

SUBJECT: Summary of Modifications to Green Tangle Timber Sale Since Approval of the Annual Operations Plan (FY 2009)

FROM: Dan Borg

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CC: Operations File

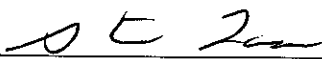
There is one minor modification and one major modification to this timber sale as compared to the Pre-Operations Plan Report. The minor modification is a result of a reduction in project cost and the major modification is necessary because two planned units were eliminated.

The project cost shown in the Pre-Operations Plan was \$69,000. The project cost listed in the contract is \$22,442. This reduction in project cost is due to the elimination of much of the planned rock surfacing.

The major modification is a result of eliminating the original Areas I and II. These units were omitted from the sale because they are located on land that will be exchanged to Starker Forests, Inc. Leaving these two units in the Green Tangle timber sale would have caused unnecessary complications to the land exchange, so they were removed.

In order to comply with the instructions for a major modification, included with the normal timber sale documents are: 1) an updated Pre-Operations Plan Report and 2) updated Summary Tables A-1 through A-3.

The changes described above have been reviewed and approved:



Steve Laam, District Forester

3/6/09
Date

Pre-Operations Report

Operation Name: Green Tangle
County: Polk, Lincoln
Management Basin: Green Mountain

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Net Acres
I	Moderate Partial Cut	43
II	Moderate Partial Cut	9
III	Moderate Partial Cut	45
IV	Moderate Partial Cut	19
V	Moderate Partial Cut	13
VI	Moderate Partial Cut	33
Total		162

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

The operation consists of six partial cut units. The units lie in the western hemlock vegetation zone. Average rainfall varies widely between the units. Areas I, II and portions of Area III get 100 to 150 inches per year. Portions of Areas III, IV, V, and VI get 78 to 100 inches yearly. Portions of Areas IV, V, and VI have an annual rainfall of 68 to 78 inches.

The soils in Areas I-VI consist the Bateman series. Bateman soils occur on gentle to moderate slopes. They are deep, gravel free, fine textured residual soils. The soil information is derived from a soil survey completed in 1980.

The aspect for the operation areas is as follows: Areas I and III are mostly south; Area II is southwest; Area IV is north; Area V is primarily east; and Area VI is east/west.

II. CURRENT STAND CONDITION:

Areas I-VI support Douglas-fir plantations that range in age from 26-35 years old. A few western hemlock trees are present in Areas I – III. All of the operation areas were pre-commercially thinned 12-14 years ago. There are some red alder and big leaf maple present in all the stands. There are few snags and little down wood in the operation areas.

Brush species consist of salmonberry, vine maple, sword fern, salal, and elderberry are present in the understory but in small quantities.

All of the operation areas are classified as Understory (UDS) stand type. The stand type was determined by Stand Level Inventory (SLI) or professional judgement.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	RD	Acres ²
I	Partial Cut	18661	DF	26	12	180	229	52	43
		Target ³			15	120	98	31	
II	Partial Cut	18448	DF	35	13	180	195	50	9
		Target ³			16	120	86	30	
III	Partial Cut	18025	DF	29	11	160	242	48	45
		Target ³			14	120	112	32	
IV	Partial Cut	18214	DF	28	12	175	222	51	19
		Target ³			15	120	98	31	
V	Partial Cut	18688	DF	28	12	170	216	49	13
		Target ³			15	120	98	31	
VI	Partial Cut	18065	DF	27	11	160	242	48	33
		Target ³			14	120	112	32	

¹ The source of stand inventory information is district plot data from 2005, 2006.

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

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

III. DESIRED STAND CONDITION:

According to the district's landscape design, all six operation areas are designated as Desired Future Condition (DFC) General and are targeted to become UDS stands.

Areas I – VI Vision: These stands will remain in the UDS stand structure following initial thinning and will stay in that condition until final regeneration harvest at around 70 years. At the time of final harvest, these areas will consist of well-stocked Douglas-fir in the overstory and brush (sword fern, hazel, vinemaple) and forbs in the understory. A few hemlock and hardwoods will be scattered throughout the stands, both in the overstory and understory. Snags and down wood will be present throughout the stands.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
I	18661	UDS	UDS	UDS	43
II	18448	UDS	UDS	UDS	9
III	18025	UDS	UDS	UDS	45
IV	18214	UDS	UDS	UDS	19
V	18688	UDS	UDS	UDS	13
VI	18605	UDS	UDS	UDS	33

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

IV. PROPOSED MANAGEMENT PRESCRIPTION:

Areas I – VI Anticipated Pathway: Each of the six operation areas will be thinned to an RD of 30-32 and 120 ft² basal area. This will leave 86-112 TPA with an average diameter of 14-16 inches. This thinning will capture harvest volume and maintain stand vigor. Snags and downed wood will be left wherever possible and all trees other than Douglas-fir will be reserved from cutting.

