

Pre-Operations Report

Operation Name: Porter Horse
County: Clatsop
Management Basin: Fishhawk and Plympton

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
1	PC-M	89	81
2	PC-M	72	65
3	MC	35	32
4	PC-M	39	35
5	MC	46	42
6	PC-H	138	125
7	MC	50	46
8	MC	50	46
9	PC-H	14	13
Total	Modified Clearcut	181	166
Total	Partial Cut	352	319
Total		533	485

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

The majority of the sale areas are located within the northern portion of the Fishhawk Basin, with 57 acres of Area 1 located in the Plympton Basin. All the sale areas are located near the Clatsop and Columbia County line, approximately 7 miles south of the Columbia River and Hwy 30. The sale areas are composed of dense, mixed conifer stands with small inclusions of hardwoods. The understory vegetation consists of huckleberry and ferns, with some salmonberry in the hardwood pockets. Well maintained mainline roads and secondary rocked roads on ODF property provide primary access to all of the sale areas.

Soil types in these sale areas are mostly Bradwood and Tillamook, and are deep, well-drained, moderately fine textured, with site index ranging from 110 to 130 feet for Douglas-fir, and averaging 100 feet for hemlock. Elevations range from 900 to 1,300 feet.

The landforms are gentle ridgelines and side-slopes along the south end of Porter Ridge and east along the divide between tributaries of Fishhawk Creek. The underlying rocks are mostly igneous origin rocks of the Tillamook Volcanics Formation. The underlying rocks of Area 1 and the northwestern portions of the

Areas 2, 3 and 7 are igneous origin Columbia River Basalt Group, Grande Ronde Formation. The underlying rock for Areas 4, 5, 6, 8, and 9 and the southeastern portions of Areas 2, 3, and 7 is sedimentary origin rocks of the Pittsburg Bluff Formation and three of the informal members of the Astoria Formation.

II. CURRENT STAND CONDITION:

Most of areas originated from railroad harvesting in the 1940's and 1950's.

Area 1 – The current stands are generally 40 to 57 years old, and are Douglas-fir stands with some hemlock and some patches of alder. The diameter distribution and stand density within these stands is uneven, as there are patches of smaller diameter trees scattered amongst the larger trees. The understory vegetation is variable, and is composed of sword ferns and huckleberry. Salmonberry is the primary understory vegetation in the hardwood portions.

Areas 2 and 4 - The current stands are approximately 54 to 59 years old, and are Douglas-fir stands with some hemlock and some stringers of alder in the draws. These stands are fairly uniform, and have an SDI range of 60 to 68. The understory vegetation is minimal, and is composed primarily composed of sword ferns, huckleberry, and some vinemaple.

Areas 3, 5, 7, and 8 – These stands are the same stand types as Areas 2 and 4. SLI indicates that there is approximately 3 to 5 snags per acre that are at least 24 inches in diameter, and 135 to 170 cubic feet of downed wood in Decay Class 1 and 2. However, in Areas 3, 7, and 8, there is approximately 5,600 cubic feet of downed wood in all decay classes.

