

MEMORANDUM

TO: Art McCoy

FROM: Randy Smith

SUBJECT: Preliminary Biological Assessment for the **Big Cut Aerial** Timber Sale

DATE: January 28, 2005

Purpose

Western Lane District is proposing the Big Cut Aerial timber sale in their 2005 Annual Operations Plan. This sale area contains potentially suitable habitat for northern spotted owls and is located within the Western Cascades NSO province. The sale is within 1.2 miles of the Wet Gulch northern spotted owl activity center. This sale is outside the known inland range of the marbled murrelet (>50 miles from the ocean). This memo presents the relevant biological information needed to assess the potential effects of the Big Cut Aerial timber sale on northern spotted owls.

Northern Spotted Owls

Policy Direction

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of northern spotted owls, according to ODF policy (Holloway 2002), is to apply the U.S. Fish and Wildlife Service rescinded Incidental Take Guidelines (ITG) as outlined in "Procedures leading to Endangered Species Act compliance for the northern spotted owl" (U.S. Fish and Wildlife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 1.2 miles), either 40% suitable habitat (1,152 acres) or 1,182 acres of suitable habitat 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.

Survey Information

The Big Cut Aerial timber sale was surveyed to protocol for northern spotted owls in 2004, and will be surveyed again in 2005, consistent with the survey protocol (Anonymous 1991). As a result of these and previous surveys in the area, one northern spotted owl activity center has been located within 1.2 miles of the sale area. The Wet Gulch site is located on USFS land approximately 0.6 miles from the Big Cut Aerial timber sale area.

Site History

-Wet Gulch

The Wet Gulch site was established in 1999 when a single male response was detected as well as a female barred owl. There were no responses in 2000 or 2002. In 2001, a male was detected once at night. In 2003, a male was observed and appeared to be paired with a barred owl. In 2004, a single owl of unknown sex was detected as well as a barred owl. Site status is Resident Single.

Habitat Information

The Big Cut Aerial sale consists of 115 acres of modified clear cut in two areas and two additional leave areas for a total sale of 121 acres. Area I consists of 74 acres which originated after wildfires around 1900 and consists of Douglas-fir with a brush understory. Average DBH is 22 inches with approximately 100 TPA. Area II consists of 41 acres of predominantly Douglas-fir but

has some hemlock, cedar, big-leaf maple and brush in the understory. Two stand types comprise Area II. Approximately 23 acres are comprised of primarily 115 year old Douglas-fir with an average DBH of 22 inches and 85 TPA. There are hemlock, cedar, bigleaf-maple and alder present in the understory. The other 18 acres are comprised of 65 year old Douglas-fir with an average DBH of 17 inches and 185 TPA. I have been to all areas of this sale and would consider the entire sale to be suitable habitat for northern spotted owls.

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 Cascades is 2,955 acres, or the approximate equivalent of the area encompassed by a circle with a radius of 1.2 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 1.2 mile radius circle (2,880 acres) around the nest or activity center approximates the home range of this site.

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 Cascades. Spotted owls are known to nest in stands as young as 40-65-years-old on state forest lands in the Cascades District (just to the North of the Wet Gulch site) that have suitable nesting structures (40% of known nests on ODF lands in the District are located in stands in this age class) and to forage in even younger stands (Irwin et al., 2000).

For the purposes of this discussion, suitable spotted owl habitat is considered to be stands at least 55 years old, younger stands that have known owl use, or stands that appear to be suitable habitat from an assessment of aerial photographs (taken in 2000) and ground verification in 2004. My assessment of habitat within this circle is that there are two, well defined types of habitat. There are large patches of federal and state ownership which are obvious, older forest structure and mature stands, and young plantations of private ownership that are not yet suitable habitat.

Landscape condition

The following discussion assesses the habitat situation within 0.7 and 1.2 miles of the Wet Gulch spotted owl activity center, as recommended by the ITG (Table 1, Figure 1).

