



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Elliot Ness
Sale 341-12-11

District: Forest Grove

Date: January 26, 2012

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,256,162.03	\$12,714.57	\$2,268,876.60
		Project Work:	\$(199,145.00)
		Advertised Value:	\$2,069,731.60



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timber description

Location: Portions of Sections 2, 11, and 12, T1N, R6W, W.M., Tillamook County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	98
Western Hemlock / Fir	19	0	98
Alder (Red)	16	0	98

Volume by Grade	2S	3S	4S	Camprur	Total
Douglas - Fir	4,340	1,860	317	0	6,517
Western Hemlock / Fir	172	62	19	0	253
Alder (Red)	0	0	0	33	33
Total	4,512	1,922	336	33	6,803



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comments: Pond Values Used: 4th Quarter Calendar Year 2011.

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost:
 $\$633.25/\text{MBF} = \$800/\text{MBF} - \$166.75/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$740 daily truck cost.

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

Brand and Paint: 6,803 MBF @\$1/MBF = \$6,803

Intermediate Supports: 10 supports x \$200/support = \$2,000

Roadside Landing Construction: 4 Landings @ 150/ldg = \$600

Total Other Costs (with Profit & Risk to be added) = \$9,403

Other Costs (No Profit & Risk added):

Blocking/Waterbarring Skid Roads: 15 hrs @ \$150/hr = \$2,250

Firewood Sorting: 15 hrs @ \$150/hr = \$2,250

Covering Slash piles: \$1,000

Slash Treatment: 60 acres @ \$150/acre = \$9,000

Equipment Cleaning: 5 machines @ \$1,000/machine = \$5,000

TOTAL Other Costs (No Profit & Risk added) = \$19,500

ROAD MAINTENANCE

Move-in: \$2,000

General Road Maintenance: 7.6 miles x \$1,000/mile = \$7,600

TOTAL: \$9,600 / 6,803 MBF = \$1.41/MBF



"STEWARDSHIP IN FORESTRY"

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District: Forest Grove

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logging conditions

combination#: 1 Douglas - Fir 46.46%
 Western Hemlock / Fir 70.02%
 Alder (Red) 76.73%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Shovel **Process:** Stroke Delimber

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 5.0 **bd. ft / load:** 4,400

cost / mbf: \$65.37

machines: Stroke Delimber (B)

combination#: 2 Douglas - Fir 33.10%
 Western Hemlock / Fir 29.98%
 Alder (Red) 23.27%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Small Tower <=40 **Process:** Manual Delimiting

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 5.0 **bd. ft / load:** 4,800

cost / mbf: \$112.54

machines: Log Loader (A)
 Tower Yarder (Small)

combination#: 3 Douglas - Fir 20.44%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Shovel **Process:** Stroke Delimber

tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 4.0 **bd. ft / load:** 4,400

cost / mbf: \$81.72

machines: Stroke Delimber (B)



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
 Elliot Ness
 Sale 341-12-11

District: Forest Grove

Date: January 26, 2012

logging costs

Operating Seasons:	2.00	Profit Risk:	15.00%
Project Costs:	\$199,145.00	Other Costs (P/R):	\$9,403.00
Slash Disposal:	\$0.00	Other Costs:	\$19,500.00

Miles of Road

Road Maintenance: \$1.41

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	3.0	4.4
Western Hemlock / Fir	\$0.00	2.0	3.9
Alder (Red)	\$0.00	2.0	3.8



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
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 Sale 341-12-11

District: Forest Grove

Date: January 26, 2012

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$84.33	\$1.44	\$1.29	\$49.72	\$1.38	\$20.72	\$0.00	\$5.00	\$2.87	\$166.75
Western Hemlock / Fir									
\$79.51	\$1.44	\$1.29	\$84.15	\$1.38	\$25.17	\$0.00	\$5.00	\$2.87	\$200.81
Alder (Red)									
\$76.35	\$1.44	\$1.29	\$86.36	\$1.38	\$25.02	\$0.00	\$5.00	\$2.87	\$199.71

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$504.25	\$337.50	\$0.00
Western Hemlock / Fir	\$0.00	\$424.82	\$224.01	\$0.00
Alder (Red)	\$0.00	\$585.00	\$385.29	\$0.00



"STEWARDSHIP IN FORESTRY"

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District: Forest Grove

Date: January 26, 2012

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	6,517	\$337.50	\$2,199,487.50
Western Hemlock / Fir	253	\$224.01	\$56,674.53
Alder (Red)	33	\$385.29	\$12,714.57

Gross Timber Sale Value

Recovery: \$2,268,876.60

Prepared by: Peter Stone

Phone: 503-359-7477

Elliot Ness
341-12-11
Volume Summary (Shown in MBF)
December 2011

Area 1: Modified clearcut (54 Acres)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	1,294	574	113	0	1,981
	In-Growth					
	Hidden D&B	(26)	(11)	(2)	(0)	(39)
	Total	1,268	563	111	0	1,942
	<i>% Total</i>	65	29	6	0	

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	STOTAL
Hemlock/Fir	Cruise Volume	26	8	1	0	35
	In-Growth					
	Hidden D&B	(1)	(1)	(0)	(0)	(2)
	Total	25	7	1	0	33
	<i>% Total</i>	76	21	3		

Area 2: Partial cut - Moderate (100 Acres)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	469	544	76	0	1,089
	In-Growth					
	Hidden D&B	(9)	(11)	(1)	(0)	(21)
	Total	460	533	75	0	1,068
	<i>% Total</i>	43	50	7	0	

Area 3: Modified clearcut (82 Acres)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	2,472	642	113	0	3,227
	In-Growth					
	Hidden D&B	(49)	(13)	(2)	(0)	(64)
	Total	2,423	629	111	0	3,163
	<i>% Total</i>	77	20	3	0	

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Hemlock/Fir	Cruise Volume	148	55	19	0	222
	In-Growth					
	Hidden D&B	(3)	(1)	(1)	(0)	(5)
	Total	145	54	18	0	217
	<i>% Total</i>	67	25	8	0	

Elliot Ness
341-12-11
Volume Summary (Shown in MBF)
December 2011

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Red alder	Cruise Volume	0	0	0	33	33
	In-Growth					
	Hidden D&B	(0)	(0)	(0)	(1)	(1)
	Total	0	0	0	32	32
	<i>% Total</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>100</i>	

Area 4: Partial cut - Heavy (17 Acres)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	139	114	17	0	270
	In-Growth					
	Hidden D&B	(3)	(2)	(1)	(0)	(6)
	Total	136	112	16	0	264
	<i>% Total</i>	<i>52</i>	<i>42</i>	<i>6</i>	<i>0</i>	

Area 5: Right-of-Way (5 Acres)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	54	23	4	0	81
	In-Growth					
	Hidden D&B	(1)	(1)	(0)	(0)	(2)
	Total	53	23	4	0	79
	<i>% Total</i>	<i>67</i>	<i>29</i>	<i>4</i>	<i>0</i>	

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Hemlock/Fir	Cruise Volume	2	1	0	0	3
	In-Growth					
	Hidden D&B	(0)	(0)	(0)	(0)	(0)
	Total	2	1	0	0	3
	<i>% Total</i>	<i>66</i>	<i>34</i>	<i>0</i>	<i>0</i>	

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Red alder	Cruise Volume	0	0	0	1	1
	In-Growth					
	Hidden D&B	(0)	(0)	(0)	(0)	(2)
	Total	0	0	0	1	1
	<i>% Total</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>100</i>	

SALE TOTALS

SPECIES	2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL (MBF)
Douglas-fir	4,340	1,860	317	0	6,517
Hemlock/Fir	172	62	19	0	253
Red alder	0	0	0	33	33
Total	4,512	1,922	336	33	6,803

TIMBER SALE SUMMARY

Elliot Ness

Contract No. 341-12-11

1. **Type of Sale:** The timber sale is a combination sale consisting of 136 acres modified clearcut and 117 acres of partial cut. The timber will be sold on a recovery basis at a sealed bid auction.
2. **Revenue Distribution:** 7% BOF, Tillamook County – tax code 56-1; 93% BOF, Tillamook – tax code 9-2
3. **Sale Acreage:** Acres are net of stream buffers and existing road prisms. Acreage was determined using ESRI ArcMap GIS software.
4. **Cruise Data:** The Timber Sale was cruised with a combination of Stand Level Inventory plots and ODF Cruiser plots. For more information see Cruise Report.
5. **Timber Description:** Timber Sale Area is medium to well stocked, 60 year old Douglas-fir stand with minor amounts of western hemlock, true firs, and hardwoods. The average Douglas-fir DBH is approximately 18 inches.
Estimated average net Douglas-fir volume per acre (MBF): Area 1 - 36.7, Area 2 - 10.9, Area 3 - 39.3, Area 4 - 10.9.
6. **Topography and Logging Method:** Slopes within the sale areas vary in aspect and vary in range from 5% to 50%. The sale area is 33% cable-based yarding and 77% ground-based yarding.
7. **Access:** From Forest Grove, travel west on Highway 8. Turn west on Highway 6 and continue approximately 10 miles and turn south onto Beaverdam Road. Drive 0.8 miles and turn right onto University Falls Road. Drive for 2.2 miles and turn west onto Beaverdam Road and continue for 0.4 miles to the northeast corner of Area 3.
8. **Projects:**
 - Project No. 1 - construct and improve 1.66 miles of road - \$30,034.66
 - Project No. 2 - surface 1.66 miles of road - \$72,094.33
 - Project No. 3 - crush and stockpile 7,200/cyd rock - \$89,668.80
 - Project No. 4 - grass seed, fertilize, and mulch - \$1,623.60

 - Equipment Move-in and Cleaning - \$5,721.82

Total rounded credit for project work is \$199,145.00

9. Other Costs:

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

Brand and Paint: 6,803 MBF @ \$1/MBF = \$6,803

Intermediate Supports: 10 supports x \$200/support = \$2,000

Roadside Landing Construction: 4 Landings @ 150/ldg = \$600

Total Other Costs (with Profit & Risk to be added) = \$9,403

Other Costs (No Profit & Risk added):

Blocking/Waterbarring Skid Roads: 15 hrs @ \$150/hr = \$2,250

Firewood Sorting: 15 hrs @ \$150/hr = \$2,250

Covering Slash piles: \$1,000

Slash Treatment: 60 acres @ \$150/acre = \$9,000

Equipment Cleaning: 5 machines @ \$1,000/machine = \$5,000

TOTAL Other Costs (No Profit & Risk added) = \$19,500

ROAD MAINTENANCE

Move-in: \$2,000

General Road Maintenance: 7.6 miles x \$1,000/mile = \$7,600

TOTAL: \$9,600 / 6,803 MBF = \$1.41/MBF

Residual Stand Specifications

Elliot Ness
341-12-11

AREA 2

Residual QMD assumption (from cruise leave tree information) - 21.

