

Pre-Operations Report

Operation Name: The South Rock Railroad Alternate
County: Linn
Management Basin: Rock Creek

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
	MC	92	85
Total		92	85

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

The operation is located within a temperate climate area. Typically the fall and winter seasons are wet. This area receives approximately 70 to 90 inches of rainfall per year. The operation is located within the *Tsuga heterophylla* Zone (Natural Vegetation of Oregon and Washington, Franklin & Dynness, 1973).

The landform is moderate to very steep slopes near the middle of several tributary forks of Rock Creek below High Rock. The geology map shows most of the sale area in a large scale landslide deposit except for the west corner of the sale area which is underlain by rocks of sedimentary or volcaniclastic origin.

Pechuck soils make up the soil within the operation. Pechuck soil is a well-drained, colluvial soil. The elevation within the operation ranges from 1,760 feet to 2,880 feet. The slopes range from 5 to 80%. The average 50 year site index for Douglas-fir is 120 feet for the operation area.

II. CURRENT STAND CONDITION:

The operation is located within a 69 year-old stand currently classified as Closed Single Canopy. The overstory is a mix of Douglas-fir, western hemlock and western red cedar trees. Approximately 40% of the stand is infected with dwarf mistletoe. There are a few scattered big leaf maple and red alder trees in the overstory as well. What little understory is present consists of dwarf Oregon grape and sword fern. There are currently 20 snags per acre; 1,800 cubic feet per acre of sound down wood; and 7,900 cubic feet per acre of down wood in all decay classes. (SLI 2004)

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Acres ²
	MC	12726	DFWH	69	15	311	237	79	92

1 The source of stand inventory information is SLI from 2004.

2 The acres are based on GIS and include roads, streams buffers, reserve areas, etc.

III. DESIRED STAND CONDITION:

This operation is located in the Rock Creek Basin. Approximately 55 percent of this basin is planned for Complex Structure stands. (*Cascade District Implementation Plan, 2003*) This basin is dominated by mature, densely stocked stands of Douglas-fir mixed with varying amounts of western hemlock, western red cedar, noble fir, and hardwoods. The diversity of tree species in these stands present good opportunities for structure based management, especially where past management included commercial thinning. Stands that did not have previous density control have very high overstory densities, and are generally not good partial cut candidates. Many of the stands in this basin have high timber values and retain important structural components (snags, large old growth trees, large down logs, etc.) from legacy stands. This basin is an important part (2.5%) of the City of Salem's municipal watershed.

The Operation

The DFC for the operation (SLI type 12726) is General. Removal of mistletoe infected western hemlock is important for the operation to limit the spread of the mistletoe. Leave trees in the unit will be Douglas-fir and western red-cedar only.

The Anticipated Pathway for the Operation is:

- The unit will receive a modified clearcut and be replanted.
- The unit will be evaluated for a pre-commercial thinning in 10-15 years.
- When the stand is about 40 years of age, it will be evaluated for an initial commercial thinning. The opportunity to develop snags and down wood with this entry will be evaluated, and implemented if conditions are suitable.
- A second commercial thinning is planned when the overstory trees are about 80-years old.
- Regeneration Harvest is planned to occur when the overstory reaches approximately 100 years of age.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
	12726	CSC	REG	GEN	92

¹ The stand is expected to develop into this condition in the five to ten years after this operation is completed.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

The proposed management prescription is:

- Harvest all trees greater than 8 inches DBH.
- All defective, diseased, and undesirable trees less than 8 inches DBH will be felled.
- Leave approximately 5-7 green trees/acre in scattered clumps. No western hemlock trees will be used as green trees.
- Remove all western hemlock trees.
- The unit will be broadcast burned to prepare the site for planting. Slashing of sub-merchantable western hemlock will need to be done prior to burning the unit. This will ensure that the mistletoe is removed from the understory trees as well.
- The unit will be planted with a mix of species except western hemlock.
- No snags and down wood will be added at this entry. Following the completion of harvest, there will be at least 2 snags per acre and 600 cubic feet per acre of fresh down wood within the unit.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%	<input type="checkbox"/>	x
Planned Quarter:			

	Conifer	Hardwood	Total
Net Volume (MBF)	4,250	0	4,250
Stumpage Value (\$/MBF)	\$350	0	
Estimated Gross Value	\$1,487,500	0	\$1,487,500
		Project Costs:	\$15,200
		Estimated Net Value:	\$1,472,300

VI. TRANSPORTATION PLANNING AND HARVESTING:

Three spurs totaling approximately 1,600 feet will be constructed to harvest this operation. These will be pit run rocked, outsloped roads with a 16 foot road bed.

