Pre-Operations Report

Operation Name: Center 8
County: Lane
Management Basin: Western Lane
Legal Description: Secs 8 & 18, T17S, R7W

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
1	Moderate Thinning	55	52
2	Modified Clearcut	43	40
3	Modified Clearcut	77	71
4	Moderate Thinning	22	20
5	Moderate Thinning	50	52
		247	235

Net acres do not include stream buffers, leave areas, or existing roads.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Areas 1 & 2: Moderate slopes, Valino soils.

Areas 3, 4, & 5: Slopes average about 60%, with some steeper areas. Digger and Valino soils. Both soils are well drained, moderately fine textured colluvial soils developing from Eocene age Tyee sandstone.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information (Net Acres)

Area	Prescription	Stand ID [1]	Species	Age	DBH	BA	TPA	SDI	Acres [2]
I	Moderate Thin	15235	DF	60	16	227	156	57	52
	Target				**18-20**	**130-150**	**60-75**	**30-35**	**52**
2	MCC	15120	DF	70	19	143	60	33	40
3	MCC	15096	DF	70	19	227	147	52	21
3	MCC	15103	DF	70	20	183	86	40	50
4	Moderate Thin	15103	DF	70	20	183	86	40	20
	Target				**22-24**	**150-170**	**50-60**	**30-35**	**20**
5	Moderate Thin	15066	DF	50	18	206	123	47	52
	Target				**20-22**	**140-160**	**55-70**	**30-35**	**52**

1 The source of stand inventory information for 15103, 15120,15235 is SLI to 8" DBH. The source of stand inventory for 15096 and 15066 is OSCUR grown forward.

Area 1

Area 1 appears to have been logged early in the last century. It probably burned periodically until the 1940's. Much of the stand is in a very low grade UDS condition with only meager, low growing brush. SLI shows it to have 4 large snags per acre and nearly 6,000 cubic feet of down wood. It also has 4 hard snags per acre over 15" DBH.

Area 2

The unit is fire origin and did not seed in well. It is extremely brushy with large, tangled vine maple crushed down by cherry that has died and fallen. Douglas-fir is scattered and patchy, interspersed with numerous nonstocked brushholes. Because of the wide spacing of the Douglas-fir, it has low crowns and very large limbs. SLI reports that the stand has about 6 large, old snags per acre and nearly 9,000 cubic feet of large down wood.

Areas 3 & 4

The current stands are a result of natural seeding that followed a series of fires 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 swordfern on north slopes. The ridgetops

are covered with dense evergreen huckleberry. SLI shows 4 to 6 large, old snags per acre and 4,000 to 6,000 cubic feet of down wood.

Area 5
This unit was logged in the 1950's. It probably was not planted and instead seeded in with Douglas-fir, hemlock, and hardwoods. SLI has not been done on the unit. I expect that very few large snags exist, but considerable down wood from logging slash and felled snags remains. Brush includes a wide variety, ranging from salmonberry and vine maple to salal, poison oak, hazel, and Oregon grape.

III. DESIRED STAND CONDITION AND VISION:

The entire sale area has a Desired Future Condition of General, and plans are to manage Areas 1, 3, 4, & 5 with an emphasis on Douglas-fir commercial forest. Area 2, however, is somewhat different. We expect this stand to be quite diverse in the future and perhaps appropriate to manage for a layered condition in the long term – particularly since it is connected to a rather wide riparian zone on Knapp Creek.

Table 3. Stand Structure Information (Net Acres)

Area	Stand ID	Current	Post Harvest	Desired Future	Acres
1,4,5	15235 15103 15066	UDS	UDS	GEN	124
2,3	15120 15096 15103	UDS	REG	GEN	111

IV. PROPOSED MANAGEMENT PRESCRIPTION and ANTICIPATED PATHWAY:

Area 1

The operation begins with a moderate thinning from below to develop a more robust brush understory and to concentrate growth on future crop trees.