Target Relative Density - 28

	Minimum	Target	Maximum
Relative Density	26	28	30
Basal Area	120	130	140
Trees per Acre	50	54	58

$$RD = BA / \sqrt{DBH}$$

$$BA = \sqrt{DBH} (RD)$$

$$BA/tree = (\pi r^2) / (144)$$

$$TPA = (BA/acre) / (BA/tree)$$

Residual Stand Specifications

Elliot Ness
341-12-11

AREAS 4

Residual QMD assumption (from cruise leave tree information) - 21.

Target Relative Density - 20

	Minimum	Target	Maximum
Relative Density	18	20	22
Basal Area	80	90	100
Trees per Acre	33	38	42

$$RD = BA / \sqrt{DBH}$$

$$BA = \sqrt{DBH} (RD)$$

$$BA/tree = (\pi r^2) / (144)$$

$$TPA = (BA/acre) / (BA/tree)$$

PROJECT COST SUMMARY SHEET

Timber Sale: Elliot Ness

Sale Number: 341-12-11

PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT

CONSTRUCTION

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	14+00	\$4,511.00
C to D	2+00	\$1,747.40
E to F	1+35	\$572.65
G to H	8+75	\$2,182.63
I to J	8+00	\$2,134.00
K to L	9+50	\$5,702.11
M to N	3+00	\$1,689.50
O to P	1+60	\$621.92
Q to R	1+00	\$501.70
S to T	8+00	\$5,164.80
U to V	9+20	\$2,690.04
W to X	3+45	\$1,008.12

69+85 stations
1.32 miles

SUBTOTAL CONSTRUCTION \$28,525.86

IMPROVEMENTS

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
U to V	18+00	\$1,508.80

18+00 stations
0.34 miles

SUBTOTAL IMPROVEMENTS \$1,508.80

TOTAL PROJECT NO. 1 COST = \$30,034.66

PROJECT NO. 2: SURFACING

<u>Road Segment</u>	<u>Amount</u>	<u>Type</u>	<u>Cost</u>
A to B	682 cy	3" - 0	\$10,482.34
C to D	204 cy	3" - 0	\$3,135.48
E to F	177 cy	3" - 0	\$2,720.49
G to H	462 cy	3" - 0	\$7,341.18
I to J	424 cy	3" - 0	\$6,737.36
K to L	20 cy	1 1/2" - 0	\$307.60
K to L	513 cy	3" - 0	\$7,889.94
K to L	30 cy	24" - 6	\$124.80
M to N	15 cy	1 1/2" - 0	\$230.70
M to N	206 cy	3" - 0	\$3,168.28
O to P	110 cy	3" - 0	\$1,668.70
Q to R	91 cy	3" - 0	\$1,361.36
S to T	321 cy	3" - 0	\$4,837.47
U to V	1,039 cy	3" - 0	\$18,082.08
W to X	227 cy	3" - 0	\$4,006.55
Total	35 cy	1 1/2" - 0	
	4,456 cy	3" - 0	
	30 cy	24" - 6	

TOTAL PROJECT NO. 2 COST = \$72,094.33

PROJECT NO. 3: Crush and Stockpile

Crush and stockpile 3,000 cubic yards 3"-0 \$34,884.00

Crush and stockpile 4,200 cubic yards 1 1/2"-0 \$54,784.80

TOTAL PROJECT NO. 3 COST = \$89,668.80

PROJECT NO. 4: GRASS SEED, FERTILIZE, & MULCH

Grass seed and fertilize areas of disturbed \$1,623.60
soil.

TOTAL PROJECT NO. 4 COST = \$1,623.60

MOVE IN & EQUIPMENT CLEANING \$5,721.82

TOTAL ALL PROJECTS \$199,143.21

TOTAL CREDITS \$199,145.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Elliot Ness
 Road Segment: A to B

Timber Sale No. : 341-12-11
 Construction : 14+00 stations
0.27 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	2.54	acres @	\$980.00	per acre =	\$2,489.20
Balanced Road Construction	14.00	sta @	\$90.00	per sta =	\$1,260.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	14.00	sta @	\$28.70	per sta =	\$401.80
				TOTAL EXCAVATION COSTS=	\$4,511.00

PROJECT NO. 1 TOTAL COST = \$4,511.00

PROJECT NO. 2:

SURFACING

	8	" deep =	42 cy/sta		
A to B	588	cy of	3" - 0	@	\$15.37 per cy = \$9,037.56
Turnaround	14	cy of	3" - 0	@	\$15.37 per cy = \$215.18
Junction	20	cy of	3" - 0	@	\$15.37 per cy = \$307.40
Landing (1)	60	cy of	3" - 0	@	\$15.37 per cy = \$922.20
Total =	682	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$10,482.34

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil. 1.27 acres @ \$220.00 per acre = \$279.40

PROJECT NO. 4 TOTAL COST = \$279.40

TOTAL COST = \$15,272.74

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Elliot Ness</u>	Timber Sale No.:	<u>341-12-11</u>
Road Segment:	<u>C to D</u>	Construction:	<u>2+00</u> stations <u>0.04</u> miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	1.25	acres @	\$980.00	per acre =	\$1,225.00
Balanced Road Construction	2.00	sta @	\$90.00	per sta =	\$180.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	2.00	sta @	\$28.70	per sta =	\$57.40
TOTAL EXCAVATION COSTS=					\$1,747.40

PROJECT NO. 1 TOTAL COST = \$1,747.40

PROJECT NO. 2:

SURFACING

	8	" deep =	42 cy/sta		
C to D	84	cy of	3"-0	@	\$15.37 per cy = \$1,291.08
Landing (1)	120	cy of	3"-0	@	\$15.37 per cy = \$1,844.40
Total =	204	cy of	3"-0		

PROJECT NO. 2 TOTAL COST = \$3,135.48

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.63	acres @	\$220.00	per acre =	\$137.50
Mulch	1.00	acres @	\$600.00	per acre =	\$600.00

PROJECT NO. 4 TOTAL COST = \$737.50

TOTAL COST = \$5,620.38

SUMMARY OF CONSTRUCTION COST

Timber Sale: Elliot Ness Timber Sale No.: 341-12-11
 Road Segment: E to F Construction: 1+35 stations
0.03 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.13	acres @	\$980.00	per acre =	\$127.40
Balanced Road Construction	1.35	sta @	\$90.00	per sta =	\$121.50
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	1.35	sta @	\$28.70	per sta =	\$38.75
				TOTAL EXCAVATION COSTS=	\$572.65

PROJECT NO. 1 TOTAL COST = \$572.65

PROJECT NO. 2:

SURFACING	8	" deep =	42 cy/sta		
E to F	57	cy of	3"-0	@	\$15.37 per cy = \$876.09
Landing (1)	120	cy of	3"-0	@	\$15.37 per cy = \$1,844.40
Total =	177	cy of	3"-0		

PROJECT NO. 2 TOTAL COST = \$2,720.49

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.07	acres @	\$220.00	per acre =	\$14.30
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PROJECT NO. 4 TOTAL COST = \$14.30

TOTAL COST = \$3,307.44

SUMMARY OF CONSTRUCTION COST

Timber Sale: Elliot Ness Timber Sale No. : 341-12-11
 Road Segment: G to H Construction : 8+75 stations
0.17 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.80	acres @	\$980.00	per acre =	\$784.00
Balanced Road Construction	8.75	sta @	\$90.00	per sta =	\$787.50
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	8.75	sta @	\$28.70	per sta =	\$251.13
				TOTAL EXCAVATION COSTS=	\$2,182.63

PROJECT NO. 1 TOTAL COST = \$2,182.63

PROJECT NO. 2:

<u>SURFACING</u>	8	" deep =	42 cy/sta		
G to H	368	cy of	3" - 0	@	\$15.89 per cy = \$5,847.52
Junction @ Pt. I	20	cy of	3" - 0	@	\$15.89 per cy = \$317.80
Turnaround	14	cy of	3" - 0	@	\$15.89 per cy = \$222.46
Landing (1)	60	cy of	3" - 0	@	\$15.89 per cy = \$953.40
Total =	462	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$7,341.18

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.40	acres @	\$220.00	per acre =	\$88.00
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PROJECT NO. 4 TOTAL COST = \$88.00

TOTAL COST = \$9,611.81

SUMMARY OF CONSTRUCTION COST

Timber Sale: Elliot Ness Timber Sale No. : 341-12-11
 Road Segment: I to J Construction : 8+00 stations
0.15 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.78	acres @	\$980.00	per acre =	\$764.40
Balanced Road Construction	8.00	sta @	\$90.00	per sta =	\$720.00
Construct Turnouts (1)	1	ea @	\$60.00	per ea =	\$60.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	8.00	sta @	\$28.70	per sta =	\$229.60
				TOTAL EXCAVATION COSTS=	\$2,134.00

PROJECT NO. 1 TOTAL COST = \$2,134.00

PROJECT NO. 2:

SURFACING

	8	" deep =	42 cy/sta		
I to J	336	cy of	3" - 0	@	\$15.89 per cy = \$5,339.04
Turnaround	14	cy of	3" - 0	@	\$15.89 per cy = \$222.46
Turnouts (1)	14	cy of	3" - 0	@	\$15.89 per cy = \$222.46
Landing (1)	60	cy of	3" - 0	@	\$15.89 per cy = \$953.40
Total =	424	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$6,737.36

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.39	acres @	\$220.00	per acre =	\$85.80
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PROJECT NO. 4 TOTAL COST = \$85.80

