

Pre-Operations Report

Operation Name: Nelson Nebulous
County (%): Lane 100%
Elevation: 457 – 1,138 ft
Legal Description: T17S R8W, Section 14

Tax Code(s): n/a
BOF%: 100 **CSL%:** 0
Sale Quarter: ALT
Unit: Veneta - NWFMP

I. VOLUME AND VALUE SUMMARY

Table 1. Types, Acres, and Value

Unit	Harvest Type	Anticipated Product ^c	Gross Acres	Net Acres	MBF/ Acre ^a	MBF/ Unit ^a	\$/MBF ^b	\$/Unit
1	CC	DF-L, BM-M	117	110	50	5,500	\$600	\$3,300,000
Total		Regeneration	117	110		5,500		
		Partial Cut	0	0		0		
						Gross Value		\$3,300,000
a. Estimated harvest volume per acre for Unit.						Project Costs		\$150,000
b. Estimated ‘price’ (excluding Project Costs)						Net Value		\$3,150,000
c. Anticipated Product (AA-B-C) – AA) SLI species code of the bid species, B) Size Class (S – small [average DBH < 15], M – medium [average DBH 15 to 23], L – large (average DBH > 23]), C) Special Product (P – Premium, H – Hardwood)								

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information

Unit	Stand ID	Measured/Imputed ^a	Species	Age	TPA	DBH	BA	SDI	Net Acres ^b
1	15389	I = 15383	DF, WH	85	83	21	195	45%	21
1	15390	M	DF, RA	85	48	26	176	37%	21
1	15394	I = 15148	DF, BM	85	152	18	268	65%	67

- a. Identify the source of stand inventory information. Use the following codes: M = Measured SLI data, I = Imputed SLI data, P = Pre-Cruise Plots, O = other (if other, describe below).
- b. Net Acres have been rounded to the nearest whole acre in this table. Stand that comprise less than one acre of a harvest unit are not reported in this table, so the total "Net Acres" per unit in this table may not equal the total "Net Acres" per unit in table 1.

- These stands were planted and approximately 18 acres of the sale were commercially thinned in 2009, while another 25 acres were commercially thinned in 1991. The remaining acres were planted but have no record of pre-commercial or commercial thinning.

Table 3. Additional Stand Information

Unit	Stand ID	Snags/Acre ^a	Down Wood/Acre ^b	Forest Health		
				SNC	Phellinus	Other ^c
1	15389	3	129			
1	15390	6	264			
1	15394	17 ¹	67			

- a. Identify the number of hard snags per acre (decay classes 1 and 2)
- b. Identify the cubic feet per acre of hard down wood (decay classes 1 and 2)
- c. Describe "Other" forest health issue.

¹The snags per acre amount seems high for this imputed stand. It is more likely closer to the 6 per acre of the measured stand.

III. WILDLIFE AND T&E SPECIES CONSIDERATIONS:

Foresters need to request the Biological Survey Tracking Form (BSTF) from the ODF Wildlife Biologist prior to sale layout in order to ensure all T&E related information is complete and understood.

1. A portion of the operation is within (Check all that apply):
- ☐ TAS ☒ NSO Circle or Home Range, or Baseline or Elevated Baseline Thiessen (BA required)
- ☐ MMMA (BA required) ☐ None
- Notes: Portions of the sale are located within the Knapp Creek Elevated Baseline Thiessen for which a habitat assessment was reviewed by the U.S. Fish and Wildlife Service in 2024 as part of the FY25 AOP where they concurred that the sale has low risk of incidental take of spotted owls.
2. Are Surveys for NSO being conducted for any portion of this operation?
- ☐ No ☐ Density Surveys ☒ Operational Surveys ☐ Combination (Density/Operational)
- Notes: Surveys completed in 2023 and 2024.
3. Are Surveys for MM being conducted for any portion of this operation?
- ☐ Yes (in progress/completed) ☒ No (Not habitat) ☐ N/A (outside of MM survey zone)
4. Are there any additional considerations (FPA Resource Sites, Species of Concern sites/Plant [from ORBIC¹])?
- ☒ No ☐ Yes, please describe:

IV. DESIRED FUTURE CONDITION AND PRESCRIPTION:

Table 4. Stand Structure Information

Unit	Stand ID	Current	Desired Future ^b	Inside of HCA	Net Acres ^a
1	15389	UDS	GEN	No	21
1	15390	UDS	GEN	No	21
1	15394	LYR	GEN	No	67

- a. Net Acres have been rounded to the nearest whole acre in this table. Stand that comprise less than one acre of a harvest unit are not reported in this table, so the total “Net Acres” per unit in this table may not equal the total “Net Acres” per unit in table 1.
- b. While desired future condition complex (Layered -LYR and Older Forest Structure – OFS) is mapped, targets for Regeneration (REG), Closed Single Canopy (CSC) and Understory (UDS) stands are not. These stand types are typically referred to as General (GEN) when discussing desired future condition.

Table 5. Partial Cut & HCA Prescriptions (Complete only for Partial Cut and HCA Harvests)

Unit	Harvest Type	Harvest Species	Residual			
			Species	TPA	BA	% SDI
1	CC					

- Leave Tree Considerations:** Foresters will work with wildlife biologist during sale layout. The following should be considered when determining final leave tree arrangements.
 - Stand Characteristics: Focus on retaining larger trees with structural characteristics to support wildlife habitat.
- Reforestation Considerations:** Following the completion of harvest, the unit will be planted with a mixture of species native to the geographic area.

¹ Oregon Biodiversity Information Center
Western Lane District
Approved - June 2025

V. HARVESTING AND ACCESS CONSIDERATIONS:

Table 6. Harvest System and Access Summary

Unit	Harvest System		Slope (%)	Area Access	Seasonal Access
	% Cable	% Ground			
1	30	70	0-35	Simple	All Weather

1. Haul Route: Nelson Creek Road 17-8-14 and 17-8-13 road
2. Haul Route Condition: Maintained gravel roads
3. Are easements required for the haul route? ☒ Yes ☐ No
 - PURCHASER's use of roads is subject to a 314 agreement which PURCHASER shall complete with BLM and Roseburg.

Table 7. Transportation Management Summary (Miles)

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0.58	0.08
Improve, rock, and/or maintain	0	0.73	0.33	0.51
Vacate	0	0	0	0
Stream Crossings: install on existing road (IE)/replace on existing road (R)/install on new construction road (NC)				
Type F - SSBT ^a	0	0	0	0
Type F – Non-SSBT	0	0	0	0
Type N	0	0	0	0

a. Salmon Steelhead and Bull Trout (SSBT)

4. Rock Sources for this operation: Commercial Rock Source
5. Are property line surveys required for this operation? ☐ Yes ☒ No
6. Is there new road construction occurring in Riparian Conservation Areas and/or Habitat Conservation Areas? ☒ No ☐ Yes

VI. AQUATIC RESOURCES:

1. Do any streams require additional review for the following:
 - Fish presence ☒ No ☐ Yes
 - Perennial/Seasonal: ☐ No ☒ Yes
 - H.E.R: ☐ No ☒ Yes
 - There are streams within the sale that require additional review. Buffers shown on the map indicate where it is believed streams are located. These streams will be located and verified for permanence, and/or type of seasonal stream during sale layout and Geotech review and buffered as required.
2. Is a portion of the operation within an Aquatic Anchor? ☒ No ☐ Yes, name:
3. Are any domestic points of diversion identified in the Oregon Water Resource Department's water rights information search GIS database located downstream within 3,000 feet of the harvest operation?

☒ No ☐ Yes, describe protection measures:

4. Are there any unregistered or unknown status domestic points of diversion that have been identified within the harvest operation? ☒ No ☐ Yes, please describe:
5. Is there a Stream Enhancement Project planned? ☒ No ☐ Yes, please describe:

VII. SLOPE STABILITY ISSUES:

Table 8. Summary of Slope Stability Assessment

Unit	Harvest Review Complete	Public Safety Review Complete	Additional Comment
1	Yes	Yes	

- **Geotech Review:** Geotechnical reviews have been completed and it was determined that no slope protections are needed. Additional consultation with Geotechnical Specialists will be done during sale layout as needed.

