

**SUBJECT: SUMMARY OF MODIFICATIONS TO WINDY PEAK 4 SINCE APPROVAL OF THE ANNUAL OPERATIONS PLAN (FY 2007 AOP)**

**DATE: 10/11/07**

**FROM: Art McCoy**

**TO: Rick Rogers, Western Lane District**

**CC: Operation file, Windy Peak 4 341-08-08**

The sale is basically the same as the approved AOP - partial cut the conifer and, in some partial cut Areas, clearcut the alder as well. However, the sale is 27 acres smaller than planned because of the discovery of marbled murrelets in the vicinity. Two marble murrelet management areas were established, reducing the sale acreage in the SW portion of the sale and in the NE portion.

Modified Clearcut vs Retention Cut:

- The retention cut acres shown in the table below are patches within partial cut Areas 5 & 6 in which alder will be clearcut and Douglas-fir clumps thinned. In the original AOP these acres were described as modified clearcut. (Neither the sale contract nor Exhibit A delineate these retention cut parcels. Instead, the contract harvest prescription for Areas 1, 3, 5, & 6 is described as heavy thinning the Douglas-fir and cutting all the alder.)

Prescription changes:

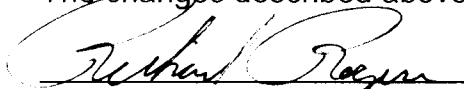
- Area 1: Harvest alder as well as thin the conifer. This was done to increase vertical diversity in the long term by replacing short lived alder patches with maple and shade tolerant conifer.
- Area 2: Change from a standard, medium density thinning to a diameter limit partial cut, removing all Douglas-fir under 32 inches DBH. The goal is to create patches of vertical diversity by cutting holes in the stand.
- Area 2: The northernmost 5 acres of the original Area 2 is younger timber than the main unit. This 5 acre piece was re-named Area 3 and has the same prescription as Areas 5 and 6.
- Area 3 (now re-named Area 4): Change from a medium density thinning to a heavy thinning to better develop future OFS.

We decided not to improve 0.4 miles of spur, but to just brush it and let the purchaser add rock if needed for winter operations. 0.1 miles of new spur was needed to log a portion of Area 5. Other project costs are for pre-operations road maintenance on State and USFS roads, including 3.2 miles of brushing. This pre-operations road maintenance is listed below as improvement.

Revised AOP documents and a Final Biological Assessment have been prepared.

	Original AOP	Current Sale
Net Acres of Conifer Thinning and Partial Cut	122	106
Net Acres of Retention Cut	0	14
Net Acres of Modified Clearcut	25	0
<b>Total Net Acres</b>	<b>147</b>	<b>120</b>
Volume (MBF)	2400	3498
New Construction (miles)	0	0.1
Improvement	0.6	3.2
Vacation	0	0.1
Project Costs	\$25,000	\$20,240

The changes described above have been reviewed and approved:

  
 Rick Rogers, District Forester

10/12/07  
 Date

# Pre-Operations Report

**Operation Name: Windy Peak 44**  
**County: Lane**  
**Management Basin: Western Lane**  
**Legal Description: Sec 16, T16S, R8W**

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

Area	Type of Operation	Gross Acres	Net Acres
1	Heavy Thinning		13
2	Medium Thinning		44
3	Medium Thinning		12
4	Heavy Thinning		47
5	Modified Clearcut		18
6	Leave Area (3 acres)		
<b>Total</b>			<b>134</b>

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

The sale area is 23 miles from the coast and 24 miles west of Eugene. Elevation is approximately 1600 feet. The climate is cooler and wetter than Eugene. Eocene age sedimentary geology underlies the area. The soils are Digger, Drain, and Valino. Slopes range from 30% to 80%.

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

The entire area is comprised of four SLI stands originating after historic wildfires. No prior management has been done.

Stand Level Inventory (SLI) has been completed on three of the four stands in 2005. Data from OSCUR was used for the fourth stand.

The sale area consists of either conifer or hardwood dominated areas. The conifer areas are Douglas-fir with a trace of western hemlock and western redcedar. The hardwood dominated areas are a mix of red alder and bigleaf maple with conifer scattered and in patches.

