



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Widenoja Sale 341-05-58

District: Tillamook

Date: 12/3/04

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$217,023.36	\$124,493.76	\$341,517.12
		<b>Project Work</b>	(\$26,567.00)
		<b>Advertised Value</b>	\$314,950.12



# Timber Sale Appraisal Timber Description Widenoja Sale 341-05-58

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Portions of Sections 11 and 13, T1N, R10W, W.M., Tillamook County, Oregon.

**Date:** 12/3/04

**Stand Stocking:** 60%

Species	Avg. DBH	Amortized%	Recovery%
Western Hemlock / Fir	15	0	95
Alder (Red)	15	0	90

Volume by Grade	Western Hemlock / Fir	Alder (Red)	Total
2S	568	0	568
3S	1,162	0	1,162
4S	222	0	222
Camprun	0	432	432
<b>Total</b>	1,952	432	2,384

**Comments:** Pond Values Used: 3rd Quarter 2004.

Cedar Stumpage:  $\$1,050/\text{MBF}$  (pond value) -  $\$289.14/\text{MBF}$  (logging cost) =  $\$760.86/\text{MBF}$   
Douglas-fir Stumpage:  $\$600.00/\text{MBF}$  (pond value) -  $\$289.14/\text{MBF}$  (logging cost) =  
 $\$310.86/\text{MBF}$

ADDITIONAL COSTS (Profit and Risk to be added)

Brand and Paint -  $\$2/\text{MBF} \times 2384 \text{ MBF} = \$4,768$

Total Other Costs + P&R = \$ 4,768

Road Maintenance

Grading (once per 2 MMBF)

$\$500/\text{Mile} \times 1 \text{ Grading} \times 3.7 \text{ miles} / 2384 \text{ MBF} = \$ 0.78$

Maintenance Rock - approximately 50 yds<sup>3</sup> / MMBF / 3.7 haul miles

$440 \text{ yds}^3 \times \$17.00/\text{yard} / 2384 \text{ MBF} = \$ 3.15$

Total Maintenance Cost = \$ 3.93



# Timber Sale Appraisal Logging Conditions Widenoja Sale 341-05-58

"STEWARDSHIP IN FORESTRY"

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<b>Combination#:</b> 1	Western Hemlock / Fir	25.67%	
	Alder (Red)	9.72%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$236.90		
<b>Machines:</b>	Log Loader (A) Tower Yarder (Medium)		
<b>Combination#:</b> 2	Western Hemlock / Fir	59.63%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Track Skidder		<b>Process:</b> Manual Falling/Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$169.63		
<b>Machines:</b>	Log Loader (B) Track Skidder		
<b>Combination#:</b> 3	Western Hemlock / Fir	14.70%	
	Alder (Red)	90.28%	
<b>Yarding Distance:</b>	Long (1,500 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Large Tower >=70		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,800
<b>Cost/MBF:</b>	\$233.55		
<b>Machines:</b>	Log Loader (A) Tower Yarder (Large)		



# Timber Sale Appraisal

## Logging Costs

### Widenoja

## Sale 341-05-58

"STEWARDSHIP IN FORESTRY"

Date: 12/3/04

Operating Seasons: 2.0

Profit & Risk: 20%

Project Costs: \$26,567

Other Costs (P/R): \$4,768

Slash Disposal: \$0

Other Costs: \$0

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Road Maintenance: \$3.93

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Western Hemlock / Fir	\$0.00	4.0	3.5
Alder (Red)	\$0.00	4.0	3.5



# Timber Sale Appraisal Logging Costs Breakdown Widenoja Sale 341-05-58

"STEWARDSHIP IN FORESTRY"

Costs	Western Hemlock / Fir	Alder (Red)
<b>Logging</b>	196.29	233.88
<b>Road Maintenance</b>	4.14	4.37
<b>Fire Protection</b>	2.27	2.27
<b>Hauling</b>	34.58	36.50
<b>Other (P/R appl.)</b>	2.00	2.00
<b>Profit &amp; Risk</b>	47.86	55.80
<b>Slash Disposal</b>	0.00	0.00
<b>Scaling</b>	2.00	2.00
<b>Other</b>	0.00	0.00
<b>Total</b>	289.14	336.82

<b>Amortization</b>	0.00	0.00
<b>Pond Value</b>	400.32	625.00
<b>Stumpage</b>	111.18	288.18
<b>Amortized</b>	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Widenoja Sale 341-05-58

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## Amortized

	Westem Hemlock / Fir	Alder (Red)
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

## Unamortized

	Westem Hemlock / Fir	Alder (Red)
MBF	1,952.00	432.00
Value	111.18	288.18
Total	217,023.36	124,493.76

## Gross Timber Sale Value

**Recovery \$341,517.12**

Prepared by: Amber Winslow

Date: 12/3/04

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Widenoja

Date: Dec. 03 2004

Construction -

Point	A - B	6+55 stations =	\$1,549.88
Point	C - D	3+20 stations =	\$1,645.30
SUB TOTAL			<u>\$3,195.18</u>

Improvement -

Point	A - B	33+70 stations =	\$7,974.20
Point	C - D	24+60 stations =	\$12,648.21
Point	E - F	0+60 stations =	\$837.70
SUB TOTAL			<u>\$21,460.11</u>

Move - In -

Grader	<u>\$162.34</u>
Roller	<u>\$174.98</u>
Skidder	<u>\$174.98</u>
Excavator	<u>\$517.14</u>
Tractor - D7	<u>\$327.30</u>
6 Dump Trucks	<u>\$554.94</u>
	<u>\$0.00</u>
	<u>\$0.00</u>
SUB TOTAL	<u>\$1,911.68</u>

GRAND TOTAL \$26,566.97



**SUMMARY OF CONSTRUCTION COST**

Sale: Widenoja

Road: A to B

Construction - 6+55 stations  
0.12 miles

Improvement - 33+70 stations  
0.64 miles

**CLEARING AND GRUBBING -**

Side cast	0.00	acres @	\$540.00	per acre =	\$0.00
Scattering	0.45	acres @	\$815.00	per acre =	\$366.75
Piling	0.00	acres @	\$905.00	per acre =	\$0.00
Endhaul	0.00	acres @	\$1,500.00	per acre =	\$0.00

**TOTAL CLEARING AND GRUBBING** \$366.75

**EXCAVATION -**

Sidecast	1421	cys. @	\$1.15	per c.y. =	\$1,634.15
Fill	1000	cys. @	\$2.00	per c.y. =	\$2,000.00
	0	cys. @	\$0.00	per c.y. =	\$0.00

