

Modification Cover Memo

SUBJECT: SUMMARY OF MODIFICATIONS TO WATERHOUSE SINCE APPROVAL OF ANNUAL OPERATIONS PLAN (FY2010 AOP)

FROM: Kevin Boyd

TO: Andy White

DATE: March 24, 2010

CC: Operation File

Changes from the FY 10 AOP:

- The Waterhouse Timber Sale was originally scheduled to be a partial cut in the FY 2010 AOP. The Tillamook District's Implementation Plan update changed the DFC in this area from complex structure to general. The prescription in the 2010 AOP did not fit the revised landscape classification. Therefore, the prescription was changed to a modified clearcut due to the large component of alder and the difficulty involved in thinning this type of timber.
- Two additional areas east of Fall Creek and southeast of Dubios Creek were added because of future operability concerns. These two areas shown in blue on the map increased the sale size from the original 73 acres to 117 acres.
- The road construction for the sale was originally planned as dirt spurs. Because this is a low elevation sale the dirt spurs will be rocked and the sale can be logged in the winter. This modification increased the project work from approximately \$10,000 to \$41,000.

AOP Modifications Waterhouse				
		Prescription		Volume
Timber Sale	Net Acres	MC	PC	MBF
Waterhouse Original	73		73	664
Waterhouse Revised	117	117	0	3139

