

Pre-Operations Report

Operation Name: Re-Hatch
County: Polk/Lincoln
Management Basin: Green Mountain

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Net Acres
	Partial Cut	97

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

This sale consists of one partial cut unit which is in the western hemlock vegetation zone. Average annual rainfall is 78" to 100". The soils are all Valino.

The operation area is located on mostly gentle to moderate slopes on the east flank of Rudder Creek, a tributary of Steere Creek. There is one steep slope area in the extreme northwest portion of the operation area. The area has a history of large-scale deep-seated slope movement and some geotechnical investigation. The underlying rock is sedimentary origin rocks of the Tyee Formation with very thick sequence of rhythmically bedded, medium- to fine-grained marine sandstone and siltstone.

The aspect for this sale is south and west.

II. CURRENT STAND CONDITION:

The overstory is predominately 69 year old Douglas-fir with a few western hemlock, Port Orford cedar, red alder, and bigleaf maple present. Understory species include numerous hemlock and alder seedlings, vine maple, salal, hazel, and sword fern. Some snags and down wood exist in the stand. The operation area was commercially thinned in 1999. At that time, approximately 6 acres of patchcuts were made and planted to hemlock. Alder seed-in occurred naturally and occupies about 10% of the patches. Patchcut trees are now about 10 feet tall.

The stand type is classified as Understory (UDS)

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	RD	Acres ²
	Partial Cut	SLI18331	DF	66	21	185	78	41	73
		Target ³			24	100	32	20	
	Partial Cut	SLI18321	DF	71	21	190	79	40	24
		Target ³			24	100	32	20	

1 The source of stand inventory information is district inventory information from 2000 for 18321 and SLI from 2003 for 18331.

2 The acres are based on orthophotos and GIS and exclude roads, stream 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 the operation area is designated as DFC Complex and is targeted to become Older Forest Structure (OFS).

Vision: The OFS condition will be attained by the time the stand reaches approximately age 110. When it reaches the DFC, the stand will consist of an overstory of fairly even-spaced Douglas-fir (averaging 32 inches DBH) with patches of alder and bigleaf maple. Beneath the overstory will be a well-developed second layer of western redcedar, hemlock and alder. One-half to two acre openings in the overstory will be scattered throughout the area. These patches will contain a second cohort of Douglas-fir, hemlock, western redcedar and alder. A lower layer of brush (vinemapple, elderberry and salal) and scattered mixed conifer and hardwood will exist in smaller openings located throughout the stand. Both large and small snags and downed wood will be present throughout the stand.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
	18331	UDS	UDS	OFS	73
	18321	UDS	UDS	OFS	24

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:

Anticipated Pathway: During this harvest, the stand will be thinned to an RD of about 20, leaving approximately 32 TPA in the overstory. Average DBH of these residual trees will be approximately 24 inches.

- Existing hard snags and all downed wood will be retained. SLI plots show a deficient number of sound snags and down logs in the stand. Approximately 100 cubic feet of down wood and 1 snag per acre will be created with the operation.

- All trees other than Douglas-fir will be reserved from cutting.
- Three to four patchcuts will be created. Patches will range from 1/2 to 2 acres in size. In patchcuts that are greater than one acre in size, a few trees will be marked for retention.
- Piling of brush and slash will be conducted in patchcuts and possibly in portions of the understory.
- Following harvest, a site preparation herbicide application will be made to deter brush competition.
- The stand will be underplanted with western hemlock and western red-cedar in approximately equal amounts. Patchcuts will be planted with Douglas-fir, western hemlock and western red cedar in approximately equal amounts. Trees will be planted at a rate of about 360 tpa.
- Animal damage mitigation will consist of tubing all planted cedar to protect against deer and elk browse. Mountain Beaver control is not expected to be needed.

This thinning will not only open the overstory enough to underplant, but will encourage the existing understory conifer and hardwood to continue to grow.

It is likely that at least one herbicide application will be needed in the patchcut areas within the first 3 years after planting in order to release planted seedlings from competing vegetation.

In 10 to 15 years following this thinning, or when the RD approaches 30, the overstory will be thinned again to approximately an RD 20, leaving about 20 TPA. This thinning will allow both the natural and planted trees in the understory to continue to grow.

- At this time, the amount of natural snags and downed wood will again be evaluated. If it is determined that additional amounts are needed, then snags and downed wood will be created.
- Thinning of the overstory will result in loss of some of the understory trees. Therefore, PCT will likely not be needed in the understory. Patchcuts may require PCT.

About 10 years after the last thinning (stand age of 90-95 years), both the natural and planted understory and patchcut trees will have reached at least 30 feet in height over more than 30% of the stand, moving the stand from UDS to LYR.

