



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
DAILY EDITION
Sale FG-341-2022-W00859-01

District: Forest Grove

Date: February 23, 2022

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,377,952.72	\$44,963.38	\$2,422,916.10
		Project Work:	(\$207,524.00)
		Advertised Value:	\$2,215,392.10



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Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	21	0	98
Alder (Red)	14	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	2,815	999	0	3,814
Alder (Red)	0	0	154	154
Total	2,815	999	154	3,968

Comments: Pond Values Used: Local Pond Values, January 2022.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
\$889.17/MBF = \$1,175/MBF - \$285.83/MBF

Western hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
\$359.17/MBF = \$645/MBF - \$285.83/MBF

Bigleaf maple and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost:
\$43.97/MBF = \$400/MBF - \$356.03/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$950 daily truck cost.

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

None

Other Costs (No Profit & Risk added):

Stimson Road Use Fee = \$99,264.28

Machine Time to Block/Waterbar Roads, and Skid Trails:

20 hours x \$150/hour = \$3,000

Machine Time to Pile Landing Slash:

20 hours x \$150/hour = \$3,000

Equipment Cleaning: 3 pieces x \$1,000/Piece = \$3,000

TOTAL Other Costs (No Profit & Risk added) = \$108,264.28

SLASH TREATMENT: 15 acres x \$250/acre = \$3,750

ROAD MAINTENANCE

(Includes; Move-in, Grading, Rolling and Spot Rock)

Move-in = \$3,431.10

General Road Maintenance: 4.76 miles X \$2,577.57 = \$12,269.23

TOTAL Road Maintenance: \$15,700.33 / 3968 MBF = \$3.95/MBF



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Logging Conditions

Combination#: 1 Douglas - Fir 30.00%
 Alder (Red) 30.00%

Logging System: Cable: Small Tower <=40 **Process:** Harvester Head Delimiting

yarding distance: Short (400 ft) **downhill yarding:** No

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

loads / day: 10 **bd. ft / load:** 4600

cost / mbf: \$160.44

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

Combination#: 2 Douglas - Fir 70.00%
 Alder (Red) 70.00%

Logging System: Shovel **Process:** Harvester Head Delimiting

yarding distance: Medium (800 ft) **downhill yarding:** No

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

loads / day: 13 **bd. ft / load:** 4600

cost / mbf: \$89.37

machines: Forwarder
 Harvester



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District: Forest Grove

Date: February 23, 2022

Logging Costs

Operating Seasons: 2.00	Profit Risk: 15%
Project Costs: \$207,524.00	Other Costs (P/R): \$0.00
Slash Disposal: \$3,750.00	Other Costs: \$108,264.28

Miles of Road

Road Maintenance: \$3.95

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.6
Alder (Red)	\$0.00	2.0	3.0



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
DAILY EDITION
Sale FG-341-2022-W00859-01

District: Forest Grove

Date: February 23, 2022

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$110.69	\$4.03	\$2.21	\$105.33	\$0.00	\$33.34	\$0.95	\$2.00	\$27.28	\$285.83
Alder (Red)									
\$110.69	\$4.15	\$2.21	\$166.25	\$0.00	\$42.50	\$0.95	\$2.00	\$27.28	\$356.03

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$909.31	\$623.48	\$0.00
Alder (Red)	\$0.00	\$648.00	\$291.97	\$0.00



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District: Forest Grove

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Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,814	\$623.48	\$2,377,952.72
Alder (Red)	154	\$291.97	\$44,963.38

Gross Timber Sale Value

Recovery: \$2,422,916.10

Prepared By: MARK SAVAGE

Phone: 503-359-7437

SUMMARY OF CONSTRUCTION COST

Timber Sale: Daily Edition
 Road Segment: C to D

Sale Number: FG-341-2022-W00859-01
 Construction: 7+70 stations
 0.15 miles

PROJECT NO. 2

CONSTRUCTION

Clearing & grubbing (scatter)	0.89	ac @	\$1,078.00	per ac =	\$959.42
Balanced road construction	6.70	sta @	\$110.00	per sta =	\$737.00
Remove large stump	2.00	ea @	\$82.50	per ea =	\$165.00
Drift	1.00	sta @	\$180.00	per sta =	\$180.00
Turnaround	1	ea @	\$82.50	per ea =	\$82.50
Construct landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	7.70	sta @	\$36.00	per sta =	\$277.20

