

# Pre-Operations Report

**Operation Name: Two Knobs**

**County: Lane**

**Management Basin: Western Lane**

**Legal Description: Sec 1, T17S, R8W; Sec 6, T17S, R7W**

**Table 1. Operation Areas, Types and Acres**

Area	Type of Operation		Net Acres
1	Modified Clearcut		19
2	Modified Clearcut		17
3	Modified Clearcut		4
			40

Net acres do not include in-unit stream buffers or existing roads within units.

## **I. PHYSICAL DESCRIPTION OF OPERATION AREA:**

The sale area is about midpoint between Eugene and the coast. Elevation is approximately 1300 feet. The climate is cooler and wetter than Eugene. Eocene age sedimentary geology underlies the area. The soils are Drain and Valino. Slopes are gentle to moderate.

## **II. CURRENT STAND CONDITION:**

The entire area consists of stands originating after wildfires that occurred during the first part of the 20<sup>th</sup> century. The average age of the overstory timber is about 60 years. Timber type is primarily Douglas-fir with bigleaf maple and some alder.

All of the area is UDS structure with heavy brush, much down wood, and some snags.

**Table 2. Stand Inventory Information (Net Acres)**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	SDI	Acres <sup>2</sup>
1	Modified Clearcut	15084	DF	60	16	200	149	55	19
2	Modified Clearcut	15079	DF	60	13	215	220	59	17
3	Modified Clearcut	15084	DF	60	16	200	149	50	4

- 1 The source of stand inventory information is SLI for trees 8" DBH and larger. The age of the overstory timber was estimated.
- 2 Net acres, unless otherwise noted, are based on orthophotos and does not include stream buffers.

### III. DESIRED STAND CONDITION and VISION:

The entire sale area has a Desired Future Condition of General, and plans are to manage the area with an emphasis on Douglas-fir commercial forest.

**Table 3. Stand Structure Information (Net Acres)**

Area	Stand ID	Current	Post Harvest	Desired Future	Acres
1,2,3	15079, 15084	UDS	REGEN	GEN	40

### IV. PROPOSED MANAGEMENT PRESCRIPTION and ANTICIPATED PATHWAY:

**All Areas: Modified Clearcut.** All hemlock, cedar, bigleaf maple and Douglas-fir less than 10 inches and over 30 inches which are not safety hazards will be left. The leave tree target will be at least 8 trees per acre and will count all trees of all species over 8 inches DBH.

The areas probably will be aerially sprayed with an Accord/Arsenal mix prior to planting to reduce brush competition to the new seedlings. The areas will be planted with Douglas-fir the year following site preparation and at least 10% redcedar or hemlock, if available.

Treatment of competing vegetation may be necessary a few years after planting. This treatment probably will be hack and squirt for resprouting bigleaf maple that were cut for safety or operational reasons during operations.

**All Areas:**

Down Wood. SLI shows the stands currently have over 2000 cubic feet per acre of down wood. Additional down wood will come from broken pieces and missed logs. No trees will be felled specifically to create down wood.

Snags. SLI shows the general forest in the area contains numerous snags. Snags which are not a safety hazard will be left during this operation, and some of the 8 leave trees per acre will eventually become snags. In addition to the existing snags we propose to create an average of 1 snag per acre that will be left in clumps or scattered across the unit. Instead of creating snags, we may leave one additional dominant Douglas-fir per acre and allow them to grow to a more desirable size before creating snags.

**V. ESTIMATED TIMBER AND REVENUE INFORMATION:**

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%	<input type="checkbox"/>	X
Planned Quarter: 4			

	Conifer	Hardwood	Total
Net Volume (MBF)	1200	0	1200
Stumpage Value (\$/MBF)	\$100	NA	
Estimated Gross Value	\$120,000	0	\$120,000
		Project Costs:	\$30,000
		Estimated Net Value:	\$90,000

**VI. TRANSPORTATION PLANNING AND HARVESTING:**

0.4 miles of simple ridgetop road construction is required. 0.1 mile of existing road will be improved by added a small amount of rock. The roads will be lightly rocked for winter logging to capture winter markets and to reduce the fire risk from summer logging.

