

# Pre-Operations Report

**Operation Name:** Paradise East  
**County:** Clatsop  
**Management Basin:** Sager

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

Area	Type of Operation	Gross Acres	Net Acres
1	PC-L	60	57
2	PC-L	145	126
3	PC-M	55	48
4	PC-M	27	25
5	PC-M	51	43
6	PC-L	67	60
7	MC	26	24
Total	Partial Cut - Light	272	243
Total	Partial Cut - Moderate	133	116
Total	Partial Cut	405	359
Total	Modified Clearcut	26	24
Total	All	431	383

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

The sale is located along the gentle ridges and headwaters of Sager Creek and Deep Creek, both tributaries of the Nehalem River. The sale is underlain by sedimentary rocks of the informal Sager Creek formation. This area is dominated by moderate sized Douglas-fir.

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

Area 1 - The current average age of this stand is approximately 88 years old and is composed of large, well stocked Douglas-fir and small components of western hemlock with some patches of red alder in riparian areas. The average DBH for this stand is 19 inches. The stand is currently categorized as 61% Layered (LYR) and 39% Closed Single Canopy (CSC), with an average stand density of 73%. Understory development consists of sword fern, vinemaple, huckleberry, salmonberry, and red alder in old skid trails.

Area 2 - The current average age of this stand is approximately 81 years old and is composed of large, well stocked Douglas-fir and small components of western hemlock with some patches of red alder in riparian areas. The average DBH for this stand is 21 inches. The stand is currently categorized as 44% Layered (LYR), 40% Understory Development (UDS), and 16% Closed Single Canopy (CSC), with an average stand density of 48%. Understory development consists

of sword fern, vinemaple, huckleberry, salmonberry, and red alder in old skid trails.

Area 3 - The current average age of this stand is approximately 85 years old and is composed of large, well stocked Douglas-fir and small components of western hemlock with some patches of red alder. The average DBH for this stand is 20 inches. The stand is currently categorized as 73% Understory Development (UDS), and 27% Closed Single Canopy (CSC), with an average stand density of 58%. Understory development consists of sword fern, vinemaple, huckleberry, salmonberry, and red alder in old skid trails.

Area 4 - The current average age of this stand is approximately 75 years old and is composed of large, well stocked Douglas-fir and small components of western hemlock, western red-cedar, and red alder. The average DBH for this stand is 20 inches. The stand is currently categorized as (Closed Single Canopy) with an average stand density of 70%. Understory development consists of sword fern, vinemaple, huckleberry, salmonberry, and red alder in riparian areas.

Area 5 - The current average age of this stand is approximately 71 years old and is composed of large, well stocked Douglas-fir and small components of western hemlock, western red-cedar, and red alder. The average DBH for this stand is 19 inches. The stand is currently categorized as Layered (LYR) with an average stand density of 62%. Understory development consists of sword fern, vinemaple, huckleberry, salmonberry, and red alder in riparian areas.

Area 6 - The current average age of this stand is approximately 79 years old and is composed of large, well stocked Douglas-fir and small components of western hemlock, western red-cedar, and red alder. The average DBH for this stand is 22 inches. The stand is currently categorized as 40% Layered (LYR), and 60% Understory Development (UDS), with an average stand density of 56%. Understory development consists of sword fern, vinemaple, huckleberry, salmonberry, and red alder in riparian areas.

Area 7 - The current average age of this stand is approximately 70 years old and is composed of large, well stocked Douglas-fir and small components of western hemlock, western red-cedar, and red alder. The average DBH for this stand is 18 inches. . The stand is currently categorized as 28% closed single canopy (CSC), and 72% Understory Development (UDS. Understory development consists of sword fern, vinemaple, huckleberry, salmonberry, and red alder in riparian areas.

**Table 2. Stand Inventory Information**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	SDI	Acres <sup>2</sup>
1	PC-L	23920	DF	79	17	315	196	77	57
		Target <sup>3</sup>			20	170-190	80	35-45	57
2	PC-L	23901	DF	78	20	237	111	55	126
		Target <sup>3</sup>			21	170-190	80	35-45	126
3	PC-M	23899	DF	70	19	211	102	52	48
		Target <sup>3</sup>			20	120-140	60	25-35	48
4	PC-M	23928	DF	76	20	302	140	70	25
		Target <sup>3</sup>			21	120-140	60	25-35	25
5	PC-M	23944	DF	69	19	259	139	62	43
		Target <sup>3</sup>			20	120-140	60	25-35	43
6	PC-L	23928	DF	76	20	302	140	70	60
		Target <sup>3</sup>			22	170-190	80	35-45	60
7	MC	23929	DF	70	17	215	138	53	24
		Target <sup>3</sup>							24

1 The source of stand inventory information is SLI. Age shown as of 2007.

2 The acres are based on GIS 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:**

Areas 1, 2, and 6 - have been targeted for a desired future condition of Older Forest Structure (OFS), while Areas 3, 4, and 5 have been targeted for a desired future condition of Layered (LYR).