VIII. RECREATION RESOURCES:

1. Recreation issues/coordination: ☒ No ☐ Yes, please describe:

IX. HISTORIC AND CULTURAL RESOURCES:

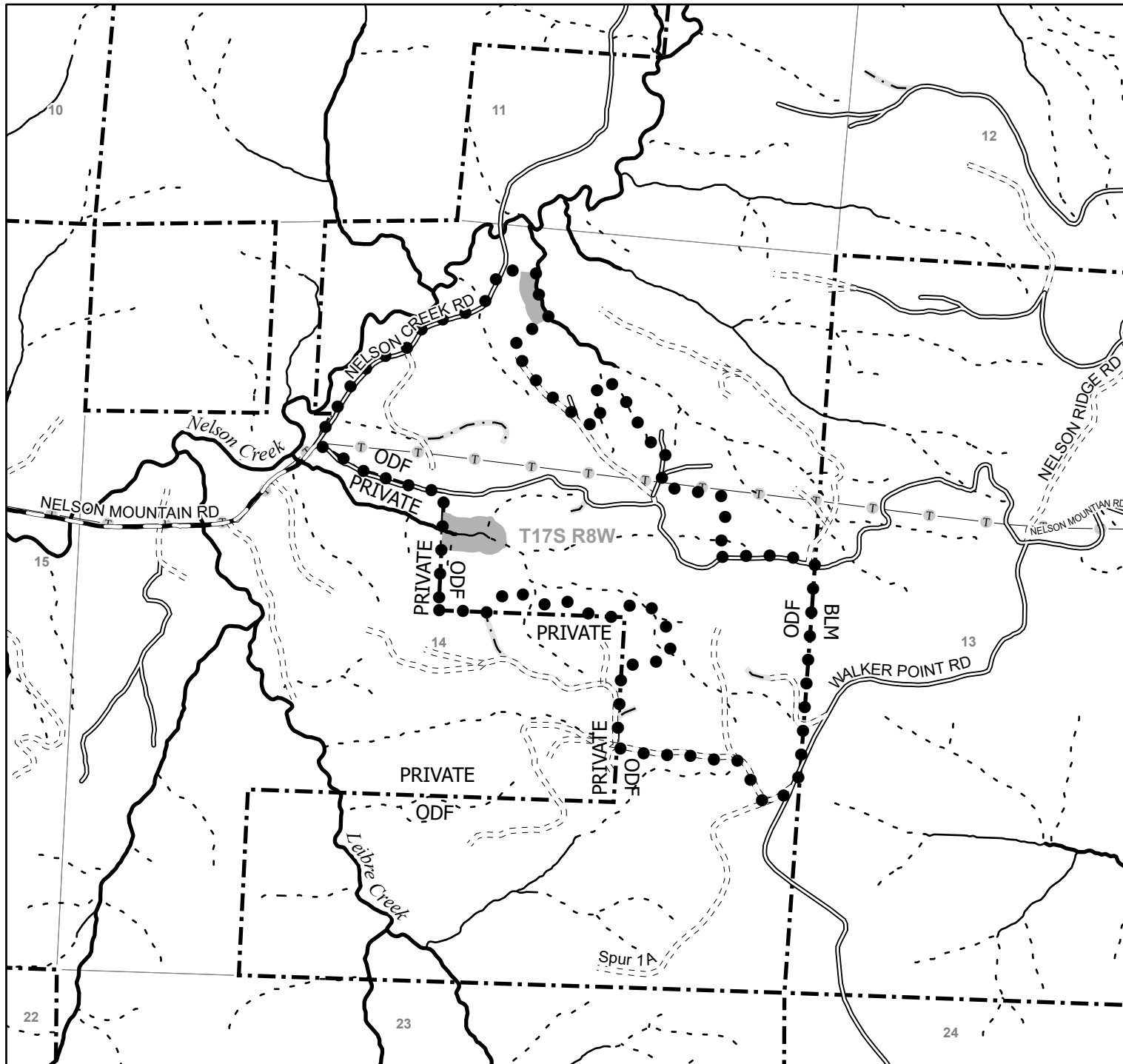
1. Has the sale been reviewed by a qualified archaeologist for potential historic or cultural resource presence?
☒ Yes ☐ No

X. SCENIC RESOURCES:

1. Are there scenic resources in the vicinity of this operation that need additional consideration? ☒ No ☐ Yes, please describe:

XI. OTHER RESOURCE CONSIDERATIONS:

1. Has a review of the FLMCS layer determined that any resources not mentioned in the report above need additional planning? ☐ No ☒ Yes, describe below
- **Powerline:** Transmission lines run through the middle of the sale. Logging systems should be designed to avoid this hazard. The power company will need to be coordinated with during sale layout and during active operations.
2. Are there any other resources present that need additional consideration? ☐ No ☒ Yes, please describe:
- **Adjacent Landowners (shared property lines):**
 - Federal, Private Industrial, Private Landowners:
 - District staff will work with adjacent private landowners to determine what additional outreach is needed during the sale process and if any additional restrictions are needed.



Legend

- Sale Boundary
- No Harvest Area
- Paved Road
- Surfaced Road
- - - Unsurfaced Road
- - - New Road Construction
- Fish Stream
- Non-Fish, Perennial Stream
- - - Non-Fish Stream, Unverified Permanence
- Transmission Lines
- Ownership Boundary

FY 2026 - Western Lane District Nelson Nebulous Portions of Section(s) 14, T17S, R8W, WM. Lane County

State Forest Division
11/27/2024

This product is for informational use and may not be
suitable for legal, engineering, or surveying purposes.

1:12,000

1,000 500 0 1,000 Feet



Unit 1 110 Acres (CC)





Oregon

Tina Kotek, Governor

Department of Forestry

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"STEWARDSHIP IN FORESTRY"

TO: Chet Behling, Western Lane Assistant District Forester

FROM: Randy Smith, Southern Oregon Area Biologist

SUBJECT: **Revised** Habitat Assessment for the **Nelson Nebulous** Timber Sale

DATE: March 10, 2025

Executive Summary

Nelson Nebulous was an alternate timber sale in the 2025 Annual Operations Plan (AOP) of the Western Lane District, Veneta Unit and remains an alternate sale in the 2026 AOP. Portions of the sale are located within the Lower Nelson non-baseline, Knapp Creek elevated baseline, and Miller Creek baseline Thiessen polygons (hereafter polygons) and Knapp Creek, Liebre Creek, Miller Creek, and Lower Nelson Creek provincial home range circles.

As required by the Safe Harbor Agreement (SHA), a habitat assessment within a baseline or elevated baseline polygon is required to track habitat and avoid likelihood of incidental take. The Nelson Nebulous sale will be removing suitable habitat within the Knapp Creek elevated and Miller Creek baseline polygons.

There have been no changes to the sale acres or sale prescription since the previous Habitat Assessment was prepared March 25, 2024, and later reviewed by the U.S. Fish and Wildlife Service in 2024.

An additional year of NSO protocol surveys were conducted in 2024, with no spotted owls observed within the sale area. However, nearby federal spotted owl detections resulted in the upgrade of the Lower Nelson Creek activity center (AC) site from abandoned to pair status. Portions of the Nelson Nebulous timber sale are contained within the Lower Nelson Creek non-baseline polygon and home range circles.

There have been 2 changes to sales in the area. The Sitka Stratus, primary 2025 AOP sale acreage has been reduced from 198 to 85 net acres and the new Sit Back, alternate 2026 AOP sale was added and consists of 81 net acres.

Due to the recent adjustments to sales in the area, minor changes in the proportions of remaining suitable habitat were amended in this revised assessment. Additionally, a tracking of acres within the new Lower Nelson Creek home range circle is provided. Post-harvest of the Nelson Nebulous timber sale, approximately 74%, 70%, 77% and 76% suitable habitat will remain within the Knapp Creek, Liebre Creek, Miller Creek and Lower Nelson Creek 0.7 mile circles, respectively, with 61%, 62%, 52% and 58% suitable habitat remaining within the Knapp Creek, Liebre Creek, Miller Creek, and Lower

Nelson Creek 1.5 mile circles, respectively, thereby exceeding the SHA and Oregon Department of Forestry (ODF) policy standards.

Introduction

Purpose

This revised habitat assessment serves as an update to the habitat assessment that was prepared March 25, 2024 (Attachment 1). Revisions in this assessment reflect the changes in nearby sale acres, additional information about northern spotted owls in the vicinity of this sale, adjustments to the proportions of remaining suitable habitat post-harvest within the Knapp Creek, Liebre Creek, and Miller Creek home range circles, and inclusion of remaining suitable habitat post-harvest within the new Lower Nelson Creek home range circle.

Portions of the Nelson Nebulous timber sale are within the 0.7 mile circles for the Knapp Creek and Liebre Creek circles and within the 1.5 mile circles for the Knapp Creek, Liebre Creek, Miller Creek, and Lower Nelson Creek northern spotted owl activity centers. This assessment presents habitat acreage monitoring since the inception of the SHA on 9/23/2016, as well as information on current survey efforts.

Background

Changes to Sales in the Vicinity

The Sitka Stratus timber sale acres were reduced to 85 net acres. The acreage reduction occurred within the Lower Nelson non-baseline polygon that overlapped the Knapp Creek and Liebre Creek 1.5 mile circles. A total of 81 net acres were transferred to the Sit Back alternate sale in the 2026 AOP. The Sit Back sale has planned sale acres within the Knapp Creek, Liebre Creek, and Lower Nelson Creek circles that will remove suitable habitat. Yet, the sale footprint remains within the Lower Nelson Creek non-baseline polygon. Updated current habitat and sale acres are reflected in Table 1 and Figure 1.

Survey History and Site Information

All potential spotted owl habitat within and surrounding the Nelson Nebulous timber sale was surveyed an additional year (2024 survey season) according to protocol endorsed by the USFWS (USFWS, 2012). Results from these call-back surveys, in addition to autonomous recording unit (ARU) deployments in the area by federal partners, resulted in upgrading the Lower Nelson Creek historic AC to pair status, which resides within the Lower Nelson Creek non-baseline polygon.

Knapp Creek

There were no spotted owls detected in 2024. Barred owls were detected in the area from 2010 through 2017, and 2021 through 2024 (Turnstone, 2024).

Liebre Creek

There were no spotted owls detected in 2024. Barred owls were detected in 2020 through 2024 (Turnstone, 2024).

Miller Creek

There were no spotted owls detected in 2024. Barred owls were detected in 2020 through 2024 (Turnstone, 2024).

Lower Nelson Creek

In 2024, a female was detected twice at night with call-back surveys. Multiple male and female detections were recorded by ARU's deployed in the area. Status was upgraded to pair at the location of the abandoned AC until further location information can be determined. Barred owls were detected 2021 through 2024 (Turnstone, 2024).

The 2025 AOP Sitka Stratus and 2026 Sit Back timber sales also have planned sale acres within the Knapp Creek, Liebre Creek, and Lower Nelson Creek home range circles that will remove suitable habitat. Those planned sale acres along with the Nelson Nebulous sale acres are reflected in Table 1 and Figure 1.