We anticipate that ODF will be required to maintain 0.3 miles of private spur and 4.8 miles of BLM connector road. We assume that we will be required to pay maintenance on the 0.3 miles of private spur and 4.8 miles of BLM connector roads.

**Table 5. Transportation Planning Summary (Miles).**

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0.4	0
Improve	0	0	0.1	0
Maintain	0	4.8	0.3	0
Close/Block	0	0	0	0
Vacate	0	0	0	0

**VII. AQUATIC RESOURCES AND WATER QUALITY:**

Approximately 800 feet of Area 3 is bounded by the RMA of a small Type F stream. Plus approximately 300 feet of the same Area is bounded a small perennial Type N stream. This stream was surveyed for fish using the

electroshock method in May of 1998. The survey was approved by the ODFW in the same year. The Type F RMA appears to be in a mature forest condition (MFC) therefore no harvest will occur within the inner RMA zone of the stream. Approximately 2 – 3 dominant or codominant conifer will be retained per 100 feet in the outer RMA zone.

In the areas adjacent to the Type N stream a no-cut buffer averaging about 40 feet will be left. 80% shade over the aquatic zone will be achieved by retaining all hardwoods, non-merch trees, and other conifers as required for perennial Type N streams within 500 feet of a Type F stream. This buffer will also include 4 dominant or co-dominant conifers per 100 feet as required by the *Northwest Oregon Forest Management Plan*.

Area 2 is adjacent to a small perennial Type N stream for approximately 1200 feet. A no-cut buffer averaging about 40 feet will be left on each stream. This buffer will include the 4 dominant or co-dominant conifers per 100 feet required by the *Northwest Oregon Forest Management Plan*.

#### **VIII. T&E SPECIES CONSIDERATIONS:**

**T&E Birds:** The SOA Wildlife Biologist has determined that the sale area is suitable habitat for northern spotted owls due to the age and size of the trees. Surveys for NSO's have taken place in this area over several years and will continue in 2009. As a result of these surveys, 1 northern spotted owl site (Knapster) has been identified within 1.5 miles of this sale.

A preliminary Biological Assessment has been completed by the ODF SOA Biologist. This assessment concludes that the sale is consistent with ODF's policies for Northern Spotted Owls and marbled murrelets.

Potential marbled murrelet habitat was surveyed according to protocol in 2007, 2008, but will not be surveyed again in 2009.

**T&E Plants:** The sale area was checked against the Oregon Natural Heritage Program (OHNP) database of known listed plant locations. The sale area was also checked against district knowledge for any listed plant location. No listed plant records were identified within the sale area.

#### **IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:**

There are a few isolated areas over 70% slope. No houses or public roads are threatened. Road construction will avoid these locations.

#### **X. RECREATION RESOURCES:**

Hunters, mushroom pickers, and backroad drivers occasionally use the existing roads. New roads will slightly increase recreational opportunity.

