"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Wolf of Haul Street
Sale WO-341-2024-W01093-01

District: West Oregon

Date: October 09, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$765,629.30	$22,603.36	$788,232.66
		Project Work:	($59,479.00)
		Advertised Value:	$728,753.66

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District: West Oregon **Date: October 09, 2023**

Timber Description

Location: Portions of Sections 29 & 32, T11S, R8W, W.M., Lincoln County, Oregon

Stand Stocking: 40%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	16	0	98
Alder (Red)	12	0	97

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	816	749	0	1,565
Alder (Red)	0	0	208	208
Total	816	749	208	1,773

Comments: Pond Values Used: Local Pond Values, Aug, 2023

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
$132.57/MBF = $490/MBF - $357.43/MBF

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
$652.57 MBF = $1160/MBF - ($357.43/MBF + $150/MBF(Extra Haul Cost))

Big leaf maple and Other Hardwoods Stumpage Price = Hardwood Pulp price using a conversion factor of 10 ton/MBF: = $30.00/MBF

PULP (Conifer and Hardwood Price) = $3/TON

Other Costs (with Profit & Risk to be added):
Intermediate Support/Tail Trees: 6 supports @ $100/support = $600
TOTAL Other Costs (with Profit & Risk to be added) = $600

Other Costs (No Profit & Risk added):
Equipment Cleaning (Invasive Species): $2,000
Landing Slash Piling and sorting out firewood: 5 Landings @ $180/Landing = $900
TOTAL Other Costs (No Profit & Risk added) = $2,900

ROAD MAINTENANCE
Move-in: (Grader) $875
Final Road Maintenance: $13,949.19
TOTAL Road Maintenance: $14,824.19/1,773MBF = $8.36/MBF

SLASH DISPOSAL
Project Work: 10 hrs @ $170/hr = $1,700
Total Slash Disposal = $1,700

District: West Oregon **Date: October 09, 2023**

Logging Conditions

Combination#: 1

Douglas - Fir	37.00%
Alder (Red)	41.04%

Logging System: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 8 **bd. ft / load:** 4500
cost / mbf: $238.31
machines: Log Loader (A)
Tower Yarder (Large)

Combination#: 2

Douglas - Fir	40.11%
Alder (Red)	39.47%

Logging System: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 9 **bd. ft / load:** 4500
cost / mbf: $211.83
machines: Log Loader (A)
Tower Yarder (Large)

Combination#: 3

Douglas - Fir	17.95%
Alder (Red)	17.40%

Logging System: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 11 **bd. ft / load:** 4500
cost / mbf: $173.32
machines: Log Loader (A)
Tower Yarder (Large)

Combination#: 4

Douglas - Fir	4.93%
Alder (Red)	2.09%

Logging System: Shovel **Process:** Feller Buncher
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 15 **bd. ft / load:** 4000
cost / mbf: $166.67
machines: Feller Buncher w/ Delimber

Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	10%
Project Costs:	$59,479.00	**Other Costs (P/R):**	$600.00
Slash Disposal:	$1,700.00	**Other Costs:**	$2,900.00

Miles of Road

Road Maintenance: $8.36

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	4.5
Alder (Red)	$0.00	3.0	3.5

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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									
$212.49	$8.53	$4.95	$94.44	$0.34	$32.08	$0.96	$2.00	$1.64	$357.43
Alder (Red)									
$215.05	$8.61	$4.95	$122.62	$0.34	$35.16	$0.96	$2.00	$1.64	$391.33

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$846.65	$489.22	$0.00
Alder (Red)	$0.00	$500.00	$108.67	$0.00

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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	1,565	$489.22	$765,629.30
Alder (Red)	208	$108.67	$22,603.36

Gross Timber Sale Value

Recovery: $788,232.66

Prepared By: Zane Sandborg **Phone:** 541-929-9163

SUMMARY OF ALL PROJECT COSTS

Sale Name: Wolf of Haul Street

Date: October 2023
Time: 9:56

Project #1 - Improvements

Road Segment	Length	Cost
1 to 2	231.0 sta	$1,691
3 to 4	14.0 sta	$2,195
5 to 6	17.8 sta	$31,206
7 to 8	7.6 sta	$1,845
9 to 10	4.4 sta	$5,376
11 to 12	2.0 sta	$2,496
17 to 18	5.4 sta	$83
23 to 24	2.5 sta	$39
Fuel Cost Increase (10%)		$4,493
TOTALS	284.7 sta	$49,424

Project #2 - Brushing	Length	Cost
Brushing	2.5 mi	$2,255
Sod and Brush Removal		$2,033
Fuel Cost Increase (10%)		$429
TOTAL		$4,717

Project #3 - Move in	Cost
Excavator, C325 or equiv.	$1,450
Dozer, D-6 or equiv.	$875
Grader, Cat 14-G or equiv.	$875
Vibratory roller	$875
Road Brusher	$778
Fuel Cost Increase (10%)	$485
TOTAL	$5,338

GRAND TOTAL **$59,479**

Compiled by: Zane Sandborg Date 10/19/2023

SUMMARY OF CONSTRUCTION COST

SALE Wolf of Haul Street Project # 1 LENGTH improve 231.0 sta
ROAD 1 to 2

EXCAVATION					Rate			
Construct Waste Area (w/ dozer)	0.5	hrs		@	$128.00	/hr	= $64	
Shape subgrade (w/ grader) (Sta. 222+90 to Pt. 2)	8.1	sta		@	$20.63	/sta	= $167	
Compact subgrade (w/ roller) (Sta. 222+90 to Pt. 2)	8.1	sta		@	$16.00	/sta	= $130	
							TOTAL EXCAVATION =	$361
IMPROVEMENT					Rate			
Re-open road (w/ dozer) (Sta. 222+90 to Pt. 2)	8.1	sta		@	$36.67	/sta	= $297	
Process surface (w/ grader)	3.0	sta		@	$20.63	/sta	= $62	
Compact surface (w/ roller)	3.0	sta		@	$16.00	/sta	= $48	
							TOTAL IMPROVEMENT =	$407
SURFACING			Size		Rate			
Spot rock	30	CY	1½"-0"	@	$28.26	/CY	= $848	
							TOTAL SURFACING COST =	$848
SPECIAL PROJECTS					Rate			
Clean out culverts (inlets and outlets)	3	culverts		@	$25	ea	= $75	
							TOTAL SPECIAL PROJECTS COST =	$75

Compiled by: Zane Sandborg
Date: Oct 19, 2023

GRAND TOTAL =====> $1,691

SUMMARY OF CONSTRUCTION COST

SALE Wolf of Haul Street Project # 1 LENGTH improve 14.0 sta
ROAD 3 to 4

IMPROVEMENT				Rate			
Re-open landing (Pt. 4) (w/ grader)	0.5	hrs	@	$114.00	/hr	=	$57
Process surface (w/ grader)	14.0	sta	@	$20.63	/sta	=	$289
Compact surface (w/ roller)	14.0	sta	@	$16.00	/sta	=	$224
						TOTAL IMPROVEMENT =	$570

SURFACING			Size		Rate			
Spot rock	30	CY	1½"-0"	@	$28.26	/CY	=	$848
Landing rock (Pt. 4)	30	CY	Jaw-Run	@	$25.90	/CY	=	$777
							TOTAL SURFACING COST =	$1,625

