



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Firebreak 2
Sale 341-13-75

District: Tillamook

Date: January 08, 2013

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$749,488.04	\$27,417.15	\$776,905.19
		Project Work:	\$(49,040.00)
		Advertised Value:	\$727,865.19



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timber description

Location: Portions of Section 31, T1S, R6W, and portions of Sections 35 and 36, T1S, R7W, W.M., Tillamook and Washington Counties, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	13	0	95
Western Hemlock / Fir	12	0	95
Alder (Red)	12	0	90

Volume by Grade	10" - 11"	12"+	2S	3S	4S	8" - 9"	Total
Douglas - Fir	0	0	778	1,378	852	0	3,008
Western Hemlock / Fir	0	0	116	892	260	0	1,268
Alder (Red)	26	25	0	0	0	84	135
Total	26	25	894	2,270	1,112	84	4,411



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comments: Pond Values Used: 4th Quarter Calendar Year 2012.

Western redcedar & Other Cedars Stumpage Price = Pond Value minus
Logging Cost
 $\$705/\text{MBF} = \$985/\text{MBF} - \$280/\text{MBF}$

Pulp (Conifer and Hardwood) Price = $\$25/\text{MBF}$

SCALING COST ALLOWANCE = $\$5.00/\text{MBF}$

FUEL COST ALLOWANCE = $\$4.00/\text{Gallon}$

HAULING COST ALLOWANCE

Hauling cost equivalent to $\$780$ daily truck cost.

Other Costs (with Profit & Risk to be added):

Brand and Paint: $\$2/\text{MBF} \times 4,411 \text{ MBF} = \$8,822$

Snag Creation (girdling): Area 1 $\$10/\text{snag} \times 184 \text{ snags} = \$1,840$

Area 4 $\$10/\text{snag} \times 134 \text{ snags} = \$1,340$

TOTAL Other Costs (with Profit & Risk to be added) = $\$12,002$

Other Costs (No Profit & Risk added):

Non-Project Roads:

Road 1 = $500' \times \$100/100' = \500

Road 2 = $1,050' \times \$180/100' = \$1,890$

Road 3 = $150' \times \$100/100' = \150

Road 4 = $250' \times \$100/100' = \250

Road 5 = $4,150' \times \$75/100' = \$3,112.50$

Non-Project Road Blocking: $\$50/\text{block} \times 4 \text{ roads (1-4)} = \200

OHV Filters: $12 \text{ filters} \times \$75/\text{filter} = \$900$

OHV Trail Clearing: $\$40/100' \times 11,050' = \$4,420$

Area 1 Swing Volume: $153 \text{ MBF} \times \$30/\text{MBF} = \$4,590$

Slash Piling and Sorting: $\$5/\text{acre} \times 313 \text{ (cable) acres} = \$1,565$

Cover Material for Piles: $12 \text{ piles} \times \$5/\text{pile} = \$60$

Equipment Cleaning: $1 \text{ machine} @ \$1,000 \text{ per machine} = \$1,000$

TOTAL Other Costs (No Profit & Risk added) = $\$18,637.50$

ROAD MAINTENANCE

Road Maintenance: In unit roads and haul routes out the N Fork

Trask and Toll Roads:

Spot Rocking: $300\text{cy} \times \$12.00/\text{cy} / 4,411 \text{ MBF} = \$0.82/\text{MBF}$

Interim Grading: $\$250/\text{mile} \times 28.8 \text{ miles} \times 1 \text{ time} / 4,411 \text{ MBF} =$
 $\$1.63/\text{MBF}$

Final Maintenance Grading: $\$500/\text{mile} \times 28.8 \text{ miles} / 4,411 \text{ MBF} =$
 $\$3.26/\text{MBF}$

Vibratory Roller: Bark Shanty/ North Fork Jct to Gobblers Knob:
7.6 miles

Firebreak 2 to Cruiser Creek: 2.5 miles

Total: $10.1 \text{ miles} \times 52.8 \text{ stations/mile} \times \$17.75/\text{station} =$

$\$9,465.72 / 4,411 \text{ MBF} = \$ 2.15/\text{MBF}$

TOTAL Road Maintenance: $\$ 7.86/\text{MBF}$



"STEWARDSHIP IN FORESTRY"

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logging conditions

combination#:	1	Douglas - Fir Western Hemlock / Fir	63.65% 39.88%
yarding distance:	Medium (800 ft)	downhill yarding:	No
logging system:	Cable: Medium Tower >40 - <70	Process:	Stroke Delimber
tree size:	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
loads / day:	3.9	bd. ft / load:	4,000
cost / mbf:	\$214.37		
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)		
combination#:	2	Douglas - Fir Western Hemlock / Fir	9.25% 4.12%
yarding distance:	Short (400 ft)	downhill yarding:	No
logging system:	Shovel	Process:	Stroke Delimber
tree size:	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
loads / day:	7.0	bd. ft / load:	3,200
cost / mbf:	\$64.21		
machines:	Stroke Delimber (B)		
combination#:	3	Douglas - Fir Western Hemlock / Fir	27.09% 55.99%
yarding distance:	Medium (800 ft)	downhill yarding:	No
logging system:	Cable: Medium Tower >40 - <70	Process:	Stroke Delimber
tree size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
loads / day:	6.6	bd. ft / load:	4,500
cost / mbf:	\$112.60		
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)		
combination#:	4	Alder (Red)	100.00%



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Firebreak 2
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yarding distance:	Medium (800 ft)	downhill yarding:	No
logging system:	Cable: Medium Tower >40 - <70	Process:	Stroke Delimber
tree size:	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
loads / day:	4.0	bd. ft / load:	3,800
cost / mbf:	\$222.23		
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)		



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logging costs

Operating Seasons:	2.00	Profit Risk:	18.00%
Project Costs:	\$49,040.00	Other Costs (P/R):	\$12,002.00
Slash Disposal:	\$0.00	Other Costs:	\$18,637.50

Miles of Road

Road Maintenance: \$7.86

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	3.5
Western Hemlock / Fir	\$0.00	3.0	3.5
Alder (Red)	\$0.00	3.0	3.2



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logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$172.90	\$8.25	\$1.99	\$99.15	\$2.72	\$51.30	\$0.00	\$5.00	\$4.23	\$345.54
Western Hemlock / Fir									
\$151.19	\$8.25	\$1.99	\$66.10	\$2.72	\$41.44	\$0.00	\$5.00	\$4.23	\$280.92
Alder (Red)									
\$222.23	\$8.65	\$1.99	\$75.75	\$2.72	\$56.04	\$0.00	\$5.00	\$4.23	\$376.61

