

MEMORANDUM

TO: Chris Rudd
FROM: Randy Smith
SUBJECT: Preliminary Biological Assessment for **Watertank Gulch** Timber Sale
DATE: January 31, 2006

Purpose

Watertank Gulch is a proposed sale in the Southwest Oregon District 2007 Annual Operations Plan. The Watertank Gulch sale is within 1.3 miles of four northern spotted owl activity centers, Rattlesnake, Section Creek, Farmer Ramsey and Tanked Wolf. This memo presents the relevant biological information needed to assess the potential effects of this thinning sale on northern spotted owls. This sale is outside of the known inland range of the marbled murrelet (>50 miles from the ocean).

Policy Direction

In the Southwest Oregon 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of northern spotted owls, according to ODF policy (Holloway 2002), is to apply the U.S. Fish and Wildlife Service rescinded Incidental Take Guidelines (ITG) as outlined in "Procedures leading to Endangered Species Act compliance for the northern spotted owl" (U.S. Fish and Wildlife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 mile radius, and within the home range circle (in this province 1.3 miles), approximately 40% suitable habitat (1,336 acres) should be maintained. Additional factors to be considered and documented in this biological assessment include proximity of the operation to a site, the prescription proposed, the size of the operation, the history of management activity near the site, and other relevant factors.

Survey Information

The Watertank Gulch timber sale was surveyed to protocol for northern spotted owls in 2004, 2005 and will be surveyed again in 2006, consistent with the survey protocol endorsed by U.S. Fish and Wildlife Service (Anonymous 1991). As a result of these and previous surveys in the area, four northern spotted owl activity centers have been identified within 1.3 miles of the sale. The Rattlesnake site is located on BLM land approximately 0.8 miles from the sale. The Section Creek site is located on BLM land 0.8 miles from the sale. The Farmer Ramsey site is on BLM land approximately 0.6 miles from the sale. The Tanked Wolf site is on BLM land approximately 0.7 miles from the sale.

Site History

Rattlesnake

In 2001, the pair nested in the 2000 tree but failed. In 2002, the pair may have attempted to nest but nest status was not confirmed and no young were detected. In 2003, the pair nested in a new tree but failed to produce young. In 2004, they nested and fledged one young. In 2005, a new female was present and they nested in a new tree but failed.

Section Creek

This site was established in 2003 but they did not nest. A non-nesting pair occupied this site in 2004 and 2005.

Farmer Ramsey

A pair was present and fledged two young in 2001. There were no responses in 2002 or 2003. In 2004, a non-nesting pair and an additional sub-adult of unknown sex were located in the core. There was no response in 2005.

Tanked Wolf

In 2002, a non-nesting pair was found at this site and the activity center was placed at the first daytime pair location. This pair was non-nesting in 2003, 2004 and 2005.

Habitat Information

The Watertank Gulch timber sale consists of 72 acres of 70-95 year old Douglas-fir with minor amounts of grand fir, incense cedar and mixed hardwood stands with an average DBH of 11-13 inches and approximately 190-240 TPA. There are approximately 2-3 snags per acre >12 inches DBH in the sale area, however, Area 1 has up to 6 conifer snags per acre >15 inches DBH. The amount of large down wood is estimated between 800-1600 cu. ft. per acre in decay classes 1-5. I have visited this sale and my assessment is that the sale area contains suitable habitat for spotted owls.

Defining the home range

We do not have specific information about the home ranges of the northern spotted owl sites affecting this thinning sale. According to "Procedures leading to Endangered Species Act compliance for the northern spotted owl" (U.S. Fish and Wildlife Service 1990), the median home range size for spotted owl pairs in the Klamath Province is 3,340 acres, or the equivalent of the area encompassed by a circle with a radius of 1.3 miles. Although spotted owls generally do not have circular home ranges, in the absence of more specific information about the home ranges of these sites, I will assume that a 1.3 mile radius circle around the nest or activity center approximates the home ranges of these sites.