Compiled by: Zane Sandborg
Date: Oct 19, 2023

GRAND TOTAL =====> $2,195

SUMMARY OF CONSTRUCTION COST

SALE Wolf of Haul Street Project # 1 LENGTH improve 17.8 sta
ROAD 5 to 6

CLEARING AND GRUBBING					Rate			
Landing extension	0.13	ac		@	$1,337.00	/acre	=	$174
						TOTAL CLEARING AND GRUBBING =		$174
EXCAVATION					Rate			
Remove tank trap (w/ C325)	0.5	hrs			$145.00	/hr	=	$73
Extend Landing (Pt. 6) (w/ C325)	1.5	hrs		@	$145.00	/hr	=	$218
End haul waste material (Exp. 20%)	100	CY		@	$4.00	/CY	=	$400
Compact waste material (Exp. 20%)	100	CY		@	$0.45	/CY	=	$45
Shape subgrade (Pt. 5 to 7) (w/ grader)	15.7	sta		@	$20.63	/sta	=	$324
Reshape subgrade (Pt. 7 to 6) (w/ dozer)	2.1	sta		@	$20.63	/sta	=	$43
Compact subgrade (w/ roller)	17.8	sta		@	$16.00	/sta	=	$285
						TOTAL EXCAVATION =		$1,388
IMPROVEMENT					Rate			
Re-open road (w/ dozer)	2.1	sta		@	$36.67	/sta	=	$77
Re-open landing (w/ dozer)	0.5	hrs		@	$128.00	/hr	=	$64
Process surface (w/ dozer)	18.8	sta		@	$20.63	/sta	=	$388
Process surface (w/ grader)	21.6	sta		@	$20.63	/sta	=	$446
Compact surface (w/ roller)	40.4	sta		@	$16.00	/sta	=	$646
						TOTAL IMPROVEMENT =		$1,621
SURFACING			Size		Rate			
Base rock (6" lift) (Pt. 5 to Pt. 6)	590	CY	Jaw-Run	@	$25.90	/CY	=	$15,281
Surface rock (4" lift) (Pt. 5 to Pt. 7)	350	CY	3"-0"	@	$26.91	/CY	=	$9,419
Traction rock (2" lift) (Sta. 6+55 to Sta. 12+40)	60	CY	1½"-0"	@	$28.26	/CY	=	$1,696
Turnaround rock (Sta. 13+55)	10	CY	Jaw-Run	@	$25.90	/CY	=	$259
Landing rock (Pt. 6)	50	CY	Jaw-Run	@	$25.90	/CY	=	$1,295
						TOTAL SURFACING COST =		$27,950
SPECIAL PROJECTS					Rate			
Grass seed (WA)	2	lbs		@	$1.80	/lb	=	$4
Mulch	2	bales		@	$12.00	/bale	=	$24
Labor	1	hrs		@	$45.00	/hr	=	$45
						TOTAL SPECIAL PROJECTS COST =		$73

Compiled by: Zane Sandborg
Date: Oct 19, 2023

GRAND TOTAL =====> $31,206

SUMMARY OF CONSTRUCTION COST

SALE Wolf of Haul Street Project # 1 LENGTH improve 7.6 sta
ROAD 7 to 8

EXCAVATION				Rate			
Shape subgrade (w/ grader)	2	sta	@	$20.63	/sta	=	$41
Compact subgrade (w/ roller)	2	sta	@	$16.00	/sta	=	$32
Waterbar and block (w/grader) (Sta. 2+00 to Pt. 8)	1	hr	@	$145.00	/hr	=	$145
						TOTAL EXCAVATION =	$218

IMPROVEMENT				Rate			
Process surface (w/dozer) (Pt. 7 to Sta. 2+00)	2.0	sta	@	$20.63	/sta	=	$41
Compact surface (w/ roller) (Pt. 7 to Sta. 2+00)	2.0	sta	@	$16.00	/sta	=	$32
						TOTAL IMPROVEMENT =	$73

SURFACING			Size		Rate			
Base rock (6" lift) (Pt. 7 to Sta. 2+00)	60	CY	Jaw-Run	@	$25.90	/CY	=	$1,554
							TOTAL SURFACING COST =	$1,554

Compiled by: Zane Sandborg
Date: Oct 19, 2023

GRAND TOTAL =====> $1,845

SUMMARY OF CONSTRUCTION COST

SALE Wolf of Haul Street Project # 1 LENGTH improve 4.4 sta
ROAD 9 to 10

EXCAVATION				Rate			
Widen curve (Pt. 11) (w/ C325)	1	hr	@	$145.00	/hr	=	$145
End haul waste material (Exp. 20%)	30	CY	@	$3.00	/CY	=	$90
Compact waste material (Exp. 20%)	30	CY	@	$0.45	/CY	=	$14
Shape subgrade (w/ grader)	4.4	sta	@	$20.63	/sta	=	$91
Compact subgrade (w/ roller)	4.4	sta	@	$16.00	/sta	=	$70
					TOTAL EXCAVATION =		$410

IMPROVEMENT				Rate			
Re-open road (w/grader)	4.4	sta	@	$15.40	/sta	=	$68
Re-open landing (w/grader)	0.5	hrs	@	$114.00	/hr	=	$57
Process surface (w/ dozer)	4.9	sta	@	$20.63	/sta	=	$101
Compact surface (w/ roller)	4.9	sta	@	$16.00	/sta	=	$78
					TOTAL IMPROVEMENT =		$304

SURFACING			Size		Rate			
Base rock (6" lift)	150	CY	Jaw-Run	@	$25.90	/CY	=	$3,885
Landing rock	30	CY	Jaw-Run	@	$25.90	/CY	=	$777
						TOTAL SURFACING COST =		$4,662

Compiled by: Zane Sandborg
Date: Oct 19, 2023

GRAND TOTAL =====> $5,376

SUMMARY OF CONSTRUCTION COST

SALE Wolf of Haul Street Project # 1 LENGTH improve 2.0 sta
ROAD 11 to 12

EXCAVATION				Rate			
Shape subgrade (w/ grader)	2.0 sta		@	$20.63	/sta	=	$41
Compact subgrade (w/ roller)	2.0 sta		@	$16.00	/sta	=	$32
						TOTAL EXCAVATION =	$73

IMPROVEMENT				Rate			
Process surface (w/ dozer)	2.5 sta		@	$20.63	/sta	=	$52
Compact surface (w/ roller)	2.5 sta		@	$16.00	/sta	=	$40
						TOTAL IMPROVEMENT =	$92

SURFACING		Size		Rate			
Base rock (6" lift)	70 CY	Jaw-Run	@	$25.90	/CY	=	$1,813
Landing rock	20 CY	Jaw-Run	@	$25.90	/CY	=	$518
						TOTAL SURFACING COST =	$2,331

Compiled by: Zane Sandborg
Date: Oct 19, 2023

GRAND TOTAL =====> $2,496

SUMMARY OF CONSTRUCTION COST

SALE Wolf of Haul Street Project # 1 LENGTH improve 5.4 sta
ROAD 17 to 18

IMPROVEMENT			Rate			
Re-open road (w/grader)	5.4 sta	@	$15.40	/sta	=	$83

TOTAL IMPROVEMENT = $83

Compiled by: Zane Sandborg
Date: Oct 19, 2023

GRAND TOTAL =====> $83

SUMMARY OF CONSTRUCTION COST

SALE Wolf of Haul Street Project # 1 LENGTH improve 2.5 sta
ROAD 23 to 24

IMPROVEMENT			Rate			
Re-open road (w/grader)	2.5 sta	@	$15.40	/sta	=	$39

TOTAL IMPROVEMENT = $39

Compiled by: Zane Sandborg
Date: Oct 19, 2023

GRAND TOTAL =====> $39

SUMMARY OF BRUSHING COST

SALE Wolf of Haul Street Project # 2 LENGTH maintain 2.50 Miles
ROAD All (Surfaced/unsurfaced)