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$529.80	\$184.26	\$0.00
Western Hemlock / Fir	\$0.00	\$434.89	\$153.97	\$0.00
Alder (Red)	\$0.00	\$579.70	\$203.09	\$0.00



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summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,008	\$184.26	\$554,254.08
Western Hemlock / Fir	1,268	\$153.97	\$195,233.96
Alder (Red)	135	\$203.09	\$27,417.15

Gross Timber Sale Value

Recovery: \$776,905.19

Prepared by: David Wells

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Firebreak 2

IMPROVEMENT

Point	A to C	132+50	stations =	\$3,456.35
SUBTOTAL IMPROVEMENT				\$3,456.35

RECONSTRUCTION

Point	A to B	34+40	stations =	\$41,096.00
SUBTOTAL RECONSTRUCTION				\$41,096.00

MOVE IN	\$4,487.65
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GRAND TOTAL	\$49,040.00
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Sale:		Firebreak 2		Road:		A to B		
Construction -	0+00 0.00	stations miles	Improvement -	0+00 0.00	stations miles	Reconstruction -	34+40 0.65	stations miles
RECONSTRUCTION: CLEARING AND GRUBBING -								
Endhaul of stumps to waste area (road prism & widening)			1.264	acres	@	\$1,500.00	per acre =	\$1,896.00
Clearing/no end haul			1.900	acres	@	\$910.00	per acre =	\$1,729.00
TOTAL CLEARING AND GRUBBING								\$3,625.00
RECONSTRUCTION: EXCAVATION -								
Road Earthwork			34.40	sta.	@	\$220.00	per sta. =	\$7,568.00
Excavate Endhaul Material			2810	cy.	@	\$1.90	per c.y. =	\$5,339.00
Drill & Shoot			250	cy.	@	\$6.00	per c.y. =	\$1,500.00
TOTAL EXCAVATION								\$14,407.00
RECONSTRUCTION: ENDHAUL -								
Endhaul Material to Waste Area			2810	cy.	@	\$1.33	per c.y. =	\$3,737.30
Spread & compact			2810	cy.	@	\$0.30	per c.y. =	\$843.00
TOTAL ENDHAUL								\$4,812.80
CULVERTS - MATERIALS & INSTALLATION								
						40	LF of 24"	\$1,080.00
			<u>Culvert Stakes & Markers</u>					
			1 markers			\$8.00		
						\$8.00		
TOTAL CULVERTS								\$1,088.00
ROCK								
0+00 to	18+50	1,400	cy. of	Pit-Run	@	\$8.83	per c.y. =	\$12,362.00
Low Water Crossing	22+00	40	cy. of	Crushed	@	\$7.40	per c.y. =	\$296.00
Landing Rock	17+60	140	cy. of	Pit-Run	@	\$8.83	per c.y. =	\$1,236.20
Fill Armor	22+00	10	cy. of	Riprap	@	\$12.00	per c.y. =	\$120.00
TOTAL ROCK								\$14,014.20
SPECIAL PROJECTS								
Install Temporary stream crossing @ station 22+00			2.00	hours	@	\$145.00	per hour	\$290.00
Construct waste areas/landings -			8.00	hours	@	\$145.00	per hour	\$1,160.00
Remove log cribbing			6.00	hours	@	\$145.00	per hour	\$870.00
Grade and shape road -			34.40	stations	@	\$17.00	per station	\$584.80
Grass seed and fertilize -			1.11	acres	@	\$220.00	per acre	\$244.20
TOTAL SPECIAL PROJECTS								\$3,149.00
GRAND TOTAL								\$41,096.00

SUMMARY OF IMPROVEMENT COST

Sale: Firebreak 2			Road: A to C		
Construction -	0+00	stations	Improvement -	132+50	stations
	0.00	miles		2.51	miles
Reconstruction -	0+00	stations			
	0.00	miles			

IMPROVEMENT: CLEARING AND GRUBBING -						TOTAL CLEARING AND GRUBBING		\$0.00
IMPROVEMENT: EXCAVATION -						TOTAL EXCAVATION		\$0.00
CULVERTS - MATERIALS & INSTALLATION								
<u>Culvert Stakes & Markers</u>								
4 markers						<u>\$32.00</u>		
						<u>\$32.00</u>	TOTAL CULVERTS	\$32.00
ROCK								
Leveling	*	220	cy. of	Crushed	@	\$6.23 per c.y.=	\$1,370.60	
							TOTAL ROCK	\$1,370.60
SPECIAL PROJECTS								
Grade and shape road -				132.50	stations @	\$15.50 per station	\$2,053.75	
							TOTAL SPECIAL PROJECTS	\$2,053.75
						GRAND TOTAL		\$3,456.35

ROCK PIT DEVELOPMENT AND ROCK COST SUMMARY

Rock:	Pit-Run and Stockpile	Pit-Run	Location:	NW 1/4 Sec. 36 T1 R7W W.M.
Sale:	Firebreak 2	Stockpile	Location:	SE 1/4 Sec. 11 T2S R7W W.M.
Swell:	1.40		Road:	1800 c.y.
Shrinkage	1.16		Stockpile:	c.y.
			Total Truck Loads:	1800 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$1,580.00

Rip Rock:	Pit-Run	\$1.90	/cu.yd.	x	1540	cu.yds.	=	\$2,926.00
Load Dump Truck:	Pit-Run	\$0.70	/cu.yd.	x	1540	cu.yds.	=	\$1,078.00
						Subtotal		\$5,584.00

Move in Roller and Compactor	1	@	\$800.78	=	\$800.78
Move in Grader	1	@	\$216.57	=	\$216.57
Move in D-8	1	@	\$1,162.64	=	\$1,162.64
Move in Excavator	1	@	\$1,282.41	=	\$1,282.41
Move in Trucks	3	@	\$269.26	=	\$807.78
				Subtotal	\$4,270.18

Base Cost= \$5.47 Per Cu.Yd.