TOTAL CONSTRUCTION COSTS = \$2,715.12

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

EROSION CONTROL

Grass seed & fertilizer	0.45	ac @	\$500.00	per ac =	\$222.50
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TOTAL EROSION CONTROL COSTS = \$222.50

TOTAL PROJECT COST = \$3,547.62

PROJECT NO. 5

Construct tank trap	1	ea @	\$55.00	per ea =	\$55.00
Rip dirt road surface	7.70	sta @	\$25.00	per sta =	\$192.50
Rip & narrow landing	1	ea @	\$150.00	per ea =	\$150.00
Remove existing culvert	1	ea @	\$150.00	per ea =	\$150.00
Grass seed & fertilizer	0.09	ac @	\$425.00	per ac =	\$38.25
Mulch	0.09	ac @	\$600.00	per ac =	\$54.00

TOTAL PROJECT COST = \$639.75

SUMMARY OF CONSTRUCTION COST

Timber Sale: Daily Edition
 Road Segment: E to F

Sale Number: FG-341-2022-W00859-01
 Construction: 9+00 stations
 0.17 miles

PROJECT NO. 2

CONSTRUCTION

Clearing & grubbing (scatter)	1.04	ac @	\$1,078.00	per ac =	\$1,121.12
Balanced road construction	6.50	sta @	\$110.00	per sta =	\$715.00
Remove large stump	1.00	ea @	\$82.50	per ea =	\$82.50
Drift	2.50	sta @	\$180.00	per sta =	\$450.00
Turnaround	1	ea @	\$82.50	per ea =	\$82.50
Construct landing	1	ea @	\$314.00	per ea =	\$314.00
Grade & roll (outslope)	9.00	sta @	\$32.20	per sta =	\$289.80
				TOTAL CONSTRUCTION COSTS =	\$3,054.92

EROSION CONTROL

Grass seed & fertilizer	0.52	ac @	\$500.00	per ac =	\$260.00
				TOTAL EROSION CONTROL COSTS =	\$260.00

TOTAL PROJECT COST = \$3,314.92

PROJECT NO. 5

Construct tank trap	1	ea @	\$55.00	per ea =	\$55.00
Rip dirt road surface	9.00	sta @	\$25.00	per sta =	\$225.00
Rip & narrow landing	1	ea @	\$150.00	per ea =	\$150.00
Grass seed & fertilizer	0.11	ac @	\$425.00	per ac =	\$46.75
Mulch	0.11	ac @	\$600.00	per ac =	\$66.00
				TOTAL PROJECT COST =	\$542.75

SUMMARY OF CONSTRUCTION COST

Timber Sale: Daily Edition
 Road Segment: G to H

Sale Number: FG-341-2022-W00859-01
 Improvement: 205+00 stations
 3.88 miles

PROJECT NO. 3

IMPROVEMENT

Clearing & grubbing (scatter)	2.36	ac @	\$1,078.00	per acre =	\$2,544.08
Clean ditch & scatter waste material	0.20	sta @	\$60.00	per sta =	\$12.00
Construct settling pond	6	ea @	\$25.00	per ea =	\$150.00
Improve turnout	16	ea @	\$33.00	per ea =	\$528.00
Improve turnaround	1	ea @	\$41.25	per ea =	\$41.25
Improve landing	1	ea @	\$157.00	per ea =	\$157.00
Grade & roll (outslope)	14.60	sta @	\$32.20	per sta =	\$470.12
Grade, ditch, & roll	190.40	sta @	\$36.00	per sta =	\$6,854.40