LIGHT BRUSHING			Rate			
Pt. 3 to Pt. 4	0.27	mi	@ $800.00	/mi	=	$216
Pt. 5 to Pt. 6	0.34	mi	@ $800.00	/mi	=	$272
Pt. 7 to Pt. 8	0.14	mi	@ $800.00	/mi	=	$112
Pt. 9 to Pt. 10	0.08	mi	@ $800.00	/mi	=	$64
Pt. 11 to Pt. 12	0.04	mi	@ $800.00	/mi	=	$32
Pt. 13 to Pt. 14	0.19	mi	@ $800.00	/mi	=	$152
Pt. 15 to Pt. 16	0.40	mi	@ $800.00	/mi	=	$320
Pt. 19 to Pt. 20	0.49	mi	@ $800.00	/mi	=	$392
TOTAL LENGTH =	1.95	mi	TOTAL LIGHT BRUSHING COST =			$1,560

MEDIUM BRUSHING			Rate			
Sta. 222+90 to Pt. 2 (Pt. 1 to Pt. 2)	0.15	mi	@ $1,100.00	/mi	=	$165
Pt. 17 to Pt. 18	0.10	mi	@ $1,100.00	/mi	=	$110
TOTAL LENGTH =	0.25	mi	TOTAL HEAVY BRUSHING COST =			$275

HEAVY BRUSHING			Rate			
Pt. 21 to Pt. 22	0.25	mi	@ $1,400.00	/mi	=	$350
Pt. 23 to Pt. 24	0.05	mi	@ $1,400.00	/mi	=	$70
TOTAL LENGTH =	0.30	mi	TOTAL HEAVY BRUSHING COST =			$420

BRUSHING GRAND TOTAL =====> $2,255

SOD AND DEBRIS REMOVAL			Rate			
All brushing segments	2.50	mi	@ $813.12	/mi	=	$2,033
TOTAL LENGTH =	2.50	mi	**TOTAL SOD AND DEBRIS REMOVAL =====>**			**$2,033**

Compiled by: Zane Sandborg
Date: Oct 19, 2023

SUMMARY OF MAINTENANCE COST

SALE: Wolf of Haul Street Final log haul Maintenance Cost Estimate

(Costed in appraisal, not in project costs)

Move-in	Grader	$	875

Road Segment	Length	Cost/Sta	Cost	Mileage
1 to 2	232.1	$20.63	$4,788.22	4.40
3 to 4	14.0	$20.63	$288.82	0.27
5 to 6	17.8	$20.63	$367.21	0.34
7 to 8	2.0	$20.63	$41.26	0.04
9 to 10	4.4	$20.63	$90.77	0.08
11 to 12	2.0	$20.63	$41.26	0.04
Total	272.3		$5,617.54	5.16

Maintenance Rock:

	Volume	Cost/CY	Cost
1½"-0"	190	$28.26	$5,369.40
3"-0"	60	$26.91	$1,614.60
Fue Cost Increase			$1,347.65
Grand Total			$ 14,824.19
TS Volume	1,773 MBF		
Cost / MBF =			$8.36

Rock Haul Cost Computation

SALE NAME: Wolf of haul street DATE: Oct 19, 2023
ROAD NAME: Wolf Cabin Road CLASS: Medium
ROCK SOURCE: Rickard Rock Quarry 10 CY truck
Route: Hwy 20, Harlan-Burnt Woods Rd., Burnt Woods Ridge Rd., Wolf Cabin Road

TIME Computation:
Road speed time factors:

1.	55 MPH		MRT	0.0	minutes
2.	50 MPH	25.0	MRT	30.0	minutes
3.	45 MPH		MRT	0.0	minutes
4.	40 MPH		MRT	0.0	minutes
5.	35 MPH	4.0	MRT	6.9	minutes
6.	30 MPH		MRT	0.0	minutes
7.	25 MPH		MRT	0.0	minutes
8.	20 MPH	8.0	MRT	24.0	minutes
9.	15 MPH		MRT	0.0	minutes
10.	10 MPH	2.0	MRT	12.0	minutes
11.	05 MPH		MRT	0.0	minutes

Dump or spread time per RT		0.50	minutes
Total hauling cycle time for this setting (100% efficiency)		73.40	minutes
Operator efficiency correction	0.85	86.35	minutes
Job efficiency correction	0.90	95.94	minutes
Truck capacity (CY)	10.00	9.59	min/CY
Loading time, delay time per CY		0.25	min/CY
TIME (minutes) per cubic yard		9.84	min/CY

COST per CY computation

Cost of truck and operator per hour	$90.00	/hr.
Cost of truck and operator per minute	$1.50	/min
Cost per CY	$14.76	/CY
Spread and compact — Water truck, Grader & Roller	$1.50	/CY

Size	Cost/Yd (Pit)	Cost Delivered w/o processing	Cost Delivered with processing
1½" - 0"	$ 13.50	$28.26	$29.76
3" - 0"	$ 12.15	$26.91	$28.41
Jaw-Run	$ 11.14	$25.90	$27.40
Pit-Run	$ 9.45	$24.21	$25.71

TIMBER CRUISE REPORT

Wolf of Haul Street
(WO-341-2023-W01093-01)
FY 2024

1. **Sale Area Location:** Portions of Sections 29 & 32, T11S, R8W, W.M. Lincoln County, Oregon.

2. **Fund Distribution:**
   a. **Fund** BOF 100%
   CSL 0%

3. **Sale Acreage by Area:**

Unit	Treatment	Gross Acres	Stream Buffers	Slope Buffers	Existing Roads	Green Tree Retention Area	Net Sale Acres	Acreage Comp. Method
1	Modified Clearcut	17	1	1	1	1	13	GIS
2	Modified Clearcut	62	6	<1	1	1	54	GIS
Total		79	7	1	2	2	67	

4. **Cruisers and Cruise Dates:** This sale was cruised by Zane Sandborg, Cody Valencia, Jeff Kuust and Jack Stout in July and August of 2023.

5. **Cruise Method and Computation:** The sale consists of two Modified Clearcut units that were cruised using variable radius plot sampling. Unit 1 was cruised using a basal area factor of 33.61 on a 2x3 chain cruise grid. Unit 2 was cruised using a basal area factor of 40 on a 3x3 chain cruise grid. On Unit 1, a total of 21 measure plots were taken. On Unit 2, a total of 56 plots were taken: 28 measure plots and 28 count plots.

   Measure plots were measured for DBH, height, form factor, grade, and defect. Data was entered into the Atterbury Super ACE cruise program to determine stand statistics and net board foot volume. Volume was removed to account for hidden defect and breakage and in-unit wildlife trees.

   Digital ortho photos, Lidar data, and GPS data were used to map the boundaries for the sale, and ArcGIS Pro was used to determine gross and net acreage.

6. **Measurement Standards:** Tree heights were measured to the nearest foot, to a top diameter of 6 inches inside bark or to 40% of form factor. Diameters at breast height (DBH) were measured to the nearest inch, and a form point of 16 feet was used to calculate form factor. Form factors were measured or estimated on every tree. Most trees were graded in 40 foot log segments unless breakage, defect, or length to top of grade cruise diameter warranted otherwise.

7. **Timber Description:** Timber is primarily 36 year-old Douglas-fir for Units 1 and 49 year-old to 81 year-old Douglas-fir for Unit 2. Unit 1 possesses a small amount of Western hemlock, grand fir, and red alder. Unit 2 possess a small amount of big-leaf maple and moderate amounts of red alder. For Unit 1 the average Douglas-fir to be removed is approximately 12 inches DBH, with an average height of 49 feet to a merchantable top. For Unit 2, the average Douglas-fir to be removed is approximately 17 inches DBH, with an average height of 65 feet to a merchantable top. The average volume per acre to be harvested (net) is approximately 20.7 MBF for Unit 1 and 27.9 MBF for Unit 2. Laminated root rot is present in Unit 1.

8. **Statistical Analysis and Stand Summary:** (See attached "Statistics").

