

Pre-Operations Report

Operation Name: Sargent Lyda
County: Tillamook
Management Basin: Wilson

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	Modified clearcut	116	111
2	Modified clearcut	142	119
3	Modified clearcut	82	65
4	Modified clearcut	66	66
5	Partial cut	76	63
Total		482	424

1. The net acres are based on orthophotos and GIS and exclude roads, stream buffers (special stewardship), other stream buffers, reserve area and non-required thinning areas.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have varied aspects and range from 10 to 80%. Elevations range from 1,000 to 2,300 feet. The major soil types are Enright and Rye. The sale areas occupy the ridges to lower slopes.

The landforms are gentle ridgelines between drainages and moderate to very steep sideslopes in the headwaters of Jordan Creek and several tributaries: Sargent Creek, Hann Creek, and Phelps Creek. The underlying rocks are mostly sedimentary origin rocks of the Yamhill Formation massive to thin-bedded dark gray siltstone commonly associated with tuff beds and thin sandstones. The south portions of Areas 1 through 4 are igneous intrusive origin rocks, diabase commonly tabular sills with columnar joints cut by dike swarms fed by Tillamook Volcanics and igneous origin rocks of the Hembre Ridge Formation, submarine pillow basalts, sheet flows including submarine basaltic breccia and basaltic sandstone.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information⁴

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	MC	240	DF	54	16	130	100	35	111
2	MC	241	DF	48	18	120	70	30	119
3	MC	242	DF	50	15	120	100	32	65
4	MC	243	DF	52	16	140	100	37	66
5	PC	244	DF	48	17	200	125	49	63
		Target ³	DF		18	120	65	29	63

1. The source of stand inventory information is from field reconnaissance cruise plots, timber cruise and admin plots taken in 2000-2004, and SLI cruise information from 2002-2004.

2. The net acres are based on orthophotos and GIS and exclude roads, stream buffers (special stewardship), other stream buffers, reserve area and non-required thinning areas. Modified clear cut acres are not contiguous and do not exceed 120 acres.

3. The Target identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.

4. These numbers are based on plot data taken to this point and final numbers may differ significantly from the actual conditions. The directive for minor and major modifications will be followed for further review.

The sale areas burned in the 1933 (Tillamook), the 1939 (Saddle Mountain) and the 1945 (Wilson River) fires. The area was seeded in 1951 and the majority was replanted in 1953. The majority of the area was fertilized in 1997. Commercial thinning was done in 1989 (Area 5), 1996 (portions of Areas 3 and 4), 2001/2003 (Areas 1, 2 and portions of 3). Area 4 was a helicopter thinning. *Phellinus weirii* patches in Area 5 were planted with alder in 1993 and interplanted with western white pine and alder in 1996.

Approximately 396 acres have been inventoried using the Stand Level Inventory (SLI) procedure and the stands have been identified as UDS. The remaining acres in this timber sale were identified as CSC according to the district stand summary information (1999). These are primarily single species, single story stands with a brush layer.

See Table 2 for specific stand data.

The Douglas-fir has Swiss needle cast (SNC) symptoms resulting in slowed diameter and/or height growth. Areas 1, 3, and 4 were mapped by aerial surveys in at least one of the last three years. Douglas-fir in Area 5 show only light symptoms of SNC.

There are scattered hemlock, spruce and cedar throughout the sale. The alder is found primarily in pockets and along stream buffers. Portions of the alder components of these stands were aeriially sprayed to release planted conifer in the 1970's resulting in alder trees with short boles and many limbs.

Minor amounts of *Phellinus weirii* were noted in the sale areas. No other significant insect or disease problems have been discovered at this time.

The brush component in all the sale areas is comprised primarily of vine maple, sword fern and salmonberry. There are some denser patches but the brush is primarily in a continuous layer.

Down wood consists of scattered large old logs (36"+) in Class 3 and 4 stages of decay and some windthrow and slash from recent partial cut activity in decay classes 1 and 2. SLI measurements show that down wood in decay classes 1 and 2 ranges from 0 to 362 cubic feet per acre. The zero measurements were in Area 2 and the fringes of Area 1. Total down wood ranges from 3,402 to 13,675 cubic feet per acre. No down wood greater than 24" on the large end in decay class 1 and 2 was recorded in any of the measured stands. Landscape targets set in the FMP were not met for hard conifer logs. Older forest structure targets for total down wood were met or exceeded.

There are some large snags in various states of decay and some hard snags created from wind and snow. Landscape targets for hard snags were not met. The Older Forest Structure target of two snags per acre greater than or equal to 24" in diameter was met or close to being met on all measured SLI stands within Areas 3, 4, and 5.

III. DESIRED STAND CONDITION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Net Acres
1	240	UDS	REG	GEN/OFS	111
2	241	UDS	REG	GEN	119
3	242	UDS/CSC	REG	GEN	65
4	243	UDS/CSC	REG	GEN	66
5	244	CSC/UDS	REG	GEN	63

1. The stand is expected to develop into this condition in the five to ten years after this operation is completed except in REG stands which occur after harvest.