**TOTAL EXCAVATION** \$3,634.15

**SURFACING- Stations 33+70 to 40+25**

9" Depth	328	cy. of	Pit Run @	\$9.74	per c.y.=	\$3,194.72
CrvWiden	45	cy. of	Pit Run @	\$9.74	per c.y.=	\$438.30
1Trnouts	17	cy. of	Pit Run @	\$9.74	per c.y.=	\$165.58
SmTurnrn	17	cy. of	Pit Run @	\$9.74	per c.y.=	\$165.58

**TOTAL SURFACING** \$3,964.18

**SPECIAL PROJECTS**

Brush Existing Road: .64 Miles @ \$800/mi.	\$512.00
<u>Grade Existing Road: 33.70 Stations @ \$14.20/sta.</u>	<u>\$478.54</u>
<u>Grade New Subgrade: 6.55 Stations @ \$9.20/sta.</u>	<u>\$60.26</u>
<u>Roll Subgrade: 40.20 Stations @ \$11/sta.</u>	<u>\$442.20</u>
<u>Grass Seed and Fertilize Areas of Disturbed Soil: .3 Acres @ \$220/sta.</u>	<u>\$66.00</u>

**TOTAL SPECIAL PROJECTS** \$1,559.00

**GRAND TOTAL** **\$9,524.08**

**SUMMARY OF CONSTRUCTION COST**

Sale: Widenoja

Road: C to D

Construction - 3+20 stations  
0.06 miles

Improvement - 24+60 stations  
0.47 miles

**CLEARING AND GRUBBING -**

Side cast	0.00	acres @	\$540.00	per acre =	\$0.00
Scattering	0.85	acres @	\$815.00	per acre =	\$692.75
Piling	0.00	acres @	\$905.00	per acre =	\$0.00
Endhaul	0.00	acres @	\$1,500.00	per acre =	\$0.00

**TOTAL CLEARING AND GRUBBING** \$692.75

**EXCAVATION -**

3.20	sta. @	\$65.00	per sta. =	\$208.00
0	cys. @	\$0.00	per c.y. =	\$0.00

**TOTAL EXCAVATION** \$208.00

**SURFACING- Stations 5+95 to 27+80**

9" Depth	1,090	cy. of	Pit Run @	\$9.97	per c.y.=	\$10,867.30
CrvWiden	102	cy. of	Pit Run @	\$9.97	per c.y.=	\$1,016.94
3Trnouts	51	cy. of	Pit Run @	\$9.97	per c.y.=	\$508.47
SmTurnrn	17	cy. of	Pit Run @	\$9.97	per c.y.=	\$169.49

**TOTAL SURFACING** \$12,562.20

**SPECIAL PROJECTS**

Grade & Pull Ditch on Existing Road : 24.60 Stations @ \$14.20/sta.	\$349.32
Grade New Construction: 3.20 Stations @ \$9.20/sta.	\$29.44
Roll subgrade: 27.80 Stations @ \$11/sta.	\$305.80
Brush road from Sta.s 0+00 to 5+90: .1 Mile @ \$800/mi.	\$80.00
Grass Seed & Fertilize Areas of Disturbed Soil: .3 Acres @ \$220/ac.	\$66.00

**TOTAL SPECIAL PROJECTS** \$830.56

**GRAND TOTAL** \$14,293.51

**SUMMARY OF CONSTRUCTION COST**

Sale: Widenoja

Road: E to F

Construction - 0+60 stations  
0.01 miles

Improvement - 0.00 stations  
0.00 miles

**CLEARING AND GRUBBING -**

Side cast	0.00	acres @	\$540.00	per acre =	\$0.00
Scattering	0.10	acres @	\$815.00	per acre =	\$81.50
Piling	0.00	acres @	\$905.00	per acre =	\$0.00
Endhaul	0.00	acres @	\$1,500.00	per acre =	\$0.00

**TOTAL CLEARING AND GRUBBING** \$81.50

**EXCAVATION -**

0 hr.s @	\$0.00	per hr. =	\$0.00
0.60 sta. @	\$65.00	per sta. =	\$39.00
0 cys. @	\$0.00	per c.y. =	\$0.00
0 cys. @	\$0.00	per c.y. =	\$0.00
0 cys. @	\$0.00	per c.y. =	\$0.00

**TOTAL EXCAVATION** \$39.00

**SURFACING-**

9" Depth	30	cy. of	Pit Run @	\$10.60	per c.y.=	\$318.00
CrvWiden	15	cy. of	Pit Run @	\$10.60	per c.y.=	\$159.00
SmTurnrn	17	cy. of	Pit Run @	\$10.60	per c.y.=	\$180.20

**TOTAL SURFACING** \$657.20

**SPECIAL PROJECTS**

Grade Road	\$20.00
Roll Subgrade	\$20.00
Grass Seed & Fertilize Areas of Disturbed Soil	\$20.00

**TOTAL SPECIAL PROJECTS** \$60.00

**GRAND TOTAL** \$837.70

**PIT-RUN ROCK PIT DEVELOPMENT**

**SALE: WIDENOJA**

Pit:	<u>MIAMI - FOLEY</u>	Location:	<u>NW1/4 SEC14 T1N R10W</u>
Rock:	<u>PIT RUN</u>	Road:	<u>1729 c.y.</u>
Swell:	<u>1.30</u>	Stockpile Size:	<u>c.y.</u>
Shrinkage:	<u>1.16</u>	Total Truck Loads:	<u>1729 c.y.</u>
Drill Pct.:	<u>0%</u>	In Place Total:	<span style="border: 1px solid black; padding: 2px;"><u>1330 c.y.</u></span>

Pit Development:				\$600.00
Drill & Shoot:	<u>\$1.90 /cu.yd.</u>	x	<u>0 cu.yds.</u>	\$0.00
Strip Rock:	<u>\$1.50 /cu.yd.</u>	x	<u>1,330 cu.yds.</u>	\$1,995.00
Push Rock:	<u>\$0.60 /cu.yd.</u>	x	<u>1729 cu.yds.</u>	\$1,037.40
Load Dump Truck:	<u>\$0.70 /cu.yd.</u>	x	<u>1729 cu.yds.</u>	\$1,210.30
			<u>Sub Total</u>	<u>\$4,842.70</u>

Base Cost     \$2.80 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A - B	\$6.04	\$0.90	\$2.80	\$9.74	407	\$3,964.18
C - D	\$6.62	\$0.90	\$2.80	\$10.32	1260	\$13,003.20
E - F	\$6.90	\$0.90	\$2.80	\$10.60	62	\$657.20
	\$0.00	\$0.00	\$0.00	\$0.00	0	\$0.00
				<u>Total C.Y.</u>	<u>1729</u>	<u>Sub Total \$17,624.58</u>

TOTAL ROCKING COSTS = **\$17,624.58**



## OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

### Widenoja

#### 1. Type of Sale

Partial cut and Clear-cut, Recovery

#### 2. Legal Description

Sections 11 and 13, T1N, R10W, WM, Tillamook County, Oregon.