Unit	Target CV	Target SE	Actual CV	Actual SE
1	40%	9%	41.0%	9.2%
2	60%	9%	49.1%	6.6%

Note: Statistics shown are for conifer and hardwood trees combined. Percentages are for net board foot volume.

9. **Total Volume (MBF) by Species and Grade:** (See attached volume report "Species, Sort Grade – Board Foot Volumes - Project").

Unit	Species	Gross Cruise Volume (MBF)	Cruised D & B	Cruised D & B (MBF)	Green Tree Retention (MBF)	Hidden D & B	Hidden D & B (MBF)	Net Sale Volume
1	Douglas-fir	264	2.1%	6	1	3%	8	249
1	Red Alder	15	2.3%	<1	0	7%	1	14
2	Douglas-fir	1408	.6%	8	43	3%	41	1316
2	Red Alder	199	.5%	1	0	2%	4	194
Total		**1885**	**.8%**	**15**	**44**	**2.9%**	**54**	**1773**

Unit	Species	Avg. DBH	Tot. Net Vol.	2-Saw	3-Saw	4-Saw	Camp Run
1	Douglas-fir	12	Grade %	5%	76%	19%	-
			249	13	189	47	-
	Red Alder	16	Grade %	-	-	-	100%
			14	-	-	-	14
2	Douglas-fir	17	Grade %	61%	33%	6%	-
			1316	803	434	79	-
	Red Alder	12	Grade %	-	-	-	100%
			194	-	-	-	194
Total	**Total**		1773	816	623	126	208

Attachments: -Cruise Design
-Cruise Maps
-Statistics
-Species, Sort, Grade – Board Foot Volume
-Stand Table Summary
-Log Stock Table – MBF

Prepared by: Zane Sandborg Date: 010/19/2023

Unit Forester: Cody Valencia Date: 10/23/23
Cody Valencia

Revised August, 2002

CRUISE DESIGN
WEST OREGON DISTRICT

Sale Name: Wolf of Haul Street Unit 1

Harvest Type: MC
Approx. Cruise Acres: 13 **Estimated CV%** 40 Net BF /Acre **SE% Objective** 9 Net BF /Acre

Planned Sale Volume: 2.42 MMBF **Estimated Sale Area Value/Acre:** $ 12,600

A. Cruise Goals: (a) Grade minimum 100 conifer and 0 hardwood trees: (b) Sample 21 cruise plots (21 grade: 0 count); (c) Other goals X Determine log grades for sale value.

(Special cruising directions – leave trees etc.) Take plots as shown on map. Do not take plots in buffers.

DO NOT RECORD 12', 22' and 32' (for Hardwoods).

DO NOT RECORD 22' LENGTHS.

B. Cruise Design:

1. **Plot Cruises:** BAF 33.61 Full point
   Cruise Line Direction(s) 90/270
   Cruise Line Spacing 3/198 (chains) (feet)
   Cruise Plot Spacing 2/132 (chains) (feet)
   Grade/Count Ratio 1:0

C. Tree Measurements:

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. **Top Cruise Diameter (TCD):** Minimum top outside bark for conifer is 7", 8" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees ≤ 18" dbh and 40% of dob @ FP for trees > 18" dbh.

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each

merch. log segment. Do not use “double dash” (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as DF (Douglas-fir); WH (Western hemlock); SS (Sitka Spruce); RC (Western red cedar); NF (Noble fir); SF (Silver fir); RA (Red alder); BM (Bigleaf maple). For “leave trees” in partial cuts, or for marked “wildlife trees,” add an “L” to the species code (such as DFL, HL, CL, etc.)
   B. Sort: Use code “1” (Domestic).
   C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; K = Camp Run; 0 = Cull ;
   Hardwoods: K = Camprun; #1 Sawmill = 12”+ scaling diameter; #2 Sawmill = 10” and 11”; #3 Sawmill = 8” and 9”; #4 Sawmill = 6” and 7”

7. **Deductions:** Estimate visible defect or damage as a “length deduction” (most often), or as a “diameter deduction,” as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a “per tree” basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning points with red flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie red flagging above eye level near plot center and another red flagging around a sturdy wooden stake marking plot center. On red flagging, write the plot identification number. On “measure/grade” plots write the tree number and/or tree diameter on all measured trees (clockwise from the line direction) in yellow paint. Mark leave trees with an L for leave.
   ITS and 100% Cruises: Mark cruise “strips” with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

9. **Cruising Equipment:** Relaskop, Rangefinder or Laser, Logger’s Tape (with dbh on back), Biltmore Stick, Compass, Cruise Cards or Data Recorder, Cruise Design, Cruise Map, Yellow Paint.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Zane Sandborg
Approved by: _____
Date: _____

Revised August, 2002

CRUISE DESIGN
WEST OREGON DISTRICT

Sale Name: **Wolf of Haul Street** **Unit** **2**

Harvest Type: MC
Approx. Cruise Acres: 54 **Estimated CV%** 60 Net BF /Acre **SE% Objective** 9 Net BF /Acre

Planned Sale Volume: 2.42 MMBF **Estimated Sale Area Value/Acre:** $ 17,100

A. Cruise Goals: (a) Grade minimum 100 conifer and 0 hardwood trees: (b) Sample 56 cruise plots (28 grade: 28 count); (c) Other goals X Determine log grades for sale value.

(Special cruising directions – leave trees etc.) Take plots as shown on map. Do not take plots in buffers.

DO NOT RECORD 12', 22' and 32' (for Hardwoods).

DO NOT RECORD 22' LENGTHS.

B. Cruise Design:

1. **Plot Cruises:** BAF 40 Full point
   Cruise Line Direction(s) 90/270
   Cruise Line Spacing 3/198 (chains) (feet)
   Cruise Plot Spacing 3/198 (chains) (feet)
   Grade/Count Ratio 1:1

C. Tree Measurements:

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. **Top Cruise Diameter (TCD):** Minimum top outside bark for conifer is 7", 8" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees ≤ 18" dbh and 40% of dob @ FP for trees > 18" dbh.

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each

merch. log segment. Do not use “double dash” (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as DF (Douglas-fir); WH (Western hemlock); SS (Sitka Spruce); RC (Western red cedar); NF (Noble fir); SF (Silver fir); RA (Red alder); BM (Bigleaf maple). For “leave trees” in partial cuts, or for marked “wildlife trees,” add an “L” to the species code (such as DFL, HL, CL, etc.)
   B. Sort: Use code “1” (Domestic).
   C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; K = Camp Run; 0 = Cull ;
   Hardwoods: K = Camprun; #1 Sawmill = 12”+ scaling diameter; #2 Sawmill = 10” and 11”; #3 Sawmill = 8” and 9”; #4 Sawmill = 6” and 7”