**XI. CULTURAL RESOURCES:**

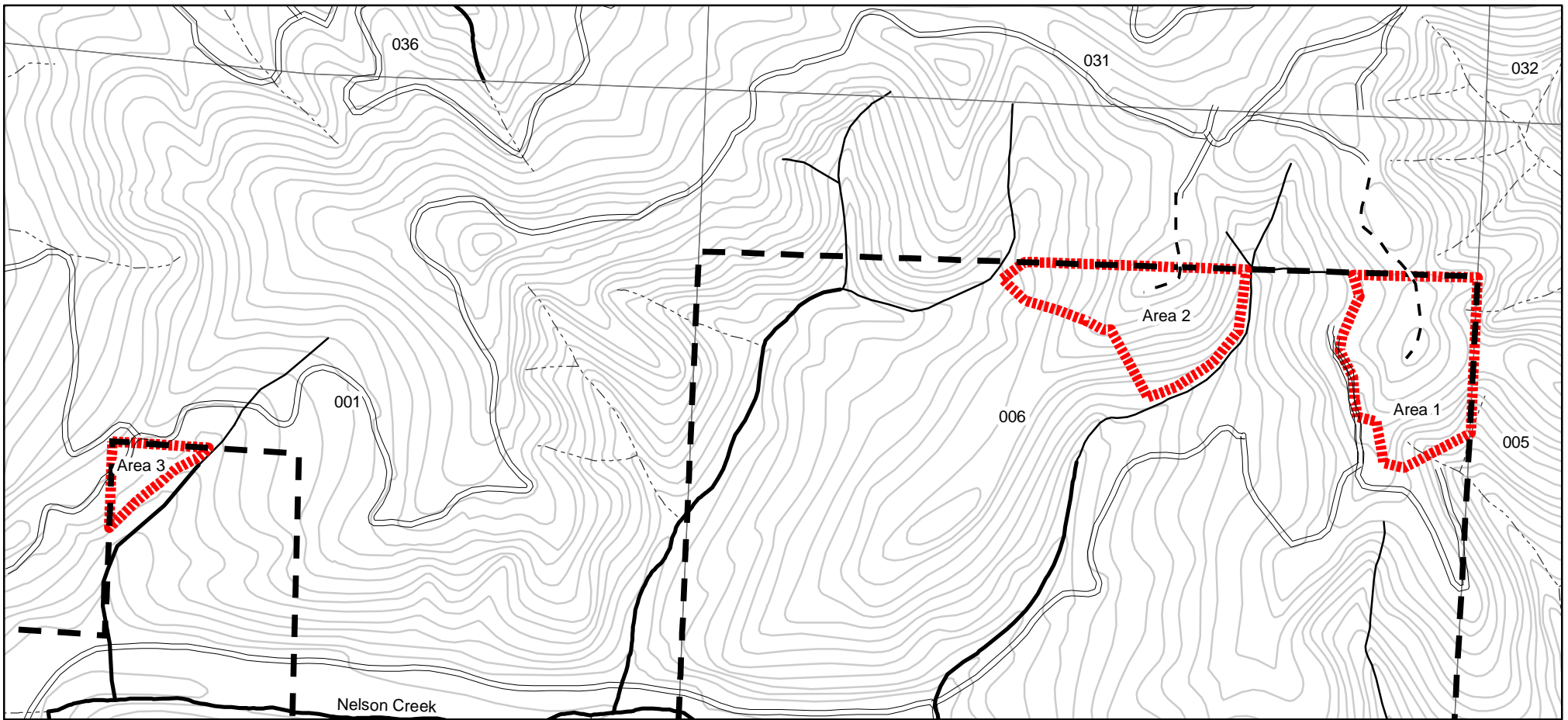
No cultural resources sites are known to exist within the sale area.

**XII. SCENIC RESOURCES:**

The area is not visible from public roads or homes.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

None known.



**Legend**

- Existing Roads
- Planned Roads
- ODF Ownership
- Sale Boundary
- Section Lines

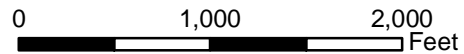
**Streams**

- Fish
- Nonfish
- Unknown

# Two Knobs

Western Lane District  
 2010 Annual Operations Plan  
 T.17S., R. 8W., Sec. 1, W.M.  
 T.17S., R. 7W., Sec. 6, W.M.  
 Lane County, Oregon

Scale 1:12,000



Contours: 40 feet

# 3



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# MEMORANDUM

TO: Art McCoy  
FROM: Randy Smith  
SUBJECT: Preliminary Biological Assessment for the **Two Knobs** Timber Sale  
DATE: January 31, 2008

## Executive Summary

Two Knobs is a proposed alternate sale in the 2009 Annual Operations Plan of the Western Lane District and is located within the home range of the Knappster northern spotted owl site. After harvest of the sale, 62% suitable habitat will remain post harvest within the 1.5 mile circle for the Knappster activity center. Suitable habitat will exceed the ITG. No spotted owls have been observed within the sale area during protocol surveys. No marbled murrelets have been observed within this sale during first year protocol surveys in 2007. Second year surveys will be conducted in 2008. As currently proposed, the Two Knobs timber sale is expected to have a low risk of negatively affecting the occupancy and productivity of the Knappster northern spotted owl site.