TOTAL IMPROVEMENT COSTS = \$10,956.85

CULVERTS

Culverts and Bands					
18" Diameter	90	LF @	\$20.00	per LF =	\$1,800.00
24" Diameter	80	LF @	\$29.00	per LF =	\$2,320.00
36" Diameter	40	LF @	\$50.00	per LF =	\$2,000.00
Markers & Stakes					
Culvert Markers	9	ea @	\$10.00	per ea =	\$90.00

TOTAL CULVERT COSTS = \$6,210.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$0.80	\$5.56	\$0.50	144	\$987.84
Subtotal =					144	\$987.84
Surfacing rock						
Surfacing rock	3" - 0	\$9.12	\$5.56	\$1.22	6,355	\$101,044.50
Junction	3" - 0	\$9.12	\$5.56	\$1.22	160	\$2,544.00
Turnout	3" - 0	\$9.12	\$5.56	\$1.22	364	\$5,787.60
Turnaround	3" - 0	\$9.12	\$5.56	\$1.22	10	\$159.00
Landing	3" - 0	\$9.12	\$5.56	\$1.22	90	\$1,431.00
Subtotal =					6,979	\$110,966.10

Totals	All Rock =	7,123
	1½" - 0 =	144
	3" - 0 =	6,979

TOTAL ROCK COSTS = \$111,953.94

EROSION CONTROL

Grass seed & fertilizer	2.36	ac @	\$425.00	per ac =	\$1,003.00
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TOTAL EROSION CONTROL COSTS = \$1,003.00

TOTAL PROJECT COST = \$130,123.79

SUMMARY OF CONSTRUCTION COST

Timber Sale: Daily Edition
 Road Segment: I to C

Sale Number: FG-341-2022-W00859-01
 Improvement: 8+60 stations
 0.16 miles

PROJECT NO. 3

IMPROVEMENT

Clearing & grubbing (scatter) 0.10 ac @ \$1,078.00 per acre = \$107.80
 Grade, ditch, & roll 8.60 sta @ \$36.00 per sta = \$309.60

TOTAL IMPROVEMENT COSTS = \$417.40

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	3" - 0	\$9.12	\$5.04	\$1.22	266	\$4,091.08
				Subtotal =	266	\$4,091.08

Totals	All Rock =	266
	3" - 0 =	266

TOTAL ROCK COSTS = \$4,091.08

EROSION CONTROL

Grass seed & fertilizer 0.10 ac @ \$425.00 per ac = \$42.50

TOTAL EROSION CONTROL COSTS = \$42.50

TOTAL PROJECT COST = \$4,550.98

SUMMARY OF CONSTRUCTION COST

Timber Sale: Daily Edition
 Road Segment: J to K

Sale Number: FG-341-2022-W00859-01
 Improvement: 6+50 stations
 0.12 miles

PROJECT NO. 3

IMPROVEMENT

Clearing & grubbing (scatter)	0.08	ac @	\$1,078.00	per acre =	\$86.24
Improve turnaround	1	ea @	\$41.25	per ea =	\$41.25
Improve landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	6.50	sta @	\$36.00	per sta =	\$234.00

TOTAL IMPROVEMENT COSTS = \$518.49

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	3" - 0	\$9.12	\$5.04	\$1.22	201	\$3,091.38
Turnaround	3" - 0	\$9.12	\$5.04	\$1.22	10	\$153.80
Landing	3" - 0	\$9.12	\$5.04	\$1.22	90	\$1,384.20
Subtotal =					301	\$4,629.38

Totals	All Rock =	301
	3" - 0 =	301

TOTAL ROCK COSTS = \$4,629.38

EROSION CONTROL

Grass seed & fertilizer	0.08	ac @	\$425.00	per ac =	\$34.00
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TOTAL EROSION CONTROL COSTS = \$34.00