The Big Cut Aerial timber sale will clear cut 8 acres within the 0.7 mile circle for the Wet Gulch spotted owl site. A habitat analysis of the Wet Gulch spotted owl site indicates that there are currently 520 acres of suitable habitat within 0.7 miles of the activity center. If the portion of the sale within the 0.7 mile circle is excluded from the suitable habitat, 512 acres (52%) of suitable habitat are available within 0.7 miles of the activity center. There are 1,685 acres of suitable habitat within 1.2 miles of the activity center. The Big Cut Aerial timber sale will clear cut 115 acres within the 1.2 mile circle. If the sale area is excluded from the suitable habitat, 1,570 acres (55%) of suitable habitat are available within 1.2 miles of the activity center. Based on this preliminary habitat analysis, this site will maintain enough unmodified suitable habitat within both the 0.7 mile and 1.5 mile circle after harvest to be consistent with the ITG.

Sale Prescription

The Big Cut Aerial timber sale is a 115 acre modified clear cut sale in two areas. Both areas will receive a modified clear cut prescription. Three trees per acre and one snag per acre will be left or created in Area I. Area II will leave 8 trees per acre and 3 snags per acre will be left or created. The higher number of GTR and snags to be left in Area II is due to operational concerns in Area I. There are 2 leave areas associated with this sale. A five acre area to the

west and a 1 acre area to the east of Area I will have an additional 34 snags created. Green trees, snags, and down wood will be left in the sale area consistent with the guidance in the Northwest Forest Management Plan. Minor conifer and hardwood species will be retained if they are not a safety hazard. A mixture of Douglas-fir, hemlock and cedar will be planted after harvest. There will be no new road construction conducted outside the sale area.

Assessment

The Wet Gulch spotted owl site is approximately 0.6 miles from the proposed Big Cut Aerial timber sale. Approximately 8 acres of the sale are within 0.7 miles of the activity center and 115 acres are within 1.2 miles of the activity center. The modified clear cut harvest of the Big Cut Aerial timber sale will likely cause some habitat fragmentation within the 1.2 mile circle. The modified clear cut will create a gap of nonsuitable habitat between contiguous habitat and the patch, potentially reducing the probability that the patch will be used to any great extent. The Wet Gulch owl activity center is on USFS land. Federally managed land makes up 50% of the area within 1.2 miles of the spotted owl activity center, 16% is managed by ODF and 34% is managed by other landowners. The habitat quality on USFS and BLM immediately surrounding the spotted owl site, and further to the east, appears to be very high quality for spotted owls. The habitat on state lands near the spotted owl activity center is of good quality and appears to provide foraging and roosting opportunities for spotted owls. Habitat on private lands within the circle is of low quality and will not provide suitable owl habitat for some time. Since the private lands do not appear to be providing much suitable habitat, it is likely that the owls are utilizing more federal habitat to the east than is encompassed within the circle. The harvest plans of adjacent landowners are unknown at this time. The preliminary habitat analysis of this site indicates that the ITG will be met within 0.7 and 1.2 miles of the activity center after harvest of the sale area.

Risk Assessment

The Big Cut Aerial timber sale includes 115 acres of modified clear cut in second growth Douglas-fir and mixed conifer/hardwood stands consisting of Douglas-fir, western hemlock and bigleaf maple. This activity will take place within 1.2 miles of the Wet Gulch activity center and some activity will be within the 0.7 mile circle.

I believe the Big Cut Aerial sale as currently planned will have a low risk of negatively affecting the occupancy and productivity of the Wet Gulch spotted owl site. This assessment is based on the following factors:

Wet Gulch:

- ◆ The sale is located 0.6 miles from the Wet Gulch activity center;
- ◆ 115 acres of the sale area are along the outer portion of the 1.2 mile circle;
- ◆ Approximately 52% of the 0.7 mile circle will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG;
- ◆ Approximately 55% of the 1.2 mile circle will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG;

Literature Cited

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

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

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

Irwin, L, D. F. Rock, and G. P. Miller. 2000. Stand Structure used by Northern Spotted Owls in Managed Forests. J. Raptor. Res. 34: 175-186.

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

cc: Rosemary Mannix
Tom Mickel
Rick Rogers
Marcia Humes

Table 1. Acres of suitable habitat within the 0.7 and 1.2 mile circle of the Wet Gulch northern spotted owl activity center.

	Acres	Wet Gulch	Wet Gulch
		0.7 miles	1.2 miles
Suitable Habitat:			
ODF		57	364
FEDERAL		423	1281
PRIVATE		40	40
TOTAL		520	1685
SALE AREA	115	8	115
Suitable acres minus sale acres		512	1570
% suitable post-harvest		52%	55%