Compliance with Policy

After completion of harvest operations associated with the Nelson Nebulous timber sale, the remaining suitable habitat within the Knapp Creek, Liebre Creek, Miller Creek, and Lower Nelson creek owl circles will exceed the standards identified in ODF's northern spotted owl policy as they relate to the SHA requirements.

Literature Cited

Oregon Department of Forestry. 2017. Northern Spotted Owl State Forest Program Operational Policies. November 2012. 11 pp.

Oregon Department of Forestry. 2019. Northern Spotted Owl Policies for Western Lane District Lands within the Safe Harbor Agreement Area. State Forests Program Bulletin 20-01.

Turnstone Environmental Consultants, Inc. 2024. Northern Spotted Owl Surveys on Oregon State Lands 2024 for Oregon Department of Forestry. 219 pp.

U.S. Fish and Wildlife Service. 2012. Protocol for surveying proposed management activities that may impact northern spotted owls. Revised January 9, 2012. 43 pp.

cc: Ole Buch
Vanessa Petro

Table 1. Acres of suitable habitat on state and federal ownership within the 0.7 and 1.5 mile circles for the Knapp Creek, Liebre Creek, Miller Creek and Lowe Nelson Creek northern spotted owl activity centers. Suitable habitat determined through field reviews, Lidar assessment, air-photo analysis (2022-earlier), and 2024 FERNS and Vantage harvest tracking system check of forest operations in the area.

Suitable Habitat	Net Acres	Knapp Creek		Liebre Creek		Miller Creek		Lower Nelson Creek	
		0.7 mile	1.5 mile	0.7 mile	1.5 mile	0.7 mile	1.5 mile	0.7 mile	1.5 mile
State		248	1418	292	1444	216	840	521	1137
Federal		519	1611	426	1598	546	1557	278	1736
Total at beginning of SHA		767	3029	718	3042	762	2397	799	2873
Total removed from 2022 AOP Walker Towers Timber Sale since start of SHA		0	0	0	6	0	0	0	0
Nelson Nebulous net sale area	110	39	110	32	110	0	22	0	89
Approved 2025 AOP Sitka Stratus Timber Sale	85	0	82	0	24	0	0	5	85
Planned 2026 AOP Sit Back Timber Sale	81	0	81	0	75	0	0	45	81
Unmodified habitat remaining		728	2756	686	2827	762	2375	749	2618
Proportion (%) remaining post-harvest		74%	61%	70%	62%	77%	52%	76%	58%



Oregon

Tina Kotek, Governor

Department of Forestry

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"STEWARDSHIP IN FORESTRY"

TO: Chet Behling, Western Lane Assistant District Forester

FROM: Randy Smith, Southern Oregon Area Biologist

SUBJECT: Habitat Assessment for the **Nelson Nebulous** Timber Sale

DATE: March 25, 2024

Executive Summary

Nelson Nebulous is an alternate timber sale in the 2025 Annual Operations Plan (AOP) of the Western Lane District, Veneta Unit and portions are located within the Lower Nelson non-baseline, Knapp Creek elevated baseline, and Miller Creek baseline Thiessen polygons (hereafter polygons) and Knapp Creek, Liebre Creek and Miller Creek provincial home range circles.

As required by the Safe Harbor Agreement (SHA), a habitat assessment within a baseline or elevated baseline polygon is required to track habitat and avoid likelihood of incidental take.

No spotted owls have been observed within the sale area during surveys in 2022 and 2023.

Post-harvest of the Nelson Nebulous timber sale, approximately 74%, 70% and 77% suitable habitat will remain within the Knapp Creek, Liebre Creek and Miller Creek 0.7 mile circles, respectively, with 60%, 62% and 52% suitable habitat remaining within the Knapp Creek, Liebre Creek and Miller Creek 1.5 mile circles, respectively, thereby exceeding the SHA and Oregon Department of Forestry (ODF) policy standards.

Introduction

Purpose

The Western Lane District, Veneta Unit is proposing the Nelson Nebulous timber as an alternate sale in their 2025 Annual Operations Plan. This sale contains suitable habitat for northern spotted owls and portions are within the Miller Creek baseline, Knapp Creek elevated baseline and Lower Nelson Creek non-baseline polygons as identified within the SHA between ODF and U.S. Fish and Wildlife Service (USFWS; USFWS, 2019). As part of the agreement, ODF will provide an acreage assessment of suitable owl habitat removed from harvest operations within baseline or elevated baseline polygons. For the purposes of the agreement, both parties agreed to use the amount of habitat occurring within the average spotted owl home range radius for assessing the likelihood of incidental take and not the polygons to be consistent with previous incidental take assessments (Attachment A).

Portions of the Nelson Nebulous timber sale are within the 0.7 mile circles for the Knapp Creek and Liebre Creek circles and within the 1.5 mile circles for the Knapp Creek, Liebre Creek and Miller Creek

northern spotted owl activity centers. This assessment presents habitat acreage monitoring since the inception of the SHA on 9/23/2016, as well as information on current survey efforts.

Policy Direction

Northern Spotted Owls

In the Western Lane District, Veneta Unit, the current standard for protection of northern spotted owls for sales within the SHA is to apply the standards identified in the ODF Northern Spotted Owl Policy (ODF, 2017) and State Forests Program Bulletin 20-01 (ODF, 2019). For sales within baseline or elevated baseline polygons, the remaining post-harvest habitat within the home range circle representing the polygon must maintain at least 500 acres of suitable habitat within a 0.7 mile radius, and 1,809 acres within the home range circle (in this case 1.5 miles) as discussed in Attachment A.

Background

Survey History and Site Information

Potential spotted owl habitat within and surrounding the timber sale was surveyed according to protocol endorsed by the USFWS (USFWS, 2012).

Knapp Creek

In 2008, the historic female paired with a new male (red w/ yellow dots-left) and nested in a new tree. In June 2008, secondary feathers, possibly from the adult female, and juvenile remains were found near the nest. Reproductive attempts appeared to have failed. The male was found alone at the site later in the season. In 2009, a male night response was heard in this area. There were no spotted owl responses in 2010 or 2011. From 2012 through 2014, a daytime activity center AC search was conducted at this site with no spotted owl responses, and there were no responses during night surveys. However, a juvenile unknown *Strix* was found in the area in 2014. In 2015, a daytime AC search was conducted at this site with no spotted owl responses, and there were no responses during night surveys. In 2016, two male spotted owl responses heard in this area were attributed to the Liebre Creek site. There were no spotted owl responses in 2017. In 2018, a pair of spotted owls was found at this site, but this response was attributed to the nearby Liebre Creek site. There were no young present. The male (dark green w/ a pink stripe-right) occupied the Liebre Creek site in 2017, and the female (red w/ yellow dots-right) occupied the San Antone Creek site in 2017. A daytime AC search was conducted in 2021 with no spotted owl responses. There were no spotted owls detected in 2019 through 2021. There was a single unknown sex night response in 2022. Barred owls were detected in the area from 2010 through 2017, and 2021 and 2022 (Turnstone, 2023).

Liebre Creek

In 2016, a non-nesting pair of spotted owls occupied this site. The male (dark green w/ a pink stripe-right) occupied the Blachly East site in 2015, and the female (blue w/ a yellow stripe-left) occupied the Cape Horn site in 2015. This was not the same pair found at the nearby Knapp Creek site in 2016. This was a new pair at this site, and the AC was placed at the April 7, 2016, daytime pair location. In 2017, the 2016 pair nested in a new tree and fledged one young which was found dead on the ground near the nest tree. The AC was moved to the 2017 nest tree. In 2018, a male and a spotted owl of unknown sex were heard at night. The pair found at the nearby Knapp Creek site was attributed to this site. The male (dark green w/ a pink stripe-right) occupied the Liebre Creek site in 2017; the female (red w/ yellow dots-right) occupied the San Antone Creek site in 2017. The pair was present in 2019 and did not nest. There was a single daytime female response with no visual in 2020. There were no spotted owl responses in 2021 and a daytime AC search was conducted at this site with no spotted owl responses. Some of this area was not covered due to the Miller Creek owls nesting nearby. There were no spotted owl responses in 2022 and a daytime AC search was conducted at this site with no spotted owl responses. Barred owls were detected in 2020 through 2022 (Turnstone, 2023).

Miller Creek

In 2016, the historic Miller Creek pair (male, dark w/ pink stripe-left; female, black w/ yellow slashes-left) was found non-nesting. This same year, another non-nesting pair of spotted owls was found at the nearby Liebre Creek site. The male (dark green w/ a pink stripe-right) was from the Blachly East site, and the female (blue w/ a yellow stripe-left) was from the Cape Horn site. In 2017, the historic pair nested in the 2014 nest tree and fledged two young. The AC was moved to the 2014/2017 nest tree location. In 2018, the historic pair was found non-nesting at this site. In 2019, the historic pair nested in a new tree and fledged two young. In 2020, the historic pair was present but did not nest. In 2021, the pair nested in a new tree and fledged one young. The AC was not moved and remains at the 2019 nest tree. The male was present in 2022. A female was detected in 2023 once at night. Barred owls were detected in the area in 2012, 2013, and from 2015 through 2017, and 2020 through 2023 (Turnstone, 2023).

The 2025 AOP Sitka Stratus timber sale also has planned sale acres within the Knapp Creek and Liebre Creek 1.5 mile circles that will remove suitable habitat. Those planned sale acres along with the Nelson Nebulous sale acres are reflected in Table 1 and Figure 1.

Compliance with Policy

After completion of harvest operations associated with the Nelson Nebulous timber sale, the remaining suitable habitat within the Knapp Creek, Liebre Creek, and Miller Creek owl circles will exceed the standards identified in ODF's northern spotted owl policy as they relate to the SHA requirements.