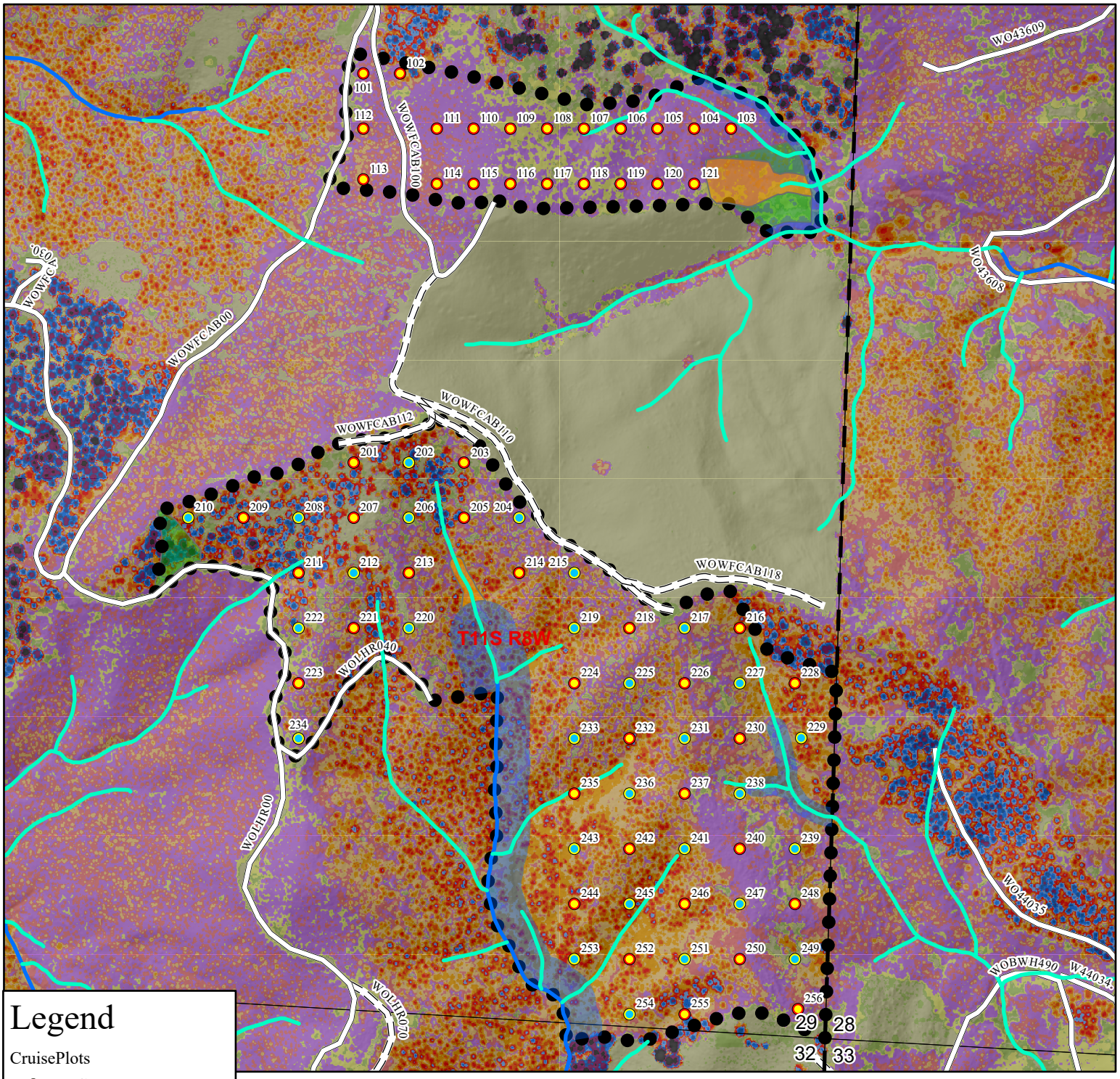
7. **Deductions:** Estimate visible defect or damage as a “length deduction” (most often), or as a “diameter deduction,” as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a “per tree” basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning points with red flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie red flagging above eye level near plot center and another red flagging around a sturdy wooden stake marking plot center. On red flagging, write the plot identification number. On “measure/grade” plots write the tree number and/or tree diameter on all measured trees (clockwise from the line direction) in yellow paint. Mark leave trees with an L for leave.
   ITS and 100% Cruises: Mark cruise “strips” with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

9. **Cruising Equipment:** Relaskop, Rangefinder or Laser, Logger’s Tape (with dbh on back), Biltmore Stick, Compass, Cruise Cards or Data Recorder, Cruise Design, Cruise Map, Yellow Paint.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Zane Sandborg
Approved by: _____
Date: _____



Legend

CruisePlots

- Count
- Measure
- Gross Boundary
- Slope Buffer
- Stream Buffer
- Green Tree Area
- ODF Managed Lands

Roads

- Surfaced Road
- Unsurfaced Road

Wolf of Haul Street
Cruise Map

PORTIONS OF SECTIONS 29 & 32, T11S, R8W,
LINCOLN COUNTY, OREGON

U1 BAF:
U2 BAF:
U1 SPACING: 2 X 3 CHAINS
U2 SPACING: 3 X 3 CHAINS
LINE BEARING: 90/270

N
W E
S

1:6,000

400 200 0 400 800 1,200 1,600

Feet

07/17/2023

TC PSTATS

PROJECT STATISTICS

PROJECT WOLFHAUL

DATE 10/9/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
11S	08	29	U1	00MC	13.00	21	129	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	21	129	6.1		
CRUISE	21	129	6.1	3,231	4.0
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
DF	110	210.9	12.4	49	50.1	176.1	20,262	19,843	5,632	5,632
R ALDER	10	11.2	16.2	43	4.0	16.0	1,155	1,129	403	403
SNAG	6	22.7	8.8	38	3.2	9.6				
GR FIR	3	3.8	15.2	55	1.2	4.8	559	559	165	165
TOTAL	*129*	*248.5*	*12.3*	*48*	*58.8*	*206.5*	*21,976*	*21,530*	*6,200*	*6,200*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1 SD: 1.0

SAMPLE TREES - BF

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF	89.4	8.5	113	123	134			
R ALDER	105.8	35.2	83	128	173			
SNAG								
GR FIR	34.8	24.1	121	160	199			
TOTAL	*93.0*	*8.2*	*110*	*120*	*129*	*345*	*86*	*38*

CL 68.1 SD: 1.0

SAMPLE TREES - CF

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF	78.7	7.5	32	35	38			
R ALDER	91.9	30.6	30	44	57			
SNAG								
GR FIR	38.5	26.6	35	47	60			
TOTAL	*83.2*	*7.3*	*32*	*35*	*37*	*276*	*69*	*31*

CL 68.1 SD: 1.0

TREES/ACRE

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF	56.4	12.6	184	211	238			
R ALDER	168.0	37.5	7	11	15			
SNAG	257.4	57.5	10	23	36			
GR FIR	342.0	76.4	1	4	7			
TOTAL	*42.4*	*9.5*	*225*	*249*	*272*	*75*	*19*	*8*

CL 68.1 SD: 1.0

BASAL AREA/ACRE

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF	46.7	10.4	158	176	194			
R ALDER	157.4	35.2	10	16	22			
SNAG	251.0	56.1	4	10	15			
GR FIR	334.7	74.8	1	5	8			
TOTAL	*28.8*	*6.4*	*193*	*206*	*220*	*35*	*9*	*4*

CL 68.1 SD: 1.0

NET BF/ACRE

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF	51.7	11.6	17,549	19,843	22,136			
R ALDER	148.8	33.3	753	1,129	1,504			
SNAG								
GR FIR	331.4	74.1	145	559	973			

TC PSTATS

PROJECT STATISTICS

PROJECT WOLFHAUL

DATE 10/9/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
11S	08	29	U1	00MC	13.00	21	129	1	W

NET BF/ACRE

CL 68.1 / SD: 1.00	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
TOTAL	*41.0*	*9.2*	*19,557*	*21,530*	*23,504*	*71*	*18*	*8*

NET CUFT FT/ACRE

CL 68.1 / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF	50.1	11.2	5,002	5,632	6,262			
R ALDER	152.9	34.2	266	403	541			
SNAG								
GR FIR	341.2	76.3	39	165	291			
TOTAL	*37.4*	*8.4*	*5,682*	*6,200*	*6,718*	*59*	*15*	*7*