TOTAL COST = \$8,957.16

SUMMARY OF CONSTRUCTION COST

Timber Sale: Elliot Ness
 Road Segment: K to L

Timber Sale No. : 341-12-11
 Construction : 9+50 stations
0.18 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.87	acres @	\$980.00	per acre =	\$852.60	
Balanced Road Construction	9.50	sta @	\$90.00	per sta =	\$855.00	
FILL EXCAVATION						
Load & Haul fill material from BD5 Pit	200	cy @	\$2.98	per cy =	\$596.00	
Place fill and rock	200	cy @	\$2.12	per cy =	\$424.00	
Compact fill with plate compactor	3	hr @	\$36.62	per hr =	\$109.86	
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00	
Landing	1	ea @	\$285.00	per ea =	\$285.00	
Grade, Ditch, and Roll	9.50	sta @	\$28.70	per sta =	\$272.65	
				TOTAL EXCAVATION COSTS=		\$3,470.11

CULVERTS - MATERIALS & INSTALLATION

Culverts

40 LF of 36" \$1,720.00

Culvert Markers

1 markers \$10.00

Bands

1 ea of 36" @ \$52.00 per ea = 52.00

Additional Culvert Installation Cost

3 Hrs @ \$150.00 per hr = \$ 450.00

TOTAL CULVERT COSTS = \$2,232.00

PROJECT NO. 1 TOTAL COST = \$5,702.11

PROJECT NO. 2:

SURFACING

	8	" deep =	42 cy/sta			
K to L	399	cy of	3" - 0	@	\$15.38 per cy =	\$6,136.62
Turnaround	14	cy of	3" - 0	@	\$15.38 per cy =	\$215.32
Junction	20	cy of	3" - 0	@	\$15.38 per cy =	\$307.60
Landing (1)	60	cy of	3" - 0	@	\$15.38 per cy =	\$922.80
Fill Widening	20	cy of	3" - 0	@	\$15.38 per cy =	\$307.60
Culvert Bedding	20	cy of	1 1/2"-0	@	\$15.38 per cy =	\$307.60
Fill Armor (Outlet)	30	cy of	24" - 6"	@	\$4.16 per cy =	\$124.80
Total =						
	20	cy of	1 1/2" - 0			
	513	cy of	3" - 0			
	30	cy of	24" - 6"			

PROJECT NO. 2 TOTAL COST = \$8,322.34

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.44 acres @	\$220.00	per acre =	\$95.70
Mulch	0.10 acres @	\$600.00	per acre =	\$60.00

PROJECT NO. 4 TOTAL COST = \$155.70

TOTAL COST = \$14,180.15

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Elliot Ness	Timber Sale No.:	341-12-11
Road Segment:	M to N	Construction:	3+00 stations <u>0.06</u> miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.28	acres @	\$980.00	per acre =	\$274.40
Balanced Road Construction	3.00	sta @	\$90.00	per sta =	\$270.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	3.00	sta @	\$28.70	per sta =	\$86.10
TOTAL EXCAVATION COSTS=					<u>\$915.50</u>

CULVERTS - MATERIALS & INSTALLATION

Culverts					
30	LF of 24"	\$720.00			
		<u>\$720.00</u>			
Culvert Markers					
1	markers	\$10.00			
Bands					
1	ea of 30" @	\$44.00	per ea =	\$44.00	
TOTAL CULVERT COSTS =					\$774.00

PROJECT NO. 1 TOTAL COST = \$1,689.50

PROJECT NO. 2:

SURFACING

8	"	deep =	42	cy/sta		
M to N	126	cy of	3" - 0	@	\$15.38	per cy = \$1,937.88
Landing (1)	60	cy of	3" - 0	@	\$15.38	per cy = \$922.80
Junction	20	cy of	3" - 0	@	\$15.38	per cy = \$307.60
Culvert Bedding	15	cy of	1 1/2" - 0	@	\$15.38	per cy = <u>\$230.70</u>
Total =	15	cy of	1 1/2" - 0			
	206	cy of	3" - 0			

PROJECT NO. 2 TOTAL COST = \$3,398.98

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.14	acres @	\$220.00	per acre =	<u>\$30.80</u>
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PROJECT NO. 4 TOTAL COST = \$30.80

TOTAL COST = \$5,119.28

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Elliot Ness</u>	Timber Sale No.:	<u>341-12-11</u>
Road Segment:	<u>O to P</u>	Construction:	<u>1+60</u> stations <u>0.03</u> miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.15	acres @	\$980.00	per acre =	\$147.00
Balanced Road Construction	1.60	sta @	\$90.00	per sta =	\$144.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	1.60	sta @	\$28.70	per sta =	\$45.92
				TOTAL EXCAVATION COSTS=	\$621.92

PROJECT NO. 1 TOTAL COST = \$621.92

PROJECT NO. 2:

SURFACING	6	" deep =	31 cy/sta		
O to P	50	cy of	3"-0	@	\$15.17 per cy = \$758.50
Landing (1)	60	cy of	3"-0	@	\$15.17 per cy = \$910.20
Total =	110	cy of	3"-0		

PROJECT NO. 2 TOTAL COST = \$1,668.70

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.08	acres @	\$220.00	per acre =	\$16.50
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PROJECT NO. 4 TOTAL COST = \$16.50

TOTAL COST = \$2,307.12

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Elliot Ness</u>	Timber Sale No.:	<u>341-12-11</u>
Road Segment:	<u>Q to R</u>	Construction:	<u>1+00</u> stations <u>0.02</u> miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.10	acres @	\$980.00	per acre =	\$98.00
Balanced Road Construction	1.00	sta @	\$90.00	per sta =	\$90.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	1.00	sta @	\$28.70	per sta =	\$28.70
TOTAL EXCAVATION COSTS=					\$501.70

PROJECT NO. 1 TOTAL COST = \$501.70

PROJECT NO. 2:

SURFACING	6	" deep =	31 cy/sta		
Q to R	31	cy of	3" - 0	@	\$14.96 per cy = \$463.76
Landing (1)	60	cy of	3" - 0	@	\$14.96 per cy = \$897.60
Total =	91	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$1,361.36

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.05	acres @	\$220.00	per acre =	\$11.00
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PROJECT NO. 4 TOTAL COST = \$11.00

TOTAL COST = \$1,874.06

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Elliot Ness	Timber Sale No. :	341-12-11
Road Segment:	S to T	Construction :	8+00 stations
			0.15 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.74	acres @	\$980.00	per acre =	\$725.20
Balanced Road Construction	8.00	sta @	\$90.00	per sta =	\$720.00
Fill Construction					
Excavate & Load	400	cy @	\$1.80	per cy =	\$720.00
Haul	400	cy @	\$2.28	per cy =	\$912.00
Place Fill	400	cy @	\$2.12	per cy =	\$848.00
Compact Fill	400	cy @	\$0.25	per hr =	\$100.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	8.00	sta @	\$28.70	per sta =	\$229.60
			TOTAL EXCAVATION COSTS=		\$4,614.80

CULVERTS - MATERIALS & INSTALLATION

Culverts					
30 LF of 18"	\$540.00				
Culvert Markers					
1 markers	\$10.00				
			TOTAL CULVERT COSTS =		\$550.00

PROJECT NO. 1 TOTAL COST = \$5,164.80

PROJECT NO. 2:

<u>SURFACING</u>	6	" deep =	31 cy/sta		
S to T	248	cy of	3" - 0	@	\$15.07 per cy = \$3,737.36
Curve Widening	16	cy of	3" - 0	@	\$15.07 per cy = \$241.12
Turnaround	10	cy of	3" - 0	@	\$15.07 per cy = \$150.70
Landing (1)	47	cy of	3" - 0	@	\$15.07 per cy = \$708.29
Total =	321	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$4,837.47

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.37 acres @	\$220.00 per acre =	\$81.40
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PROJECT NO. 4 TOTAL COST = \$81.40

TOTAL COST = \$10,083.67

SUMMARY OF CONSTRUCTION COST

Timber Sale: Elliot Ness
 Road Segment: U to V

Timber Sale No.: 341-12-11
 Construction: 9+20 stations
 0.17 miles
 Improvement: 18+00 stations
 0.34 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter, Improvement)	0.80	acres @	\$1,274.00	per acre =	\$1,019.20
Clearing and Grubbing (Scatter, Construction)	0.85	acres @	\$980.00	per acre =	\$833.00
Balanced Road Construction	9.20	sta @	\$90.00	per sta =	\$828.00
Construct Turnouts	2	ea @	\$60.00	per ea =	\$120.00
Construct Turnaround	1	ea @	\$75.00	per ea =	\$75.00
Landing	2	ea @	\$285.00	per ea =	\$570.00
Grade, Ditch, and Roll	9.20	sta @	\$28.70	per sta =	\$264.04
Grade and Roll (Improvement)	<u>18.00</u>	sta @	<u>\$27.20</u>	per sta =	<u>\$489.60</u>
				TOTAL EXCAVATION COSTS=	\$4,198.84

PROJECT NO. 1 TOTAL COST = \$4,198.84

PROJECT NO. 2:

SURFACING

	8	" deep =	42 cy/sta		
Spot Rock (0+00 -18+00)	400	cy of	3" - 0	@	\$17.40 per cy = \$6,960.00
Base Rock (18+00 - 27+20)	377	cy of	3" - 0	@	\$17.40 per cy = \$6,563.28
Curve Widening	20	cy of	3" - 0	@	\$17.40 per cy = \$348.00
Turnouts (2)	28	cy of	3" - 0	@	\$17.40 per cy = \$487.20
Junction	20	cy of	3" - 0	@	\$17.40 per cy = \$348.00
Roadside Landing	60	cy of	3" - 0	@	\$17.40 per cy = \$1,044.00
Landing (1)	120	cy of	3" - 0	@	\$17.40 per cy = \$2,088.00
Turnaround	<u>14</u>	cy of	3" - 0	@	<u>\$243.60</u>
Total =	1039	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$18,082.08

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil. 0.40 acres @ \$220.00 per acre = \$88.00

PROJECT NO. 4 TOTAL COST = \$88.00

TOTAL COST = \$22,368.92

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Elliot Ness	Timber Sale No.:	341-12-11
Road Segment:	W to X	Construction:	3+45 stations
			0.07 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.32	acres @	\$980.00	per acre =	\$313.60
Balanced Road Construction	3.45	sta @	\$90.00	per sta =	\$310.50
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	3.45	sta @	\$28.70	per sta =	\$99.02
			TOTAL EXCAVATION COSTS=		\$1,008.12