## **Introduction**

### Purpose

The Western Lane District is proposing the Two Knobs timber sale in their 2009 Annual Operations Plan. This sale area contains potentially suitable habitat for northern spotted owls. Portions of the sale are within the 1.5 mile circle for the Knappster northern spotted owl activity center. This memo presents the relevant biological information needed to assess the potential effects of the Two Knobs timber sale on northern spotted owls.

### Policy Direction

#### *Northern Spotted Owls*

In the Western Lane District, the standard for protection of northern spotted owls, according to ODF policy (Holloway 2002), is to apply the U.S. Fish and Wildlife Service rescinded Incidental Take Guidelines (ITG) as outlined in "Procedures leading to Endangered Species Act compliance for the northern spotted owl" (U.S. Fish and Wildlife Service 1990). According to the ITG, the best available habitat is identified for a 70 acre core area; at least 500 acres of suitable habitat should be maintained within a 0.7 miles radius, and within the home range circle (in this case 1.5 miles), approximately 40% suitable habitat (1,906 acres) should be maintained. Additional factors to be considered and documented in this biological assessment include proximity of the operation to a site, the prescription proposed, the size of the operation, the history of activity near the site, and other relevant factors.

#### *Marbled Murrelets*

The sale area is approximately 26 miles from the Pacific Ocean. There is a patch of apparent suitable habitat near one of the sale areas. This area is being surveyed for murrelets according to Pacific Seabird Group protocol (Evans et al., 2003). Surveys for murrelets were conducted in 2007 with no detections observed. Second year surveys will be conducted in 2008. The nearest known occupied marbled murrelet site on ODF land, Miller Creek MMMA, is approximately 2.3 miles south of sale area 3.

## **Background**

### Survey History and Site Information

#### *Knappster*

This new pair site is currently being monitored by an ODF contract crew. This site was established in 2007 at the female night location with a non-nesting pair occupying the site. Barred owls were also detected in 2007.

### Sale Area Information

The Two Knobs timber sale consists of 44 net acres of approximately 60 year-old second growth Douglas-fir and scattered big-leaf maple and alder that originated after fires in the 1930's and 1940's. All sale areas are dominated by Douglas-fir stands and have DBH ranging from 13-16 inches and a range of 150-220 TPA. There are a few, widely scattered, large residual Douglas-fir trees within the sale areas. The riparian areas are primarily red alder and big-leaf maple and the brush layer consists of vine maple, cherry, salal, and evergreen huckleberry. Stand Level Inventory (SLI) information has been collected for all sale areas and there are roughly 6 - 8 snags per acre over 24" DBH. These sale areas have approximately 3,300 cubic feet per acre of existing down wood of which a majority is from past fire history and is in older decay classes. The entire sale is considered suitable habitat for northern spotted owls.

### Prescription

The Two Knobs timber sale consists of 44 net acres of modified clearcut, including 2 acres RMA thinning, in 3 sale areas. Stands in the sale are currently classified as understory (UDS) and the desired future condition of ODF ownership in this area is general (GEN). Two to three overstory Douglas-fir will be left scattered within the units and approximately 8 total trees per acre will be left within all sale areas. All hemlock, cedar, chinquapin, big-leaf maple and residual Douglas-fir trees with old growth characteristics which are not safety hazards or operational impediments will be retained as well as existing snags that are not safety hazards. Additional hard snag creation may take place after an evaluation of completed harvest activities. For all areas, snags, and down wood will be left in the sale area consistent or exceeding the guidance in the Northwest Forest Management Plan. No suitable habitat outside the sale areas will be lost due to new road construction.

