

# Pre-Operations Report

**Operation Name: Joyce Creek (Alternative)**  
**County: Tillamook**  
**Management Basin: Trask**

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

Area	Type of Operation	Gross Acres	Net Acres <sup>1</sup>
1	RC	531	502
2	MC	116	114
3	MC	83	81
4	MC	69	69
5	MC	108	108
6	MC	104	103
7	MC	118	116
Total		1130	1093

<sup>1</sup> The net acres are based on orthophotos and GPS and exclude roads, stream buffers and reserve areas.

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

Slopes have a varied aspect and range from 5% to 75%. Elevations range from 600 to 1850 feet. The major soil types are Rye and Killam.

The landforms are gentle but narrow ridgelines and steep side-slopes of the divide between Joyce Creek and the South Fork of the Trask River. There are bands of steep slopes throughout the sale area. The underlying rocks are predominantly igneous origin the submarine base of the Tillamook Volcanics Formation. The underlying rocks of the northeast tip of the sale area are sedimentary origin rocks of the Tyee Formation.

## II. CURRENT STAND CONDITION:

**Table 2. Stand Inventory Information<sup>4</sup>**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	SDI	Net Acres <sup>2</sup>
1	RC	304	DF	39	16	115	81	35	502
		Target <sup>3</sup>			18	40	22	10	
2	MC	305	DF	39	13	167	184	54	114
3	MC	306	DF	39	16	122	88	31	81
4	MC	307	DF	39	14	156	143	41	69
5	MC	308	DF	39	14	130	124	35	108
6	MC	309	DF	39	13	167	175	46	103
7	MC	310	DF	39	14	88	77	40	116

<sup>1</sup> The stand inventory information is from field reconnaissance cruise plots taken in 2005.

<sup>2</sup> The net acres are based on orthophotos and GPS and exclude roads, and stream buffers and reserve areas. Modified clear cut acres are not contiguous and do not exceed 120 acres.

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

<sup>4</sup> These numbers are based on plot data taken to this point and final numbers may differ significantly from the actual conditions. The directive for minor and major modifications will be followed for further review.

The sale areas burned in the 1933 (Tillamook), 1939 (Saddle Mountain) and 1951 (North Fork / Elkhorn) fires and were planted with Douglas-fir. These areas were pre-commercially thinned in 1990 and fertilized in 1992.

The stands in the sale areas are classified as 100% CSC according to the district stand summary information (1999). The stands are dominated by a single species, are single age and single story.

See Table 2 for specific stand data.

The Douglas-fir is from an off-site seed source and has Swiss needle cast (SNC) symptoms resulting in slowed diameter and/or height growth. The stands are within the SNC zone and have been mapped by SNC aerial surveys. The dominant trees have 30-40% live crown ratios, with 25% live crown in the remainder of the Douglas-fir. Heavy PCT caused variable density of the stand, and due to SNC little growth has occurred. The best trees are along streams.

There is scattered alder throughout the sale. The alder that occurs is on disturbed sites or riparian areas where the brush species is also more prevalent. The alder components of these stands were aerially sprayed to release planted conifer in the 1970's resulting in alder trees with short boles and many limbs. The "zombie" alder occupies more growing space than unsprayed alder.

No other significant insect or disease problems have been discovered at this time.

The brush component in all the sale areas is comprised primarily of sword fern. Oregon grape is heavy on ridge tops. Other species such as vine maple, salmonberry and bracken fern occur sporadically.

There are some large snags in various states of decay and/or some hard snags created from animal damage. Down wood consists of scattered large old logs (36"+) in Class 3 and 4 stages of decay and some windthrow in decay classes 1 and 2 and slash from PCT activity.

**III. DESIRED STAND CONDITION and VISION:**

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest <sup>1</sup>	Desired Future	Net Acres
1	304	CSC	UDS	GEN/OFS	53/449
2	305	CSC	REG	GEN/OFS	59/55
3	306	CSC	REG	OFS	81
4	307	CSC	REG	GEN/OFS	31/38
5	308	CSC	REG	GEN/OFS	4/104
6	309	CSC	REG	OFS	103
7	310	CSC	REG	OFS	116

<sup>1</sup> The stand is expected to develop into this condition in the five to ten years after this operation is completed except in REG stands which occur after harvest.

See Section IV: Proposed Management Prescription for more information on Green Tree, Down Wood, and Snag Strategies during operation. Also refer to Landscape Design in the Summary document for more information on strategies to move the district toward Desired Future Condition goals.

The prescriptions described below are based on the current stand condition such as overall tree and stand growth, species mix, stand density, and stand health. The existing stand is showing little sign of developing into complex structure, see Section II, Current Stand Conditions. By conducting a final harvest now a mix of conifers and hardwoods can be established to meet a wider variety of goals in the future. A mix of conifers more biologically suited to the site has potential to grow complex faster and have more resistance to disease such as SNC. Alder will be allowed to grow naturally after conifer planting so future managers can choose the best trees for continued growth.