TOTAL PRODUCTION COSTS	\$9,854.18
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Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 0 1850 (Pit-Run)	2.26	1.10	5.47	8.83	1400	\$12,362.00
A to B Low Water Crossing (Crushed)	5.60	1.10	0.70	7.40	40	\$296.00
A to B Landing Rock (Pit-Run)	2.26	1.10	5.47	8.83	140	\$1,236.20
A to C - Leveling Rock -Crushed	4.43	1.10	0.70	6.23	220	\$1,370.60
				Total C.Y.	1800	Sub Total \$15,264.80

TOTAL ROCKING COSTS	\$15,264.80
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Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Firebreak 2**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
26.0	Pavement	30
22.0	Main Lines	7
5.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Drill & Compressor	\$930.12		\$46.00	0.00	0.00	0	\$0.00	\$930.12
1	Excavators (Large)	\$1,302.35	1	\$44.80	0.00	4.00	2	\$89.60	\$1,391.95
1	Tractor (D8)	\$1,202.51	2	\$15.10	0.00	4.00	2	\$30.20	\$1,232.71
2	Dump Truck (10 cy +)	\$661.33		\$2.85	0.00	0.00	0	\$0.00	\$661.33
1	Water Truck (1500 Gal)	\$271.54		\$2.85	0.00	0.00	0	\$0.00	\$271.54
				TOTAL MOVE-IN COSTS:					\$4,487.65



"STEWARDSHIP IN FORESTRY"

Firebreak Two

Volume Summary

Area 1-Modified Clearcut				
92 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	9.6	887	5%	843
Hemlock	6.0	550	5%	523
Alder	1.6	150	10%	135
TOTAL	17.3	1587		1501

Area 2-Partial Cut				
169 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	5.1	858	5%	815
Hemlock	4.4	747	5%	710
TOTAL	9.5	1605		1525

Area 3-Modified Clearcut				
50 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	10.2	511	5%	485
TOTAL	10.2	511		485

Area 4-Modified Clearcut				
67 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	13.6	910	5%	865
Hemlock	0.6	37	5%	35
TOTAL	14.1	947		900

TOTAL SALE VOLUME			378	acres
SPECIES	Cruised Net (MBF)		Net Sale (MBF)	
Douglas-fir	3166		3008	
Hemlock	1334		1268	
Red Alder	150		135	



"STEWARDSHIP IN FORESTRY"

Firebreak Two

Volume Summary

TOTAL	4650	4411
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OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Firebreak 2

1. **Type of Sale**

Regeneration and Partial Cut, Recovery

2. **Legal Description**

Portions of Section 31, T1S, R6W, and portions of Sections 35 and 36, T1S, R7W, W.M., Tillamook and Washington Counties, Oregon

3. **Sale Acreage**

Sale acreage was determined by GPS and orthophotographs along with GIS.)

ACRES

	<u>Gross</u>	<u>Net</u>
Area 1 (Modified Clearcut)	103	92
Area 2 (Partial Cut)	177	169
Area 3 (Modified Clearcut)	62	50
Area 4 (Modified Clearcut)	74	67

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. **Cruising Procedures**

A. Cruise Method

Fifty-nine (59) plots were sampled on a rectangular grid pattern spaced 350' between plots and 700' between lines.

All conifers 8 inches DBH and greater containing 20 net board feet and all hardwoods 9 inches DBH and greater containing 30 net board feet were sampled for tree species, DBH, form factor, merchantable height, visible defect, and grade. Diameters were measured outside bark to the nearest inch and merchantable heights were recorded to the nearest foot. The point of tree observation was 4.5 feet on all plots.

B. Plot size

Variable radius plots used BAF's of 40 in Area 1, 33.61 and 40 in Area 2, and 33.61 in Areas 3 and 4 for all species.

C. Grading System

Tree heights were measured to a 6" merchantable top for conifers and 7" for

hardwoods. All measurements were outside bark. All species were graded using the Columbia River Log Scaling and Grading Bureau rules, favoring a 40' log.

5. Computation Procedure

The volumes and statistics for the timber cruised were computed using SuperACE 2004, developed by Atterbury Consultants, Inc. The standard error and coefficient of variation for the cruise based on net board feet per acre is shown in the table below. Volume deductions were made for snags in Areas 1 and 4, and hidden defect and breakage. There were no volume additions made for in-growth or otherwise.

Area	C.V. (%)	S.E. (%)
1	82.5	24.8
2	48.1	9.1
3	80.2	28.3
4	64.7	22.8
Average	65.9	8.6

6. Hidden Defect and Breakage

A 5% reduction was applied to conifers and a 10% reduction to hardwood volumes for hidden defect and breakage. This was in addition to visual defect deducted during the cruise.

7. Timber Description

The entire sale area was burned in the 1939 Saddle Mountain Fire and about 45% of the sale, primarily along the southern side was burned in the 1951 North Fork Fire.

About 50% of Area 1 was reforested in 1972-73 and received no further management. Area 2 naturally regenerated and about 15 years ago 60% of the area was commercially thinned. Area 3 was reforested by seeding in 1965-66 and received no further stand management. About 50% of Area 4 was re-forested in 1955-56 and about 30% was commercially thinned about 15 years ago.

Sale Area	Species (%)	DBH	Merchantable Bole Height	Merchantable Top
1	Douglas-fir (53%)	14.3	52	5
1	Hemlock (31%)	11.0	43	5
1	Alder (16%)	12.2	42	6
2	Douglas-fir (52%)	14.9	59	5
2	Hemlock (48%)	12.7	51	5
3	Douglas-fir (100%)	10.7	28	5
4	Douglas-fir (97%)	13.0	51	5
4	Hemlock (3%)	17.0	72	5

8. Cruiser Names/Dates

Areas 1, 2, and 4 were cruised in October 2007 and Area 3 was cruised in August 2011 by ODF District Personnel.