TOTAL PROJECT COST = \$5,181.87

SUMMARY OF CONSTRUCTION COST

Timber Sale: Daily Edition
 Road Segment: L to M

Sale Number: FG-341-2022-W00859-01
 Improvement: 6+00 stations
 0.11 miles

PROJECT NO. 3

IMPROVEMENT

Clearing & grubbing (scatter)	0.07	ac @	\$1,078.00	per acre =	\$75.46
Improve turnaround	1	ea @	\$41.25	per ea =	\$41.25
Improve landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	6.00	sta @	\$36.00	per sta =	\$216.00

TOTAL IMPROVEMENT COSTS = \$489.71

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	3" - 0	\$9.12	\$5.20	\$1.22	186	\$2,890.44
Turnaround	3" - 0	\$9.12	\$5.20	\$1.22	10	\$155.40
Landing	3" - 0	\$9.12	\$5.20	\$1.22	90	\$1,398.60
Subtotal =					286	\$4,444.44

Totals	All Rock =	286
	3" - 0 =	286

TOTAL ROCK COSTS = \$4,444.44

EROSION CONTROL

Grass seed & fertilizer	0.07	ac @	\$425.00	per ac =	\$29.75
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TOTAL EROSION CONTROL COSTS = \$29.75

TOTAL PROJECT COST = \$4,963.90

SUMMARY OF CONSTRUCTION COST

Timber Sale: Daily Edition
 Road Segment: N to O

Sale Number: FG-341-2022-W00859-01
 Improvement: 32+60 stations
 0.62 miles

PROJECT NO. 3

IMPROVEMENT

Clearing & grubbing (scatter)	0.38	ac @	\$1,078.00	per acre =	\$409.64
Clean culvert inlet & outlet, scatter waste	6	ea @	\$25.00	per ea =	\$150.00
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
Improve landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	32.60	sta @	\$36.00	per sta =	\$1,173.60

TOTAL IMPROVEMENT COSTS = \$2,162.49

CULVERTS

Markers & Stakes					
Culvert Markers	4	ea @	\$10.00	per ea =	\$40.00

TOTAL CULVERT COSTS = \$40.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	3" - 0	\$9.12	\$5.66	\$1.22	1,010	\$16,160.00
Junction	3" - 0	\$9.12	\$5.66	\$1.22	24	\$384.00
Turnout	3" - 0	\$9.12	\$5.66	\$1.22	28	\$448.00
Turnaround	3" - 0	\$9.12	\$5.66	\$1.22	10	\$160.00
Roadside landing	3" - 0	\$9.12	\$5.66	\$1.22	95	\$1,520.00
Landing	3" - 0	\$9.12	\$5.66	\$1.22	90	\$1,440.00
Subtotal =					1,257	\$20,112.00

Totals	All Rock =	1,257
	3" - 0 =	1,257

TOTAL ROCK COSTS = \$20,112.00

EROSION CONTROL

Grass seed & fertilizer	0.38	ac @	\$425.00	per ac =	\$161.50
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TOTAL EROSION CONTROL COSTS = \$161.50

TOTAL PROJECT COST = \$22,475.99

SUMMARY OF CONSTRUCTION COST

Timber Sale: Daily Edition

Sale Number: FG-341-2022-W00859-01

PROJECT No. 1, 2, 3 & 4 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

<u>Equipment</u>	<u>Total</u>
Brush Cutter	\$699.03
Grader	\$1,215.81
Roller (smooth/grid) & Compactor	\$699.03
Excavator (Large) - Equipment Cleaning	\$2,215.81
Dozer (Large) - Equipment Cleaning	\$2,260.39
Dump Truck (10cy +)	\$731.83
	<u>TOTAL MOVE-IN COSTS =</u> <u>\$8,397.63</u>

PROJECT No. 5 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

<u>Equipment</u>	<u>Total</u>
Excavator (Large) - Equipment Cleaning	\$2,215.81
	<u>TOTAL MOVE-IN COSTS =</u> <u>\$2,215.81</u>