The goal of partial cutting within these stands is to quickly promote these stands to the designated desired future condition. In most cases a light thinning with the creation of some stand structure components will accomplish this goal. By removing the co-dominant trees within these stands individual tree growth will be maintained and more understory can develop as a result of increased light to the forest floor. This will allow for development of a more complex stand structure. Snag creation and felling for down wood will take place in areas that show deficiencies. In areas where down wood and snags are close to stand target inputs, harvest activities with some minor additional input is anticipated to accomplish stand structure goals. These inputs will promote stand conditions towards OFS and LYR. Desired future conditions are anticipated to be reached within 5 to 10 years following harvest. Approximately 20 to 25 years following harvest, the stand will be re-entered for a light maintenance thinning to facilitate continuing understory development, stand complexity, and individual tree growth.

Area 7 - is not planned to have a complex desired future condition on the landscape.

This area will be regeneration harvested and planted with a mixture of conifer species. Five to seven conifer trees per acre will be left to provide a source for natural regeneration and future downed wood and snags. A pre-commercial thinning is anticipated at 12 to 17 years when crowns close followed by a commercial thinning at 30 to 40 years of age to ensure continued growth. At age 45 to 50 the stand will be evaluated for either additional thinning or regeneration harvest.

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest <sup>1</sup>	Desired Future	Acres
1	23920	LYR	OFS	OFS	57
2	23901	UDS <sup>2</sup>	LYR	OFS	126
3	23899	UDS	LYR	LYR	31
4	23928	UDS	LYR	LYR	25
5	23944	UDS <sup>2</sup>	LYR	LYR	43
6	23928	UDS	LYR	OFS	60
7	23929	CSC	REG	GEN	24

<sup>1</sup> The stand is expected to develop into this condition in the five to ten years after this operation is completed.

<sup>2</sup> As determined by Unit Forester.

#### **IV. PROPOSED MANAGEMENT PRESCRIPTION:**

Areas 1, 2, and 6 - have a desired future condition of Older Forest Structure (OFS). To reach the OFS condition these stands will be automark thinned with a target Stand Density Index (SDI) of 35 to 45. Minor species will be reserved and efforts will be made to reserve the understory. There will be a lower and upper end diameter limit set to ensure that the younger layer of timber in this area is reserved, as well as the oldest, biggest trees are reserved.

*Snag Creation:* Snag creation will occur to supplement existing snags and those expected to occur naturally after harvest in order to accelerate this stand toward an OFS condition. If pre-sale activities determine that fewer than two hard snags per acre > 24" DBH and six snags > 12" DBH exist, then opportunities for snag creation will be implemented.

*Downed Wood:* The sale contract will require that a minimum of 600 cubic feet of downed woody debris be present after harvest completion.

Areas 3, 4, and 5 - have a desired future condition of LYR. These units will be automark thinned with a target SDI of 25 to 35 that will maintain current growth rates and allow more understory development. All minor species and trees under eight inches DBH will be reserved where operationally feasible. Alternative prescriptions will be implemented at the patch scale. These prescriptions could include patch cuts, heavier thinning, or no-harvest areas. Sale areas will be evaluated for underplanting opportunities at the time alternate prescriptions have been implemented.

Partial cut sale areas will be evaluated for underplanting opportunities at the time sale preparation is started. LYR and OFS areas will be reviewed once cutting prescriptions are developed and field review determines the size of the opening for the best survival of underplanted seedlings.

Area 7 - This area is a modified clearcut that will be replanted with a mixture of conifer species. Site preparation will be provided by ground based harvesting. Slash manipulation should be at a minimum. Seedlings will be planted at 300 trees per acre with a mixture of Douglas-fir, western hemlock, western red cedar, and true fir. Tree protection will be provided to all species except western hemlock and true fir.

*Snags:* During all harvesting activities, all existing snags will be retained unless deemed to be safety hazards. Where fewer than two hard snags per acre are found to exist during sale layout, opportunities for snag creation or leaving additional live green trees will be implemented to supplement landscape snag levels (FMP, "Landscape Management Strategy 3c. Snags", pages 4-53 and 4-54).

*Green Trees:* A combination of methods will be implemented to achieve the green tree retention requirements such as green tree retention areas, stream buffers, and trees scattered across the sale areas (FMP, page 4-53, Paragraph 2). Minor species found may be reserved from cutting; further consideration of those species will be taken during sale layout.

*Downed Wood:* For all harvesting activities, all existing down woody debris will be retained. Down woody debris levels will be assessed and if deficiencies are found to exist on an individual unit, then additional conifer trees and/or conifer logs will be retained to meet the landscape targets for down woody debris as prescribed in the FMP (FMP, "Landscape Management Strategy 3d. Down Wood." pages 4-54 and 4-55)."