9. Revenue Distribution

FDF 100%

Tax Code: Tillamook County 9-2: 75%, Washington County 25%

Deed Numbers: Tillamook County:115, 161; Washington County: 115

10. Attachments

Volume Summary

SuperACE tables by Area

- Log Stock Tables
- Stand Table Summary

Logging Plan

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take

DL – Douglas-fir leave

RA – Red alder take

WL – Western hemlock leave

WH – Western hemlock take

TC TLOGSTVB				Log Stock Table - MBF																	
				Project: FRBRTWO																	
T01S R07W S35 TSALE										T01S R07W S35 TSALE											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1												
01S	07W	35	AREA 1	SALE	92.00	12	52	Date	11/7/2012												
										Time	12:52:24PM										
S Spp	So	Gr	Log	Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
DF	CO	2	36		80	17.9	65	7.7								65					
DF	CO	2	40		170	8.8	155	18.4					60		61	33					
DF	CO	3	30		5	5.0	5	.5			5										
DF	CO	3	31		6	5.0	6	.7			6										
DF	CO	3	33		8	24.0	6	.7			6										
DF	CO	3	35		6	5.0	5	.6			5										
DF	CO	3	36		67	5.0	64	7.6			26	22	15								
DF	CO	3	40		344	5.2	326	38.7				69	257								
DF	CO	4	15		8	5.0	7	.9		6	2										
DF	CO	4	16		3	5.0	3	.4			3										
DF	CO	4	17		9	5.0	9	1.0		9											
DF	CO	4	23		5	5.0	5	.6			5										
DF	CO	4	24		10	5.0	10	1.2			10										
DF	CO	4	25		14	5.0	13	1.5		13											
DF	CO	4	26		9	5.0	8	1.0		8											
DF	CO	4	27		21	5.0	20	2.3		20											
DF	CO	4	28		7	5.0	6	.7		6											
DF	CO	4	29		6	5.0	5	.6		5											
DF	CO	4	31		6	5.0	6	.7		6											
DF	CO	4	32		6	5.0	6	.7		6											
DF	CO	4	34		48	5.0	46	5.4		46											
DF	CO	4	36		20	5.0	19	2.3		19											
DF	CO	4	38		32	5.0	30	3.6		30											
DF	CO	4	40		19	5.0	18	2.1		18											
DF	Totals				908	7.1	843	55.5		191	68	92	272	60	61	99					
WH	CO	3	34		44	5.0	42	8.0			42										
WH	CO	3	36		27	5.0	25	4.8				25									
WH	CO	3	37		28	5.0	26	5.1			26										
WH	CO	3	40		339	5.6	320	61.2			118	105	57	40							
WH	CO	4	14		18	5.0	17	3.3			17										
WH	CO	4	15		8	5.0	7	1.4			7										
WH	CO	4	16		11	5.0	11	2.0			11										
WH	CO	4	19		7	5.0	7	1.3			7										
WH	CO	4	24		12	5.0	11	2.1			11										
WH	CO	4	26		24	5.0	23	4.3			23										
WH	CO	4	29		35	5.0	33	6.4			33										
WH	Totals				552	5.4	523	34.4			296	130	57	40							
RA	H	R	10																		
RA	H	R	24		30	15.3	25	18.5							25						
RA	H	R	29		9	10.0	8	5.8			8										
RA	H	R	32		31	16.4	26	19.0					26								
RA	H	R	36		22	10.0	20	14.6				20									
RA	H	R	40		69	17.5	57	42.1				57									
RA	Totals				160	15.4	135	8.9			84		26		25						
DL	CO	3	40		22	15.6	19	100.0			19										
DL	Totals				22	15.6	19	1.2			19										
Total All Species					1,642	7.5	1,520	100.0		191	364	325	355	100	86	99					

TC		TSTNDSUM															Stand Table Summary																											
															Project															FRBRTWO														
T01S R07W S35 TSALE																														T01S R07W S35 TSALE														
Twp		Rge		Sec		Tract					Type			Acres			Plots			Sample Trees			Page:		1																			
01S		07W		35		AREA 1					SALE			92.00			12			52			Date:		11/07/2011																			
																							Time:		12:49:45PM																			
S		Av							Average Log			Net		Net		Net		Net		Net		T o t a l s																						
Spc		DBH		Trees		FF 16'		Ht Tot		Trees/ Acre		BA/ Acre		Logs Acre		Net Cu.Ft.		Net Bd.Ft.		Tons/ Acre		Cu.Ft. Acre		Bd.Ft. Acre		Tons		Cunits		MBF														
DF		9		2		87		51		14.462		6.67		14.46		7.4		34.8		3.04		107		503		279		98		46														
DF		10		1		88		56		6.112		3.33		6.11		9.8		40.0		1.71		60		244		157		55		22														
DF		11		4		88		75		20.592		13.33		25.64		11.4		40.0		8.33		292		1,026		766		269		94														
DF		13		1		88		59		3.616		3.33		3.62		17.5		40.0		1.81		63		145		166		58		13														
DF		14		2		89		85		6.327		6.67		12.65		15.3		62.3		5.52		194		789		508		178		73														
DF		15		1		91		89		2.828		3.33		5.66		18.7		75.0		3.02		106		424		278		97		39														
DF		16		1		87		105		2.387		3.33		4.77		22.5		90.0		3.06		107		430		282		99		40														
DF		17		4		90		97		8.435		13.33		16.87		25.9		101.2		12.46		437		1,708		1,147		402		157														
DF		18		2		88		94		3.859		6.67		7.72		26.5		97.3		5.82		204		751		535		188		69														
DF		19		3		90		103		5.225		10.00		10.45		30.8		114.9		9.16		321		1,201		843		296		110														
DF		22		1		90		109		1.218		3.33		2.44		45.8		170.0		3.18		112		414		293		103		38														
DF		23		1		88		143		1.165		3.33		3.50		39.3		176.7		3.92		138		618		361		127		57														
DF		24		3		88		108		3.183		10.00		6.37		53.0		206.7		9.61		337		1,316		884		310		121														
DF		25		1		85		92		.978		3.33		.98		42.3		80.0		1.18		41		78		109		38		7														
DF		Totals		27		88		79		80.388		90.00		121.23		20.8		79.6		71.81		2,520		9,646		6,607		2,318		887														
WH		8		2		90		82		19.099		6.67		19.10		7.3		45.0		4.46		139		859		411		128		79														
WH		10		4		90		77		24.446		13.33		24.45		8.8		45.0		6.91		216		1,100		635		199		101														
WH		11		3		90		77		15.153		10.00		15.15		13.2		53.3		6.40		200		808		589		184		74														
WH		12		2		91		103		8.488		6.67		16.98		12.7		57.5		6.93		216		976		637		199		90														
WH		13		2		90		96		7.233		6.67		14.47		14.3		62.5		6.61		206		904		608		190		83														
WH		16		1		92		112		2.387		3.33		4.77		29.9		125.0		4.58		143		597		421		132		55														
WH		17		1		87		97		2.115		3.33		4.23		22.9		85.0		3.10		97		360		286		89		33														
WH		18		1		89		85		1.886		3.33		3.77		26.4		100.0		3.19		100		377		294		92		35														
WH		Totals		16		90		84		80.807		53.33		102.92		12.8		58.1		42.17		1,318		5,981		3,880		1,213		550														
RA		9		1		79		44		7.545		3.33																																
RA		10		2		79		77		12.223		6.67		12.22																														
RA		14		2		86		85		6.236		6.67		6.24		30.2		110.0		5.18		188		686		477		173		63														
RA		16		2		85		70		4.775		6.67		4.77		33.0		115.0		4.33		158		549		399		145		51														
RA		18		1		87		82		1.886		3.33		3.77		26.2		105.0		2.72		99		396		250		91		36														
RA		Totals		8		82		70		32.665		26.67		27.01		16.5		60.4		12.24		445		1,631		1,126		409		150														
DL		15		1		84		81		2.716		3.33		2.72		28.4		80.0		2.12		77		217		195		71		20														
DL		Totals		1		84		81		2.716		3.33		2.72		28.4		80.0		2.12		77		217		195		71		20														
Totals				52		88		80		196.577		173.33		253.87		17.2		68.8		128.34		4360		17,476		11,807		4,011		1,608														