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T11S R08W S29 Ty00MC 13.00

Project: **WOLFHAUL**

Acres **13.00**

Page **1**

Date **10/9/2023**

Time **8:49:45AM**

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		DO 2M	5	5.2	1,210	1,147	15			61	39				100	40	14	272	1.78	4.2
DF		DO 3M	76	2.1	15,417	15,099	196		100				1	18	81	37	8	82	0.62	183.1
DF		DO 4M	19	1.1	3,636	3,597	47		100			64	32	3		18	6	22	0.36	164.1
DF	**Totals**		92	2.1	20,262	19,843	258		94	4	2	12	7	15	67	28	7	56	0.56	351.4
RA		DO CR	100	2.3	1,155	1,129	15		87		13	6		26	68	34	8	86	0.91	13.2
RA	**Totals**		5	2.3	1,155	1,129	15		87		13	6		26	68	34	8	86	0.91	13.2
GF		DO 3M	82		462	462	6		100					35	65	36	10	122	0.98	3.8
GF		DO 4M	18		96	96	1		100			72	28			18	7	25	0.48	3.8
GF	**Totals**		3		559	559	7		100			12	5	29	54	27	8	74	0.81	7.6
Totals				2.0	21,976	21,530	280		94	3	3	11	6	16	67	29	7	58	0.58	372.2

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 10/9/2023

T11S R08W S29 Ty00MC 13.00

Project WOLFHAUL
Acres 13.00

Time: 8:49:46AM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		8	3	90	27	13.755	4.80	13.76	4.7	16.7		64	229		8	3
DF		9	8	88	67	28.982	12.80	28.98	10.9	47.5		315	1,377		41	18
DF		10	7	87	87	20.541	11.20	35.21	9.7	39.2		340	1,379		44	18
DF		11	12	86	89	29.102	19.21	46.08	12.8	45.3		589	2,086		77	27
DF		12	12	86	89	24.453	19.21	46.87	12.8	43.9		601	2,058		78	27
DF		13	22	87	88	38.200	35.21	72.93	16.1	55.0		1,176	4,011		153	52
DF		14	14	86	85	20.960	22.41	37.43	19.4	64.0		726	2,395		94	31
DF		15	12	87	85	15.650	19.21	31.30	20.4	69.2		639	2,165		83	28
DF		16	10	86	89	11.463	16.00	22.93	24.2	83.0		556	1,903		72	25
DF		17	3	90	94	3.046	4.80	6.09	30.3	111.7		185	680		24	9
DF		18	2	88	100	1.811	3.20	3.62	34.0	115.0		123	417		16	5
DF		19	2	88	95	1.626	3.20	3.25	37.3	117.5		121	382		16	5
DF		22	1	88	87	.606	1.60	1.21	47.5	155.0		58	188		7	2
DF		28	1	85	121	.374	1.60	1.12	65.0	263.3		73	296		9	4
DF		30	1	89	106	.326	1.60	.65	100.5	425.0		66	277		9	4
DF		Totals	110	87	81	210.895	176.05	351.43	16.0	56.5		5,632	19,843		732	258
RA		13	2	87	68	3.473	3.20	3.47	26.0	70.0		90	243		12	3
RA		14	1	87	57	1.497	1.60	1.50	28.0	60.0		42	90		5	1
RA		15	1	86	62	1.304	1.60	1.30	34.0	90.0		44	117		6	2
RA		16	1	86	70	1.146	1.60	2.29	23.0	80.0		53	183		7	2
RA		17	2	86	62	2.031	3.20	3.05	29.0	83.3		88	254		11	3
RA		18	1	87	55	.906	1.60	.91	40.0	90.0		36	82		5	1
RA		25	1	86	33	.470	1.60									
RA		30	1	86	68	.326	1.60	.65	76.0	245.0		50	160		6	2
RA		Totals	10	87	62	11.152	16.00	13.17	30.6	85.7		403	1,129		52	15
GF		13	1	86	80	1.736	1.60	3.47	15.5	50.0		54	174		7	2
GF		16	1	89	79	1.146	1.60	2.29	22.0	85.0		50	195		7	3
GF		18	1	86	91	.906	1.60	1.81	33.5	105.0		61	190		8	2
GF		Totals	3	87	82	3.788	4.80	7.58	21.8	73.7		165	559		21	7
SN		8	1	98	60	4.585	1.60									
SN		9	5	99	79	18.114	8.00									
SN		Totals	6	99	75	22.699	9.60									
Totals			129	88	80	248.535	206.46	372.18	16.7	57.8		6,200	21,530		806	280

TC PLOGSTVB

Log Stock Table - MBF

T11S R08W S29 Ty00MC 13.00

Project: WOLFHAUL
Acres 13.00

Page 1
Date 10/9/2023
Time 8:49:44AM

Spp	ST	Sort	Grade	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		DO	2M	40	16	5.2	15	5.8						7		2	3		3	
DF		DO	3M	28	0		0	.2			0									
DF		DO	3M	30	1		1	.5				1								
DF		DO	3M	32	29	5.3	27	10.6			14	13								
DF		DO	3M	34	9		9	3.5			9									
DF		DO	3M	36	16	3.0	15	5.9			8	7								
DF		DO	3M	38	14	3.5	13	5.2			10	4								
DF		DO	3M	40	131	1.3	130	50.3			25	70	35							
DF		DO	4M	12	4		4	1.7			4	1								
DF		DO	4M	14	7	2.1	7	2.6			7									
DF		DO	4M	16	8		8	3.2			8									
DF		DO	4M	18	5		5	2.0			5									
DF		DO	4M	20	5		5	2.0			4	2								
DF		DO	4M	24	4		4	1.7			4									
DF		DO	4M	26	3		3	1.3			3									
DF		DO	4M	28	4		4	1.7			4									
DF		DO	4M	30	3		3	1.3			3									
DF		DO	4M	32	2	20.0	1	.6			1									
DF		Totals			263	2.1	258	92.2			112	97	35	7		2	3		3	
RA		DO	CR	14	0		0	1.8			0									
RA		DO	CR	16	0		0	3.0			0									
RA		DO	CR	18	0		0	.9			0									
RA		DO	CR	32	4	3.8	4	25.8					4							
RA		DO	CR	38	1	14.3	1	8.0			1									
RA		DO	CR	40	9		9	60.5			3	4				2				
RA		Totals			15	2.3	15	5.2			5	4	4			2				
GF		DO	3M	32	2		2	28.7					2							
GF		DO	3M	36	2		2	24.9				2								
GF		DO	3M	40	2		2	29.2					2							
GF		DO	4M	14	0		0	6.2			0									
GF		DO	4M	16	0		0	6.2				0								
GF		DO	4M	28	0		0	4.9			0									
GF		Totals			7		7	2.6			1	2	4							
Total		All Species			286	2.0	280	100.0			117	103	43	7		2	5		3	

TC PSTATS

PROJECT STATISTICS

PROJECT WOLFHAUL

DATE 10/19/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
11S	08	29	U2	00MC	54.00	56	296	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	56	296	5.3		
CRUISE	27	135	5.0	8,652	1.6
DBH COUNT					
REFOREST					
COUNT	28	161	5.8		
BLANKS	1				
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
DF	104	101.1	17.3	65	39.8	165.7	26,077	25,916	6,683	6,683
R ALDER	25	51.2	11.8	38	11.3	38.6	3,687	3,667	1,118	1,118
SNAG	3	5.9	12.4	37	1.4	5.0				
BL MAPLE	3	2.0	14.2	37	0.6	2.1	168	165	56	56
TOTAL	*135*	*160.2*	*15.6*	*55*	*53.6*	*211.4*	*29,932*	*29,748*	*7,857*	*7,857*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

SAMPLE TREES - BF

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF	113.2	11.1	418	470	523			
R ALDER	39.4	8.0	71	77	83			
SNAG								
BL MAPLE	57.4	39.7	68	113	158			
TOTAL	*131.0*	*11.3*	*336*	*379*	*422*	*685*	*171*	*76*

