



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Hopscotch
Sale TL-341-2019-01-

District: Tillamook

Date: June 22, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$410,353.02	\$81,442.80	\$491,795.82
		Project Work:	\$0.00
		Advertised Value:	\$491,795.82



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Hopscotch

Sale TL-341-2019-01-

District: Tillamook

Date: June 22, 2018

Timber Description

Location: Portions of Sections 7, 8, 17, and 18, T2S, R7W, W.M., Tillamook County, Oregon

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	16	0	95
Alder (Red)	17	0	90

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	552	939	0	0	0	0	1,491
Alder (Red)	0	0	83	54	144	79	360
Total	552	939	83	54	144	79	1,851

Comments: Pond Values Used: March 2018
Region: Astoria, Forest Grove, and Tillamook

Western hemlock and other conifers stumpage price = Pond Value – Logging Cost
 $\$600/\text{MBF} - \$360/\text{MBF} = \$240/\text{MBF}$

Western Red Cedar and Other Cedars Stumpage Price = Pond Value – Logging Cost
 $\$1100/\text{MBF} - \$360/\text{MBF} = \$740/\text{MBF}$

Pulp (Conifer and Hardwood) Price = \$ 2.50/ Ton

BRAND AND PAINT ALLOWANCE = \$2.00/ MBF

FUEL COST ALLOWANCE = \$3.00/ Gallon

HAULING COST ALLOWANCE

Hauling cost equivalent to \$950 daily truck cost

Other Costs with Profit and Risk to be added:

Snag creation: 111 snags x \$10/ snag = \$1,110

TOTAL Other Costs with profit and Risk to be added = \$ 1,110

Other Costs with No Profit and Risk Added:

Machine Cleaning: \$1000/machine x 2 machines x 1 seasons = \$2,000

Slash piling and sorting (Cable Ground): \$5/ac x 107 ac = \$535

Heliport Construction: 6 hours machine loader time for slash moving @ \$140/ hour = \$ 840

Non-project Road 1: \$300/ station x 2+70 stations = \$810

Road blocking \$50/ block x 1 road = \$50

Tailhold dozer: 1.5 months x \$1,500/ month + \$300 move in = \$2,550

Ditch Cleaning and Bank Sluff Removal:

Mobilization: once – dump truck w/ tilt bed & small excavator: \$890 x 1 = \$890

Small excavator (Cat 312 or equivalent): 40 hours @ \$95/ hour = \$3,800

Dump truck: 40 hours @ \$70/ hour = \$2,800

TOTAL Other Costs no Profit and Risk added = \$ 14,275

ROAD MAINTENANCE:

Portions of Blue Bus and Toll Roads.

Spot rocking: 20cy/MMBF/mile x 1.85 MMBF x \$7.00/cy x 6.0 miles/ 1851 MBF = \$ 0.84/ MBF

Interm Grading, once: \$400/ mile x 6.0 miles x 1 time/ 1851 MBF = \$1.30/ MBF

Final Maintenance Grading: \$800 x 6.0 miles/1851MBF = \$2.59 / MBF

Final Maintenance Compaction: \$700/mile x 2.0 miles/ 1851 MBF = \$ 0.76/ MBF

Total Road Maintenance: \$5.49/ MBF



Timber Sale Appraisal Hopscotch

Sale TL-341-2019-01-

District: Tillamook

Date: June 22, 2018

Logging Conditions

Combination#: 1 Douglas - Fir 95.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber

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:** 3600

cost / mbf: \$238.10

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

Combination#: 2 Douglas - Fir 5.00%

Logging System: Shovel **Process:** Stroke Delimber

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

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 5 **bd. ft / load:** 3600

cost / mbf: \$176.22

machines: Stroke Delimber (B)

Combination#: 3 Alder (Red) 95.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber

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

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 6 **bd. ft / load:** 3200

cost / mbf: \$312.50

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

Combination#: 4 Alder (Red) 5.00%

Logging System: Shovel **Process:** Stroke Delimber

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

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 6 **bd. ft / load:** 3200

cost / mbf: \$165.21

machines: Stroke Delimber (B)



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Hopscotch

Sale TL-341-2019-01-

District: Tillamook

Date: June 22, 2018

Logging Costs

Operating Seasons: 1.00	Profit Risk: 15%
Project Costs: \$0.00	Other Costs (P/R): \$1,110.00
Slash Disposal: \$0.00	Other Costs: \$14,275.00

Miles of Road

Road Maintenance: \$5.49

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	3.2



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Hopscotch
Sale TL-341-2019-01-

District: Tillamook

Date: June 22, 2018

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$235.01	\$5.76	\$2.37	\$60.67	\$0.60	\$45.66	\$0.00	\$2.00	\$7.71	\$359.78
Alder (Red)									
\$305.14	\$6.04	\$2.37	\$89.38	\$0.60	\$60.53	\$0.00	\$2.00	\$7.71	\$473.77