Areas 6 and 9 - The current stands are approximately 54 to 59 years old, and are Douglas-fir stands with some hemlock and some stringers of alder in the draws. In general, these stands are fairly uniform, and have an SDI range of 60 to 68. There are some older Douglas-fir leftover from the original railroad logging. These older trees exhibit some bark furrowing, and are located in clumps and individually along the Horseshoe Camp Road. The understory vegetation is minimal, and is composed primarily composed of sword ferns, huckleberry, and some vinemaple.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Acres ²
1	PC-M	745*	DF, WH	40	12	160	198	46	24
1	PC-M	765*	DF, WH	51	19	248	120	58	7
1	PC-M	795*	DF	54	16	222	158	56	15
1	PC-M	819*	DF	57	19	190	99	45	8
1	PC-M	23500	DF, WH	54	15	232	179	60	27
1	PC-M	Target ³	DF, WH		19	130	70	30-35	81
2	PC-M	23500	DF, WH	54	15	232	179	60	65
2	PC-M	Target ³	DF, WH		17	140	90	30-35	65
3	MC	23500	DF, WH	54	15	232	179	60	27
3	MC	23477	DF, WH	59	15	262	208	68	5
3	MC	Target ³	DF, WH, WRC, NF				5		32
4	PC-M	23477	DF, WH	59	15	262	208	68	35
4	PC-M	Target ³	DF, WH		17	140	90	30-35	35
5	MC	23477	DF, WH	59	15	262	208	68	42
5	MC	Target ³	DF, WH, WRC, NF				5		42
6	PC-H	23477	DF, WH	59	15	262	208	68	125
6	PC-H	Target ³	DF, WH		18	110	60	25-30	125
7	MC	23500	DF, WH	54	15	232	179	60	46
7	MC	Target ³	DF, WH, WRC, NF				5		46
8	MC	23500	DF, WH	54	15	232	179	60	46
8	MC	Target ³	DF, WH, WRC, NF				5		46
9	PC-H	23500	DF, WH	54	15	232	179	60	13
9	PC-H	Target ³	DF, WH		18	110	60	25-30	13

1 The source of stand inventory information is (*OSCUR Stand 2002 and SLI from and 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.

III. DESIRED STAND CONDITION/VISION:

The desired future stand condition for Area 1 is complex, with approximately 33% going to LYR and 67% targeted for OFS. Approximately 50% Area 2 is targeted for LYR. Area 6 has a Desired Future Condition (DFC) of 75% OFS and 25% LYR. Area 9 has a DFC of LYR. Areas 3, 4, 5, 7, 8, and the north half of Area 2 are not planned to have a complex desired future condition on the landscape.

Table 3.

Area	Stand ID	Current	Post Harvest ²	Desired Future	Acres
1	745	UDS	LYR	OFS	24
1	765	CSC	LYR	OFS	7
1	795	CSC	LYR	OFS	15
1	819	CSC	LYR	OFS	8
1	23500	UDS	LYR	LYR	27
2	23500	UDS	LYR	LYR	32
2	23500	UDS	LYR	General	33
3	23500	UDS	REG	General	8
3	23477	UDS	REG	General	24
4	23477	UDS	LYR	General	35
5	23477	UDS	REG	General	42
6	23477	UDS	LYR	OFS	94
6	23477	UDS	LYR	LYR	31
7	23500	UDS	REG	General	46
8	23500	UDS	REG	General	46
9	23500	UDS	LYR	LYR	13

² The stand is expected to develop into this condition in the five to ten years after this operation is completed.

IV. PROPOSED MANAGEMENT PRESCRIPTION/VISION:

Area 1 – The existing stocking levels vary significantly across these sale areas. The application of a general basal area thinning prescription should maintain or enhance this variability of stand densities. There are patches of younger merchantable conifer and hardwoods scattered through portions of the sale area. In order to preserve some of the existing species diversity, the “biggest and best” trees will be retained regardless of species, including alder. Non-merchantable understory trees will be retained. A requirement for retaining a minimum number of smaller diameter conifer per acre may be utilized to ensure retention of different diameter ranges. It is anticipated that this prescription will develop tree diameter size and increase structural diversity within the stand, and reach a Layered condition shortly after harvesting. An additional entry in the future most likely be needed to obtain the Desired Future Condition of Older Forest Structure in the northern portion.

Areas 2 and 4 - are UDS stands with existing components necessary for more complex stand structures. Partial cutting these stands, to an approximate relative density range of 30-35%, will maintain individual tree growth, and help maintain and develop the understory as a result of increased light to the forest floor, allowing for maintenance and/or development of a more complex stand structure.

Areas 3, 5, 7, and 8 - are planned for modified clearcut and will be replanted with a mixture of conifer species, including Douglas-fir, western hemlock, true fir, and some western red cedar. It is anticipated that red alder will naturally seed in portions of exposed to mineral soil.

