

**SILVICULTURAL CERTIFICATION FOR NFMA COMPLIANCE****SLINKY TIMBER SALE**

All of the proposed harvest units were either field verified or evaluated under the guidance of a certified Silviculturist.

Based upon my analysis and stand diagnosis, I recommend the following finding of facts pursuant to NFMA be made in project decisions:

1. There is reasonable assurance that if prescriptions are implemented as I prescribe:
  - a. Soil, slope or other watershed conditions will not be irreversibly damaged.
  - b. Reforestation can be accomplished within five years of final harvest.
2. I further find that:
  - a. All lands within this project area that would be regeneration harvested are suitable for timber production.
  - b. Even-aged management is the optimal silvicultural system to be used within this project area because it meets the objectives of the *NORTHWEST FOREST PLAN*, the *MT. HOOD FOREST PLAN*, and recommendations of the *OAK GROVE* and *UPPER CLACKAMAS WATERSHED ANALYSES*. These stands have reached the culmination of mean annual increment for fiber production.
  - c. All units or combination of 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/ E. Craig Edberg  
Silviculturist

August 5, 2003  
Date

## STAND DIAGNOSIS

### SLINKY TIMBER SALE

#### EXISTING CONDITIONS

The units for the proposed Slinky project area are made up primarily of late seral stands that are 200-300 years old. Hemlock dwarf mistletoe (*Arceuthobium campylopodium tsugensis*) is present in several of the stands. Growth loss, reduction of wood quality and mortality results from this agent. Windthrow potential in the project area is moderate, as categorized by the Soils Resource Inventory (SRI)..

Primary plant associations in the project area include ABAM/RHMA/XETE (Pacific silver fir /rhododendron/beargrass), ABAM/RHMA/VAAL-COCA (Pacific silver fir/Pacific rhododendron/Alaskan huckleberry-bunchberry dogwood), TSHE/RHMA/VAAL-COCA (western hemlock/Pacific rhododendron/Alaskan huckleberry-bunchberry dogwood) and TSHE/RHMA/BENE (western hemlock/Pacific rhododendron/dwarf Oregon-grape). Douglas-fir (*Pseudotsuge menziesii*), western hemlock (*Tsuga macrophylla*), Pacific silver fir (*Abies amabilis*) and noble fir (*Abies procera*) are the major conifer species found here, although some Western redcedar, (*Thuja placata*) is present. The most common shrub and herb species comprise vine maple (*Acre circinatum*), Pacific rhododendron (*rhododendron macrophyllum*), beargrass (*Xerophyllum tenax*), Alaskan huckleberry (*Vaccinium alaskaense*), bunchberry dogwood (*Cornus canadensis*) and dwarf Oregon-grape (*Berberis nervosa*).

Productivity for the Slinky area is variable and has been determined to range between Site Classes III and IV (*Douglas-fir, Upper Limits of Site Indices for Dominant Trees*, FSH June 1974). These site classes were established by measuring the height of the most dominant trees in each unit and correlating this figure with their age (This was done because of the variability between some of the units). The site classes then determined the width of riparian buffers for each unit.

Elevations for the units range from about 3,000' to 4,000'. The aspect varies. No areas considered for treatment have been identified as unsuitable for timber management. Large logs (>24" diameter) that are in decay classes 4 and 5 can be found in several of the proposed units. Canopy closure is variable. Conifer canopy cover, in some places can be so dense (>80%), that few plants are surviving in the understory. Other areas are very open (<40%) where the overstory has begun to die out and a thick layer of rhododendron has become established.

## TREATMENT OPTIONS

Proposed areas under consideration for treatment were field reviewed by a Certified Silviculturist and specific silvicultural systems were selected based upon site-specific analysis, area management goals and objectives.

Treatment options considered in this analysis were: 1. No Treatment; 2. Regeneration harvest; 3. Thinning.

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 or and mortality in these stands. (Four-92, FW-382; Four-289; Four-292, C1-016).

The **regeneration harvest option** was chosen as the optimal treatment to achieve to achieve resource management goals. The *Mt. Hood National Forest Plan* states that timber stands should be considered for regeneration harvest when they have reached or surpassed 95% of culmination of mean annual increment (CMAI) measured in cubic feet (Four-86, FW-306). All of the stands in the project area have exceeded CMAI. This treatment is considered to be the optimum 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). A regeneration harvest would prepare the sites for the establishment of a young, healthy and vigorous stand in the proposed units.

