

# Pre-Operations Report

**Operation Name: Knapp Nose**  
**County: Lane**  
**Management Basin: Western Lane**  
**Legal Description: Sec 18, T17S, R7W**

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

Area	Type of Operation	Net Acres
1	Modified Clearcut	11
2	Modified Clearcut	48
3	Modified Clearcut	64
	Total	123

Net acres do not include in-unit stream buffers or leave areas.

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

Elevations range from 600 to 1100 feet elevation. Slopes range from only 30% in some areas over 60% in others. The soil is Valino, a well drained, moderately fine textured colluvial soil developing from Eocene age Tyee sandstone.

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

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

Area	Prescription	Stand ID <sup>1</sup>	Major Species	Age	DF DBH	Total BA	Total TPA	SDI	Acres <sup>2</sup>
1&2	Modified Clearcut	15121	DF	70	18	200	113	47	59
3	Modified Clearcut	15119	DF	70	17	190	184	50	64

<sup>1</sup> The source of stand inventory information is SLI for trees over 8" DBH, but OSCUR age is shown.

The current stands are a result of natural seeding that followed a series of fires that began in 1910 and ended about 1930. The stands are almost entirely even-aged Douglas-fir about 70 years old with scattered bigleaf maple underneath. The riparian areas are primarily alder and maple. Brush is the typical dense vine maple and salal found throughout the Nelson Mountain area, with patches of evergreen huckleberry on the ridges and salmonberry in the draws.

### III. DESIRED STAND CONDITION AND VISION:

The entire Knapp Creek watershed has a Desired Future Condition of General, and plans are to manage the area with an emphasis on Douglas-fir commercial forest. However, 10% to 20% of the planting stock will be redcedar, if available. Alder, bigleaf maple, and chinquapin from seeding and sprouting will also be components of the new stand, along with larger legacy Douglas-fir, hemlock, cedar, chinquapin, and bigleaf maple trees.

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

Area	Stand ID	Current	Post Harvest	Desired Future	Acres
1&2	15121	UDS	REG	GEN	59
3	15119	UDS	REG	GEN	64

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

#### Prescription and Management Pathway:

Modified clearcuts will contribute towards the District-wide regeneration structure goal of 10% of the State-owned landscape. Less than 5% of the forest is now under 15 years old.

The units will probably be site prep sprayed with an Arsenal/ Accord mix. Afterwards the units will be planted to 300 trees per acre, primarily Douglas-fir, with 10% to 20% cedar (if available) mixed in.

A couple of years later the area may be hack and squirt treated to reduce the amount of bigleaf maple and chinquapin resprouting from stumps.

Further treatment for brush competition is not anticipated. No precommercial thinning is planned. Portions of the area may be commercially thinned in 40 to 45 years, depending upon growth, markets, and State policies. Or the entire stand may be allowed to grow freely until final harvest at age 50 to 70.

Leave Trees: Five trees per acre means 615 leave trees are required by the *Northwest Oregon State Forests Management Plan*. An additional two trees per acre are needed for future snags, bringing the total leave trees needed to 1000. RMA trees within 100 feet of Type F streams do not count towards this total.

Countable leave trees will consist of:

- RMA trees more than 100 feet from Type F streams.
- Trees within Type N RMA's.

- All hemlock, cedar, chinquapin, and bigleaf maple which are not safety hazards or operational impediments.
- All trees under 12" DBH and over 36" DBH.

**Snags:** Existing snags that are not safety hazards will be left. Some of the leave green trees will eventually die and become snags and tops will blow out of others. Other green trees can be topped or killed at a later time (when they are larger) if it is felt the landscape needs supplemental snags. The sale area currently has over 5 snags per acre. Some conifer topping may be required to reduce leave tree blowdown potential.

**Down Wood:** SLI shows that thousands of cubic feet per acre of down wood are present in the sale area. Down wood over two years old existing at the time of sale will not be removed.

**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)	4,100	0	4,100
Stumpage Value (\$/MBF)	\$350	NA	
Estimated Gross Value	\$1,439,550	\$0	\$1,439,550
		Project Costs:	\$56,000
		Estimated Net Value:	\$1,383,550

**VI. TRANSPORTATION PLANNING AND HARVESTING:**

The sale will be cable yarded.

0.6 miles of new construction is required. All except about 0.1 miles will be rocked for winter operations and future management activities.

The road system for Areas 1 and 2 crosses private land. A road use permit will be required for hauling. The road system is gated and public motorized vehicle use is not allowed.

Full bench construction will be required on slopes over 60% and excess excavation will be endhauled to stable locations. Less than 300 feet of road is planned on slopes over 60%.