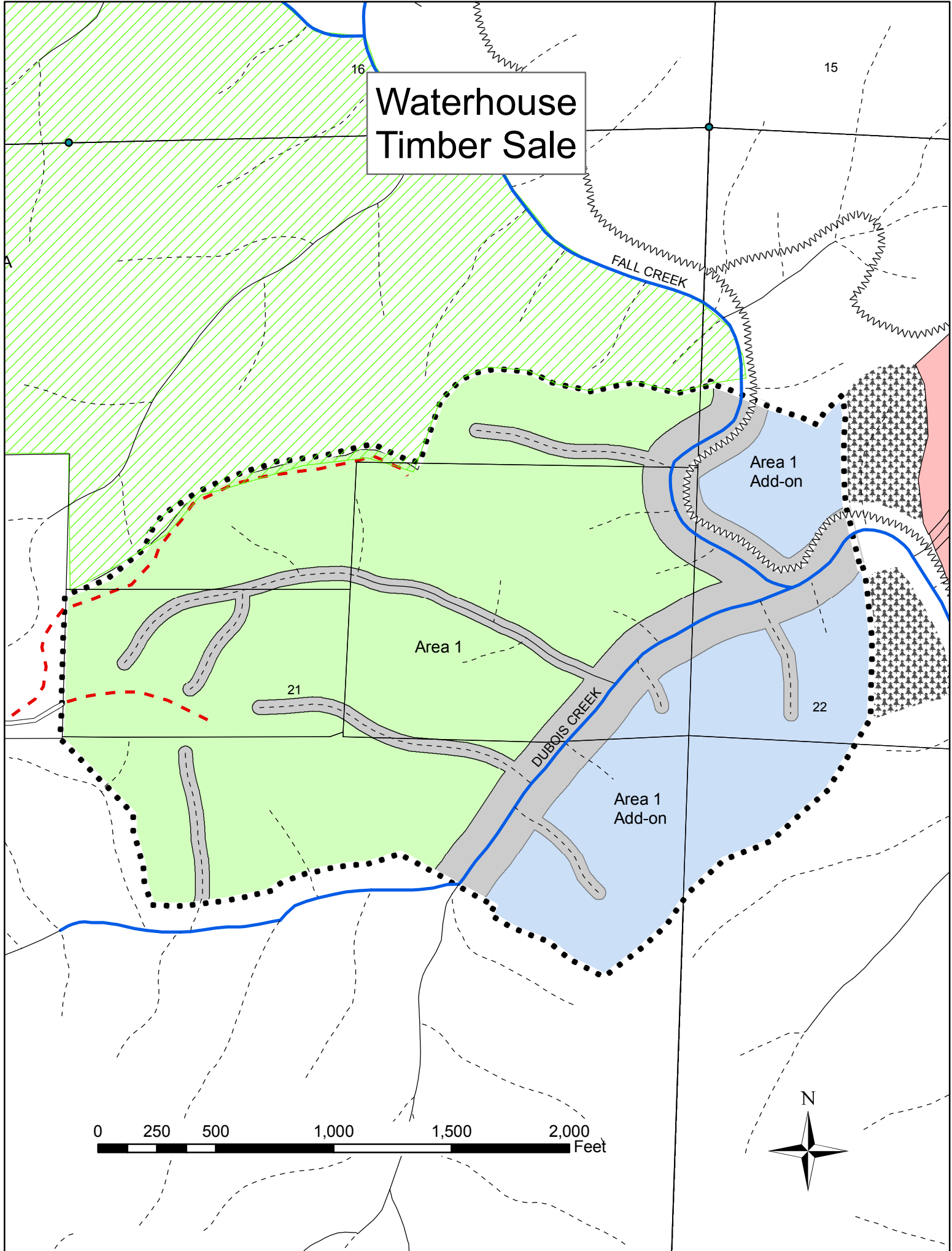
Andy White

Andy White, District Forester

3/24/10

Date

Waterhouse Timber Sale



0 250 500 1,000 1,500 2,000 Feet



Pre-Operations Report

Operation Name: Waterhouse

Legal: Portions of Section 21 and 22, T3N, R9W, W.M., Tillamook County

Management Basin: Lower Nehalem

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	Modified Clearcut	147	117
Total		147	117

1. The net acres are based on orthophotos and GIS and exclude roads and stream buffers.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Located in portions of Section 21 and 22, T3N, R9W, W. M. The slopes have a predominantly north and south aspects and range from 10% to 110%. Elevations range from 280 feet to 1120 feet. The major soil type is Killiam.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information⁴

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	MC	202	RA/DF/WH/ SS/RC	65	18	270	147	65	120

1. The source of stand inventory information is from cruise plots.

2. The net acres are based on GIS and exclude roads and stream buffers.

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. The directive for minor and major modifications will be followed for further review.

5. Includes 13 big leaf maple trees with a basal area of 16 ft² per acre.

Area 1: Portions of the sale area burned in the 1933 Tillamook burn. It was located along the northern edge of the fire so the fire did not completely burn the existing stand leaving legacy trees which includes Douglas-fir, western hemlock and Sitka spruce scattered throughout the sale. These legacy trees contain defects from the fire. The stand naturally regenerated with a mixed, dense stand of red alder, Douglas-fir, western hemlock, big leaf maple and Sitka spruce.

These species are arranged at various densities throughout the sale area. The basal area per acre for the red alder is 111 ft², 101 ft² for the Douglas-fir and 16

ft² for the western hemlock, 24ft² for the Sitka spruce and 16 ft² for the western red cedar. Due to the lack of stocking control, the stands are approaching stem exclusion. The naturally regenerated conifer dominant and co-dominant trees have good live crown ratios (greater than 40%). The suppressed conifer trees are becoming overstocked resulting in the loss of live crown ratios and growth and have height to diameter ratios problems (>80%). Due to the age of the stands, the alder has poor height and diameter growth.

The brush component is comprised primarily of Oregon grape, salal, sword fern, salmonberry, vine maple and huckleberry.

III. DESIRED STAND CONDITION AND VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest	Desired Future	Net Acres
1	202	UDS	REG	GEN	117

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 (DFC) goals.

Watershed Perspective

Area 1 is within the Lower Nehalem watershed. Much of the watershed is mixed species conifer stands and recent management has focused on some clearcuts and partial cuts of mixed conifer stands and regeneration harvest of stands severely impacted by Swiss needle cast.

Area 1- The desired future condition (DFC) for this area is general (GEN).

Short Term Vision:

The naturally regenerated conifer and hardwoods will be clearcut which will remove the large pockets of mature alder and the naturally regenerated conifer to help facilitate regeneration. The legacy trees will be left by using a diameter limit which will provide critical wildlife habitat while the younger cohort grows towards maturity. The entire area will be planted with conifer.

Long Term Vision:

In the long term this operation allows a new cohort of conifer trees to be established replacing scattered conifer and large pockets of alder. This new cohort will be pre-commercially thinned in approximately 12-15 years and the first

entry commercial thinning at about 35 years. At that time a decision can be made about the next entry interval and future considerations for the stand. It is also expected that the defect in the legacy trees will continue to increase causing mortality and/or wind throw to the legacy trees adding another component of downed wood and snags to the stand.

IV. PROPOSED MANAGEMENT PRESCRIPTION AND 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.

Refer to Green Tree, Snag and Down Wood Strategies in the Summary document for strategies used on every sale.

Modified Clearcut

Area1

Prescription: A modified clearcut will remove all of the merchantable naturally regenerated Douglas-fir, Sitka Spruce, Western Hemlock and Red Alder. Green Tree Retention Areas to the east will contain most of the leave trees required to be left on the stand. All legacy trees over 40” in diameter will be left throughout the stand. All other species will be retained.

