



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Two Windy
Sale FG-341-2023-W00888-01

District: Forest Grove

Date: January 10, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,840,512.99	\$0.00	\$2,840,512.99
		Project Work:	(\$114,856.00)
		Advertised Value:	\$2,725,656.99



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District: Forest Grove

Date: January 10, 2023

Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	20	0	98
Western Hemlock / Fir	18	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	3,996	1,761	5,757
Western Hemlock / Fir	803	455	1,258
Total	4,799	2,216	7,015

Comments: LOCAL POND VALUES, NOVEMBER 2022

NOBLE FIR AND OTHER CONIFERS:

STUMPAGE PRICE = POND VALUE - WESTERN HEM/FIR LOGGING COST

\$189.97 = \$644.91 - \$454.94

WESTERN REDCEDAR AND OTHER CEDARS:

STUMPAGE PRICE = POND VALUE - DOUG-FIR LOGGING COST

\$806.15 = \$1,218 - \$411.85

RED ALDER AND OTHER HARDWOODS:

STUMPAGE PRICE = POND VALUE - DOUG-FIR LOGGING COST

\$204.15 = \$616 - \$411.85

BRANDING AND PAINTING ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$5.00/GAL

HAULING COST ALLOWANCE = \$1,200/DAY

OTHER COSTS (WITH PROFIT & RISK ADDED): N/A

OTHER COSTS (NO PROFIT & RISK ADDED):

EQUIPMENT CLEANING: 3 PIECES @ \$1,000/PIECE = \$3,000

MACHINE TIME TO BLOCK/WATERBAR ROADS AND SKID TRAILS:

20 HOURS X \$150/HOUR = \$3,000

WEYERHAEUSER ROAD MAINT & ROCKWEAR FEE: \$62,333.75

STIMSON LAND & TIMBER FEE: \$6,727.26

TOTAL OTHER COSTS (NO P&R) = \$75,061.01

SLASH TREATMENT: 25 ACRES X \$250/ACRE = \$6,250

ROAD MAINTENANCE (INCLUDES SPOT ROCKING, GRADING, & ROLLING):

MOVE IN: \$3,461.11

GENERAL ROAD MAINT: 9.37 miles X \$2,078.69 = \$19,477.32

TOTAL ROAD MAINTENANCE: \$22,938.43 / 7,015 MBF = \$3.26/MBF



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Logging Conditions

Combination#: 1 Douglas - Fir 69.14%
 Western Hemlock / Fir 46.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 6 **bd. ft / load:** 4500
cost / mbf: \$290.44
machines: Log Loader (A)
 Forwarder
 Harvester
 Tower Yarder (Medium)

Combination#: 2 Douglas - Fir 30.86%
 Western Hemlock / Fir 54.00%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 8 **bd. ft / load:** 4600
cost / mbf: \$145.22
machines: Forwarder
 Harvester



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 15%
Project Costs: \$114,856.00	Other Costs (P/R): \$0.00
Slash Disposal: \$6,250.00	Other Costs: \$75,061.01

Miles of Road

Road Maintenance: \$3.26

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	4.6
Western Hemlock / Fir	\$0.00	2.0	3.9



"STEWARDSHIP IN FORESTRY"

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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$245.63	\$3.33	\$4.96	\$92.39	\$0.00	\$51.95	\$0.89	\$2.00	\$10.70	\$411.85
Western Hemlock / Fir									
\$212.02	\$3.33	\$4.96	\$163.47	\$0.00	\$57.57	\$0.89	\$2.00	\$10.70	\$454.94

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$863.74	\$451.89	\$0.00
Western Hemlock / Fir	\$0.00	\$644.91	\$189.97	\$0.00



Timber Sale Appraisal
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Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,757	\$451.89	\$2,601,530.73
Western Hemlock / Fir	1,258	\$189.97	\$238,982.26

Gross Timber Sale Value

Recovery: \$2,840,512.99

Prepared By: Adrian Torres

Phone: 503-359-7460

TIMBER SALE SUMMARY
Two Windy
#FG-341-2023-W00888-01

1. **Location:** Portions of Sections 15, 16, 21, and 22, T1S, R6W, W.M., Washington County, Oregon.
2. **Type of Sale:** This timber sale is 152 net acres of Modified Clearcut and less than 1 acre of Right-of-Way Timber removal. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF; 100% Washington County.
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcGIS Pro software.
5. **Cruise:** The timber sale was cruised by ODF Cruisers in October of 2022. For more information, see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of a well-stocked, thinned 65-year-old stand of Douglas-fir and western hemlock with minor components of red alder. These timber stands have an average of 241 ft² of basal area, an average Douglas-fir DBH of 20 inches. The estimated average net Douglas-fir volume is approximately 46.0 MBF per acre.
7. **Topography and Logging Method:** Slopes within the Timber Sale Area range from 5% to 80% with a mainly southern aspect in Unit 1 and Unit 2. Unit 1 is 54% ground-based yarding and 46% cable-based yarding. Unit 2 is 100% cable-based yarding. Unit 3 is 100% ground-based yarding. The average cable corridor length is approximately 700 feet and the maximum is approximately 2000 feet. The average horizontal skid trail length is approximately 300 feet and the maximum is approximately 600 feet.
8. **Access:** All access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove, proceed south on Highway 47 for 15 miles. Turn right onto Pike Road and continue for 4.5 miles. Pike Road then becomes Turner Creek Road. Continue down Turner Creek Road for 4 miles and there is a Weyerhaeuser gate that requires a key. Continue through this gate on Turner Creek Road for 4.5 miles. Turn right onto North Fork Trask River Road and continue for 1.5 miles and there is a Weyerhaeuser gate that requires a key. Continue through this gate on North Fork Trask River Road for 4.5 miles to the junction with Williams Road. Turn right on Williams Road and continue for 0.9 miles to access the southern portion of Unit 1. To access Unit 2, continue on Williams Road for 2.4 miles to Windy Point Road and turn right. Continue on Windy Point Road for 0.8 miles to a Stimson Gate that requires a key. Continue on Windy Point Road for 0.5 miles to a new construction road and turn right. Continue on spur road for 0.2 miles to Unit 2. To access Unit 3, proceed west for approximately 300 feet from the intersection of Williams Road and Windy Point Road. Turn left on a spur road and continue for 0.1 miles to Unit 3. There are gates along this route that will require a key which can be obtained at the Forest Grove District Office.
9. **Projects:**

Project No. 1: Rocked Road Construction	\$44,092.34
Project No. 2: Road Improvement	\$70,763.66
Total Credit for all Projects	\$114,856.00

PROJECT COST SUMMARY SHEET

Timber Sale: Two Windy
Sale Number: FG-341-2023-W00888-01

PROJECT NO. 1: ROAD CONSTRUCTION

	Road Segment	Length	Cost
	D to E	11+50	\$33,073.15
	J to K	3+50	\$3,421.09
		15+00 stations	
		0.28 miles	
Total Rock =	127 cy	1½" - 0	
	1,296 cy	4" - 0	
		Move-in =	\$3,589.71
		TOTAL PROJECT COST =	\$40,083.95
		10% FUEL ADJUSTMENT =	\$44,092.34

PROJECT NO. 2: ROAD IMPROVEMENT

	Road Segment	Length	Cost
	A to B	116+00	\$17,358.98
	C to D	63+80	\$25,643.68
	F to G	9+50	\$6,009.23
	H to I	15+60	\$9,557.59
		204+90 stations	
		3.88 miles	
Total Rock =	144 cy	1½" - 0	
	2,775 cy	4" - 0	
	12 cy	Pit-run	
	24 cy	Riprap	
		Move-in =	\$5,761.11
		TOTAL PROJECT COST =	\$64,330.59
		10% FUEL ADJUSTMENT =	\$70,763.66
		TOTAL CREDITS WITH ADJUSTMENT =	\$114,856.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Two Windy
Road Segment: A to B