PROJECT NO. 1 TOTAL COST = \$1,008.12

PROJECT NO. 2:

SURFACING

SURFACING	8	" deep =	31 cy/sta		
W to X	107	cy of	3"-0	@	\$17.65 per cy = \$1,888.55
Landing (1)	120	cy of	3"-0	@	\$17.65 per cy = \$2,118.00
Total =	227	cy of	3"-0		

PROJECT NO. 2 TOTAL COST = \$4,006.55

PROJECT NO. 4:

0.16 acres @ \$220.00 per acre = \$35.20

PROJECT NO. 4 TOTAL COST = \$35.20

TOTAL COST = \$5,049.87

Move-In & Equipment Cleaning

Timber Sale: Elliot Ness
 Sale Number: 341-12-11

LOWBOY HAUL (One-way)	
DIST. (mi)	AVE SPEED (mph)
5.0	7
0.0	2

No.	EQUIPMENT DESCRIPTION	Equipment Cleaning	Base Cost	Woods Cost	Pilot Cars	Area Move	Begin Mileage	End Mileage	Total Miles	Within		Total Cost
										Area	Cost	
0	Drill & Compressor		\$0.00	\$0.00		\$46.00	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Brush Cutter		\$0.00	\$0.00		\$4.00	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Graders		\$300.00	\$128.58		\$3.65	0.00	2.50	2.50	\$9.13	\$437.71	\$437.71
0	Loader (Small)		\$0.00	\$0.00	1	\$3.55	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Loader (Med. & Large)		\$414.39	\$208.48	1	\$9.00	0.00	0.00	0.00	\$0.00	\$622.87	\$622.87
1	Rollers (smooth/grid) & Compactors		\$308.59	\$155.25		\$5.00	0.00	0.00	0.00	\$0.00	\$463.84	\$463.84
0	Excavators (Small)	\$0	\$0.00	\$0.00		\$22.00	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Excavators (Med.)	\$0	\$0.00	\$0.00		\$35.50	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Excavators (Large)	\$1,000	\$466.14	\$230.66	1	\$44.80	0.00	2.50	2.50	\$112.00	\$1,808.80	\$1,808.80
0	Tired Backhoes/Skidders	\$0	\$0.00	\$0.00		\$3.00	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Tractors (D6)	\$0	\$0.00	\$0.00	2	\$7.10	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Tractors (D7)	\$0	\$0.00	\$0.00	2	\$11.30	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Tractor (D8)	\$1,000	\$473.80	\$217.52	2	\$15.10	0.00	2.50	2.50	\$37.75	\$1,729.07	\$1,729.07
3	Dump Truck (10 cy +)		\$350.00	\$150.00		\$2.85	0.00	0.00	0.00	\$0.00	\$500.00	\$500.00
0	Dump Truck (Off Hiway)		\$0.00	\$0.00	1	\$4.75	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Water Truck (1500 Gal)		\$0.00	\$0.00		\$2.85	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Water Truck (2500 Gal)		\$111.67	\$47.86		\$2.85	0.00	0.00	0.00	\$0.00	\$159.53	\$159.53

TOTAL MOVE-IN COSTS: \$5,721.82

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Timber Sale: Elliot Ness
 Sale Number: 341-12-11
 Pit Name: Browns Camp

Swell:	<u>130%</u>	1-1/2"-0 (trk measure)	<u>35 cy</u>
Shrinkage:	<u>120%</u>	3"-0 (trk measure)	<u>4,456 cy</u>
Drill Pct.:	<u>100%</u>	6"-0 (trk measure)	<u>cy</u>
		1 1/2"-0 Stockpile (stockpile measure)	<u>4,200 cy</u>
		3"-0 Stockpile (stockpile measure)	<u>3,000 cy</u>
		Total Truck Yardage:	<u>13,131 cy</u>
		Total In Place Yardage:	<u>10,101 cy</u>

Drill & Shoot (Downholes):	<u>\$2.50 /cy x</u>	<u>10,101 cy</u>	=	<u>\$25,252.31</u>
Push Rock:	<u>\$0.70 /cy x</u>	<u>13,131 cy</u>	=	<u>\$9,191.84</u>
Oversize Reduction:	<u>\$4.50 /cy x</u>	<u>1,010 cy</u>	=	<u>\$4,545.42</u>
Load Crusher:	<u>\$0.70 /cy x</u>	<u>13,131 cy</u>	=	<u>\$9,191.84</u>
Crushing (1 1/2" - 0):	<u>\$3.00 /cy x</u>	<u>35 cy</u>	=	<u>\$105.00</u>
Crushing (3" - 0):	<u>\$3.00 /cy x</u>	<u>4,456 cy</u>	=	<u>\$13,368.60</u>
Crushing 1 1/2"-0 Stockpile:	<u>\$3.00 /cy x</u>	<u>5,040 cy</u>	=	<u>\$15,120.00</u>
Crushing 3" - 0 Stockpile:	<u>\$3.00 /cy x</u>	<u>3,600 cy</u>	=	<u>\$10,800.00</u>
Build and Shape Stockpile:	<u>\$1.00 /cy x</u>	<u>8,640 cy</u>	=	<u>\$8,640.00</u>
Load Dump Truck:	<u>\$0.70 /cy x</u>	<u>13,131 cy</u>	=	<u>\$9,191.84</u>
		Subtotal		<u>\$105,406.84</u>

Equipment Cleaning (Excavator)				\$1,000.00
Move in Crusher (3 Stage)				\$2,987.00
Set up Crusher				\$3,024.00
Move in and set up Drill and Compressor				\$635.15
Move in Excavator				\$622.87
Move in Loader				\$560.03
Clean Up Pit				\$300.00
Gradation Tests (\$65/2000 cy)	<u>\$65.00</u>	<u>cy/2000cy x</u>	<u>7</u> tests	<u>\$455.00</u>
Change Gradation				<u>\$210.00</u>
		Subtotal		<u>\$9,794.05</u>

PIT DEVELOPMENT COST \$8.77/cy TOTAL PRODUCTION COST \$115,200.89

CRUISE REPORT
Elliot Ness
341-12-11

1. ACREAGE CALCULATION: The Timber Sale Area is 258 acres, determined with ESRI ArcMap GIS Software. Acres are net of stream buffers, leave areas, and existing roads. Thinning area acres are also net of R/W acres.

2. SAMPLING INTENSITY:

In 2003 and 2008 Sale Areas 1, 2, and 4 were cruised with 34 Stand Level Inventory variable radius plots. The plot data was grown forward to November 2011. Areas 2 and 4 plots did not adequately sample the stands so they were supplemented with an additional 8 variable radius grade plots in November 2011. The cruise design assumed a Coefficient of Variation (CV%) of 48%, an average stand diameter of 16 inches, a desired sampling error (SE%) of 10%. The combined cruises produced an acceptable sampling error of 4.2%.

In November 2011 Area 3 was cruised with 26 variable radius grade plots. The cruise design assumed a Coefficient of Variation (CV%) of 48%, an average diameter of 16 inches, a desired sampling error (SE%) of 10%. The cruise produced an acceptable sampling error of 9.1%.

3. SAMPLING METHOD:

Areas 2 and 4: Pre-cruise plots indicated an optimal 6 to 8 grade trees per plot could be realized in a variable radius plot using a 40 BAF prism. Plots were laid out on a single cruise line with plots at a 5 chain spacing. Plots falling on or near existing roads or no-harvest areas were offset 1 chain. Cruisers 'thinned' Area 2 plots from below to 130 ft² of basal area and Area 4 plots to 90 ft² of basal area by assigning a 'Take' or 'Leave' status to each tree in every plot.

Area 3: Pre-cruise plots indicated an optimal 6 to 8 grade trees per plot could be realized in a variable radius plot using a 33.61 BAF prism. Plots were laid out on a 5 chain by 6 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. TREE MEASUREMENT AND GRADING:

All grade plot 'Take' trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

- a) **Height Standards:**
Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.
- b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.
- c) **Form Factors** were measured for each grade tree using a form point of 16 feet.

5. DATA PROCESSING

- a) **Volumes and Statistics,** Cruise and grown forward volume estimates, and sampling statistics, were derived from Super Ace 2008 cruise software.
- b) **Deductions:** Two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

6. Cruisers: The sale was cruised by SLI contract and ODF cruisers.

Prepared by: Peter Stone 12/15/11
ODF Forester Date

Reviewed by: Eric Foucht Date

TC PSTATS		PROJECT STATISTICS								PAGE	1
		PROJECT				ELLINESS				DATE	1/12/2012
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
01_	06_	12	A3	MC	THR	253.00	92	580	S	W	
01N	07W	02	A4	PC							
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		92	580	6.3							
CRUISE		84	519	6.2	30,031	1.7					
DBH COUNT											
REFOREST											
COUNT		8	36	4.5							
BLANKS											
100 %											
STAND SUMMARY											
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
DOUG FIR-L	93	21.2	21.3	102	11.4	52.5	9,359	9,359	2,098	2,098	
DOUG FIR-T	376	86.6	17.7	98	35.0	147.1	26,088	25,955	5,738	5,738	
R ALDER-L	16	4.4	12.1	62	1.0	3.5	310	310	75	75	
R ALDER-T	4	1.2	15.8	79	0.4	1.7	138	130	33	33	
PS FIR-L	8	.8	20.3	76	0.4	1.7	256	256	62	62	
PS FIR-T	2	.3	21.4	113	0.2	.8	137	137	33	33	
NOB FIR-L	2	.2	26.0	99	0.2	.8	111	111	29	29	
NOB FIR-T	6	1.2	19.3	98	0.6	2.5	523	523	104	104	
SNAG-L	5	1.1	20.4	78	0.6	2.5					
WHEMLOCK-T	5	1.6	15.7	105	0.5	2.1	354	352	75	75	
WR CEDAR-L	2	.1	34.5	101	0.1	.8	98	98	27	27	
TOTAL	519	118.7	18.3	97	50.5	216.0	37,375	37,232	8,273	8,273	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR-L		53.9	5.6	652	691	729					
DOUG FIR-T		81.4	4.2	542	565	589					
R ALDER-L		50.6	13.1	67	78	88					
R ALDER-T		68.6	39.2	84	138	191					
PS FIR-L		79.4	29.9	539	770	1,001					
PS FIR-T		71.4	66.8	181	545	909					
NOB FIR-L				530	530	530					
NOB FIR-T		69.9	31.1	642	932	1,222					
SNAG-L											
WHEMLOCK-T		63.5	31.5	185	270	355					
WR CEDAR-L		12.2	11.4	669	755	841					
TOTAL		79.7	3.5	549	569	589	254	63	28		
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR-L		163.7	17.1	18	21	25					
DOUG FIR-T		109.4	11.4	77	87	96					
R ALDER-L		830.1	86.5	1	4	8					
R ALDER-T		697.1	72.6	0	1	2					
PS FIR-L		708.6	73.8	0	1	1					
PS FIR-T		731.5	76.2	0	0	1					
NOB FIR-L		830.1	86.5	0	0	0					
NOB FIR-T		611.5	63.7	0	1	2					
SNAG-L		470.8	49.0	1	1	2					
WHEMLOCK-T		440.7	45.9	1	2	2					
WR CEDAR-L		959.2	99.9	0	0	0					
TOTAL		82.2	8.6	109	119	129	270	67	30		