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Daily Edition
 Sale Number: FG-341-2022-W00859-01
 Quarry Name: Seven Cedars

3" - 0: 9,425 cy (truck measure)
 Total truck yardage: 9,425 cy
 Total in place yardage: 7,632 cy
 Oversize - Pile: 5%
 Swell: 130%
 Compaction: 116%

Move-in & Other Base Cost

Quarry development & overburden removal		\$1,172.89
Equipment cleaning & move in excavator		\$1,976.63
Equipment cleaning & move in dozer		\$1,955.43
Move in & setup drill		\$592.75
Move in loader		\$886.00
Move in & setup crusher		\$1,946.28
Move in dump trucks		\$675.00
Gradation tests	\$71.50 /2,000cy x <u> 5 </u> tests =	\$357.50
Clean up quarry		\$500.00
	Subtotal =	<u>\$10,062.48</u>
	Per CY =	<u>\$1.07/cy</u>

3"-0 Base Cost

Drill & shoot	<u>\$2.80</u>	/ cy x	<u> 7,632 </u>	cy =	\$21,368.42
Push rock	<u>\$0.80</u>	/ cy x	<u> 9,921 </u>	cy =	\$7,936.84
Oversize - Pile	<u>\$0.80</u>	/ cy x	<u> 496 </u>	cy =	\$396.84
Load crusher	<u>\$0.80</u>	/ cy x	<u> 9,425 </u>	cy =	\$7,540.00
Crush (3" - 0)	<u>\$3.30</u>	/ cy x	<u> 9,425 </u>	cy =	\$31,102.50
Load dump truck	<u>\$0.80</u>	/ cy x	<u> 9,425 </u>	cy =	\$7,540.00
				Subtotal =	<u>\$75,884.61</u>
				Per CY =	<u>\$8.05/cy</u>

3"-0 Base Cost = \$9.12/cy

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Daily Edition
Sale Number: FG-341-2022-W00859-01
Stockpile Name: Saddle Stockpile

1 1/2" - 0: 144 cy (truck measure)
Total truck yardage: 144 cy

<u>1 1/2"-0 Base Cost</u>					
Load dump truck	<u> \$0.80 </u>	/ cy x	<u> 144 </u>	cy =	<u> \$115.20 </u>
				Subtotal =	<u> \$115.20 </u>
				Per CY =	<u> \$0.80 </u>

1 1/2"-0 Cost = **\$0.80/cy**

CRUISE REPORT
Daily Edition
#FG-341-2022-W00859-01

1. LOCATION: Portions of Sections 18 and 19, T1S, R5W, W.M., Washington County, Oregon.

2. CRUISE DESIGN:

Pre-cruise evaluation indicated that the stand's average DBH is approximately 18 inches and the coefficient of variation is about 50%. For sales of this size and approximate value, ODF cruise standards require a sampling error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. The cruise design chosen for this sale is a variable radius sample plot using a 40 BAF prism.

3. SAMPLING METHOD:

The Timber Sale Area was sampled in January 2022 with 32 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 6 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS:

166 trees were measured and graded producing a cumulative Sampling Error of 9.5% on the Douglas-fir basal area and 9.7% for the Douglas-fir net board foot volume.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following Columbia River Log Scale grade rules and favored 40 foot segments.

- a) **Height Standards:** Total tree heights were measured to the nearest foot. Bole heights were calculated to a top DIB of six inches (or 25% of DBH, whichever is larger) for conifers.
- 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 Super Ace 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. For hardwoods five percent was deducted.