**Retention cut:**

In the short term Area 1 will be cut to reduce stand density and make room for planting of shade tolerant species. In the long term this operation moves the stand toward more complex structure. This prescription will allow for openings and gaps in the stand to create greater edge effect. The reduced canopy layer and gaps will also allow for understory initiation of shrubs and tree species creating horizontal and vertical diversity. The expectation is future density

management to continue the growth of overstory trees as well as understory trees and shrubs species.

These prescriptions will combine with the adjacent stands to create a mosaic of openings over the landscape through gaps, variable density and mixed species. Unmanaged hardwood and conifer mixes will be left in headwalls, and/or in riparian buffers as well as scattered in the unit.

As the future stand becomes established the residual trees from this entry will add to complexity of sizes, species and densities. These trees are also expected to add to snags and down wood now, or grow larger over time and through the life of the stand contribute continuously.

#### **IV. PROPOSED MANAGEMENT PRESCRIPTION AND ANTICIPATED PATHWAY:**

**See table 2 for prescription targets**

##### **Retention Cut:**

In Area 1 merchantable Douglas-fir will be thinned to a basal area range of 33 to 50 square feet. The resulting trees should result in a relatively contiguous canopy of approximately 30-45 trees per acre. Merchantable alder will be removed. Non-merchantable alder of all sizes will be retained scattered throughout as not required to be cut. All other species will be reserved.

An alternative of withholding treatment in Area 1 until the surrounding areas have reached full stocking will be considered prior to sale layout. Factors include district harvest objectives and ongoing research into SNC treatments.

##### **Modified Clearcut:**

In Areas 2, 3, 4, 5, 6 and 7, merchantable Douglas-fir and alder will be removed. A diameter limit will be used to select Douglas-fir trees to be left. Current estimates are 3-9 trees per acre in units, with 9-15 overall. The density and size of leave trees will be determined after a more comprehensive cruise is completed. Non-merchantable alder will be reserved scattered throughout the harvest areas. Other species will be reserved.

##### **Green Tree, Down Wood and Snag Strategies**

See also Section III: Desired Future Condition for long term strategies

A variety of methods will be used to achieve green tree retention requirements. These residual green trees will supplement the future stand by promoting growth of dominant/co-dominant leave trees. Small non-merchantable hardwood and conifer will also be retained where possible. These leave trees function as future source of snags and down wood recruitment across the landscape. Green trees will be left on precipitous slopes, headwalls, and those areas not reached by conventional logging methods. Stream buffers adjacent to small perennials and

the outer Riparian Management Area (RMA) of fish bearing creeks will also contribute additional green trees. Many of these areas will be posted so they are outside of the timber sale boundary.

Existing down wood will be left in the sale areas. Down wood recruitment is expected through mortality and windthrow of residual or leave trees, felled snags and/or tops left during harvest. Tops resulting from ground yarding will be left in the unit in piles.

Existing snags not determined to be a safety hazard will be retained and any felled snags will be left for down wood. Creation of snags is expected during harvest activities (rub trees, lift trees, or tail trees) and over time by natural processes. Additional green trees may be reserved around large snags to preserve the integrity and usefulness of the snags to wildlife.

**V. ESTIMATED TIMBER AND REVENUE INFORMATION:**

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%		X
Planned Quarter:		4	

	Conifer	Hardwood*	Total
Net Volume (MBF)	10036		10036
Stumpage Value (\$/MBF)	\$232.49		
Estimated Gross Value	\$2,333,250		\$2,333,250
		Project Costs:	\$80,386
		Estimated Net Value:	\$2,252,864

\* Alder will be removed according to prescriptions. Current estimates are negligible.

**VI. HARVESTING AND ACCESS CONSIDERATIONS:**

The sale areas are accessed via South Fork Trask River and Joyce Creek Roads. These are currently all weather crushed rock and/or pit run roads. See maps for specific road locations and conditions.

Approximately 0.5 miles of abandoned road will be improved which includes grading, rocking, widening, sidecast pullback and adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Approximately 1.4 miles total of roads will be constructed in order to realign an existing road and to provide access to cable yarding areas. Ridge top construction will be approximately 1.0 mile. Following harvest, roads within the sale areas will be reviewed for closure. Ground yarding roads will be closed and

water-barred following harvest. See summary document for more information on this topic.

Other project work that will be included with this sale are stream enhancement of Joyce Creek and riparian conversion.

The operation will be 80% cable yarding and 20% ground yarding. Ground harvest will generally be restricted to slopes less than 35%. No helicopter yarding is planned for this sale.

