"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
South Minich

Sale TL-341-2022-W00504-01

District: Tillamook

Date: May 27, 2022

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$981,004.76	$13,473.68	$994,478.44
		Project Work:	($144,200.00)
		Advertised Value:	$850,278.44

Timber Sale Appraisal
South Minich

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District: Tillamook

Date: May 27, 2022

Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	100
Western Hemlock / Fir	15	0	100
Sitka Spruce	19	0	100
Red Cedar	15	0	100
Alder (Red)	19	0	100

Volume by Grade	2S	3S & 4S 6"- 11"	Camprun	3S	4S	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	464	395	0	0	0	0	0	0	859
Western Hemlock / Fir	1,215	810	0	0	0	0	0	0	2,025
Sitka Spruce	0	0	173	0	0	0	0	0	173
Red Cedar	25	0	0	21	14	0	0	0	60
Alder (Red)	0	0	0	0	0	27	16	18	61
Total	1,704	1,205	173	21	14	27	16	18	3,178

Comments: Additional Costs – South Minich
Pond Values Used: April 2022
Region: Astoria, Forest Grove, and Tillamook
Pulp (Conifer and Hardwood) Price = $ 2.50/ Ton
FUEL COST ALLOWANCE = $5.00/ Gallon
HAULING COST ALLOWANCE = $1,200/DAY
($120.00/hr x 10 hr.= $ 1,200.00)

Other costs with profit and risk added:
BRAND AND PAINT ALLOWANCE = $2.00/ MBF
3178 MBF x $2.00/MBF = $6,356
Heliport Construction: $500/unit x 1 unit = $500
Move-in Machine Cleaning: $1,000/machine x 2 machines x 2 seasons = $4,000
Non-project Rd. 1: 1+00 sta. $1,100/sta. = $ 1,100
Non-project Rd. 2: 1+00 sta. $1,100/sta. = $ 1,100
Non-project Rd. 3: 1+00 sta. $1,100/sta. = $ 1,100
Closing non-project: 3 x $50/road = $ 150.00
Roadside non-project landings: 1 x $200/landing = $ 200.00

TOTAL Other costs with profit and risk to be added = $14,506

Other Costs without Profit and Risk Added:
Slash piling and sorting (Cable Settings): $5/ac x 103ac. = $515

Ditch Cleaning and Bank Sluff Removal:
Mobilization: one time – dump truck w/ tilt bed & small excavator: $900 x 1 = $900
Small excavator (Cat 312 or equivalent): 10 hours @ $135/ hour = $1,350
Dump truck: 10 hours @ $90/ hour = $900

TOTAL Other Costs without Profit and Risk added = $3,665

ODF Road Maintenance
Spot Rocking: 20cy/MMBF/mile x 3.178 x $31/cy x 2.6 miles /3,178 MBF = $1.61/MBF
Interim Grading: $1,150/mile x 2.6 miles x 1 times/ 3,178 MBF = $0.94/MBF
Final Maintenance Grading: $1,500/mile x 2.6 miles/ 3,178 MBF = $1.23/MBF
Total Road Maintenance: = $3.78/MBF

Timber Sale Appraisal
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"STEWARDSHIP IN FORESTRY"

District: Tillamook

Date: May 27, 2022

Logging Conditions

Combination#: 1

Douglas - Fir	9.00%
Western Hemlock / Fir	9.00%
Sitka Spruce	9.00%
Red Cedar	9.00%
Alder (Red)	9.00%

Logging System: Shovel
Process: Harvester Head 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: 18
bd. ft / load: 3500
cost / mbf: $84.83
machines: Forwarder
Harvester

Combination#: 2

Douglas - Fir	58.00%
Western Hemlock / Fir	58.00%
Sitka Spruce	58.00%
Red Cedar	58.00%
Alder (Red)	58.00%

Logging System: Cable: Medium Tower >40 - <70
Process: Harvester Head 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: 9
bd. ft / load: 3500
cost / mbf: $248.95
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 3

Douglas - Fir	33.00%
Western Hemlock / Fir	33.00%
Sitka Spruce	33.00%
Red Cedar	33.00%
Alder (Red)	33.00%

Logging System: Cable: Medium Tower >40 - <70
Process: Harvester Head 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: 7
bd. ft / load: 3500
cost / mbf: $320.08
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Timber Sale Appraisal
South Minich

Sale TL-341-2022-W00504-01

District: Tillamook

Date: May 27, 2022

Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	10%
Project Costs:	$144,200.00	**Other Costs (P/R):**	$14,506.00
Slash Disposal:	$0.00	**Other Costs:**	$3,665.00

Miles of Road

Road Maintenance: $3.78

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	3.2
Western Hemlock / Fir	$0.00	2.0	4.0
Sitka Spruce	$0.00	2.0	2.8
Red Cedar	$0.00	2.0	4.0
Alder (Red)	$0.00	2.0	4.0

Timber Sale Appraisal
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Sale TL-341-2022-W00504-01

District: Tillamook **Date: May 27, 2022**

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$257.65	$3.78	$2.76	$187.50	$4.56	$45.62	$0.00	$2.00	$1.15	$505.02
Western Hemlock / Fir									
$257.65	$3.78	$2.76	$150.00	$4.56	$41.88	$0.00	$2.00	$1.15	$463.78
Sitka Spruce									
$257.65	$3.78	$2.76	$214.29	$4.56	$48.30	$0.00	$2.00	$1.15	$534.49
Red Cedar									
$257.65	$3.78	$2.76	$150.00	$4.56	$41.88	$0.00	$2.00	$1.15	$463.78
Alder (Red)									
$257.65	$3.78	$2.76	$150.00	$4.56	$41.88	$0.00	$2.00	$1.15	$463.78