Leave Trees and Snags: All hemlock and cedar (if any) and all hardwoods which are not a safety hazard or within yarding corridors will be left. Trees with oldgrowth bark characteristics will be left (the unit contains a few scatter old trees). SLI shows 4 old snags per acre over 24" DBH. These will be left if safe.

Down Wood: No new down wood other than logging slash and snag tops will be left. SLI shows nearly 6,000 cubic feet per acre of old down wood exists.

Next Entry: No brush control or underplanting will be done. At this time we expect the next entry will be a clearcut in 20 or 30 years.

Area 2

The operation begins with a modified clearcut to convert this low stocked area to a more productive stand.

Leave Trees: Hemlock and cedar (if any) and bigleaf maple will be left standing, but some will be knocked down during yarding. 190 green trees should be left to meet the requirements of the *Northwest State Forests Management Plan*. This requirement will be exceeded by the number to be left in the non-fish riparian zones. In addition, all trees over 35 inches DBH will be left (not to exceed 50 trees). Some leave trees will be felled because of safety or operational reasons.

Snags: Our cruise shows 10 old snags per acre over 24" DBH, and 4 hard snags, averaging 13" DBH. All snags which are not a safety hazard will be left. Snags may be created from leave trees at a later time if it is felt necessary.

Down Wood: Our experience on the adjacent Knapp Knob sale suggests that at least 600 cu ft/ac of down wood will be created during the logging operations. Nearly 9,000 cubic feet per acre of old down wood currently exists in the sale area according to SLI. No new down wood will be intentionally created.

Reforestation: The logging contract will require felling any cherry or alder over 3 inches diameter. Brush will be ripped up with an excavator and piled. The harvest area will be treated with aerially applied herbicide after harvest to reduce brush competition from salal and resprouting vine maple and bigleaf maple. The unit will be planted to 300 trees per acre, with a mixture of Douglas-fir and cedar. Anticipating continued brush competition, probably 50% of the seedlings will be cedar.

Herbicide treatment for brush competition is anticipated a few years after harvest. The bare ground created by brush piling is an excellent seedbed for alder, and vine maple roots will probably resprout. No precommercial thinning is planned, but may be necessary if significant conifer inseedling occurs.

Next Harvest Entry: The area probably will be commercially thinned in 40 to 45 years, depending upon growth, markets, and State policies.

Area 3

The operation begins with a modified clearcut to contribute towards the District-wide regeneration structure goal of 10% of the State-owned landscape. Only about 5% of the forest is now less than 20 years old.

Leave Trees: Hemlock and cedar (if any) plus bigleaf maple and chinquapin which are not a safety hazard will be left standing, but some will be knocked down during yarding.

The 4 acres of stream buffers probably contain about 150 trees, which amounts to 2 trees per clearcut acre. In addition, about 110 conifer in the 25 to 100 feet inner RMA bordering perennial and high energy streams will be left. Plus, within the unit itself, bigleaf maple, any large, defective Douglas-fir, and any hemlock or cedar will be left. The within-unit trees will probably be only about 2 or 3 trees/ac.

Snags: SLI shows 6 snags per acre over 24" DBH and over 4 hard snags per acre over 15" DBH. Many of these snags will be left after logging. We do not intend to create new snags at this time, however, some of the leave trees listed above will eventually become snags.

Down Wood: We predict that logging this size of timber on steep ground such as this will create over 600 cubic feet of new down wood per acre. SLI shows over 700 cubic feet per acre of hard down wood now exists and over 4,000 cubic feet per acre total of down wood. No new down wood will be intentionally created.

Reforestation: The harvest area may be treated with aerially applied herbicide after harvest to reduce brush competition from salal, evergreen huckleberry, and resprouting vine maple and bigleaf maple. Some of the bigleaf maple leave trees may be killed, but we expect most treated maple trees to recover in a few years. 300 trees per acre will be planted, consisting of Douglas-fir with 10% to 15% cedar. Some hemlock may be planted, but this is an extreme site on a steep, south-facing slope where hemlock seedlings generally do poorly. The unit may need hack and squirt treatment of bigleaf maple stump sprouts a couple of years after harvest, but SLI suggests that there are fewer maple in this unit than normally found in this part of the District.