Snags and Down Wood: Down wood and snag creation will be done on the Timber Sale.

The existing down wood will be reserved in the sale areas and additional down wood will be created during this harvest operation. Down wood creation will be completed by bucking and leaving the obvious defect form felled trees.

Snag creation will be done with this harvest operation. Approximately 2 snags per acre will be created. Snag creation will be within in the timber sale boundary, not in the green tree retention areas. The legacy trees from the original stand will also be left. It is expected that there will be mortality and/or wind throw in these trees because of the defect. A component of hardwoods and conifers will also be retained in the stream buffers and high landslide hazard locations (HLHL). All hardwoods species other than red alder will be reserved.

Pathway: The vision for this stand is to retain the existing legacy structure, maximize revenues for this harvest and to remove the major hardwood component to reintroduce a more contiguous conifer component.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%		x
Planned Quarter:		(Alt)	

	Conifer	Hardwood	Total
Net Volume (MBF)	1,909	1230	3139
Stumpage Value (\$/MBF)	\$138.82	\$170	
Estimated Gross Value	\$265,007	\$209,100	\$474,107
		Project Costs:	\$40,742
		Estimated Net Value:	\$433,365

**Combined Douglas-fir, Spuce and Hemlock stumpage values based on harvest type.*

VI. HARVESTING AND ACCESS CONSIDERATIONS:

Area 1 is accessed by the Waterhouse Road, a surfaced, all-weather road. See maps for specific road locations and conditions.

Approximately .75 miles of road will be constructed to provide access to cable harvest areas. Ground yarding roads will be closed and water-barred following harvest. See summary document for more information on this topic.

There will be no other project work included with this sale.

The operation will be 97% cable harvested and 3% ground harvested.

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			.75	
Improve				
Maintain ²		3.7		
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

Fall Creek a large Type F Stream and Dubois Creek, a medium Type F divide the eastern and western portions of the sale area. Several tributaries of both streams are unnamed, small, seasonal and perennial Type N streams within the sale area. These streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain.

Oregon Department of Fish and Wildlife (ODFW) will be requested to complete stream surveys before sale layout begins. Streams of unknown status will be treated as Type F until surveys are completed to verify fish use.

Other known aquatic habitat within the sale areas includes seeps, springs and waterfalls.

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.

Refer to the Aquatic Resource Protection Strategies in the Summary document for information on the “in stream work period” for road work and stream improvement projects.

VIII. T&E SPECIES CONSIDERATIONS:

The sale area has been reviewed with the ODF Northwest Oregon Area Biologist.

Surveys for marbled murrelets are not required for due to the absence of potentially suitable habitat.

Surveys have been conducted during the 2008 and 2009 survey season for northern spotted owl. All northern spotted owl surveys were and will be conducted in accordance with USFWS endorsed protocol.

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).

Streams in this sale are in the Fall Creek drainage in the Nehalem basin. As of March 2008, coastal coho salmon are listed as threatened for the Oregon Coast.

The riparian and aquatic strategies combined with road and harvest practices described in this Annual Operations Plan and our Northwest Oregon State Forests Management Plan (FMP) are designed to minimize impacts and or restore aquatic habitats that influence aquatic species.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

This assessment is based on USGS 1:24,000 topographic maps and available geologic maps. There are a lot of high landslide hazard locations in the sale area which drains into Fall Creek, a tributary to the Nehalem River. The risk of landslides delivering to Fall Creek from this area is high. The geotechnical specialist will conduct a field review of this sale.

X. RECREATION RESOURCES:

The sale area is not designated as non-motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). This sale has been reviewed by the District Recreation Coordinator. This area is accessed across private land that is gated. . This area is accessible by foot and is used for hunting and hiking.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does not list any cultural sites within or adjacent to the proposed sale boundary.

XII. SCENIC RESOURCES:

The sale areas have a visual classification of Level 3 – Low sensitivity.

XIII. Other Resource Considerations

None known.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The sale area contains Focused and Special, Aquatic and Riparian Habitat (See section VII. Aquatic Resources and Water Quality, for the management guidelines to be utilized). This sale also includes Special Stewardship, Operationally Limited. This area will be evaluated further with the geotechnical specialist to determine if this classification shows in the correct location. See Section IX, Slope Stability and Geotechnical Issues, for additional information.

Boundary lines depicted on Attachment C are approximate; exact locations and site specific management activities will be determined during the sale preparation process.