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$975.19	$470.17	$0.00
Western Hemlock / Fir	$0.00	$720.80	$257.02	$0.00
Sitka Spruce	$0.00	$591.00	$56.51	$0.00
Red Cedar	$0.00	$1,245.23	$781.45	$0.00
Alder (Red)	$0.00	$684.66	$220.88	$0.00

Timber Sale Appraisal
South Minich

Sale TL-341-2022-W00504-01

District: Tillamook **Date: May 27, 2022**

Summary

Amortized

Specie	**MBF**	**Value**	**Total**
Douglas - Fir	0	$0.00	$0.00
Western Hemlock / Fir	0	$0.00	$0.00
Sitka Spruce	0	$0.00	$0.00
Red Cedar	0	$0.00	$0.00
Alder (Red)	0	$0.00	$0.00

Unamortized

Specie	**MBF**	**Value**	**Total**
Douglas - Fir	859	$470.17	$403,876.03
Western Hemlock / Fir	2,025	$257.02	$520,465.50
Sitka Spruce	173	$56.51	$9,776.23
Red Cedar	60	$781.45	$46,887.00
Alder (Red)	61	$220.88	$13,473.68

Gross Timber Sale Value

Recovery: $994,478.44

Prepared By: Jonah Horn **Phone:** 503-842-2545

PROJECT SUMMARY SHEET

Sale: South Minich

CONSTRUCTION

Point	E to F	3+05	stations =	$3,128.72
			SUBTOTAL CONSTRUCTION	**$3,128.72**

IMPROVEMENT

Point	A to B	87+05	stations =	$61,874.73
Point	E to F	64+20	stations =	$27,337.00
			SUBTOTAL IMPROVEMENT	**$89,211.73**

RECONSTRUCTION

Point	C to D	6+35	stations =	$4,783.63
Point	E to F	6+50	stations =	$3,452.26
			SUBTOTAL RECONSTRUCTION	**$8,235.89**

SPECIAL PROJECTS

Point G			1,404.40
Project No. 2 - Pit Development			$1,370.00
Brush	37.1	miles of road	$38,955.00
		SUBTOTAL SPECIAL PROJECTS	**$41,729.40**

MOVE IN **$1,894.26**

GRAND TOTAL **$144,200.00**

SUMMARY OF CONSTRUCTION COST

Sale: **South Minich** Road: **A to B**

Construction -	0+00	stations	Improvement -	87+05	stations	Reconstruction -	0+00	stations
	0.00	miles		1.65	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts							
30	LF of 18"	$600.00	30	LF of 24"	$930.00		
Culvert Stakes & Markers							
7 markers		$56.00					
						TOTAL CULVERTS	$1,586.00

ROCK

0+00 to	6+35	90	cy. of	Crushed	@	$33.08	per c.y.=	$2,977.20	
6+35 to	50+75	770	cy. of	Crushed	@	$31.10	per c.y.=	$23,947.00	
50+75 to	87+05	820	cy. of	Crushed	@	$29.93	per c.y.=	$24,542.60	
Culvert Backfill	43+30, 57+25	40	cy. of	Crushed	@	$31.44	per c.y.=	$1,257.60	
Landing Rock	Point B	100	cy. of	Pit-Run	@	$7.62	per c.y.=	$762.00	
Traction Rock	As Directed	50	cy. of	Crushed	@	$31.68	per c.y.=	$1,584.00	
Energy Dissipator	6+25	5	cy. of	Riprap	@	$7.09	per c.y.=	$35.45	
								TOTAL ROCK	$55,105.85

SPECIAL PROJECTS

Construct landing at Point B -	1.00	@	$370.00	each	$370.00	
Construct waste areas -	1.00	hours @	$180.00	per hour	$180.00	
Construct ditchouts (53+20, 79+00) -	2.00	@	$60.00	each	$120.00	
Grade and shape road -	87.05	stations @	$22.00	per station	$1,915.10	
Roll subgrade w/ vibratory roller prior to rocking -	87.05	stations @	$17.50	per station	$1,523.38	
Ditching Right Station 49+90 to 60+90 -	11.00	stations @	$80.00	per station	$880.00	
Remove culverts from state lands	1.00	@	$141.40	total	$141.40	
Grass seed and fertilize -	0.05	acres @	$280.00	per acre	$14.00	
Mulching -	0.050	acres @	$780.00	per acre	$39.00	
				TOTAL SPECIAL PROJECTS		$5,182.88

GRAND TOTAL **$61,874.73**

SUMMARY OF CONSTRUCTION COST

Sale: **South Minich** Road: **C to D**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	6+35	stations
	0.00	miles		0.00	miles		0.12	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.520	acres @	$1,275.00	per acre =	$663.00	
				TOTAL CLEARING AND GRUBBING		**$663.00**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	6.35	sta. @	$120.00	per sta. =	$762.00	
				TOTAL EXCAVATION		**$762.00**

ROCK

0+00	to	1+50	70	cy. of	Crushed	@	$29.72	per c.y.=	$2,080.40	
Junction Rock		0+00	20	cy. of	Crushed	@	$31.47	per c.y.=	$629.40	
								TOTAL ROCK		**$2,709.80**

SPECIAL PROJECTS

Construct landing at Point D -	1.00	@	$370.00	each	$370.00	
Grade and shape road -	6.35	stations @	$22.00	per station	$139.70	
Roll subgrade w/ vibratory roller prior to rocking -	6.35	stations @	$17.50	per station	$111.13	
Grass seed and fertilize -	0.10	acres @	$280.00	per acre	$28.00	
				TOTAL SPECIAL PROJECTS		**$648.83**

