

Pre-Operations Report

Operation Name: Berry Cobbler
County: Tillamook
Management Basin: Wilson

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	Partial cut	113	102
2	Modified clearcut	84	69
3	Retention cut	42	35
4	Modified clearcut	70	53
5	Modified clearcut	33	23
6	Modified clearcut	81	61
Total		423	343

1. The net acres are based on orthophotos and GIS and exclude roads, stream buffers, reserve areas and non-required thinning areas.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have varied aspects and range from 40-80%. Elevations range from 850 to 1750 feet. The major soil types are Nedonna and Enright.

The landform is mostly moderate slopes in the upper end of the Little North Fork of the Wilson River and its tributary Berry Creek. The underlying rocks are mostly sedimentary origin basaltic mudstone inter-fingered with igneous origin submarine flows at the base of the Tillamook Volcanics Formation.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information⁴

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	PC	221	DF/RA	45	13	199	215	55	102
		Target ³	DF/RA		15	100	84	26	
2	MC	222	DF/RA	45	14	110	103	30	69
3	RC	223	DF/RA	46	12	235	284	66	35
		Target ³	DF/RA		22	40	15	9	
4	MC	224	DF/RA	45	12	200	295	57	53
5	MC	225	DF/RA	45	12	190	243	54	23
6	MC	226	DF/RA	45	12	190	243	54	61

1. The source of stand inventory information is from field reconnaissance cruise plots taken in 2005 and 2001 and SLI in 2002 and 2003.

2. The net acres are based on orthophotos and GIS and exclude roads, stream buffers, and non-required thinning areas. Modified clear cut acres are not contiguous and do not exceed 120 acres.

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

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

The sale areas burned in the 1933 (Tillamook) and 1939 (Saddle Mountain) fires. Area 4 burned again in the 1945 (Wilson River) fire. All areas were aerially seeded or planted in 1955-1957. Areas 1, 2, 5 and 6 were replanted in the early 1960's and Areas 3 and 4 were replanted in the late 1960's. Area 1 was commercially thinned in 1991. Portions of Areas 2 and 6 were commercially thinned in 2001. The remainder of the sale area has had no prior stand management.

Approximately 161 acres has been inventoried using the Stand Level Inventory (SLI) procedure and all but three acres were identified as UDS. The remaining acres of the sale were identified as UDS according to the district stand summary information (1999). These are primarily single story; single species conifer stands with hardwood growing in stream buffers and openings.

See Table 2 for specific stand data.

The Douglas-fir has severe Swiss needle cast (SNC) symptoms and poor live crown ratios resulting in slowed diameter and/or height growth.

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.

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 swordfern, vine maple and huckleberry occurring heavier in openings.

Down wood consists of scattered large old logs (36"+) in Class 3 and 4 stages of decay and some windthrow and thinning slash in decay classes 1 and 2. SLI measurements in the sale areas show down wood in decay classes 1 and 2 ranging from 10 to 130 cubic feet per acre. Total down wood ranges from 2,200 to 4,700 cubic feet per acre.

There are some large snags in various states of decay and some hard snags which have been created from natural processes. SLI measurements in the sale areas show less than one snag per acre 15" diameter and larger in decay classes 1 and 2. Total snags per acre in the 24" and greater diameters range from 1.4 to 2.6.

III. DESIRED STAND CONDITION and VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Net Acres
1	221	UDS	UDS	LYR	102
2	222	UDS	REG	LYR	69
3	223	UDS	REG	GEN	35
4	224	UDS	REG	GEN	53
5	225	UDS	REG	LYR	23
6	226	UDS	REG	LYR/GEN	61

1. 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.

Vision: Area 1 has a DFC of LYR. This is a second-entry commercial thinning operation to reduce density. After this operation there will be approximately 85 trees per acre composed primarily of Douglas-fir and alder. As a result of the basal area thinning, residual trees will be distributed unevenly across the area with some areas of relatively low stocking as well as groups of larger trees. Alder will be located in the stream buffers, on the legacy roads, and in pockets throughout the area and will provide horizontal diversity. The openings and gaps will allow for understory reinitiation of shrubs and tree species creating horizontal and vertical diversity. The stand will start approaching crown closure again when the average diameter of the stand is 22-24 inches.