Sale Number: FG-341-2023-W00888-01
Improvement: 116+00 stations
2.20 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	1.34	ac @	\$1,078.00	per acre =	\$1,444.52
Clean ditch & scatter waste material	116.00	sta @	\$60.00	per sta =	\$6,960.00
Clean culvert inlet & outlet, scatter waste	4	ea @	\$25.00	per ea =	\$100.00
Construct settling pond	6	ea @	\$25.00	per ea =	\$150.00
Improve turnout	10	ea @	\$33.00	per ea =	\$330.00
Grade, ditch, & roll	116.00	sta @	\$36.00	per sta =	\$4,176.00

TOTAL IMPROVEMENT COSTS = \$13,160.52

CULVERTS

Culverts and Bands					
18" Diameter	30	LF @	\$20.00	per LF =	\$600.00
30" Diameter	50	LF @	\$39.00	per LF =	\$1,950.00
Markers & Stakes					
Culvert markers	6	ea @	\$10.00	per ea =	\$60.00

TOTAL CULVERT COSTS = \$2,610.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$5.27	\$4.93	\$0.50	72	\$770.40
Energy dissipator	Riprap	\$2.16	\$4.93	\$1.60	24	\$208.56
				Subtotal =	96	\$978.96

Totals

All Rock =	96
1½" - 0	72
Riprap	24

TOTAL ROCK COSTS = \$978.96

EROSION CONTROL

Grass seed & fertilizer	1.34	ac @	\$425.00	per ac =	\$569.50
Straw mulch bale	4	ea @	\$10.00	per ea =	\$40.00

TOTAL EROSION CONTROL COSTS = \$609.50

TOTAL PROJECT COST = \$17,358.98

SUMMARY OF CONSTRUCTION COST

Timber Sale: Two Windy
Road Segment: C to D

Sale Number: FG-341-2023-W00888-01
Improvement: 63+80 stations
1.21 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.74	ac @	\$1,078.00	per acre =	\$797.72
Roadside brushing	1.21	mi @	\$1,550.00	per mi =	\$1,875.50
Clean ditch & scatter waste material	63.80	sta @	\$60.00	per sta =	\$3,828.00
Clean culvert inlet & outlet, scatter waste	3	ea @	\$25.00	per ea =	\$75.00
Improve turnout	8	ea @	\$33.00	per ea =	\$264.00
Construct roadside landing	3	ea @	\$165.00	per ea =	\$495.00
Improve roadside landing	1	ea @	\$82.50	per ea =	\$82.50
Grade, ditch, & roll	63.80	sta @	\$36.00	per sta =	\$2,296.80

TOTAL IMPROVEMENT COSTS = \$9,714.52

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Subgrade reinforcement	Pit-run	\$1.36	\$6.29	\$0.75	12	\$100.80
Subtotal =					12	\$100.80
Surfacing rock						
Surfacing rock	4" - 0	\$1.35	\$6.29	\$1.22	1,271	\$11,261.06
Junction	4" - 0	\$1.35	\$6.29	\$1.22	36	\$318.96
Turnout	4" - 0	\$1.35	\$6.29	\$1.22	112	\$992.32
Roadside landing	4" - 0	\$1.35	\$6.29	\$1.22	332	\$2,941.52
Subtotal =					1,751	\$15,513.86

Totals

All Rock =	1,763
4" - 0	1,751
Pit-run	12

TOTAL ROCK COSTS = \$15,614.66

EROSION CONTROL

Grass seed & fertilizer	0.74	ac @	\$425.00	per ac =	\$314.50
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TOTAL EROSION CONTROL COSTS = \$314.50

TOTAL PROJECT COST = \$25,643.68

SUMMARY OF CONSTRUCTION COST

Timber Sale: Two Windy
Road Segment: D to E

Sale Number: FG-341-2023-W00888-01
Construction: 11+50 stations
0.22 miles

PROJECT NO. 1: ROAD CONSTRUCTION

CONSTRUCTION

Clearing & grubbing (scatter)	1.33	ac @	\$1,078.00	per ac =	\$1,433.74
Balanced road construction	10.10	sta @	\$110.00	per sta =	\$1,111.00
Drift	1.40	sta @	\$180.00	per sta =	\$252.00
"Y" Junction Full Bench Road Construction (0+00 to 1+20)					
Excavate & load	506	cy @	\$1.64	per cy =	\$829.84
Haul to Waste Area No. 1	658	cy @	\$2.27	per cy =	\$1,493.66
Shape and compact waste material	658	cy @	\$0.30	per cy =	\$197.40
Full Bench Road Construction (3+40 to 8+50)					
Excavate & load	2,782	cy @	\$1.64	per cy =	\$4,562.48
Haul to Waste Area No. 1	3,617	cy @	\$2.57	per cy =	\$9,295.69
Shape and compact waste material	3,617	cy @	\$0.30	per cy =	\$1,085.10
Turnout	2	ea @	\$66.00	per ea =	\$132.00
Turnaround	1	ea @	\$82.50	per ea =	\$82.50
Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	11.50	sta @	\$36.00	per sta =	\$414.00

TOTAL CONSTRUCTION COSTS = \$21,203.41

CULVERTS

Culverts and Bands					
18" Diameter	60	LF @	\$20.00	per LF =	\$1,200.00
Markers & Stakes					
Culvert markers	2	ea @	\$10.00	per ea =	\$20.00

TOTAL CULVERT COSTS = \$1,220.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	4" - 0	\$1.35	\$6.50	\$1.22	747	\$6,775.29
Traction rock	1½" - 0	\$1.35	\$6.50	\$1.22	127	\$1,151.89
Turnout	4" - 0	\$1.35	\$6.50	\$1.22	58	\$526.06
Turnaround	4" - 0	\$1.35	\$6.50	\$1.22	20	\$181.40
Landing	4" - 0	\$1.35	\$6.50	\$1.22	180	\$1,632.60
Subtotal =					1,132	\$10,267.24

Totals

All Rock =	1,132
1½" - 0	127
4" - 0	1,005

TOTAL ROCK COSTS = \$10,267.24

EROSION CONTROL

Grass seed & fertilizer	0.67	ac @	\$500.00	per ac =	\$332.50
Straw mulch (bale)	5	ea @	\$10.00	per ea =	\$50.00

TOTAL EROSION CONTROL COSTS = \$382.50

TOTAL PROJECT COST = \$33,073.15

SUMMARY OF CONSTRUCTION COST

Timber Sale: Two Windy
Road Segment: F to G

Sale Number: FG-341-2023-W00888-01
Improvement: 9+50 stations
0.18 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.11	ac @	\$1,078.00	per acre =	\$118.580
Roadside brushing	0.18	mi @	\$1,550.00	per mi =	\$279.000
Clean ditch & scatter waste material	9.50	sta @	\$60.00	per sta =	\$570.000
Improve turnout	1	ea @	\$33.00	per ea =	\$33.000
Construct turnaround	1	ea @	\$82.50	per ea =	\$82.500
Improve landing	1	ea @	\$157.00	per ea =	\$157.000
Grade, ditch, & roll	9.50	sta @	\$36.00	per sta =	\$342.000

TOTAL IMPROVEMENT COSTS = \$1,582.080

CULVERTS

Culverts and Bands					
18" Diameter	30	LF @	\$20.00	per LF =	\$600.00
Markers & Stakes					
Culvert markers	1	ea @	\$10.00	per ea =	\$10.00