Area 4

The operation begins with a moderate thinning from below to develop a more robust brush understory and to concentrate growth on future crop trees.

Leave Trees and Snags: All hemlock and cedar (if any) and all hardwoods which are not a safety hazard or within yarding corridors will be left. SLI shows 4 old snags per acre over 24" DBH. These will be left if safe.

Down Wood: No new down wood other than logging slash and snag tops will be left. SLI shows nearly 6,000 cubic feet per acre of old down wood exists.

Next Entry: No brush control or underplanting will be done. At this time we expect the next entry will be a clearcut in 20 or 30 years.

Area 5

The operation begins with a moderate thinning from below to produce income to the trust, develop a more robust brush understory, and to concentrate growth on future crop trees.

Leave Trees and Snags: All cedar (if any) and all hardwoods which are not a safety hazard or within yarding corridors will be left. Safe snags will be left and any trees over 36" DBH.

Down Wood: No new down wood other than logging slash will be left.

Next Entry: No brush control or underplanting will be done. At this time we expect the next commercial entry will be a clearcut in 20 or 30 years.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%	□	X
Planned Quarter: 4			

	Conifer	Hardwood	Total
Net Volume (MBF)	5300	0	5300
Stumpage Value ($/MBF)	$330	0	
Estimated Gross Value	$1,747,600	$0	$1,747,600
		Project Costs:	$418,000
		Estimated Net Value:	$1,329,600

VI. TRANSPORTATION PLANNING AND HARVESTING:

Most of the sale will be cable yarded. However, portions of Areas 1 probably will be tractor skidded and much of Area 2 probably will be shovel logged.

1.6 miles of new construction is required. All roads will be rocked and left open after the sale for future management activities. A road use permit over BLM will be required for log and rock hauling if the IP Deeded Road is used.

Full bench construction will be required on slopes over 60% and excess excavation will be endhauled to stable locations.

0.6 miles of the old, dirt Nelson Divide Road will be improved by old sidecast pullback where needed, widening portions, establishing drainage, and rocking.

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0.6	1.0	0
Improve	0	0.9	0	0
Maintain	0	3.9	0.7	0
Close/Block	0	0	0	0
Vacate	0	0	0	0

VII. AQUATIC RESOURCES AND WATER QUALITY:

All Areas - High energy or perennial non-fish streams: The sale areas contain numerous small non-fish streams - most which probably go dry in the late summer. 25 foot no-cut zones (except for logging corridors) will be left on each side of the streams. In clearcut units, 40 dominant or codominant conifer per 1000 feet (each side) will be left in the in 25 foot to 100 foot inner riparian zone.

The streams are bordered by hardwood. Since hardwoods lean heavily towards openings, in the clearcuts much of the hardwood must be felled into the creeks. The hardwood tops will remain in the creek channels until they rot away in a few years. In the clearcuts we do not expect conifer reforestation to be very successful on those portions of the inner RMA's now in hardwood because of wetness; shallow, ravelly soils; brush; and - in some cases - mountain beaver.

Area 1 (moderate thinning) – Fish streams: The SE border of the unit abuts a fish stream. This stream enters Knapp Creek, a coho stream, 500 feet downstream of the sale boundary. A 25 foot no-cut buffer will be left. Since the draw bottom is quite gentle, logging slash can be removed from the channel and

piled above the high water mark. Slash will be removed from the stream prior to changing yarding roads.

Area 2 (modified clearcut) - Fish streams. Knapp Creek borders the west edge of the sale for about 900 feet. The inner RMA contains about 1 ½ acres, of which 0.8 acres are mature (70 year old) conifer. No operations will occur in either the streambank or inner RMA zones. 14 dominant or codominant conifer will be retained in the outer RMA.

Area 3 (modified clearcut) – Fish streams: Fish use ends on the west fork of Haynes Creek just below the southern boundary of the sale.