7. CRUISERS: The sale was cruised by ODF cruiser Shamus Smith.

Prepared by: Mark Savage 2/16/2022
Date

Reviewed by: Mark Savage 2/16/2022
Date

TC PSTATS		PROJECT STATISTICS								PAGE	1
ODF		PROJECT				DAYED				DATE	2/1/2022
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
01S	05	19	00U1	00MC		109.00	32	184	S	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			32	184	5.8						
CRUISE			32	183	5.7	14,251	1.3				
DBH COUNT											
REFOREST											
COUNT											
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		144	73.2	21.2	119	39.1	180.0	35,860	35,704	7,882	
R ALDER		20	22.4	14.3	68	6.6	25.0	1,482	1,482	526	
DF-SNAG		17	33.9	11.0	47	6.8	22.5				
BL MAPLE		2	1.1	20.3	71	0.6	2.5	198	198	59	
TOTAL		<i>183</i>	<i>130.7</i>	<i>18.0</i>	<i>91</i>	<i>54.3</i>	<i>230.0</i>	<i>37,541</i>	<i>37,384</i>	<i>8,468</i>	
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		74.7	6.2	812	866	920					
R ALDER		84.4	19.4	86	107	128					
DF-SNAG											
BL MAPLE		34.4	32.2	125	185	245					
TOTAL		<i>95.3</i>	<i>7.0</i>	<i>646</i>	<i>695</i>	<i>744</i>	<i>362</i>	<i>91</i>	<i>40</i>		
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		67.6	5.6	174	184	194					
R ALDER		77.7	17.8	30	37	44					
DF-SNAG											
BL MAPLE		13.4	12.6	47	54	61					
TOTAL		<i>86.7</i>	<i>6.4</i>	<i>140</i>	<i>149</i>	<i>159</i>	<i>300</i>	<i>75</i>	<i>33</i>		
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		76.0	13.4	63	73	83					
R ALDER		276.2	48.8	11	22	33					
DF-SNAG		237.7	42.0	20	34	48					
BL MAPLE		397.9	70.3	0	1	2					
TOTAL		<i>86.1</i>	<i>15.2</i>	<i>111</i>	<i>131</i>	<i>151</i>	<i>296</i>	<i>74</i>	<i>33</i>		
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		53.8	9.5	163	180	197					
R ALDER		232.6	41.1	15	25	35					
DF-SNAG		162.4	28.7	16	23	29					
BL MAPLE		393.5	69.5	1	3	4					
TOTAL		<i>37.5</i>	<i>6.6</i>	<i>215</i>	<i>230</i>	<i>245</i>	<i>56</i>	<i>14</i>	<i>6</i>		
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		54.7	9.7	32,255	35,704	39,153					
R ALDER		189.7	33.5	986	1,482	1,979					
DF-SNAG											
BL MAPLE		395.6	69.9	60	198	336					

TC PSTATS		PROJECT STATISTICS							PAGE	2	
ODF		PROJECT			DAYED				DATE	2/1/2022	
TWP	RGE	SC	TRACT	TYPE	ACRES			PLOTS	TREES	CuFt	BdFt
01S	05	19	00U1	00MC	109.00			32	184	S	W
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15		
TOTAL		48.4	8.6	34,185	37,384	40,583	94	23	10		
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		53.8	9.5	7,133	7,882	8,631					
R ALDER		195.0	34.4	345	526	708					
DF-SNAG											
BL MAPLE		394.0	69.6	18	59	100					
TOTAL		44.2	7.8	7,806	8,468	9,129	78	20	9		

TC PSTNDSUM		Stand Table Summary										Page	2				
ODF												Date:	2/1/2022				
T01S R05W S19 Ty00MC		109.00		Project DAYED				Time: 11:28:49AM									
				Acres 109.00				Grown Year:									
S Spc	T	DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DFS		8	4	85	43	15.167	5.29										
DFS		11	1	86	77	2.005	1.32										
DFS		13	1	86	60	1.436	1.32										
DFS		16	1	85	32	.948	1.32										
DFS		18	1	86	20	.749	1.32										
DFS		19	1	86	17	.672	1.32										
DFS		20	2	86	24	1.213	2.65										
DFS		21	1	86	63	.550	1.32										
DFS		22	1	86	30	.501	1.32										
DFS		24	1	86	55	.421	1.32										
DFS		28	1	85	65	.310	1.32										
DFS		30	1	86	107	.270	1.32										
DFS	Totals		17	86	47	33.949	22.50										
Totals			183	84	91	130.739	230.00	190.26	44.5	196.5	240.68	8,468	37,384	26,234	9,230	4,075	