Literature Cited

Oregon Department of Forestry. 2017. Northern Spotted Owl State Forest Program Operational Policies. November 2012. 11 pp.

Oregon Department of Forestry. 2019. Northern Spotted Owl Policies for Western Lane District Lands within the Safe Harbor Agreement Area. State Forests Program Bulletin 20-01.

Turnstone Environmental Consultants, Inc. 2022. Northern Spotted Owl Surveys on Oregon State Lands 2020 for Oregon Department of Forestry. 215 pp.

U.S. Fish and Wildlife Service. 2012. 2012 Protocol for surveying proposed management activities that may impact northern spotted owls. Revised January 9, 2012. 43 pp.

U.S. Fish and Wildlife Service and Oregon Department of Forestry. 2019. Minor Amendment for the Safe Harbor Agreement for the Northern Spotted Owl in the Coast Ranges Study Area for the Barred Owl Removal Experiment. September 2019. 32pp.

cc: Ole Buch
Vanessa Petro

Table 1. Acres of suitable habitat on state and federal ownership within the 0.7 and 1.5 mile circles for the Knapp Creek, Liebre Creek, and Miller Creek northern spotted owl activity centers. Suitable habitat determined through field reviews, Lidar assessment, air-photo analysis (2022-earlier), and 2023 FERNS and Vantage harvest tracking system check of forest operations in the area.

Suitable Habitat	Net Acres	Knapp Creek		Liebre Creek		Miller Creek	
		0.7 mile	1.5 mile	0.7 mile	1.5 mile	0.7 mile	1.5 mile
State		248	1418	292	1444	216	840
Federal		519	1611	426	1598	546	1557
Total at beginning of SHA		767	3029	718	3042	762	2397
Total removed from 2022 AOP							
Walker Towers Timber Sale							
since start of SHA		0	0	0	6	0	0
Nelson Nebulous net sale area	110	39	110	32	110	0	22
Planned 2025 AOP Sitka							
Stratus Timber Sale	198	0	195	0	111	0	0
Unmodified habitat remaining		728	2724	686	2815	762	2375
Proportion (%) remaining post-harvest		74%	60%	70%	62%	77%	52%



United States Department of the Interior

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Reply To: 8503.2004(16)
TS Number: 16-231

Liz Dent
Division Chief, State Forests Division
Oregon Department of Forestry
State Forester's Office
2600 State Street
Salem, OR 97310-1336

FEB 24 2016

Dear Ms. Dent:

This responds to your January 21, 2016, letter that we received on January 25, 2016, requesting affirmation on the criteria that we will use to assess the likelihood of incidental take of northern spotted owls (spotted owls) under the Barred Owl Removal Project Safe Harbor Agreement (Agreement) that the Oregon Department of Forestry and the U.S. Fish and Wildlife Service (Service) are in the process of developing.

Your letter provided a summary of our recent discussions on how to avoid potential incidental take of baseline spotted owl sites (i.e., those areas that are considered to continue to be used by spotted owls for nesting) under the terms of the Agreement. The Agreement is specific to the implementation of the Barred Owl Removal Experiment that we are conducting to determine whether removing barred owls will affect the breeding of spotted owls. The experimental design involved the use of Thiessen polygons that represent the cumulative area of use by a single or pair of spotted owls during the breeding survey period (March to August). The Thiessen polygon encompasses all the annual territory center locations, and extends outward to a maximum of one half the median nearest neighbor distance, or midway between the annual territory center locations of spotted owls occupying adjacent territories, whichever distance is shorter. This type of information is usually not available for spotted owls; however, the covered area of the Agreement was part of a spotted owl demographic study that has intensively followed the movement of spotted owls for many years in the area.

For the purposes of the Agreement, we agreed to use the amount of habitat occurring within the average spotted owl home range radius for assessing the likelihood of incidental take and not the Thiessen polygons in order to be consistent with previous incidental take assessments and since there hasn't been a take assessment methodology done within the scale of Thiessen polygons. As outlined in your letter, the following criteria were established for avoiding the likelihood of incidental take of all baseline spotted owls identified within Thiessen polygons and covered under the Agreement:

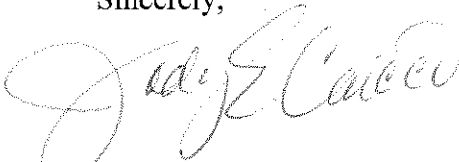
- Where forest operations will occur within 0.7 miles of the activity center, conduct no harvest activities that would reduce suitable habitat below 500 acres around the activity center;

- Conduct no forest harvest operations that would reduce suitable habitat in a 1.5 mile radius circle around the activity center below 1,809 acres;
- Apply seasonal restrictions to forest operations as needed to avoid disturbance to nesting or potentially nesting pairs of spotted owls, unless it's determined that the pair is no longer nesting.

We believe that following the above agreed upon criteria will result in a low likelihood of incidental take of spotted owls within the Agreement area.

If you have any questions about this response, please contact Richard Szlemp at 503-231-6179. We look forward to continued coordination with you in the completion and implementation of the Agreement.

Sincerely,



for Paul Henson, Ph.D.
State Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE
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File Number: 2024-TA-0003
File Name: : Oregon Department of Forestry Fiscal Year 2025 Annual Operations Plans for Timber Harvest.dox
TS Number: 24-249
Doc Type: Draft Technical Assistance

To: Ron Zilli
Deputy Division Chief
State Forests Division
Oregon Department of Forestry
2600 State Street
Salem, OR 97310

From: Kessina Lee, State Supervisor, Oregon Fish and Wildlife Office
Portland, Oregon

Subject: Oregon Department of Forestry Fiscal Year 2025 Annual Operations Plans for Timber Harvest, Western Lane and West Oregon Districts (Lane and Lincoln Counties), Oregon. [In reply refer to: File Number 2024-TA-0003].

Dear Mr. Zilli:

This is the U.S. Fish and Wildlife Service's (Service) response to your April 10, 2023, letter, and subsequently shared information via telephone, regarding draft pre-operation reports and preliminary biological assessments (PBA) for five Oregon Department of Forestry (ODF) timber sales, Millers Wood, Old Highway, Nelson Nebulous, Pat Tilden and a revised Sitka Stratus timber sales in its Western Lane and West Oregon Districts. These five timber sales are proposed to be included in the Fiscal Year 2025 Annual Operations Plans (AOP). You requested that we provide any concerns relative to the proposed operations' compliance with the Endangered Species Act of 1972, as amended (16 U.S.C. 1531 et seq.) (ESA) for the federally listed species identified below:

northern spotted owl (*Strix occidentalis caurina*) (spotted owl)
marbled murrelet (*Brachyramphus marmoratus*) (murrelet)

This technical assistance is strictly regarding potential effects to the spotted owl and marbled murrelet.

Sufficient information has been provided to determine the effects of the proposed action and to conclude whether it would adversely affect federally listed species and/or designated critical habitat. Our response is based on information provided by the action agency, best available science, and complete and successful implementation of the conservation measures included by the action agency.

Revised Sitka Stratus Timber Sale

Sitka Stratus was an alternate timber sale in the 2024 Annual Operations Plan (AOP) of the Western Lane District, Veneta Unit and is now a primary sale in the 2025 AOP. Portions are located within the Knapp Creek elevated baseline and Lower Nelson non-baseline Thiessen polygons (polygons) identified in the Safe Harbor Agreement (SHA) for the Northern Spotted Owl in the Coast Ranges Study Area for the Barred Owl Removal Experiment, and Knapp Creek and Liebre Creek provincial home range circles. For timber sales within baseline or elevated baseline polygons, the remaining post-harvest habitat within the home range circle representing the polygon must maintain at least 500 acres of suitable (nesting, roosting, foraging) habitat within a 0.7 mile radius, and 1,809 acres within the home range circle (in this case 1.5 miles).

Proposed Action

Sitka Stratus timber sale was originally proposed as a 117-acre clearcut in the 2024 AOP of the Western Lane District (Lane County), Township 17 South, Range 18 West, Section 12, and is located within the Knapp Creek and Liebre Creek 1.5-mile radius spotted owl home range circles.

The Revised Sitka Stratus timber sale added an additional 81 acres to the single harvest unit now totaling 198 net acres. The timber sale is 80 to 82-year-old Douglas-fir, western hemlock, and red alder mixed stands. The trees within the timber sale have an average diameter of 18 to 23 inches, approximately 69 to 125 trees per acre, and a basal area of 190 to 216 square feet per acre. Stands within the sale unit are classified as understory development and layered; meaning that portions of the sale have moved past closed single canopy and have developed a moderate understory shrub layer but have not had time to develop canopy layering. Based on ODF available cruise information, orthoimagery and field verification, ODF considers this stand suitable dispersal, roosting, or foraging habitat for spotted owls.

Knapp Creek Survey History and Site Information (as compiled by ODF)

In 2008, the historic female paired with a new male (red w/ yellow dots-left) and nested in a new tree. In June 2008, secondary feathers, possibly from the adult female, and juvenile remains were found near the nest. Reproductive attempts appeared to have failed. The male was found alone at the site later in the season. In 2009, a male night response was heard in this area. There were no spotted owl responses in 2010 or 2011. From 2012 through 2014, a daytime Activity Center (AC) search was conducted at this site with no spotted owl responses, and there were no responses during night surveys. However, a juvenile unknown *Strix* was found in the area in 2014. In 2015, a daytime AC search was conducted at this site with no spotted owl responses, and there were no responses during night surveys. In 2016, two male spotted owl responses heard in this area were attributed to the Liebre Creek site. There were no spotted owl responses in 2017. In 2018, a pair of spotted owls was found at this site, but this response was attributed to the nearby Liebre Creek site. There were no young present. The male (dark green w/a pink stripe-right) occupied the Liebre Creek site in 2017, and the female (red w/ yellow dots-right)

occupied the San Antone Creek site in 2017. A daytime AC search was conducted in 2021 with no spotted owl responses. There were no spotted owls detected in 2019 through 2021. There was a single unknown sex night response in 2022. Barred owls were detected in the area from 2010 through 2017, 2021 and 2022. An additional year of NSO protocol surveys were conducted in 2023, with no spotted owls observed within the sale area.