#### 3. Sale Acreage

	ACRES		
	<u>Sale</u>	<u>Total</u>	<u>Net</u>
Area 1 (Retention Cut)	30	26	25
Area 2 (Partial cut)	14	14	14
Area 3 (Partial cut)	39	38	36
Area 4 (Partial cut)	21	21	21
<b>Total</b>	<b>104</b>	<b>99</b>	<b>96</b>

Sale Acres: Area within the Timber Sale Boundary signs.

Total Acres: Sale acres, plus green tree retention areas outside the timber sale boundary; less roads and riparian areas classified as Special Stewardship in LMCS inside the sale boundary. For accomplishment reporting – clearcut (regeneration) harvest.

Net acres: Used for calculating the advertised volume.

Clearcut - Sale acres, less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Partial Cut - Sale acres minus areas of low stocking, hardwoods, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

#### 4. Cruising Procedures

##### A. Cruise Method

A total of 80 variable radius plots were taken across the sale area. Plots were spaced on a square grid pattern in Areas 1, 2, and 3; 230' apart in Area 1, 208' apart in Area 2, and 264' apart in Area 3. Plots in Area 4 were spaced on a grid 300' x 150' apart. 16 plots were taken in Area 1, 14 in Area 2, 34 in Area 3, and 16 in Area 4. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots. Species were recorded on all trees and they were graded and measured for merchantable height, diameter, and form factor.

##### B. Plot size

A basal area factor of 40 was used in all sale areas. The point of observation was at 4.5 feet.

### **C. Grading System**

All trees were graded according to Columbia River Log Scaling and Grading Rules. Conifer trees were measured to a 6-inch top and hardwood trees were measured to an 8-inch top, both favoring 40-foot lengths. All heights were measured to the nearest foot. All diameters were measured at a height of 4.5 feet to the nearest 1-inch. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

### **5. Computation Procedure**

Plot data was entered into SuperAce for computation of basal area, stand tables, diameters, and volume to basal area ratio for each species and type. This data was then entered into the Volume Summary Worksheet to compute sale volumes.

### **6. Hidden Defect and Breakage**

A 5% deduction was applied to the volume to account for the defect and breakage.

### **7. Timber Description**

The current stand conditions are closed-single canopy. Areas 1, 2 and the upper 2/3 of Area 3 were logged in the early 1900's and naturally regenerated. About half of Area 4 was harvested in the early 1960's and was naturally regenerated with hemlock.

**Area 1:** Area 1 is a dense conifer stand of hemlock. The timber is 50-60 years old. There are poor height to diameter ratios with a lot of wind throw around the edges of the timber sale area.

**Area 2:** Area 2 is a dense stand of predominately hemlock with scattered Douglas-fir, spruce, cedar, and alder. The timber is 65-75 years old.

**Area 3:** Area 3 is a mix stand of alder and conifer. Hemlock is the dominant conifer species especially in the upper 2/3 of the sale area, however there is a component of Douglas-fir, spruce, and cedar as well. The timber is 55-65 years old in the upper 2/3 of the sale area and approximately 90-95 years old in the bottom 1/3 of the sale area.

**Area 4:** Area 4 is predominately a hemlock stand with patches of alder. The timber is approximately 50 years old

### **8. Cruiser Names/Dates**

Winslow / Wells / Phillips, July and August, 2004.

**9. Revenue Distribution**

FDF: 100%

Tax Code: 56-8

Deed Number: 116, 129, 716

0% - Rehabilitation Obligated

**10. Attachments**

Stand Tables

Volume Summary

Logging Plan

TC TSTNDSUM		Stand Table Summary															
Project WIDENOJA											T01N R10W S13 T0010						
T01N R10W S13 T0010											T01N R10W S13 T0010						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees		Page:	Date: 11/2/200							
01N	10W	13	AREA 1	0010	25.00	16	141		1	Time: 4:36:50PM							
S Spc	T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
WH		9	1	85	90	5.535	2.50										
WH		10	3	85	86	13.581	7.50	18.26	13.4	57.4	7.81	244	1,049	195	61	26	
WH		11	5	85	86	19.138	12.50	26.87	13.6	55.4	11.73	367	1,489	293	92	37	
WH		12	7	85	95	22.037	17.50	44.02	14.4	62.6	20.24	633	2,755	506	158	69	
WH		13	11	86	98	29.877	27.50	64.90	16.4	68.6	34.11	1,064	4,450	853	266	111	
WH		14	8	86	94	18.940	20.00	35.57	19.6	79.4	22.33	698	2,824	558	174	71	
WH		15	9	86	110	18.157	22.50	42.35	21.5	90.3	29.18	912	3,826	729	228	96	
WH		16	10	87	112	18.062	25.00	39.84	25.7	103.6	32.78	1,024	4,128	820	256	103	
WH		17	8	86	116	12.910	20.00	37.07	24.3	100.3	28.80	900	3,718	720	225	93	
WH		18	12	87	112	16.960	30.00	39.47	31.7	129.5	40.09	1,253	5,112	1,002	313	128	
WH		19	12	86	116	15.666	30.00	45.71	29.1	117.1	42.57	1,331	5,352	1,064	333	134	
WH		20	11	87	122	12.522	27.50	34.12	34.9	145.0	38.08	1,190	4,945	952	298	124	
WH		21	10	86	122	10.431	25.00	29.11	38.7	170.9	36.08	1,127	4,975	902	282	124	
WH		22	7	87	120	6.684	17.50	18.14	40.9	180.3	23.75	743	3,271	594	186	82	
WH		23	2	86	132	1.749	5.00	5.25	45.3	189.8	7.59	238	995	190	59	25	
WH		Totals	116	86	104	222.248	290.00	480.68	24.4	101.7	375.16	11,723	48,890	9,379	2,931	1,222	
WL		24	7	89	118	5.574	17.50	14.28	49.7	227.0	22.70	710	3,242	568	177	81	
WL		25	4	88	117	2.916	10.00	6.57	56.2	247.1	11.82	369	1,623	296	92	41	
WL		26	3	86	119	2.061	7.50	4.12	60.9	251.7	8.01	251	1,036	200	63	26	
WL		27	3	87	131	1.939	7.50	5.18	60.1	256.9	9.96	311	1,331	249	78	33	
WL		28	2	87	117	1.182	5.00	3.55	62.5	250.0	7.09	222	887	177	55	22	
WL		29	1	86	102	.541	2.50	1.08	45.6	155.0	1.58	49	168	39	12	4	
WL		30	2	87	133	1.050	5.00	3.15	81.0	392.2	8.16	255	1,234	204	64	31	
WL		33	1	85	90	.411	2.50	.82	111.0	325.0	2.93	91	267	73	23	7	
WL		40	1	87	122	.286	2.50	.86	133.4	463.3	3.67	115	398	92	29	10	
WL		Totals	24	88	119	15.960	60.00	39.60	59.9	257.2	75.92	2,373	10,186	1,898	593	255	
SS		15	1	86	86	2.093	2.50										
SS		Totals	1	86	86	2.093	2.50										
Totals			141	86	105	240.301	352.50	520.29	27.1	113.5	451.08	14096	59,076	11,277	3,524	1,477	