The **thinning option** was not selected because all of the stands are old and have long since surpassed CMAI.

## TREATMENT PROPOSAL

Harvest approximately 184 acres using the reserve shelterwood regeneration method. Approximately 10% of the harvest area would be retained in patches and scattered large trees would be retained at the rate of 10 to 12 per acre.

/s/ E. Craig Edberg  
E. Craig Edberg  
Silviculturist

August 5, 2003  
Date

## Slinky Timber Sale Wildlife Survey and Manage Summary

Clackamas River Ranger District, Mt. Hood National Forest  
05/08/03

Prepared By: Sharon Hernandez, Wildlife Biologist /S/ *Sharon Hernandez*

The Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl include the requirement to conduct surveys for the Oregon red tree vole (*Arborimus longicaudus*) and terrestrial mollusks prior to any habitat-disturbing activities that will be implemented within the known or suspected range and within the habitat types or vegetation communities associated with these species. The Slinky timber sale occurs outside of the identified larch Mountain salamander distribution range. Therefore surveys were not required. No suitable habitat for the great gray owl exists within the Slinky timber sale project area. Therefore surveys were not required.

The Slinky Timber Sale was surveyed for red tree voles and terrestrial mollusks. In September of 2000, red tree vole surveys were completed as specified within the Survey Protocol for the Red Tree Vole Version 2.0 (dated February 18, 2000). In October of 1998 and June of 1999, terrestrial mollusk surveys were completed as specified within the Survey Protocol for Terrestrial Mollusk Species Draft Version 2.0 (dated October 29, 1997).

The following is a summary red tree vole and terrestrial mollusk surveys completed for the Slinky Timber sale:

### RED TREE VOLE SURVEY SUMMARY

Unit#	Acres	Date Surveyed	Linear Ft Required	Linear Ft Surveyed*	Potential Nest Observed	Tree Species Potential Nest In	Tree Climbed?	Results of Climb
1	30	9-26-00	9000	18,940	No	N/A	N/A	N/A
2	30	9-26-00	9000	12,845	No	N/A	N/A	N/A
5	38	9-25-00	11,400	12,595	No	N/A	N/A	N/A
8	6	9-20-00	1800	2830	No	N/A	N/A	N/A
9	20	9-20-00	6000	6100	No	N/A	N/A	N/A
15	5	9-19-00	1500	1500	No	N/A	N/A	N/A
17	17	9-18-00	5100	6505	No	N/A	N/A	N/A
31	25	9-19-00	7500	8165	No	N/A	N/A	N/A
151	13	9-26-00	3900	3990	No	N/A	N/A	N/A

\*Modified Line Transect used

**Red Tree Vole Results Summary:** Red-tree vole surveys were satisfactory completed to protocol for the Slinky Timber Sale. No potential red-tree vole nests were observed during survey efforts. (Note: In unit 5 an unidentified nest was seen in a 14" DBH snag that was among a group of snags. Since the tree in which the nest was seen was dead as well as the surrounding trees, it has been determined that it has little potential of being a red-tree vole nest. Hence tree was not climbed for identification.

**TERRESTRIAL MOLLUSK SURVEY SUMMARY**

<b>Unit #</b>	<b>Acres</b>	<b>Search Time Required (hrs.)</b>	<b>Visit One: Date Surveyed</b>	<b>Visit One: Search Time Completed (hrs)</b>	<b>C-3 Species Found / Sites Requiring Protection</b>	<b>Visit Two: Date Surveyed</b>	<b>Visit Two Search Time Completed (hrs.)</b>	<b>C-3 Species Found / Sites Requiring Protection</b>
1	30	3	10-28-98	6.5	7 HEMA*, 3 PRCO*	06-02-99	4.25	None Found
2	30	3	10-28-98	4.5	4 HEMA*	06-02-99	5.0	2 HEMA* / 1 CRHE
5	38	4	10-28-98	4.5	4 HEMA*	06-02-99	4.75	4 HEMA*
8	6	1	10-28-98	1.0	None Found	06-02-99	1.15	None Found
9	20	2	10-28-98		None Found	06-02-99	2.5	None Found
15	5	1	10-29-98	1	2 PRCO*, 2 HEMA*	06-23-99	1.15	2 HEMA*
17	17	2	10-29-98	2.30	1 HEMA*, 1 PRCO*	06-23-99	3.0	None Found
31	25	2.5	10-29-98	3.0	None Found	06-02-99	3.75	1 HEMA*,
151	13	1.3	10-29-98	1.3	1 HEMA*	06-23-99	1.45	2 HEMA*

HEMA = *Hemphillia malonei*  
 PRCO = *Prophysaon coeruleum*  
 CRHE = *Cryptomastix hendersoni*

\* HEMA and PRCO C-3 species no longer require pre-disturbance surveys in Oregon. Known sites do not require protection.