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

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0.5	0.1
Improve	0	0.9	0	0
Maintain	0	3.2	0.5	0.1
Close/Block	0	0	0	0
Vacate	0	0	0	0.1

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

All Areas are bounded by Type F streams. The RMA's are mature hardwood. No-cut buffers at least 100 feet wide will be marked that will include the mature hardwoods plus a fringe of conifer outside the hardwood type.

For perennial Type N streams, no-cut buffers 25 to 40 feet wide on each side will be marked. The channels are too incised to remove slash and place it above the high water mark. The hardwood tops will remain in the creek channels until they rot away in a few years.

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

**T&E Birds:** The SOA Wildlife Biologist has determined that the sale area is suitable 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 2008. As a result of these surveys, 2 northern spotted owl site (Knapp Cr. and Knappster) have been identified within 1.5 miles of this sale.

A preliminary Biological Assessment will be prepared by the ODF SOA Biologist to assure that the appropriate measures are taken to provide sufficient habitat on the landscape consistent with ODF's policy on Northern Spotted Owls.

Potential marbled murrelet was surveyed according to protocol in 2007 and will be surveyed again in 2008.

**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:**

Type N stream channels in Areas 1, 2, & 3 have some potential for failure, but wide, timbered RMA's will be left. Road construction is on stable ground and will not threaten slope stability. There are locations in Areas 1, 2, & 3 with slopes over 70%. No houses or public roads are threatened.

**X. RECREATION RESOURCES:**

To the best of our knowledge, the sale area currently has no recreational use since it has limited road access and is steep and brushy. The road has a locked private gate at the junction with the Nelson Mountain County Road, and public access is prohibited.

**XI. CULTURAL RESOURCES:**

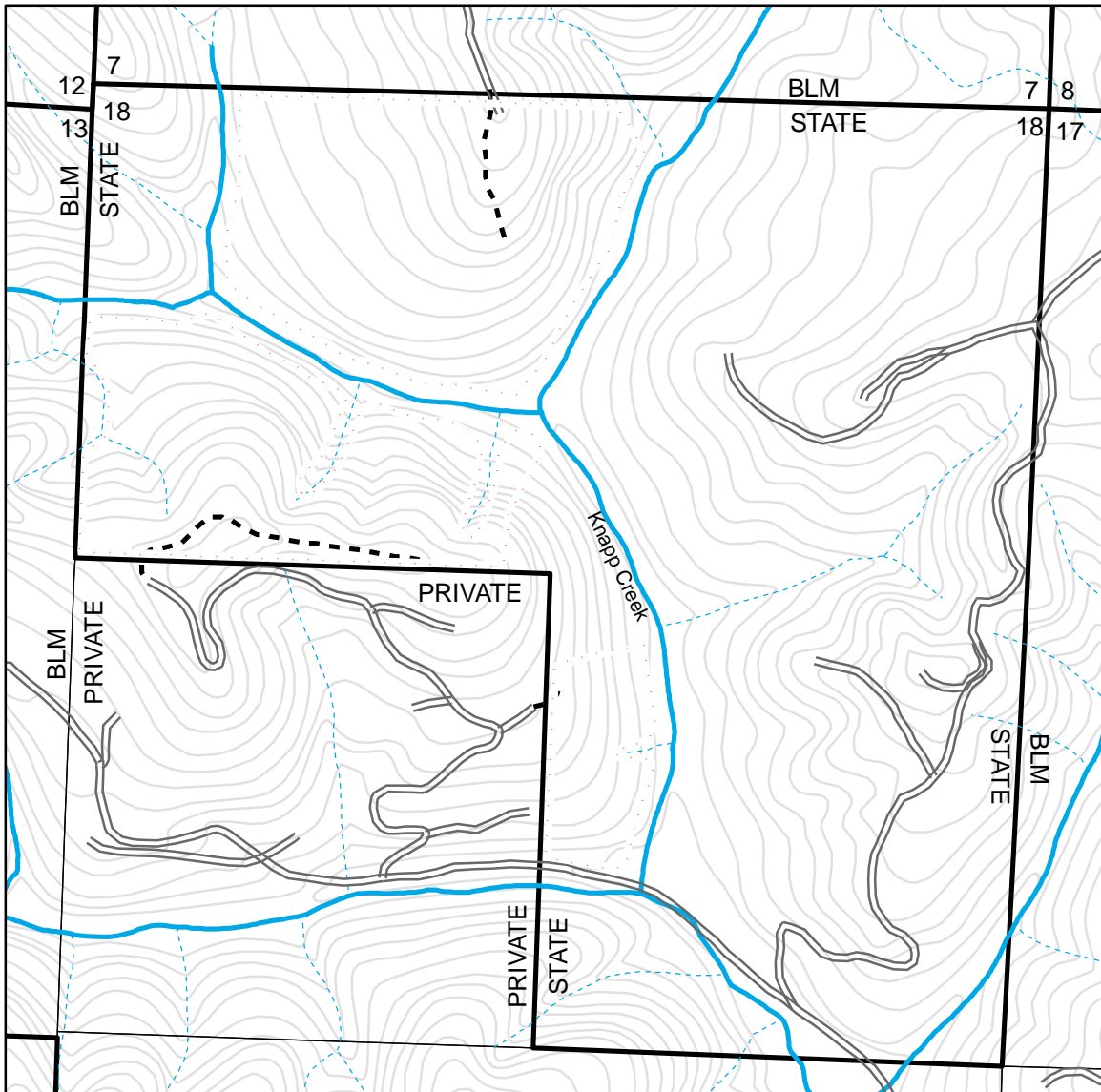
No cultural resources sites are known to exist in the area.