Even though the Douglas-fir overstory is made up of varying ages, it is primarily a single species homogenous overstory with limited vertical diversity. The understory is composed of various typical coast range shrub species with minor amounts of hemlock and cedar.

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

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	RD	Acres <sup>2</sup>
1	H Thin	15040	DF	72	17.6	296	174	75	13
	<b>Target</b>	<b>See IV</b>							
2	M Thin	15038	DF	104	24.3	354	110	83.7	37
	M Thin	15032	DF	90	25.0	169	49	56.3	7
	<b>Target</b>	<b>See IV</b>							
3	M Thin	15032	DF	90	25.0	169	49	56.3	12
	<b>Target</b>	<b>See IV</b>							
4	H Thin	15020	DF	72	16.8	200	127	67.5	47
	<b>Target</b>	<b>See IV</b>							
5	M CC	15020	Hdwd	72	14.7	58	49	NA	18
6	Leave	15020	DF/WH/Hdwd	72	16.8	200	127	67.5	3

- 1 For Stand 15040, the source of stand inventory information is OSCUR from 1980 grown forward to 1999 with a growth model. Age was updated to 2006. OSCUR inventory did not collect information on hardwoods. SLI is the source for the other stands. The SLI data used includes diameter classes 2 inches and bigger.

Neither SLI inventory or OSCUR inventory realistically describe the stands on the ground. After a field visit the stands were observed as follows :

Stand ages listed below are based on current overstory age from OSCUR

**Area 1 (SLI 15040) :**

SLI has not yet been conducted for this stand. Most of the Area is well stocked 70 year old Douglas-fir averaging about 17 inches DBH with a few old, large diameter Douglas-fir. The eastern portion of the area (SLI 15038) contains large patches of mature hardwood with Douglas-fir either in clumps or scattered individually.

**Area 2 (SLI 15038 and 15032) :**

37 acres of well stocked 130 year old Douglas-fir averaging about 25 inches DBH with patches of hardwood averaging 16 inches DBH, and 7 acres of well stocked 70 year old DF averaging about 17 inches DBH (similar to the DF stand in Area 5).

**Area 3 (SLI 15032):**

This portion of SLI 15032 is well stocked 130 year old Douglas-fir averaging about 25 inches DBH with patches of hardwood averaging 16" DBH. The area includes some large diameter Douglas-fir up to 5 feet DBH.

**Area 4 (SLI 15020):**

Well stocked 70 year old Douglas-fir averaging about 17 inches DBH with scattered hardwoods.

**Area 5 (SLI 15020)**

Well stocked 70 year old alder and bigleaf maple averaging about 15 inches DBH. There are scattered Douglas-fir and small patches of DF. Some scattered old growth DF were found in the northern portion of the unit. Minor amounts of hemlock and cedar occur.

**Area 6 (SLI 15020)**

Very large, wide spaced, full crowned Douglas-fir with clumps of smaller western hemlock and scattered hardwood.

Western hemlock and western redcedar are very minor components in Areas 1 to 5.

**III. DESIRED STAND CONDITION AND VISION:**

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

Area	Stand ID	Current(SLI)	Post Harvest	Desired Future	Acres
1	15040	UDS	UDS	OFS	13
2	15038/32	LYR	UDS	OFS	44
3	15032	LYR	UDS	OFS	12
4	15032	UDS	UDS	OFS	47
5	15020	UDS	REG	OFS	18
6	15020	LYR (field call)	LYR	OFS	3

Post Harvest: The stand is expected to develop into this condition in the five years after this operation is completed. Area 6 is listed as UDS in SLI, but it is actually a small LYR'ed patch within a larger UDS stand.

**Areas 1 and 4** are currently UDS and have a DFC of OFS. Bigleaf maple creates some layering in these stands, but little shade tolerant conifer exists in the understory. The overstory boles are clean and the tree crowns are high.

The Vision begins with a heavy thinning from below within the Douglas-fir dominated overstory portions (cut to about RD 20). Hardwoods which are not safety hazards will be left to maintain some of the current vertical structure. The thinning is designed to improve species diversity and increase future layering by adding a new cohort of a mixed conifer species beneath the Douglas-fir dominated overstory through natural regeneration. In addition, the thinning will increase the diameter growth of the overstory leave trees and maintain current

crown height. Diameter and height growth of current understory trees will markedly improve.

