

Pre-Operations Report

Operation Name: Spilde Over
County: Benton/Lincoln
Management Basin: Green Mountain

Table 1. Operation Areas, Types and Acres

| Area | Type of Operation | Net Acres |
|----------|-------------------|-----------|
| I | Modified Clearcut | 35 |
| II | Partial Cut | 9 |
| III | Partial Cut | 27 |
| IV | Partial Cut | 17 |
| V | Partial Cut | 27 |
| | | |
| Total CC | | 35 |
| Total PC | | 80 |

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

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

The landform for Area I is gentle. The landform for Areas II thru V is moderate ridgeline divide and side-slopes of two tributaries on the north side of the Yaquina River just above Hamer Lake. The underlying rocks are sedimentary origin rocks of the Tye Formation.

The landform for Area I is located on a broad ridge and has a southwest aspect. Area II is a ridgetop unit that has a strong southwest aspect. Area III has a southerly aspect. Area IV has a southeast aspect. Area V is a ridgetop unit that has a southeast aspect.

II. CURRENT STAND CONDITION:

Area I supports a mixed 64 year old Douglas-fir/red alder stand. There are some bigleaf maple in the stand, as well. Snags and down wood are present although in limited numbers. Brush species such as elderberry, salal, vine maple, salmonberry, hazel, Oregon grape, and sword fern are growing in the understory.

Areas II-V contain 58-65 year old natural Douglas-fir stands. There are some big leaf maple and red alder present but located mainly in riparian areas. A few snags and some down wood are present. Brush species are similar to those in Area I.

All five operation areas are classified as Understory (UDS) stand type.

Table 2. Stand Inventory Information

| Area | Prescription | Stand ID ¹ | Species | Age | DBH | BA | TPA | RD | Acres ² |
|------|--------------|-----------------------|-------------|-----|-----|-----|-----|----|--------------------|
| I | CC | SLI 18252 | Red Alder | 64 | 14 | 148 | 129 | 39 | 12 |
| | | S99 18144 | Douglas-fir | 64 | 17 | 322 | 201 | 39 | 23 |
| II | PC | SLI 18584 | Douglas-fir | 60 | 18 | 232 | 138 | 69 | 9 |
| | | Target ³ | | | 22 | 160 | 61 | 34 | |
| III | PC | S99 18135 | Douglas-fir | 60 | 16 | 305 | 212 | 76 | 27 |
| | | Target ³ | | | 20 | 160 | 73 | 36 | |
| IV | PC | S99 18309 | Douglas-fir | 58 | 17 | 321 | 194 | 78 | 17 |
| | | Target ³ | | | 21 | 160 | 80 | 35 | |
| V | PC | S99 18310 | Douglas-fir | 65 | 18 | 330 | 183 | 78 | 27 |
| | | Target ³ | | | 22 | 160 | 61 | 34 | |

1 The source of stand inventory information is OSCUR 99 grown forward or SLI from 2003 or 2004.

2 The acres are based on orthophotos and 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, all areas of the timber sale are designated as Desired Future Condition General and are targeted to become UDS stands.

Area I Vision: When the next final harvest occurs in this operation area, the stand will be 60-70 years old and will be in the UDS condition. At that time, about 1/3 of the stand will consist of an overstory of well-stocked, well-formed red alder with a few scattered western red cedar. The rest of the stand will consist of well-stocked Douglas-fir with smaller amounts of western hemlock, western red-cedar, bigleaf maple and red alder. Where there are gaps in the overstory, there will be an understory of hemlock, cedar, alder and brush (elderberry, vinemapple, salmonberry, Oregon grape). Legacy trees (about 4-6 per acre) left from the first regeneration harvest will be located in small clumps and also scattered across the area. These Douglas-fir trees will average about 34 inches DBH. Both large and small snags and large and small down wood will be located throughout the unit.

Area II - V Vision: These stands are currently classified as UDS and will remain in that condition following harvest and until final regeneration harvest at about age 80 years. At that time, these areas will consist of well-stocked, large Douglas-fir in the overstory with a few patches of alder and bigleaf maple, mainly in the riparian areas. The understory will consist mainly of sword fern, elderberry, hazel and vinemaple. Where there are gaps in the overstory, small clumps of Douglas-fir and hardwood will also be found in the understory. Snags and down wood will be present throughout the stands.