SAMPLE TREES - CF

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF	93.0	9.1	103	113	124			
R ALDER	39.1	8.0	22	24	26			
SNAG								
BL MAPLE	59.4	41.1	26	44	62			
TOTAL	*107.9*	*9.3*	*84*	*93*	*101*	*465*	*116*	*52*

TREES/ACRE

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF	80.9	10.8	90	101	112			
R ALDER	175.1	23.4	39	51	63			
SNAG	359.9	48.1	3	6	9			
BL MAPLE	526.6	70.3	1	2	3			
TOTAL	*55.0*	*7.3*	*148*	*160*	*172*	*121*	*30*	*13*

BASAL AREA/ACRE

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF	67.6	9.0	151	166	181			
R ALDER	176.8	23.6	29	39	48			
SNAG	307.5	41.1	3	5	7			
BL MAPLE	424.1	56.6	1	2	3			
TOTAL	*42.6*	*5.7*	*199*	*211*	*223*	*73*	*18*	*8*

NET BF/ACRE

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF	68.0	9.1	23,564	25,916	28,269			
R ALDER	178.3	23.8	2,794	3,667	4,540			
SNAG								
BL MAPLE	452.5	60.4	65	165	265			

TC PSTATS

PROJECT STATISTICS

PROJECT WOLFHAUL

DATE 10/19/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
11S	08	29	U2	00MC	54.00	56	296	1	W

NET BF/ACRE

CL 68.1 SD: 1.00	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
TOTAL	*49.1*	*6.6*	*27,799*	*29,748*	*31,698*	*96*	*24*	*11*

NET CUFT FT/ACRE

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF	67.0	8.9	6,085	6,683	7,281			
R ALDER	178.2	23.8	852	1,118	1,384			
SNAG								
BL MAPLE	429.2	57.3	24	56	88			
TOTAL	*46.2*	*6.2*	*7,372*	*7,857*	*8,342*	*85*	*21*	*9*

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T11S R08W S29 Ty00MC 54.00

Project: **WOLFHAUL**

Acres **54.00**

Page **1**
Date **10/19/2023**
Time **9:04:48AM**

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		DO 2M	61	.7	16,168	16,058	867			64	36	0	1	2	97	40	14	331	1.94	48.5
DF		DO 3M	33	.5	8,408	8,365	452		97	0	2	0	3	10	87	38	8	96	0.75	87.2
DF		DO 4M	6	.5	1,501	1,493	81		100			46	52	2		21	6	25	0.40	59.7
DF	**Totals**		87	.6	26,077	25,916	1,399		37	40	23	3	5	4	88	33	9	133	1.04	195.4
BM		DO CR	100	1.5	168	165	9		100			5	40		56	29	8	70	0.81	2.4
BM	**Totals**		1	1.5	168	165	9		100			5	40		56	29	8	70	0.81	2.4
RA		DO CR	100	.5	3,687	3,667	198		100			9	13	16	62	31	7	59	0.58	62.2
RA	**Totals**		12	.5	3,687	3,667	198		100			9	13	16	62	31	7	59	0.58	62.2
Totals				0.6	29,932	29,748	1,606		45	35	20	4	6	6	85	32	9	114	0.93	260.0

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 10/19/2023

T11S R08W S29 Ty00MC 54.00

Project WOLFHAUL
Acres 54.00

Time: 9:04:50AM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		9	3	87	48	10.820	4.78	10.82	8.0	26.7		87	289		47	16
DF		10	6	87	63	17.529	9.56	17.53	12.5	46.7		219	818		118	44
DF		12	2	88	100	4.058	3.19	8.12	14.0	50.0		114	406		61	22
DF		13	1	86	89	1.729	1.59	3.46	15.5	55.0		54	190		29	10
DF		14	3	87	93	4.472	4.78	8.94	18.3	63.3		164	566		89	31
DF		15	6	87	103	7.791	9.56	15.58	23.6	86.7		367	1,350		198	73
DF		16	5	87	95	5.706	7.97	11.41	25.2	90.0		288	1,027		155	55
DF		17	7	88	100	7.076	11.15	15.16	28.9	103.3		438	1,567		236	85
DF		18	9	88	108	8.115	14.34	18.03	33.4	120.0		602	2,164		325	117
DF		19	9	87	103	7.283	14.34	16.19	35.8	123.0		579	1,991		312	108
DF		20	4	86	112	2.921	6.37	8.03	33.5	117.3		269	942		145	51
DF		21	11	88	106	7.287	17.53	18.55	39.2	145.4		727	2,696		393	146
DF		22	6	88	106	3.622	9.56	7.85	50.0	190.0		392	1,491		212	81
DF		23	2	88	140	1.105	3.19	3.31	50.0	211.7		166	701		89	38
DF		24	3	87	115	1.522	4.78	4.06	51.1	201.2		207	817		112	44
DF		25	9	88	116	4.207	14.34	11.69	54.5	221.2		637	2,585		344	140
DF		26	2	85	130	.864	3.19	2.16	70.8	286.0		153	618		83	33
DF		27	4	88	123	1.603	6.37	4.41	67.2	285.5		296	1,258		160	68
DF		28	4	88	130	1.491	6.37	4.47	70.0	320.8		313	1,435		169	77
DF		29	2	87	145	.695	3.19	1.74	76.2	350.0		132	608		71	33
DF		30	1	86	150	.325	1.59	.97	88.7	406.7		86	396		47	21
DF		34	1	89	146	.253	1.59	.76	116.3	600.0		88	455		48	25
DF		35	1	84	130	.238	1.59	.72	86.3	443.3		62	317		33	17
DF		39	1	90	166	.192	1.59	.77	129.2	705.0		99	542		54	29
DF		48	1	83	121	.127	1.59	.38	168.3	790.0		64	301		35	16
DF		52	1	86	139	.108	1.59	.32	246.3	1193.3		80	387		43	21
DF		Totals	104	87	93	101.137	165.71	195.42	34.2	132.6		6,683	25,916		3,609	1,399
RA		10	7	87	69	19.801	10.80	22.63	14.0	51.2		317	1,160		171	63
RA		11	5	86	70	11.689	7.71	14.03	15.3	53.3		215	748		116	40
RA		12	3	86	72	5.893	4.63	5.89	21.7	63.3		128	373		69	20
RA		13	3	86	84	5.021	4.63	8.37	18.8	64.0		157	536		85	29
RA		14	2	87	64	2.887	3.09	2.89	29.5	80.0		85	231		46	12
RA		15	4	86	69	5.029	6.17	7.54	24.0	71.7		181	541		98	29
RA		18	1	86	56	.873	1.54	.87	40.0	90.0		35	79		19	4
RA		Totals	25	86	71	51.194	38.57	62.22	18.0	58.9		1,118	3,667		604	198
BM		10	1	86	62	1.310	.71	1.31	14.0	50.0		18	65		10	4
BM		18	1	86	69	.404	.71	.81	27.5	90.0		22	73		12	4
BM		23	1	87	52	.248	.71	.25	62.0	110.0		15	27		8	1
BM		Totals	3	86	62	1.961	2.14	2.37	23.6	69.9		56	165		30	9
SN		8	1	99	18	4.775	1.67									
SN		23	2	99	146	1.155	3.33									
SN		Totals	3	99	43	5.930	5.00									
Totals			135	87	83	160.222	211.43	260.01	30.2	114.4		7,857	29,748		4,243	1,606