Leave conifer = 18.05 tpa  
 = 62.5 ft<sup>2</sup> basal area/acre



**Stand Table Summary**

**Project WIDENOJA**

**T01N R10W S13 T0100**

**T01N R10W S13 T0100**

**Twp Rge Sec Tract Type Acres Plots Sample Trees**  
**01N 10W 13 A2BA180200 0100 14.00 14 125**

**Page: 1**  
**Date: 10/21/04**  
**Time: 11:25:49AM**

S Spc	T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Cu.Ft. Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
WL		14	1	90	89	2.711	2.86	5.42	18.1	75.0	3.14	98	407	44	14	6
WL		15	1	83	97	2.328	2.86	4.66	23.9	95.0	3.56	111	442	50	16	6
WL		16	1	86	103	2.125	2.86	4.25	27.4	120.0	3.73	117	510	52	16	7
WL		17	4	87	109	7.195	11.43	16.14	30.1	119.0	15.55	486	1,920	218	68	27
WL		18	1	90	122	1.635	2.86	4.90	26.6	116.7	4.17	130	572	58	18	8
WL		19	5	86	115	7.354	14.29	16.22	37.8	152.2	19.60	613	2,470	274	86	35
WL		20	2	89	128	2.647	5.71	7.94	34.8	159.2	8.84	276	1,264	124	39	18
WL		21	1	79	88	1.177	2.86	1.18	71.2	240.0	2.68	84	282	38	12	4
WL		22	4	87	129	4.392	11.43	13.18	39.2	173.4	16.55	517	2,284	232	72	32
WL		23	6	89	111	5.938	17.14	13.80	53.2	223.1	23.49	734	3,078	329	103	43
WL		24	4	87	130	3.662	11.43	10.99	51.8	232.6	18.21	569	2,556	255	80	36
WL		25	5	89	126	4.213	14.29	12.64	59.5	273.6	24.05	752	3,457	337	105	48
WL		26	5	86	126	3.894	14.29	10.92	58.5	267.2	20.44	639	2,917	286	89	41
WL		27	4	88	116	2.967	11.43	7.41	59.9	252.9	14.17	444	1,874	198	62	26
WL		28	2	87	128	1.375	5.71	4.13	62.6	291.7	8.27	258	1,203	116	36	17
WL		30	3	89	126	1.774	8.57	4.72	84.1	362.5	12.71	397	1,712	178	56	24
WL		31	1	92	148	.545	2.86	1.64	101.1	486.7	5.29	165	796	74	23	11
WL		32	2	87	128	1.014	5.71	2.53	77.8	360.9	6.30	197	913	88	28	13
WL		36	1	86	143	.400	2.86	.80	131.6	525.0	3.36	105	420	47	15	6
WL		38	1	87	135	.357	2.86	1.43	101.3	530.0	4.63	145	757	65	20	11
WL		39	1	93	96	.339	2.86	.68	155.0	730.0	3.36	105	495	47	15	7
WL		40	3	87	125	.991	8.57	2.97	134.7	624.3	12.82	400	1,855	179	56	26
WL		42	1	87	132	.304	2.86	.91	162.7	786.7	4.75	148	718	66	21	10
WL	Totals		59	87	117	59.338	168.57	149.45	50.1	220.2	239.67	7,491	32,905	3,355	1,049	461
WH		8	1	89	79	8.394	2.86	8.39	7.1	40.0	1.90	59	336	27	8	5
WH		10	3	88	63	15.935	8.57	15.93	11.9	49.7	6.08	190	792	85	27	11
WH		11	3	88	85	12.930	8.57	17.18	14.4	57.6	7.86	247	990	110	35	14
WH		12	3	87	95	10.863	8.57	21.73	16.1	66.4	11.18	351	1,442	156	49	20
WH		13	6	86	92	18.520	17.14	33.89	19.7	82.8	21.35	666	2,808	299	93	39
WH		14	4	88	93	11.143	11.43	25.16	17.2	74.8	13.86	433	1,883	194	61	26
WH		15	7	91	103	16.628	20.00	30.83	24.3	107.4	23.95	749	3,311	335	105	46
WH		16	5	88	108	10.157	14.29	20.31	26.9	116.9	17.47	546	2,374	245	76	33
WH		17	2	91	133	3.631	5.71	10.89	25.4	117.8	8.87	277	1,283	124	39	18
WH		18	2	89	116	3.254	5.71	6.60	33.8	142.4	7.13	223	939	100	31	13
WH		19	1	87	120	1.451	2.86	4.35	30.6	126.7	4.26	133	551	60	19	8
WH		20	5	88	120	6.619	14.29	18.60	35.5	151.9	21.14	660	2,825	296	92	40
WH		21	4	90	103	4.696	11.43	10.55	47.2	245.2	15.93	497	2,586	223	70	36
WH		22	4	88	130	4.272	11.43	11.76	43.2	195.4	16.26	508	2,299	228	71	32
WH		23	2	89	125	1.956	5.71	5.87	47.5	206.0	8.92	279	1,209	125	39	17
WH		25	2	94	110	1.697	5.71	5.09	50.1	221.7	8.16	255	1,129	114	36	16
WH		26	1	94	105	.775	2.86	1.55	69.4	300.0	3.44	108	465	48	15	7
WH		27	1	93	137	.746	2.86	2.24	63.8	343.3	4.57	143	768	64	20	11
WH		29	1	93	149	.619	2.86	1.86	79.5	410.0	4.71	148	761	66	21	11
WH		33	1	87	123	.484	2.86	1.45	85.7	373.3	3.98	124	542	56	17	8
WH	Totals		58	88	96	134.765	165.71	254.23	25.9	115.2	211.01	6,597	29,292	2,954	924	410
RA		14	2	94	37	5.345	5.71	5.35	16.5	50.0	2.43	88	267	34	12	4
RA		16	1	93	44	2.046	2.86	2.05	20.5	50.0	1.15	42	102	16	6	1
RA		17	1	94	76	1.813	2.86	1.81	41.1	180.0	2.05	75	326	29	10	5
RA		19	1	93	66	1.482	2.86	1.48	48.5	170.0	1.98	72	252	28	10	4
RA		21	1	94	60	1.188	2.86	1.19	56.8	180.0	1.86	68	214	26	9	3