**Terrestrial Mollusks Results Summary:** Only one species found during survey efforts require protection. This is the *Cryptomastix hendersoni* (CRHE). This species was found approximately 250 feet outside the western boundary of unit 2. A habitat area was created around this site. The boundaries that form the habitat area include a buffer of 100 meters (328 feet) on the south/south-west/west edge, 80 meters (263 feet) on west/north-west/north edge, and 60 meters (197 feet) on the north/north-east/east/south-east edges of the unit. This habitat area falls outside of unit 2.

The management recommendations for Survey and Manage Terrestrial Mollusks, Version 2.0 (Burke et. al. 1999), recommend management guidelines within the habitat areas formed for the *Cryptomastix hendersoni*. It states that every effort should be made to conserve the existing structural features and environmental conditions, including tree canopy, understory and herbaceous vegetation, woody debris of all decay classes, and any other factors that may be contributing to a relatively cool and damp microclimate on the forest floor. Occupied sites should be protected from the introductions of nonnative species. This includes prohibiting the use of un-washed vehicles that could carry weed seeds or other exotics, and the use of hay bales or other nonnative mulching material and planting mixes used for erosion control. There should be no activities that would substantially disturb or compact the soil (no yarding or vehicles), and there should be no management by means of fire or chemicals within this habitat area.

The above is a cautious approach that is recommended until the needs and abundance of this species are better understood.

### 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 both the Oak Grove and 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 and Oak Grove 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 577 acres within the Oak Grove and 1087 acres within the Upper Clackamas 5<sup>th</sup> 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 5<sup>th</sup> 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%

**Average Snag Levels and Tolerance levels for Unmanaged and Managed Stands\*  
within the Oak Grove 5<sup>th</sup> Field Watershed**

Seral Stage and Plant Series	Large Snags > 21 in.	Small Snags 15 to 21 in.	Current Tolerance Level at the Landscape Scale	Percent of Watershed
Western Hemlock Late Seral	4	2.1	Close to 30%	7.5%
Western Hemlock Mid Seral	2	2.2	Less than 30%	1.5%
Pacific Silver Late Seral	6.4	6.1	Between 30% and 50%	28.9%
Pacific Silver Mid Seral	2.9	5.0	Close to 30%	13.9%
Mountain Hemlock Late Seral	1.8	0.2	Less than 30%	4.2%
Mountain Hemlock Mid Seral	1	1.9	Less than 30%	2.6%
All Plant Series Early Seral Plantations	1.5	0.5	Less than 30%	28.2%
All Plant Series in Mid Seral Plantations	0.1	0.1	Less than 30%	7.4%

\*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

**"Ron Lindland"****<Ron.Lindland@noaa.gov>**

07/07/2003 07:48 AM

To: Daniel Shively <dshively@fs.fed.us>  
cc: Robert Bergamini <rbergamini@fs.fed.us>, James B Roden <jroden@fs.fed.us>, James R Rice <jrrice@fs.fed.us>  
Subject: Re: Updated Slinky Timber Sale Project and New Effects Determination for ESA listed Salmon and Steelhead

Dan and Bob,

After reviewing the attached BE which describes the proposed changes in the Slinky Timber Sale action, the Slinky Timber Sale BA dated April 4, 2000, and NOAA Fisheries' February 28, 2001 letter of concurrence; and talking with Bob Bergamini this morning, I agree that the Slinky Timber Sale (as currently proposed) would have no effect on ESA listed salmonids or their habitat. This determination is based mainly on the fact that proposed timber harvest units are located upstream from Harriet Lake Dam and also approximately 3 miles upstream from an impassable natural waterfall barrier on Oak Grove Fork and on the understanding that the proposed road obliteration and rock quarry rehabilitation are now being addressed under a separate EA. The road obliteration and rock quarry rehabilitation work would be covered under NOAA Fisheries' February 25, 2003, programmatic BO. Ron

Daniel Shively wrote:

Hi, Ron.