**XII. SCENIC RESOURCES:**

The area is classed as Low Sensitivity.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

None known.



# Knapp Nose

# 3

## Western Lane District - 2009 Annual Operations Plan

T.17S., R. 7W., Sec. 18, W.M.  
Lane County, Oregon

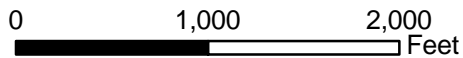
**Legend**

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

**Streams**

**FISHPRES**

- Fish
- Nonfish
- Unknown



Contour Interval : 40 Feet

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# MEMORANDUM

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

## Executive Summary

Knapp Nose is a proposed sale in the 2009 Annual Operations Plan of the Western Lane District and is located within the home range of the Knapp Creek and Knappster northern spotted owl sites. After harvest of the sale, 66% and 60% suitable habitat will remain post harvest within the 1.5 mile circles for the Knapp Creek and Knappster activity centers and 62% and 71% suitable habitat will remain within the 0.7 mile circles. Suitable habitat within all circles 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 Knapp Nose timber sale is expected to have a low risk of negatively affecting the occupancy and productivity of the Knapp Creek and Knappster northern spotted owl sites.

## **Introduction**

### Purpose

The Western Lane District is proposing the Knapp Nose 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 0.7 and 1.5 mile circles for the Knapp Creek and Knappster northern spotted owl activity centers. This memo presents the relevant biological information needed to assess the potential effects of the Knapp Nose 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 are patches of apparent suitable habitat surrounding some of the sale areas. These areas are 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 is approximately 0.8 miles southwest of sale area 2.

## **Background**

### Survey History and Site Information

#### *Knapp Creek*

Potential spotted owl habitat within and surrounding the timber sale was surveyed according to protocol endorsed by the USFWS (Anonymous, 1991). This site is currently being monitored by an ODF contract crew. This site was established in 1991 with a pair occupying the site. There were no responses from 1992-1996 and the site was changed to historic. A female was heard in 1997 but was attributed to an adjacent site. There were no responses from 1998-2004. A male was captured at this site in 2005 and the site was upgraded to resident single. This male was banded at Walker Creek West as a juvenile in 2004 and he was also confirmed at the Miller Creek (AKA Liebre Creek) site in 2005. A single male night response was heard in 2006. In 2007, the 2005 male was found paired but non-nesting with a female who was banded as a juvenile at January Creek in 2004. The site was upgraded to pair status and the activity center (AC) moved to the day pair location. Barred owls have been detected annually at this site since 2002 (Kingfisher, 2007). This AC is approximately 0.5 miles from the Knapp Nose timber sale.

#### *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 Knapp Nose timber sale consists of 123 net acres of 70 year-old second growth Douglas-fir and scattered big-leaf maple that originated after a series of fires that began in 1910 and ended in the 1930's. All sale areas are dominated by Douglas-fir stands and have DBH ranging from 17-20 inches and a range of 115-185 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 several of the sale areas and there are roughly 5-12 snags per acre over 24" DBH. These sale areas have approximately 5,000 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 Knapp Nose timber sale is a 3 area modified clear cut totaling 123 net acres. Stands in the sale are currently classified as understory (UDS) and the desired future condition of ODF ownership in this area is general (GEN). 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. Within areas 2 and 3, at least 200 green trees will be left outside the posted RMA's. 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 0.7 and 1.5 mile circles of the Knapp Creek and Knappster spotted owl activity centers, as recommended by the ITG (Table 1, Figure 1).

*Knapp Creek.* The Knapp Nose timber sale will clear cut 33 acres within the 0.7 mile circle for the Knapp Creek spotted owl site. A habitat analysis of the Knapp Creek spotted owl site indicates that there are approximately 648 acres of state and federal suitable habitat within 0.7 miles of the activity center. If the sale area is excluded from the suitable habitat, 615 acres (62%) of suitable habitat are available within 0.7 miles of the activity center. The Knapp Nose timber sale will clear cut 123 acres within the 1.5 mile circle for the Knapp Creek spotted owl site. A habitat analysis of the Knapp Creek spotted owl site indicates that there are approximately 3183 acres of state and federal suitable habitat within 1.5 miles of the activity center. The approved 2008 AOP Center 8 timber sale has 94 sale acres within the Knapp Creek 1.5 mile circle. If the sale area and acres in the approved Center 8 timber sale are removed, 2966 acres (66%) 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 both the 0.7 and 1.5 mile circles after harvest to be consistent with the ITG.