TC TSTNDSUM		Stand Table Summary													
Project WIDENOJA											T01N R10W S13 T0100				
T01N R10W S13 T0100											T01N R10W S13 T0100				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees					Page:			
01N	10W	13	A2BA180200	0100	14.00	14	125					2			
											Date:	10/21/04			
											Time:	11:25:49AM			
Spc	T	Sample			Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
		DBH	Trees	16'				Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits
RA	Totals	6	94	50	11.874	17.14	11.87	29.0	97.8	9.47	344	1,162	133	48	16
SS	30	1	86	135	.582	2.86	1.75	82.1	386.7	3.73	143	675	52	20	9
SS	Totals	1	86	135	.582	2.86	1.75	82.1	386.7	3.73	143	675	52	20	9
DL	26	1	86	112	.763	2.86	2.29	49.2	210.0	3.10	113	481	43	16	7
DL	Totals	1	86	112	.763	2.86	2.29	49.2	210.0	3.10	113	481	43	16	7
Totals		125	88	100	207.323	357.14	419.59	35.0	153.8	466.98	14688	64,515	6,538	2,056	903

Leave Conifer = 72.54 trees / acre  
 = 174.29 ft<sup>2</sup> / acre - basal area  
 191.43 ft<sup>2</sup>/acre all leave trees

WL = hemlock leave

Take Alder  
 Take Hemlock < 16" DBH  
 Thin Hemlock 180-200  
 Reserve all other Conifer

TC TSTNDSUM		Stand Table Summary											Project WIDENOJA			
T01N R10W S13 T16+											T01N R10W S13 T16+					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees			Page:	1					
01N	10W	13	A3180-200	16+	38.00	34	281			Date:	10/21/04					
										Time:	2:10:24PM					
S Spc	T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft Acre	Totals		
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
WL	16	2	92	64	1.664	2.35	2.49	23.6	83.6	1.88	59	208	71	22	8	
WL	17	3	86	77	2.251	3.53	4.50	22.6	80.3	3.26	102	361	124	39	14	
WL	18	5	88	69	3.390	5.88	5.43	29.8	97.6	5.18	162	530	197	61	20	
WL	19	1	92	85	.579	1.18	1.16	35.1	135.0	1.30	41	156	49	15	6	
WL	20	5	93	103	2.704	5.88	5.41	40.9	177.3	7.08	221	959	269	84	36	
WL	21	7	88	102	3.430	8.24	7.37	43.5	176.9	10.27	321	1,304	390	122	50	
WL	22	3	82	104	1.313	3.53	3.49	39.9	147.4	4.47	140	515	170	53	20	
WL	23	9	90	109	3.725	10.59	7.45	56.4	237.6	13.45	420	1,770	511	160	67	
WL	24	3	90	107	1.134	3.53	2.27	61.8	237.8	4.49	140	539	171	53	20	
WL	25	5	92	109	1.723	5.88	3.80	65.3	304.6	7.94	248	1,158	302	94	44	
WL	26	4	89	119	1.282	4.71	2.88	70.2	328.2	6.46	202	945	246	77	36	
WL	27	1	76	109	.303	1.18	.91	53.5	176.7	1.55	49	160	59	18	6	
WL	28	3	86	109	.812	3.53	1.89	78.3	330.3	4.75	148	626	180	56	24	
WL	29	3	90	116	.784	3.53	1.83	86.0	402.3	5.04	158	737	192	60	28	
WL	30	1	92	115	.237	1.18	.71	63.8	323.3	1.45	45	229	55	17	9	
WL	31	1	92	118	.226	1.18	.45	100.3	455.0	1.45	45	206	55	17	8	
WL	33	1	93	123	.199	1.18	.60	99.7	526.7	1.91	60	315	72	23	12	
WL	35	1	92	113	.177	1.18	.35	100.6	450.0	1.14	36	159	43	14	6	
WL	36	1	94	51	.168	1.18										
WL	37	1	94	119	.157	1.18	.47	122.2	673.3	1.84	57	317	70	22	12	
WL	39	1	86	131	.144	1.18	.29	174.5	695.0	1.61	50	200	61	19	8	
WL	42	1	93	113	.122	1.18	.24	195.1	1020.0	1.52	47	248	58	18	9	
WL	43	1	86	122	.117	1.18	.35	88.8	403.3	.99	31	141	38	12	5	
WL	45	2	90	137	.215	2.35	.65	153.1	788.2	3.18	99	511	121	38	19	
WL	68	1	94	114	.047	1.18	.09	492.5	2240.0	1.47	46	209	56	17	8	
WL	Totals	66	89	97	26.901	77.65	55.09	53.1	227.0	93.69	2,927	12,505	3,560	1,112	475	
RA	10	3	82	55	6.352	3.53	6.35	6.5	26.5	1.14	41	168	43	16	6	
RA	11	1	84	72	1.783	1.18	1.78	16.6	70.0	.82	30	125	31	11	5	
RA	12	9	85	57	13.461	10.59	13.46	15.3	53.3	5.67	206	717	215	78	27	
RA	13	8	86	54	10.441	9.41	10.44	17.5	63.5	5.04	183	663	191	70	25	
RA	14	11	86	71	12.179	12.94	14.38	21.7	78.8	8.59	312	1,133	326	119	43	
RA	15	8	87	71	7.752	9.41	10.70	22.3	86.2	6.57	239	921	250	91	35	
RA	16	14	88	74	12.010	16.47	13.72	31.6	117.5	11.91	433	1,611	453	165	61	
RA	17	8	88	66	5.930	9.41	8.12	29.1	106.8	6.49	236	867	247	90	33	
RA	18	11	89	70	7.277	12.94	9.93	34.7	126.7	9.46	344	1,257	360	131	48	
RA	19	12	89	69	7.249	14.12	10.26	36.0	123.5	10.14	369	1,267	385	140	48	
RA	20	10	90	83	5.308	11.76	9.05	42.1	166.2	10.49	381	1,504	399	145	57	
RA	21	6	90	74	2.954	7.06	4.45	46.0	159.2	5.63	205	708	214	78	27	
RA	22	3	91	46	1.329	3.53	2.21	32.3	135.8	1.96	71	300	75	27	11	
RA	23	1	90	85	.408	1.18	.82	40.4	200.0	.91	33	163	34	13	6	
RA	Totals	105	87	66	94.433	123.53	115.65	26.7	98.6	84.81	3,084	11,405	3,223	1,172	433	
WH	9	2	88	56	5.211	2.35	5.21	8.5	35.1	1.42	44	183	54	17	7	
WH	10	1	85	76	2.157	1.18	2.16	14.8	60.0	1.02	32	129	39	12	5	
WH	11	4	88	40	7.338	4.71	3.77	12.3	40.0	1.48	46	151	56	18	6	
WH	12	6	88	50	8.927	7.06	7.45	15.6	50.0	3.72	116	373	141	44	14	
WH	13	6	90	58	7.686	7.06	7.69	19.0	58.5	4.68	146	450	178	55	17	
WH	14	8	88	55	9.017	9.41	11.22	18.9	55.7	6.81	212	625	259	81	24	
WH	15	11	87	69	10.715	12.94	15.56	22.4	72.0	11.16	349	1,120	424	133	43	
WH	16	4	86	78	3.449	4.71	5.20	26.2	91.6	4.36	136	476	166	52	18	
WH	17	2	85	79	1.511	2.35	2.26	32.6	103.2	2.35	74	233	89	28	9	
WH	18	4	87	92	2.725	4.71	5.45	31.6	125.3	5.52	172	683	210	66	26	