GRAND TOTAL **$4,783.63**

SUMMARY OF CONSTRUCTION COST

Sale: **South Minich** Road: **E to F**

Construction -	3+05	stations	Improvement -	64+20	stations	Reconstruction -	6+50	stations
	0.06	miles		1.22	miles		0.12	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
70+70		73+75	60%	0.2	Outslope	$600	=	$1,830.00	
								TOTAL	**$1,830.00**

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.180	acres @	$1,275.00	per acre =	$229.50	
				TOTAL CLEARING AND GRUBBING		**$229.50**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	6.50	sta. @	$70.00	per sta. =	$455.00	
				TOTAL EXCAVATION		**$455.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

80	LF of 18"	$1,600.00	40	LF of 24"	$1,240.00	

Culvert Stakes & Markers

11 markers	$88.00		
		TOTAL CULVERTS	**$2,928.00**

ROCK

64+20 to	73+75	400	cy. of	Crushed	@	$30.57	per c.y.=	$12,228.00	
Culvert Backfill	3 Locations	60	cy. of	Crushed	@	$31.82	per c.y.=	$1,909.20	
Landing Rock	73+75	100	cy. of	Pit-Run	@	$7.99	per c.y.=	$799.00	
Energy Dissipator	27+30	5	cy. of	Riprap	@	$7.41	per c.y.=	$37.05	
Spot Rock	As Directed	300	cy. of	Crushed	@	$31.82	per c.y.=	$9,546.00	
Backfill	58+40	20	cy. of	Pit-Run	@	$7.61	per c.y.=	$152.20	
								TOTAL ROCK	**$24,671.45**

SPECIAL PROJECTS

Construct landing at Point F -	1.00	@	$370.00	each	$370.00	
Construct waste areas -	1.00	hours @	$180.00	per hour	$180.00	
Grade and shape road -	73.75	stations @	$22.00	per station	$1,622.50	
Roll subgrade w/ vibratory roller prior to rocking -	73.75	stations @	$17.50	per station	$1,290.63	
Remove culverts from state lands	3.00	@	$273.90	total	$273.90	
Grass seed and fertilize -	0.10	acres @	$280.00	per acre	$28.00	
Mulching -	0.050	acres @	$780.00	per acre	$39.00	
				TOTAL SPECIAL PROJECTS		**$3,804.03**

GRAND TOTAL **$33,917.98**

SUMMARY OF CONSTRUCTION COST

Sale: **South Minich** Road: **Point G**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.00	miles		0.00	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts

30 LF of 18" $600.00

Culvert Stakes & Markers

1 markers $8.00

TOTAL CULVERTS $608.00

ROCK

Culvert Backfill	0+00	20	cy. of	Crushed	@	$31.27	per c.y.=	$625.40	
							TOTAL ROCK		$625.40

SPECIAL PROJECTS

Remove culverts from state lands	1.00	@	$141.40	total	$141.40	
Grass seed and fertilize -	0.05	acres @	$280.00	per acre	$14.00	
Mulching -	0.020	acres @	$780.00	per acre	$15.60	
				TOTAL SPECIAL PROJECTS		**$171.00**

GRAND TOTAL $1,404.40

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Commercial	Road:	2640 c.y.
Sale:	**South Minich**	Stockpile:	c.y.
		Total Truck Loads:	2640 c.y.

3/4"-0"	$19.00	
1 1/2"-0"	$16.75	
3"-0"	$15.00	Per Cu.Yd.

TOTAL PRODUCTION COSTS	$0.00

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds		ROCK COST
A to B 0 635 (Crushed)	10.88	3.20	19.00	33.08	90		$2,977.20
A to B 635 5075 (Crushed)	11.15	3.20	16.75	31.10	770		$23,947.00
A to B 5075 8705 (Crushed)	11.73	3.20	15.00	29.93	820		$24,542.60
A to B Culvert Backfill (Crushed)	11.49	3.20	16.75	31.44	40		$1,257.60
A to B Traction Rock (Crushed)	11.73	3.20	16.75	31.68	50		$1,584.00
C to D 0 150 (Crushed)	11.52	3.20	15.00	29.72	70		$2,080.40
C to D Junction Rock (Crushed)	11.52	3.20	16.75	31.47	20		$629.40
E to F 6420 7375 (Crushed)	12.37	3.20	15.00	30.57	400		$12,228.00
E to F Culvert Backfill (Crushed)	11.87	3.20	16.75	31.82	60		$1,909.20
E to F Spot Rock (Crushed)	11.87	3.20	16.75	31.82	300		$9,546.00
Point G Culvert Backfill (Crushed)	11.32	3.20	16.75	31.27	20		$625.40
				Total C.Y.	2640	Sub Total	$81,326.80

TOTAL ROCKING COSTS	$81,326.80

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Minich Pit	Location:	Sec. 11, T1N, R10W, W.M.
Sale:	**South Minich**	Road:	230 c.y.
Swell:	1.40	Stockpile:	c.y.
Shirinkage	1.16	Total Truck Loads:	230 c.y.
Drill Pct.:	0%	In Place Total:	164 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread							$0.00
Rip Rock:	$3.00	/cu.yd.	x	164	cu.yds.	=	$492.00
Load Dump Truck:	$1.00	/cu.yd.	x	230	cu.yds.	=	$230.00
						Subtotal	$722.00
						TOTAL PRODUCTION COSTS	$722.00

Base Cost= $3.14 Per Cu.Yd.