The original Slinky Timber Sale that we informally consulted on in January of 2001 has been modified -- two units in the adjacent Upper Clackamas Watershed were dropped (Units 36 & 38) and hence a new Effects Determination of No Effect was made by Bob Bergamini in the attached updated BE.

Would you review the attached BE (and original BA & LOC for that matter) and let me know if you concur with the No Effect Determination for ESA listed fish species under NOAA Fisheries jurisdiction. Please reply to all (those listed above) with your response.

>

> Thanks, Dan.

>

> Dan Shively

> Fisheries Program Manager

> Mt. Hood National Forest

> Phone: (503) 668-1605

> FAX: (503) 668-1423

**Project Review for Heritage Resources**

under the terms of the

1995 Programmatic Agreement between ACHP, SHPO, and USFS R6

(Consultation PA, 3/95)

FOREST: MT. HOOD RANGER DISTRICT: CLACKAMAS RIVER COUNTY: CLACKAMAS

UNDERTAKING/PROJECT NAME: Slinky EA. Inventory Report # 99-03-14

USGS QUAD: Mt. Mitchell PROPOSED IMPLEMENTATION DATE: 2001

By signing this document, the Forest Specialist certifies that for this project the Forest complies with Section 106 of the National Historic Preservation Act, under the terms of the above Programmatic Agreement (PA). This form shall be kept on file with the project NEPA analysis file as supporting documentation.

**PROGRAMMATIC REVIEW (Stipulation III.A) SHPO CONSULTATION NOT REQUIRED:**

The undertaking named above meets the conditions listed in **Appendix A** \_\_\_\_\_ and will be excluded from case-by-case review.

The undertaking named above meets the conditions listed in **Appendix B** \_\_\_\_\_ and will be excluded from case-by-case review. Inspection and/or monitoring documentation is attached.

**STANDARD CASE-BY-CASE REVIEW (Stip. III.B) DOCUMENTATION TO SHPO AS NOTED:**

**NO HISTORIC PROPERTIES:** An appropriate inventory has been conducted for this undertaking and no properties potentially eligible for the National Register of Historic Places (NRHP) have been located; therefore, the undertaking meets the criteria given in Stip. III.B.1 of the PA. The undertaking may proceed. A COPY OF THE DOCUMENTATION WILL BE FORWARDED TO SHPO FOR INFORMATION WITHIN 60 DAYS.

**NO EFFECT:** An appropriate inventory has been conducted for this undertaking and property(s) which may be eligible for inclusion in the NRHP have been located. Avoidance measures will be implemented per Stip. III.B.2(a-d), if necessary; therefore the undertaking meets the criteria given in Stip. III.B.2 of the PA. The undertaking may proceed. A COPY OF THE DOCUMENTATION WILL BE FORWARDED TO SHPO FOR INFORMATION WITHIN 60 DAYS.

**NO ADVERSE EFFECT:** An appropriate inventory has been conducted for this undertaking and property(s) which may be eligible for inclusion in the NRHP have been located which may be affected by the undertaking. DOCUMENTATION WILL BE FORWARDED TO SHPO PER STIP. III.B.5(a). The undertaking may proceed in 30 calendar days if SHPO does not object.

/s/ Jan M. Prior  
Forest Specialist

4/2/99  
Date

FOR SHPO USE

For NO ADVERSE EFFECT undertakings, please indicate your opinion of our determination by marking the appropriate line below, then sign and return this form to us.

I Concur with NO ADVERSE EFFECT Signed \_\_\_\_\_

I Do Not Concur, because in my opinion:

This undertaking will have an ADVERSE EFFECT \_\_\_\_\_ Date

This undertaking will have NO EFFECT

Remarks:

REPORT # 99-03-14

SHPO #

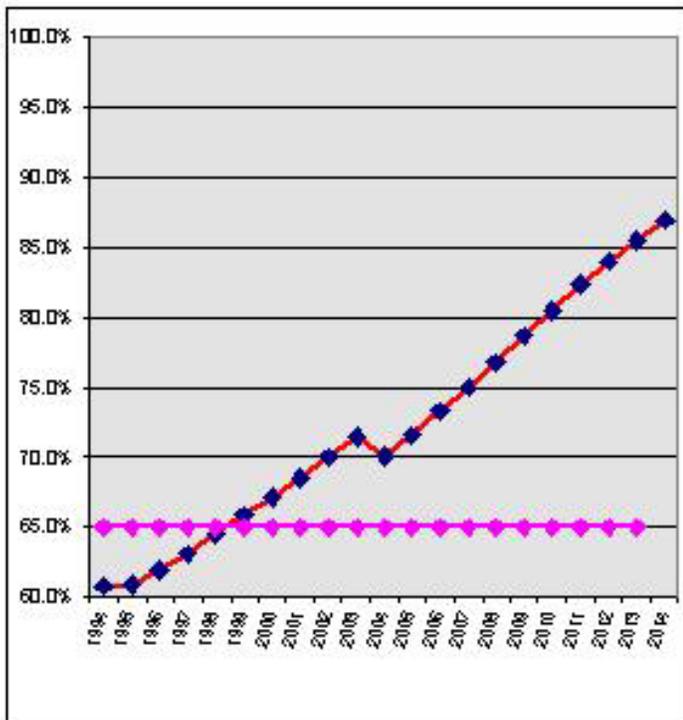
Results: Negative

County: Clackamas

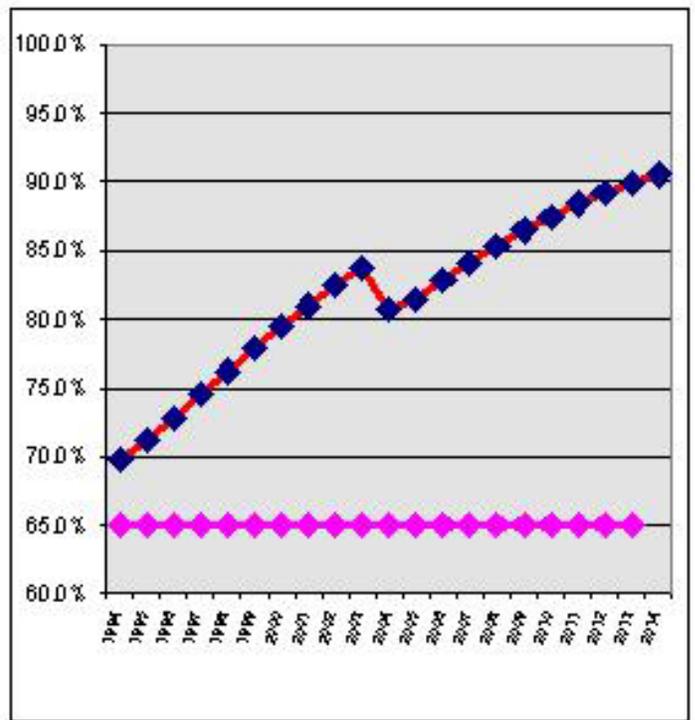
### Aggregate Recovery Percentage (ARP)

From data contained in GIS shape file titled Veg2000.shp.  
From spreadsheet titled ARP Slinky.xls.