Areas 6 and 9 – are also UDS stands with existing elements of a more complex structure. Partial cutting these stands, to an approximate relative density range of 25-30%, will increase individual tree growth, and help maintain and develop the understory as a result of increased light to the forest floor, allowing for development of a more complex stand structures. A maximum diameter limit may be utilized to ensure retention of the older cohort of Douglas-fir along the Horseshoe Camp Road. In order to preserve some of the existing species diversity, the “biggest and best” trees will be retained regardless of species, including alder. Non-merchantable understory trees will be retained.

Snags: In all areas, all existing snags will be retained unless deemed to be safety hazards. In MC areas, if pre-sale activities determine that fewer than 2 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. In PC areas, it is anticipated that additional snags will develop during yarding activities by leaving, topping, or girdling damaged rub trees, tail trees, lift trees, and/or intermediate support trees.

Green Trees: In MC Areas 3, 5, 7, and 8, an average of 5 green trees per acre will be scattered and/or clumped throughout the areas, and not solely located in riparian areas. Non-merchantable understory trees will be retained. In addition, non-merchantable alder may be left in operationally feasible areas to provide short term snag recruitment for cavity nesting birds. In all sale areas minor species such as red cedar may be reserved from cutting, and any existing larger remnant trees will be reserved from cutting.

Downed Wood: For all harvesting activities, all existing downed woody debris will be retained. In MC Areas 3, 5, 7, and 8, additional conifer trees and/or conifer logs will be retained to meet the landscape targets for down wood as prescribed in the FMP and Implementation Plan. Obvious defect in conifer logs will be bucked out in the unit to enhance downed wood levels. In partial cut areas, to increase down wood levels, operations will be required to top trees prior to yarding and to yard only merchantable log segments to roadsides.

Site Preparation treatments for Areas 3, 5, 7, and 8 will be further evaluated with the reforestation forester during sale layout. Site preparation for Areas 3, 5, 7, and 8 will be accomplished through cable yarding operations, ground based harvesting, and mechanical manipulation of slash concentrations. These sale areas will be replanted at 250 – 300 trees per acre with Douglas-fir, western hemlock, true fir, and western red cedar. Animal damage through big game browse is anticipated to be high. Mountain beaver trapping will focus on draw areas and sword fern and alder type within the stand. Tree protection will be

prescribed for newly planted conifer species, Douglas-fir will receive paper bud caps, Western Red Cedar will receive tubes at initial planting. Aerial applied herbicides will be prescribed as a site preparation if competing vegetation poses a threat to stand establishment.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%	<input type="checkbox"/>	4
Planned Quarter:		2 nd	

	Conifer	Hardwood	Total
Net Volume (MBF)	12,666	0	12,666
Stumpage Value (\$/MBF)	\$400	\$0	
Estimated Gross Value	\$5,066,400	\$0	\$5,066,400
		Project Costs:	\$433,000
		Estimated Net Value:	\$4,633,400

VI. HARVESTING AND ACCESS CONSIDERATIONS:

There are currently good quality forest roads accessing the general vicinity of the sale areas. All of the sale areas can be accessed by extending road systems from the Horseshoe Camp and Porter Ridge Road networks and utilizing multi-span cable yarding (long line) systems from the existing roads. These new roads were identified during transportation planning efforts in the 1980's and 1990's, and are in ridge top locations.

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. Roads into Areas 3, 5, 7, and 8 will be evaluated for use of temporary dirt roads. It is anticipated that some portion of the spurs needed to access these modified-clearcut area will be vacated upon completion of harvesting activities. These plans will be further explored and evaluated during the field layout process. The new rocked roads into the partial cut areas will be needed for future harvesting entries, and will remain open upon completion of harvesting activities.

Approximately 3.0 miles of road improvement is needed on the Porter Ridge Road.

The road rock needed for road construction and improvement will be crushed at the Viewpoint Quarry.