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds		ROCK COST
A to B Landing Rock (Pit-Run)	2.78	1.70	3.14	7.62	100		$762.00
A to B Energy Dissipator (Riprap)	1.95	2.00	3.14	7.09	5		$35.45
E to F Landing Rock (Pit-Run)	3.15	1.70	3.14	7.99	100		$799.00
E to F Energy Dissipator (Riprap)	2.27	2.00	3.14	7.41	5		$37.05
E to F Backfill (Pit-Run)	3.77	0.70	3.14	7.61	20		$152.20
				Total C.Y.	230	Sub Total	$1,785.70

TOTAL ROCKING COSTS	$1,785.70

Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **South Minich**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
22.6	Pavement	30
1.4	Main Lines	7
0.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Graders	$238.33		$3.65	0.00	2.30	2.3	$8.40	$246.73
1	Rollers (smooth/grid) & Compactors	$252.70		$5.00	0.00	0.00	0	$0.00	$252.70
1	Excavators (Small)	$252.70		$22.00	0.00	0.00	0	$0.00	$252.70
1	Excavators (Large)	$389.00	1	$44.80	0.00	2.30	2.3	$103.04	$492.04
1	Tractor (D8)	$434.20	2	$15.10	0.00	2.30	2.3	$34.73	$468.93
1	Dump Truck (10 cy +)	$87.01		$2.85	0.00	2.30	2.3	$6.56	$93.57
1	Water Truck (1500 Gal)	$81.03		$2.85	0.00	2.30	2.3	$6.56	$87.59

	TOTAL MOVE-IN COSTS:	$1,894.26

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
South Minich

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Section(s) 10 & 11, of T1N, R10W, Tillamook County, W.M.

3. Sale Acreage

Sale acreage was determined by GPS and orthophotographs along with GIS.

	ACRES	
	Gross	Net
Unit 1 (Modified Clearcut)	156	103

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

Timber sale area was cruised using variable plot sampling. All units were cruised by ODF Staff in April 2020. All conifers 8" DBH and greater containing 20 board feet and all hardwoods 10" DBH and greater containing 30 board feet were recorded on all plots. Species, DBH (to nearest inch), merchantable bole length (to nearest foot), form factor, and defect were recorded for all measure trees. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods, respectively.

B. Plot size

Unit	BAF	Spacing
1	40.00	775 x 175

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40' lengths.

5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table for each species and type.

Net sale acreage was used for volume calculation.

	Cruise Statistics (Board Foot Volumes)			
Unit	Acres	Number of Plots	SE (%)	CV (%)
1	103	33	10.8	62.1
Project Total	103	33	10.8	62.1

6. Hidden Defect and Breakage

A 1% reduction for conifers and a 2% reduction for hardwood volumes were applied for hidden defect and breakage.

7. Timber Description

Timber sale area is prescribed modified clearcuts. The sale area is a Western hemlock (64%) dominated stand with 27% Douglas-fir and small volumes of Red alder, Western red cedar, and Sitka spruce. The western and northern portions of the sale area was modified clearcut in 1985, central to eastern portion was partial cut in 1998, southern line was partial cut in 2010, and southeast and northeast portion has been unmanaged.

Sale Unit	Age	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	45-87	Western hemlock	15.2	52	5
		Douglas-fir	17	61	5
		Sitka spruce	18.6	47	5
		Western red cedar	15.3	42	5
		Red alder	18.6	49	6

Above date derived from Statistics (type) report using SuperAce 2008, developed by Atterbury consultants, Inc.

8. Cruiser /Dates

ODF Staff Cruised both units April 2020.

9. Revenue Distribution

BOF – 100%

Tax Code: 5600 (40%), 5608 (60%)

Deed Numbers: 186

10. Attachments

Volume Summary Table (2)

Stand Table (2)

Log Stock Tables (2)

Species, Sort, Grade Table (2)

Logging Plan (2)

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take
WH – western hemlock take
RA – red alder take
WRC—Western red cedar take
SS—Sitka spruce take
OC—other conifer (existing snag - status 1 or 2)

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: SMIN

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T01N R10W S11 T0100 **T01N R10W S11 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
01N	10W	11	ALL	0100	103.00	33	173	S	W

Spp	ST	Sort	Grad	% Net BdFt	Def%	Bd. Ft. per Acre Gross	Bd. Ft. per Acre Net	Total Net MBF	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
WH		CO	2	59	1.6	12,016	11,827	1,218			16	84	1		0	98	39	19	652	3.02	18.1
WH		CO	3	23	2.2	4,663	4,562	470		87	8	5	2	9	27	62	35	9	114	0.81	39.9
WH		CO	4	18		3,470	3,470	357	62	33	5		18	35	17	30	26	6	33	0.37	103.6
WH	**Totals**			64	1.4	20,149	19,860	2,046	11	26	12	51	4	8	9	78	30	8	123	0.89	161.7
DF		CO	2	53	1.9	4,624	4,537	467			27	73	1			99	38	17	507	2.60	8.9
DF		CO	3	34	.6	2,883	2,866	295		75	25		4		11	85	37	9	106	0.75	27.0
DF		CO	4	13	1.0	1,037	1,027	106	83	17			32	18	23	28	24	5	30	0.41	34.3
DF	**Totals**			27	1.3	8,544	8,431	868	10	28	23	39	6	2	7	85	31	8	120	0.91	70.2
SS		CO	2	57	3.7	1,007	970	100			11	89			11	89	37	19	586	3.13	1.7
SS		CO	3	33	3.1	589	570	59			100				25	75	37	13	245	1.70	2.3
SS		CO	4	10		156	156	16	71	29			52	38	11		20	5	27	0.49	5.8
SS	**Totals**			5	3.2	1,753	1,697	175	7	3	40	51	5	3	16	76	27	10	174	1.50	9.8
RC		CO	2	40		240	240	25			100					100	40	13	269	1.98	.9
RC		CO	3	34		197	197	20		100					37	63	36	11	152	1.29	1.3
RC		CO	4	26		150	150	15	100				22	14	54	10	26	5	26	0.42	5.7
RC	**Totals**			2		587	587	60	26	34	41		6	4	27	64	29	7	74	0.84	7.9
RA		H	2	27	10.0	184	165	17			100					100	40	16	360	1.90	.5
RA		H	3	17	13.0	116	101	10			100				100		32	14	200	1.63	.5
RA		H	4	56	3.5	345	333	34		52	48		3	6	14	78	33	7	76	0.89	4.4
RA	**Totals**			2	7.0	644	599	62		29	71		2	3	24	71	34	9	112	1.06	5.4
Type Totals					1.6	31,677	31,174	3,211	11	25	18	46	5	6	10	79	30	8	122	0.92	254.9