Liebre Creek Survey History and Site Information (as compiled by ODF)

In 2016, a non-nesting pair of spotted owls occupied this site. The male (dark green w/ a pink stripe -right) occupied the Blachly East site in 2015, and the female (blue w/ a yellow stripe-left) occupied the Cape Horn site in 2015. This was not the same pair found at the nearby Knapp Creek site in 2016. This was a new pair at this site, and the activity center (AC) was placed at the April 7, 2016, daytime pair location. In 2017, the 2016 pair nested in a new tree and fledged one young which was found dead on the ground near the nest tree. The AC was moved to the 2017 nest tree. In 2018, a male and a spotted owl of unknown sex were heard at night. The pair found at the nearby Knapp Creek site was attributed to this site. The male (dark green w/ a pink stripe-right) occupied the Liebre Creek site in 2017; the female (red w/yellow dots-right) occupied the San Antone Creek site in 2017. The pair was present in 2019 and did not nest. There was a single daytime female response with no visual in 2020. There were no spotted owl responses in 2021 and a daytime AC search was conducted at this site with no spotted owl responses. Some of this area was not covered due to the Miller Creek owls nesting nearby. There were no spotted owl responses in 2022 and a daytime AC search was conducted at this site with no spotted owl responses. Barred owls were detected in 2020 through 2022. An additional year of NSO protocol surveys were conducted in 2023, with no spotted owls observed within the sale area.

Environmental Baseline and Action Effects (based on the ODF pre-operation report)

The proposed Sitka Stratus timber sale will remove 198 net acres of habitat that ODF considers to be stand suitable dispersal, roosting, or foraging habitat for spotted owls. The previous timber sale proposal will remove 112 acres which will be within the 1.5-mile radius home range circle of the Knapp Creek Spotted owl territory and 34 acres which falls within the 1.5-mile radius home range circle of the Liebre Creek spotted owl territory. No part of the timber sale is within the 0.7-mile radius of either spotted owl site center of the AC. The added 98 sale acres are not within the Knapp Creek elevated baseline polygon baseline identified in the Safe Harbor Agreement (SHA) for the Northern Spotted Owl in the Coast Ranges Study Area for the Barred Owl Removal Experiment but are within the Knapp Creek and Liebre Creek 1.5-mile home range circles.

Post-harvest of the Revised Sitka Stratus timber sale, approximately 74 percent (728 acres) and 70 percent (686 acres) of suitable habitat will remain within the Knapp Creek and Liebre Creek 0.7 mile radius core area circles, respectively, with 60 percent and 62 percent suitable habitat remaining within the Knapp Creek and Liebre Creek 1.5 mile home range circles, respectively.

Conservation Measures

There are no conservation measures proposed for the Sitka Stratus timber sale; activities will be conducted outside established critical breeding season disruption distances for the spotted owl (see Attachment A).

Conclusion

Based upon 1) the post-harvest amount of remaining suitable habitat in home ranges and core areas of spotted owl activity centers will be well above the standard set in the SHA to avoid take, and 2) activities will be conducted outside established critical breeding season disruption distances for the spotted owl - we believe the Revised Sitka Stratus timber sale has a low risk of incidental take of spotted owls.

Pat Tilden Timber Sale

Pat Tilden is an alternate timber sale in the 2025 Annual Operations Plan (AOP) of the Western Lane District, Veneta Unit and portions are located within the Cape Horn elevated baseline Thiessen polygon identified in the SHA but is not located within the Cape Horn provincial home range circle. For timber sales within baseline or elevated baseline polygons, the remaining post-harvest habitat within the home range circle representing the polygon must maintain at least 500 acres of suitable habitat within a 0.7-mile radius, and 1,809 acres within the home range circle (in this case 1.5- miles) according to the SHA.

Proposed Action

The Western Lane District, Veneta Unit is proposing the 109 acre Pat Tilden clear cut timber sale as an alternate in their 2025 Annual Operations Plan. This sale contains suitable habitat for northern spotted owls and portions are within the Cape Horn elevated baseline polygon in the SHA. No portion of the Pat Tilden timber sale is within the 0.7- or 1.5-mile circles for the Cape Horn northern spotted owl activity center.

Cape Horn Spotted Owl Survey History and Site Information (as compiled by ODF)

In 2015, the historic female was found non-nesting. A male spotted owl was heard once at night late in the season. There were no spotted owl responses in 2016. The historic female was found paired with the 2015 Blachly East male at the Liebre Creek site in 2016. In 2017, a female spotted owl was heard once during night surveys. There were no spotted owl responses in 2018 through 2023. Barred owls were detected in the area from 2012 through 2018, and 2021 through 2023.

Environmental Baseline and Action Effects (based on the ODF pre-operations report)

No portion of the Pat Tilden timber sale is within the 0.7- or 1.5-mile circles for the Cape Horn northern spotted owl activity center. A habitat analysis of the Cape Horn site indicates that there are approximately 62% (614 acres) of suitable habitat within 0.7 -miles core area of the activity center and 52% (2341 acres) of suitable habitat within the 1.5- mile home range.

Conservation Measures

There are no conservation measures proposed for the Pat Tilden timber sale; the activities are outside established critical breeding season disruption distances for the spotted owl (see Attachment A).

Conclusion

We believe the Pat Tilden timber sale has a low risk of incidental take of spotted owls for the following reasons: 1) No portion of the Pat Tilden timber sale is within the 0.7- or 1.5-mile circles (core area or home range) for the Cape Horn northern spotted owl activity center that

represents the Cape Horn elevated baseline polygon. 2) The post-harvest amount of remaining suitable habitat in home ranges and core areas of spotted owl activity centers will be well above the standard set in the SHA to avoid take, and 3) Activities will be conducted outside established critical breeding season disruption distances for the spotted owl.

Nelson Nebulous Timber Sale

Nelson Nebulous timber sale is a proposed alternate timber sale in the 2025 Annual Operations Plan (AOP) of the Western Lane District, Veneta Unit, and portions are located within the Lower Nelson non-baseline, Knapp Creek elevated baseline, and Miller Creek baseline polygons identified in the SHA, and Knapp Creek, Liebre Creek and Miller Creek provincial home range circles.

Proposed Action

Nelson Nebulous is proposed 110 acre clear cut timber sale presented as an alternate sale in ODFs 2025 Annual Operations Plan. This sale contains suitable habitat for northern spotted owls and portions are within the Miller Creek baseline, Knapp Creek elevated baseline and Lower Nelson Creek non-baseline polygons as identified within the SHA.

Spotted Owl Survey History and Site Information (as compiled by ODF)

Knapp Creek

In 2008, the historic female paired with a new male and nested in a new tree. In June 2008, secondary feathers, possibly from the adult female, and juvenile remains were found near the nest. Reproductive attempts appeared to have failed. The male was found alone at the site later in the season. In 2009, a male night response was heard in this area. There were no spotted owl responses in 2010 or 2011. From 2012 through 2014, a daytime activity center AC search was conducted at this site with no spotted owl responses, and there were no responses during night surveys. However, a juvenile unknown *Strix* was found in the area in 2014. In 2015, a daytime AC search was conducted at this site with no spotted owl responses, and there were no responses during night surveys. In 2016, two male spotted owl responses heard in this area were attributed to the Liebre Creek site. There were no spotted owl responses in 2017. In 2018, a pair of spotted owls was found at this site, but this response was attributed to the nearby Liebre Creek site. There were no young present. The male occupied the Liebre Creek site in 2017, and the female occupied the San Antone Creek site in 2017. A daytime AC search was conducted in 2021 with no spotted owl responses. There were no spotted owls detected in 2019 through 2021. There was a single unknown sex night response in 2022. Barred owls were detected in the area from 2010 through 2017, and 2021 and 2022.

Liebre Creek

In 2016, a non-nesting pair of spotted owls occupied this site. The male occupied the Blachly East site in 2015, and the female (blue w/ a yellow stripe-left) occupied the Cape Horn site in 2015. This was not the same pair found at the nearby Knapp Creek site in 2016. This was a new pair at this site, and the AC was placed at the April 7, 2016, daytime pair location. In 2017, the 2016 pair nested in a new tree and fledged one young which was found dead on the ground near the nest tree. The AC was moved to the 2017 nest tree. In 2018, a male and a spotted owl of unknown sex were heard at night. The pair found at the nearby Knapp Creek site was attributed to this site. The male (dark green w/ a pink stripe-right) occupied the Liebre Creek site in 2017;

the female occupied the San Antone Creek site in 2017. The pair was present in 2019 and did not nest. There was a single daytime female response with no visual in 2020. There were no spotted owl responses in 2021 and a daytime AC search was conducted at this site with no spotted owl responses. Some of this area was not covered due to the Miller Creek owls nesting nearby. There were no spotted owl responses in 2022 and a daytime AC search was conducted at this site with no spotted owl responses. Barred owls were detected in 2020 through 2022.

