

# Pre-Operations Report

**Operation Name:** Tums Relief  
**County:** Benton  
**Management Basin:** Blodgett

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

Area	Type of Operation	Gross Acres	Net Acres
I	Partial Cut	33	31
II	Partial Cut	68	59
III	Partial Cut	15	14
IV	Partial Cut	17	14
V	Partial Cut	66	57
VI	Partial Cut	121	117
VII	Partial Cut	59	55
VIII	Partial Cut	36	32
Total		415	379

## I. PHYSICAL DESCRIPTION OF OPERATION AREA:

This operation consists of eight partial cut units. These areas are all in the western hemlock vegetation zone. Average annual rainfall is 78" to 100". The soils are 85% Valino and 15% Ork.

Areas I, II & VII are located on gentle to moderate slopes of the divide between the TumTum River and Lasky Creek. Areas III, IV, V, VI & VIII are on the gentle to moderate slopes on the northeast side of Thompson Lake. There is one band of steep slopes on the east side of the spur ridge in the center of Area VI. 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 aspects for this operation are: Area I is primarily west, Area II is southwest, Area III is northwest, Area IV is west, Area V is south, Area VI is a ridge-top and is split between southeast and northwest, Area VII is a ridge-top and is split between northwest and southeast and Area VIII is a ridge-top with a southerly aspect.

## II. CURRENT STAND CONDITION:

All eight operation areas support 51-65 year old natural Douglas-fir timber with a few scattered red alder and big leaf maple. Areas I – VI and Area VIII were commercially thinned in 1994. Area VII was partial cut in 1997. Brush species in the units consists of salal, Oregon grape, vine maple, hazel, and sword fern. An abundance of natural Douglas-fir seedlings are present in Area I. Western hemlock seedlings were underplanted in Areas III and IV about four years ago. Natural hemlock and red alder seedlings exist in the understory of Area V. There are a few snags and a little down wood in all the areas.

The stand types represented in the operation areas are: Closed Single Canopy (CSC) 37 acres and Understory (UDS) 342 acres.

**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	18499	D-fir	60	22	200	76	43	31
		Target <sup>3</sup>			24	80	25	16	
II	Partial Cut	18499	D-fir	51	20	190	87	42	59
		Target <sup>3</sup>			22	100	38	21	
III	Partial Cut	18509	D-fir	65	21	210	87	46	6
		18510	D-fir	65	21	210	87	46	8
		Target <sup>3</sup>			23	100	35	21	
IV	Partial Cut	18503	D-fir	65	21	210	87	47	8
		18510	D-fir	65	21	210	87	47	6
		Target <sup>3</sup>			23	100	38	21	
V	Partial Cut	18504	D-fir	61	22	223	84	48	57
		Target <sup>3</sup>			24	120	38	24	
VI	Partial Cut	18507	D-fir	65	21	210	87	46	37
		18510	D-fir	65	21	210	87	46	80
		Target <sup>3</sup>			23	160	55	33	
VII	Partial Cut	18497	D-fir	63	23	220	75	46	14
		18530	D-fir	63	23	220	75	46	35
		18532	D-fir	63	24	260	83	53	6
		Target <sup>3</sup>			25	160	47	32	
VIII	Partial Cut	18503	D-fir	61	22	223	84	48	9
		18504	D-fir	61	22	223	84	48	23
		Target <sup>3</sup>			24	160	51	33	

1 The source of stand inventory information is district inventory plots from 1995 through 2002.

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

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

### III. DESIRED STAND CONDITION:

According to the district's landscape design Areas I and II are designated as DFC Complex and are targeted to become Older Forest Structure (OFS) stands. The anticipated pathway for these units is to move from UDS to Layered (LYR) to OFS. This will be accomplished by using techniques such as low density thinning or patch cutting, followed by planting with shade tolerant conifer species. Area I currently has an abundance of Douglas-fir seedlings in the understory that will be released through partial cutting.

Small portions of Areas VI and VII are designated as DFC Complex but will not be put on a pathway to more complex stands with this operation.

Areas III-VIII are designated as DFC General and are not targeted to develop beyond a UDS stand. However, Areas III, IV, and V all have numerous western hemlock or red alder seedlings existing in the understory. Low density thinnings will help release these natural seedlings and other shade tolerant seedlings will be planted, after harvest. The pathway for these stands is to move from UDS to LYR and finally to OFS with one more future partial cut. Partial cutting in Areas VI-VIII will move CSC stands to UDS or will keep the current UDS stands in that stand type.