PROJECT STATISTICS
PROJECT ELLINESS

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
01_	06_	12	A3	MC	THR	253.00	92	580	S	W
01N	07W	02	A4	PC						

CL	68.1	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.	INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	
DOUG FIR-L		150.7	15.7	44	53	61	
DOUG FIR-T		79.6	8.3	135	147	159	
R ALDER-L		830.1	86.5	0	3	6	
R ALDER-T		755.8	78.7	0	2	3	
PS FIR-L		582.6	60.7	1	2	3	
PS FIR-T		674.5	70.3	0	1	1	
NOB FIR-L		830.1	86.5	0	1	1	
NOB FIR-T		380.7	39.7	2	3	4	
SNAG-L		443.4	46.2	1	3	4	
WHEMLOCK-T		419.4	43.7	1	2	3	
WR CEDAR-L		959.2	99.9	0	1	2	
TOTAL		55.2	5.7	204	216	228	122 30 14

CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.	INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	
DOUG FIR-L		152.5	15.9	7,873	9,359	10,846	
DOUG FIR-T		86.1	9.0	23,628	25,955	28,283	
R ALDER-L		830.1	86.5	42	310	579	
R ALDER-T		705.3	73.5	35	130	226	
PS FIR-L		604.6	63.0	95	256	417	
PS FIR-T		678.9	70.7	40	137	234	
NOB FIR-L		830.1	86.5	15	111	207	
NOB FIR-T		401.9	41.9	304	523	742	
SNAG-L							
WHEMLOCK-T		440.3	45.9	190	352	513	
WR CEDAR-L		959.2	99.9	0	98	195	
TOTAL		60.0	6.3	34,905	37,232	39,560	144 36 16

Log Stock Table - MBF
Project: ELLINESS

T01_R06_S12 TMC

T01_R06_S12 TMC

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
 01_ 06_ 12 A3 MC 82.00 26 179 Date 1/12/2012
 Time 11:10:32AM

Spp	T	So	Gr	Log	Gross	% Def	Net	% 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
DF				CU															
DF				CU	4														
DF				CU	6														
DF				CU	8														
DF				CU	12														
DF				CU	16														
DF				CU	18														
DF				CU	24														
DF				CU	28														
DF				CU	30														
DF				CU	32														
DF				CU	39														
DF				CU	40														
DF				2M	12	7		7	.2								7		
DF				2M	20	12		12	.4								12		
DF				2M	24	18		18	.5				10				7		
DF				2M	32	20		20	.6			5	15						
DF				2M	34	12		12	.4				12						
DF				2M	40	2,431	1.1	2,405	74.5			313	357	1059		477	162	36	
DF				3M	20	6		6	.2						6				
DF				3M	30	5		5	.1			5							
DF				3M	32	177	.8	175	5.4		56	61	42	16					
DF				3M	40	459	.6	456	14.1		88	121	247						
DF				4M	16	20		20	.6		20								
DF				4M	20	34		34	1.1		34								
DF				4M	24	34		34	1.0		34								
DF				4M	30	21		21	.7		21								
DF				4M	32	4		4	.1		4								
DF				Totals		3,258		3,227	92.0		257	182	293	334	394	1065	503	162	36
NF				CU	6														
NF				CU	35														
NF				2M	40	113		113	85.3				12	6	54			40	
NF				3M	32	3		3	2.4				3						
NF				3M	40	2		2	1.2			2							
NF				4M	20	0		0	.3		0								
NF				4M	24	3		3	1.9		3								
NF				4M	40	12		12	8.8		12								
NF				Totals		132		132	3.8		15	2	3	12	6	54		40	
WH				CU	4														
WH				CU	10														
WH				2M	16	9		9	10.4							9			
WH				2M	40	26	2.1	26	28.8				11	15					
WH				3M	30	4		4	4.2			4							
WH				3M	32	10		10	11.1		10								
WH				3M	40	37		37	41.2		7		30						
WH				4M	16	4		4	4.2		1		3						

TC TLOGSTVB

Log Stock Table - MBF
Project: ELLINESS

T01_R06_S12 TMC

T01_R06_S12 TMC

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
 01_ 06_ 12 A3 MC 82.00 26 179 Date 1/12/2012
 Time 11:10:32AM

Spp	S	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches											
									MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29
WH				Totals	90		89	2.5			18	4	32	11	15	9				
RA				CU 12																
RA		R		16	10		10	30.9		3				7						
RA		R		20	2		2	6.1		2										
RA		R		30	23	8.7	21	63.0				13			8					
RA				Totals	35	5.7	33	.9		5	13			7	8					
RC				CU 8																
RC				2M 40	22		22	90.1							10	13				
RC				3M 40	2		2	9.9		1	1									
RC				Totals	25		25	.7		1	1				10	13				
Total All Species					3,539		3,506	100.0		296	202	329	364	423	1138	516	202	36		

Log Stock Table - MBF
Project: ELLINESS

T01N R06W S12 TMC

T01N R06W S12 TMC

Twp 01N **Rge** 06W **Sec** 12 **Tract** A1 **Type** MC **Acres** 54.00 **Plots** 18 **Sample Trees** 117 **Page** 1
Date 1/12/2012 **Time** 11:10:32AM

Spp	T	S	So	Gr	Log	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
DF			2M		32	4		4	.2					4					
DF			2M		40	1,290		1,290	65.1					146	259	409	294	183	
DF			3M		32	100		100	5.0		18	37		37	8				
DF			3M		40	474		474	23.9		197	56		203	18				
DF			4M		16	16		16	.8		16								
DF			4M		20	28		28	1.4		28								
DF			4M		24	65		65	3.3		63	2							
DF			4M		30	4		4	.2		4								
DF			Totals			1,981		1,981	98.3		326	94		240	176	259	409	294	183
SF			2M		40	26		26	73.6					11		14			
SF			3M		32	4		4	12.9					4					
SF			3M		40	4		4	11.5		4								
SF			4M		20	1		1	2.0		1								
SF			Totals			35		35	1.7		5			16		14			
Total All Species						2,015		2,015	100.0		331	94		240	192	259	423	294	183

TC		TLOGSTVB		Log Stock Table - MBF															
Project:										ELLINESS									
T01N R06W S12 TPC										T01N R06W S12 TPC									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1										
01N	06W	12	A2	PC	100.00	24	112	Date	1/12/2012										
								Time	11:10:32AM										
Spp	T	So	Gr	Log	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
DF		2M		40	2,131	.0	2,130	66.8				8	448	474	675	503	22		
DF		3M		14	1		1	.0		1									
DF		3M		19	5		5	.2		5									
DF		3M		22	1		1	.0		1									
DF		3M		30	25		25	.8		15		10							
DF		3M		32	264		264	8.3		8	87	30	129	10					
DF		3M		35	3		3	.1		3									
DF		3M		40	597	.2	595	18.7		30	118	143	304						
DF		4M																	
DF		4M		7															
DF		4M		16	28		28	.9		9	19								
DF		4M		20	27		27	.9			27								
DF		4M		24	42		42	1.3			42								
DF		4M		26	3		3	.1		3									
DF		4M		30	49		49	1.6			49								
DF		4M		32	12		12	.4			12								
DF		Totals			3,190		3,187	95.6		76	356	181	443	458	474	675	503	22	
RA		R		20	3		3	4.5			3								
RA		R		24	10		10	14.8			10								
RA		R		32	54		54	80.7			36	9	9						
RA		Totals			67		67	2.0			49	9	9						
SF		2M		32	3		3	5.2					3						
SF		2M		40	40		40	72.1					11					29	
SF		3M		32	3		3	5.8					3						
SF		3M		40	9		9	15.9			9								
SF		4M		16	1		1	1.0			1								
SF		Totals			55		55	1.7			9			17				29	
NF		2M		40	21		21	86.8							21				
NF		3M		40	3		3	13.2			3								
NF		Totals			24		24	.7			3				21				
Total All Species					3,336		3,334	100.0		76	417	190	452	458	492	696	503	51	