TC TLOGSTVB				Log Stock Table - MBF																		
				Project: FRBRTWO																		
T01S R07W S36 TSALE												T01S R07W S36 TSALE										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2													
01S	07W	36	AREA 2	SALE	169.00	29	159	Date	11/7/2012													
									Time	12:56:07PM												
Spp	T	S	So	Gr	Log	Len	Gross	%	Net	%Spc	Net Volume by Scaling Diameter in Inches											
							MBF	Def	MBF		2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
WL		CO	4		40		6	5.0	5	.5		5										
	WL	Totals					1,144	6.1	1,074	28.9		58	165	110	335	269	115	21				
DF		CO	2		36		63	5.0	59	7.3						29	30					
DF		CO	2		40		192	6.1	180	22.1					132	48						
DF		CO	3		32		19	5.0	18	2.2			4	14								
DF		CO	3		34		11	5.0	11	1.3			11									
DF		CO	3		35		6	5.0	6	.7			6									
DF		CO	3		36		29	12.1	26	3.2				26								
DF		CO	3		40		399	6.1	375	46.0			40	126	189	20						
DF		CO	4		14		2	5.0	2	.2			2									
DF		CO	4		15		2	5.0	2	.3			2									
DF		CO	4		16		4	5.0	4	.5		4										
DF		CO	4		17		4	5.0	3	.4		3										
DF		CO	4		19		8	5.0	8	.9		8										
DF		CO	4		20		5	5.0	5	.6		5										
DF		CO	4		24		24	5.0	23	2.8		4	19									
DF		CO	4		25		10	5.0	9	1.1		9										
DF		CO	4		26		9	5.0	9	1.1		9										
DF		CO	4		27		3	5.0	3	.4			3									
DF		CO	4		28		4	5.0	4	.5		4										
DF		CO	4		29		6	5.0	5	.7		5										
DF		CO	4		30		6	5.0	6	.7			6									
DF		CO	4		31		6	5.0	6	.7		6										
DF		CO	4		32		4	5.0	4	.4		4										
DF		CO	4		35		5	5.0	5	.6		5										
DF		CO	4		37		17	5.0	16	2.0		16										
DF		CO	4		40		19	5.0	18	2.2		18										
DF		CO	4		41		10	5.0	9	1.1		9										
	DF	Totals					867	6.0	815	21.9		109	91	166	189	151	78	30				
WH		CO	2		28		30	20.2	24	3.3						24						
WH		CO	2		40		99	7.3	92	13.0					92							
WH		CO	3		32		144	5.0	137	19.3			105	16	16							
WH		CO	3		34		6	5.0	6	.8			6									
WH		CO	3		40		327	6.2	307	43.2		7	103	135	61							
WH		CO	4		16		16	5.0	15	2.1		15										
WH		CO	4		18		6	5.0	6	.8		6										
WH		CO	4		19		10	5.0	10	1.4		4	6									
WH		CO	4		20		22	5.0	20	2.9		20										
WH		CO	4		21		11	5.0	11	1.5		11										
WH		CO	4		22		10	5.0	9	1.3		6	4									
WH		CO	4		23		9	5.0	8	1.2			8									
WH		CO	4		24		39	5.0	37	5.2		14	23									
WH		CO	4		31		5	5.0	5	.7			5									
WH		CO	4		32		24	5.0	23	3.2		6	17									
	WH	Totals					758	6.4	710	19.1		89	277	151	77	92	24					
Total All Species							3,965	6.4	3,713	100.0		333	635	570	771	644	527	169	64			