See Section IV: Proposed Management Prescription for more information on Green Tree, Down Wood, and Snag Strategies during operation. Also refer to Landscape Design in the Summary document for more information on strategies to move the district toward Desired Future Condition goals.

The regeneration harvest prescriptions will remove Douglas-fir susceptible to Swiss needle cast and retain other native species. These areas will be planted with a mix of conifer species. Unmanaged hardwood and conifer mixes will be left in headwalls, riparian areas, and adjacent green tree retention areas as well as scattered throughout the units. Partial cutting will create openings and gaps in the stand to allow the residual trees to grow larger in diameter and crown depth. The openings and gaps will also allow for understory reinitiation of shrubs and tree species creating horizontal and vertical diversity. Future density management in the partial cut unit is planned to continue the growth of overstory trees as well as understory trees and shrubs.

Additional acreage adjacent to the sale areas has been commercially thinned. The timber sale areas will combine with adjacent stands to create a mosaic of openings, gaps, variable densities and mixed species over the landscape. As the future stands are established and mature the residual trees from this entry will add to complexity of sizes, species and densities. These trees will also add to snags and down wood over time and through the life of the stand.

Area 5, the partial cut unit, will be reviewed for snag creation at time of harvest since the residual stand is expected to be greater than 15" DBH. SLI measurements have not been done in this area so further data will be gathered during sale preparation.

Stand Level Inventory (SLI) will be scheduled for harvest units five to seven years after harvest completion or stand establishment depending on the prescription. SLI will measure the snags/acre and cubic feet of down wood by decay class. If the stands are deficient in either of these characteristics, the need for creating additional amounts will be evaluated.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

See table 2 for prescription targets

Modified Clearcut:

In Areas 1 through 4, Douglas-fir will be removed. All other species will be reserved. A diameter limit will be used to select the trees to be left. These residual trees will provide a future down wood and/or snags.

Partial Cut:

In Area 5, Douglas-fir will be thinned to a basal area range of 100-120 square feet. All other species will be reserved. Falling trees away from and avoiding yarding through the pockets will minimize disturbance of planted alder and white pine.

Understory vegetation will be enhanced by the additional growing space available.

Green Tree, Down Wood and Snag Strategies

See also Section III: Desired Future Condition for long term strategies

A variety of methods will be used to achieve green tree retention requirements. These residual green trees will supplement the future stand by promoting growth of dominant/co-dominant leave trees. Small non-merchantable hardwood and conifer will also be retained where possible. These leave trees function as future source of snags and down wood recruitment across the landscape. Green trees will be left on precipitous slopes and headwalls and those areas not reached by conventional logging methods. Stream buffers adjacent to small perennials will also contribute additional green trees. Many of these areas will be posted so they are outside of the timber sale boundary.

Existing down wood will be left in the sale areas. Down wood recruitment is expected through mortality and windthrow of residual or leave trees, felled snags and tops left during harvest. Small non-merchantable hardwood and conifer will be retained where possible in harvest units with the expectation they will become short term snags and down wood. Tops resulting from ground yarding will be left in the units.

Existing snags not determined to be a safety hazard will be retained and any felled snags will be left for down wood. Creation of snags is expected during harvest activities (rub trees, lift trees, or tail trees) and over time by natural processes.

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:		3	

	Conifer	Hardwood	Total
Net Volume (MBF)	4267		4267
Stumpage Value (\$/MBF)*	241		
Estimated Gross Value	\$1,028,347		\$1,028,347
		Project Costs:	\$203,800
		Estimated Net Value:	\$824,547

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Jordan Creek, Archers, Ben Smith, Lyda, and C-Line Roads. These are currently all weather, crushed rock roads. See maps for specific road locations and conditions.

Approximately 7.0 miles of existing surfaced road (1.0 miles of low use spur road and 6.0 miles of moderate use, collectors) will be improved which includes grading, rocking, widening, culvert replacement, spot rocking, sidecast pullback, and adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Approximately 0.2 miles of new spur will be constructed to provide access to cable yarding areas in Area 4. This area was previously helicopter thinned but road improvement projects in the area have made it economically feasible to extend the road with this spur.

Following harvest, roads within the sale areas will be reviewed for closure. All ground yarding roads will be closed and waterbarred. See summary document for more information on this topic.

No other project work will be included with this sale.

The operation will be 40% ground yarding and 60% cable yarding.

Table 5. Transportation Planning Summary (Miles)⁴

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			0.2	
Improve		6.0	1.0	
Maintain ²	5.4	8.7	2.9	
Close/Block ³				
Vacate ³				

1. Additional roads may be built by the operator at the time of harvest and will be approved by the State through the Operations Plan. These will be short dead end spurs and closed or blocked after harvest
2. All roads accessing the sale area will be maintained during the life of the timber sale contract. Maintenance miles in the table are those roads not being constructed or improved.
3. Roads not closed/blocked or vacated at the end of the sale will be reviewed for closure after reforestation is established.
4. The numbers in this table reflect planned Project Work associated with the sale.