TC		TLOGSTVB		Log Stock Table - MBF														
Project:										ELLINESS								
T01N R07W S02 TPC										T01N R07W S02 TPC								
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1									
01N	07W	02	A4	PC	17.00	24	112	Date	1/12/2012									
									Time	11:10:32AM								
Spp	T	So	Gr	Log	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
DF		2M		40	357	.1	356	66.1				1	73	81	110	87	4	
DF		3M		14	0		0	.0		0								
DF		3M		19	1		1	.2		1								
DF		3M		22	0		0	.1		0								
DF		3M		30	4		4	.8		3		1						
DF		3M		32	46		46	8.6		1	15	5	23	2				
DF		3M		35	0		0	.1		0								
DF		3M		40	103	.3	103	19.1		5	20	25	52					
DF		4M																
DF		4M		7														
DF		4M		16	5		5	.9		2	3							
DF		4M		20	5		5	.9			5							
DF		4M		24	7		7	1.3			7							
DF		4M		26	1		1	.1		1								
DF		4M		30	8		8	1.6			8							
DF		4M		32	2		2	.4			2							
DF		Totals			540		539	95.6		14	61	32	76	74	81	110	87	4
RA		R		20	1		1	4.5			1							
RA		R		24	2		2	14.8			2							
RA		R		32	9		9	80.7			6	2	2					
RA		Totals			11		11	2.0			8	2	2					
SF		2M		32	0		0	5.2					0					
SF		2M		40	7		7	72.1					2				5	
SF		3M		32	1		1	5.8					1					
SF		3M		40	2		2	15.9			2							
SF		4M		16	0		0	1.0			0							
SF		Totals			9		9	1.7			2			3				5
NF		2M		40	4		4	86.8							4			
NF		3M		40	1		1	13.2			1							
NF		Totals			4		4	.7			1				4			
Total All Species					565		564	100.0		14	72	33	78	74	84	114	87	9

T01N R06W S12 TMC										T01N R06W S12 TMC				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
01N	06W	12	A1	MC	54.00	18	117	S	W					

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
								Net	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
													4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
DF		2M	65	23,970		23,970	1,294				42	58			0	100	40	16	445	2.24	53.9				
DF		3M	29	10,623		10,623	574			95	5				17	83	39	8	93	0.60	114.6				
DF		4M	6	2,087		2,087	113			100				39	61		22	6	26	0.35	79.4				
DF	Totals		98	36,681		36,681	1,981			33	29	38		2	3	5	89	33	9	148	0.97	247.9			
SF		2M	73	473		473	26			45	55				100		40	14	317	1.82	1.5				
SF		3M	24	157		157	8			47	53				53	47	38	9	105	0.75	1.5				
SF		4M	3	13		13	1			100				100			20	7	30	0.59	.4				
SF	Totals		2	643		643	35			14	46	41		2		13	85	36	11	188	1.25	3.4			
Type Totals				37,324		37,324	2,015			33	29	38		2	3	5	89	33	9	149	0.98	251.3			

T01N R06W S12 TPC										T01N R06W S12 TPC				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
01N	06W	12	A2	PC	100.00	24	112	S	W					

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF		2M	66	.0	21,309	21,299	2,130		0	57	43					100	40	15	378	1.99	56.4
DF		3M	28	.2	8,970	8,955	896	7	92	1			1	3	30	66	36	8	88	0.64	101.4
DF		4M	6		1,620	1,620	162	7	93				34	59	7		21	6	27	0.37	60.0
DF	Totals		96	.1	31,898	31,874	3,187	2	31	38	28		2	4	9	86	33	9	146	1.01	217.8
RA		R	100		671	671	67		100				5	15	81		29	7	60	0.49	11.2
RA	Totals		2		671	671	67		100				5	15	81		29	7	60	0.49	11.2
SF		2M	77		428	428	43			33	67				7	93	39	18	548	3.01	.8
SF		3M	22		121	121	12		73	27					27	73	39	7	78	0.66	1.5
SF		4M	1		5	5	1		100				100				16	6	20	0.63	.3
SF	Totals		2		554	554	55		17	31	52		1		11	88	37	10	214	1.40	2.6
NF		2M	86		208	208	21				100					100	40	17	460	2.49	.5
NF		3M	14		32	32	3		100							100	40	7	70	0.92	.5
NF	Totals		1		240	240	24		13		87					100	40	12	265	1.71	.9
Type Totals				.1	33,363	33,338	3,334	2	32	37	29		2	4	10	84	33	9	143	1.00	232.5

T01N R07W S02 TPC										T01N R07W S02 TPC				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
01N	07W	02	A4	PC	17.00	24	112	S	W					

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF		2M	66	.1	20,976	20,965	356		0	57	42					100	40	15	379	1.99	55.3
DF		3M	28	.2	9,145	9,129	155	7	91	1			1	3	30	66	36	8	88	0.63	103.9
DF		4M	6		1,638	1,638	28	8	92				34	58	8		21	6	27	0.37	60.9
DF	Totals		96	.1	31,759	31,732	539	3	31	38	28		2	4	9	85	33	9	144	1.00	220.1
RA		R	100		671	671	11		100				5	15	81		29	7	60	0.49	11.2
RA	Totals		2		671	671	11		100				5	15	81		29	7	60	0.49	11.2
SF		2M	77		428	428	7			33	67				7	93	39	18	548	3.01	.8
SF		3M	22		121	121	2		73	27					27	73	39	7	78	0.66	1.5
SF		4M	1		5	5	0		100				100				16	6	20	0.63	.3
SF	Totals		2		554	554	9		17	31	52		1		11	88	37	10	214	1.40	2.6
NF		2M	86		208	208	4				100					100	40	17	460	2.49	.5
NF		3M	14		32	32	1		100							100	40	7	70	0.92	.5
NF	Totals		1		240	240	4		13		87					100	40	12	265	1.71	.9
Type Totals				.1	33,223	33,197	564	2	32	37	28		2	4	10	84	33	9	141	0.99	234.8

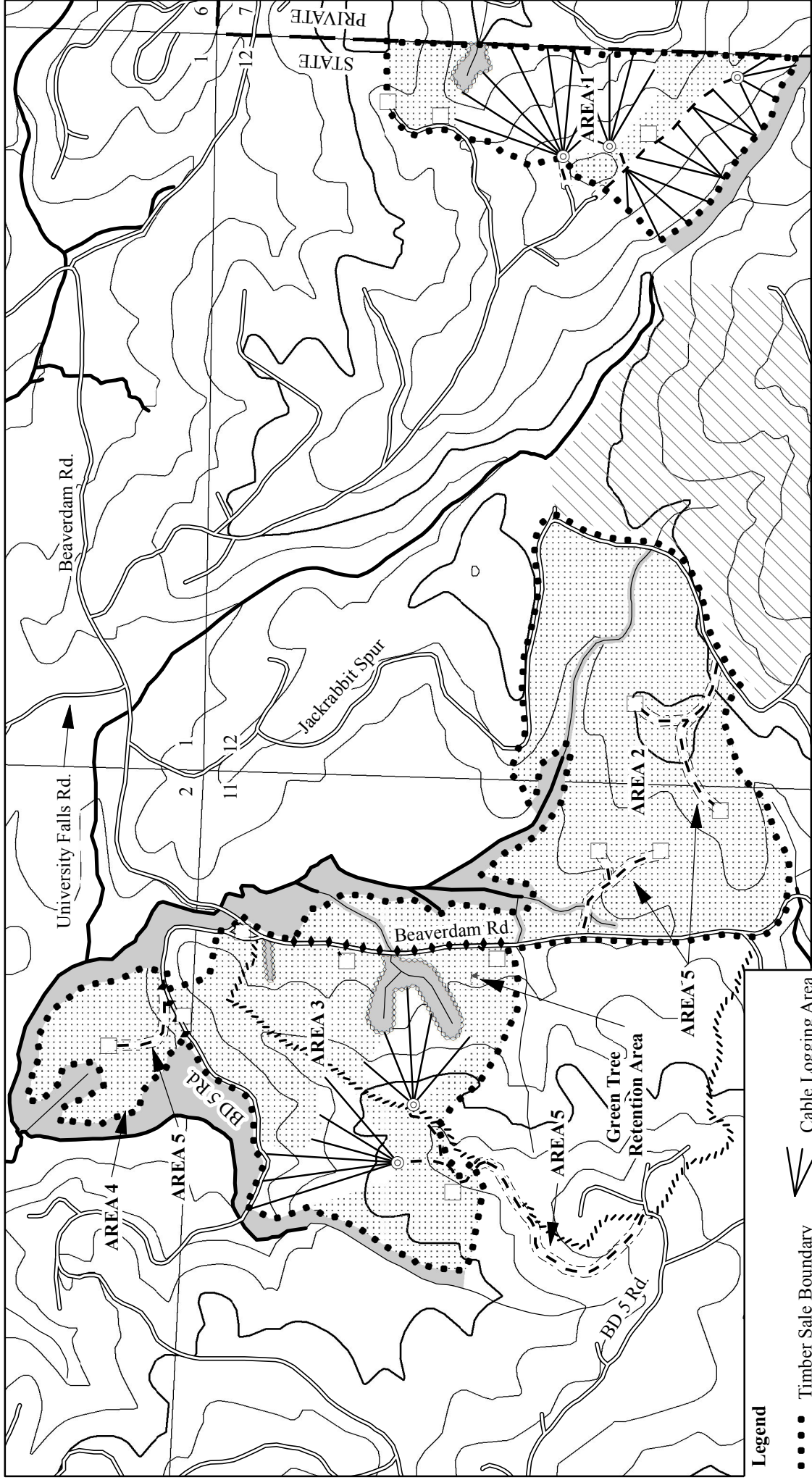
TC		Stand Table Summary														
TSTNDSUM		Project ELLINESS														
T01_R06_S12 TMC											T01_R06_S12 TMC					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01_	06_	12	A3	MC	82.00	26	179	Date:	01/12/2011							
								Time:	11:10:34AM							
S Spc	T	Sample		Av				Average Log		Net		Net	Totals			
		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	1	85	89	2.926	1.29	2.93	8.2	40.0	.68	24	117	56	20	10
DF		10	1	86	48	2.370	1.29	2.37	7.7	30.0	.52	18	71	42	15	6
DF		11	3	87	91	5.876	3.88	7.84	13.3	55.0	2.97	104	431	243	85	35
DF		12	3	84	89	4.938	3.88	6.58	13.6	52.5	2.55	90	346	209	73	28
DF		13	3	85	96	4.207	3.88	8.41	14.1	53.3	3.39	119	449	278	97	37
DF		14	3	83	93	3.628	3.88	7.26	16.6	61.7	3.43	120	447	281	99	37
DF		15	5	86	108	5.267	6.46	10.53	20.4	88.0	6.13	215	927	502	176	76
DF		16	5	89	106	4.629	6.46	9.26	25.2	110.0	6.66	234	1,018	546	192	84
DF		17	2	89	127	1.640	2.59	4.92	23.2	100.0	3.26	114	492	267	94	40
DF		18	2	93	116	1.463	2.59	3.66	29.7	132.0	3.09	108	483	254	89	40
DF		19	3	91	112	1.970	3.88	4.60	35.1	147.1	4.60	161	676	377	132	55
DF		20	6	87	121	3.555	7.76	10.07	30.8	130.6	8.85	310	1,315	725	255	108
DF		21	9	88	125	4.837	11.63	13.97	36.3	165.4	14.48	508	2,311	1,187	416	190
DF		22	7	88	125	3.428	9.05	9.30	38.3	168.9	10.14	356	1,572	832	292	129
DF		23	9	87	121	4.032	11.63	11.20	43.0	192.8	13.74	482	2,160	1,127	395	177
DF		24	15	89	129	6.172	19.39	18.52	48.0	224.4	25.32	889	4,156	2,077	729	341
DF		25	12	89	124	4.551	15.51	12.89	52.3	245.3	19.22	674	3,163	1,576	553	259
DF		26	20	87	125	7.012	25.85	19.98	56.5	259.5	32.19	1,130	5,185	2,640	926	425
DF		27	4	88	135	1.300	5.17	3.90	63.6	291.7	7.07	248	1,138	580	204	93
DF		28	7	88	131	2.116	9.05	6.05	63.3	301.5	10.90	382	1,823	894	314	149
DF		29	7	88	130	1.973	9.05	5.92	70.3	333.3	11.85	416	1,973	972	341	162
DF		30	7	89	136	1.843	9.05	5.79	76.8	384.5	12.68	445	2,228	1,040	365	183
DF		31	3	88	126	.740	3.88	1.97	80.3	375.0	4.51	158	740	370	130	61
DF		32	8	89	132	1.852	10.34	5.55	89.8	447.9	14.22	499	2,488	1,166	409	204
DF		33	1	89	120	.218	1.29	.65	87.9	420.0	1.64	57	274	134	47	22
DF		34	4	89	148	.820	5.17	3.08	89.2	481.3	7.81	274	1,480	641	225	121
DF		35	3	89	134	.580	3.88	1.74	104.8	558.9	5.20	182	973	426	150	80
DF		36	1	83	135	.183	1.29	.55	109.8	496.7	1.72	60	272	141	49	22
DF		42	2	89	129	.269	2.59	.81	154.2	800.0	3.54	124	645	290	102	53
DF		Totals	156	87	113	84.395	201.66	200.31	42.5	196.5	242.35	8,503	39,354	19,873	6,973	3,227
NF		10	1	91	76	2.370	1.29	2.37	12.8	60.0	.73	30	142	60	25	12
NF		24	1	91	126	.411	1.29	1.23	52.0	253.3	1.54	64	313	126	53	26
NF		26	1	87	126	.351	1.29	1.05	55.5	253.3	1.40	58	266	115	48	22
NF		29	1	92	148	.282	1.29	.85	42.9	206.7	.87	36	175	71	30	14
NF		33	1	93	143	.218	1.29	.65	109.0	613.3	1.71	71	400	140	58	33
NF		34	1	91	129	.205	1.29	.62	97.4	516.7	1.44	60	318	118	49	26
NF		Totals	6	91	98	3.837	7.76	6.77	47.3	238.5	7.68	320	1,614	630	262	132
WH		14	3	89	103	3.628	3.88	6.05	20.8	94.0	4.02	126	568	330	103	47
WH		19	1	93	108	.657	1.29	1.97	28.2	123.3	1.78	55	243	146	45	20
WH		21	1	93	116	.537	1.29	1.61	31.8	170.0	1.64	51	274	135	42	22
WH		Totals	5	90	105	4.822	6.46	9.63	24.1	112.7	7.44	232	1,085	610	191	89
RA		13	1	93	94	1.402	1.29	2.80	11.1	50.0	.86	31	140	70	26	11
RA		14	1	82	69	1.209	1.29	1.21	22.7	50.0	.75	27	60	62	22	5
RA		17	1	83	69	.820	1.29	1.64	14.6	65.0	.66	24	107	54	20	9
RA		26	1	82	82	.351	1.29	.35	54.5	270.0	.53	19	95	43	16	8
RA		Totals	4	86	79	3.782	5.17	6.00	16.9	66.9	2.79	102	402	229	83	33
RC		34	1	81	93	.205	1.29	.41	120.8	410.0	1.16	50	168	95	41	14
RC		35	1	74	109	.193	1.29	.39	85.6	345.0	.78	33	133	64	27	11