**Stand Table Summary**

**Project WIDENOJA**

**T01N R10W S13 T16+**

**T01N R10W S13 T16+**

**Twp Rge Sec Tract**  
**01N 10W 13 A3180-200**

**Type Acres Plots Sample Trees**  
**16+ 38.00 34 281**

**Page: 2**  
**Date: 10/21/04**  
**Time: 2:10:24PM**

S Spc	T	Sample			Av Ht Tot	Trees/ Acres	BA/ Acres	Logs Acres	Average Log		Net Tons/ Acres	Net Cu.Ft. Acres	Net Bd.Ft. Acres	Totals		
		DBH	Trees	16'					Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
WH		19	2	91	91	1.203	2.35	2.41	36.3	143.6	2.79	87	346	106	33	13
WH		20	4	91	84	2.152	4.71	3.78	33.5	120.3	4.05	127	454	154	48	17
WH		21	1	92	104	.489	1.18	.98	49.0	215.0	1.53	48	210	58	18	8
WH		22	2	91	93	.876	2.35	1.75	51.1	219.5	2.86	89	384	109	34	15
WH		23	1	92	116	.408	1.18	1.22	44.4	210.0	1.74	54	257	66	21	10
WH		26	1	93	122	.319	1.18	.96	62.5	323.3	1.92	60	310	73	23	12
WH		28	1	92	124	.285	1.18	.86	69.5	303.3	1.91	59	260	72	23	10
WH		29	1	93	127	.256	1.18	.77	79.2	410.0	1.95	61	315	74	23	12
WH		30	2	93	122	.484	2.35	1.45	77.5	398.2	3.60	113	578	137	43	22
WH		31	1	93	127	.227	1.18	.68	83.8	443.3	1.83	57	302	70	22	11
WH		34	1	93	121	.186	1.18	.56	107.5	580.0	1.92	60	323	73	23	12
WH		40	1	93	117	.135	1.18	.40	105.8	540.0	1.37	43	218	52	16	8
WH		Totals	66	88	64	65.757	77.65	81.77	26.7	102.5	69.99	2,186	8,381	2,660	831	318
DF		18	1	85	119	.689	1.18	1.38	34.1	135.0	1.34	47	186	51	18	7
DF		19	1	88	116	.630	1.18	1.89	27.1	116.7	1.46	51	221	56	19	8
DF		21	1	89	117	.499	1.18	1.00	47.6	205.0	1.35	47	204	51	18	8
DF		22	3	88	109	1.350	3.53	2.70	50.2	204.7	3.87	136	553	147	52	21
DF		23	1	89	125	.404	1.18	1.21	43.9	203.3	1.52	53	247	58	20	9
DF		24	1	89	115	.374	1.18	.75	46.2	210.0	.99	35	157	37	13	6
DF		29	2	90	112	.510	2.35	1.28	70.3	313.2	2.56	90	401	97	34	15
DF		31	2	88	135	.443	2.35	1.33	78.5	388.3	2.98	104	516	113	40	20
DF		34	1	89	126	.187	1.18	.56	99.0	480.0	1.58	55	269	60	21	10
DF		35	1	90	138	.176	1.18	.53	112.4	580.0	1.69	59	306	64	23	12
DF		36	1	86	133	.166	1.18	.50	106.5	526.7	1.51	53	263	58	20	10
DF		39	2	88	143	.284	2.35	.99	119.8	655.7	3.39	119	651	129	45	25
DF		44	1	89	137	.111	1.18	.33	179.4	956.7	1.71	60	320	65	23	12
DF		Totals	18	88	120	5.823	21.18	14.45	63.0	297.1	25.95	910	4,293	986	346	163
RC		9	1	70	42	2.663	1.18	2.66	5.8	20.0	.36	15	53	14	6	2
RC		13	3	80	45	3.953	3.53	3.95	15.5	39.9	1.44	61	158	55	23	6
RC		16	1	65	76	.843	1.18	.84	40.7	70.0	.81	34	59	31	13	2
RC		17	1	62	69	.773	1.18	.77	47.6	60.0	.86	37	46	33	14	2
RC		20	1	81	23	.550	1.18	.55	24.3	20.0	.31	13	11	12	5	0
RC		22	1	81	53	.450	1.18	.45	59.8	90.0	.63	27	40	24	10	2
RC		23	2	80	83	.812	2.35	1.22	61.3	183.0	1.75	75	223	67	28	8
RC		24	1	81	63	.384	1.18	.77	40.8	95.0	.74	31	73	28	12	3
RC		28	1	80	85	.267	1.18	.53	79.0	250.0	.99	42	134	38	16	5
RC		32	1	81	58	.212	1.18	.42	70.1	145.0	.70	30	61	27	11	2
RC		33	1	81	75	.198	1.18	.40	93.5	280.0	.87	37	111	33	14	4
RC		34	1	81	85	.188	1.18	.38	111.5	345.0	.98	42	130	37	16	5
RC		39	1	81	76	.145	1.18	.14	227.7	930.0	.77	33	135	29	13	5
RC		42	1	80	85	.122	1.18	.12	279.4	1150.0	.80	34	141	31	13	5
RC		97	1	80	99	.023	1.18									
RC		Totals	18	76	54	11.583	21.18	13.21	38.7	104.0	12.03	512	1,374	457	195	52
SS		13	2	90	51	2.592	2.35	2.59	18.0	45.0	1.21	47	117	46	18	4
SS		17	1	90	44	.764	1.18	.76	28.4	40.0	.56	22	31	21	8	1
SS		19	1	90	41	.623	1.18	.62	33.3	40.0	.54	21	25	21	8	1
SS		21	2	91	81	.984	2.35	1.50	50.7	156.3	1.97	76	234	75	29	9
SS		27	1	90	53	.305	1.18	.30	86.9	180.0	.69	27	55	26	10	2
SS		29	1	91	129	.266	1.18	.80	74.1	360.0	1.54	59	287	58	22	11

