

Pre-Operations Report

Operation Name: Rackheap Falls
County: Tillamook
Management Basin: North Fork Nehalem

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	PC	267	190
2	PC	179	137
Total		446	327

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

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have a varied aspect and range from 0% to 80%. Elevations range from 360 to 760 feet. The major soil types are Killam and Rye.

The landforms are gentle ridge-top and moderated side-slopes to the north and steep side-slopes to the south of the divides between Rackheap Creek, Helloff Creek, Fall Creek and unnamed tributaries to the Nehalem River. The underlying rocks in Area 1 are sedimentary origin rocks of the Roy Creek formation, basaltic sandstone and thin bedded tuffaceous mudstones. The rocks in Area 2 are igneous origin, subaerial flows of the Tillamook Volcanics formation with some sedimentary origin rocks of the Roy Creek formation.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information⁴

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	PC	109	WH,DF,SS, RA, WRC	65	16.7	377	249	94	190
1		Target ³	WH,DF,SS, RA, WRC	65	18.7	194	102	46	190
2	PC	110	WH,DF,SS, RA, WRC	65	14.8	374	314	98	137
2		Target ³	WH,DF,SS, RA, WRC	65	18.8	160	83	38	137

1. The source of stand inventory information is from field reconnaissance cruise plots taken in 2004.

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

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 significantly. The directive for minor and major modifications will be followed for further review.

Portions of the sale areas burned in the 1933 Tillamook Fire. The majority of the sale areas were naturally regenerated. Portions of Area 2 were planted in 1964. A portion of Area 1 was commercially thinned in the early 1970's. The remaining areas have had no prior stand management.

According to the district stand summary information (1999), 99 acres were identified as UDS and 228 acres were identified as CSC.

The sale areas are predominately dense, single story, and multiple species stands with pockets of layering. There are also scattered pockets and stringers of alder that add to the diversity of the stands. There are small, suppressed conifer and brush species mainly in gaps or under the alder that are growing in the understory. A portion of Area 1 was thinned in the 1970's. The understory in this stand is made up of dense small hemlock and is being suppressed due to crown closure. The hemlock, spruce, and Douglas-fir in both of these areas is overstocked resulting in poor live crown ratios and slowed diameter growth.

See Table 2 for specific stand data.

Down wood consists of scattered large old logs (36"+) in Class 3 and 4 stages of decay and some windthrow in decay classes 1 and 2. There are some large snags in various states of decay and some hard snags created from wind and snow damage. These sale areas have not been Stand Level Inventoried at this time so down wood and snag information is unavailable. During sale preparation, different options such as down wood and snag creation, additional green tree retention, and future stand management and monitoring will be considered in order to achieve FMP targets.

III. DESIRED STAND CONDITION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Net Acres
1	109	CSC	UDS	LYR	42
1	109	CSC	UDS	OFS	57
1	109	UDS	UDS	GEN	9
1	109	UDS	UDS	OFS	82
2	110	CSC	UDS	LYR	73
2	110	CSC	UDS	OFS	56
2	110	UDS	UDS	OFS	8

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.

In the short term, both Areas 1 and 2 will be a partial cut to reduce stand density. This operation will keep these stands moving along the pathway to more complex structure. This prescription will allow for 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. The expectation is future density management to continue the growth of overstory trees as well as understory trees and shrubs species.

The timber sale areas will combine with adjacent recently managed thinnings, planned future sales and unmanaged stands to create a mosaic of openings, gaps, variable densities and mixed species stands. As the future stand is established the residual trees from previous stands 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.

A snag and down wood assessment will be done during sale layout to determine if snag and/or down wood creation is necessary to achieve the FMP targets.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

See Table 2 for prescription targets

Partial Cut:

In Areas 1 and 2, hemlock, Douglas-fir, and spruce will be thinned to a basal area range of 160 to 180 square feet. All other species will be reserved.

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 a future source of snags and down wood recruitment across the landscape. 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 from harvesting operation will be left in the areas that are approved for ground yarding.

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:		3rd	

	Conifer	Hardwood	Total
Net Volume (MBF)	7101	0	7101
Stumpage Value (\$/MBF)*	\$115	0	
Estimated Gross Value	\$816,615	0	\$816,615
		Project Costs:	\$215,000
		Estimated Net Value:	\$601,615

***Combined Douglas-fir and hemlock stumpage values**

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Hansen Road, Rackheap Road, Fall Creek Ridge Road, and Nehalem Ridge Road. These are currently all weather, crushed rock roads. Approximately 5.0 miles of existing surfaced road will be improved. This work will bring all roads up to standards described in *the Forest Roads Manual*. See maps for specific road locations and conditions.

Approximately .75 miles of road will be constructed to provide access to cable yarding areas that were previously ground yarded. Following harvest, roads within the sale areas will be reviewed for closure. See summary document for more information on this topic. The operation will be 56% cable yarding and 44% ground yarding.

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			.75	
Improve		2.5	2.5	
Maintain ²				
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:

Fall Creek, Bidwell Creek, and several unnamed Type F streams are within and adjacent to the sale areas. There are also unnamed Type N streams within the sale areas. Riparian vegetation along these streams includes a mix of hardwood and conifer species. Additional streams may be identified during fieldwork and will be managed according to FMP riparian strategies.

Oregon Department of Fish and Wildlife (ODFW) will be requested to complete stream surveys before sale layout begins. Streams of unknown status will be treated as Type F until surveys are completed to verify fish use.

Stream buffers within and adjacent to the 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 operational constraints for implementing FMP strategies.

ODFW fish biologist will work with ODF to identify possible watershed enhancement projects on a spur road off of Hanson Road and on Big Rackheap road.

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 (Clint Smith).

It was determined that in the sale areas there is potential marbled murrelet habitat within or adjacent to the sale boundary. Surveys have been and will be conducted during the 2004 and 2005 survey season for marbled murrelets. All surveys for marbled murrelet have been and will be conducted in accordance with Pacific Seabird Group (PSG) protocol. There were several murrelet detections in a portion of Area 1. A Marbled Murrelet Management Area (MMMA) will be designated after the 2005 survey season and the sale boundary will be modified to exclude any area that falls within the MMMA.

It was determined that there is potential northern spotted owl habitat within or adjacent to the sale boundary. Surveys have been and will be conducted during the 2004 and 2005 survey season for northern spotted owl. All northern spotted owl surveys were and will be conducted in accordance with USFWS endorsed protocol. There have been no northern spotted owl detections during the 2004 survey season.

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 for Area 1 is moderate with only one area of steep slopes in the central portion of the sale area above Fall Creek. The initial assessment for Area 2 is high in the southern portion of the sale area. 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.

X. RECREATION RESOURCES:

The sale areas are designated as Non-motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). The sale areas are located in the North Coast Travel Management Area. No OHV trails were identified within or adjacent to the sale areas. Recreational use common to this area includes hiking, hunting,

and horseback riding. The District Recreation Coordinator will be consulted during sale layout and sale contract preparation.

XI. CULTURAL RESOURCES:

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

XII. SCENIC RESOURCES:

The sale areas have a visual classification of Level 3, low sensitivity. No scenic impact is expected.

XIII. OTHER RESOURCE CONSIDERATIONS:

None known.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Table 6. Land Management Classification Summary

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
1	Aquatic and Riparian	73	15
1	Wildlife Habitat	406	1
2	Aquatic and Riparian	50	>1
2	Wildlife Habitat	206	

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.