Miller Creek

In 2016, the historic Miller Creek pair was found non-nesting. This same year, another non-nesting pair of spotted owls was found at the nearby Liebre Creek site. The male was from the Blachly East site, and the female (blue w/ a yellow stripe-left) was from the Cape Horn site. In 2017, the historic pair nested in the 2014 nest tree and fledged two young. The AC was moved to the 2014/2017 nest tree location. In 2018, the historic pair was found non-nesting at this site. In 2019, the historic pair nested in a new tree and fledged two young. In 2020, the historic pair was present but did not nest. In 2021, the pair nested in a new tree and fledged one young. The AC was not moved and remains at the 2019 nest tree. The male was present in 2022. A female was detected in 2023 once at night. Barred owls were detected in the area in 2012, 2013, and from 2015 through 2017, and 2020 through 2023

Environmental Baseline and Action Effects (based on the ODF pre-operation report)

Of the 110 acres of planned harvest within the provincial home range, all acres are considered suitable habitat for northern spotted owls. Post-harvest of the Nelson Nebulous timber sale, approximately 74%, (728 acres), 70% (668 acres) and 77% (762 acres) suitable habitat will remain within the Knapp Creek, Liebre Creek and Miller Creek 0.7 mile core area circles, respectively, with 60%, (2724 acres), 62% (2815 acres) and 52% (2372 acres) suitable habitat remaining within the Knapp Creek, Liebre Creek and Miller Creek 1.5 mile home range circles, respectively

Conservation Measures

There are no conservation measures proposed for the Nelsons Nebulous timber sale; the activities are outside established critical breeding season disruption distances for the spotted owl (see Attachment A).

Conclusion

We believe the Nelson Nebulous timber sale has a low risk of incidental take of spotted owls based upon 1) the post-harvest amount of remaining suitable habitat in home ranges and core areas of spotted owl activity centers will be well above the standard set in the SHA to avoid take, and 2) activities will be conducted outside established critical breeding season disruption distances for the spotted owl.

Old Highway Timber Sale

Old Highway is a timber sale in the 2025 Annual Operations Plan (AOP) of the West Oregon District (Lincoln County) that entails clearcutting and partial cutting of middle-aged stands. One partial cut harvest unit is located within the buffer portion of the Old Highway Marbled Murrelet Management Area (MMMA). Selective harvest thinning, road improvement, and guy line and tail hold anchors are proposed within the buffer portion of the MMMA.

Proposed Action

Harvest Unit 3 of Old Highway timber sale is entirely within the Old Highway Marbled Murrelet Management Area (MMMA) buffer, consisting of 3.9 acres of approximately 50-year-old Douglas fir. Based on 2020 LiDAR imagery the tree heights in the harvest unit range from 100 to 185 feet. The stand has not grown larger limbs and trees in the sale units have yet to develop platform structures, which are characteristics needed for murrelet nesting habitat. There is high canopy cover with canopy overlap among adjacent trees in many areas. There is some variation in canopy closure and patchiness throughout the stand due to previous partial cut harvest, abiotic components such as soils, topography, and sunlight, or biotic components such as disease and competition.

Old Highway Survey History and Site Information (as compiled by ODF)

The Old Highway MMMA was designated in 2024 following one sub-canopy detection during the 2023 survey season. Stands within the MMMA have a recent history of murrelet occurrence, which is limited to the single observation described above. The current MMMA includes 21 acres of DOH and 40 acres of buffer. Suitable nesting habitat is consistent throughout the designated occupied habitat (DOH) and mostly consists of open-grown trees. The understory plant composition within the DOH portion of the MMMA includes a well-developed shrub and hardwood layer, including vine maple, big-leaf maple, red alder, sword fern, and hazel, along with a minor component of salmonberry.

Environmental Baseline and Action Effects (as provided by ODF)

Harvest Unit 3 includes operations planned within the 100-m buffer of the MMMA. Unit 3 is a 4 net acre partial cut in a Douglas-fir dominant stand. Current stand characteristics include 50-year-old trees, stocked at 119 trees per acre (TPA), an approximate average diameter of 19 inches, and a basal area of roughly 224 square feet per acre. Approximately 3.9 acres of buffer will be thinned by cable yarding. There is a high likelihood tail holds and guy line anchors may be selected within the MMMA buffer and DOH. There is some within-stand variability in the amount of cover and height of vegetation, but generally understory cover is light to moderate (approximately 65%). The present understory plant composition includes sword fern, ocean spray, and blackberry.

The treatment is a partial cut that would result in a decreased tree density of approximately 72 Trees Per Acre (TPA), reduce the basal area to 140 square feet per acre, and maintain at least 40% canopy cover. Hauling operations will use existing road systems located throughout the area.

The USFWS has advised that thinning prescriptions should not result in less than 40% canopy cover, where berry producing species are present, to avoid short-term berry flushes and long-term increases in food abundance for potential nest predators such as corvids. The proposed prescriptions for first-entry commercial thinning are expected to retain post-harvest canopy cover greater than 40%. Thinning in the buffer and at the edge of DOH will not remove trees that contain suitable nest platforms or adjacent trees that provide cover to potential nest platforms. Considering the age of the stand that is proposed to be thinned, hand marking take trees and applying directional falling requirements in the contract is appropriate. Suitable nesting

habitat is defined as relatively flat structures that are at least 4 inches wide, 33 feet from the ground, and contain thick (> 0.5 inch) moss, epiphyte, or duff layers. Suitable nesting structures may include tree limbs, dwarf mistletoe brooms, or unique platform features resulting from damage.

Seasonal timing restrictions will be implemented during the late breeding season where no work will occur until 2 hours post day light and work will cease 2 hours prior to dusk will be observed regarding harvest-related operational activities including road construction, felling for landing areas and corridors, yarding activities, and installation of tail hold and guy line anchors.

Conservation Measures

Trash policing and removal from all harvest units, landing and roadways must be done daily. Store all food items and food waste inside appropriate containers or vehicles. Avian predators such as jays and ravens eat a wide variety of foods, and the presence of human food and food waste can attract and increase jay and raven numbers. Do not feed wildlife in the sale areas. Failure to adhere to these guidelines will result in a temporary suspension of activities until all trash is removed. Seasonal timing restriction will be observed during the late breeding season and no work will occur w/in the respective disturbance distances (see Attachment A) during the critical breeding period.

Protection and Avoidance Measures (from the ODF Biological Assessment)

The key to successfully implementing this operation, while maintaining a low risk to murrelets and their habitat, is understanding that special considerations will be necessary when operating near murrelet habitat. Operators must understand that prior planning and approval is required in areas of concern when designing logging plans, selecting tailholds, conducting yarding activities, and choosing cable corridor locations. Involvement of the Area Biologist or Designee early in the harvest process should greatly increase the likelihood of successful implementation of the protection measures resulting in minimized risk to murrelets and their habitat.

The proposed timber harvest has been reviewed by an Area Biologist to assess impacts to marbled murrelets and their nesting habitat. The assessment included an evaluation of MMMA configuration, overstory canopy cover, understory components, and topography. To consider the sale a low risk of impacting murrelets and their nesting habitat, the following protection measures must be implemented for harvest operations within the MMMA and should be included in the contract language:

Thinning Prescription

The USFWS has advised that thinning prescriptions should not result in less than 40% canopy cover, where berry-producing species are present, to avoid short-term berry flushes and long-term increases in food abundance for potential nest predators such as corvids. The proposed prescriptions for first-entry commercial thinning are expected to retain post-harvest canopy cover greater than 40%.

Thinning in the buffer and at the edge of DOH will not remove trees that contain suitable nest platforms or adjacent trees that provide cover to potential nest platforms. Considering the age of the stand that is proposed to be thinned, hand marking take trees and applying directional falling

requirements in the contract is appropriate. Suitable nesting habitat is defined as relatively flat structures that are at least 4 inches wide, 33 feet from the ground, and contain thick (e.g., > 0.5 inch) moss, epiphyte, or duff layers. Suitable nesting structures may include tree limbs, dwarf mistletoe brooms, or unique platform features resulting from damage (e.g., epicormics branching and reiterated tops).

Seasonal Timing Restrictions

Refer to ODF State Forest Division Operational Policy for Marbled Murrelets for specific timing restrictions regarding harvest-related operational activities including road construction, felling for landing areas and corridors, yarding activities, and installation of tailhold and guyline anchors. These activities are subject to seasonal timing restrictions per ODF policy and should avoid disturbance to nesting murrelets (ODF 2013).

Trash Removal

Trash policing and removal from all harvest units, landing and roadways must be done daily. Store all food items and food waste inside appropriate containers or vehicles. Avian predators such as jays and ravens eat a wide variety of foods, and the presence of human food and food waste can attract and increase jay and raven numbers. Do not feed wildlife in the sale areas. Failure to adhere to these guidelines will result in a temporary suspension of activities until all trash is removed.

Tailhold and Guyline Use Restrictions

The use of tailholds and guyline anchors are not seasonally restricted; however, the use of heavy equipment or chainsaws to install these features are prohibited within the MMMA (occupied habitat and 100-m buffer) from April 1 through August 5. From August 6 through September 15, activities are allowed with daily timing restrictions. Daily timing restrictions prohibit the use of heavy machinery and chainsaws within 2 hours of sunrise and 2 hours of sunset. From September 16 to March 31, activities are unrestricted. If tailholds are installed from April 1 through August 5, non-mechanized methods such as an ax should be used and follow the guidelines as discussed in #5, below.