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 Klamath province. The home ranges of spotted owls in this region contain large percentages of stands in intermediate stages of stand development (Anthony and Wagner 1999). Spotted owls are known to nest in stands as young as 60-80 years old that have suitable structures on state forest lands in the Southwest Oregon District (40% of known nests on ODF lands in the District are in this age class) and to forage in even younger stands.

A complicating factor in identifying suitable spotted owl habitat on this District is the land ownership pattern. The area around the Rattlesnake, Section Creek, Farmer Ramsey and Tanked Wolf spotted owl sites includes lands managed by federal, state, private industrial and private non-industrial landowners. Because specific stand data on private and federal ownership was not available for our use, this assessment of habitat quality within the Rattlesnake, Section Creek, Farmer Ramsey and Tanked Wolf home range circles is based on aerial photos. Determination of habitat status within the owl circles was done by 2004 series air photo analysis and 2005 field assessments.

Landscape Condition

The following discussion assesses the habitat situation within 0.7 and 1.3 miles of the Rattlesnake, Section Creek, Farmer Ramsey and Tanked Wolf spotted owl activity centers, as recommended by the ITG (Table 1, Figure 1). Portions of the sale are within the 0.7 mile circles of the Farmer Ramsey and Tanked Wolf activity centers.

The Watertank Gulch timber sale will thin 72 acres within the 1.3 mile circle for the Rattlesnake spotted owl site. A habitat analysis of the Rattlesnake spotted owl site indicates that there are currently 2,616 acres of suitable habitat within 1.3 miles of the activity center. If the sale area is excluded from the suitable habitat, 2,544 acres (75%) of suitable habitat are available within 1.3 miles of the activity center.

Based on this preliminary habitat analysis, this site will maintain enough unmodified suitable habitat within the 1.3 mile circle after harvest to be consistent with the ITG.

The Watertank Gulch timber sale will thin 72 acres within the 1.3 mile circle for the Section Creek spotted owl site. A habitat analysis of the Section Creek spotted owl site indicates that there are currently 2,475 acres of suitable habitat within 1.3 miles of the activity center. If the sale area is excluded from the suitable habitat, 2,403 acres (71%) of suitable habitat are available within 1.3 miles of the activity center. Based on this preliminary habitat analysis, this site will maintain enough unmodified suitable habitat within the 1.3 mile circle after harvest to be consistent with the ITG.

The Watertank Gulch timber sale will thin approximately 13 acres within the 0.7 mile circle for the Farmer Ramsey spotted owl site. A habitat analysis of the Farmer Ramsey spotted owl site indicates that there are currently 907 acres of suitable habitat within 0.7 miles of the activity center. If the sale area is excluded from the suitable habitat, 894 acres (91%) of suitable habitat are available within 0.7 miles of the activity center. Approximately 72 acres will be thinned within 1.3 miles of the activity center. There are currently 2,547 acres of suitable habitat within 1.3 miles of the activity center. If the sale area is excluded from the suitable habitat, 2,475 acres (73%) of suitable habitat are available within 1.3 miles of the activity center. Based on this preliminary habitat analysis, this site will maintain enough unmodified suitable habitat within both the 0.7 and 1.3 mile circles after harvest to be consistent with the ITG.

The Watertank Gulch timber sale will thin 4 acres within the 0.7 mile circle for the Tanked Wolf spotted owl site. A habitat analysis of the Tanked Wolf spotted owl site indicates that there are currently 878 acres of suitable habitat within 0.7 miles of the activity center. If the sale area is excluded from the suitable habitat, 874 acres (89%) of suitable habitat are available within 0.7 miles of the activity center. Approximately 72 acres will be thinned within 1.3 miles of the activity center. There are currently 2,453 acres of suitable habitat within 1.3 miles of the activity center. If the sale area is excluded from the suitable habitat, 2,381 acres (70%) of suitable habitat are available within 1.3 miles of the activity center. Based on this preliminary habitat analysis, this site will maintain enough unmodified suitable habitat within both the 0.7 and 1.3 mile circles after harvest to be consistent with the ITG.