Although few overstory hemlock trees are in the general area, past experience at this elevation and proximity to the coast shows that hemlock seeds in well after thinning. Alder and bigleaf maple is expected to be a component of the regeneration as well. Most existing snags and all down material will be left.

Since the harvest will reduce overstory trees per acre down to about 40, no further harvest is planned for these stands for many decades. After this thinning the stands will gradually grow into OFS in less than 50 years.

**Areas 2 and 3** are currently LYR and have a DFC of OFS. Bigleaf maple creates most of the layering, but some understory hemlock and a few understory cedar exist. These stands apparently began at fairly low densities, so the crowns of many overstory trees are longer than would be expected for their age.

A medium thinning to a Douglas-fir RD of about 30 should leave about 30 overstory Douglas-fir trees per acre, plus shorter maple, alder, and hemlock. Additional hemlock will seed in after harvest, eventually improving layering.

No further harvest is planned for these stands for many decades. After this thinning they should grow into OFS within a couple of decades.

**Area 5** is hardwood with a UDS structure and a DFC of OFS. The Vision begins by harvesting the hardwood from the stand as a Modified Clearcut, leaving the scattered conifer (mostly Douglas-fir) and thinning conifer clumps. The alder to be harvested is a short lived species compared to conifer and will not contribute much to OFS development. The conifer left will have more water and soil nutrients available for uptake and growth and should grow larger diameters at an increased rate. By removing the hardwood, a new cohort of Douglas-fir, western hemlock, and western redcedar can be established by planting and natural regeneration, along with re-sprouting and naturally seeded hardwoods.

**Area 6 (leave area)** is currently LYR or OFS and has a DFC of OFS. This small area is at or near OFS at this time. Management would not improve over nature.

**All Areas:** These entries are designed to promote OFS at a quicker rate than if left unmanaged. They will add both vertical and horizontal structural diversity to the impacted stands and to the surrounding district landscape. The stands will also benefit from the increase of species diversity. The future stands will contain multiple species, numerous large diameter trees, multiple cohorts, sufficient amounts of downed wood, and numerous large snags. If in the future additional large downed wood or snags are needed to meet OFS requirements, either could be created from the dominant overstory.

## **IV. PROPOSED MANAGEMENT PRESCRIPTION**

### **Prescription and Management Pathway:**

#### **Areas 1 and 4**

Douglas-fir trees will be removed from the middle of the overall stand size classes. Douglas-fir trees less than 8" DBH and greater than 26 inches DBH will be left. The stands will be reduced to a Douglas-fir RD of about 20, leaving roughly 40 Douglas-fir per acre. All western hemlock, western redcedar, and hardwood which are not a safety hazard will be maintained. All existing safe snags and downed wood will be maintained.

No brush control or underplanting is anticipated. No further management is anticipated until after the stands have reached OFS.

#### **Areas 2 and 3**

Douglas-fir trees will be removed from the middle of the overall stand size classes. Douglas-fir trees less than 8" DBH and greater than 30 inches DBH will be left. The stands will be reduced to a Douglas-fir RD of about 30, leaving roughly 30 Douglas-fir per acre. All western hemlock, western redcedar, and hardwood which are not a safety hazard will be maintained. All existing safe snags and downed wood will be maintained.

No brush control or underplanting is anticipated. No further management is anticipated until after the stands have reached OFS.

#### **Area 5**

All hardwoods will be harvested. Conifer patches will be heavily thinned, but all trees over 26" DBH will be left if not in yarding corridors. Potentially competing vine maple may be treated with herbicide prior planting. Resprouting bigleaf maple may be hack and squirt treated one to three years after planting. The area will be planted to 200 to 300 mixed conifer per acre.

A wide spaced precommercial thinning at age 15 or so is anticipated to reduce hardwood in the stand and to encourage brush (and perhaps another hemlock age class) in what might be by then a very dense and rather uniform sized stand (plantation plus hemlock natural regeneration). Hopefully this management will produce a stand well on its way to becoming layered by age 40. Even though the RD of overstory trees will be low at this time, a heavy commercial thinning to about 60 overstory trees per acre may be desirable to enhance layering. One more commercial thinning (maybe age 70) will be necessary to reduce overstory trees to about 30 clumpy overstory trees per acre, release the two or three age classes of well developed understory trees, and allow the stand to grow into classic OFS.