## **Assumptions**

### Defining the Home Range

According to "Procedures leading to Endangered Species Act compliance for the northern spotted owl" (USFWS 1990), the median home range size (based on 95% minimum convex polygon) for spotted owl pairs in the Oregon Coast Range is 4,766 acres, or the approximate equivalent of the area encompassed by a circle with a radius of 1.5 miles. Although spotted owls generally do not have circular home ranges, in the absence of more specific information about the home ranges of this site, I will assume that a 1.5 mile radius circle around the nest or activity center approximates the home range of this site. All stands for this analysis were digitized and circle radii/acreages were calculated using ArcMap 9.2 software.

### Defining Suitable Habitat

Although spotted owl habitat has generally been described as old growth, spotted owls are known to use a variety of forest types in this part of the Oregon Coast Range. Spotted owls are known to nest in stands as young as 60-80-years-old on state forest lands in the Western Lane District that have suitable nesting structures (33% of known nests on ODF lands in the District are located in stands in this age class) and to forage in even younger stands (Glenn and Anthony, 2000).

For the purposes of this discussion, suitable spotted owl habitat is considered to be stands at least 55 years old from inventory data, younger stands that have known owl use, or stands that appear to be

suitable habitat from structural inventory data or an assessment of aerial photographs (taken in 2005) and/or ground verification in 2007.

## **Impact Assessment and Discussion**

### Landscape Analysis

The following discussion assesses the habitat situation within the 1.5 mile circle of the Knappster spotted owl activity center, as recommended by the ITG (Table 1, Figure 1).

*Knappster.* The Two Knobs timber sale will clear cut 44 acres within the 1.5 mile circle for the Knappster spotted owl site. A habitat analysis of the Knappster spotted owl site indicates that there are approximately 2977 acres of state and federal suitable habitat within 1.5 miles of the activity center. The approved 2008 AOP Center 8 timber sale has 151 sale acres within the Knappster 1.5 mile circle. If the sale area and acres in the approved Center 8 timber sale are removed, 2782 acres (62%) of suitable habitat are available within 1.5 miles of the activity center. Based on this preliminary habitat analysis, this site will maintain enough unmodified suitable habitat within the 1.5 mile circle after harvest to be consistent with the ITG.

### Effects of the Prescription

Following completion of the modified clear cut operation in Areas 1-3, I do not anticipate the sale area will be suitable northern spotted owl habitat for many years. The green trees, snags and down wood retained post-harvest will provide valuable habitat components during the development of the next stand. The Two Knobs timber sale areas are located adjacent to blocks of non-suitable habitat and will likely not increase habitat fragmentation.

### Discussion and Consideration of Other Relevant Factors

No spotted owls have been observed within the proposed sale areas during protocol surveys. The Two Knobs timber sale is 1.0 miles from the Knappster AC. All 44 acres of the sale are within the 1.5 mile Knappster circle and none are within the 0.7 mile circle. These acres are located along the outer perimeter of the circle and do not appear to fragment suitable habitat near the AC. The Knappster spotted owl activity center is on BLM ownership and is not located within a Late Successional Reserve (LSR). Private lands comprise a small proportion of the ownership within the Knappster circle. There has been a small amount of recent timber harvest activity within the Knappster circle and much of federal ownership is in LSR's, Connectivity/Diversity blocks and some in General Forest Management. Despite this, there remains a large section immediately surrounding the AC of high quality habitat and good connectivity to remaining habitat within the circle. Within 1.5 miles of the Knappster activity center, federally managed land makes up 46% of the ownership, 48% is managed by ODF and 6% is in other ownership. The habitat analysis within 1.5 miles of this activity center indicates that the ITG will be met after harvest of the sale area.

As stated earlier, the Center 8 timber sale in the approved 2008 AOP will remove suitable habitat from within the Knappster 1.5 mile circle. In Western Lane's 2009 AOP, 2 sales will also remove suitable habitat within the 0.7 and 1.5 mile Knappster circles. Table 2 provides a summary of the acres of suitable habitat that will be removed after implementation of the 2008 and 2009 AOP within each circle. The applicable sale acres are also shown in Figure 1 to provide context of activity within each circle. If all sale areas are harvested, there will still remain large blocks of contiguous habitat and each circle will maintain enough suitable habitat to exceed the ITG.