TOTAL CULVERT COSTS = \$610.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$5.27	\$5.98	\$0.50	24	\$282.00
Subtotal =					24	\$282.00
Surfacing rock						
Surfacing rock	4" - 0	\$1.35	\$5.98	\$1.22	294	\$2,513.70
Turnout	4" - 0	\$1.35	\$5.98	\$1.22	14	\$119.70
Turnaround	4" - 0	\$1.35	\$5.98	\$1.22	10	\$85.50
Landing	4" - 0	\$1.35	\$5.98	\$1.22	90	\$769.50
Subtotal =					408	\$3,488.40

Totals	All Rock =	432
	1½" - 0	24
	4" - 0	408

TOTAL ROCK COSTS = \$3,770.40

EROSION CONTROL

Grass seed & fertilizer	0.11	ac @	\$425.00	per ac =	\$46.75
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TOTAL EROSION CONTROL COSTS = \$46.75

TOTAL PROJECT COST = \$6,009.23

SUMMARY OF CONSTRUCTION COST

Timber Sale: Two Windy
 Road Segment: H to I

Sale Number: FG-341-2023-W00888-01
 Improvement: 15+60 stations
 0.30 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.18	ac @	\$1,078.00	per acre =	\$194.04
Roadside brushing	0.30	mi @	\$1,100.00	per mi =	\$330.00
Clean ditch & scatter waste material	15.60	sta @	\$60.00	per sta =	\$936.00
Clean culvert inlet & outlet, scatter waste	2	ea @	\$25.00	per ea =	\$50.00
Improve turnout	2	ea @	\$33.00	per ea =	\$66.00
Improve turnaround	1	ea @	\$41.25	per ea =	\$41.25
Construct roadside landing	1	ea @	\$165.00	per ea =	\$165.00
Grade, ditch, & roll	15.60	sta @	\$36.00	per sta =	\$561.60

TOTAL IMPROVEMENT COSTS = \$2,343.89

CULVERTS

Culverts and Bands					
18" Diameter	60	LF @	\$20.00	per LF =	\$1,200.00
Markers & Stakes					
Culvert markers	2	ea @	\$10.00	per ea =	\$20.00

TOTAL CULVERT COSTS = \$1,220.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$5.27	\$6.08	\$0.50	48	\$568.80
				Subtotal =	48	\$568.80
Surfacing rock						
Surfacing rock	4" - 0	\$1.35	\$6.08	\$1.22	483	\$4,177.95
Turnout	4" - 0	\$1.35	\$6.08	\$1.22	28	\$242.20
Turnaround	4" - 0	\$1.35	\$6.08	\$1.22	10	\$86.50
Roadside landing	4" - 0	\$1.35	\$6.08	\$1.22	95	\$821.75
				Subtotal =	616	\$5,328.40

Totals

All Rock =	664
1½" - 0	48
4" - 0	616

TOTAL ROCK COSTS = \$5,897.20

EROSION CONTROL

Grass seed & fertilizer	0.18	ac @	\$425.00	per ac =	\$76.50
Straw mulch bale	2	ea @	\$10.00	per ea =	\$20.00

TOTAL EROSION CONTROL COSTS = \$96.50

TOTAL PROJECT COST = \$9,557.59

SUMMARY OF CONSTRUCTION COST

Timber Sale: Two Windy
 Road Segment: J to K

Sale Number: FG-341-2023-W00888-01
 Construction: 3+50 stations
0.07 miles

PROJECT NO. 1: ROAD CONSTRUCTION

CONSTRUCTION

Clearing & grubbing (scatter)	0.41	ac @	\$1,078.00	per ac =	\$441.98
Balanced road construction	1.90	sta @	\$110.00	per sta =	\$209.00
Drift	1.60	sta @	\$180.00	per sta =	\$288.00
Grade, ditch, & roll	3.50	sta @	\$36.00	per sta =	\$126.00

TOTAL CONSTRUCTION COSTS = \$1,064.98

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	4" - 0	\$1.35	\$5.14	\$1.22	227	\$1,750.17
Curve widening	4" - 0	\$1.350	\$5.140	\$1.220	64	\$493.44
Subtotal =					291	\$2,243.61

Totals	All Rock =	291
	4" - 0	291

TOTAL ROCK COSTS = \$2,243.61

EROSION CONTROL

Grass seed & fertilizer	0.21	ac @	\$500.00	per ac =	\$102.50
Straw mulch (bale)	1	ea @	\$10.00	per ea =	\$10.00

TOTAL EROSION CONTROL COSTS = \$112.50

TOTAL PROJECT COST = \$3,421.09

SUMMARY OF CONSTRUCTION COST

Timber Sale: Two Windy

Sale Number: FG-341-2023-W00888-01

PROJECT No. 1 & 2 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

<u>Equipment</u>	<u>Total</u>
Brush Cutter	\$829.93
Grader	\$1,301.28
Loader (Med. & Large)	\$1,133.02
Roller (smooth/grid) & Compactor	\$829.93
Excavator (Large) - Equipment Cleaning	\$2,301.28
Dozer (Large) - Equipment Cleaning	\$2,345.86
Dump Truck (10cy +)	\$609.52
<u>TOTAL MOVE-IN COSTS =</u>	<u>\$9,350.82</u>

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Two Windy
Sale Number: FG-341-2023-W00888-01
Stockpile Name: Barney Stockpile & Quarry

4" - 0: 4,071 cy (truck measure)
Pit-run: 12 cy (truck measure)
Riprap: 24 cy (truck measure)
Total truck yardage: 4,107 cy

Move-in & within area move

Move in excavator	\$1,074.16
Move in loader	\$939.03
Move in Dump Trucks	\$262.72
Subtotal =	\$2,275.91
Per CY =	\$0.55/cy

4"-0 Base Cost

Load dump truck	\$0.80	/ cy x	4,071	cy =	\$3,256.80	
					Subtotal =	\$3,256.80
					Per CY =	\$0.79

Pit-run Base Cost

Load dump truck	\$0.80	/ cy x	12	cy =	\$9.60	
					Subtotal =	\$9.60
					Per CY =	\$0.80

Riprap Base Cost

Load dump truck	\$1.60	/ cy x	24	cy =	\$38.40	
					Subtotal =	\$38.40
					Per CY =	\$1.60

4"-0 Cost = \$1.35/cy
Pit-Rrun Cost = \$1.36/cy
Riprap Cost = \$2.16/cy

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Two Windy
Sale Number: FG-341-2023-W00888-01
Stockpile Name: Trask 5.5 Stockpile
1 1/2" - 0: 271 cy (truck measure)
Total truck yardage: 271 cy

Within area Move-in

Move in loader					\$945.88
Move in Dump Trucks					\$263.33
				Subtotal =	\$1,209.21
				Per CY =	\$4.46/cy

1 1/2"-0 Base Cost

Load dump truck	\$0.80	/ cy x	271	cy =	\$216.80
				Subtotal =	\$216.80
				Per CY =	\$0.80

1 1/2"-0 Cost = **\$5.27/cy**

CRUISE REPORT
Two Windy
#FG-341-2023-W00888-01

1. LOCATION:

Portions of Sections 15, 16, 21, and 22, T1S, R6W, W.M., Washington County, Oregon.

2. CRUISE DESIGN:

The timber cruise was designed using an estimated coefficient of variation (CV) of 53%, average stand diameter of 18 inches, sampling error (SE) of 9% and a minimum of 100 grade trees.

3. SAMPLING METHOD:

The Timber Sale Area was cruised in October of 2022 with 34 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 6 chain x 6 chain grid for Unit 1 and 7 chain x 6 chain grid for Unit 2. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS:

209 trees were measured and graded producing a sampling error of 8.6% on the Douglas-fir Basal Area. The sampling error of Douglas-fir Net Board Foot Volume is 8.4%.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following the Official Log Scaling and Grading Rules as adopted by the NW Log Rules Advisory Group. Forty-foot segments were favored.

- 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:** Measured for each grade tree using a form point of 16 feet.

