

# Pre-Operations Report

**Operation Name:** Huff 'n Puff  
**County:** Clatsop  
**Management Basin:** Sweethome

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

Area	Type of Operation	Gross Acres	Net Acres
1	MC	110	91
2	MC	114	95
3	MC	92	77
Total		316	263

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

Sale areas are located in the Sweethome Basin, south of State Highway 26 and west of the Nehalem River, about 15 to 16 miles inland from the Pacific Ocean. Stand overstories are comprised of Douglas-fir, hemlock and Red alder as the dominant tree species. Understory vegetation is dominated by salmonberry and sword fern, with significant amounts of vine maple and huckleberry.

The landforms are gentle to very steep slopes below Cougar Mountain along three un-named tributaries above the Nehalem River. The underlying rock is mostly igneous origin rock of the Cole Mountain Basalt Formation (informal), invasive intrusive sills and dikes. There is a small portion in the south of Area 2 that is sedimentary rock of the Hamlet Formation (informal), mudstones with a few interbeds of sandstone and a small portion of Area 3 that is igneous rock of the Tillamook Volcanics Formation, subaerial basaltic andesite flows with flow breccia tops and bottoms.

Soil types in these sale areas are Humbug, Tillamook, Grindstone, Killam, Rye, and Fishhawk soils. These soil types are deep to moderately deep, well drained soils, with moderate to fine textures, and rock free. Site index range from 120 feet (Fishhawk) to 140 feet (Tillamook) for Douglas-fir. Slopes range from gentle to steep, with very few areas where slopes exceed 50%.

## II. CURRENT STAND CONDITION:

These stands originated after harvesting, wildfires, and subsequent “high grade” harvesting in the 1920’s through the 1950’s. Areas 1, 2, and 3 are planned for modified-clearcutting. In general, these stands are composed of high quality conifer and hardwoods, approximately 60 to 70 years old, with dense brush understories in the alder dominated portions of the sale areas.

**Table 2. Stand Inventory Information**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	SDI	Acres <sup>2</sup>
1	MC	23266	RA, WH	59	15	271	210	69	8
1	MC	25752	RA, DF	60	15	220	173	75	18
1	MC	23262	DF, SS	69	17	312	188	76	4
1	MC	23267	WH, RA	62	15	202	155	52	34
1	MC	25743	DF, WH	59	17	307	189	75	9
1	MC	23268	WH, DF	64	15	298	241	77	4
		Target <sup>3</sup>	DF, WH,WRC				6		77
2	MC	23265	DF	61	15	304	236	78	9
2	MC	23264	RA	59	13	133	152	49	20
2	MC	23263	DF	59	19	188	94	44	23
2	MC	23262	DF, SS	69	17	312	188	76	2
2	MC	23260	RA, DF	59	14	177	161	63	31
2	MC	23261	WH, DF	59	16	261	184	66	6
		Target <sup>3</sup>	DF, WH,WRC				6		91
3	MC	25752	RA, DF	60	15	220	173	75	31
3	MC	25741	DF	104	18	315	187	77	6
3	MC	25751	DF, WH	75	23	223	78	49	2
3	MC	25745	DF, WH	59	17	307	189	75	35
3	MC	25753	RA, DF	60	15	220	173	75	10
3	MC	25748	DF, WH	59	17	307	189	75	5
3	MC	25750	DF, WH	75	23	223	78	49	4
3	MC	25749	DF, WH	59	17	307	189	75	2
		Target <sup>3</sup>	DF, WH,WRC				6		95

1 The source of stand inventory information is (OSCUR – Veg Code) from 2002.

2 The acres are based on (orthophotos, traverse, GIS, GPS, etc) and exclude roads, streams buffers, reserve areas, etc.

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

Comment: All sale areas have been scheduled for SLI.

### III. DESIRED STAND CONDITION:

The desired future condition for all sale areas is "General", as they are not planned for development of more complex stand structures. The expected post operation result for Areas 1, 2, and 3 is REG.