VIII. T&E SPECIES CONSIDERATIONS:

T&E Birds: We surveyed for murrelets in 2006 and will continue in 2007. Portions of Area 1 and about one acre of Area 2 are within the Knapp Creek spotted owl circle. Portions of Area 4 are within the January Creek circle. Preliminary investigation suggests that both circles will have adequate habitat after the operations. Spotted owl surveys were done in 2006 and will continue in 2007.

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:

The USGS 1:24,000 topographic quadrangle indicates that high landslide hazard locations are scattered throughout Area III, Area IV, and Area V. The map also indicates that there may be a few isolated high landslide hazard locations in Area I and that there are no high landslide hazard locations in Area II. Aerial photos from 2000 were reviewed and recent (most likely 1996) landslides were identified in Area III and Area IV. Area I and Area II deliver to Knapp Creek and unnamed tributaries to Knapp Creek. The risk of direct delivery to Knapp Creek for Area I and Area II is low. Area III and Area IV deliver to Haynes Creek and unnamed tributaries to Haynes Creek. The risk of direct delivery to Haynes Creek is moderate to high for Area III and Area IV. Area V delivers to the headwaters of Poodle Creek and an unnamed tributary of Fish Creek. The risk of direct delivery from Area V is high for Poodle Creek and moderate for Fish Creek. In order to provide large wood for potential debris flows, trees will be left along debris torrent prone streams in the sale areas. All roads will be constructed on or near stable ridgetop locations. A waste area site was reviewed by the geotechnical specialist.

X. RECREATION RESOURCES:

The area is lightly used for backwoods driving, mushroom picking, and some hunting. Additional roading and road improvement will enhance the current use. All rocked roads will be left open after operations for wood cutting and other recreational activities.

XI. CULTURAL RESOURCES:

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

XII. SCENIC RESOURCES:

All areas are classed as Low Sensitivity.

XIII. OTHER RESOURCE CONSIDERATIONS:

None known.

Center 8, Areas 1&2
Sec 18,T17S,R7W

Area 2

Area 1

0 600 1200 Feet

New Construction

Road Improvement

Type F Streams

Other Streams and Draws

Clearcut

Thinning

Center 8, Areas 1 & 2
Sec 18,T17S,R7W

Area 2

Area 1

0 600 1200 Feet

New Construction

Road Improvement

Type F Streams

Other Streams and Draws

20' Topogs

Center 8, Areas 3 & 4
Sec 8,T17S,R7W

Waste Area

Area 4

Area 3

0 600 1200 Feet

New Construction

Road Improvement

Type F Streams

Other Streams and Draws

Clearcut

Thinning

Center 8, Areas 3 & 4
Sec 8,T17S,R7W

Waste Area

Area 4

Area 3

a 2

0 600 1200 Feet

New Construction

Road Improvement

Type F Streams

Other Streams and Draws

20' Topogs

Center 8, Area 5
Sec 26,T16S,R7W

0 600 1200 Feet

New Construction
Road Improvement
Type F Streams
Other Streams and Draws
Clearcut
Thinning

Center 8, Area 5
Sec 26,T16S,R7W

0 600 1200 Feet

New Construction
Road Improvement
Type F Streams
Other Streams and Draws
USGS Topogs

MEMORANDUM

TO: Art McCoy

FROM: Randy Smith

SUBJECT: Preliminary Biological Assessment for the **Center 8** Timber Sale

DATE: January 26, 2007

Executive Summary
Center 8 is a proposed sale in the 2008 Annual Operations Plan of the Western Lane District and is located within the home range of the Knapp Creek and January Creek northern spotted owl sites. After harvest of the sale, 78% suitable habitat will remain post harvest within the 1.5 mile circle for the Knapp Creek resident single activity center and 55% suitable habitat will remain within the 1.5 mile circle for the January Creek pair site activity center. Suitable habitat within the circles will exceed the ITG. The sale does not impact either of the 0.7 mile circles.
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 2006. Second year surveys will be conducted in 2007.
As currently proposed, the Center 8 timber sale is expected to have a low risk of negatively affecting the occupancy and productivity of the Knapp Creek and January Creek northern spotted owl sites.