6. DATA PROCESSING:

- a) **Volumes and Statistics:** Cruise estimates and sampling statistics were derived from SuperAce 2008 cruise software.
- b) **Deductions:** The following percent volume deductions are by species to account for the hidden defect and breakage. For conifers two percent was deducted.

7. CRUISERS: The sale was cruised by ODF cruisers Adrian Torres, Mark Savage, and Colton Turner.

Prepared by: Adrian Torres 11-17-2022

Reviewed by: Mark Savage 11-17-2022
Date

TC PSTATS				PROJECT STATISTICS				PAGE	1			
				PROJECT		TWO WINDY		DATE	11/1/2022			
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
01S 01S	06 06W	15 16	00U2 00U1	00MC 00MC		Combined 152.00	34	220	S	W		
				TREES	ESTIMATED			PERCENT				
				PLOTS	TREES	PER PLOT	TREES	TREES				
TOTAL			34	220	6.5							
CRUISE			34	220	6.5	20,659	1.1					
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
			TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR			177	95.2	19.7	117	45.3	200.9	38,605	38,526	8,656	8,656
DOUG FIR-S			11	17.5	11.2	66	3.6	12.1				
WHEMLOCK			32	23.3	17.8	114	9.5	40.3	8,445	8,445	1,855	1,855
TOTAL			220	135.9	18.5	110	58.9	253.3	47,050	46,971	10,510	10,510
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			64.5	4.8	566	595	624					
DOUG FIR-S												
WHEMLOCK			40.4	7.1	419	451	483					
TOTAL			69.0	4.6	519	545	570	190	48	21		
CL	68.1	COEFF		SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR			57.9	4.3	125	131	137					
DOUG FIR-S												
WHEMLOCK			36.8	6.5	92	99	105					
TOTAL			63.0	4.2	115	120	125	159	40	18		
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			76.2	13.1	83	95	108					
DOUG FIR-S			352.3	60.4	7	17	28					
WHEMLOCK			230.1	39.4	14	23	32					
TOTAL			73.6	12.6	119	136	153	216	54	24		
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR			50.5	8.6	184	201	218					
DOUG FIR-S			271.9	46.6	6	12	18					
WHEMLOCK			204.2	35.0	26	40	54					
TOTAL			31.6	5.4	240	253	267	40	10	4		
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR			49.2	8.4	35,279	38,526	41,773					
DOUG FIR-S												
WHEMLOCK			203.4	34.9	5,501	8,445	11,389					
TOTAL			31.4	5.4	44,446	46,971	49,495	39	10	4		
CL	68.1	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR			48.9	8.4	7,930	8,656	9,381					
DOUG FIR-S												

TC PSTATS				PROJECT STATISTICS				PAGE	2	
				PROJECT	TWO			WINDY	DATE	11/1/2022
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
01S	06	15	00U2	00MC	152.00	34	220	S	W	
01S	06W	16	00U1	00MC						
CL	68.1		COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.	INF. POP.		
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK			201.8	34.6	1,213	1,855	2,496			
TOTAL			30.4	5.2	9,963	10,510	11,058	37	9	4

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																			
<div><div>T01S R06W S15 Ty00MC42.00</div><div>T01S R06W S16 Ty00MC110.00</div></div>				Project:		TWOWINDY												Page		1			
				Acres		152.00												Date		11/1/2022			
																		Time		7:12:17AM			
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of 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			CU														13	8		0.00	29.7		
DF			2M	69	.2	26,807	26,743	4,065			58	42	0		0	99	40	15	361	1.91	74.0		
DF			3M	25	.2	9,747	9,732	1,479		99	1			0	2	98	40	8	110	0.70	88.6		
DF			4M	6		2,051	2,051	312		100			14	38	21	27	26	6	36	0.39	56.3		
DF Totals				82	.2	38,605	38,526	5,856		30	40	29	1	2	2	95	33	10	155	1.04	248.6		
WH			2M	63		5,394	5,394	820			88	12				100	40	14	301	1.54	17.9		
WH			3M	31		2,613	2,613	397		96	4				1	99	40	9	117	0.72	22.3		
WH			4M	6		439	439	67		100			29	49	22		21	6	28	0.33	15.8		
WH Totals				18		8,445	8,445	1,284		35	57	8	1	3	1	95	35	10	151	0.96	56.0		
Totals					0.2	47,050	46,971	7,140		31	43	25	1	2	2	95	34	10	154	1.03	304.6		

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		11/1/2022	
				T01S R06W S15 Ty00MC		42.00		Project		TWOWINDY		Time:		7:12:18AM			
				T01S R06W S16 Ty00MC		110.00		Acres		152.00		Grown Year:					
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DF		5	1	88	88	7.369	1.00										
DF		7	1	86	70	3.760	1.00										
DF		8	1	85	66	2.878	1.00										
DF		10	3	88	84	5.992	3.27	7.83	9.9	48.2	2.22	78	378	337	118	57	
DF		11	2	87	74	3.430	2.26	3.43	14.3	61.1	1.40	49	210	213	75	32	
DF		12	3	84	62	4.161	3.27	1.60	8.8	40.0	.40	14	64	61	21	10	
DF		13	4	91	79	4.360	4.02	6.54	15.4	68.3	2.88	101	447	438	154	68	
DF		14	6	90	90	6.589	7.04	10.82	18.8	82.0	5.79	203	887	880	309	135	
DF		15	8	88	106	7.377	9.05	12.70	22.4	98.7	8.12	285	1,254	1,234	433	191	
DF		16	7	88	100	5.764	8.05	10.09	25.5	108.9	7.33	257	1,099	1,115	391	167	
DF		17	8	88	118	5.422	8.55	10.84	30.6	127.1	9.47	332	1,378	1,439	505	209	
DF		18	8	87	119	5.410	9.56	12.25	31.9	130.3	11.14	391	1,596	1,693	594	243	
DF		19	13	88	124	7.150	14.08	19.66	30.5	126.5	17.09	600	2,487	2,598	912	378	
DF		20	12	87	127	6.341	13.83	18.45	32.5	136.2	17.10	600	2,513	2,599	912	382	
DF		21	14	88	134	6.693	16.10	19.14	39.0	180.3	21.29	747	3,450	3,236	1,135	524	
DF		22	7	86	123	2.857	7.54	7.62	41.8	177.0	9.08	319	1,348	1,380	484	205	
DF		23	16	87	132	6.452	18.61	18.92	45.3	201.9	24.44	857	3,820	3,714	1,303	581	
DF		24	13	86	129	4.643	14.58	13.29	48.5	211.5	18.38	645	2,810	2,793	980	427	
DF		25	7	85	126	2.361	8.05	6.20	53.7	235.2	9.48	333	1,458	1,441	506	222	
DF		26	11	85	139	3.480	12.83	10.44	58.1	258.4	17.27	606	2,697	2,625	921	410	
DF		27	7	86	137	2.088	8.30	6.26	62.4	279.5	11.15	391	1,751	1,694	594	266	
DF		28	8	87	139	2.117	9.05	6.12	69.4	333.8	12.09	424	2,041	1,838	645	310	
DF		29	5	85	143	1.372	6.29	4.12	74.6	351.3	8.75	307	1,446	1,330	467	220	
DF		30	7	86	137	1.640	8.05	4.92	78.3	368.1	10.97	385	1,811	1,668	585	275	
DF		31	4	86	139	.864	4.53	2.59	83.8	398.5	6.19	217	1,032	941	330	157	
DF		32	3	84	150	.585	3.27	1.76	94.0	442.3	4.70	165	776	715	251	118	
DF		33	4	88	140	.719	4.27	2.16	99.1	497.8	6.10	214	1,074	927	325	163	
DF		35	2	57	30	.377	2.52										
DF		36	1	85	149	.142	1.00	.43	121.8	623.3	1.48	52	266	225	79	40	
DF		37	1	86	145	.135	1.00	.40	85.4	450.0	.98	34	182	149	52	28	
DF		40	1	85	138	.115	1.00	.35	141.7	726.7	1.40	49	251	212	74	38	
DF		Totals	188	87	109	112.642	213.01	218.91	39.5	176.0	246.68	8,656	38,526	37,496	13,156	5,856	
WH		8	1	87	56	3.606	1.26	3.61	5.1	30.0	.59	18	108	89	28	16	
WH		15	3	93	119	3.077	3.78	6.15	26.6	125.0	5.23	163	769	795	248	117	
WH		16	2	92	121	1.803	2.52	4.51	25.6	116.0	3.69	115	523	560	175	79	
WH		17	2	90	126	1.597	2.52	4.79	25.0	108.3	3.83	120	519	582	182	79	
WH		18	3	90	119	2.137	3.78	5.70	28.7	121.2	5.24	164	691	797	249	105	
WH		19	5	87	119	3.196	6.29	7.67	35.7	149.2	8.75	274	1,144	1,331	416	174	
WH		20	1	93	130	.577	1.26	1.73	36.2	180.0	2.01	63	312	305	95	47	
WH		21	7	89	129	3.663	8.81	10.99	39.0	182.4	13.72	429	2,004	2,085	652	305	
WH		22	4	87	135	1.907	5.03	5.72	43.9	199.2	8.04	251	1,139	1,222	382	173	
WH		23	3	91	129	1.309	3.78	3.93	48.0	230.0	6.03	189	903	917	287	137	
WH		24	1	90	145	.401	1.26	1.20	58.1	276.7	2.23	70	333	340	106	51	
WH		Totals	32	89	114	23.271	40.27	55.99	33.1	150.8	59.36	1,855	8,445	9,022	2,819	1,284	
Totals			220	87	110	135.913	253.28	274.91	38.2	170.9	306.04	10,510	46,971	46,518	15,976	7,140	