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest	Desired Future	Acres
1	23266	CSC	REG	General	8
1	25752	CSC	REG	General	18
1	23262	CSC	REG	General	4
1	23267	CSC	REG	General	34
1	25743	CSC	REG	General	9
1	23268	CSC	REG	General	4
2	23265	CSC	REG	General	9
2	23264	UDS	REG	General	20
2	23263	CSC	REG	General	23
2	23262	UDS	REG	General	2
2	23260	CSC	REG	General	31
2	23261	CSC	REG	General	6
3	25752	CSC	REG	General	31
3	25741	LYR	REG	General	6
3	25751	UDS	REG	General	2
3	25745	CSC	REG	General	35
3	25753	CSC	REG	General	10
3	25748	CSC	REG	General	5
3	25750	UDS	REG	General	4
3	25749	CSC	REG	General	2

### IV. PROPOSED MANAGEMENT PRESCRIPTION:

Areas 1, 2, and 3 - are planned for modified clearcut and will be replanted with a mixture of conifer species. OSCUR 2002 inventory indicates a small portion of an older Douglas-fir type along the edge of Area 3. Based on the results of upcoming SLI efforts and further field reconnaissance, additional strategies for retaining "layered" characteristics in this type will be employed. These strategies will include a maximum diameter restriction, individually marking groups or individual trees, or posting some or all this type out of the sale area as a Green Tree Retention Area.

*Snags:* In all areas, all existing snags will be retained unless deemed to be safety hazards. Where pre-sale activities determine that fewer than two hard snags per acre exist, opportunities for snag creation or leaving additional live green trees will be implemented to supplement landscape snag levels as defined by the Forest Management Plan.

*Green Trees:* An average of 5 to 10 green trees per acre will be retained using multiple wildlife tree strategies, including scattering and/or clumping green trees throughout the areas, and not solely located in riparian areas. In addition, individual and small clumps of non-merchantable alder may be left in operationally feasible areas to provide short term snag recruitment. Minor species such as red cedar and any existing larger remnant trees will be reserved from cutting.

*Downed Wood:* All existing down wood will be retained. Specific bucking and yarding practices may be required to retain 600 cubic per acre of downed wood . In areas which are dominated by hardwoods, down wood levels of 600 cubic feet per acre may not be achieved. Therefore, additional down wood will be retained on portions stocked with conifer.

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

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Planned Quarter:		4 <sup>th</sup>	

	Conifer	Hardwood	Total
Net Volume (MBF)	8,100	3,600	11,700
Stumpage Value (\$/MBF)	\$400	\$300	
Estimated Gross Value	\$3,240,000	\$1,080,000	\$4,320,000
		Project Costs:	\$624,500
		Estimated Net Value:	\$3,695,500

**VI. TRANSPORTATION PLANNING AND HARVESTING:**

The main access route for this sale is the Cougar Mountain Road, connecting the sale areas to the Hamlet County Road and State Highway 53 near Necanicum Junction. Existing routes across State Forest lands will be used, and an estimated 2.5 miles of new spur roads will be constructed to fully access the sale areas for logging.

A general transportation plan was developed for the entire drainage prior to determining access routes to the sale areas. This planning was conducted to minimize road density, environmental impact, and construction costs. A professional engineering firm may be contracted to assist in implementing the road planning and costing efforts.

The proposed new roads are composed of collector spurs and relatively short “working” spurs from existing rocked roads. The roads are designed to reach

ridge-tops to facilitate cable yarding. Preliminary road designs indicate that there are three potential stream crossings (small, Type N) accessing Areas 1 and 2.

The new rocked roads will be needed for future harvesting entries, and will remain open upon completion of harvesting activities. Approximately 2.2 miles of road improvement is needed on the existing ridgetop roads in Area 3 and along part of Cougar Mountain Road.

An alternative access route from the east would require a large Type F stream crossing over the Nehalem River, and locate the road parallel to an Type F stream (unnamed tributary to Nehalem River). This route was considered environmentally and economically unfeasible.

The anticipated rock source for new road construction base rock is the Cougar Mountain Stockpile Site. Smaller aggregate crushed rock for new road construction and road improvement may be secured from second parties and or developing a new rock source within the area.

An additional crushing project is anticipated to generate necessary road rock at the Sweethome Stockpile Site. This rock may also be secured from second parties and or hauled in from an ODF rock source. This rock is necessary to complete the second phase of the Sweethome Basin Transportation Plan, which includes the replacement of three culverts on Type F streams with fish passable structures (two on Sweethome Road, one on Hoppinhome Road).

In addition, approximately 25 miles of roadside brushing will be included.

Multi-span cable yarding (long line) systems from the existing roads and helicopter yarding were also analyzed. These alternative harvesting strategies were determined to be economically unfeasible and provided minimal additional resource protection.

Approximately 85% of the sale area will be cable logged, as the slopes are moderate to steep. Ground based harvesting systems will be utilized on the more gentle slopes. Cable yarding can be done with medium size yarders. Tractor logging can be done with shovel loggers, track or wheel skidders.