Sale Prescription

The prescription for the Watertank Gulch timber sale is a thinning to a SDI of 30-35%. The prescription will primarily be a basal area thinning from below to remove the suppressed, intermediate and some co-dominant trees from these overstocked Closed Single Canopy structure stands. Hardwood patches will be thinned and interplanted with conifer species to promote layering and greater species diversity. Some of the healthy advanced understory will be reserved to promote layering. Approximately 10% of the sale area will remain in un-thinned patches at least 1 acre in size. In addition, opportunities to create small ¼ to 1 acre patch cuts throughout the sale will be explored during sale layout with the Area Biologist for added diversity. All minor conifer and hardwood species will be reserved from cutting. Trees greater than 32 inches DBH will be reserved from cutting unless they are a safety hazard. This will preserve the largest and healthiest trees in the stands. The basal area target and upper diameter limit will preserve the diversity of these stands while permitting density management for increased growth and development of the overstory and understory. Thinning these stands will increase the health and vigor of the residual hardwood and conifer as well as reduce the likelihood of insect damage, disease, wildfire, windthrow, or other stand replacing event. An estimated 1 to 1.5 snags per acre will occur as a result of logging and natural mortality. An additional 1 snag per 2 acres will be created. All snags that are not safety or fire hazards will be reserved. Any snags that are felled will be retained for down wood. Approximately 100 cu. ft./acre of class 1 down wood will be added through normal logging operations including trees that are damaged and eventually blow down and cull log segments required to be left on the ground. No yarding of down wood will be permitted. Most open patches will be underplanted with a combination of Douglas-fir, ponderosa pine, sugar pine, and incense cedar. No suitable habitat will be removed during sale operations for road construction.

Assessment

The Rattlesnake spotted owl site is approximately 0.8 miles from the proposed Watertank Gulch timber sale. Approximately 72 acres of the sale are within 1.3 miles of the activity center. This sale does not affect the 0.7 mile circle. The Rattlesnake owl activity center is on BLM land and is not located in a LSR. Federally managed land makes up 52% of the area within 1.3 miles of the spotted owl activity center, 2% is managed by ODF and 46% is managed by other landowners. The habitat analysis of this site indicates that the ITG will be met within 1.3 miles of the activity center after harvest of the sale area.

The Section Creek spotted owl site is 0.8 miles from the proposed Watertank Gulch timber sale. Approximately 72 acres of the sale are within 1.3 miles of the activity center. This sale does not affect the 0.7 mile circle. The Section Creek owl activity center is on BLM land and is not located in a LSR. Federally managed land makes up 50% of the area within 1.3 miles of the spotted owl activity center, 3% is managed by ODF and 47% is managed by other landowners. The habitat analysis of this site indicates that the ITG will be met within 1.3 miles of the activity center after harvest of the sale area.

The Farmer Ramsey spotted owl site is 0.6 miles from the proposed Watertank Gulch timber sale. Approximately 13 acres of the sale are within 0.7 miles and 72 acres are within 1.3 miles of the activity center. The Farmer Ramsey owl activity center is on BLM land and is not located in a LSR. Federally managed land makes up 45% of the area within 1.3 miles of the spotted owl activity center, 2% is managed by ODF and 53% is managed by other landowners. The habitat analysis of this site indicates that the ITG will be met within 0.7 and 1.3 miles of the activity center after harvest of the sale area.

The Tanked Wolf spotted owl site is approximately 0.7 miles from the proposed Watertank Gulch timber sale. Approximately 4 acres of the sale are within 0.7 miles and 72 acres are within 1.3 miles of the activity center. The Tanked Wolf owl activity center is on BLM land and is not located in a LSR. Federally managed land makes up 42% of the area within 1.3 miles of the spotted owl activity center, 4% is managed by ODF and 54% is managed by other landowners. The habitat analysis of this site indicates that the ITG will be met within 0.7 and 1.3 miles of the activity center after harvest of the sale area.