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest <sup>1</sup>	Desired Future	Acres
I	18499	UDS	UDS	OFS	31
II	18499	UDS	UDS	OFS	59
III	18509	UDS	UDS	UDS	7
	18510	UDS	UDS	UDS	7
IV	18503	UDS	UDS	UDS	14
V	18504	UDS	UDS	UDS	57
VI	18507	CSC	UDS	UDS	25
	18507	UDS	UDS	LYR	10
	18510	UDS	UDS	UDS	82
VII	18497	UDS	UDS	UDS	17
	18530	CSC	UDS	UDS	12
	18530	UDS	UDS	UDS	21
	18532	UDS	UDS	OFS	5
VIII	18503	UDS	UDS	UDS	10
	18504	UDS	UDS	UDS	22

<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 will be partial cut to a RD of about 16, which will retain about 25 trees per acre that are 24" DBH. This low density thinning will release the numerous

natural Douglas-fir seedlings that will remain in the understory after the thinning operation. About 200 trees per acre will be planted after harvest with the species composition being about 50% hemlock and 50% western red cedar.

Thinning Area II to a RD of about 21 should result in approximately 38 trees per acre remaining that are 24" DBH. A mixture of 20% Douglas-fir, 40% hemlock, and 40% cedar will be planted at a rate of 350 trees per acre.

Partial cutting in Areas III and IV will leave approximately 35-38 trees per acre that are 22-23" DBH and will reduce the RD to about 21. Most of the existing hemlock seedlings should remain after harvest. About 200 hemlock and cedar seedlings in a 50/50 mix will be planted to supplement the previously planted seedlings.

Area V will be partial cut to a RD of about 24, which will leave approximately 38 trees per acre that are 24" DBH. This thinning will release the natural hemlock and alder seedlings remaining in the stand. About 200 trees per acre that are 50% hemlock and 50% cedar will be planted to supplement the natural seedlings.

A small portion of Areas I-V (10-15%) may require slash piling and pile burning.

The silvicultural practices for Areas I-V described above will provide species diversity and create a future layering component.

In Areas VI-VIII a moderate thinning will be prescribed which will retain 47-55 trees per acre that are 23-25" DBH. The RD's for these areas after harvest will be about 33.

Existing snags and down wood will be retained in all areas. For the units that are snag and down wood deficient according to SLI, sufficient numbers of snags and down wood will be created. Hemlock, cedar, alder, and big leaf maple will be reserved from cutting.

## V. ESTIMATED TIMBER AND REVENUE INFORMATION:

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
89%	11%		X
Planned Quarter: 4			

	Conifer	Hardwood	Total
Net Volume (MBF)	4,500	0	4,500
Stumpage Value (\$/MBF)	\$250		
Estimated Gross Value	\$1,125,000	0	\$1,125,000
		Project Costs:	\$140,000
		Estimated Net Value:	\$985,000

## VI. TRANSPORTATION PLANNING AND HARVESTING:

The operation area is accessed by two private roads that originate from the Tum Tum County road to the east. Easements have been procured. The county road is county maintained. The private road into Areas I, II, and VII is in good condition and will only need some spot rock and grading during hauling. Lasky Creek road which provides access to Areas I & II will receive a lift of rock. The roads into Areas IV, V & VIII will also receive a lift of rock to re-establish their original design standard.

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

About 4.4 miles of road improvement will be necessary.

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

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

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

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0	0
Improve	0	0	4.0	0.4
Maintain	0	4.1	1.3	0
Close/Block	0	0	0	0.4
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 Mary's River system. The operation area is not in proximity to streams in which listed fish are present.

There are no type F streams within the operation areas. A type F stream is outside the boundary but adjacent to Areas II and VI. The timber sale boundary

will be posted at least 100 feet horizontal distance from these streams. The partial cut thinning prescription will retain sufficient trees in the outer Riparian Management Area (RMA) zone to comply with current standards.

Type N streams are present in some of the operation areas. 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 Douglas-fir, red alder, and big leaf maple trees and brush species such as salmonberry, elderberry, vine maple, and sword fern.

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

The Land Management Classification System (LMCS) for the Aquatic and Riparian category determined 22 acres in Focused Stewardship. Focused Stewardship acres are distributed along type N stream RMA's.

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

The operation area contains suitable habitat for northern spotted owls and marbled murrelets. Surveys were conducted in 2003 and 2004 to protocol with no detections. However, two additional areas (I&II) were recently added to the operation so they will need to be analyzed by the area wildlife biologist to determine if suitable habitat exists.

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 low. The geotechnical specialist may be consulted if concerns arise during sale layout.

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

Recreation in the vicinity of the operation area is mostly hunting.

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

There is a grave site to the north of Area VI. Care will be taken to ensure it will not be disturbed during timber sale operations. This site will be located and

documented with the assistance of the public use coordinator during preparation of this sale. Another cultural resource may be located in Area IV. This unit will also be investigated by the public use coordinator.

**XII. SCENIC RESOURCES:**

Portions of Areas I, II, and VII are visible from Highway 20. LMCS determined that 44 acres are in the Visual category.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

No other resource considerations have been identified.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

**Table 6. Land Management Classification Summary**

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
I	Aquatic and Riparian Habitat	3	0
	Visual	5	0
II	Aquatic and Riparian Habitat	16	0
	Visual	13	0
V	Aquatic and Riparian Habitat	3	0
VII	Visual	26	0

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.