TC		PLOGSTVB		Log Stock Table - MBF																	
<div>T01S R06W S15 Ty00MC42.00</div> <div>T01S R06W S16 Ty00MC110.00</div>				Project:		TWO WINDY												Page		1	
				Acres		152.00												Date		11/1/2022	
																		Time		7:12:16AM	
Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spe	Net Volume by Scaling Diameter in Inches													
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+		
DF		2M	20	15		15	.3										15				
DF		2M	32	11		11	.2						11								
DF		2M	40	4,048		4,039	69.0					978	1037	1278	617	128					
DF		3M	29	2		2	.0			2											
DF		3M	30	2		2	.0			2											
DF		3M	32	4		4	.1				2	2									
DF		3M	33	7		7	.1			7											
DF		3M	34	2		2	.0			2											
DF		3M	35	11		11	.2			9	2										
DF		3M	36	4		4	.1			4											
DF		3M	37	28		28	.5			28											
DF		3M	38	20		20	.3			20											
DF		3M	39	11		11	.2			9	2										
DF		3M	40	1,391		1,388	23.7			210	447	720	11								
DF		4M	12	6		6	.1			6											
DF		4M	13	3		3	.0			3											
DF		4M	14	1		1	.0			1											
DF		4M	15	8		8	.1			8											
DF		4M	16	11		11	.2			2	10										
DF		4M	17	5		5	.1			5											
DF		4M	18	7		7	.1			7											
DF		4M	19	3		3	.0			3											
DF		4M	20	1		1	.0			1											
DF		4M	21	7		7	.1			7											
DF		4M	22	19		19	.3			19											
DF		4M	23	12		12	.2			12											
DF		4M	24	11		11	.2			11											
DF		4M	25	7		7	.1			7											
DF		4M	26	17		17	.3			17											
DF		4M	27	8		8	.1			8											
DF		4M	28	3		3	.0			1	2										
DF		4M	29	24		24	.4			24											
DF		4M	30	11		11	.2			11											
DF		4M	31	18		18	.3			18											
DF		4M	32	23		23	.4			23											
DF		4M	33	7		7	.1			7											
DF		4M	34	8		8	.1			8											

Log Stock Table - MBF

T01S R06W S15 Ty00MC 42.00
T01S R06W S16 Ty00MC 110.00

Project: TWOWINDY
Acres 152.00

Page 2
Date 11/1/2022
Time 7:12:16AM

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
DF		4M	35	8		8	.1			8										
DF		4M	36	47		47	.8			45	2									
DF		4M	38	15		15	.3			15										
DF		4M	40	20		20	.3			20										
DF		Totals		5,868		5,856	82.0			591	466	722	978	1059	1278	617	143			
WH		2M	40	820		820	63.9					293	249	278						
		3M	35	3		3	.3			3										
		3M	40	394		394	30.7			60	113	206	14							
		4M	12	1		1	.1			1										
		4M	13	7		7	.6			7										
		4M	15	1		1	.1			1										
		4M	17	4		4	.3			4										
		4M	18	2		2	.2			2										
		4M	19	2		2	.2			2										
		4M	20	2		2	.1			2										
		4M	21	2		2	.2			2										
		4M	22	21		21	1.6			21										
		4M	23	5		5	.4			5										
		4M	25	3		3	.2			3										
		4M	27	2		2	.2			2										
		4M	32	4		4	.3			4										
		4M	33	4		4	.3			4										
		4M	34	7		7	.6			7										
	WH		Totals		1,284		1,284	18.0			130	113	206	307	249	278				
	Total		All Species		7,152		7,140	100.0			722	579	928	1285	1308	1556	617	143		

TC PSTATS				PROJECT STATISTICS				PAGE 1				
				PROJECT	TWO WINDY		DATE	10/31/2022				
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
01S	06	16	00U1	00MC	Unit 1	110.00	23	127	S	W		
				TREES	ESTIMATED	PERCENT						
				PER PLOT	TOTAL	SAMPLE						
					TREES	TREES						
TOTAL			23	127	5.5							
CRUISE			23	127	5.5	11,581	1.1					
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
SAMPLE			TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES			/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
DOUG FIR			91	69.6	20.4	119	35.0	158.3	30,607	30,515	6,903	6,903
DOUG FIR-S			4	3.6	18.9	47	1.6	7.0				
WHEMLOCK			32	32.2	17.8	114	13.2	55.7	11,669	11,669	2,563	2,563
TOTAL			127	105.3	19.6	115	49.9	220.9	42,276	42,185	9,466	9,466
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		54.2	5.7	560	594	628						
DOUG FIR-S												
WHEMLOCK		40.4	7.1	419	451	483						
TOTAL		57.3	5.1	512	539	567	131	33	15			
CL	68.1	COEFF		SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		49.8	5.2	126	133	140						
DOUG FIR-S												
WHEMLOCK		36.8	6.5	92	99	105						
TOTAL		53.6	4.7	114	120	126	115	29	13			
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		74.6	15.9	59	70	81						
DOUG FIR-S		338.8	72.2	1	4	6						
WHEMLOCK		181.6	38.7	20	32	45						
TOTAL		54.2	11.6	93	105	117	123	31	14			
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		56.8	12.1	139	158	177						
DOUG FIR-S		373.9	79.7	1	7	12						
WHEMLOCK		158.9	33.8	37	56	74						
TOTAL		31.3	6.7	206	221	236	41	10	5			
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		52.6	11.2	27,095	30,515	33,936						
DOUG FIR-S												
WHEMLOCK		158.2	33.7	7,737	11,669	15,602						
TOTAL		30.0	6.4	39,491	42,185	44,878	38	9	4			
CL	68.1	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		54.1	11.5	6,107	6,903	7,698						
DOUG FIR-S												