TC TSTNDSUM

Stand Table Summary

Project **SMIN**

T01N R10W S11 T0100							**T01N R10W S11 T0100**
Twp	**Rge**	**Sec**	**Tract**	**Type**	**Acres**	**Plots**	**Sample Trees**
01N	**10W**	**11**	**ALL**	**0100**	103.00	33	173

Page: 1
Date: 05/11/2022
Time: 7:18:24AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	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
WH		9	8	88	64	21.949	9.70	21.95	7.2	32.5	5.05	158	713	520	163	73
WH		10	6	88	73	13.334	7.27	15.56	8.2	32.9	4.09	128	511	421	132	53
WH		11	5	88	76	9.183	6.06	14.69	10.7	43.8	5.05	158	643	520	163	66
WH		12	7	88	75	10.803	8.48	16.98	12.1	44.5	6.56	205	756	676	211	78
WH		13	7	87	79	9.205	8.48	15.78	13.0	44.2	6.54	204	697	674	211	72
WH		14	6	88	80	6.803	7.27	13.61	15.0	62.5	6.52	204	850	672	210	88
WH		15	8	89	82	7.902	9.70	15.80	17.7	71.9	8.93	279	1,136	919	287	117
WH		16	1	88	85	.868	1.21	1.74	23.2	85.0	1.29	40	148	133	41	15
WH		17	5	88	85	3.845	6.06	7.69	24.5	94.0	6.04	189	723	622	194	74
WH		18	1	71	95	.686	1.21	1.37	13.0	50.0	.57	18	69	59	18	7
WH		19	1	89	140	.616	1.21	1.85	32.6	150.0	1.93	60	277	199	62	29
WH		20	1	86	90	.556	1.21	1.11	35.7	115.0	1.27	40	128	131	41	13
WH		21	3	91	115	1.512	3.64	4.03	37.8	170.0	4.87	152	685	502	157	71
WH		22	1	93	135	.459	1.21	1.38	44.8	206.7	1.97	62	285	203	64	29
WH		23	4	92	114	1.680	4.85	4.20	45.9	205.0	6.18	193	861	636	199	89
WH		24	3	93	118	1.157	3.64	1.93	59.8	280.0	3.69	115	540	380	119	56
WH		25	1	93	122	.356	1.21	1.07	54.2	246.7	1.85	58	263	190	60	27
WH		26	4	91	138	1.315	4.85	3.95	60.1	292.5	7.58	237	1,154	781	244	119
WH		27	2	90	126	.610	2.42	1.83	60.0	268.3	3.51	110	491	362	113	51
WH		28	2	86	124	.567	2.42	1.70	55.3	256.7	3.01	94	437	310	97	45
WH		30	2	91	135	.494	2.42	1.48	79.9	403.3	3.79	118	598	390	122	62
WH		31	1	91	110	.231	1.21	.69	71.4	370.0	1.59	50	257	163	51	26
WH		32	4	93	139	.868	4.85	2.60	96.7	517.5	8.06	252	1,348	830	259	139
WH		33	1	94	143	.204	1.21	.61	109.4	613.3	2.14	67	375	221	69	39
WH		34	4	93	148	.769	4.85	2.31	113.0	630.8	8.34	261	1,455	860	269	150
WH		35	2	92	145	.363	2.42	.73	134.3	810.0	3.12	97	588	321	100	61
WH		36	1	93	139	.171	1.21	.51	120.0	680.0	1.98	62	350	203	64	36
WH		37	2	88	134	.325	2.42	.97	106.1	570.0	3.31	103	555	341	106	57
WH		38	2	89	136	.308	2.42	.92	127.3	675.0	3.76	118	623	387	121	64
WH		39	1	93	150	.146	1.21	.44	149.8	866.7	2.10	66	380	216	68	39
WH		41	2	88	153	.264	2.42	.93	143.3	804.3	4.24	133	744	437	137	77
WH		43	2	94	141	.240	2.42	.72	160.9	933.3	3.71	116	673	382	119	69
WH		45	1	82	134	.110	1.21	.33	174.0	843.3	1.83	57	278	189	59	29
WH		51	1	81	148	.085	1.21	.26	232.9	1050.0	1.91	60	269	197	61	28
WH		Totals	102	88	81	97.986	123.64	161.71	26.4	122.8	136.40	4,263	19,860	14,049	4,390	2,046
DF		10	2	87	76	4.445	2.42	6.67	8.0	36.7	1.52	53	244	156	55	25
DF		11	1	87	76	1.837	1.21	3.67	9.4	40.0	.99	35	147	102	36	15
DF		12	2	88	76	3.087	2.42	4.63	11.1	40.0	1.47	51	185	151	53	19
DF		13	5	87	83	6.575	6.06	11.84	13.4	51.1	4.53	159	605	467	164	62
DF		14	5	87	78	5.669	6.06	10.20	14.1	48.9	4.09	144	499	422	148	51
DF		15	1	86	76	.988	1.21	.99	22.9	30.0	.64	23	30	66	23	3
DF		16	2	87	82	1.736	2.42	2.60	24.7	93.3	1.83	64	243	189	66	25
DF		17	2	88	90	1.538	2.42	3.08	20.2	80.0	1.77	62	246	182	64	25
DF		18	3	88	96	2.058	3.64	4.12	29.9	111.7	3.51	123	460	362	127	47
DF		19	5	88	97	3.078	6.06	6.77	29.4	113.6	5.67	199	770	584	205	79
DF		20	4	88	91	2.222	4.85	4.44	34.9	123.8	4.42	155	550	455	160	57
DF		21	3	89	102	1.512	3.64	3.02	38.1	133.3	3.28	115	403	338	119	42
DF		22	1	87	89	.459	1.21	.92	44.1	160.0	1.15	40	147	119	42	15
DF		23	1	89	105	.420	1.21	.84	51.6	170.0	1.24	43	143	127	45	15
DF		27	1	89	136	.305	1.21	.91	64.4	313.3	1.68	59	287	173	61	30
DF		31	1	89	129	.231	1.21	.69	80.2	360.0	1.59	56	250	163	57	26
DF		32	1	90	119	.217	1.21	.65	79.3	366.7	1.47	52	239	151	53	25