Table 3.

| Area | Stand ID | Current | Post Harvest ¹ | Desired Future | Acres |
|------|-----------|---------|---------------------------|----------------|-------|
| I | SLI 18252 | UDS | REG | UDS | 12 |
| | S99 18144 | UDS | REG | UDS | 23 |
| II | SLI 18584 | UDS | UDS | UDS | 9 |
| III | S9918135 | UDS | UDS | UDS | 27 |
| IV | S99 18309 | UDS | UDS | UDS | 17 |
| V | S99 18310 | UDS | UDS | UDS | 27 |

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:

Area I Anticipated Pathway: This harvest will be a modified clearcut prescription leaving behind about 10-12 green trees per acre that will be greater than 16 inches DBH. The majority of these reserve trees will be Douglas-fir, but some alder and bigleaf maple may also be left. Existing snags that do not pose a safety hazard and all existing down wood will be retained. The area wildlife biologist will be consulted to determine the necessary number of snags and amount of down wood to create with this sale.

After harvest, portions of the area less than 35% slope will be slash piled and the piles will be burned. A site prep herbicide treatment will also be applied. Prior to planting, mountain beaver will be trapped from the area.

Following completion of site prep activities, the north 1/3 of the area will be replanted with alder at a rate of 538 TPA. Cedar, at a rate of 10-20 TPA will be mixed in with the alder. The rest of the area will be replanted with approximately 70% Douglas-fir, 15% western hemlock and 15% western redcedar at a rate of 436 trees per acre. All cedar will be tubed to deter elk and deer browse. Once planting is complete, the operation area will fit the REG classification.

It is likely that at least one herbicide application will be needed within the first 3 years after planting in order to release planted conifer from competing brush. It is also likely that mountain beaver will be trapped again the first year after planting. By age 12 years the stand will have moved from REG to CSC.

When the planted alder reach age 9-12 years, they will most likely require a pre-commercial thinning (PCT) back to about 250 TPA. Trees will be left on an even spacing. When the planted conifer reach age 12-15, it is likely that PCT will be used to reduce total trees per acre to around 222. The biggest and best trees will be selected to leave, also keeping in mind the desire to leave roughly the same percent mix as was planted.

At approximately age 30 the conifer in the unit will be commercially thinned to about an RD 35. This thinning will capture harvest volume and will also move the stand on the pathway from CSC to UDS by opening the stand enough to allow vegetation to grow in the understory. At this time, an evaluation will be made as to whether or not the alder will need further thinning. This would likely be a PCT operation (trees too small for commercial harvest) and would be done separately from the conifer harvest. Approximately 5-10 years following these thinnings, the UDS condition will be achieved.

A second commercial thinning of the conifer area will be conducted in 10 to 15 years, when the stand RD has reached about 50. Trees will be thinned to about an RD 35. This thinning will capture harvest volume and maintain stand vigor. It will also keep the stand from reverting to CSC. The amount and condition of down wood and snags will be evaluated and more will be created at this time if needed.

In 10-15 years following the second thinning, conifer growth rates will be evaluated and a decision will be made to either conduct a third thinning or to wait until final harvest at 60-70 years old.

Areas II – V Anticipated Pathway: All four areas will be thinned to an RD of 34-36 and about 160 ft² basal area per acre. From 60-80 TPA will be left, averaging 20-22 inches DBH. This operation will capture volume and open the overstory enough to maintain stand vigor and allow the existing understory vegetation to grow. Without this thinning, the stand would likely revert to CSC. Snags and down wood will be created with this operation. Regeneration harvest of these areas will occur in about 20 years following this operation.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

| Ownership | | Sale Type | |
|--------------------|-----|--------------------------|----------|
| BOF | CSL | Cash | Recovery |
| 62% | 38% | <input type="checkbox"/> | X |
| Planned Quarter: 4 | | | |

| | Conifer | Hardwood | Total |
|-------------------------|-----------|----------------------|-----------|
| Net Volume (MBF) | 1,400 | 300 | 1,700 |
| Stumpage Value (\$/MBF) | \$350 | \$300 | |
| Estimated Gross Value | \$490,000 | \$90,000 | \$580,000 |
| | | Project Costs: | \$158,000 |
| | | Estimated Net Value: | \$422,000 |

VI. TRANSPORTATION PLANNING AND HARVESTING:

Access to Area I is over the Yaquina and Spilde Loop roads which are surfaced and in good condition. Two ridge top spurs off of Spilde Loop Road will be constructed and surfaced with crushed rock. The Yaquina road passes through an Industrial Forest Landowner of which a permanent easement is in place.