TC PSTATS				PROJECT STATISTICS				PAGE	2	
				PROJECT	TWO			WINDY	DATE	10/31/2022
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
01S	06	16	00U1	00MC	110.00		23	127	S	W
CL	68.1		COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK			156.8	33.4	1,707	2,563	3,419			
TOTAL			29.9	6.4	8,863	9,466	10,068	37	9	4

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T01S R06W S16 Ty00MC110.00</div>				Project:		TWO WINDY												Page		1	
				Acres		110.00												Date		10/31/2022	
																		Time		3:19:13PM	
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
					Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF			CU														18	10		0.00	11.6
DF			2M	71	.3	21,886	21,816	2,400			60	40				100	40	15	357	1.91	61.1
DF			3M	23	.3	7,008	6,987	769		100				0	1	98	40	8	110	0.71	63.4
DF			4M	6		1,713	1,713	188		100			11	37	21	31	27	6	40	0.40	42.6
DF Totals				72	.3	30,607	30,515	3,357		29	43	29	1	2	1	96	35	10	171	1.09	178.8
WH																					
WH			2M	63		7,453	7,453	820			88	12				100	40	14	301	1.54	24.7
WH			3M	31		3,610	3,610	397		96	4				1	99	40	9	117	0.72	30.8
WH			4M	6		606	606	67		100			29	49	22		21	6	28	0.33	21.9
WH Totals				28		11,669	11,669	1,284		35	57	8	1	3	1	95	35	10	151	0.96	77.4
Totals					0.2	42,276	42,185	4,640		30	47	23	1	2	1	95	35	10	165	1.05	256.2

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		10/31/2022	
		T01S R06W S16 Ty00MC		110.00		Project		TWO WINDY		Time:		3:19:15PM					
						Acres		110.00		Grown Year:							
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DF		10	1	89	66	3.189	1.74	3.19	11.5	60.0	1.04	37	191	115	40	21	
DF		11	1	89	90	2.635	1.74	2.64	16.3	70.0	1.22	43	184	134	47	20	
DF		12	1	85	63	2.214	1.74	2.21	8.8	40.0	.56	20	89	61	21	10	
DF		14	4	91	83	6.507	6.96	9.76	18.7	81.7	5.21	183	797	573	201	88	
DF		15	4	88	103	5.669	6.96	8.50	21.8	93.3	5.28	185	794	581	204	87	
DF		16	4	86	107	4.982	6.96	9.96	24.4	102.5	6.94	244	1,021	764	268	112	
DF		17	2	85	115	2.207	3.48	4.41	29.1	120.0	3.66	129	530	403	141	58	
DF		18	6	87	120	5.905	10.43	13.78	31.4	129.3	12.34	433	1,781	1,357	476	196	
DF		19	4	87	120	3.533	6.96	8.83	32.3	128.0	8.13	285	1,131	894	314	124	
DF		20	7	86	126	5.580	12.17	15.94	32.5	132.0	14.75	518	2,105	1,623	569	231	
DF		21	8	88	137	5.784	13.91	16.63	39.7	189.1	18.82	660	3,145	2,070	726	346	
DF		22	2	83	114	1.318	3.48	2.64	51.3	190.0	3.85	135	501	424	149	55	
DF		23	10	87	132	6.028	17.39	17.48	45.6	203.1	22.74	798	3,550	2,501	878	391	
DF		24	6	86	137	3.321	10.43	9.96	49.3	216.7	14.01	491	2,159	1,541	541	237	
DF		25	4	85	138	2.041	6.96	6.12	53.8	233.3	9.38	329	1,429	1,032	362	157	
DF		26	7	85	140	3.302	12.17	9.91	58.1	259.5	16.42	576	2,571	1,806	634	283	
DF		27	5	86	140	2.187	8.70	6.56	63.3	284.7	11.84	415	1,868	1,302	457	205	
DF		28	4	88	142	1.627	6.96	4.88	70.1	335.8	9.76	342	1,639	1,073	377	180	
DF		29	5	85	143	1.896	8.70	5.69	74.6	351.3	12.09	424	1,998	1,330	467	220	
DF		30	4	85	134	1.417	6.96	4.25	75.9	348.3	9.19	323	1,481	1,011	355	163	
DF		31	2	84	138	.664	3.48	1.99	82.1	373.3	4.66	163	743	513	180	82	
DF		32	1	83	153	.311	1.74	.93	93.4	443.3	2.49	87	414	273	96	46	
DF		33	1	85	133	.293	1.74	.88	93.6	450.0	2.34	82	395	258	90	43	
DF		35	2	57	30	.521	3.48										
DF		Totals	95	87	116	73.130	165.22	167.16	41.3	182.6	196.72	6,903	30,515	21,640	7,593	3,357	
WH		8	1	87	56	4.982	1.74	4.98	5.1	30.0	.81	25	149	89	28	16	
WH		15	3	93	119	4.252	5.22	8.50	26.6	125.0	7.23	226	1,063	795	248	117	
WH		16	2	92	121	2.491	3.48	6.23	25.6	116.0	5.09	159	722	560	175	79	
WH		17	2	90	126	2.207	3.48	6.62	25.0	108.3	5.29	165	717	582	182	79	
WH		18	3	90	119	2.952	5.22	7.87	28.7	121.2	7.24	226	955	797	249	105	
WH		19	5	87	119	4.416	8.70	10.60	35.7	149.2	12.10	378	1,581	1,331	416	174	
WH		20	1	93	130	.797	1.74	2.39	36.2	180.0	2.77	87	430	305	95	47	
WH		21	7	89	129	5.061	12.17	15.18	39.0	182.4	18.96	592	2,769	2,085	652	305	
WH		22	4	87	135	2.635	6.96	7.91	43.9	199.2	11.11	347	1,575	1,222	382	173	
WH		23	3	91	129	1.808	5.22	5.42	48.0	230.0	8.34	261	1,248	917	287	137	
WH		24	1	90	145	.554	1.74	1.66	58.1	276.7	3.09	96	459	340	106	51	
WH		Totals	32	89	114	32.156	55.65	77.37	33.1	150.8	82.02	2,563	11,669	9,022	2,819	1,284	
Totals			127	88	115	105.286	220.87	244.53	38.7	172.5	278.75	9,466	42,185	30,662	10,412	4,640	

TC		PLOGSTVB		Log Stock Table - MBF																
<div>T01S R06W S16 Ty00MC110.00</div>				Project:		TWO WINDY										Page		1		
				Acres		110.00										Date		10/31/2022		
																Time		3:19:13PM		
Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
DF		2M	40	2,407		2,400	71.5					609	586	802	402					
DF		3M	29	2		2	.1			2										
DF		3M	30	2		2	.1			2										
DF		3M	33	7		7	.2			7										
DF		3M	35	3		3	.1			3										
DF		3M	36	4		4	.1			4										
DF		3M	37	13		13	.4			13										
DF		3M	38	12		12	.4			12										
DF		3M	39	6		6	.2			6										
DF		3M	40	722		720	21.4			97	213	410								
DF		4M	12	2		2	.1			2										
DF		4M	14	1		1	.0			1										
DF		4M	15	2		2	.1			2										
DF		4M	16	11		11	.3			2	10									
DF		4M	17	3		3	.1			3										
DF		4M	19	1		1	.0			1										
DF		4M	21	3		3	.1			3										
DF		4M	22	16		16	.5			16										
DF		4M	23	5		5	.1			5										
DF		4M	24	4		4	.1			4										
DF		4M	25	2		2	.0			2										
DF		4M	26	11		11	.3			11										
DF		4M	27	2		2	.0			2										
DF		4M	28	2		2	.0				2									
DF		4M	29	15		15	.5			15										
DF		4M	30	11		11	.3			11										
DF		4M	31	14		14	.4			14										
DF		4M	32	12		12	.4			12										
DF		4M	33	7		7	.2			7										
DF		4M	34	7		7	.2			7										
DF		4M	36	38		38	1.1			38										
DF		4M	40	20		20	.6			20										
DF		Totals		3,367		3,357	72.3			323	224	410	609	586	802	402				
WH		2M	40	820		820	63.9					293	249	278						
WH		3M	35	3		3	.3			3										
WH		3M	40	394		394	30.7			60	113	206	14							

