

Pre-Operations Report

Operation Name: South Rock Creek

County: Linn

Management Basin: Rock Creek

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
I	PC-M	263	243
II	PC-L	23	22
III	PC-L	45	41
Total		331	306

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 & Dyrness, 1973).

The landform is moderate to very steep slopes in the headwaters of Rock Creek below High Rock. The underlying rocks are sedimentary or volcanoclastic 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 for the operation area.

II. CURRENT STAND CONDITION:

Areas I and II are a 74 year-old stand currently classified as Understory. The overstory consists mostly of Douglas-fir, western hemlock and western red cedar trees. The understory contains vine maple, salal, oxalis and sword ferns. There are currently 7 snags per acre; 800 cubic feet per acre of sound down wood; and 3,200 cubic feet per acre of down wood in all decay classes. (SLI 2004) Approximately 100 acres of Area I were thinned in 1978.

Area III is 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. 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
I	PC-M	12727	DFRC	74	18	237	132	57	263
		Target ³			20	153	61	30	
II	PC-L	12758	DFRC	74	18	237	132	57	23
		Target ³			19	194	90	40	
III	PC-L	12726	DFWH	69	15	311	237	80	45
		Target ³			20	176	90	40	

1 The source of stand inventory information is SLI from 2004 for trees greater than 8 inches in diameter.

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

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

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, except for stands with very high overstory densities. The stands generally have high timber values and retain important structural components (snags, large old growth trees, large down logs, etc.) from legacy stands. This basin makes up 2.5% of the City of Salem’s municipal watershed.

Area I

The DFC for Area I (SLI type 12758) is Layered. The goal for this thinning will be to encourage the growth of all species in the stand.

The anticipated pathway for Area I :

This will be the second commercial thinning of the stand:

- Moderate thin the current stand while minimizing damage to the understory.
- Evaluate the entire stand in 15-20 years for another possible entry to encourage the growth of the understory trees.

Area II

The DFC for Area II (SLI type 12758 and 12727) is Layered. The light thinning prescription for the area will remove the suppressed Douglas-fir and a few of the cedar and hemlock. All hardwood will be kept when possible and may count toward the leave SDI and BA. The stand will be difficult to thin due to the steep terrain. Therefore, care will be taken to avoid damage to the residual stand. The stand should have a mix of large Douglas-fir, cedar, hemlock and a few scattered hardwoods when completed.

The anticipated pathway for Area II:

- Lightly thin the current stand removing the suppressed Douglas-fir and a few of the other conifer species.
- Evaluate the stand in 15-20 years for a second thinning to remove some of the hemlock and cedar trees to open up the stand.

Area III

The DFC for Area III (SLI type 12726) is REG, UDS, or CSC. The goal for the prescription will be to remove the suppressed and dying conifer and encourage the growth of the largest and best growing conifer trees.

The anticipated pathway for Area III:

- Lightly thin the current stand. This is an initial entry into a dense stand of mostly conifer. A light thinning is warranted.
- The stand will be evaluated in 15-20 years for another thinning or the possibility of a regeneration harvest.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
I	12758	UDS	UDS	LYR	263
II	12727	UDS	UDS	LYR	25
III	12726	CSC	CSC	GEN	45

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 for Area I is:

- Thin all trees greater than 8 inches DBH to: BA of 153, TPA of 61, average DBH of 20 inches, and an SDI of 30%.
- Keep all hardwoods and all noble fir.
- Keep all western hemlock and western red cedar less than 10" DBH and greater than 30" DBH.
- Keep all Douglas-fir greater than 30" DBH.

- Maintain the existing down wood and snags where they do not pose a safety hazard. At the completion of the operation at least 2 snags per acre will be within Area I.
- The **total residual stand (overstory and understory) in Area I will be:** BA of 166, TPA of 3,250, average DBH of 1 inch and an SDI of 35%. The residual numbers are skewed toward the smaller diameter trees. These numbers are here to show the plethora of seedlings to be used for the layers in the stand.

The proposed management prescription for Area II is:

- Thin the stand to: BA of 194, TPA of 90, average DBH of 19 inches, and an SDI of 40%.
- Hardwoods will be reserved from harvest when not located within a road right-of-way or cable corridor.
- Maintain the existing down wood and snags where they do not pose a safety hazard. At the completion of the operation at least 2 snags per acre will be within Area II.
- The **total residual stand (overstory and understory) in Area II will be:** BA of 204, TPA of 152, SDI of 40% and DBH of 13 inches.

The proposed management prescription for Area III is:

- All trees greater than 8 inches DBH thin to: BA of 176, TPA of 90, an average DBH of 20 inches, and an SDI of 40%.
- Maintain the existing down wood and snags where they do not pose a safety hazard. At the completion of the operation at least 2 snags per acre will be within Area III.
- The **total residual stand (overstory and understory) in Area III will be:** BA of 176, TPA of 91, an average DBH of 20 inches and an SDI of 40%.

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)	2,964	32	2,996
Stumpage Value (\$/MBF)	\$350	\$150	
Estimated Gross Value	\$1,037,400	\$4,800	\$1,042,200
		Project Costs:	\$177,083
		Estimated Net Value:	\$865,117

VI. TRANSPORTATION PLANNING AND HARVESTING:

Access: SRC Road, SRC 1400, 1410, 1450, 1500, and 1600 spurs. Haul will be out SRC Rd. Otherwise, haul will be TR 1200, SRC 900, SRC. All roads are surfaced and in good condition but will need some drainage rehabilitation, brushing, and grading. Five spurs will be constructed that total 5,200 feet. These spurs will have a 16 subgrade plus a ditch and will be surfaced with pit run rock. During 1997, a portion of the SRC Rd and the SRC 1200 Rd washed out. These sections of road will be repaired with this operation by placing new culverts and repairing the road surfaces.

Logging: The unit is approximately 40% ground logging and 60% cable. Ground slopes in the area range from 5% to 80%.

Project work: New construction – 5,200 feet
 Improvement – 2.66 miles
 Brushing – 5.5 miles
 Repair 2 blowouts

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	1	0
Improve	0	2.66	0	0
Maintain	0	5.8	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. Rock Creek, a large, fish bearing stream is located at the bottom of Areas I and II. Rock Creek is an important stream for steelhead habitat. This habitat ends down stream from the proposed operation. There are approximately 10 small, non-fish streams located within the entire operation. The overstory along the non-fish streams consists of Douglas-fir, western red cedar and some hardwoods. The overstory on Rock Creek consists of red alder, Douglas-fir and some western hemlock.

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 streams or within 50 feet of the 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 Snowy South 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:

There are bands of steep and very steep slopes especially in the lower slopes of both sale areas. 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:

Area II and the northern portions of Areas I and III can be seen from Highway 22 and some parts of Mill City. Since the thinnings will be light to moderate within the operation, the impact to the visual resources should be minimal.

XIII. OTHER RESOURCE CONSIDERATIONS:

There are no other resource considerations for this operation.

XIV. LMCS:

Area 1, 2 & 3 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 eight perennial Type N stream. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.

Area 2 contains Focused Stewardship, Aquatic and Riparian Habitat for one perennial Type N stream. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.

Area 3 contains Focused Stewardship, Aquatic and Riparian Habitat for one perennial Type N stream. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.