TC PLOGSTVB

Log Stock Table - MBF

T11S R08W S29 Ty00MC 54.00

Project: WOLFHAUL
Acres 54.00

Page 1
Date 10/19/2023
Time 9:04:48AM

Spp	ST	Sort	Grade	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		DO	2M	12	1		1	.0						1						
DF		DO	2M	14	1		1	.0							1					
DF		DO	2M	26	10		10	.7										10		
DF		DO	2M	32	4		4	.3						4						
DF		DO	2M	34	9		9	.7								9				
DF		DO	2M	36	10		10	.7						4		6				
DF		DO	2M	40	839		833	59.5						275	175	249	78	31	24	
DF		DO	3M	20	1		1	.1				1								
DF		DO	3M	26	4		4	.3				3				2				
DF		DO	3M	28	6		6	.4			6									
DF		DO	3M	30	3	4.9	2	.2				1	1							
DF		DO	3M	32	37		37	2.6			7	22	8							
DF		DO	3M	34	9		9	.7			9									
DF		DO	3M	36	54		54	3.9			35	11	5				4			
DF		DO	3M	38	19		19	1.4			9	10								
DF		DO	3M	40	320		318	22.7			55	95	162					7		
DF		DO	4M	12	9		9	.6			8	1								
DF		DO	4M	14	5		5	.3			4	1								
DF		DO	4M	16	6		6	.4			4	1								
DF		DO	4M	18	11		11	.8			10	1								
DF		DO	4M	20	7		7	.5			6	1								
DF		DO	4M	24	6		6	.4			5	1								
DF		DO	4M	26	2		2	.2			2									
DF		DO	4M	28	19		19	1.3			19									
DF		DO	4M	30	15		15	1.1			15									
DF		DO	4M	34	2	20.0	2	.1			2									
DF		Totals			1,408		1,399	87.1			196	148	176	284	176	266	83	48	24	
BM		DO	CR	14	0		0	4.9			0									
BM		DO	CR	30	4		4	39.6			4									
BM		DO	CR	36	3		3	39.1					3							
BM		DO	CR	40	2	8.3	1	16.5				1								
BM		Totals			9	1.5	9	.6			4	1	3							
RA		DO	CR	12	6		6	2.9			6									
RA		DO	CR	16	6		6	3.3			6									
RA		DO	CR	18	3		3	1.4			3									
RA		DO	CR	20	4		4	1.9			4									

TC PLOGSTVB

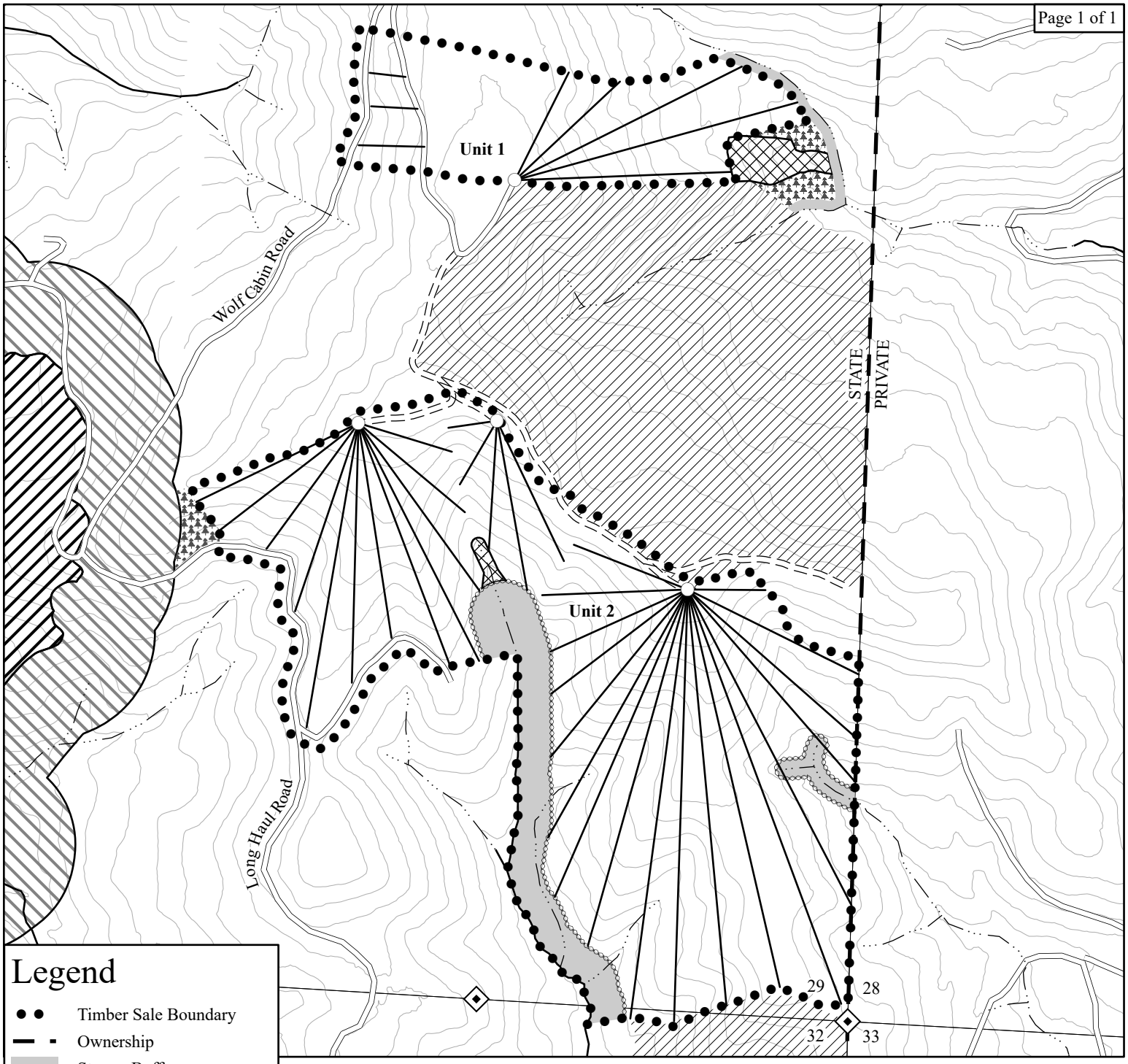
Log Stock Table - MBF

T11S R08W S29 Ty00MC 54.00

Project: WOLFHAUL
Acres 54.00

Date 10/19/2023
Time 9:04:48AM

Spp	ST	Sort	Grade	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+
RA		DO	CR	24	12		12	6.2			12									
RA		DO	CR	30	14		14	7.0				14								
RA		DO	CR	32	23	4.6	22	11.1			22									
RA		DO	CR	34	9		9	4.6			9									
RA		DO	CR	36	22		22	11.3			22									
RA		DO	CR	38	21		21	10.4			21									
RA		DO	CR	40	79		79	39.8			34	45								
RA		Totals			199		198	12.3			140	58								
Total		All Species			1,616		1,606	100.0			339	208	179	284	176	266	83	48	24	



LOGGING PLAN

OF TIMBER SALE CONTRACT NO. WO-341-2024-W01093-01
WOLF OF HAUL STREET
PORTIONS OF SECTIONS 29 & 32, T11S, R8W, W.M.
LINCOLN COUNTY, OREGON

UNIT	ACRES	CABLE TRACTOR ACRES
1 (MC)	9	4
2 (MC)	54	0
TOTAL	63	4

Legend

- Timber Sale Boundary
- Ownership
- Stream Buffer
- Posted Stream Buffer
- Slope Buffer
- Green Tree Retention Area
- Reforestation Area

Marbled Murrelet Management Area

- Occupied Habitat
- Non-Habitat Buffer
- Surfaced Road
- Unsurfaced Road
- Type F Stream
- Type N Stream
- Cable Corridor
- Land Survey Monument
- Landing

This product is for informational use and may not have been prepared for or be suitable for legal, engineering or survey purposes. Variations may exist between and among data sets in use by the Department of Forestry. This map was developed using the Statewide layer on 8/21/2023. Users of this information should review or consult the primary data and information sources to ascertain the usability of this information.

1:6,000

0 250 500 1,000 1,500 2,000 Feet

N
W E
S

10/11/2023