TC		Stand Table Summary															
TSTNDSUM		Project FRBRTWO															
T01S R07W S36 TSALE													T01S R07W S36 TSALE				
Twp	Rge	Sec	Tract		Type			Acres		Plots	Sample Trees		Page:	1			
01S	07W	36	AREA 2		SALE			169.00		29	159		Date:	11/07/2011			
													Time:	12:54:31PM			
Spc	S T	Sample		FF	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	16'	Tot				Net Cu.Ft.	Bd.Ft.				Tons	Cunits	MBF	
DL		10	1	82	49	2.125	1.16	2.12	5.8	20.0	.34	12	42	57	21	7	
DL		11	1	81	58	1.725	1.16	1.72	8.9	30.0	.42	15	52	71	26	9	
DL		14	4	87	84	4.418	4.64	7.75	17.9	65.9	3.81	139	511	644	234	86	
DL		15	3	84	80	3.013	3.70	5.08	19.4	61.9	2.72	99	314	459	167	53	
DL		16	5	87	80	4.575	6.46	8.32	20.7	70.7	4.74	172	588	801	291	99	
DL		17	1	82	91	.735	1.16	1.47	25.7	90.0	1.04	38	132	175	64	22	
DL		18	2	89	89	1.562	2.76	3.12	25.2	87.4	2.17	79	273	366	133	46	
DL		19	6	84	83	3.756	7.39	6.81	29.2	94.5	5.46	199	644	923	336	109	
DL		20	2	89	96	1.264	2.76	2.53	36.2	130.0	2.52	91	329	425	155	56	
DL		21	6	88	102	3.435	8.28	6.87	41.1	145.0	7.76	282	996	1,311	477	168	
DL		22	4	88	99	2.091	5.52	4.18	44.0	170.5	5.06	184	713	854	311	121	
DL		23	1	87	115	.478	1.38	.96	53.6	215.0	1.41	51	206	238	87	35	
DL		24	3	86	107	1.233	3.92	2.47	54.5	209.8	3.69	134	517	624	227	87	
DL		25	1	84	103	.418	1.38	.84	57.9	210.0	1.33	48	176	225	82	30	
DL		26	3	87	123	1.134	4.14	3.03	52.0	224.7	4.37	158	681	738	266	115	
DL		28	3	88	119	.968	4.14	2.58	64.9	298.7	4.61	168	771	778	283	130	
DL		Totals		46	86	87	32.930	59.92	59.86	31.2	116.0	51.43	1,869	6,944	8,692	3,158	1,174
WL		11	1	82	107	1.756	1.16	3.51	11.7	50.0	1.31	41	176	222	69	30	
WL		12	4	84	82	6.183	4.86	10.89	12.8	48.6	4.46	139	530	753	235	90	
WL		13	2	82	86	2.515	2.32	5.03	14.6	55.0	2.36	74	277	398	125	47	
WL		14	3	90	93	3.665	3.92	7.33	18.7	81.1	4.37	137	595	739	231	100	
WL		15	3	89	88	3.192	3.92	6.38	19.4	82.0	3.97	124	524	670	210	89	
WL		16	5	89	86	4.781	6.68	8.58	23.5	91.2	6.45	202	782	1,090	341	132	
WL		17	4	86	82	3.221	5.08	5.57	24.8	90.0	4.42	138	501	748	234	85	
WL		18	3	85	94	2.092	3.70	4.18	30.3	106.9	4.06	127	447	686	214	76	
WL		19	3	84	88	1.878	3.70	3.76	31.5	108.8	3.78	118	409	639	200	69	
WL		20	10	87	96	5.918	12.91	11.84	36.1	130.6	13.66	427	1,545	2,308	721	261	
WL		21	1	82	98	.482	1.16	.96	46.2	140.0	1.42	45	135	241	75	23	
WL		22	1	81	69	.439	1.16	.88	37.2	110.0	1.04	33	97	176	55	16	
WL		23	1	81	74	.402	1.16	.80	46.5	130.0	1.19	37	104	202	63	18	
WL		24	4	83	106	1.546	4.86	3.09	54.0	183.8	5.33	167	568	901	282	96	
WL		Totals		45	86	90	38.070	56.56	72.80	24.8	91.9	57.84	1,807	6,688	9,774	3,055	1,130
DF		10	2	85	56	4.654	2.54	4.65	9.3	35.4	1.23	43	165	209	73	28	
DF		11	3	86	65	5.268	3.48	5.27	13.7	46.7	2.06	72	246	347	122	42	
DF		13	3	87	77	4.250	3.92	5.51	13.2	50.4	2.07	73	278	350	123	47	
DF		14	3	86	69	3.665	3.92	4.95	16.7	47.8	2.36	83	237	399	140	40	
DF		15	5	88	89	5.429	6.68	10.86	19.7	77.3	6.09	214	839	1,030	361	142	
DF		16	2	84	95	1.843	2.54	3.69	21.0	75.0	2.21	77	276	373	131	47	
DF		17	6	88	96	5.111	8.06	9.35	26.9	105.0	7.16	251	981	1,211	425	166	
DF		18	4	92	108	3.140	5.52	6.28	32.3	131.3	5.78	203	825	977	343	139	
DF		19	2	91	111	1.401	2.76	3.50	31.3	134.0	3.12	110	469	528	185	79	
DF		20	1	86	94	.652	1.38	1.30	34.2	110.0	1.27	45	143	214	75	24	
DF		22	3	90	108	1.582	4.14	3.69	40.3	167.2	4.23	149	616	715	251	104	
DF		Totals		34	87	83	36.995	44.91	59.05	22.3	86.0	37.59	1,319	5,076	6,353	2,229	858
WH		8	1	80	44	3.320	1.16	3.32	5.1	20.0	.54	17	66	92	29	11	
WH		10	6	83	81	13.154	7.17	19.53	8.5	38.0	5.34	167	743	902	282	126	
WH		11	4	82	87	7.025	4.64	12.29	10.9	44.3	4.31	135	544	728	227	92	
WH		12	4	87	92	6.464	5.08	12.93	12.6	51.8	5.21	163	670	880	275	113	
WH		13	2	82	74	2.515	2.32	3.77	17.3	53.3	2.11	65	201	356	111	34	
WH		14	5	84	75	5.627	6.02	7.80	19.8	62.2	4.93	154	485	833	260	82	