TC TSTNDSUM		Stand Table Summary														
Project ELLINESS																
T01_R06_S12 TMC										T01_R06_S12 TMC						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	2							
01_	06_	12	A3	MC	82.00	26	179	Date:	01/12/2011							
								Time:	11:10:34AM							
S Spc	T	Sample			Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
		DBH	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
RC	Totals	2	78	101	.399	2.59	.80	103.7	378.4	1.94	83	302	159	68	25	
SN	18	1		17	.878	1.55										
SN	20	3		17	2.133	4.65										
SN	27	1		17	.390	1.55										
SN	Totals	5		17	3.401	7.76										
Totals		178	87	107	100.636	231.39	223.51	41.3	191.3	262.20	9240	42,757	21,501	7,577	3,506	

TC		TSTNDSUM											Stand Table Summary			
Project													ELLINESS			
T01N R06W S12 TMC											T01N R06W S12 TMC					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	06W	12	A1	MC	54.00	18	117	Date:	01/12/2011							
								Time:	11:10:34AM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		8	2	87	59	10.698	3.73	10.70	4.6	20.0	1.41	50	214	76	27	12
DF		9	4	87	53	16.906	7.47	16.91	6.5	30.0	3.15	111	507	170	60	27
DF		10	9	88	86	30.811	16.80	30.81	12.8	60.0	11.21	393	1,849	605	212	100
DF		11	5	87	83	14.147	9.34	14.15	14.8	60.0	5.98	210	849	323	113	46
DF		12	3	88	79	7.132	5.60	9.51	14.4	57.5	3.90	137	547	211	74	30
DF		14	4	87	91	6.987	7.47	13.97	16.8	70.0	6.70	235	978	362	127	53
DF		15	7	88	98	10.651	13.07	21.30	20.6	90.0	12.50	439	1,917	675	237	104
DF		16	5	88	89	6.774	9.34	13.55	21.9	87.8	8.44	296	1,189	456	160	64
DF		17	2	87	102	2.369	3.73	4.74	28.1	115.0	3.79	133	545	205	72	29
DF		18	1	87	101	1.057	1.87	2.11	32.0	130.0	1.93	68	275	104	37	15
DF		19	3	88	119	2.845	5.60	8.54	26.9	116.7	6.54	230	996	353	124	54
DF		20	5	88	112	4.279	9.34	9.41	38.0	149.1	10.19	357	1,404	550	193	76
DF		21	5	87	109	3.882	9.34	7.76	45.9	180.0	10.15	356	1,397	548	192	75
DF		22	7	87	116	4.951	13.07	14.85	36.1	166.7	15.30	537	2,476	826	290	134
DF		23	6	88	124	3.883	11.20	11.65	42.1	192.8	13.97	490	2,246	754	265	121
DF		24	3	87	120	1.834	5.60	5.50	43.4	190.0	6.80	239	1,045	367	129	56
DF		25	4	88	124	2.214	7.47	6.64	50.2	224.8	9.50	333	1,493	513	180	81
DF		26	4	88	126	2.026	7.47	6.08	55.5	253.3	9.60	337	1,540	519	182	83
DF		27	6	87	117	2.836	11.20	8.51	55.2	249.5	13.39	470	2,122	723	254	115
DF		28	7	88	128	3.073	13.07	8.77	68.9	336.6	17.22	604	2,950	930	326	159
DF		29	5	88	126	2.050	9.34	6.15	69.0	328.8	12.09	424	2,022	653	229	109
DF		30	2	87	140	.761	3.73	2.28	79.2	396.7	5.15	181	905	278	98	49
DF		31	1	87	144	.356	1.87	1.07	88.3	436.7	2.69	94	467	145	51	25
DF		32	4	87	127	1.337	7.47	4.01	84.8	413.3	9.70	340	1,658	524	184	90
DF		34	3	88	136	.888	5.60	2.67	102.3	513.3	7.77	273	1,368	419	147	74
DF		35	2	88	137	.567	3.73	1.70	108.5	546.2	5.26	185	929	284	100	50
DF		36	1	87	136	.264	1.87	.79	113.1	583.3	2.55	90	462	138	48	25
DF		37	4	88	130	1.007	7.47	3.02	117.7	601.8	10.13	356	1,818	547	192	98
DF		38	1	88	142	.237	1.87	.71	134.2	720.0	2.72	95	512	147	52	28
DF		Totals	115	88	91	146.822	214.73	247.86	32.5	148.0	229.74	8,061	36,681	12,406	4,353	1,981
SF		18	1	87	113	1.057	1.87	2.11	36.1	135.0	2.18	76	285	118	41	15
SF		28	1	87	112	.437	1.87	1.31	61.0	273.3	2.29	80	358	124	43	19
SF		Totals	2	87	113	1.493	3.73	3.42	45.6	187.9	4.47	156	643	242	84	35
Totals			117	88	91	148.316	218.46	251.28	32.7	148.5	234.22	8217	37,324	12,648	4,437	2,015

