

# Pre-Operations Report

**Operation Name:** Big Yaq  
**County:** 84% Benton 16% Lincoln  
**Management Basin:** Green Mountain

**Table 1. Operation Areas, Types and Acres**

Area	Type of Operation	Gross Acres	Net Acres
I	Partial Cut	101	91
II	Partial Cut	46	41
III	Partial Cut	120	102
Total		267	234

## **I. PHYSICAL DESCRIPTION OF OPERATION AREA:**

The operation consists of 3 partial cut units. The units lie in the western hemlock vegetation zone. Average annual rainfall is 78" to 100". The soils are all Valino.

The operation area is located on the upper Yaquina River drainage and on the divide with and in the headwaters of the Little Yaquina River. The slopes are generally moderate with bands of steep slopes associated with Areas I & III. The underlying rock is sedimentary origin rocks of the Tyee Formation very thick sequence of rhythmically bedded, medium- to fine-grained marine sandstone and siltstone

Aspect for Areas I and II is predominately north/south. Aspect for Area III is mostly west facing.

## **II. CURRENT STAND CONDITION:**

All three sale areas contain Douglas-fir ranging from 25 to 32 years old. The units were pre-commercially thinned 14-18 years ago. Douglas-fir is the only conifer present in the stands. A majority of the Douglas-fir trees in Area II were pruned of lower branches in the recent past. Hardwoods including red alder and big leaf maple exist in all three units. Very little down wood and few snags are present. There are some understocked portions of Area I that are the result of *Phellinus weirii* or bear damage.

The stand type for the sale areas is Closed Single Canopy (CSC). Since these stands are densely stocked, little sunlight is available to support understory brush

species. Salal, vine maple, hazel, salmonberry, and elderberry are present in the understory but in small quantities.

**Table 2. Stand Inventory Information**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	RD	Acres <sup>2</sup>
I	Partial Cut	18717	Douglas-fir	32	11	133	203	40	91
		Target <sup>3</sup>			13	120	130	33	
II	Partial Cut	18716	Douglas-fir	25	11	146	228	44	41
		Target <sup>3</sup>			12	100	127	30	
III	Partial Cut	18356	Douglas-fir	31	11	130	182	38	102
		Target <sup>3</sup>			13	120	130	33	

1 The source of stand inventory information is based on district plot data from 2001.

2 The acres are based on orthophotos and excludes 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, Areas I and III are designated as DFC Complex and are targeted to become Layered (LYR) stands. Area II is designated as General and is targeted to become an Understory (UDS) stand.

Area I Vision: The LYR condition will be attained by the time the stand reaches approximately age 60. At that age the stand will consist of an overstory of Douglas-fir with a few scattered small clumps of alder. Patches of hemlock and western red cedar will be present in a second layer where patchcuts were created and planted. An understory of natural Douglas-fir, alder, salmonberry and vinemaple will be present where gaps were created by thinning and by nature. Snags & downed wood will be present throughout the stand, especially in root rot areas.

Area II Vision: The UDS condition will be attained within a few years of thinning. At that time the stand will consist mostly of pruned Douglas-fir and a few scattered hardwood and unpruned Douglas-fir in the overstory and a mix of shrubs and herbs in the understory. The final desired condition is to have a stand of large pruned Douglas-fir (28-32" DBH) which will be marketed for their high-value clear wood.

Area III Vision: The vision for this stand is to have an overstory of Douglas-fir with scattered hardwood. Understory Douglas-fir, western hemlock and hardwood will be present in natural openings and underneath the overstory canopy. Brush and

herbaceous vegetation will be present on the forest floor. This condition may take many years to achieve.

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest <sup>1</sup>	Desired Future	Acres
I	18717	CSC	UDS	LYR	91
II	18716	CSC	UDS	UDS	41
III	18356	CSC	UDS	LYR	102

<sup>1</sup> 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 Pathway: The anticipated pathway for Area I is to move from CSC to UDS by thinning and creating patch cuts. Area I will be thinned to a RD of about 33. Most hardwood, snags and downed wood will be left. Patch cuts varying in size and shape will be created in existing root rot pockets and in other parts of the unit. Patch cut boundaries will be posted and all trees inside will be harvested unless these areas are greater than an acre, in which case about 6 trees per acre will be reserved. A site preparation herbicide treatment may be required in the patch cuts to deter brush competition. The patches will be planted with western hemlock and western red cedar in approximately equal amounts, except in root rot pockets where cedar will be the only species planted. Approximately 400 trees per acre will be planted. All cedar will be tubed to protect against deer and elk browse. These trees are expected to grow and create a second layer in the stand. About 130 trees per acre, averaging 13" DBH, will remain outside the patch cuts. Future thinning and patch cutting, natural disturbance (root rot, etc) and seed-in of natural seedlings, brush and forbs will add to the complexity of the stand and will help continue this area on a pathway towards LYR.