A second thinning will be conducted in 10 to 15 years, when stand RDs have reached about 50. The aim of this thinning will be to again capture volume and maintain stand vigor. In another 10-15 years, tree growth rates will be evaluated and a decision will be made to either conduct a third thinning or to wait a few years and conduct a regeneration harvest. If a third thinning is chosen, then final harvest will likely occur when the stands are around 70 years old.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
80%	20%	<input type="checkbox"/>	X
Planned Quarter:		3	

	Conifer	Hardwood	Total
Net Volume (MBF)	1,000	0	1,000
Stumpage Value (\$/MBF)	\$50		
Estimated Gross Value	\$50,000		\$50,000
		Project Costs:	\$23,000
		Estimated Net Value:	\$27,000

VI. TRANSPORTATION PLANNING AND HARVESTING:

Areas I through V are accessed from Green Mountain Road. This collector road is in adequate condition to support wet weather haul. Access over the bottom of Green Mountain Road is through Industrial forest lands and a small woodland owner. Permanent easements are secured.

Access to Area I is via a surfaced spur off Broken Horn road. Most of this spur, and a portion of the Broken Horn Road, is over BLM property. A permanent easement is in place. These roads are surfaced but only suitable for minimal wet weather hauling, requiring only normal road maintenance.

Access to Area II will require reopening a portion of an existing unsurfaced spur road. This segment will be rocked for wet weather hauling.

Access to Area III is from Bradish Boulevard. This road is surfaced but only suitable for minimum wet weather hauling, requiring only normal road maintenance.

Access to Area IV is via an aggregate spur off Green Mtn. Road. Dry weather access through the center of Area IV will be provided by reopening an existing unsurfaced spur that extends northwest from the existing rocked road.

Access to Area V is directly off Green Mountain road. It is in satisfactory condition only requiring routine maintenance.

Access to Area VI is via an existing unsurfaced ridge top spur off Harmsen Road.

Approximately 1.2 miles of improvement will be needed. This will consist of re-opening 4 existing roads. One of the roads will be re-opened for a short distance and surfaced.

Existing roads provide timber harvest access to 100% of the operation acreage. Due to this fact, no other transportation alternatives were considered.

Harvesting timber in the operation areas will require a combination of 79% cable yarding and 21% ground skidding.

All unsurfaced roads will be waterbarred and blocked to vehicular traffic after harvesting operations are completed and/or at the beginning of the wet weather season.

Table 5. Transportation Planning Summary (Miles):

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct				
Improve			0.1	1.1
Maintain		6.7	4.7	
Close/Block				1.1
Vacate				

VII. AQUATIC RESOURCES AND WATER QUALITY:

Water flowing from streams in Areas I - IV is part of the Siletz River System. Streams flowing from Areas V and VI are part of the Yaquina River system.

Type F streams are adjacent to, or within the following units: Area I has Hays Creek to the southwest and Steere Creek to the south; Fisher Creek is southeast of Area III; Area IV has a small, unnamed type F stream adjacent to the northwest corner of the unit; a small type F stream is present on the south side of Area V, and a small type F stream flows through Area VI.

Type N streams are present in some of units.

For type F streams adjacent to an area, the timber sale boundary will be posted at least 25' horizontal distance from the streams. For type F streams that are within an area, a 25' horizontal distance buffer will be posted along either side of the stream. For type N streams, a nonposted 25' horizontal distance buffer will be established. For both type F or N streams, no harvesting will be allowed within the buffer except to facilitate cable yarding. The partial cut thinning prescription will retain sufficient trees in the RMA to comply with current FMP standards.

Vegetation along Type F and N streams consists of conifer and hardwood trees and brush species such as salmonberry, elderberry, sword fern, and vine maple.

There are no domestic water intakes in the vicinity of the operation areas.

Activities that will take place in proximity to the streams, listed above, include timber felling and yarding. The following measures will be employed to minimize impacts to the stream: 1) no timber will be felled within the buffer except to facilitate cable yarding, 2) timber above the buffer will be felled away from or parallel to the stream, 3) timber will be yarded away from the stream, where possible, 4) if it is necessary to yard logs across the stream, logs will be fully suspended above the buffer vegetation, and 5) single-end suspension of logs will be required elsewhere in the units.