Introduction

Purpose
The Western Lane District is proposing the Center 8 timber sale in their 2008 Annual Operations Plan. This sale area contains potentially suitable habitat for northern spotted owls. Portions of the sale are within the 1.5 mile circles for the Knapp Creek and January Creek northern spotted owl activity centers. This memo presents the relevant biological information needed to assess the potential effects of the Center 8 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 27 miles from the Pacific Ocean. There are patches of apparent suitable habitat within and surrounding 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 2006 with no detections observed. Second year surveys will be conducted in 2007. The nearest known occupied marbled murrelet site on ODF land is approximately 1.3 miles west of sale area 1.

Background

Survey History and Site Information

Knapp Creek

Potential spotted owl habitat 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. Barred owls have been detected annually at this site since 2002 (Kingfisher, 2006). This activity center (AC) is approximately 1.4 miles from the Center 8 timber sale.

January Creek

This site has been monitored by PNW crews since the late 1990's. A male was first identified at this site in 1991 and the site was upgraded to pair status in 1992. The pair nested and fledged 1 young in 1993 and 1994. They were present at the site but did not nest in 1995-1999. In 2000 and 2001 the pair nested and fledged 2 young each year. They did not nest in 2002 but in 2003 they produced 1 young, in 2004 they produced two young and in 2005 they produced 1 young. They did not nest in 2006.

Sale Area Information

The Center 8 timber sale consists of 235 net acres of 50-70 year-old second growth Douglas-fir and scattered big-leaf maple that originated after 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 16-20 inches with a range of 60-160 TPA. There are a few large, widely scattered, 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 4-6 snags per acre over 15" DBH. These sale areas have a range of 4000 to 9000 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 Center 8 timber sale is a 5 area clear cut and partial cut sale totaling 235 net acres. Sale areas 1, 4 & 5 have a medium density thinning totaling 132 acres with areas 2 & 3 being a modified clear cut prescription totaling 103 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). Sale areas 2, 3, and 5 are outside the 1.5 mile circles for Knapp Creek and January Creek and will not be discussed further in this BA.

Area 1 is a 52 acre medium density thinning from below of Douglas-fir with the retention of hemlock, cedar, big-leaf maple and larger conifer trees with old growth characteristics which are not safety hazards or operational impediments. Twenty acres of area 1 are within the Knapp Creek 1.5 mile circle. Existing snags that are not safety hazards will be retained. Approximately 26 trees will be topped or girdled for snag creation. The post harvest conifer target for area 1 is 60-75 trees per acre (TPA), a basal area (BA) of 130-150 square feet/acre, a stand density index (SDI) of 30-35 and an average diameter of 18-20 inches.

Area 4 is a 20 acre medium density thinning from below of Douglas-fir with the retention of minor conifer species, old-growth Douglas-fir and hardwoods which are not safety hazards or operational impediments. Ten acres of area 4 are within the January Creek 1.5 mile circle. Existing snags that are not safety hazards will be retained. Approximately 10 trees will be topped or girdled for snag

creation. The post harvest conifer target for area 4 is 50-60 TPA, a BA of 150-170, a SDI of 30-35 and an average diameter of 22-24 inches.
For both areas, snags, and down wood will be left in the sale area consistent or exceeding the guidance in the Northwest Forest Management Plan.

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 ArcView 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 2006.

Impact Assessment and Discussion

Landscape Analysis
The following discussion assesses the habitat situation within 1.5 miles of the Knapp Creek and January Creek spotted owl activity centers, as recommended by the ITG (Table 1, Figure 1).

