

Pre-Operations Report

Operation Name: Mill Stone
County: Polk
Management Basin: Green Mountain

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
I	Modified Clearcut	39	33
II	Partial Cut	49	46
III	Partial Cut	27	22
Total CC		39	33
Total PC		76	68

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

The operation consists of one modified clearcut unit and two partial cut units. The units lie in the western hemlock vegetation zone. Average rainfall is between 78 and 100 inches.

Area I is located on moderate slopes in the headwaters of Big Rock Creek. There is one very small band of steep slope noted in the western portion of the unit. Area II is located on moderate to steep slopes in the headwaters of the South Fork of Mill Creek. Area III is on gentle to moderate slopes in the headwaters of Big Rock Creek. The underlying rock is sedimentary origin rocks of the Tye Formation with very thick sequence of rhythmically bedded, medium- to fine-grained marine sandstone and siltstone.

Aspect for Areas I and II is west and for Area III is south.

II. CURRENT STAND CONDITION:

Area I is a 24 year old Douglas-fir stand that is severely infected with Swiss needle cast (SNC). There are some red alder and big leaf maple present in the stand. The Douglas-fir has not been pre-commercially thinned. Both Areas II and III support 26-year-old Douglas-fir stands that were pre-commercially thinned about 12 years ago. There are a few hardwoods in the stand such as big leaf

maple and red alder. The Douglas-fir in Area II is slightly to moderately infected with SNC. There are few snags and little down wood in the operation areas.

Brush species such as salmonberry, vine maple, sword fern, salal, and elderberry are present in the understory but in small quantities.

All three areas are classified as CSC stand type.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	RD	Acres ²
I	Modified Clearcut	18949	Douglas-fir	24	11	190	287	57	33
		Target ³							
II	Partial Cut	18080	Douglas-fir	26	11	180	272	54	46
		Target ³			13	130	140	36	
III	Partial Cut	18078	Douglas-fir	26	11	145	203	43	22
		Target ³			13	120	130	33	

1 The source of stand inventory information is district inventory plots from 2001.

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

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

III. DESIRED STAND CONDITION:

According to the district's landscape design Areas I-III are designated as General and are not intended to become more complex stands such as Layered (LYR) or Older Forest Structure (OFS). The anticipated pathway for Area I is to move from a Closed Single Canopy (CSC) stand to Regeneration (REG) through clearcutting and replanting, then to CSC and finally to Understory (UDS) utilizing future commercial thinning entries. The anticipated pathway for Areas II and III is to move from CSC to UDS through commercial thinning.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
I	18949	CSC	REG	UDS	33
II	18080	CSC	UDS	UDS	46
III	18078	CSC	UDS	UDS	22

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 Douglas-fir trees in Area I are severely infected with Swiss needle cast (SNC) and consequently, the growth of these trees has been significantly slowed. Partial cutting in similar stands has appeared to be detrimental to stand health in

other areas of the Coast Range. Since Area I supports mostly Douglas-fir trees the area will be clearcut. After harvest, the unit will be replanted with a combination of conifer seedlings. If SNC tolerant Douglas-fir are available, the mix will be approximately 50% Douglas-fir, 25% western hemlock, 20% western red cedar, and 5% Sitka spruce. Otherwise, the mix will be 30% alder, 25% western hemlock, 20% Douglas-fir, 20% western red cedar, and 5% Sitka spruce. Seedlings will be planted at a rate of about 400 per acre. All cedar will be tubed to deter elk browse. Some slash piling on the flatter portions of the unit may be necessary to create planting spots. The area will be evaluated for mountain beaver activities and trapped prior to planting if necessary. Approximately 10-12 reserve trees per acre will be retained to provide for future snags, down wood, and legacy trees. The reserve trees will be composed of Douglas-fir and red alder, along with the very few western hemlock that are present.

In Area II, a partial cut will be prescribed that will lower the RD to 35-40. This is a somewhat higher RD than in most first entry plantation thinnings. The reason for this is the stand is slightly to moderately infected with SNC. Stands that have this level of infection have been shown to respond better to lighter partial cutting than a thinning that removes more trees. After partial cutting, about 140 trees per acre that are 13" DBH will remain.

Area III will be partial cut to a RD of about 35. After partial cutting about 130 trees that are 13" DBH will be left.

Existing hardwood trees will be retained in all three areas. Any conifer other than Douglas-fir will be reserved from cutting. Existing snags and down wood will be retained.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
96%	4%		X
Planned Quarter:		1	

	Conifer	Hardwood	Total
Net Volume (MBF)	800	0	800
Stumpage Value (\$/MBF)	\$200		
Estimated Gross Value	\$160,000		\$160,000
		Project Costs:	\$55,000
		Estimated Net Value:	\$105,000

VI. TRANSPORTATION PLANNING AND HARVESTING:

Access to Area I is from Hatchery-Fall Creek road. This road is rocked and in good condition but may need some spot rock and maintenance grading during hauling.

Access to Areas II and III is from Big Rock Creek County Road. An access permit will need to be secured from Plum Creek Timber along a spur off the county road. This road is rocked and in good condition but will need some spot rock and maintenance grading during hauling.