Specific criteria will be required for all tailholds and guylines to protect platform trees and associated cover or recruitment trees in the MMMA from damage. The criteria are as follows

1. The following trees in DOH will **not** be selected for guylines or tailhold anchors:
 - a. Trees with potential nest platforms **or** immediately surrounding trees that provide cover to potential nest platforms.
 - b. When feasible, the largest trees in areas where the number of large trees is limited.
 - c. When feasible, minor conifer tree species that are not commonly found in the stand.
2. An ODF Area Biologist or a designee familiar with murrelet habitat and biology will inspect and approve all trees before each is used. A lead time of at least two weeks for all reviews or meetings with ODF representatives is required. No trees that are potential habitat or surrounding trees that provide cover to platform trees, as determined by an ODF Area Biologist or designee will be damaged or harvested.

3. Guylines or skylines will not be placed where they have the potential to damage platforms or platform trees.
4. No conifer trees will be felled within the DOH of the MMMA.
5. To protect trees used as guyline anchors, it is preferred that plates, nylon straps or other approved devices be utilized to prevent damage to trees. If this is not feasible, notching of the trees to prevent cable slippage will be limited to less than $\frac{1}{4}$ the circumference of the tree.
6. If no suitable guyline or tailhold trees exist, operational equipment such as a Yoder, which does not require guylines, or a dozer, which may serve as a tailhold or guyline, may be used provided no DOH is removed or destroyed when using such equipment.

Restrictions and Requirements for Construction and Improvement of Roads and Landings in Buffers

No construction of landings will occur within the DOH of the MMMA. Construction of roads, improvement of roads and landings, and yarding activities in buffers and at landings in buffers are seasonally restricted (from April 1 through August 5, then with daily timing restriction from August 6 through September 15) to prevent disturbance to nesting murrelets in DOH. Tree removal should be done only to the extent necessary for the specific operation. To prevent damage to platform trees and associated cover trees in the MMMA, the following trees will **not** be selected for removal for road construction, road improvement, landing areas or cable corridors in buffers:

1. Trees with potential nest platforms or immediately surrounding trees that provide cover to potential nest platforms as determined by an Area Biologist or designee.
2. When feasible, the largest trees in areas where the number of large trees is limited.
3. When feasible, minor tree species (not commonly found in the stand).

The following additional criteria apply to landings in buffers:

1. Seek to move landings out of buffers.
2. Utilize single, parallel corridor-type landings when landings must be in buffers.
3. If single, parallel corridor-type landings are not feasible and a spoke landing must be used, reduce the number of spoked corridors, and keep away from dominant trees. An ODF Area Biologist or a designee familiar with murrelet habitat and biology will inspect and approve all proposed road and landing locations. Lead time of at least two weeks for all reviews or meetings with ODF representatives is required. No trees that are potential habitat or surrounding trees that provide cover to platform trees, as determined by an ODF Area Biologist or designee will be damaged or harvested.
4. Landing improvement in buffers will be restricted to not greater than 0.25 acres in size.
5. To the extent practical, spoked landings constructed in buffers will be decommissioned and re-vegetated where appropriate. Decommissioning may include gates, tank traps, or boulder/stump placement. Revegetation for spoked landings will be addressed on a case-by-case basis.
6. Yard to the road with minimal road widening or extra brush clearing than already exists.
7. No conifer trees will be felled within the DOH of the MMMA.

If the protection measures cannot be met or the harvest operations within the affected MMMA's increase in scope or scale, then the low-risk determination may not be accurate.

Conclusion

We believe the Old Highway timber sale has a low risk of incidental take of murrelet due to a combination of the following reasons: 1) The action is a very small area (3.9 acres) of a 50 year old stand that is unlikely to have nesting structure for murrelet 2) The action will not remove or downgrade murrelet nesting or suitable habitat. It will only remove a small amount of buffer habitat where under canopy flights by murrelets may occur when they approach nests in adjacent nesting habitat. 3) Implementation of the protection and avoidance measures described above and in the submitted biological assessment further minimizing effects to murrelet.

Millers Woods Thin Timber Sale

Millers Woods Thin is a timber sale in the 2025 Annual Operations Plan (AOP) of the West Oregon District (WOD), Lincoln County, Oregon. The harvest prescription is a first-entry commercial thin in young, closed-canopy stands with poorly developed limb structure, low tree species diversity, and suppressed understory. The Miller Thin timber sale consists of three harvest units which are partially located within the buffer portion of the Salmon Creek, Salmon Creek East, Wolf Creek West, and North Miller Creek MMMA. Road improvement, guy line and tail hold anchors are proposed within the buffer portion of the collective MMMA.

Proposed Action

The West Oregon District has proposed the Millers Woods Thin (FY 2025) timber sale in Lincoln County. Harvest Unit 1 is adjacent to and partially within the North Miller Creek MMMA buffer (12.1 acres). Harvest Unit 2 is adjacent to and partially within the Wolf Creek West MMMA buffer (8.7 acres). Harvest Unit 3 is adjacent to and partially within the Salmon Creek East MMMA buffer (5.6 acres) and the Salmon Creek MMMA buffer (6.2 acres). The Western Oregon District has proposed a partial cut thinning for this timber sale within the MMMA buffers, which will increase stand structure and encourage growth and limb development of the remaining trees in the stand by reducing competition for sunlight and moisture. Planned harvest outside of the MMMA's will also include partial cuts with the same prescriptions. Selective harvest thinning is proposed, as is harvest-related operations in the buffers will include tail hold and guy line anchor and road improvements.

Protection and Avoidance Measures (from the ODF Biological Assessment)

The key to successfully implementing this operation, while maintaining a low risk to murrelets and their habitat, is understanding that special considerations will be necessary when operating near murrelet habitat. Operators must understand that prior planning and approval is required in areas of concern when designing logging plans, selecting tailholds, conducting yarding activities, and choosing cable corridor locations. Involvement of the Area Biologist or Designee early in the harvest process should greatly increase the likelihood of successful implementation of the protection measures resulting in minimized risk to murrelets and their habitat.

The proposed timber harvest has been reviewed by an Area Biologist to assess impacts on marbled murrelets and their nesting habitat. The assessment included an evaluation of MMMA configurations, overstory canopy cover, understory components, and topography. To consider the sale a low risk of impacting murrelets and their nesting habitat, the following protection measures must be implemented for harvest operations within each MMMA. They should be

included in the contract language:

Thinning Prescription

The USFWS has advised that thinning prescriptions should not result in less than 40% canopy cover, where berry-producing species are present, to avoid short-term berry flushes and long-term increases in food abundance for potential nest predators such as corvids. The proposed prescriptions for first-entry commercial thinning are expected to retain post-harvest canopy cover greater than 40%.

Thinning in the buffer and at the edge of DOH will not remove trees that contain suitable nest platforms or adjacent trees that provide cover to potential nest platforms. Suitable nesting habitat is defined as relatively flat structures that are at least 4 inches wide, 33 feet from the ground, and contain thick (e.g., > 0.5 inch) moss, epiphyte, or duff layers. Suitable nesting structures may include tree limbs, dwarf mistletoe brooms, or unique platform features resulting from damage (e.g., epicormic branching and reiterated tops).

Seasonal Timing Restrictions

Refer to ODF State Forest Division Operational Policy for Marbled Murrelets for specific timing restrictions regarding harvest-related operational activities including road construction, felling for landing areas and corridors, yarding activities, and installation of tailhold and guyline anchors. These activities are subject to seasonal timing restrictions per ODF policy and should avoid disturbance to nesting murrelets (ODF 2013).

Trash Removal

Trash policing and removal from all harvest units, landing and roadways must be done daily. Store all food items and food waste inside appropriate containers or vehicles. Avian predators such as jays and ravens eat a wide variety of foods, and the presence of human food and food waste can attract and increase jay and raven numbers. Do not feed wildlife in the sale areas. Failure to adhere to these guidelines will result in a temporary suspension of activities until all trash is removed.

Tailhold and Guyline Use Restrictions

The use of tailholds and guyline anchors are not seasonally restricted; however, the use of heavy equipment or chainsaws to install these features are prohibited within the MMMA (occupied habitat and 100-m buffer) from April 1 through August 5. From August 6 through September 15, activities are allowed with daily timing restrictions. Daily timing restrictions prohibit the use of heavy machinery and chainsaws within 2 hours of sunrise and 2 hours of sunset. From September 16 to March 31, activities are unrestricted. If tailholds are installed from April 1 through August 5, non-mechanized methods such as an ax should be used and follow the guidelines as discussed in #5, below.

Specific criteria will be required for all tailholds and guylines to protect platform trees and associated cover or recruitment trees in the MMMA from damage. The criteria are as follows:

1. The following trees in DOH will **not** be selected for guylines or tailhold anchors:
 - a. Trees with potential nest platforms **or** immediately surrounding trees that provide cover to potential nest platforms.
 - b. When feasible, the largest trees in areas where the number of large trees is

limited.

- c. When feasible, minor conifer tree species that are not commonly found in the stand.
2. An ODF Area Biologist or a designee familiar with murrelet habitat and biology will inspect and approve all trees before each is used. A lead time of at least two weeks for all reviews or meetings with ODF representatives is required. No trees that are potential habitat or surrounding trees that provide cover to platform trees, as determined by an ODF Area Biologist or designee will be damaged or harvested.
3. Guylines or skylines will not be placed where they have the potential to damage platforms or platform trees.
4. No conifer trees will be felled within the DOH of the MMMA.
5. To protect trees used as guyline anchors, it is preferred that plates, nylon straps, or other approved devices be utilized to prevent damage to trees. If this is not feasible, notching of the trees to prevent cable slippage will be limited to less than $\frac{1}{4}$ the circumference of the tree.
6. If no suitable guyline or tailhold trees exist, operational equipment such as a Yoder, which does not require guylines, or a dozer, which may serve as a tailhold or guyline, may be used provided no DOH is removed or destroyed when using such equipment.