TC TSTNDSUM

**Stand Table Summary**

**Project WIDENOJA**

**T01N R10W S13 T16+**

**T01N R10W S13 T16+**

**Twp Rge Sec Tract**  
**01N 10W 13 A3180-200**

**Type**  
**16+**

**Acres**  
**38.00**

**Plots**  
**34**

**Sample Trees**  
**281**

**Page: 3**

**Date: 10/21/04**

**Time: 2:10:24PM**

S Spc	T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
SS		Totals	8	90	58	5.535	9.41	6.58	38.1	113.7	6.50	251	748	247	95	28
		Totals	281	87	70	210.032	330.59	286.76	34.4	135.0	292.97	9870	38,706	11,133	3,751	1,471

*Leave Conifer = 49.83 tpa average*  
*= 129.42 ft<sup>2</sup> basal area/acre - average*

**Stand Table Summary**

Project **WIDENOJA**

**T01N R10W S11 T0100**

*Thin wit  
140-100*

*Take - A - tree*

**T01N R10W S11 T0100**

**Twp Rge Sec Tract**  
**01N 10W 11 AREA 4**

**Type**  
**0100**

**Acres Plots Sample Trees**  
20.00 16 90

**Page: 1**  
**Date: 10/21/04**  
**Time: 12:27:45PM**

Spc	T	Sample			Av Ht	Trees/ BA/ Logs			Average Log		Net			Totals		
		DBH	Trees	16'		Tot	Acres	Acres	Acres	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acres	Net Cu.Ft. Acres	Net Bd.Ft. Acres	Tons	Cunits
WL	10	2	92	64	8.644	5.00	12.88	8.6	33.4	3.56	111	430	71	22	9	
WL	11	2	89	91	7.385	5.00	7.38	19.3	79.6	4.57	143	587	91	29	12	
WL	12	3	91	75	9.995	7.50	13.23	14.1	58.1	5.99	187	769	120	37	15	
WL	13	7	92	92	18.666	17.50	37.33	15.9	70.7	18.91	593	2,640	378	119	53	
WL	14	6	91	91	13.913	15.00	25.49	18.6	77.4	15.15	473	1,972	303	95	39	
WL	15	3	92	78	6.336	7.50	10.61	21.8	88.0	7.42	231	933	148	46	19	
WL	16	2	93	94	3.515	5.00	7.03	25.7	107.6	5.77	180	757	115	36	15	
WL	17	3	92	98	4.875	7.50	11.43	26.0	99.7	9.48	298	1,140	190	60	23	
WL	18	8	93	95	11.548	20.00	24.51	29.1	113.7	22.79	713	2,786	456	143	56	
WL	19	3	89	101	3.854	7.50	7.71	36.0	138.5	8.89	278	1,068	178	56	21	
WL	20	1	93	92	1.205	2.50	2.41	36.4	140.0	2.81	88	338	56	18	7	
WL	22	3	93	90	2.851	7.50	4.79	52.1	218.5	7.99	250	1,046	160	50	21	
WL	23	2	93	100	1.725	5.00	3.45	53.1	207.6	5.85	183	716	117	37	14	
WL	24	1	93	67	.816	2.50										
WL	26	1	93	95	.705	2.50	1.41	60.5	250.0	2.73	85	352	55	17	7	
WL	27	3	92	108	1.929	7.50	4.50	71.2	337.3	10.25	320	1,517	205	64	30	
WL	28	3	90	98	1.792	7.50	3.58	66.0	246.7	7.54	237	884	151	47	18	
WL	29	1	92	112	.549	2.50	1.65	68.6	326.7	3.61	113	538	72	23	11	
WL	39	1	92	140	.309	2.50	.93	152.9	773.3	4.53	142	717	91	28	14	
WL	50	1	93	102	.183	2.50										
WL	Totals	56	92	88	100.795	140.00	180.32	25.6	106.4	147.85	4,624	19,193	2,957	925	384	
WH	8	2	90	72	13.307	5.00	13.31	8.7	35.0	3.72	116	466	74	23	9	
WH	9	1	91	92	5.415	2.50	5.42	12.8	60.0	2.21	69	325	44	14	6	
WH	10	11	90	79	49.715	27.50	58.27	11.9	53.3	22.15	693	3,104	443	139	62	
WH	11	2	91	83	7.440	5.00	7.44	12.9	65.0	3.08	96	484	62	19	10	
WH	14	2	91	62	4.814	5.00	7.22	13.1	50.0	3.03	95	361	61	19	7	
WH	17	1	92	55	1.514	2.50	1.51	34.9	90.0	1.69	53	136	34	11	3	
WH	18	1	92	92	1.497	2.50	2.99	31.3	100.0	3.01	94	299	60	19	6	
WH	19	1	89	89	1.256	2.50	2.51	35.7	120.0	2.86	90	302	57	18	6	
WH	Totals	21	90	78	84.959	52.50	98.68	13.2	55.5	41.77	1,306	5,476	835	261	110	
RA	11	3	94	47	11.260	7.50	11.26	11.7	46.8	3.61	131	526	72	26	11	
RA	12	1	94	41	3.030	2.50	3.03	13.1	50.0	1.09	40	151	22	8	3	
RA	13	1	94	27	2.712	2.50	2.71	11.3	40.0	.85	31	108	17	6	2	
RA	14	3	94	60	6.822	7.50	6.82	24.0	90.5	4.50	164	617	90	33	12	
RA	16	1	94	51	1.908	2.50	1.91	28.4	80.0	1.49	54	153	30	11	3	
RA	17	1	94	57	1.586	2.50	1.59	34.9	90.0	1.52	55	143	30	11	3	
RA	20	1	93	75	1.112	2.50	2.22	33.7	130.0	2.06	75	289	41	15	6	
RA	21	1	93	45	1.039	2.50	1.04	46.8	80.0	1.34	49	83	27	10	2	
RA	Totals	12	94	49	29.470	30.00	30.58	19.6	67.7	16.45	598	2,071	329	120	41	
SS	42	1	90	86	.266	2.50	.53	168.8	840.0	2.34	90	447	47	18	9	
SS	Totals	1	90	86	.266	2.50	.53	168.8	840.0	2.34	90	447	47	18	9	
Totals		90	91	79	215.491	225.00	310.11	21.3	87.7	208.41	6619	27,188	4,168	1,324	544	