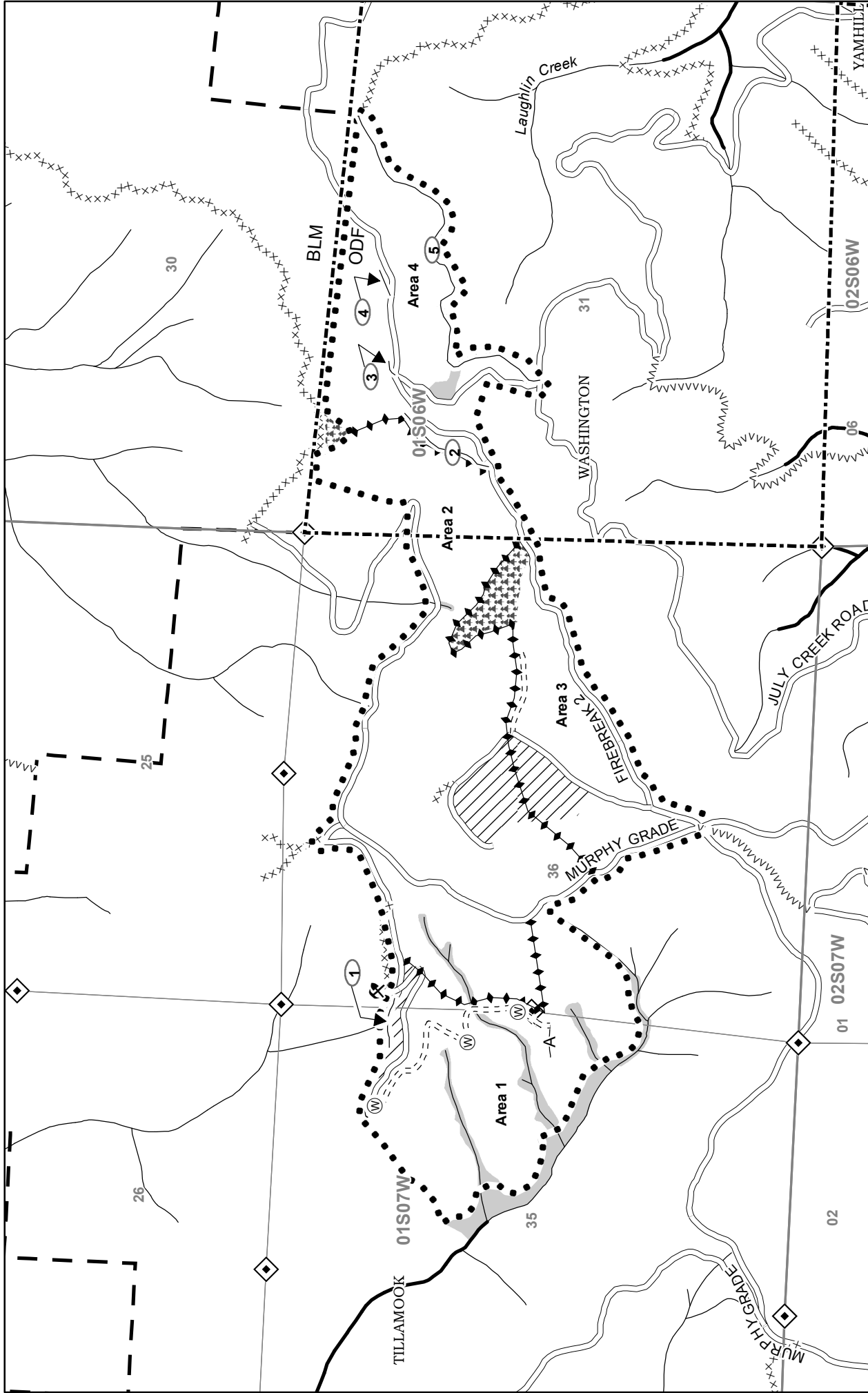
TC TSTNDSUM				Stand Table Summary											
Project FRBRTWO															
T01S R07W S36 TSALE												T01S R07W S36 TSALE			
Twp	Rge	Sec	Tract	Type				Acres	Plots	Sample Trees			Page:	2	
01S	07W	36	AREA 2	SALE				169.00	29	159			Date:	11/07/2011	
												Time:	12:54:31PM		
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s		
		DBH	Trees	FF Ht 16' Tot				Net Cu.Ft.	Net Bd.Ft.		Tons	Cunits	MBF		
WH		15	2	86 59	2.068	2.54	2.07	25.3	89.8	1.68	52	186	284	89	31
WH		16	3	82 83	2.490	3.48	4.98	21.3	75.0	3.40	106	374	575	180	63
WH		18	3	90 97	2.217	3.92	4.43	30.9	113.8	4.38	137	505	740	231	85
WH		19	3	88 107	1.990	3.92	3.98	35.2	127.9	4.48	140	509	757	237	86
WH		20	1	81 102	.531	1.16	1.06	41.7	130.0	1.42	44	138	240	75	23
WH		Totals		34 84 81	47.400	41.39	76.16	15.5	58.0	37.79	1,180	4,420	6,386	1,995	747
Totals			159	86 85	155.394	202.78	267.86	23.1	86.3	184.64	6176	23,128	31,205	10,437	3,909

TC TLOGSTVB				Log Stock Table - MBF Project: FRBRTWO															
T01S R07W S36 TSALE												T01S R07W S36 TSALE							
Twp	Rge	Sec	Tract		Type	Acres	Plots	Sample Trees				Page	1						
01S	07W	36	AREA 3		SALE	50.00	9	52				Date	11/7/2012						
												Time	12:58:56PM						
Spp	T	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches									
										MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13
DF	CO	3	26	5	5.0	4	.9	4											
DF	CO	3	32	127	6.0	120	24.7			73	22	26							
DF	CO	3	40	48	6.9	45	9.2			45									
DF	CO	4	12	11	5.0	10	2.1			10									
DF	CO	4	14	1	5.0	1	.2		1										
DF	CO	4	16	110	5.0	105	21.6		91	13									
DF	CO	4	19	2	5.0	2	.5		2										
DF	CO	4	20	5	5.0	5	.9		5										
DF	CO	4	24	91	6.8	84	17.4		37	48									
DF	CO	4	32	43	5.0	41	8.4		24	16									
DF	CO	4	40	72	5.0	68	14.1		68										
DF Totals				515	5.7	485	100.0		233	205	22	26							
Total All Species				515	5.7	485	100.0		233	205	22	26							

TC		TSTNDSUM													Stand Table Summary																									
															Project													FRBRTWO												
T01S R07W S36 TSALE																												T01S R07W S36 TSALE												
Twp		Rge		Sec		Tract					Type			Acres			Plots			Sample Trees			Page:			1														
01S		07W		36		AREA 3					SALE			50.00			9			52			Date:			11/07/2011														
																												Time: 12:57:22PM												
S Spc		T		Sample DBH		FF Trees		Av Ht 16'		Tot		Trees/ Acre		BA/ Acre		Logs Acre		Average Log		Net		Net		T o t a l s																
																		Net		Net		Tons/ Acre					Cu.Ft. Acre		Bd.Ft. Acre											
DF				8		11		81		23		117.682		41.08		117.68		3.1		18.2		10.56		370		2,140		528		185		107								
DF				9		2		81		35		16.906		7.47		16.91		5.1		25.0		2.45		86		423		123		43		21								
DF				10		8		82		51		54.776		29.88		54.78		9.1		37.5		14.28		501		2,054		714		251		103								
DF				11		5		81		50		28.293		18.67		28.29		12.4		34.0		9.98		351		962		499		175		48								
DF				12		7		82		53		33.284		26.14		33.28		14.5		35.7		13.72		481		1,189		686		241		59								
DF				13		3		82		51		12.154		11.20		12.15		16.8		46.7		5.78		204		567		289		102		28								
DF				14		5		80		48		17.467		18.67		17.47		19.9		46.0		9.93		347		803		496		174		40								
DF				15		4		81		45		12.172		14.94		12.17		20.6		50.0		7.16		250		609		358		125		30								
DF				16		3		80		49		8.024		11.20		10.70		19.0		47.5		5.81		204		508		290		102		25								
DF				17		2		81		63		4.738		7.47		9.48		19.2		60.0		5.18		182		569		259		91		28								
DF				18		1		83		66		2.113		3.73		4.23		21.9		70.0		2.64		93		296		132		46		15								
DF				19		1		81		51		1.897		3.73		1.90		43.0		50.0		2.34		82		95		117		41		5								
DF				Totals		52		81		39		309.507		194.19		319.03		9.9		32.0		89.84		3,151		10,214		4,492		1,576		511								
Totals				52		81		39				309.507		194.19		319.03		9.9		32.0		89.84		3151		10,214		4,492		1,576		511								