**Table 5. Transportation Planning Summary (Miles)<sup>4</sup>**

Activity	Mainline	Collector	Rocked Spur <sup>1</sup>	Dirt Spur <sup>1</sup>
Construct	0	0	1.2	0.2
Improve	0	0	0.3	0.2
Maintain <sup>2</sup>	4.5	0	5	0
Close/Block <sup>3</sup>	0	0	0	0
Vacate <sup>3</sup>	0	0	0	0

<sup>1</sup> Additional roads may be built by the operator at the time of harvest and will need to be approved by the State through the Operations Plan before construction. These will be short dead end spurs and closed or blocked after harvest

<sup>2</sup> All roads accessing the sale area will be maintained during the life of the timber sale contract. Maintenance miles in the table are those roads not being constructed or improved.

<sup>3</sup> Roads not closed/blocked or vacated at the end of the sale will be reviewed for closure after reforestation is established.

<sup>4</sup> The numbers in this table reflect planned Project Work associated with the sale.

**VII. AQUATIC RESOURCES AND WATER QUALITY:**

South Fork Trask River, Bill Creek and Joyce Creek are large and medium Type F streams that are within or adjacent to the sale areas and haul route. There are unnamed small Type F streams adjacent within or adjacent to the sale areas. There are additional unnamed small perennial and seasonal Type N streams within the sale areas. Oregon Department of Fish and Wildlife (ODFW) has completed stream surveys to verify fish use.

All streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain according to *Forest Management Plan* Riparian Strategies. The riparian areas will be reviewed during sale layout for current stand conditions and/or operational constraints for implementing FMP strategies.

A watershed analysis has been completed for the Trask basin. Actions are being planned as a result of the analysis recommendations.

ODFW fish biologist will work with ODF to identify possible stream enhancement project areas in Joyce Creek to incorporate wood placement into the stream with harvest activities. ODFW will also be consulted for potential riparian conversion.

In order to protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods include (but are not limited to) maintaining culverts and other road drainage structures, using sediment control devices in road ditches when necessary, and monitoring logging and hauling operations. Work in live streams will be conducted between July 1 and September 15. Operations outside of this period will be reviewed with ODFW.

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

The sale area has been reviewed with the ODF Northwest Oregon Area Biologist. Surveys for marbled murrelets are not required for Joyce Creek, due to the absence of potentially suitable habitat.

Spotted owl surveys are not required for Joyce Creek, as the sale area is within the Tillamook Burn (see November, 2002 ODF Policy Guidance: *Northern Spotted Owl Surveying on State Forest Lands*).

T & E Fish species: See Sections VII, and IX for listed fish protection measures.

T & E Plant species: The sale areas were checked against the Oregon Natural Heritage Program (ONHP) database of known threatened or endangered listed plant locations as well as local records in the Land Management Classification System (LMCS). No listed plants were identified within or adjacent to the sale areas.

### **IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:**

The initial assessment from the geotechnical specialists is low to high due to size and inclusion of the entire sale area. The geotechnical specialist will be consulted during sale layout. Specific locations identified will be treated appropriately.

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

The sale area is designated as Motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). This sale has been reviewed by the District Recreation Coordinator. Recreational use common to this area includes hunting and camping.

No designated OHV trails were identified within the sale areas. There are 2 lightly used user created motorcycle trails in the sale area that will be evaluated during sale layout to determine if trails need to be preserved and if so what resource protection may be appropriate. The District Recreation Coordinator will be

consulted during sale layout and administration. A dispersed campsite at the junction of Bill Creek will be protected to allow camping during harvesting.

**XI. CULTURAL RESOURCES:**

The *Tillamook State Cultural Assessment* does not list any cultural sites within or adjacent to the proposed sale boundary.

**XII. SCENIC RESOURCES:**

The majority of sale areas have a visual classification of Level 3, low sensitivity. Portions of Area 1 have a Deed restriction that could potentially classify the area along the South Fork Trask River as Level 2, moderate sensitivity. The sale may be reviewed by the Public Use Coordinator to determine methods to minimize visual impact. No scenic impact is expected.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

A deed restriction is in place along the South Fork Trask River, referred to as County Resolution Lands (Fund 54). See Section XII for more information.

A permanent inventory plot (#243062) is within the sale area. Permanent plot markings will be protected according to guidelines.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

Areas 1, 2 and 5 contain Focused Stewardship, Aquatic and Riparian Habitat, Deeds, and Recreation. See Section VII, Aquatic and Resources and Water Quality, Section XII, Scenic Resources for the management guidelines to be utilized.

Areas 3, 6 and 7 contain Focused and Special Stewardship, Aquatic and Riparian Habitat. See Section VII, Aquatic and Resources and Water Quality for the management guidelines to be utilized.

Area 4 contains Focused Stewardship, Aquatic and Riparian Habitat. See Section VII, Aquatic and Resources and Water Quality for the management guidelines to be utilized.

Boundary lines depicted on Attachment C are approximate; exact locations and site specific management activities will be determined during the sale preparation process.