Other requirements designed to minimize impacts to streams include seasonal restrictions for log hauling.

VIII. T&E SPECIES CONSIDERATIONS:

Suitable marbled murrelet habitat exists adjacent to some of the operation areas according to the area wildlife biologist. Surveys were conducted in 2007 and 2008, with one detection noted, but occupied site behavior was not observed. The operation areas do not contain suitable habitat for northern spotted owls as determined by the area wildlife biologist.

Areas I and II are adjacent to Marbled Murrelet Management Areas (MMMA). The boundary for Area I was posted at least 100 meters from the MMMA so seasonal restrictions will not be required. The boundary for Area II is less than 100 meters from the MMMA so seasonal restrictions will be required.

The operation areas were checked against district knowledge for any listed plant locations. The operation areas were also 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 operation areas.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

This assessment is based on analysis of USGS 1:24,000 topographic maps.

There is a band of high landslide hazard locations along the mid-slopes in Area I. There is an isolated high landslide hazard location in Area II. Area I partially drains to Hayes Creek and both areas drain to Steer Creek. The risk of landslides delivering directly to Hayes Creek and Steer Creek from Area I is moderate and from Area II is low. Area I may be located on a large, deep-seated landslide landform.

There is a band of high landslide hazard locations along the mid-slopes in Area III. Area III drains to Fisher Creek. The risk of landslides delivering directly to Fisher Creek from Area III is moderate.

There are no high landslide hazard locations in Area IV. Area IV drains to Rock Creek. The risk of landslides delivering directly to Rock Creek from Area IV is low.

There are isolated high landslide hazard locations in Areas V and VI. Area V drains directly to the Little Yaquina River and Area VI drains to an unnamed

tributary of the Little Yaquina River. The risk of landslides delivering directly to the Little Yaquina River and its tributary from both areas is low to moderate.

The geotechnical specialist will be consulted if evidence of recent landslide activity is identified during sale layout.

X. RECREATION RESOURCES:

Recreation in the vicinity of the operation areas is mostly hunting and fishing.

XI. CULTURAL RESOURCES:

The operation areas were checked for cultural resources with the district's GIS inventory. No cultural resources are located in the vicinity of the operation areas.

XII. SCENIC RESOURCES:

Portions of Area VI may be visible from the Logsdan Road, a rural two lane paved road. This is a level 3, low intensity visual classification.

XIII. OTHER RESOURCE CONSIDERATIONS:

No other resource considerations have been identified.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

There are 27 acres of Focused Stewardship and 6 acres of Special Stewardship, Aquatic and Riparian Habitat present in the operation areas. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.

TABLE A-1 TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District: West Oregon

Fiscal Year: 2009

Date: 03/02/2009

Operation	Payment Type	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
		BOF	CSL			Partial Cut	Clear-cut	Con-ifer	Hard-woods	Total	Gross	Projects	Net
Chinquapin Ridge	R	100%	0%	Lincoln	1	33	56	1.9	0.1	2	\$900,000	\$30,000	\$870,000
Biker Baber	R	15%	85%	Lincoln	1		65	2	0.2	2.2	\$990,000	\$97,000	\$893,000
Easter Bonner	R	100%	0%	Benton	2	257		1.4		1.4	\$252,000	\$107,000	\$145,000
All A Board	R	100%	0%	Benton	2		61	0.8	0.5	1.3	\$455,000	\$37,000	\$418,000
Green Tangle	R	80%	20%	Linc, Polk	3	162		1		1	\$50,000	\$23,000	\$27,000
Strombo Combo	R	95%	5%	Lincoln	4	97	52	2.9		2.9	\$1,015,000	\$143,000	\$872,000

Total:	549	234	10	0.8	10.8	3,662,000	437,000	3,225,000
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Alternate Operations

Burgett King	R	100%	0%	Benton		279	6	2.7		2.7	\$742,000	\$58,000	\$684,000
Steep In-Cline	R	100%	0%	Lincoln			60	1.5	0.1	1.6	\$720,000	\$102,000	\$618,000