#### **All Areas:**

Approximately 50 snags will be created from DBH classes ranging from 26 to 40 inches DBH. The current stands contain a range of 20 to 30 snags per acre and have a range of 4 to almost 7 snags per acre that are greater than 24" (based on all decay classes from SLI data). Created snags will range from 50 feet to 100 feet in height. Most will have limbs left.

The tops from the snag creation will be left in place and add to the downed wood component. The general area had some blowdown the winter of 2003/04. Area 2 had a bug beetle attack in 2004 that killed patches of Douglas-fir. Additional new wood will come from breakage, missed logs, and the tops of created snags. No trees will be felled specifically to create additional down wood at this time. The current downed wood within the stands range from almost 1200 cu ft per acre to over 2600 cu ft per acre (based on all decay classes from SLI data).

**V. ESTIMATED TIMBER AND REVENUE INFORMATION:**

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%	<input type="checkbox"/>	X
Planned Quarter: 4			

	Conifer	Hardwood	Total
Net Volume (MBF)	2,100	300	2,400
Stumpage Value (\$/MBF)	\$ 365	\$ 320	
Estimated Gross Value	\$ 766,500	\$ 96,000	\$862,500
		Project Costs:	\$25,000
		Estimated Net Value:	\$ 837,500

**VI. TRANSPORTATION PLANNING AND HARVESTING:**

The sale area is accessed by existing rocked roads but 600 feet of new, rocked spur must be constructed. Approximately 3100 feet of existing spurs will be improved by adding additional rock. The sale area consists of approximately 95% cable yarding and 5% ground-based yarding.

Sale related project work = \$ 25,000.

Access agreements will be required for hauling from BLM, USFS, and an industrial owner.

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

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
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Construct	0	0	0.1	0
Improve	0	0	0.6	0
Maintain	4.9	0.9	0.6	0
Close/Block	0	0	0	0
Vacate	0	0	0	0

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

The sale area contains small non-fish streams which consist of both perennial and annual portions. A Type F stream crosses over onto State land for a small distance in the north portion of Area 5. The Management Standards for Aquatic and Riparian Areas found in the *NWO State Forests Management Plan* (pg. J-1 - J-16) will be the minimum standards followed within these RMAs.

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

**T&E Birds:**

The sale is within the Rock Creek, Bear Creek West, and Upper Geenleaf spotted owl circles and contains potential marbled murrelet trees.

A biological assessment addressing spotted owls and marbled murrelets will be completed by the Area biologist prior to completing sale preparation.

Timing restrictions for cutting and yarding in Areas 1 and 2 will be included in the contract for marbled murrelet protection.

**T&E Plants:** Cross checking the Oregon Natural Heritage data base for rare plants showed a non-specific location for tall bugbane (*Cimicifuga elata*) within several miles of the sale. This plant is not Threatened or Endangered but is on the state candidate list. As such, this plant is not given special legal protection but ODF is documenting its occurrence. This plant is an understory species normally occurring in moist shady areas. The observation in the database was made in 1935. The recommendations for management given by the Oregon Department of Agriculture (ODA) states "timber harvest isn't necessarily bad for it as long as the soil is not disturbed, and colonization of blackberries or other weeds is not promoted. Do not use herbicide on it during site preparation for reforestation."

**IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:**

The area is moderately steep, but the sale will be cable logged and little, if any, road will be constructed. If high landslide hazard locations are identified in the sale area during timber sale layout, the geotechnical specialist will be consulted.

Vegetation retention practices for potential debris flow track reaches as prescribed in the Management Standards for Aquatic and Riparian Areas (Appendix J, Table J-2) will be applied to debris torrent prone reaches where applicable. Any road construction will avoid high landslide hazard locations.

**X. FOREST LAND MANAGEMENT MANAGEMENT CLASSIFICATION:**

The sale area contains Focused Stewardship for northern spotted owl and aquatic and riparian habitat.

**XI. RECREATION RESOURCES:**

Deer and Elk hunters occasionally use the existing roads in the area. The proposed activities will promote vegetation that will provide feed for deer and elk.