Risk Assessment

The Watertank Gulch timber sale includes 72 acres of thinning in mixed conifer/hardwood stands consisting of Douglas-fir, grand fir, incense cedar, big leaf maple and pacific madrone. This activity will take place within 1.3 miles of the Rattlesnake, Section Creek, Farmer Ramsey and Tanked Wolf activity centers and some activity will take place within 0.7 miles of the Farmer Ramsey and Tanked Wolf activity centers.

I believe the Watertank Gulch sale as currently planned will have a low risk of negatively affecting the occupancy and productivity of the Rattlesnake, Section Creek, Farmer Ramsey and Tanked Wolf spotted owl pairs. This assessment is based on the following factors:

Rattlesnake:

- ◆ The sale is located 0.8 miles from the Rattlesnake activity center;
- ◆ Approximately 75% of the 1.3 mile circle will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG;
- ◆ The proposed sale prescription is a moderate thinning that will retain habitat elements and enhance future development of habitat important to northern spotted owls.

Section Creek:

- ◆ The sale is located 0.8 miles from the Section Creek activity center;
- ◆ Approximately 71% of the 1.3 mile circle will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG;
- ◆ The proposed sale prescription is a moderate thinning that will retain habitat elements and enhance future development of habitat important to northern spotted owls.

Farmer Ramsey:

- ◆ Approximately 91% of the 0.7 and 73% of the 1.3 mile circle will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG;
- ◆ The proposed sale prescription is a moderate thinning that will retain habitat elements and enhance future development of habitat important to northern spotted owls.

Tanked Wolf:

- ◆ The sale is located 0.7 miles from the Tanked Wolf activity center;
- ◆ Approximately 89% of the 0.7 mile circle and 70% of the 1.3 mile circle will remain as unmodified suitable habitat after harvest of the sale, exceeding the ITG;
- ◆ The proposed sale prescription is a moderate thinning that will retain habitat elements and enhance future development of habitat important to northern spotted owls.

Although the proposed sale is within 0.7 miles of the Farmer Ramsey and Tanked Wolf activity centers, I believe the risk of the sale would be low because there will be sufficient, quality habitat available within both the 0.7 and 1.3 mile circles after harvest which will exceed the ITG and that the prescription is a thinning which will retain and enhance habitat elements important to owls into the future.

Literature Cited

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

Anthony, R.G., F.F. Wagner 1999. Reanalysis of northern spotted owl habitat use on the Miller Mountain study area. Report to the Bureau of Land Management, Medford District, October 1999. 71 pp.

Holloway, R. "Northern Spotted Owl Management Measures." ODF Internal Memorandum to Area Directors, District Foresters, Assistant District Foresters. October 23, 2000.

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: Marcia Humes
Dan Thorpe
Rob Nall

Table 1. Acres of suitable habitat within the 0.7 and 1.3 mile circles of Rattlesnake, Section Creek, Farmer Ramsey and Tanked Wolf northern spotted owl activity centers. Suitable habitat was determined through 2004 air-photo analysis and 2005 field assessments.

	Acres	Rattlesnake	Section Creek	Farmer Ramsey		Tanked Wolf	
		1.3	1.3	0.7	1.3	0.7	1.3
Suitable Habitat							
State		73	92	13	72	4	124
Federal		1192	1289	467	1281	449	1119
Private		1351	1094	427	1193	425	1210
Total		2616	2475	907	2547	878	2453
Sale area	72	72	72	13	72	4	72
Acres removed for road construction		0	0	0	0	0	0
Unmodified suitable habitat remaining		2544	2403	894	2475	874	2381
% suitable remaining post harvest		75%	71%	91%	73%	89%	70%