Restrictions and Requirements for Construction and Improvement of Roads and Landings in Buffers

No construction of landings will occur within the DOH of each MMMA. Construction of roads, improvement of roads and landings, and yarding activities in buffers and at landings in buffers are seasonally restricted (from April 1 through August 5, then with daily timing restriction from August 6 through September 15) to prevent disturbance to nesting murrelets in DOH. Tree removal should be done only to the extent necessary for the specific operation. To prevent damage to platform trees and associated cover trees in each MMMA, the following trees will **not** be selected for removal for road construction, road improvement, landing areas or cable corridors in buffers:

1. Trees with potential nest platforms or immediately surrounding trees that provide cover to potential nest platforms as determined by an Area Biologist or designee.
2. When feasible, the largest trees in areas where the number of large trees is limited.
3. When feasible, minor tree species (not commonly found in the stand).

The following additional criteria apply to landings in buffers:

1. Seek to move landings out of buffers.
2. Utilize single, parallel corridor-type landings when landings must be in buffers.
3. If single, parallel corridor-type landings are not feasible and a spoke landing must be used, reduce the number of spoked corridors, and keep away from dominant trees. An ODF Area Biologist or a designee familiar with murrelet habitat and biology will inspect and approve all proposed road and landing locations. Lead time of at least two weeks for all reviews or meetings with ODF representatives is required. No trees that are potential habitat or surrounding trees that provide cover to platform trees, as determined by an ODF Area Biologist or designee will be damaged or harvested.
4. Landing improvement in buffers will be restricted to not greater than 0.25 acres in size.
5. To the extent practical, spoked landings constructed in buffers will be decommissioned and re-vegetated where appropriate. Decommissioning may include gates, tank traps, or

boulder/stump placement. Revegetation for spoked landings will be addressed on a case-by-case basis.

6. Yard to the road with minimal road widening or extra brush clearing than already exists.
7. No conifer trees will be felled within the DOH of the MMA.

If the protection measures cannot be met or the harvest operations within the affected MMAs increase in scope or scale, then the low-risk determination may not be accurate.

Conclusion

We believe the Millers Wood timber sale has a low risk of incidental take of murrelet due to a combination of the following reasons: 1) The action is in very young stands are unlikely to have nesting structure for murrelet 2) canopy cover will be retained at the target of 40 percent or greater post thinning – Therefore, the action will not remove or downgrade murrelet nesting or suitable habitat. 3) Implementation of the protection and avoidance measures described above and in the submitted biological assessment further minimizing effects to murrelet.

Based on the canopy cover retention target of 40- percent or greater post thinning, no trees displaying suitable nesting platforms and their buffering neighbors will be removed, operating outside the critical breeding period for the murrelet and honoring seasonal restrictions in the late breeding season, we believe the Millers Woods Thin timber sale has a low risk of incidental take of marbled murrelets.

Thank you for the information provided to review these five projects. We appreciate your efforts to reduce the likelihood of negative impacts to federally listed species such as the spotted owl and marbled murrelet and look forward to continued coordination. If you have any questions about this response, please contact Kevin Maurice or Randi Riggs at 503-231-6179.

Sincerely,

Acting Forest Resources Division Manager
for Kessina Lee
State Supervisor

Literature cited

U.S. Fish and Wildlife Service and Oregon Department of Forestry. 2019. Minor Amendment for the Safe Harbor Agreement for the Northern Spotted Owl in the Coast Ranges Study Area for the Barred Owl Removal Experiment. September 2019. 32pp.

Attachments

Attachment A

Disturbance Source	Disturbance Distance* During the Entire Breeding Season NLAA	Disruption Distance* During the Critical Breeding Season LAA	Disruption Distance* During the Late Breeding Season LAA
Oregon Coast Range	March 1-Sept 30	March 1 – July 7	July 8 – Sept. 30
Oregon West and East Cascades	March 1-Sept 30	March 1 – July 15	July 16 – Sept 30
Light maintenance of roads, campgrounds, and administrative facilities	<= 0.25 mile	No restrictions; NA ¹	No restrictions; NA
Log hauling on open roads	<= 0.25 mile	No restrictions; NA ²	No restrictions; NA
Chainsaws (includes felling hazard/danger trees), Drones	<= 0.25 mile	<= 65 yards ²	No distance restrictions
Heavy equipment for road construction, road repairs, bridge construction, culvert replacements, etc.	<= 0.25 mile	<= 65 yards ²	No distance restrictions
Pile-driving (steel H piles, pipe piles), rock crushing, and screening equipment	<= 0.25 mile	<= 120 yards ³	No distance restrictions
Blasting	<= 1 mile	<= 0.25 mile ³	100 yards ^{4,3}
**Helicopter: Chinook 47d (described as a large helicopter in the rest of this document)	<= 0.5 mile	<= 265 yards ⁵	100 yards (hovering only) ⁶
**Helicopter: Boeing Vertol 107, Sikorsky S-64 (SkyCrane)	<= 0.25 mile	<= 150 yards ⁷	50 yards (hovering only) ⁶
**Helicopters: K-MAX, Bell 206 L4, Hughes 500	<= 0.25 mile	<= 110 yards ⁸	50 yards (hovering only) ⁶
**Small fixed-wing aircraft (Cessna 185, etc.)	<= 0.25 mile	<= 110 yards	No distance restrictions
Tree Climbing	<= 25 yards	<= 25 yards ⁹	No distance restrictions
Burning (prescribed fires, pile burning)	<= 0.25 mile	<= 0.25 mile ¹⁰	No distance restrictions
Drone Use	0.25 mile	65 yards	N/A (spotted owls, as long as spotted owls are not pursued)

* Note: Table values are presented as general distances for a single activity occurring at least once, without consideration for particulars of the activity or the situation. The unit biologist must consider the sum of all activities as well as their timing, duration, frequency, situation-specific magnitude and any situation-specific factors that may increase or decrease potential effects of these activities (e.g., topography). Distances for all activities in known northern spotted owl sites except drone use are measured from the edge of the nest patch, unless the current

nest tree is known, in which case the distance is measured from that tree. For potential sites, distances for all activities are measured from the edge of the core area. Distances for drone use apply to the nest patch even if the current nest tree is known.

****Aircraft normally use above ground level (AGL) as a unit of measure. For instance, to not cause a disruption by medium and small helicopters during the late breeding season, the AGL would be 350 feet. 350 feet AGL would account for 200 foot tall trees that spotted owls would be occupying plus the 50 yards (or appropriate) disruption distance.**

1. NA = not applicable. Based on information presented in Tempel and Gutiérrez (2003, p. 700), Delaney et al. (1999, p. 69), and Kerns and Allwardt (1992, p. 9), we anticipate that the few spotted owls that select nest sites in close proximity to open roads either are undisturbed by or habituate to the normal range of sounds and activities associated with these roads.
2. Based on Delaney et al. (1999, p. 67) which indicates that spotted owl flush responses to above-ambient equipment sound levels and associated activities are most likely to occur at a distance of 65 yards (60 m) or less.
3. Impulsive sound associated with blasts and pile-driving is highly variable and potentially injurious at close distances. We selected a 0.25-mile radius around blast sites as a disruption distance based on observed prairie falcon flush responses to blasting noise at distances of 0.3 – 0.6 miles from blast sites (Holthuijzen et al. 1990, p. 273). We have conservatively chosen a distance threshold of 120 yards for impact pile-driving and rock-crushing operations to avoid potential hearing loss effects and to account for substantial behavioral responses (e.g., flushing) from exposure to continuous sounds from impact pile driving.
4. Exposure to peak sound levels that are >140 dBA is likely to cause injury in the form of hearing loss in birds (Dooling and Popper 2007, pp. 23-24). We have conservatively selected 100 yards as an injury threshold distance based on sound levels from experimental blasts reported by Holthuijzen et al. (1990, p. 272), which documented peak sound levels from small blasts at 138 – 146 dBA at a distance of 100 m (110 yards).
5. Based on an estimated 92 dBA sound-contour from sound data for the Chinook 47d presented in Newman et al. (1984, Table D.1).
6. Rotor-wash from large helicopters is expected to be disruptive at any time during the nesting season due the potential for flying debris and shaking of trees located directly under a hovering helicopter. Hovering rotor-wash distance is based on a 300-ft radius rotor-wash zone for large helicopters hovering at < 500 above ground level (from WCB 2005, p. 2 – logging safety guidelines). We reduced the hovering helicopter rotor-wash zone to a 50-yard radius for all other helicopters based on the smaller rotor-span for all other ships.
7. Based on an estimated 92 dBA sound contour from sound data for the Boeing Vertol 107 the presented in the San Dimas Helicopter Logging Noise Report (USFS 2008, chapters 5, 6).
8. Based on Delaney et al. (1999, p. 74), which concluded that a buffer of 105 m (115) yards for helicopter overflights would eliminate flush responses from military helicopter overflights. The estimated 92 dBA sound contours for these helicopters is less than 110 yards (e.g., K-MAX (100 feet) (USFS 2008, chapters 5, 6), and Bell 206 (85-89 dbA at 100 m) (Grubb et al. 2010, p. 1277).
9. Distance for spotted owls is based on Swarthout and Steidl (2001, p. 312) who found that 95 percent of flush responses by Mexican spotted owls due to the presence of hikers on trails in canyons occurred within a distance of 24 m.
10. Based on recommendations presented in Smoke Effects to Northern Spotted Owls (USFWS 2008, p. 4). The disruption distance for prescribed burning during the critical breeding period is based on concerns with dense, persistent smoke occurring at a site where spotted owls are nesting. Many factors influence how much smoke is produced and how far and in which direction it would travel when burning.