**XII. CULTURAL RESOURCES:**

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

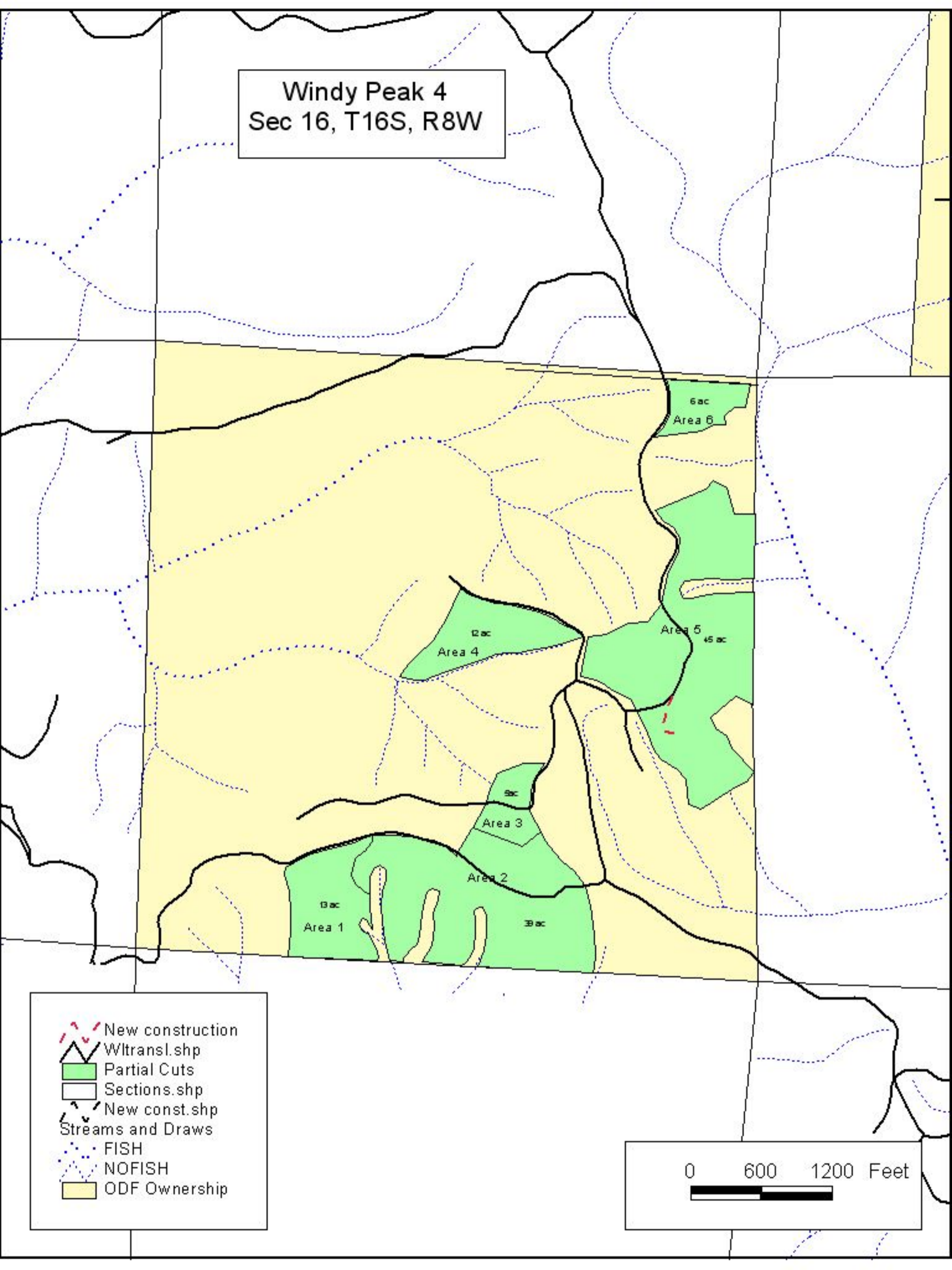
**XIII. SCENIC RESOURCES:**

The area is not visible from public roads or homes.

**XIV. OTHER RESOURCE CONSIDERATIONS:**

None known.