Area II Pathway: Area II will be thinned to an RD of 30 removing most of the unpruned Douglas-fir from the stand and leaving space for the pruned trees to rapidly produce clear wood on their pruned boles. Approximately 127 trees, averaging 12" DBH will remain after harvest. Increased sunlight will allow brush and herbaceous vegetation development on the forest floor. Future thinning will continue to open the stand allowing the remaining trees to produce clear wood volume and also allowing the understory vegetation to grow.

Area III Pathway: This area will be thinned to an RD of about 33, leaving approximately 130 trees per acre that average 13" DBH. Hardwood and snags will be left where possible. This entry is anticipated to move the stand on a pathway from CSC to UDS. Some natural seed-in is expected from Douglas-fir and possibly hemlock. During future harvest entries, this area will be moved on a pathway from UDS to LYR by making patch cuts and/or low density thinnings that will then be underplanted.

## V. ESTIMATED TIMBER AND REVENUE INFORMATION:

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
78%	22%		X
Planned Quarter: 3			

	Conifer	Hardwood	Total
Net Volume (MBF)	1400	0	1400
Stumpage Value (\$/MBF)	\$200		
Estimated Gross Value	\$280,000	0	\$280,000
		Project Costs:	\$84,000
		Estimated Net Value:	\$196,000

## VI. TRANSPORTATION PLANNING AND HARVESTING:

Access to Areas I and II is from Green Mountain and Harmsen roads. Area III is accessed by Yaquina road. These roads are rocked and in good condition. Maintenance grading and spot rocking will be required in order to keep these roads in good condition for all season hauling.

Existing roads provide access to about 90% of the operation area acreage. Because existing roads already access the majority of the operation area, no other harvest alternatives were considered.

The majority of Area I will require reopening and surfacing existing roads. Approximately 0.3 miles of new road will need to be constructed to provide additional access in Areas I and II. The locations of these new roads will be on gentle ground or on ridge top. Access into Area III will require securing an access permit from a small private woodland owner to the East. The concrete bridge spanning the Yaquina river along the haul route into Area III will be inspected by an Engineer and any repairs identified will be completed. A stream crossing culvert will be replaced on a small type N stream in Area III.

About 1.4 miles of road improvement will be necessary. Fish presence surveys will need to be completed on Balm Creek and one of its tributaries and a tributary to the Yaquina river. Based on the finding of the surveys, four stream crossing structures may be replaced, removed, or left.

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 about 90% cable yarding and 10% ground based skidding.

**Table 5. Transportation Planning Summary (Miles).**

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0.3	0
Improve	0	0	0.7	0.7
Maintain	0	2.0	3.6	0.5
Close/Block	0	0	0	1.2
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 the operation area are part of the Yaquina River system. Area III is in proximity to a stream in which listed fish are present.

Type F streams are assumed to be in Areas I and III and adjacent to the west boundary of Area II. 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 riparian management area (RMA) zones to comply with current standards.

Type N streams are present in all three units. 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 F and N streams consists of Douglas-fir and red alder trees and brush species such as salmonberry, elderberry, sword fern, and vine maple.

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.

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

The Land Management Classification System (LMCS) for Aquatic and Riparian classifications determined 62 acres in Focused Stewardship and 14 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 are located within the inner zone of type F streams.

### **VIII. T&E SPECIES CONSIDERATIONS:**

The operation area does not contain suitable habitat for northern spotted owls or marbled murrelets. Surveys are not required for spotted owls. There is marbled murrelet nesting habitat in older timber adjacent to the operation area that was surveyed in 2004 and will be continued in 2005.

T&E Fish: Tributaries of the Siletz and Yaquina rivers 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 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:**

The initial assessment by the geotechnical specialist is high for Area I where steep slopes are predominately located in a band in the middle of the area. The risk is moderate for Area III where the steep slopes are associated mostly with the larger tributary drainage in the southwest portion of the sale area. The risk for Area II is low. The geotechnical specialist will review the sale in the field. If the sale boundaries are changed prior to field review, the geotechnical specialist may be consulted and the need for field review may be reassessed.

### **X. RECREATION RESOURCES:**

Recreation for this area consists mostly of hunting.

### **XI. CULTURAL RESOURCES:**

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

**XII. SCENIC RESOURCES:**

The operation area is not visible from any paved highways.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

There is an ODF permanent inventory plot located in Area III.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

**Table 6. Land Management Classification Summary**

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
I	Aquatic and Riparian Habitat	22	4
II	Aquatic and Riparian Habitat	14	4
III	Aquatic and Riparian Habitat	26	6

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.