TC		PLOGSTVB		Log Stock Table - MBF															
T01S R06W S16 Ty00MC				110.00		Project: Acres		TWO WINDY 110.00		Page Date Time		2 10/31/2022 3:19:13PM							
Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spe	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
WH		4M	12	1		1	.1			1									
WH		4M	13	7		7	.6			7									
WH		4M	15	1		1	.1			1									
WH		4M	17	4		4	.3			4									
WH		4M	18	2		2	.2			2									
WH		4M	19	2		2	.2			2									
WH		4M	20	2		2	.1			2									
WH		4M	21	2		2	.2			2									
WH		4M	22	21		21	1.6			21									
WH		4M	23	5		5	.4			5									
WH		4M	25	3		3	.2			3									
WH		4M	27	2		2	.2			2									
WH		4M	32	4		4	.3			4									
WH		4M	33	4		4	.3			4									
WH		4M	34	7		7	.6			7									
WH		Totals		1,284		1,284	27.7			130	113	206	307	249	278				
Total		All Species		4,650		4,640	100.0			454	337	616	917	835	1080	402			

TC PSTATS				PROJECT STATISTICS				PAGE	1			
				PROJECT	TWO WINDY			DATE	11/1/2022			
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
01S	06	15	00U2	00MC Unit 2	42.00	11	93	S	W			
				TREES	ESTIMATED	PERCENT						
				PER PLOT	TOTAL	SAMPLE						
				PLOTS	TREES	TREES	TREES					
TOTAL				11	93	8.5						
CRUISE				11	93	8.5	9,077	1.0				
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
SAMPLE				TREES	AVG	BOLE	REL	BASAL	GROSS	NET		
TREES				/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	
DOUG FIR				86	162.2	18.8	114	72.1	312.7	59,552	59,506	13,247
DOUG FIR-S				7	54.0	9.3	69	8.3	25.5			
TOTAL				93	216.1	16.9	103	82.2	338.2	59,552	59,506	13,247
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		74.1	8.0	549	596	644						
DOUG FIR-S												
TOTAL		82.2	8.5	505	552	598	270	67	30			
CL	68.1	COEFF		SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		66.0	7.1	120	129	138						
DOUG FIR-S												
TOTAL		74.4	7.7	110	120	129	221	55	25			
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		62.7	19.8	130	162	194						
DOUG FIR-S		225.8	71.3	15	54	92						
TOTAL		78.4	24.8	163	216	270	270	67	30			
CL	68.1	COEFF		BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		30.2	9.5	283	313	343						
DOUG FIR-S		189.5	59.9	10	25	41						
TOTAL		29.1	9.2	307	338	369	37	9	4			
CL	68.1	COEFF		NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		33.5	10.6	53,211	59,506	65,801						
DOUG FIR-S												
TOTAL		33.5	10.6	53,211	59,506	65,801	49	12	5			
CL	68.1	COEFF		NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		31.3	9.9	11,936	13,247	14,557						
DOUG FIR-S												
TOTAL		31.3	9.9	11,936	13,247	14,557	43	11	5			

TC PSCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T01S R06W S15 Ty00MC 42.00

Project: TWOWINDY

Page 1

Acres 42.00

Date 11/1/2022

Time 7:10:43AM

S So Gr T rt ad Spp		% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
							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	CU														11	7		0.00	76.9
DF	2M	66	.1	39,695	39,650	1,665			55	45	1		1	98	40	15	368	1.93	107.8
DF	3M	29		16,921	16,921	711		98	2				2	98	40	8	110	0.68	154.4
DF	4M	5		2,936	2,936	123		100			20	40	20	20	24	6	32	0.38	92.3
DF Totals		100	.1	59,552	59,506	2,499		33	37	30	2	2	2	94	31	9	138	0.98	431.4
Totals			0.1	59,552	59,506	2,499		33	37	30	2	2	2	94	31	9	138	0.98	431.4

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		11/1/2022	
T01S R06W S15 Ty00MC				42.00				Project		TWO WINDY				Time:		7:10:44AM	
								Acres		42.00				Grown Year:			
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DF		5	1	88	88	26.669	3.64										
DF		7	1	86	70	13.606	3.64										
DF		8	1	85	66	10.417	3.64										
DF		10	2	88	96	13.334	7.27	20.00	9.3	43.3	5.30	186	867	223	78	36	
DF		11	1	84	55	5.510	3.64	5.51	11.9	50.0	1.86	65	276	78	27	12	
DF		12	2	83	62	9.260	7.27										
DF		13	4	91	79	15.780	14.55	23.67	15.4	68.3	10.42	366	1,617	438	154	68	
DF		14	2	88	107	6.803	7.27	13.61	18.8	82.5	7.30	256	1,123	307	108	47	
DF		15	4	88	111	11.853	14.55	23.71	23.0	103.7	15.54	545	2,459	653	229	103	
DF		16	3	91	87	7.813	10.91	10.42	28.1	125.0	8.36	293	1,302	351	123	55	
DF		17	6	89	119	13.842	21.82	27.68	31.3	130.0	24.67	866	3,599	1,036	364	151	
DF		18	2	87	117	4.116	7.27	8.23	34.1	135.0	8.01	281	1,111	336	118	47	
DF		19	9	88	127	16.622	32.73	48.02	29.6	125.8	40.57	1,424	6,039	1,704	598	254	
DF		20	5	88	129	8.334	18.18	25.00	32.6	143.3	23.25	816	3,584	977	343	151	
DF		21	6	87	128	9.071	21.82	25.70	37.9	165.3	27.75	974	4,248	1,165	409	178	
DF		22	5	87	127	6.888	18.18	20.66	38.7	172.7	22.78	799	3,568	957	336	150	
DF		23	6	87	133	7.562	21.82	22.69	44.7	199.4	28.87	1,013	4,525	1,213	426	190	
DF		24	7	85	121	8.102	25.45	21.99	47.6	205.3	29.83	1,047	4,514	1,253	440	190	
DF		25	3	86	106	3.200	10.91	6.40	53.4	240.0	9.74	342	1,536	409	144	65	
DF		26	4	86	135	3.945	14.55	11.84	57.8	255.8	19.51	685	3,028	819	288	127	
DF		27	2	87	131	1.829	7.27	5.49	59.6	263.3	9.32	327	1,445	392	137	61	
DF		28	4	86	137	3.402	14.55	9.35	68.3	330.9	18.20	639	3,095	764	268	130	
DF		30	3	87	144	2.222	10.91	6.67	82.3	401.1	15.63	549	2,674	657	230	112	
DF		31	2	88	140	1.388	7.27	4.16	86.0	430.0	10.20	358	1,790	429	150	75	
DF		32	2	85	148	1.302	7.27	3.91	94.4	441.7	10.51	369	1,725	441	155	72	
DF		33	3	89	142	1.837	10.91	5.51	101.4	517.8	15.92	559	2,853	669	235	120	
DF		36	1	85	149	.514	3.64	1.54	121.8	623.3	5.36	188	962	225	79	40	
DF		37	1	86	145	.487	3.64	1.46	85.4	450.0	3.56	125	657	149	52	28	
DF		40	1	85	138	.417	3.64	1.25	141.7	726.7	5.05	177	908	212	74	38	
DF		Totals	93	87	103	216.125	338.18	354.47	37.4	167.9	377.53	13,247	59,506	15,856	5,564	2,499	
Totals			93	87	103	216.125	338.18	354.47	37.4	167.9	377.53	13,247	59,506	15,856	5,564	2,499	