VII. AQUATIC RESOURCES AND WATER QUALITY:

There are no known Type F streams within the sale areas. Jordan Creek and an unnamed tributary, both large Type F streams, are adjacent to Area 4. Another unnamed tributary, a small type F, is also adjacent to Area 4.

Sargent, Hann and Phelps Creeks are small perennial Type N streams adjacent to Areas 1 and 2. There are several unnamed small perennial and seasonal Type N streams within the sale areas.

Oregon Department of Fish and Wildlife (ODFW) has completed the majority of stream surveys in the sale area. Additional streams adjacent and within Areas 3 and 4 will be requested for surveys to be completed prior to sale layout. Streams of unknown status will be treated as Type F until surveys are completed to verify fish use.

Stream buffers within or adjacent to harvest unit boundaries will be managed according to *Forest Management Plan* Riparian Strategies. The riparian areas will be reviewed during sale layout for current stand conditions and/or operational constraints for implementing FMP strategies. ODFW fish biologist will work with ODF to identify possible stream enhancement project areas.

Approximately 4 net acres of the sale are within the Ben Smith Creek sub-basin. This sub-basin has been identified as a Salmon Anchor Habitat (SAH) Basin and the most current SAH Basin Strategies will be used at the time of contract development.

In order to protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods include (but are not limited to) maintaining culverts and other road drainage structures, using sediment control devices in road ditches when necessary, and monitoring logging and hauling operations. Culvert installment and replacement in live streams will be conducted between July 1 and September 15. Operations outside of this period will be reviewed with ODFW.

VIII. T&E SPECIES CONSIDERATIONS:

The sale areas have been reviewed with the ODF Northwest Oregon Area Biologist.

Surveys for marbled murrelets are not required due to the absence of potentially suitable habitat.

It was determined that in Area 5 there is potential northern spotted owl habitat within or adjacent to the sale boundary. Surveys have been conducted during the 2004 survey season for northern spotted owl with no detections. Additional surveys will be conducted during the 2005 survey season. All northern spotted

owl surveys were and will be conducted in accordance with USFWS endorsed protocol.

Felling in Area 5 will need to be completed by March 15th, 2008, prior to the survey expiration period.

T & E Plant species: The sale areas were checked against the Oregon Natural Heritage Program (ONHP) database of known threatened or endangered listed plant locations as well as local records in the Land Management Classification System (LMCS). No listed plants were identified within or adjacent to the sale areas.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

The initial assessment from the geotechnical specialists is low for Area 5, the east half of Area 1, and the southeasterly half of Area 2; moderate for Area 3 and the northwesterly half of Area 2; and high for Area 4 and the west half of Area 1. There are high landslide hazard locations scattered in these areas of the sale. The geotechnical specialist will review the sale in the field. If the sale boundaries are changed prior to field review, the geotechnical specialist may be consulted and the need for field review may be reassessed.

A small portion of Area 2 has been identified as being within a SAH Basin and the most current SAH Strategies will be used at the time of contract development. See the Summary Document for more information.

X. RECREATION RESOURCES:

The sale areas are designated as Motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). The District Recreation Coordinator has reviewed this sale.

Archers Firebreak is the designated OHV trail within the sale areas. Short-term closure of this trail may occur to facilitate logging and public safety. Slash will be removed from OHV trails upon completion of the operation. A plan will be developed to advise the public when trails are closed due to harvest activity. The District Recreation Coordinator will be consulted during sale layout.

Recreational use common to this area includes hunting, camping, and OHV use.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does not list cultural sites within or adjacent to the proposed sale boundary.

XII. SCENIC RESOURCES:

The sale areas have a visual classification of Level 2, moderate sensitivity, and there will be some visual impact until green up occurs. Visual impact will be reduced due to the distance between units, stream buffers, and by the residual trees being left in the sale areas. The sale will be reviewed by the Public Use Coordinator to determine methods to minimize visual impact

XIII. OTHER RESOURCE CONSIDERATIONS:

The COPE research area is north of Area 2. The road and road buffer account for the acreage showing up in LMCS.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Table 6. Land Management Classification Summary

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
1	Aquatic and Riparian Habitat	38	
	Recreation	5	
2	Aquatic and Riparian Habitat	48	9
	Recreation	8	
	Research and Monitoring	3	
	Wildlife Habitat	6	
3	Aquatic and Riparian Habitat	34	2
4	Aquatic and Riparian Habitat	16	
	Recreation	10	
5	Aquatic and Riparian Habitat	30	1
	Recreation	< 1	

This table summarizes the acres of Focused and Special Stewardship within the operations. The acres in each operational area in this table do not necessarily add up to its gross or net acres, because of overlapping classifications under the Land Management Classification System (Feb. 2003). For example, a particular acre can be classified as Focused Stewardship for Aquatic and Riparian, Recreation, and Scenic resources.