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

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Planned Quarter:		1 <sup>st</sup>	

	Conifer	Hardwood	Total
Net Volume (MBF)	5,805	0	5,805
Stumpage Value (\$/MBF)	\$325	\$400	
Estimated Gross Value	\$1,886,625	0	\$1,886,625
		Project Costs:	\$204,500
		Estimated Net Value:	\$1,682,125

**VI. HARVESTING AND ACCESS CONSIDERATIONS:**

For sale access, approximately 1.5 miles of new dirt road construction, 6.0 miles of road improvement along the haul route and 1.5 miles of in-sale road improvement including East Sager, Jones, and Sager roads, will be completed to maintain the road network. New roads are minor spurs that do not cross perennial streams. They are needed to reduce skidding distance and to access sale areas separated by incised draws. Since this area has an established road network, utilizing the existing infrastructure and constructing a few minor spurs was determined the most sound access/harvest system. The road rock needed for road improvement will be obtained at the Northrup and Cow Creek stockpiles.

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

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0.0	0.0	0.0	1.5
Improve	6.0	0.0	1.5	0.0
Maintain	8.0	4.0	0.0	0.0
Close/Block	0.0	0.0	0.0	1.5
Vacate	0.0	0.0	0.0	0.0

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

*Type F and Domestic Use Streams:* Area 1, 2, 3, 4, 6, and 7 - A Type F fork off Deep Creek runs along the southeastern boundary of Area 1. Another Type F fork of Deep Creek runs along the south boundary of Area 2 for about 2,500 ft. A small Type F stream runs the entire eastern boundary of Area 3 and for 1,000 ft. into Area 2. Sager Creek, a medium Type F stream runs along the western boundary of Area 4, and the northwestern boundary of Area 6. Deep Creek a medium Type F stream runs the entire eastern boundary of Area 7 for 1,600 feet.

There are no known Type F streams within the sale boundaries. The unknown creeks within the sale areas should be field verified. The streams will be buffered to the Northwest Forest Management Plan standards. No domestic use streams are associated with the harvest activities. Areas 5 - No Type F streams are associated with the harvest activities.

*Type N Streams:* There are perennial Type N streams in all sale areas.

This sale does not contain any streams with federally listed fish species.

*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. No stream crossings are anticipated during road construction. 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. There are no known high landslide hazard locations or debris-track Type N streams within the sale area.

All streams will be examined to determine stream type and classification during sale layout, and then the specific riparian management area strategies required in the FMP will be implemented. Stream type and classification will be done using the most recently completed stream survey information and newly adopted FPA rules where appropriate. The FMP riparian management area strategies that will be implemented are found in the FMP, Appendix J, “Management Standards for Aquatic and Riparian Areas”, pages J-1 through J-16.

ODFW Biologists have no stream enhancement projects scheduled for this area at this time.

Roadside ditches will be assessed for possible disconnection opportunities from the hydrological system during sale layout in accordance with the recommendations of the Watershed Implementation Team Action Plan (WIT).

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

All sale areas were surveyed to protocol for northern spotted owls in 2005, 2006, and 2007 with no detections. Areas 1-6 were surveyed for marbled murrelets in 2005, 2006, 2007 and 2008 with no detections. Area 7 was determined to not have potential suitable habitat for marbled murrelets by the NWOA Biologist and does not require surveys.

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

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

There are no high landslide hazard locations predicted in the timber sale. The initial hazard and risk assessment from the geotechnical specialist is low. The geotechnical specialist will only be consulted during sale layout if concerns arise.

**X. RECREATION RESOURCES:**

There are no significant recreation activities in this area other than dispersed camping and hunting.

**XI. CULTURAL RESOURCES:**

There are historic railroad grades within the sale area and additional reconnaissance will be conducted to determine protection measures, if any, during final sale preparations.

**XII. SCENIC RESOURCES:**

The sale areas are in a landscape of low visual sensitivity.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

Some areas within the sale will require some property surveys or survey monument protection measures. The requirements are as follows: Area 3 - the ¼ corner to Sections 2 and 35 along the east boundary of the sale area has been displaced by land movement and will need to be restored. The section corner common to Sections 1, 2, 35, and 36 and the ¼ corner between Sections 1 and 36 should be re-witnessed. Areas 1, 2, 4, 5, and 6 do not need survey work.

Protection of several research and monitoring plots which are outside the sale, but in close proximity to several of the harvest units should be identified and protected. Area 1 has an Oregon State University Young Plantation Gap Study taking place north and east across East Sager Creek Road. On the west side of East Sager Ridge Road across from Areas 2 and 3 are multiple active gap creation study plots related to the same project. The north portion of Area 4 is within the 200 foot buffer of a Swiss Needle Cast study plot. There are no restrictions associated within this buffer. The administrator should be aware of these study areas and not allow activities such as tail holds or the decking of logs to take place in these areas.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

There is a Swiss Needle Cast permanent plot located north of Area 4. Approximately one acre of Area 4 is designated as focused stewardship for research and monitoring. See Section XI, Other Resource Considerations, for the management guidelines to be utilized.