TABLE A-2 TIMBER HARVEST OPERATIONS - FOREST STRUCTURE SUMMARY

District: West Oregon

Fiscal Year 2009

Date: 03/02/2009

Operation	Area	Net Acres			Stand Structure Development Pathway			Structural Components	Comments
		Clearcut	Partial Cut	Total	Current	Post-Harvest	Desired	Green Trees	
Chinquapin Ridge/Blod	I,II,IV	43		43	UDS	REG	UDS	8-10/ac	
	III	13		13	LYR/UDS	REG	UDS	8-10/ac	
	V		33	33	UDS	UDS	UDS		
Biker Baber/BWR		65		65	UDS	REG	UDS	8-10/ac	
Easter Bonner/BR	I,II,III		105	105	CSC/UDS	UDS	LYR		
	IV,V,VI		152	152	UDS	UDS	UDS		
All A Board/GM	I, II	51		51	UDS	REG	UDS	8-10/ac	
	III	10		10	LYR/UDS	REG	UDS	8-10/ac	
Green Tangle/GM	I-VI		162	162	UDS	UDS	UDS		
Strombo Combo/BWR	I	48		48	UDS	REG	UDS	8-10/ac	
	II		97	97	UDS	UDS	LYR/OFS		
	III	4		4	UDS	REG	LYR	42/ac	

Total	234	549	783
Annual Range	200-250	550-720	750-970

Alternate Operations

Burgett King/BR	I,IV		273	273	UDS	UDS	OFS		
	II	6		6	UDS	REG	LYR	36/ac	
	III		6	6	LYR	LYR	OFS		
Steep In Cline/BWR	I,II	60		60	UDS	REG	UDS	8-10/ac	

TABLE A-4 REFORESTATION AND YOUNG STAND MANAGEMENT REPORT

District **West Oregon**

Fiscal Year: 2009

Date: 01/03/2008

Management Activity	Board of Forestry			Common School Forest Lands			District	
	Acres Planned	Average Cost*/Acre	BOF Cost	Acres Planned	Average Cost*/Acre	CSL Cost	Total Acres	Total Cost
Initial Planting*	150	\$245.00	\$36,750.00	8	\$245.00	\$1,960.00	158	\$38,710.00
Interplanting*	15	\$175.00	\$2,625.00	5	\$175.00	\$875.00	20	\$3,500.00
Underplanting*	56	\$185.00	\$10,360.00	3	\$185.00	\$555.00	59	\$10,915.00
Tree Protection - Barriers	249	\$85.00	\$21,165.00	18	\$85.00	\$1,530.00	267	\$22,695.00
Tree Protection - Direct Control	182	\$30.00	\$5,460.00	20	\$30.00	\$600.00	202	\$6,060.00
Site Prep. - Chemical - Aerial	127	\$100.00	\$12,700.00	0	\$100.00	\$0.00	127	\$12,700.00
Site Prep. - Chemical - Hand	79	\$125.00	\$9,875.00	11	\$125.00	\$1,375.00	90	\$11,250.00
Site Prep. - Slash Burning	76	\$190.00	\$14,440.00	7	\$190.00	\$1,330.00	83	\$15,770.00
Site Prep. - Mechanical	46	\$190.00	\$8,740.00	5	\$190.00	\$950.00	51	\$9,690.00
Fertilization	0	\$0.00	\$0.00	0	\$0.00	\$0.00	0	\$0.00
Noxious Weed Control	15	\$25.00	\$375.00	5	\$25.00	\$125.00	20	\$500.00
Release - Chemical - Aerial	50	\$85.00	\$4,250.00	58	\$85.00	\$4,930.00	108	\$9,180.00
Release - Chemical - Hand	40	\$100.00	\$4,000.00	0	\$100.00	\$0.00	40	\$4,000.00
Release - Mechanical - Hand	80	\$55.00	\$4,400.00	20	\$55.00	\$1,100.00	100	\$5,500.00
Precommercial Thinning	714	\$85.00	\$60,690.00	231	\$85.00	\$19,635.00	945	\$80,325.00
Pruning	35	\$90.00	\$3,150.00	0	\$85.00	\$0.00	35	\$3,150.00
Totals	1,914		\$198,980.00	391		\$34,965.00	2,305	\$233,945.00

*Planting costs include seedling costs

TABLE A-5 RECREATION MANAGEMENT SUMMARY

District: West Oregon

Fiscal Year: 2009

01/09/2008

Operation	Unit of Measure	Current	Construction Projects	Construction Cost (Funding)		Improvement Projects	Improvement Cost (Funding)		Total Cost	Comments
				ODF	Other		ODF	Other		
Baber Mdw/Salmon Cr.						\$3,000			\$3,000	
Black Rock						\$3,000			\$3,000	

\$6,000