TC		PLOGSTVB		Log Stock Table - MBF															
<div>T01S R06W S15 Ty00MC42.00</div>				Project: TWOWINDY		Acres 42.00		Page 1											
								Date 11/1/2022											
								Time 7:10:42AM											
Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		2M	20	15		15	.6										15		
DF		2M	32	11		11	.4						11						
DF		2M	40	1,641		1,639	65.6					368	451	476	215	128			
DF		3M	32	4		4	.2			2	2								
DF		3M	34	2		2	.1			2									
DF		3M	35	8		8	.3			6	2								
DF		3M	37	15		15	.6			15									
DF		3M	38	9		9	.3			9									
DF		3M	39	4		4	.2			2	2								
DF		3M	40	669		669	26.8			113	234	311	11						
DF		4M	12	4		4	.2			4									
DF		4M	13	3		3	.1			3									
DF		4M	15	6		6	.2			6									
DF		4M	17	2		2	.1			2									
DF		4M	18	7		7	.3			7									
DF		4M	19	1		1	.1			1									
DF		4M	20	1		1	.0			1									
DF		4M	21	4		4	.2			4									
DF		4M	22	3		3	.1			3									
DF		4M	23	7		7	.3			7									
DF		4M	24	7		7	.3			7									
DF		4M	25	5		5	.2			5									
DF		4M	26	6		6	.2			6									
DF		4M	27	7		7	.3			7									
DF		4M	28	1		1	.0			1									
DF		4M	29	9		9	.3			9									
DF		4M	31	4		4	.1			4									
DF		4M	32	12		12	.5			12									
DF		4M	34	2		2	.1			2									
DF		4M	35	8		8	.3			8									
DF		4M	36	10		10	.4			7	2								
DF		4M	38	15		15	.6			15									
DF		Totals		2,501		2,499	100.0			268	242	313	368	473	476	215	143		
Total		All Species		2,501		2,499	100.0			268	242	313	368	473	476	215	143		

VOLUME SUMMARY
(Shown in MBF)
Two Windy
FG-341-2023-W00888-01
November 2021

UNIT 1: Modified Clearcut (110 Acres)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	2,400	769	188	3,357
	Hidden D&B (2%)	(48)	(15)	(4)	(67)
	NET TOTAL	2,352	754	184	3,290
	% of Total	71	23	6	
Western hemlock	Cruise Volume	820	397	67	1,284
	Hidden D&B (2%)	(17)	(8)	(1)	(26)
	NET TOTAL	803	389	66	1,258
	% of Total	64	31	5	

UNIT 2: Modified Clearcut (42 Acres)

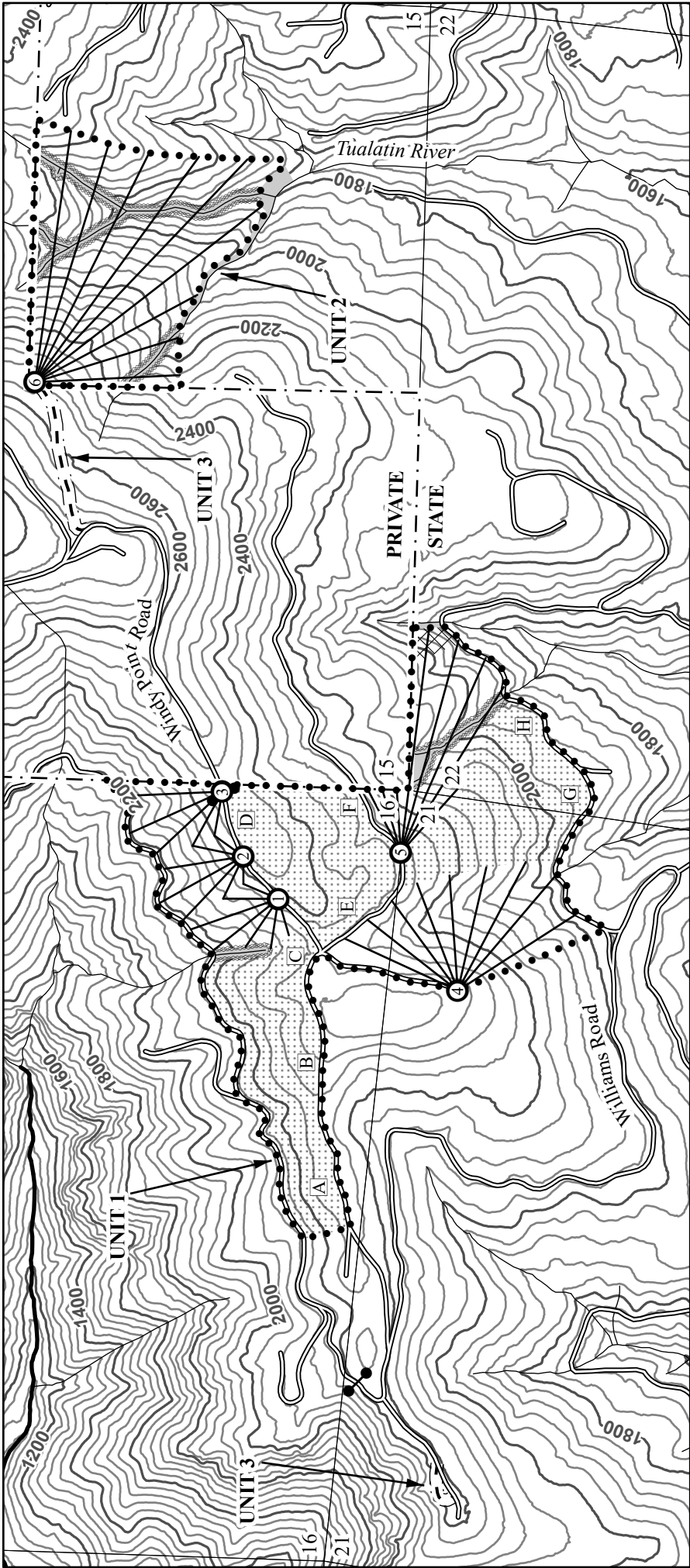
SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	1,665	711	123	2,499
	Hidden D&B (2%)	(33)	(14)	(3)	(50)
	NET TOTAL	1,632	697	120	2,449
	% of Total	67	28	5	

UNIT 3: Right-of-Way (<1 Acre)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	12	6	0	18
	Hidden D&B (2%)	(0)	(0)	(0)	(0)
	NET TOTAL	12	6	0	18
	% of Total	67	33	0	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	3,996	1,457	304	5,757
Western hemlock	803	389	66	1,258
Total	4,799	1,846	370	7,015



Legend

- Timber Sale Boundary
- Stream Buffer Boundary
- Right-of-Way Boundary
- ODF Ownership Boundary
- Surfaced Road
- New Road Construction
- Gate
- Type-F Stream
- Type-N Stream
- Stream Buffer
- Cable Landing
- Tractor Landing
- Cable Yarding Area
- Tractor Yarding Area
- Harvest Optional Area
- Section Lines
- 40 Foot Contour Band
- 200 Foot Contour Band

LOGGING PLAN

FOR TIMBER SALE CONTRACT #FG-341-2023-W00888-01
TWO WINDY
PORTIONS OF SECTIONS 15, 16, 21 & 22, T1S, R6W, W.M.,
WASHINGTON COUNTY, OREGON

Forest Grove District GIS
November, 2022

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

1:12,000
1 inch = 1,000 feet



APPROXIMATE NET ACRES	TRACTOR CABLE	
	TRACTOR	CABLE
UNIT 1	59	51
UNIT 2	0	42
UNIT 3	<1	0

TOTAL	59	93
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