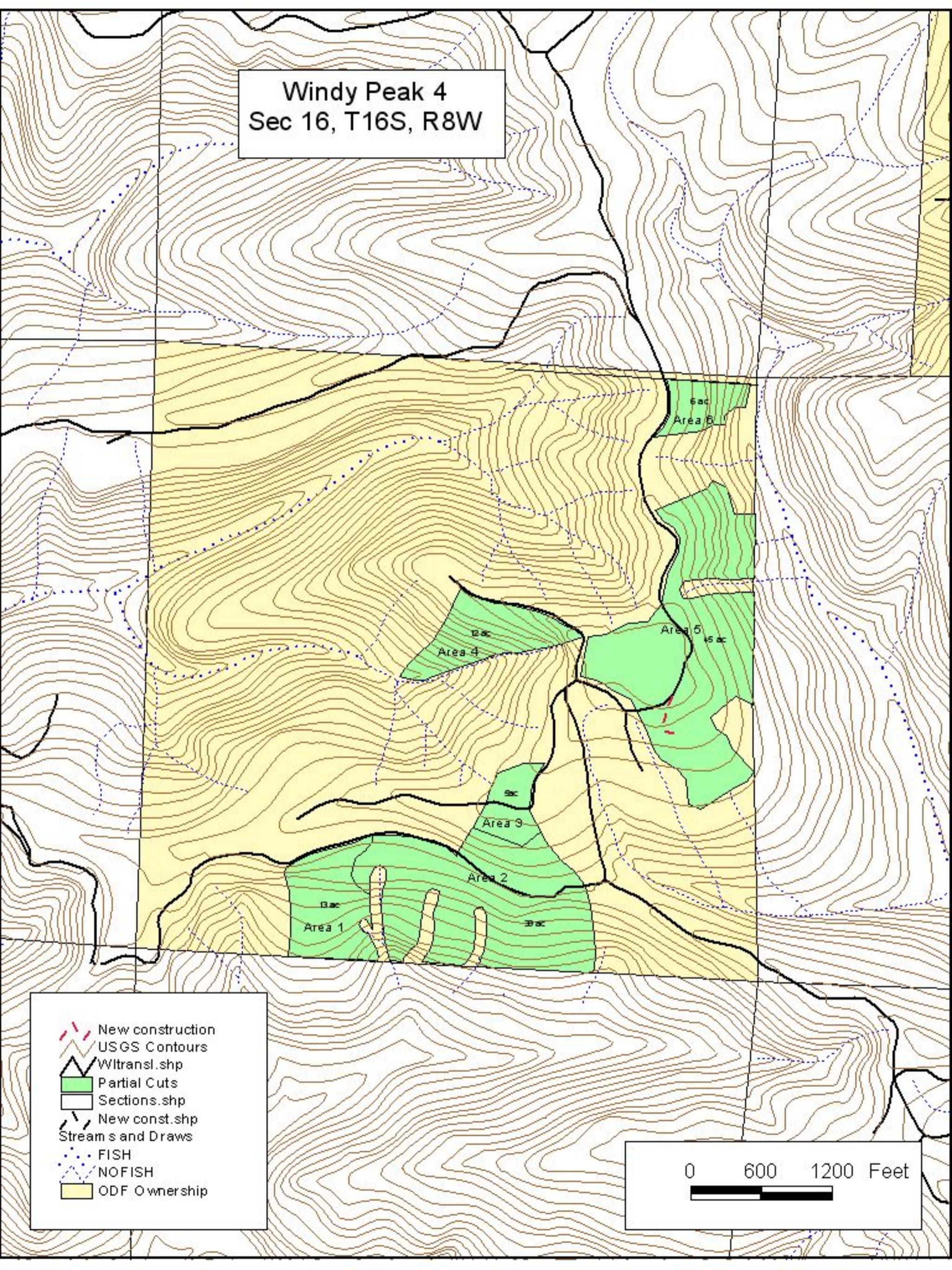
Windy Peak 4  
Sec 16, T16S, R8W



- New construction
- Wltransl.shp
- Partial Cuts
- Sections.shp
- New const.shp
- Streams and Draws
- FISH
- NOFISH
- ODF Ownership

0 600 1200 Feet

Windy Peak 4  
Sec 16, T16S, R8W



- New construction
- USGS Contours
- Wltransl.shp
- Partial Cuts
- Sections.shp
- New const.shp
- Streams and Draws
- FISH
- NOFISH
- ODF Ownership

0 600 1200 Feet