindland@noaa .gov> 09/09/2003 06:18 AM	To: cc: Subject:	Robert Bergamini <rbergamini@ Re: Updated Imp Timber Sale p

Bob,

Based on the information provided in the Biological Evaluation (received August 27, 2003) and in your September 8, 2003 e-mail, I concur that the proposed Imp Timber Sale project, as revised, remains "Not Likely to Adversely Affect" Lower Columbia River steelhead or Upper Willamette River chinook salmon. Ron

Robert Bergamini wrote:

> Hi Ron,
>
> The modifications to these timber sales are mainly due to us narrowing the focus of our EA's. All of our restoration projects have been pulled and put into separate restoration EAs and any thinning units will be covered under a separate EA for thinning projects. (The thinning units that were in the Imp were consulted on in the Upper Clackamas Thinning BA). To answer your other questions: the semi-permanent road is a ridge-top road on flat terrain. There will be no stream crossings or culvert removals. The road has no hydrological link to any intermittent or perennial stream. As stated above the stream restoration was included in a separate EA.
>
> Hopefully we won't be changing much more. There will be no modifications to Orchard but there may be some to the Mutt Sale if we go forward with it. Let me know if you need any more info.
>
> Robert Bergamini
> Fisheries Biologist
> Clackamas River Ranger District
> Mt. Hood National Forest
> Estacada, OR 97023
> 503-630-8801
> rbergamini@fs.fed.us
>
>
>"Ron Lindland"
<Ron.Lindland@no
To:Robert Bergamini
<rbergamini@fs.fed.us>
>cc:
>Subject: Re: Updated Imp Timber Sale project
> 09/02/2003 07:56 AM

Public Participation

The legal notice for the 30-day comment period on the Imp proposed action was published in the Oregonian on November 10, 2003.

LEGAL NOTICE of PROPOSED ACTION

MT. HOOD NATIONAL FOREST: PUBLIC COMMENT ON THE IMP TIMBER SALE PROPOSED ACTION AND PRELIMINARY ASSESSMENT. The Imp Timber Sale is located near Pot Creek within T. 6 S., R. 7 E., W.M., Clackamas County, Oregon. The proposed action includes 88 acres of timber harvest using the reserve shelterwood regeneration method and the construction of 0.1 mile of temporary road. An Environmental Assessment will be prepared after comments are received and considered. A copy of the Proposed Action and Preliminary Assessment can be downloaded from the Forest web site at http://www.fs.fed.us/r6/mthood/ in the Forest Projects section. The Responsible Official is Kathryn J. Silverman, Acting Forest Supervisor. Comments and/or requests for additional information on the proposed action should be addressed to Jim Rice, mail: 595 NW Industrial Way, Estacada, OR 97023; phone: 503-630-6861; office hours: 8-4:30 M-F; or Email: comments-pacificnorthwest-mthood-clackamasriver@fs.fed.us. The opportunity to comment ends 30 days following the date of publication of this notice. Comments must be signed or in the case of electronic or telephone submissions, commenters must verify their identity upon request to be eligible to appeal. Only those who submit timely and substantive comments will be accepted as appellants.