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

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0.00	1.75	0.75	0.00
Improve	0.00	1.50	0.70	0.00
Maintain	9.00	6.00	1.50	0.00
Close/Block	0.00	0.00	0.00	0.00
Vacate	0.00	0.00	0.00	0.00

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

*Type F Streams:* Nehalem River (large, Type F stream) parallels the east boundary of Area 2, approximately 450 feet away from the sale boundary. An unnamed tributary (small, Type F stream) of the Nehalem River flows between the southern boundary of Area 2 and part of the northern boundary of Area 3. There are no Type F streams within or adjacent to Area 1.

All of the streams flow in a easterly direction towards the Nehalem River.

*Type N Streams:* There are small perennial Type N streams in all sale areas. NW Oregon Forest Plan stream riparian strategies will be employed along these streams. The current riparian vegetation is composed of a patchwork of conifer and hardwood overstories. The understory in the conifer dominated reaches is similar to the headlands, with mostly ferns, salal, and some wild rose. The understory within the alder reaches is mostly salmonberry.

All streams will be examined during sale layout to determine stream type and classification. Then, the specific RMA strategies required in the FMP will be implemented. These strategies are found in Appendix J, pages J-1 through J-16.

There are no identified debris track Type N streams in the operations areas. Where it is necessary to cable log across any live streams, full suspension of logs will be required. Operations will be planned to avoid negative impacts to stream habitats of listed fish. The Cougar Mountain road, which will receive impacts from log hauling, has a stream which may contain listed fish. If any in-stream work is required with this sale, then the in-stream work will be conducted during in-stream periods established by ODFW.

*Stream Enhancement Opportunities:* There may be opportunities for stream enhancement on the unnamed tributary of the Nehalem River. Further assessment and collaboration will be done with ODFW biologists and the Sunset Unit Forester.

*Aquatic Resource Protection:* For all areas, full log suspension is required when cable yarding over streams. No ground-based logging equipment operation is allowed within the stream bank zone. Adequate RMA buffers will be left where required on all streams per the FMP standards. To protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods range from use of hay bales in road ditches, to “ditch-outs” away from streams, to complete shutdown of logging and hauling operations during times of heavy rainfall. There are no known high risk sites within the sale area. Any high-risk sites found will require at least one-end log suspension and cable logging. If any in-stream work is required with the sale, then the in-stream work will be conducted during in-stream periods established by ODFW.

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

The sale areas have been surveyed for Northern Spotted Owls in 2004, with no responses, and are scheduled to be resurveyed in 2005.

The suitable habitat in portions of Area 1 has been surveyed for Marbled Murrelets in 2004, with no responses, and are scheduled to be resurveyed in 2005. Areas 2 and 3 were determined by the Area Wildlife Biologist, on April 19, 2004, not to have any suitable habitat for marbled murrelets.

The sale area was checked against district knowledge for any listed plant location. The sale 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 sale area.

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

There are steep slopes located mostly along the draws in all three areas. The initial assessment from the geotechnical specialist is high. The geotechnical specialist will review the sale in the field during layout.

In addition, transportation planning was conducted to minimize road density and environmental impact. A professional engineering firm may be contracted to assist in implementing the road planning and costing efforts.

If the sale boundaries are changed based on the results of the final transportation plan, the geotechnical specialist may be consulted, prior to field review, and the need for field review may be reassessed.

**X. RECREATION RESOURCES:**

This area receives dispersed recreation, which includes hunting, fishing, camping, target shooting, and driving forest roads. There are no established recreation sites within the operation areas. The planned operations will only temporarily impact recreational road use.

**XI. CULTURAL RESOURCES:**

There are no identified cultural resources within the operation areas.

**XII. SCENIC RESOURCES:**

Approximately 17 acres of Area 2 has been designated “Level 2 Visual”, as it may be visible from the Lower Nehalem County Road. The planned operations will include strategically located green trees within the sale area and posting out of approximately 18 acres closest to the County Road to minimize visual impact.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

The Cougar Mountain Road passes two private residences before running into the Hamlet County Road. Hauling activities from this sale will need to take into account the possible effects of dust and/or noise that such hauling could have on these residents.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

The lands in this timber sale are all classified “general” management, except for those within stream buffers, which receive “aquatic and riparian” classifications.

Within this overlay are 17 acres of “focused” Visual classification for the Lower Nehalem County Road.

**Table 6. Land Management Classification Summary**

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
1	Aquatic and Riparian Habitat	30	9
2	Aquatic and Riparian Habitat	21	11
2	Visual	17	0
3	Aquatic and Riparian Habitat	27	9

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.