TC	TSTNDSUM	Stand Table Summary
		Project SMIN

T01N R10W S11 T0100 **T01N R10W S11 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	
01N	10W	11	ALL	0100	103.00	33	173	Page: 2
								Date: 05/11/2022
								Time: 7:18:24AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	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		35	1	89	144	.181	1.21	.54	111.2	596.7	1.73	61	325	178	62	33
DF		36	2	90	137	.343	2.42	1.03	114.3	616.7	3.35	118	634	345	121	65
DF		37	1	90	160	.162	1.21	.49	132.2	730.0	1.83	64	356	189	66	37
DF		38	1	89	142	.154	1.21	.46	124.5	680.0	1.64	57	314	169	59	32
DF		39	1	90	132	.146	1.21	.44	127.1	693.3	1.59	56	304	164	57	31
DF		40	1	89	143	.139	1.21	.42	150.4	813.3	1.79	63	339	184	65	35
DF		41	1	89	148	.132	1.21	.40	158.7	883.3	1.79	63	350	185	65	36
DF		42	1	90	158	.126	1.21	.38	168.6	960.0	1.82	64	363	187	66	37
DF		Totals	49	88	87	37.761	59.39	70.20	28.2	120.1	56.39	1,979	8,431	5,809	2,038	868
SS		9	1	68	48	2.744	1.21	2.74	4.3	20.0	.31	12	55	32	12	6
SS		19	1	84	96	.616	1.21	1.23	34.0	100.0	1.09	42	123	112	43	13
SS		20	1	87	82	.556	1.21	1.11	31.4	110.0	.91	35	122	94	36	13
SS		21	1	87	78	.504	1.21	1.01	31.9	105.0	.84	32	106	86	33	11
SS		24	1	87	88	.386	1.21	.77	53.9	195.0	1.08	42	150	111	43	15
SS		26	1	90	146	.329	1.21	.99	67.5	346.7	1.73	67	342	178	69	35
SS		30	2	87	141	.494	2.42	1.48	76.1	345.0	2.93	113	511	302	116	53
SS		40	1	86	129	.139	1.21	.42	137.2	690.0	1.49	57	288	153	59	30
SS		Totals	9	78	77	5.766	10.91	9.75	40.9	174.1	10.37	399	1,697	1,068	411	175
RA		14	1	88	58	1.134	1.21	1.13	17.3	40.0	.54	20	45	56	20	5
RA		18	1	91	73	.686	1.21	.69	33.7	50.0	.64	23	34	65	24	4
RA		20	1	95	114	.556	1.21	1.11	41.8	175.0	1.28	46	194	131	48	20
RA		21	2	90	94	1.008	2.42	1.51	37.5	93.3	1.56	57	141	160	58	15
RA		22	1	96	99	.459	1.21	.92	49.6	200.0	1.25	46	184	129	47	19
RA		Totals	6	91	83	3.842	7.27	5.36	35.7	111.7	5.26	191	599	542	197	62
RC		10	1	80	69	2.222	1.21	2.22	10.6	30.0	.55	23	67	57	24	7
RC		13	1	81	50	1.315	1.21	1.32	8.5	20.0	.26	11	26	27	11	3
RC		18	1	81	92	.686	1.21	1.37	32.3	105.0	1.04	44	144	107	46	15
RC		19	1	80	70	.616	1.21	1.23	22.5	65.0	.65	28	80	67	29	8
RC		21	1	81	93	.504	1.21	1.01	41.4	115.0	.98	42	116	101	43	12
RC		24	1	81	105	.386	1.21	.77	59.3	200.0	1.08	46	154	111	47	16
RC		Totals	6	81	72	5.729	7.27	7.92	24.5	74.2	4.56	194	587	470	200	60
OC		20	1	86	82	.556	1.21									
OC		Totals	1	86	82	.556	1.21									
Totals			173	87	82	151.640	209.70	254.95	27.6	122.3	212.99	7026	31,174	21,938	7,236	3,211

Log Stock Table - MBF

Project: SMIN

T01N R10W S11 T0100 **T01N R10W S11 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	
01N	10W	11	ALL	0100	103.00	33	173	Page 1 Date 5/11/2022 Time 7:21:11AM