Approximately 2 miles of old railroad grades traverse up the drainage of the unnamed tributary to Fishhawk Creek between Areas 6 and 9. These railroad grades have numerous fills located in fairly steep headwalls, that will be evaluated for removal during sale layout. In addition, approximately 25 miles of roadside brushing on the Fishhawk Basin road system will be included.

The project work for this sale is estimated to cost approximately \$433,000.

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 60% 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	0.0	0.0	2.0	0.5
Improve	3.0	0.5	0.5	0.0
Maintain	9.0	5.0	3.0	0.0
Close/Block	0.0	0.0	0.0	0.0
Vacate	0.0	0.0	0.0	0.5

VII. AQUATIC RESOURCES AND WATER QUALITY:

Type F Streams: Fishhawk Creek (medium, Type F stream) flows along the south boundary of Areas 6 and 9.

The upper reaches of the East Fork of Plympton Creek (small, Type F stream) flows along the northwest boundary of Area 1.

An unnamed tributaries (small, Type F stream) of Fishhawk Creek flow along the western boundary of Area 6 and the eastern boundaries of Areas 7, 8, and 9.

Another unnamed tributary of Fishhawk Creek (small, Type stream) flows along the eastern boundaries of Areas 4, 5 and 6.

There are no Type F streams within or adjacent to Area 3.

Fishhawk Creek and its tributaries flow in a southeasterly direction through the Fishhawk Basin towards the Nehalem River. The West Fork of Plympton Creek flow in a northerly direction through the Plympton Basin towards the Columbia 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. Per ODF's Salmon Protection Policy for State Forest Operations, contract provisions will be included to reduce the likelihood of adverse effects on listed fish. Specific standards will include: (1) hauling on roads which are in proximity to streams in which "listed" fish are present would only be allowed during weather conditions and use levels commensurate with the capabilities of the road drainage systems; (2) implementation of riparian management area strategies in accordance with the FMP, Appendix J, "Management Standards for Aquatic and Riparian Areas," pages J-1 through J-16.

The sale areas are within proximity of streams in which listed fish are present.

Streams associated with the sale have a LMCS Aquatic and Riparian classification of focused. The sale area is located within the Fishhawk Salmon Anchor Habitat area (SAH). The sale shall receive all resource protection measures necessary to mitigate any slope stability hazards in accordance with the standards contained in the SAH strategies.

Stream Enhancement Opportunities: There may be opportunities for stream enhancement on the unnamed tributaries of Fishhawk Creek. 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 area has been surveyed for Northern Spotted Owls in 2005, with no responses, and are scheduled to be resurveyed in 2006.

The ODF Northwest Area Biologist determined the sale area did not contain suitable habitat for Marbled Murrelets, on February 4, 2005.

The sale area was checked against the Oregon Natural Heritage Program database of known listed plant locations. The sale area was also checked against district knowledge for any listed plant location. No listed plant records were identified within the sale area.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

The initial assessment from the geotechnical specialists is low. No slope stability concerns are anticipated since there are only a few scattered high landslide hazard locations in the sale areas. If during field work there are any concerns related to slope stability the geotechnical specialist will be consulted.

X. RECREATION RESOURCES:

This area receives dispersed recreation, which includes hunting, camping, target shooting, and driving forest roads. This sale is located in the motorized recreation portion of the Clatsop State Forest. Inventories of existing trails found two desirable trails in the sale. Area 1 and 6 each have active trails in the area, the trail in area 1 may become part of a larger OHV trail network. Coordination between the Sunset Unit Forester and the District Recreation Coordinator will occur to ensure coordination and integration of recreational resources and plans.

XI. CULTURAL RESOURCES:

None.

XII. SCENIC RESOURCES:

The sale areas are not visible from any county or state highway. All forest roads accessing the sale areas are Level 3 classification.

XIII. OTHER RESOURCE CONSIDERATIONS:

None.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

All of Areas 4, 5, 6, 7, 8, and 9, and most of Areas 2 and 3, are classified as Focused – Wildlife for the Fishhawk Salmon Anchor Habitat area. The remaining lands in this timber sale are all classified “general” management.