*Leave Conifer = 100.98 trees/acre  
= 142.50 BA/acre*



"STEWARDSHIP IN FORESTRY"

# WIDENOJA

## Volume Summary

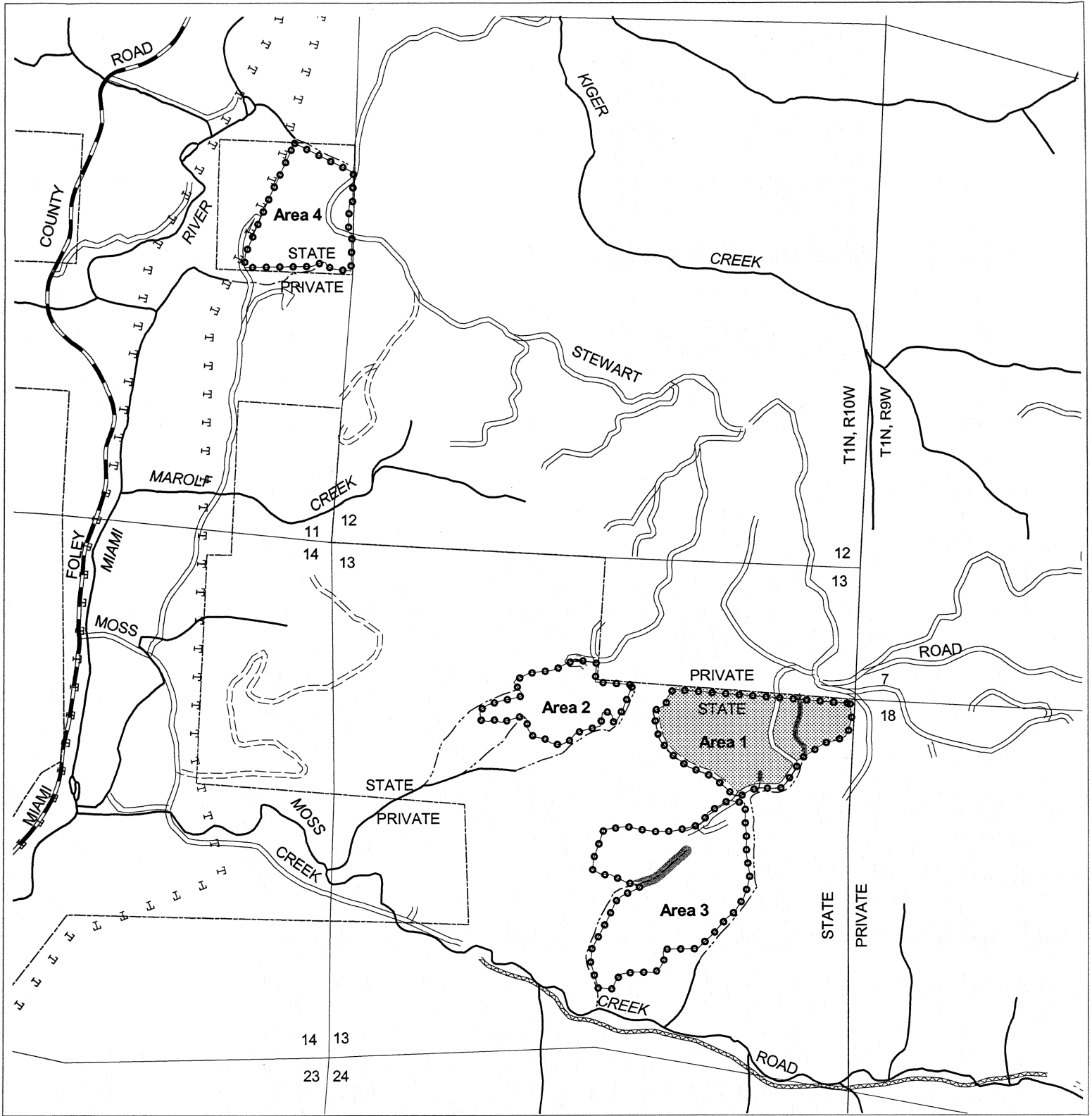
Area 1 - Retention Cut						
25 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Hemlock	290	169	49.0	1225	5%	1164
<b>TOTAL</b>				1225		1164

Area 2 - Partial Cut						
14 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Hemlock	166	177	29.4	412	5%	391
<b>TOTAL</b>				412		391

Area 3 - Partial Cut						
36 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Hemlock	78	108	8.4	302	5%	287
Alder	124	92	11.4	410	5%	390
<b>TOTAL</b>				712		677

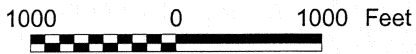
Area 4 - Partial Cut						
21 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Hemlock	53	104	5.5	116	5%	110
Alder	30	69	2.1	44	5%	42
<b>TOTAL</b>				160		152

TOTAL SALE VOLUME		
SPECIES	Gross (MBF)	Net Vol. (MBF)
Hemlock	2055	1952
Alder	454	432
<b>TOTAL</b>	2509	<b>2384</b>



- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- Buffer
- ▨ Non-required thinning
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- Surfaced road
- Unsurfaced road
- State highway
- County road
- ② Non-project road
- Swing road
- Abandoned road
- OHV trail
- Non-motorized trail
- T T Transmission line

**LOGGING PLAN**  
 Timber Sale Contract No. 341-05-58  
 Widenoja  
 Portions of Sections 11 and 13,  
 T1N, R10W, W. M.  
 Tillamook County, Oregon



Area	Type of Operation	Acres	
		Sale	Net
1	Retention cut	30	25
2	Partial cut	14	14
3	Partial cut	39	36
4	Partial cut	21	21
Total		104	96

Tillamook District GIS  
 11/08/2004

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







"STEWARDSHIP IN FORESTRY"

## Oregon Department of Forestry

### WRITTEN PLAN

**SALE NAME:** Widenoja

**PROTECTED WATERS:** Moss Creek, Type F stream.

**LOCATION:** Portions of Section 13, T1N, R10W, W.M., Tillamook County.

**Activity:** Logging cables strung across Type F streams for deflection.

**Protection measures:**

- When cable yarding lines are strung across RMA's they will be at least 150 feet apart and pulled out prior to rigging the next yarding road.

**Date:** August 16, 2004

**Prepared by:** Amber Winslow, Forester