TC TLOGSTVB				Log Stock Table - MBF																
				Project: FRBRTWO																
T01S R07W S31 TSALE										T01S R07W S31 TSALE										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1											
01S	07W	31	AREA 4	SALE	67.00	9	32	Date	11/7/2012											
										Time	1:01:31PM									
Spp	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches											
									MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19
DF	CO	2	32		27	18.6	22	2.5						22						
DF	CO	2	36		33	5.0	31	3.6						31						
DF	CO	2	40		282	5.8	266	30.7					24	124	75	42				
DF	CO	3	32		28	17.7	23	2.7			18	5								
DF	CO	3	33		5	5.0	5	.5			5									
DF	CO	3	35		4	5.0	4	.5			4									
DF	CO	3	36		57	8.9	52	6.0			24	28								
DF	CO	3	40		293	5.6	277	32.0			79	112	86							
DF	CO	4	14		3	5.0	3	.4		3										
DF	CO	4	15		6	5.0	6	.7		3	2									
DF	CO	4	16		20	5.0	19	2.1		19										
DF	CO	4	17		4	5.0	4	.4		4										
DF	CO	4	20		17	5.0	16	1.8			16									
DF	CO	4	24		16	5.0	16	1.8		12	4									
DF	CO	4	27		5	5.0	5	.6		5										
DF	CO	4	31		5	5.0	5	.6			5									
DF	CO	4	35		15	5.0	14	1.6		14										
DF	CO	4	36		15	5.0	14	1.7		14										
DF	CO	4	39		47	5.0	45	5.2		45										
DF	CO	4	40		41	5.0	39	4.5		39										
DF	Totals				924	6.4	865	92.4		158	157	145	86	24	177	75	42			
WH	CO	3	40		32	9.8	29	82.6					29							
WH	CO	4	30		6	5.0	6	17.4			6									
WH	Totals				38	9.0	35	3.7			6		29							
DL	CO	3	40		31	5.0	29	78.9					29							
DL	CO	4	37		8	5.0	8	21.1		8										
DL	Totals				39	5.0	37	3.9		8			29							
Total All Species					1,001	6.5	936	100.0		166	163	145	115	53	177	75	42			

TC		TSTNDSUM															Stand Table Summary																											
															Project															FRBRTWO														
T01S R07W S31 TSALE																														T01S R07W S31 TSALE														
Twp		Rge		Sec		Tract				Type		Acres		Plots		Sample Trees				Page:		1																						
01S		07W		31		AREA 4				SALE		67.00		9		32				Date:		11/07/2011																						
																				Time:		1:00:08PM																						
S Spc	T	Sample		FF	Av	Ht	Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	Bd.Ft.	T o t a l s																											
		DBH	Trees	16'	Net						Net	Cu.Ft.		Bd.Ft.	Tons		Cunits	MBF																										
DF		8	2	87	68			21.397	7.47	21.40	6.3	30.0	3.81	134	642		255	90	43																									
DF		9	1	90	75			8.453	3.73	8.45	9.7	40.0	2.34	82	338		157	55	23																									
DF		10	3	89	74			20.541	11.20	20.54	11.9	46.7	6.95	244	959		465	163	64																									
DF		11	4	88	68			22.533	14.94	28.19	11.3	44.0	9.11	320	1,241		610	214	83																									
DF		12	2	88	77			9.757	7.47	14.76	12.6	46.4	5.31	186	685		356	125	46																									
DF		14	2	90	84			6.987	7.47	13.97	15.2	60.0	6.07	213	838		407	143	56																									
DF		15	1	89	84			3.043	3.73	6.09	17.6	70.0	3.05	107	426		204	72	29																									
DF		16	5	88	87			13.441	18.67	26.88	20.2	77.0	15.47	543	2,069		1,037	364	139																									
DF		18	1	88	93			2.022	3.73	4.04	27.5	105.0	3.17	111	425		212	75	28																									
DF		19	2	90	106			3.813	7.47	9.52	29.9	124.0	8.11	285	1,181		543	191	79																									
DF		21	1	90	108			1.553	3.73	3.11	43.9	175.0	3.88	136	543		260	91	36																									
DF		22	2	89	94			2.896	7.47	4.38	47.9	192.6	5.97	209	843		400	140	56																									
DF		24	2	87	126			2.377	7.47	5.94	52.1	214.0	8.82	310	1,272		591	207	85																									
DF		25	1	94	153			1.096	3.73	3.29	60.4	316.7	5.66	199	1,041		379	133	70																									
DF		27	1	94	154			.939	3.73	2.82	68.9	383.3	5.53	194	1,080		371	130	72																									
DF		Totals		30	88	79		120.848	112.03	173.38	18.9	78.3	93.25	3,272	13,583		6,248	2,192	910																									
DL		15	1	92	105			3.043	3.73	6.09	22.5	95.0	3.76	137	578		252	92	39																									
DL		Totals		1	92	105		3.043	3.73	6.09	22.5	95.0	3.76	137	578		252	92	39																									
WH		17	1	95	105			2.369	3.73	4.74	29.2	115.0	4.42	138	545		296	93	37																									
WH		Totals		1	95	105		2.369	3.73	4.74	29.2	115.0	4.42	138	545		296	93	37																									
Totals				32	89	80		126.260	119.50	184.21	19.3	79.8	101.43	3547	14,706		6,796	2,376	985																									



Rock source

- Stock pile
- Waste area
- Bridge
- Gate
- Survey corner
- Domestic water supply intake
- Truck turn-around
- Helicopter landing zone
- Cultural site

Landing

- Buffer
- Non-required thinning
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downhill yarding
- Green tree retention area

Restricted area

- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- Unsurfaced road
- Surfaced road
- Paved road
- Abandoned road

Swing road

- Non-project road
- Blocked road
- OHV trail
- Non-motorized trail
- Transmission line
- Railroad

LOGGING PLAN

Timber Sale Contract No. 341-13-075

FIREBREAK 2

Portions of Section 31, T1S, R6W, and
Sections 35 and 36, T1S, R7W, W.M.,
Tillamook and Washington Counties, Oregon

1,000 0 1,000 Feet

N

Area	Operation	Gross	Net
1	Modified clearcut	103	92
2	Partial cut	177	169
3	Modified clearcut	62	50
4	Modified clearcut	74	67
Total		416	378

Tillamook District GIS
11/08/2012

This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.