TC		TSTNDSUM		Stand Table Summary												
Project														ELLINESS		
T01N R06W S12 TPC										T01N R06W S12 TPC						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	06W	12	A2	PC	100.00	24	112	Date:	01/12/2011							
								Time:	11:10:34AM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		8	1	83	65	5.123	1.79	5.12	7.3	30.0	1.06	37	154	106	37	15
DF		9	2	87	65	7.331	3.24	7.33	7.4	35.5	1.56	55	260	156	55	26
DF		10	3	87	72	9.851	5.37	9.85	10.2	50.0	2.87	101	493	287	101	49
DF		11	3	87	92	8.130	5.37	13.55	11.5	50.0	4.45	156	677	445	156	68
DF		12	2	88	79	3.558	2.79	3.56	18.5	70.0	1.88	66	249	188	66	25
DF		13	1	88	85	2.798	2.58	5.60	13.5	55.0	2.16	76	308	216	76	31
DF		14	4	88	98	4.912	5.25	9.82	17.2	73.3	4.83	169	720	483	169	72
DF		15	4	88	100	5.829	7.15	14.57	16.8	67.0	6.96	244	976	696	244	98
DF		16	5	88	96	6.976	9.74	13.95	23.1	94.0	9.18	322	1,311	918	322	131
DF		17	5	87	101	5.177	8.16	11.49	24.9	103.5	8.14	286	1,189	814	286	119
DF		18	5	88	109	5.507	9.73	12.03	31.7	121.7	10.86	381	1,463	1,086	381	146
DF		19	3	87	105	3.130	6.16	6.26	37.3	145.9	6.66	234	914	666	234	91
DF		20	5	88	95	5.185	11.31	10.37	38.2	147.7	11.28	396	1,532	1,128	396	153
DF		21	4	88	115	3.631	8.73	10.89	32.4	140.2	10.05	353	1,527	1,005	353	153
DF		22	10	88	113	7.417	19.58	21.70	36.9	169.8	22.85	802	3,685	2,285	802	368
DF		23	2	88	110	1.123	3.24	2.87	45.3	196.6	3.69	130	563	369	130	56
DF		24	9	88	113	6.166	19.37	18.50	42.8	191.7	22.57	792	3,546	2,257	792	355
DF		25	6	87	120	3.515	11.98	9.82	51.6	225.0	14.44	507	2,211	1,444	507	221
DF		26	4	88	121	2.157	7.95	6.47	54.0	247.0	9.95	349	1,598	995	349	160
DF		27	2	88	127	1.297	5.16	3.89	60.0	276.7	6.65	233	1,077	665	233	108
DF		28	2	88	132	.942	4.03	2.49	75.1	358.5	5.32	187	892	532	187	89
DF		29	2	87	120	1.124	5.16	3.37	66.1	306.7	6.35	223	1,034	635	223	103
DF		30	4	88	120	1.642	8.06	4.92	70.5	333.9	9.89	347	1,645	989	347	164
DF		31	1	87	134	.492	2.58	1.48	84.1	420.0	3.54	124	620	354	124	62
DF		32	2	87	88	.519	2.90	1.04	94.5	385.0	2.80	98	400	280	98	40
DF		33	5	87	122	1.601	9.51	4.80	86.8	411.6	11.88	417	1,977	1,188	417	198
DF		34	2	88	117	.460	2.90	1.38	89.5	418.3	3.52	124	577	352	124	58
DF		35	1	88	110	.217	1.45	.65	93.0	423.3	1.73	61	276	173	61	28
DF		Totals	99	87	97	105.812	191.25	217.78	33.4	146.4	207.12	7,268	31,874	20,712	7,268	3,187
RA		10	1	87	60	1.719	.94	1.72	8.5	40.0	.40	15	69	40	15	7
RA		12	5	88	54	5.968	4.69	5.97	14.8	60.0	2.43	89	358	243	89	36
RA		13	1	87	91	1.017	.94	2.03	14.5	60.0	.81	29	122	81	29	12
RA		15	1	88	85	.764	.94	1.53	19.1	80.0	.80	29	122	80	29	12
RA		Totals	8	88	62	9.468	7.50	11.25	14.4	59.7	4.45	162	671	445	162	67
SF		13	1	87	58	1.017	.94	1.02	19.6	60.0	.57	20	61	57	20	6
SF		21	1	88	105	.390	.94	.78	48.1	180.0	1.07	38	140	107	38	14
SF		35	1	87	102	.140	.94	.42	91.3	420.0	1.10	38	177	110	38	18
SF		37	1	88	101	.126	.94	.38	99.8	466.7	1.08	38	176	108	38	18
SF		Totals	4	87	76	1.673	3.75	2.59	51.5	213.5	3.82	133	554	382	133	55
NF		26	1	88	99	.452	1.67	.90	68.3	265.0	1.48	62	240	148	62	24
NF		Totals	1	88	99	.452	1.67	.90	68.3	265.0	1.48	62	240	148	62	24
Totals		112	87	94		117.405	204.17	232.53	32.8	143.4	216.88	7624	33,338	21,688	7,624	3,334

TC		TSTNDSUM		Stand Table Summary												
Project														ELLINESS		
T01N R07W S02 TPC										T01N R07W S02 TPC						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	07W	02	A4	PC	17.00	24	112	Date:	01/12/2011							
								Time:	11:10:34AM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		8	1	83	65	5.489	1.92	5.49	7.3	30.0	1.14	40	165	19	7	3
DF		9	2	87	65	7.733	3.42	7.73	7.5	35.6	1.64	58	275	28	10	5
DF		10	3	88	72	10.380	5.66	10.38	10.2	50.0	3.02	106	519	51	18	9
DF		11	3	87	92	8.711	5.75	14.52	11.5	50.0	4.77	167	726	81	28	12
DF		12	2	87	79	3.812	2.99	3.81	18.5	70.0	2.01	71	267	34	12	5
DF		13	1	88	85	2.894	2.67	5.79	13.5	55.0	2.23	78	318	38	13	5
DF		14	4	88	98	4.817	5.15	9.63	17.2	73.1	4.73	166	705	80	28	12
DF		15	4	88	100	6.246	7.66	15.61	16.8	67.0	7.46	262	1,046	127	44	18
DF		16	5	88	96	6.799	9.49	13.60	23.1	93.9	8.94	314	1,276	152	53	22
DF		17	5	87	101	5.546	8.74	12.31	24.9	103.5	8.72	306	1,274	148	52	22
DF		18	5	88	109	5.847	10.33	12.78	31.7	121.7	11.53	405	1,555	196	69	26
DF		19	3	88	104	2.494	4.91	4.99	37.0	144.5	5.27	185	721	90	31	12
DF		20	5	88	95	5.080	11.08	10.16	38.1	147.6	11.05	388	1,500	188	66	25
DF		21	4	88	115	3.811	9.17	11.43	32.4	140.3	10.55	370	1,604	179	63	27
DF		22	10	88	114	7.193	18.99	21.17	36.8	169.4	22.20	779	3,585	377	132	61
DF		23	2	88	110	1.184	3.42	3.03	45.1	196.4	3.90	137	596	66	23	10
DF		24	9	88	112	6.047	19.00	18.14	42.4	189.1	21.90	769	3,430	372	131	58
DF		25	6	88	120	3.322	11.32	9.33	51.4	224.9	13.68	480	2,099	233	82	36
DF		26	4	87	120	2.055	7.58	6.17	53.8	246.2	9.46	332	1,518	161	56	26
DF		27	2	87	127	1.153	4.58	3.46	60.0	276.7	5.91	207	957	101	35	16
DF		28	2	88	132	.975	4.17	2.57	75.1	358.5	5.50	193	922	94	33	16
DF		29	2	88	120	1.163	5.33	3.49	66.1	306.7	6.57	231	1,070	112	39	18
DF		30	4	87	120	1.612	7.91	4.84	70.6	335.4	9.74	342	1,622	166	58	28
DF		31	1	88	134	.509	2.67	1.53	84.1	420.0	3.66	128	641	62	22	11
DF		32	2	88	88	.537	3.00	1.07	94.5	385.0	2.89	102	414	49	17	7
DF		33	5	87	122	1.656	9.84	4.97	86.8	411.6	12.28	431	2,045	209	73	35
DF		34	2	87	117	.476	3.00	1.43	89.5	418.3	3.64	128	597	62	22	10
DF		35	1	87	110	.225	1.50	.67	93.0	423.3	1.79	63	285	30	11	5
DF		Totals	99	87	96	107.765	191.25	220.10	32.9	144.2	206.21	7,236	31,732	3,506	1,230	539
RA		10	1	87	60	1.719	.94	1.72	8.5	40.0	.40	15	69	7	2	1
RA		12	5	88	54	5.968	4.69	5.97	14.8	60.0	2.43	89	358	41	15	6
RA		13	1	87	91	1.017	.94	2.03	14.5	60.0	.81	29	122	14	5	2
RA		15	1	88	85	.764	.94	1.53	19.1	80.0	.80	29	122	14	5	2
RA		Totals	8	88	62	9.468	7.50	11.25	14.4	59.7	4.45	162	671	76	27	11
SF		13	1	87	58	1.017	.94	1.02	19.6	60.0	.57	20	61	10	3	1
SF		21	1	88	105	.390	.94	.78	48.1	180.0	1.07	38	140	18	6	2
SF		35	1	87	102	.140	.94	.42	91.3	420.0	1.10	38	177	19	7	3
SF		37	1	88	101	.126	.94	.38	99.8	466.7	1.08	38	176	18	6	3
SF		Totals	4	87	76	1.673	3.75	2.59	51.5	213.5	3.82	133	554	65	23	9
NF		26	1	88	99	.452	1.67	.90	68.3	265.0	1.48	62	240	25	10	4
NF		Totals	1	88	99	.452	1.67	.90	68.3	265.0	1.48	62	240	25	10	4
Totals		112	87	93		119.358	204.17	234.85	32.3	141.4	215.96	7592	33,197	3,671	1,291	564



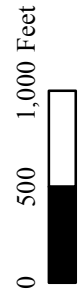
LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-12-11
 ELLIOT NESS
 PORTIONS OF SECTIONS 2, 11, 12, T01N, R06W, W.M
 TILLAMOOK COUNTY, OREGON



1:12,000

1 inch = 1,000 feet



- Legend**
- Timber Sale Boundary
 - ◆◆◆◆ Area Boundary
 - ▭ Right-of-Way Boundary
 - Existing Road
 - - - New Construction Road
 - Type F Stream
 - Type N Stream
 - ▨ Unposted Stream Buffer
 - ▩ Posted Stream Buffer
 - ▱ Cable Logging Area
 - ▤ Tractor Logging Area
 - ▥ Reforestation Area
 - Tractor Landing
 - ⊙ Cable Landing
 - ▭ ODF Ownership
 - ~ 80 Foot Contour
 - ▨ Recreation Trail

	TRACTOR	CABLE
AREA 1	15	39
AREA 2	100	0
AREA 3	62	20
AREA 4	17	0
AREA 5	5	0
TOTAL	199	59

Forest Grove District GIS
 January 2012
 This product is for informational use and may not be suitable for legal, engineering, or surveying purposes.