By age 110 years the average overstory tree will have reached 32 inches in diameter and there will be enough snags and down wood of the appropriate sizes and decay classes to classify the stand as OFS. The remaining overstory will be left as legacy trees. Over time, some will become snags and downed wood. The understory trees will gradually become the overstory component. Continued seed-in of conifer and hardwood will keep the stand in the OFS condition. Density regulation in the form of commercial thinning of the overstory and PCT of the understory trees will likely occur.

The Port Orford cedar, which was planted many years ago in the understory, is not native to the site. It has begun to die in some parts of the stand, most likely from Port-Orford-Root disease. It is not expected to remain a component of the stand.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
82%	18%	<input type="checkbox"/>	X
Planned Quarter: 3			

	Conifer	Hardwood	Total
Net Volume (MBF)	1,100	0	1,100
Stumpage Value (\$/MBF)	\$350	0	
Estimated Gross Value	\$385,000		\$385,000
		Project Costs:	\$89,000
		Estimated Net Value:	\$296,000

VI. TRANSPORTATION PLANNING AND HARVESTING:

Access to the operation is from Steere Creek County road and Beaver Creek Road. The county road is county maintained. Beaver Creek road is rocked and in good condition but will need some spot rock and maintenance grading during hauling. The access spur off Beaver Creek road into the operation area will require a lift of rock to re-establish its original design standard. Over 50% of the area is planned for wet weather hauling.

Existing roads provide the most efficient access for timber harvest and access 100% of the operation acreage. Because existing roads already access the sale area, no other harvest alternatives were considered.

About 3.0 miles of road improvement will be necessary.

Fish distribution surveys will need to be completed in the Hatchery area. Based on the survey results stream crossing structures will be evaluated for replacement. Emphasis will be placed on the larger culvert in the Hatchery Extension area.

All unsurfaced roads will be waterbarred, blocked to vehicular traffic, and grass seeded after harvesting operations are concluded and/or at the beginning of the wet season.

Harvesting timber in the operation areas would require a combination of 30% cable yarding and 70% ground skidding.

Contingent upon acquiring an access permit, the lower portion of Rudder Creek road will be evaluated for realignment or improvement. This is due to the recent vacation of the lower portion of Hatchery Fall Creek Road which was a primary haul route. Rudder Creek road is currently not wide enough, some corners are too sharp and some grades are too steep for a primary haul route.

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0	0
Improve	0	1.2	0.8	1.0
Maintain	0	1.9	0	0
Close/Block	0	0	0	1.0
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:

Water flowing from the operation area is part of the Siletz River system. The operation area is in proximity to streams in which listed fish are present.

A type F stream exists to the west of the operation area. The timber sale boundary will be posted about 25' horizontal distance from this stream. The partial cut thinning prescription will retain sufficient trees in the outer Riparian Management Area (RMA) zone to comply with current standards. Approximately 12-15 logs will be placed in the type F stream adjacent to the south boundary of the unit to improve fish habitat.

Type N streams are present in the operation area. A 25' horizontal distance buffer will be established on either side of these streams. No harvesting will be allowed in 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 conifer and hardwood trees and brush species such as salmonberry, elderberry, vine maple, and sword fern.

There are registered domestic water intakes to the south of the operation area on private land. However, it is not anticipated that harvesting will impact water

quality. Further investigation during sale preparation will be required to confirm this assumption.

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 stream: 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 logs 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 units.

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

The operation area contains 19 acres Focused Stewardship, Aquatic and Riparian Habitat along the Type N stream riparian areas. The area contains an additional two acres in Special Stewardship, Aquatic and Riparian Habitat along Rudder Creek, a type F stream.

VIII. T&E SPECIES CONSIDERATIONS:

The operation area contains suitable habitat for northern spotted owls and marbled murrelets. Surveys were conducted in 2005 and will be continued in 2006.

T&E Fish: Tributaries of the Siletz river that are fed from streams in the operation areas 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 operation area.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

There are a few steep slopes in the north most end of the operation in the headwaters of Rudder Creek. The initial assessment from the geotechnical specialist is low. If High Landslide Hazard Locations are located during field work the geotechnical specialist will be consulted.

X. RECREATION RESOURCES:

Recreation in the operation area consists mainly of hunting.

XI. CULTURAL RESOURCES:

There are no known cultural resources located in or adjacent to the operation area.

XII. SCENIC RESOURCES:

None of the operation area is visible from paved highways.

XIII. OTHER RESOURCE CONSIDERATIONS:

No other resource considerations have been identified.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The operation area contains Focused Stewardship, Aquatic and Riparian Habitat along the Type N stream riparian areas. The area contains Special Stewardship, Aquatic and Riparian Habitat for the inner zone of a type F stream. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.