*Knappster.* The Knapp Nose timber sale will clear cut 20 acres within the 0.7 mile circle for the Knappster spotted owl site. A habitat analysis of the Knappster spotted owl site indicates that there are approximately 716 acres of state and federal suitable habitat within 0.7 miles of the activity center. If the sale area is excluded from the suitable habitat, 696 acres (71%) of suitable habitat are available within 0.7 miles of the activity center. The Knapp Nose timber sale will clear cut 123 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, 2703 acres (60%) 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 both the 0.7 and 1.5 mile circles 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 Knapp Nose timber sale is located adjacent to a block of non-suitable habitat and will likely not increase habitat fragmentation within either circle.

### Discussion and Assessment of Other Relevant Factors

No spotted owls have been observed within the proposed sale areas during protocol surveys. The Knapp Nose timber sale is 0.5 miles from the Knapp Creek AC and 0.6 miles from the Knappster AC. Approximately 33 acres of the sale are within the 0.7 mile Knapp Creek circle and 20 acres are within the 0.7 mile Knappster circle. These acres are located along the outer perimeter of the 0.7 mile circles and do not appear to fragment suitable habitat near the AC. The Knapp Creek and Knappster spotted owl activity centers are on BLM ownership with only the Knapp Creek center located within a Late Successional Reserve (LSR). There has been limited recent timber harvest activity within both circles and a majority of federal ownership is in reserves or administratively withdrawn and may not have harvest activities for some time. Private lands comprise a small proportion of the ownership within both circles. Habitat surrounding the Knapp Creek AC is of high quality and quantity and has little fragmentation within either the 0.7 or 1.5 mile circles. Federally managed land makes up 41% of the area within 1.5 miles of the Knapp Creek spotted owl activity center, 47% is managed by ODF and 12% is managed by other landowners. There has been a small amount of recent harvest within the Knappster circle. 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 these two activity centers indicate 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 both the Knapp Creek and Knappster 1.5 mile circles. In Western Lane's 2009 AOP, 4 sales will also remove suitable habitat within the Knapp Creek or 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 Knapp Nose sale is expected to have a low risk of negatively affecting the occupancy and productivity of the Knapp Creek and Knappster spotted owl sites. This assessment is based on the following factors:

##### Knapp Creek

- ◆ The sale is located 0.5 miles from the activity center, along the outer edge of the 0.7 mile circle;
- ◆ 33 clearcut acres are within the 0.7 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 0.7 and 66% of the 1.5 mile circles will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG.

##### Knappster

- ◆ The sale is located 0.6 miles from the activity center, along the outer edge of the 0.7 mile circle;
- ◆ 20 clearcut acres are within the 0.7 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 71% of the 0.7 and 60% 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 Knapp Nose timber sale, the remaining suitable habitat within the Knapp Creek and Knappster 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 that the risk of negatively impacting these owl sites is low.

### **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 0.7 and 1.5 mile circles of the Knapp Creek and Knappster northern spotted owl activity centers. Suitable habitat determined through 2005 air-photo analysis and 2007 field assessment.

	Acres	Knapp Creek		Knappster	
		0.7 mi	1.5 mi	0.7 mi	1.5 mi
Suitable Habitat:					
Federal		476	1378	470	1517
State		172	1805	246	1460
<b>Total</b>		<b>648</b>	<b>3183</b>	<b>716</b>	<b>2977</b>
Sale area	123	33	123	20	123
Suitable habitat removed due to new road construction within circles		0	0	0	0
State acres in notification within circles (Center 8)		0	94	0	151
Unmodified suitable habitat remaining		615	2966	696	2703
% suitable post harvest		62%	66%	71%	60%

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

Circle	Knapp Creek		Knappster	
	0.7	1.5	0.7	1.5
Current Suitable Habitat	648	3183	716	2977
Minus acres in notification Center 8-2008 AOP	0	94	0	151
Minus acres in Knapp Nose-2009 AOP	33	123	20	123
Minus acres in Nelson Junction-2009 AOP	1	115	0	0
Minus acres in Miller Hardwood-2009 AOP	0	38	0	0
Minus acres in Two Knobs-2009 AOP	0	0	0	44
After harvest of '08 and '09 sales, total suitable acres remaining in circle	614	2813	696	2659
% Habitat remaining	62%	62%	71%	59%

**Figure 1. Suitable habitat on state and federal lands within 0.7 and 1.5 miles of two spotted owl activity centers relative to the Knapp Nose timber sale.\***