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0.3	0
Improve	0	0	0	0
Maintain	0	0	0	0
Close/Block	0	0	0	0
Vacate	0	0	0	0

*For determination of road class either use results of the Harvest and Habitat roads classifications, or if this information is not available then low use roads are spurs, medium use roads are collectors and high use roads are mainlines. Use these same criteria when comparing the total for all AOP sales to the IP plans.

VII. AQUATIC RESOURCES AND WATER QUALITY:

There are no streams containing listed fish within the operation. There are approximately 4 small, non-fish bearing streams and 1 medium, non-fish bearing stream located within the entire operation. These streams flow into Rock Creek. The overstory along the non-fish bearing streams consists of Douglas-fir, western red cedar and some hardwoods. These streams will be evaluated during sale layout to determine if they are potential debris flow tracks.

Management activities within riparian areas of streams will focus on achieving properly functioning aquatic and riparian habitat conditions over time. Riparian Management Areas (RMAs) will be established immediately adjacent to streams for the purpose of protecting aquatic and riparian resources and maintaining the functions and ecological processes of the streams. The Management Standards for Aquatic and Riparian Areas found in the *NWO State Forests Management Plan* (pg. J-1 – J-16) will be followed within these RMAs.

The following measures will be used to minimize impacts to streams: 1. No ground based equipment will be allowed within 25 feet of the non-fish bearing streams, 2. There will be seasonal restrictions as to when ground yarding and road construction will be allowed (i.e. during dry seasons), 3. Erosion control measures will be used on areas of soils exposed during road construction or improvement, 4. Road ditches will be disconnected from streams, 5. Road maintenance will be required during log hauling.

VIII. T&E SPECIES CONSIDERATIONS:

This operation was surveyed for Northern Spotted owls during the 2005 survey season with one response. It will be surveyed again in 2006. A portion of this operation is located within the Under Rock Northern Spotted owl site. A biological analysis (BA) will be drafted by an ODF biologist. This BA will be reviewed by both the Oregon Department of Fish and Wildlife and the US Department of Fish and Wildlife. The biological assessment and comments from both agencies will be reviewed by the District Forester, Program Director and the Area Director who will then determine how to proceed with the planned operations.

The operation area was checked against District knowledge for any listed plant location. The operation area was also checked against the Oregon Natural Heritage Program's database of known listed plant locations. No listed plant records were identified within the operation area.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

The operation is not expected to significantly affect the stability of the very large landslide deposit. If tension cracks or other signs of instability are observed during field work for the sale the geotechnical specialist will be consulted. There are however bands of steep and very steep slopes throughout the sale area. The initial hazard and risk assessment from the geotechnical specialist is high. The geotechnical specialist will be consulted during sale layout to determine if a field visit is needed.

X. RECREATION RESOURCES:

There are no developed recreational resources located within the operation. However, hunting, horseback riding, and sight seeing occur within the area.

XI. CULTURAL RESOURCES:

Pre-operation reconnaissance revealed no visible cultural resource features or artifacts. If discovery is made, the cultural resource will be protected and field staff will consult with the Cultural Resource Specialist in Salem.

XII. SCENIC RESOURCES:

There are no scenic resources within the operation area.

XIII. OTHER RESOURCE CONSIDERATIONS:

To protect air quality, the planned burn will comply with the Oregon Smoke Management Plan. The Smoke Management Plan is designed to reduce emissions from prescribed burning in western Oregon and to minimize smoke intrusions into designated population areas.

XIV. LMCS:

Area 1 contains Focused Stewardship, Visual. See Section XII, Scenic Resources, for the management guidelines to be utilized.

Area 1 contains Focused Stewardship, Aquatic and Riparian Habitat for four perennial Type N stream. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.

Area 1 contains Special Stewardship, Aquatic and Riparian Habitat for one medium Type N stream. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.