Log Stock Table - MBF

T01S R05W S19 Ty00MC 109.00

Project: DAYED
Acres 109.00

Page 1
Date 2/1/2022
Time 11:28:48AM

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	6		6	.1					6										
DF		2M	30	14		14	.4								14							
DF		2M	40	2,865		2,852	73.3					394	344	747	889	454					24	
DF		3M	20	20	5.4	19	.5				12	8										
DF		3M	28	7		7	.2			1	4	2										
DF		3M	30	12		12	.3			8	4											
DF		3M	32	25		25	.6			15	2	7										
DF		3M	34	44		44	1.1			27	18											
DF		3M	36	12		12	.3			8	4											
DF		3M	38	38		38	1.0			32	6											
DF		3M	40	789		786	20.2			143	215	412			16							
DF		4M	12	5		5	.1			5												
DF		4M	14	7		7	.2			7												
DF		4M	16	10		10	.2			10												
DF		4M	18	1		1	.0			1												
DF		4M	20	10		10	.3			10												
DF		4M	22	2		2	.0			2												
DF		4M	24	19		19	.5			18	1											
DF		4M	26	11		11	.3			11												
DF		4M	28	2		2	.1			2												
DF		4M	30	9		9	.2			9												
DF		Totals		3,909		3,892	95.5			310	265	429	400	344	777	889	454				24	
BM		CR	32	22		22	100.0					10		12								
BM		Totals		22		22	.5					10		12								
RA		CR	14	5		5	3.1			5												
RA		CR	20	32		32	20.1			8	5	11		8								
RA		CR	22	3		3	2.1			3												
RA		CR	28	4		4	2.7			4												
RA		CR	30	17		17	10.8			6					11							
RA		CR	32	17		17	10.4				7		10									
RA		CR	40	82		82	50.8			11	47	24										
RA		Totals		162		162	4.0			39	59	36	10	8	11							
Total		All Species		4,092		4,075	100.0			349	324	474	410	363	788	889	454				24	