Spp	S T	So rt	Gr 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+
WH		CO	2	14	10		10	.5									10			
WH		CO	2	20	5		5	.3								5				
WH		CO	2	32	4		4	.2								4				
WH		CO	2	40	1,217	1.6	1,198	58.6						34	113	320	165	435	131	
WH		CO	3	20	9	14.3	8	.4					8							
WH		CO	3	24	44		44	2.2				16	21		7					
WH		CO	3	32	129	1.6	127	6.2				65	40	15			7			
WH		CO	3	40	298	2.3	291	14.2			22	98	139	10		21				
WH		CO	4	12	1		1	.0				1								
WH		CO	4	14	5		5	.3		5										
WH		CO	4	15	7		7	.4			6	1	1							
WH		CO	4	16	9		9	.5		8	1									
WH		CO	4	17	8		8	.4		3	2		2	1						
WH		CO	4	18	17		17	.8		14	2	1								
WH		CO	4	19	12		12	.6		9		1	2							
WH		CO	4	20	5		5	.2		5										
WH		CO	4	21	2		2	.1		2	1									
WH		CO	4	22	11		11	.5		8		1		1						
WH		CO	4	23	16		16	.8		15		1								
WH		CO	4	24	33		33	1.6		7	9	15	1							
WH		CO	4	25	16		16	.8		11	5									
WH		CO	4	26	13		13	.6		9	1	1	2							
WH		CO	4	27	16		16	.8		12			3							
WH		CO	4	28	8		8	.4		8										
WH		CO	4	29	9		9	.5		9										
WH		CO	4	30	2		2	.1				2								
WH		CO	4	31	17		17	.8		17										
WH		CO	4	32	13		13	.6			11		2							
WH		CO	4	33	22		22	1.1		20	1									
WH		CO	4	34	9		9	.5		9										
WH		CO	4	36	2		2	.1			2									
WH		CO	4	37	8		8	.4		4		2	2							
WH		CO	4	38	7		7	.3		7										
WH		CO	4	39	33		33	1.6		16		17								
WH		CO	4	40	57		57	2.8		22	19				15					
WH		Totals			2,075	1.4	2,046	63.7		222	83	221	223	62	135	351	182	435	131	
DF		CO	2	14	6		6	.7						6						
DF		CO	2	40	470	1.9	461	53.1						71	44	64	83	154	45	
DF		CO	3	12	7		7	.8							7					
DF		CO	3	20	5		5	.6					5							
DF		CO	3	32	34		34	3.9			11	22								
DF		CO	3	40	251	.7	250	28.7			57	55	71	53	14					
DF		CO	4	13	3		3	.4		3										
DF		CO	4	14	0		0	.1				0								
DF		CO	4	15	10		10	1.2		10										
DF		CO	4	16	7		7	.8		7										
DF		CO	4	17	2		2	.3		2										
DF		CO	4	18	9		9	1.0		8			1							
DF		CO	4	19	2		2	.3		2										
DF		CO	4	21	1		1	.2					1							

TC TLOGSTVB

Log Stock Table - MBF

Project: SMIN

T01N R10W S11 T0100 **T01N R10W S11 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2
01N	10W	11	ALL	0100	103.00	33	173	Date	5/11/2022
								Time	7:21:11AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	4	22	1		1	.1				1								
DF		CO	4	25	2		2	.2		2										
DF		CO	4	27	6		6	.6		6										
DF		CO	4	28	1		1	.1				1								
DF		CO	4	29	8		8	.9		6	2									
DF		CO	4	31	6		6	.6		4			2							
DF		CO	4	33	5		5	.6		5										
DF		CO	4	34	7		7	.8		7										
DF		CO	4	35	6		6	.7		4			2							
DF		CO	4	36	5		5	.5		3			2							
DF		CO	4	37	5		5	.6					5							
DF		CO	4	38	12	8.6	11	1.2		11										
DF		CO	4	39	9		9	1.1		9										
DF		Totals			880	1.3	868	27.0		88	70	80	89	130	64	64	83	154	45	
SS		CO	2	32	11		11	6.2						11						
SS		CO	2	40	93	4.1	89	50.9								8	61	21		
SS		CO	3	32	15		15	8.4						15						
SS		CO	3	40	46	4.1	44	25.2						11	33					
SS		CO	4	15	6		6	3.5		6	1									
SS		CO	4	18	1		1	.7					1							
SS		CO	4	20	1		1	.6		1										
SS		CO	4	25	3		3	1.7		2		1								
SS		CO	4	28	2		2	1.1		2										
SS		CO	4	30	1		1	.7		1										
SS		CO	4	32	2		2	1.0			2									
SS		Totals			181	3.2	175	5.4		12	2	1	1	36	33	8	61	21		
RC		CO	2	40	25		25	40.8						10	14					
RC		CO	3	32	8		8	12.6					8							
RC		CO	3	40	13		13	21.0					13							
RC		CO	4	14	1		1	1.0		1										
RC		CO	4	16	3		3	4.5		3										
RC		CO	4	30	2		2	3.5		2										
RC		CO	4	31	8		8	13.9		8										
RC		CO	4	38	2		2	2.6		2										
RC		Totals			60		60	1.9		15			20	10	14					
RA		H	2	40	19	10.0	17	27.6								17				
RA		H	3	32	12	13.0	10	16.8							10					
RA		H	4	18	1		1	1.7			1									
RA		H	4	29	2		2	3.1			2									
RA		H	4	31	5		5	7.6			5									
RA		H	4	36	3		3	5.6			3									
RA		H	4	38	4	16.7	4	5.7			4									
RA		H	4	40	20	2.6	20	32.0			3				17					
RA		Totals			66	7.0	62	1.9			18				27	17				
Total All Species					3,263	1.6	3,211	100.0		337	173	302	334	239	274	440	326	610	176	