Access to Areas II & V and a portion of Areas III & IV are over Green Mountain and Yaquina 4 roads. Green Mountain road is surfaced and in good condition, requiring only routine maintenance. A permanent easement is in place for the lower portion of Green Mountain road. The Yaquina 4 road is also surfaced and in good condition but will need a lift of rock to bring it back to its original design standard. This is also true for the existing road into Area II. A short ridgetop spur into Area III will be constructed and surfaced with crushed rock. Access to the lower portion of Area III will require extension of an existing dirt road over gentle to moderate side slopes. The majority of Areas IV and V will be accessed by a newly constructed, unsurfaced, ridgetop road. Due to the grade of the ridge some full bench construction will be required.

An alternative access route into Areas IV and V from Balm Creek Road was considered but discarded due to an excessive number of switchbacks needed to reach the ridge. An alternative route for Area III, which was located on the ridgetop, was discarded due to excessive grades. Alternatives for Area I consisted of not building one of the ridgetop roads. This was discarded for reasons of logability and the need for access for future harvesting. The existing road into Area II provides the most efficient access so no other alternatives were considered.

Wet weather access is planned for Areas I, II and a portion of III. Areas IV and V have limited access to surfaced roads.

Fish distribution surveys will need to be conducted on Balm Creek and one of its tributaries and a tributary to Yaquina River. If fish presence is verified then some stream crossing structures will be evaluated for possible replacement.

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.

Existing roads provide timber harvest access to 20% of the operation acreage. Where existing roads already access the sale area, no other harvest alternatives were considered. In areas where new roads were constructed, the most efficient harvest alternative was chosen.

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 | 0.4 | 0.8 |
| Improve | 0 | 0 | 2.2 | 0.2 |
| Maintain | 0 | 4.1 | 1.7 | 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 streams in Area I drains into the Mary’s River System. Areas II through V contain streams that flow into the Yaquina River System.

There are no type F streams within any of the operation areas or in close proximity to them.

There is a stream that is present in Area I. It is unknown at this time if it is type F or type N. The ODFW fish biologist will determine the correct stream classification. If it is type F a 100’ horizontal distance buffer will be posted on either side of the stream. If it is a type N stream, a buffer averaging 50-75 feet horizontal distance will be posted on either side of this stream. 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.

Type N streams are present in Areas II-V. 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 to comply with current standards.

Vegetation along Type 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 domestic water rights associated with this operation.

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 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 the Aquatic and Riparian category determined that there are 10 acres of Focused Stewardship. Focused Stewardship acres are distributed along type N stream RMA's.

VIII. T&E SPECIES CONSIDERATIONS:

The operation areas contains suitable habitat for northern spotted owls and marbled murrelets. Surveys were conducted in 2005 with no detections. Surveys will be continued in 2006.

T&E fish: Tributaries of the Yaquina River that flow from 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 areas were checked against district knowledge for any listed plant locations. The operation areas were also checked against the Oregon Natural Heritage Program (ONHP) database of known listed plant locations. No listed plant records were identified within the operation areas.

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:

Hunting is the primary recreational use of this area.

XI. CULTURAL RESOURCES:

There are no known cultural resources within or adjacent to the operation areas.

XII. SCENIC RESOURCES:

The operation areas are not visible from paved roads.

XIII. OTHER RESOURCE CONSIDERATIONS:

No other resource considerations have been identified.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Area I contains Focused Stewardship, Aquatic and Riparian Habitat in the upper Mary's River drainage system. Areas II through V contain Focused Stewardship, Aquatic and Riparian Habitat in the upper Yaquina River drainage system. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.