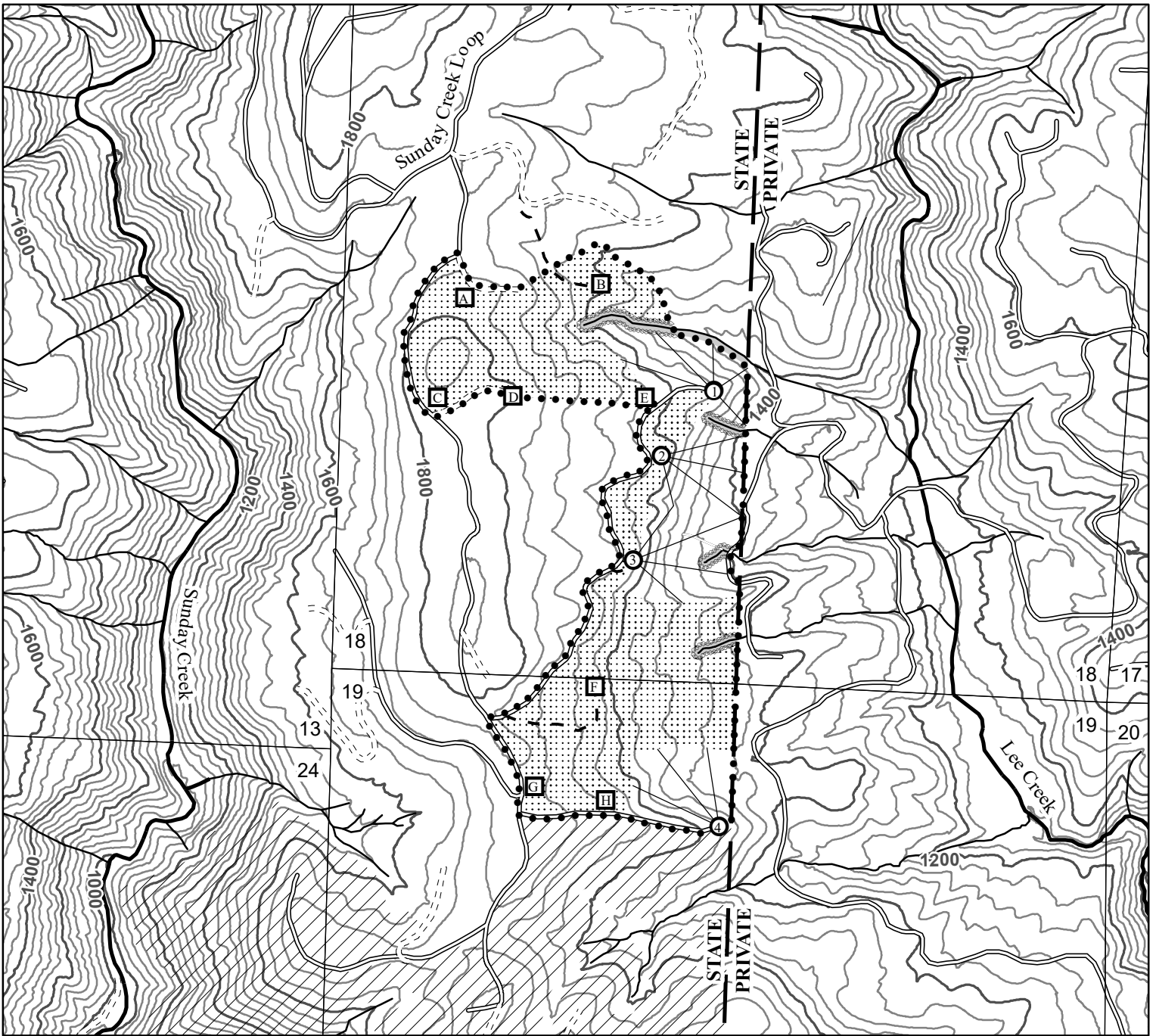
Volume Summary
 (Shown in MBF)
Daily Edition
#FG-341-2022-W00859-01
February 2022

UNIT 1: MC (109 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	2,872	944	76	0	3,892
	Hidden D&B (2%)	(57)	(19)	(2)	(0)	(78)
	NET TOTAL	2,815	925	74	0	3,814
	% of Total	74	24	2	0	
Red alder	Cruise Volume	0	0	0	162	162
	Hidden D&B (5%)	(0)	(0)	(0)	(8)	(8)
	NET TOTAL	0	0	0	154	154
	% of Total	0	0	0	100	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	2,815	925	74	0	3,814
Red alder	0	0	0	154	154
Total	2,815	925	74	154	3,968



LEGEND

- Timber Sale Boundary
- ▭ Stream Buffer Boundary
- ▭ ODF Ownership Boundary
- ▭ Surfaced Roads
- ▭ Unsurfaced Roads
- ▭ New Road Construction
- ▭ Type-F Stream
- ▭ Type-N Stream
- ▭ Stream Buffer
- ▭ Cable Yarding Area
- ▭ Tractor Yarding Area
- Cable Landing
- ▭ Tractor Landing
- ▭ Section Lines
- ▭ 40 Foot Contour Band
- ▭ 200 Foot Contour Band

LOGGING PLAN

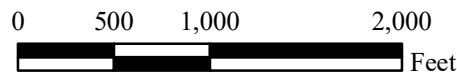
FOR TIMBER SALE CONTRACT #FG-341-2022-W00859-01
 DAILY EDITION
 PORTIONS OF SECTIONS 18 & 19, T1S, R5W, W.M.,
 WASHINGTON COUNTY, OREGON

Forest Grove District GIS
 February, 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
TIMBER SALE AREA	76	33
TOTAL	76	33