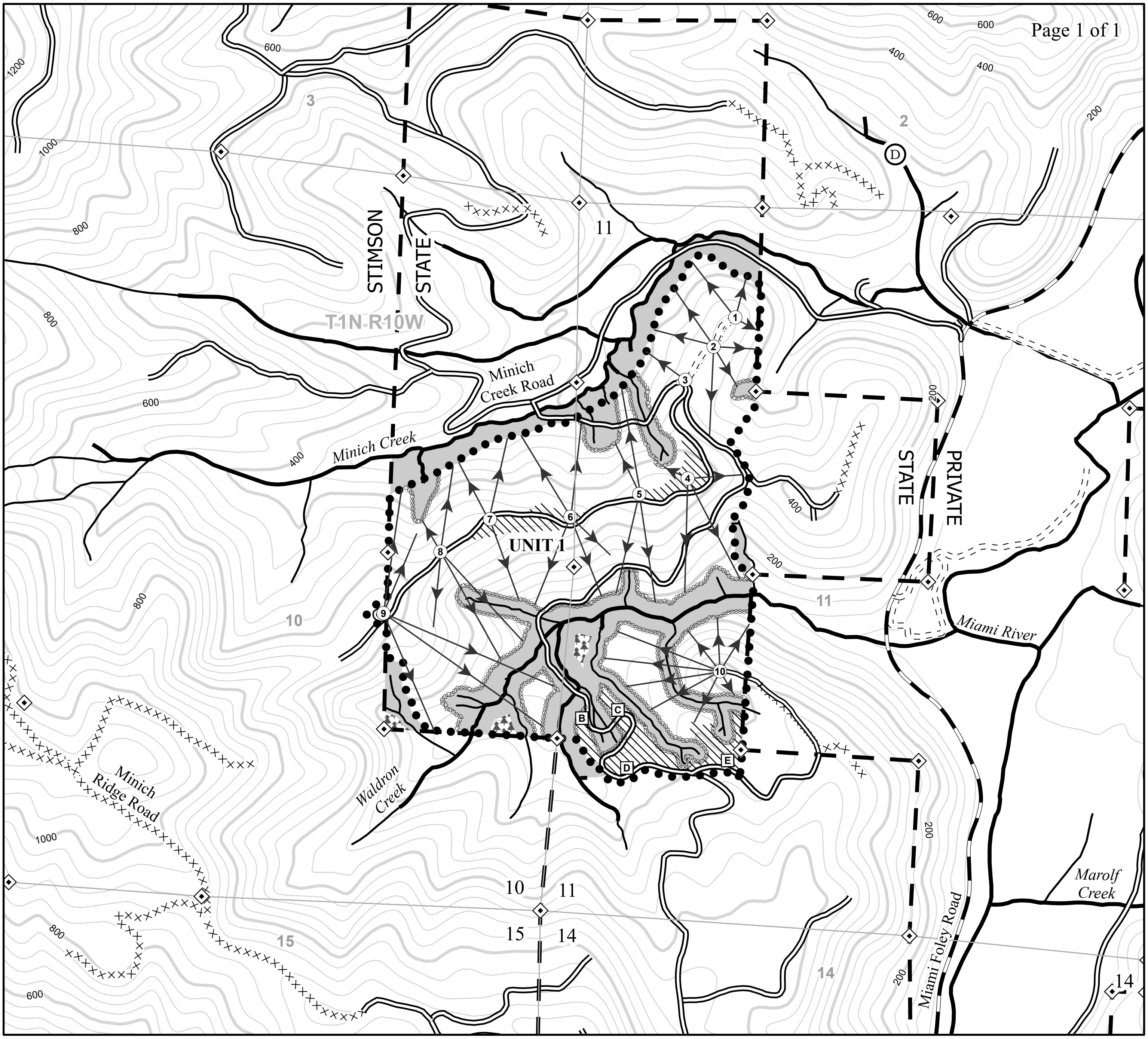
"STEWARDSHIP IN FORESTRY"

South Minich

Volume Summary

Unit 1-Modified Clearcut				
		103 acres		
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	8.4	868	1%	859
Red Alder	0.60	62	2%	61
Sitka spruce	1.70	175	1%	173
Western red cedar	0.59	60	1%	59
Western hemlock	19.86	2046	1%	2026
TOTAL	31.2	3211		3178

TOTAL SALE VOLUME	**103**	**acres**
SPECIES	Cruised Net (MBF)	Net Sale (MBF)
Douglas-fir	868	859
Red Alder	62	61
Sitka Spruce	175	173
Western red cedar	60	59
Western hemlock	2046	2026
TOTAL	3211	3178



Legend

- Domestic Water Intake
- Cable Landing
- Tractor Landing
- Cable Logging
- Ground Based
- Highways
- Surfaced Road
- Unsurfaced Road
- ××× Blocked Road
- Type-F Stream
- Type-N Stream
- Green Tree Retention
- Sections
- 200' Contour
- 40' Contour
- Riparian Boundary
- Timber Sale Boundary
- Property Line
- Corners
- Sections
- NP - Non-project spur

LOGGING PLAN

TIMBER SALE CONTRACT # TL 341-2022-W00504-01
SOUTH MINICH
PORTIONS OF SECTIONS 10, & 11, T1N, R10W, W.M.
TILLAMOOK COUNTY, OREGON

Tillamook District GIS
JUNE 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

0 1,000 2,000 Feet

N

NET ACRES

	GROUND	CABLE	TOTAL
UNIT 1	10	93	103
TOTAL	10	93	103