Areas 2, 4, 5 and 6 have a DFC of GEN and LYR. Management will begin with a regeneration harvest designed to harvest SNC infected Douglas-fir and sprayed alder in order to improve stand health. After harvesting, there will be 8-15 Douglas-fir trees retained per acre. A minor component of Western hemlock will be scattered across the area and alder will be retained in stream buffers and clumps throughout the area. The area will be reforested with a mixture of conifer species; western hemlock, SNC tolerant Douglas-fir and western red cedar. These planted seedlings along with natural seeding and the residual green trees will form a layered stand when enough of the largest trees approach 18 inches in diameter.

Area 3 has a DFC of GEN but will be managed towards LYR. Approximately 15% of the basal area is retained after the retention harvest. The trees will be dispersed across the unit in clumps and individually. The area will be reforested with a mixture of conifer species; western hemlock, SNC tolerant Douglas-fir and

western red cedar, providing horizontal and vertical diversity. The stand will reach LYR condition when enough of the larger trees reach an average diameter of 18 inches and the understory trees are at least 30 feet in height. The understory will be kept at a density that will maintain growth and provide crop trees in the future.

These prescriptions will combine with the adjacent stands to create a mosaic of openings over the landscape with gaps, variable densities 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.

IV. PROPOSED MANAGEMENT PRESCRIPTION and ANTICIPATED PATHWAY:

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.

Area 1: Merchantable Douglas-fir will be thinned to a basal area range of 100 to 120 square feet. All other species will be reserved.

The resulting stand will have a stand density of 20-25 SDI which is relatively open, will maintain stand vigor, and develop healthier and larger trees in the residual stand. The cutting prescription will be designed to achieve variable densities throughout the sale area. Managers will review density, stand health and landscape goals to decide future management prescriptions.

Areas 2, 3, 4, 5, and 6: Merchantable Douglas-fir and alder will be removed. A diameter limit will be used to select 8-15 trees per acre. These residual trees will provide future down wood and/or snags. All other species will be reserved. Dependent on the amount of residual basal area, these stands are classified as either a modified clearcut or retention cut. Residual trees may be clumped or scattered individually. These areas will be planted with mixed conifer. The understory vegetation will be enhanced by the additional growing space available.

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

seasonals will also contribute additional green trees. Many of these areas will be posted so they are outside of the timber sale boundary.

A snag assessment will be done in conjunction with the timber cruise for the partial cut in Area 1. Residual diameters in this stand are expected to be over 15 inches. The stand will be evaluated for snag creation at time of harvest if snags are deficient. In all areas, 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.

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 tops left during harvest. Small non-merchantable hardwood and conifer will be retained where possible in harvest units with the expectation they will become short term snags and down wood.

During sale preparation different options such as snag and/or down wood creation, additional green tree retention and future stand management and monitoring will be considered in order to achieve future FMP targets.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

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

	Conifer	Hardwood	Total
Net Volume (MBF)	4207	266	4473
Stumpage Value (\$/MBF) *	\$238	\$250	
Estimated Gross Value	\$1,001,266	\$66,500	\$1,067,766
		Project Costs:	\$101,700
		Estimated Net Value:	\$966,066

**Conifer average based on species, size and harvest type.*

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Cedar Butte Road, Kilchis Lookout Road, Berry Creek Road and Berry Ridge Road. These are currently all weather, crushed rock roads.

See maps for specific road locations and conditions.

Approximately 2.7 miles of existing surfaced road will be improved which includes grading, rocking, widening, culvert replacement, spot rocking, sidecast

pullback, and/or adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Approximately 0.6 miles of road will be constructed to provide access to cable yarding areas. An alternate in Area 4 may be to reopen a legacy road to reduce yarding distances.

Following harvest, roads within the sale areas will be reviewed for closure. See summary document for more information on this topic.

No other project work is planned for this sale.

The operation will be 100% cable yarded.