## **Conclusions and Risk Assessment**

### Biological Risk

As currently proposed, the Two Knobs sale is expected to have a low risk of negatively affecting the occupancy and productivity of the Knappster spotted owl site. This assessment is based on the following factors:

- ◆ The sale is located 1.0 miles from the activity center, along the outer portion of the 1.5 mile circle;
- ◆ Habitat quality and quantity immediately surrounding the activity center is high along with good connectivity to habitat elsewhere within the activity center;
- ◆ Approximately 62% of the 1.5 mile circle will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG.

#### Compliance with Policy

After completion of harvest operations associated with the Two Knobs timber sale, the remaining suitable habitat within the Knappter owl circles will exceed the standards identified in the U.S. Fish and Wildlife Service rescinded Incidental Take Guidelines. Assessment of other relevant factors indicates this sale should pose a low risk of negatively impacting this owl site.

#### **Consultation**

Doug Cottam, District Wildlife Biologist with the Oregon Department of Fish and Wildlife, did not provide comments on this BA.

#### **Literature Cited**

Anonymous. 1991. Protocol for surveying proposed management activities that may impact northern spotted owls. Revised – March 17, 1992. 15 pp.

Evans Mack, D., W. P. Ritchie, S. K. Nelson, E. Kuo-Harrison, P. Harrison, and T. E. Hamer. 2003. Methods for surveying Marbled Murrelets in forests: a revised protocol for land management and research. The Pacific Seabird Group unpublished document available at <http://www.pacificseabirdgroup.org>. 80pp.

Glenn, E., and R. G. Anthony. 2000. Home Range and Habitat Use of Northern Spotted Owls on State Forest Lands in the Oregon Coast Range. Unpublished Final Report, Oregon Cooperative Fish and Wildlife Research Unit, Corvallis, OR. 114 pp.

Holloway, R. "State Forests Program Spotted Owl Strategies." ODF Internal Memorandum to Area Directors, District Foresters, Assistant District Foresters. September, 2002.

Kingfisher Ecological, Inc. 2007. Northern Spotted Owl Surveys Oregon State Lands 2007 for Oregon Department of Forestry. 139pp.

U.S. Fish & Wildlife Service. 1990. Procedures leading to endangered species compliance for the northern spotted owl. U.S. Fish and Wildlife Service, Region 1, July 1990. 15 pp.

cc: Dave Lorenz  
 Rob Nall  
 Marcia Humes  
 Greg Kreimeyer  
 Doug Cottam, ODFW

Table 1. Acres of suitable habitat on state and federal ownership within the 1.5 mile circle of the Knappster northern spotted owl activity center. Suitable habitat determined through 2005 air-photo analysis and 2007 field assessment.

	<b>Acres</b>	<b>Knappster</b>
		1.5 mi
Suitable Habitat:		
Federal		1517
State		1460
<b>Total</b>		<b>2977</b>
Sale area	44	44
Suitable habitat removed due to new road construction within circles		0
State acres in notification within circles (Center 8)		151
Unmodified suitable habitat remaining		2782
% suitable post harvest		62%

Table 2. Acres of suitable habitat in the Knappster circles after ODF harvest of 2008 and 2009 AOP sales.

Circle	Knappster	
	0.7	1.5
Current Suitable Habitat	716	2977
Minus acres in notification Center 8-2008 AOP	0	151
Minus acres in Knapp Nose-2009 AOP	20	123
Minus acres in Nelson Junction-2009 AOP	0	0
Minus acres in Miller Hardwood-2009 AOP	0	0
Minus acres in Two Knobs-2009 AOP	0	44
<hr/>		
After harvest of '08 and '09 sales, total suitable acres remaining in circle	696	2659
% Habitat remaining	71%	59%

**Figure 1. Suitable habitat on state and federal lands within 1.5 miles of the Knappster spotted owl activity center relative to the Two Knobs timber sale.\***