The Center 8 timber sale will partial cut 20 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 3,533 acres of state and federal suitable habitat within 1.5 miles of the activity center. If the sale area is excluded from the suitable habitat, 3,513 acres (78%) 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.
The Center 8 timber sale will partial cut 10 acres within the 1.5 mile circle for the January Creek spotted owl site. An additional 1 acre within the circle will be lost due to new road construction. A habitat analysis of the January Creek spotted owl site indicates that there are approximately 2,467 acres of state and federal suitable habitat within 1.5 miles of the activity center. If the sale area and area lost due to road construction are excluded from the suitable habitat, 2,456 acres (55%) 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 medium density thinning operation in Areas 1 & 4, I do not anticipate the sale area will be immediately utilized by spotted owls in the short term. The thinning prescription

and disturbance from harvest operations will temporarily result in a simplified understory and brush component in the sale area.
The prescription will reduce the density of Douglas-fir within the stand increasing rate of stand growth and survival while promoting improved stand health and vigor over the longer term. A less dense and patchier, diverse stand will provide improved foraging habitat and accessibility for owls while still providing shelter and cover from predators. This prescription will promote growth and move the stand more quickly towards development of habitat elements important to spotted owls and prey species.

Discussion
No spotted owls have been observed within the proposed sale areas during protocol surveys. Both the Knapp Creek and January Creek spotted owl sites are 1.4 miles from the proposed Center 8 timber sale. Approximately 20 acres of the sale are within the 1.5 mile Knapp Creek circle and 10 acres are within the 1.5 mile January Creek circle. These acres are located along the very outer perimeter of the circle. This sale does not affect either of the 0.7 mile circles. The Knapp Creek and January Creek spotted owl activity centers are on BLM ownership and are located within a Late Successional Reserve (LSR). There has been limited timber harvest activity within the Knapp Creek circle and all federal ownership appears to be in reserves or administratively withdrawn and may not have harvest activities for some time. 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 42% of the area within 1.5 miles of the Knapp Creek spotted owl activity center, 46% is managed by ODF and 12% is managed by other landowners. There has been a moderate amount of recent harvest within the January Creek circle almost exclusively on private ownership. 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 January Creek activity center, federally managed land makes up 49% of the ownership, 12% is managed by ODF and 39% is in other ownership. Habitat analysis within 1.5 miles of these two activity centers indicate that the ITG will be met after harvest of the sale area.

Conclusions and Risk Assessment

Biological Risk
As currently proposed, the Center 8 sale is expected to have a low risk of negatively affecting the occupancy and productivity of the Knapp Creek and January Creek spotted owl sites. This assessment is based on the following factors:
Knapp Creek
- The sale is located 1.4 miles from the activity center, along the outer edge of the 1.5 mile circle;
- 20 of the 235 sale acres are within 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;
- The moderate thinning will retain habitat elements important to spotted owls post-harvest and promote accelerated development of habitat elements in the future.
- Approximately 78% of the 1.5 mile circle will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG.

January Creek
- The sale is located 1.4 miles from the activity center, along the outer edge of the 1.5 mile circle;
- 10 of the 235 sale acres are within the 1.5 mile circle;
- Habitat quality and quantity immediately surrounding the activity center is high along with good connectivity to habitat northeast and south of the activity center;
- The moderate thinning will retain habitat elements important to spotted owls post-harvest and promote accelerated development of habitat elements in the future.

- Approximately 55% 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 Center 8 timber sale, the remaining suitable habitat within the Knapp Creek and January Creek owl circles will exceed the standards identified in the U.S. Fish and Wildlife Service rescinded Incidental Take Guidelines.

Consultation
Doug Cottam, District Wildlife Biologist with the Oregon Department of Fish and Wildlife, had "…no further comments and agree with the BA".

Literature Cited
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Table 1. Acres of suitable habitat on state and federal ownership within the 1.5 mile circle of the Knapp Creek and January Creek northern spotted owl activity centers. Suitable habitat determined through 2005 air-photo analysis and 2006 field assessment.

	Acres	**Knapp Creek**	**January Creek**
		1.5 mi	1.5 mi
Suitable Habitat:			
Federal		1567	1935
State		1966	532
Total		3533	2467
Sale area	235	20	10
Suitable habitat removed due to new road construction within circles		0	1
State acres in notification within circles		0	0
Unmodified suitable habitat remaining		3513	2456
% suitable post harvest		78%	55%