Existing roads provide timber harvest access to 80% of the sale acreage. Approximately 0.4 miles of new road will need to be constructed to provide additional access. The locations of these roads will be in stable locations on gentle ground or ridgetops. Because existing roads already access the majority of the sale area, no other harvest alternatives were considered.

About 0.6 miles of road improvement will be necessary.

Most roads in the timber operation area will be rocked for winter haul. The reason for rocking these roads for winter haul is to make the operation more attractive for perspective purchasers and should result in a higher bid price.

A fish presence survey will need to be completed on a tributary to Fall Creek East of Area I. Based on the finding of the survey one stream crossing may be replaced.

Harvesting timber in the operation areas would require a combination of 80% cable yarding and 20% ground skidding.

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0.2	0.2
Improve	0	0	0	0.6
Maintain	0	3.0	1.9	0
Close/Block	0	0	0	0.7
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:

Waters from the operation area flow into Big Rock Creek or Mill Creek, which are tributaries of the Siletz River. The operation is in proximity to streams in which listed fish are present.

Area I contains some type N streams. Buffers averaging 50-75 feet horizontal distance will be posted on either side of these streams. No trees will be felled within the buffer except to facilitate cable yarding. In the remaining portion of the riparian management area (RMA) zones sufficient trees will be retained to comply with current standards.

There is an assumed type F stream located just outside the southwest corner of Area II. There is an assumed type F stream that forms within the southeast portion of Area III. Fish presence surveys will be conducted to determine if fish are present. If these streams are determined to be type F, a 25' horizontal distance buffer will be posted to protect these streams. No trees will be felled within the buffer except to facilitate cable-yarding corridors. The partial cut thinning prescription will retain sufficient trees in the inner and outer RMA zones (out to 170' from the aquatic zone) to comply with current standards.

Type N streams are present within Areas II and III. A 25' horizontal distance buffer will be established on either side of these streams. No harvesting will be allowed within the buffer except to facilitate cable yarding. The partial cut thinning prescription will retain sufficient trees in the RMA zone to comply with current standards.

Vegetation along type F and N streams consists of Douglas-fir and red alder trees and brush species such as salmonberry, elderberry, sword fern, and vine maple.

There are no registered domestic water rights in the vicinity of the operation area.

Activities that will take place in proximity to the streams, listed above, include timber felling and yarding. The following measures will be employed to minimize impacts to the streams: 1) no timber will be felled within the buffer except to facilitate cable yarding, 2) timber above the buffer will be felled away from or parallel to the stream, 3) timber will be yarded away from the stream, where possible, 4) if it is necessary to yard across the stream, logs will be fully suspended above the buffer vegetation, and 5) single end suspension of logs will be required elsewhere in the unit.

Other requirements designed to minimize impacts to streams include seasonal restrictions for road construction and log hauling.

The Land Management Classification System for Aquatic and Riparian classifications determined 33 acres in Focused Stewardship and 5 acres in

Special Stewardship. Focused Stewardship acres are distributed along type N stream RMA's and the outer zone of type F streams. Special Stewardship acres area located along the inner zone of type F stream RMA's.

VIII. T&E SPECIES CONSIDERATIONS:

Areas II and III were included in the FY 2005 AOP as an alternate sale. It was determined by the area wildlife biologist that they do not contain suitable habitat for northern spotted owls or marbled murrelets. Consequently, no surveys have been conducted. Area I was recently added to this operation and has not been analyzed for owl or murrelet habitat by the area wildlife biologist to date.

T&E Fish: Big Rock Creek and Mill Creek support "threatened" Coho salmon. For a discussion of protection measures see Section VI "Harvesting and Access Considerations" and Section VII "Aquatic Resources and Water Quality".

The operation area was checked against district knowledge for any listed plant locations. The operation area was also checked against the Oregon Natural Heritage Program (ONHP) database of known listed plant locations. No listed plant records were identified within the operations area.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

The initial assessment by the geotechnical specialist is as follows: Areas I & II are moderate with only one steep indication of slope in Area I and two bands of steep slopes in Area II. Area III is low. The geotechnical specialist will be consulted during sale layout and the need for field review will be assessed.

X. RECREATION RESOURCES:

Recreation in this area consists mostly of hunting. The gate on the access route to Areas II and III is locked throughout the year.

XI. CULTURAL RESOURCES:

There is a suspected old homestead site in the southern part of Area III. The public use coordinator will conduct a site assessment prior to preparation of the timber sale.

XII. SCENIC RESOURCES:

The operation area is not visible from any paved highways.

XIII. OTHER RESOURCE CONSIDERATIONS:

There have been no other resource considerations identified.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Table 6. Land Management Classification Summary

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
I	Aquatic & Riparian Habitat	11	2
II	Aquatic & Riparian Habitat	11	0
III	Aquatic & Riparian Habitat	11	3

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. For example, a particular acre can be classified as Focused Stewardship for Aquatic and Riparian, Recreation, and Scenic resources.