Kink Subwatershed

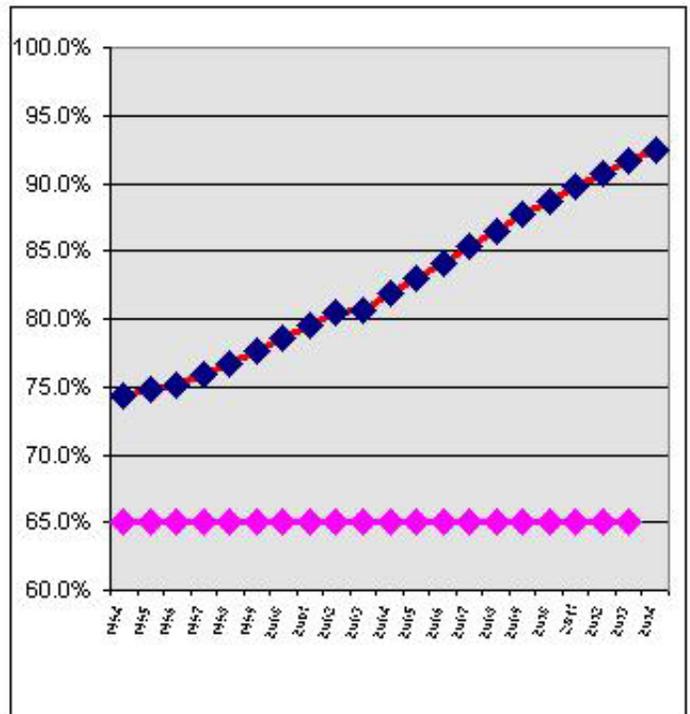
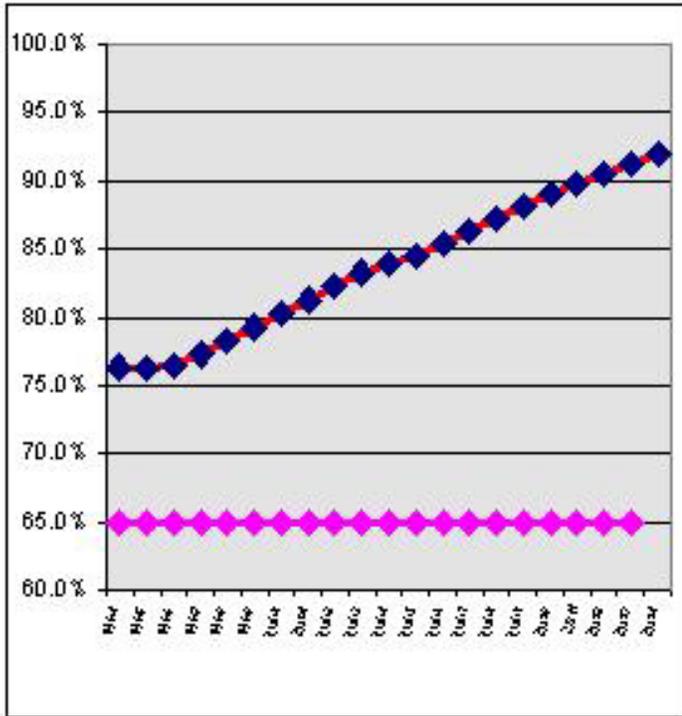


Harriet Subwatershed

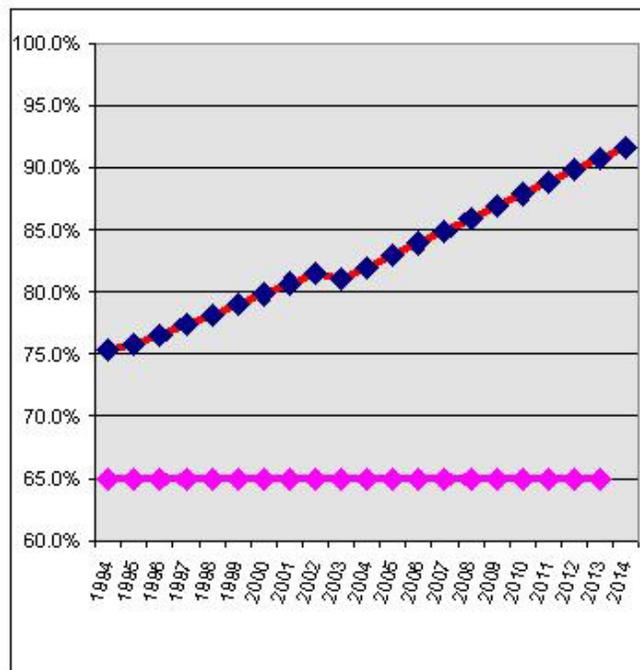


Austin Subwatershed

Oak Grove Watershed



Upper Clackamas Watershed



## Public Participation

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

### LEGAL NOTICE of PROPOSED ACTION

MT. HOOD NATIONAL FOREST: PUBLIC COMMENT ON THE SLINKY TIMBER SALE PROPOSED ACTION AND PRELIMINARY ASSESSEMENT. The Slinky Timber Sale is located near Oak Grove Butte within T. 6 S., R. 7 E., W.M., Clackamas County, Oregon. The proposed action includes 184 acres of timber harvest using the reserve shelterwood regeneration method, the construction of 0.4 mile of temporary roads, and the reconstruction of roads along the haul route. 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 Gary Larsen, 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: [jrrice@fs.fed.us](mailto:jrrice@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.