Table 5. Transportation Planning Summary (Miles)⁴

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			0.6	
Improve			2.7	
Maintain ²		4.7		
Close/Block ³				
Vacate ³				

1. *Additional roads may be built by the operator at the time of harvest and will be approved by the State through the Operations Plan. These will be short dead end spurs and closed or blocked after harvest*
2. *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.*
3. *Roads not closed/blocked or vacated at the end of the sale will be reviewed for closure after reforestation is established.*
4. *The numbers in this table reflect planned Project Work associated with the sale.*

VII. AQUATIC RESOURCES AND WATER QUALITY:

Oregon Department of Fish and Wildlife (ODFW) will conduct stream surveys in the sale and these are anticipated to be completed prior to sale layout. Streams with potential fish use will be treated as Type F until surveys are completed to verify fish use.

The Little North Fork Wilson River (large) and Berry Creek (medium) Type F streams are adjacent to the sale areas. There are also some unnamed small Type F tributaries adjacent to the sale areas and an unnamed assumed Type F tributary within Area 4. There are additional unnamed small perennial and seasonal Type N streams. These streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain.

Stream buffers within or adjacent to harvest unit boundaries will be managed 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.

The entire sale is within the Little North Fork Wilson sub-basin. This sub-basin has been identified as a Salmon Anchor Habitat (SAH) Basin and the most current SAH Basin Strategies will be used at the time of contract development.

The sale areas were identified as part of the Salmon Anchor Habitat Basin Plans approved in June 2005. See Salmon Anchor Summary Table for tracking of acres managed in each basin and list of sales in Basin Plans.

ODFW fish biologist will work with ODF to identify possible stream enhancement project areas.

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. Culvert installment and replacement 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:

T & E Wildlife species: The sale areas have been reviewed with the ODF Northwest Oregon Area Biologist.

Surveys for marbled murrelets are not required due to the absence of potentially suitable habitat. Spotted owl surveys are not required as the sale 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:

There are some steep slopes scattered in the sale areas. The initial hazard and risk assessment from the geotechnical specialist is moderate. The geotechnical specialist will be consulted during field work so that the need for field visits can be assessed.

The sale is located in a SAH Basin and the most current SAH Strategies will be used at the time of contract development. See the Summary Document for more information.

X. RECREATION RESOURCES:

This sale has been reviewed by the District Recreation Coordinator.

The sale areas are located in an area currently designated Non-Motorized Use in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). Despite the zoning designation, the main use of the sale areas is OHV use and hunting. Reid's Ridge OHV trail is adjacent to Area 2 and Reid's Ridge South is within Area 2. Cut -Off Trail is adjacent to Area 3. These trails have a long history of use and are intended to be part of the overall OHV system. Adjustments to the motorized use zone boundary are planned and will incorporate these outlying trails. These changes will be presented to the Recreation Advisory Committee in 2006.

Short term closure of these trails may occur to facilitate logging and public safety. A plan will be developed to advise the public when trails are closed due to harvest activity. Upon completion of the operation, slash will be removed from the OHV trails, rolling dips will be installed and access will be restricted with filters. Non-designated trails will be blocked. The District Recreation coordinator will be consulted during sale layout and administration.

A dispersed campsite adjacent to the sale will be evaluated for improvement to direct vehicle access farther away from the riparian area.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does not list any cultural sites within or adjacent to the proposed sale boundary. The Public Use Coordinator will be contacted if a site is identified for appropriate protection and tracking.

XII. SCENIC RESOURCES:

The sale areas have a visual classification of Level 3, low sensitivity. The sale will be reviewed by the Public Use Coordinator to determine methods to minimize visual impact. There will be some visual impact until green up occurs.

XIII. OTHER RESOURCE CONSIDERATIONS:

Permanent inventory plots are adjacent to Area 6 and near the proposed road construction for Area 4. Permanent plot markings will be protected according to guidelines.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The sale contains Focused and Special Stewardship, Aquatic and Riparian Habitat. The sale also contains Focused Special Stewardship, Wildlife Habitat. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.