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$635.00	\$275.22	\$0.00
Alder (Red)	\$0.00	\$700.00	\$226.23	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Hopscotch

Sale TL-341-2019-01-

District: Tillamook

Date: June 22, 2018

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	1,491	\$275.22	\$410,353.02
Alder (Red)	360	\$226.23	\$81,442.80

Gross Timber Sale Value

Recovery: \$491,795.82

Prepared By: David Wells

Phone: 503-842-2545



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Hopscotch

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Portions of Sections 7, 8, 17, and 18, T2S, R7W, W.M. Tillamook County, Oregon

3. Sale Acreage

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

	ACRES	
	<u>Gross</u>	<u>Net</u>
Area 1 (Modified Clearcut)	145	111

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

All of the sale areas were cruised on a rectangular grid with 350' between plots and 700' between lines.

The timber sale areas were cruised using variable plot sampling. 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. Also recorded for sampled trees on all plots were height, species, diameter, form factor, and merchantable bole heights recorded to 6" or 7" outside bark for conifers and hardwoods, respectively.

B. Plot size

BAF used on for the sale area was 27.78. Point of tree observation was 4.5 feet.

C. Grading System

All species were graded using the Columbia River Log Scaling and Grading Bureau rules, favoring a 40' log.

5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, ingrowth, advertised volume, and development of a volume summary. A log stock table and stand table were produced. The sale area was cruised in 2017. The net sale acreage was used for volume calculation.

Statistics – Net Board Feet/ Acre			
	# Plots measure	SE %	CV %
Area 1	22	8.5	54.0

6. Hidden Defect and Breakage

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

7. Timber Description

The sale area burned three times, in 1933, 1939, and 1951. The stand was seeded in 1952-53 with Douglas-fir and there has been no additional management. The stand is predominately Douglas-fir with a component of red alder. No minor species were noted during sale preparation. There is extensive bear damage within the buffer at the north end of the harvest area.

Sale Area - Species	DBH	Merchantable Bole Height	Merchantable Top
Area 1: Douglas-fir	15.5	64	5"
Area 1: alder	16.5	57	6"

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

8. Cruiser /Dates

The timber sale was cruised in 2017 by contract and District personnel.

9. Revenue Distribution

FDF: 100%

Tax Code: 901 100%

Deed Number: 169

10. Attachments

Stand Table

Log Stock Table

Volume Summary

Logging Plan Map

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take

RA – Red alder take

OC2 – Snag Class 2

TC		Stand Table Summary														
TSTNDSUM		Project HOPSCOTCH														
T02S R07W S07 TSALE											T02S R07W S07 TSALE					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
02S	07W	07	HOPSCOTCH	SALE	111.00	40	123	Date:	12/14/2017							
								Time:	1:56:50PM							
S Spc	T	Sample		Av		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
		DBH	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF		8	1	74	74	3.612	1.26	3.61	8.3	40.0	.85	30	144	94	33	16
DF		9	2	84	84	5.707	2.52	5.71	10.6	40.0	1.73	61	228	192	67	25
DF		10	2	86	103	4.623	2.52	9.25	7.8	37.5	2.05	72	347	228	80	38
DF		11	5	83	70	9.551	6.30	11.46	12.5	43.3	4.08	143	497	453	159	55
DF		12	5	84	82	8.026	6.30	12.84	13.3	47.5	4.87	171	610	540	190	68
DF		13	5	80	76	6.838	6.30	10.94	15.6	48.8	4.85	170	533	539	189	59
DF		14	4	82	88	4.717	5.04	9.43	16.4	60.0	4.41	155	566	490	172	63
DF		15	7	85	89	7.191	8.82	14.38	19.0	75.0	7.79	273	1,079	865	304	120
DF		16	10	85	87	9.029	12.61	17.15	21.0	82.1	10.26	360	1,409	1,139	400	156
DF		17	6	85	94	4.799	7.56	10.40	24.3	90.0	7.19	253	936	799	281	104
DF		18	10	86	96	7.134	12.61	14.98	26.8	100.0	11.45	402	1,498	1,271	446	166
DF		19	7	86	108	4.482	8.82	10.88	30.2	111.2	9.37	329	1,210	1,040	365	134
DF		20	5	85	105	2.889	6.30	7.51	31.5	117.7	6.74	237	884	748	263	98
DF		21	5	85	101	2.621	6.30	5.77	39.6	140.0	6.51	229	807	723	254	90
DF		22	5	80	81	2.388	6.30	3.82	43.3	136.2	4.72	166	521	524	184	58
DF		23	1	85	119	.437	1.26	1.31	40.2	160.0	1.50	53	210	167	58	23
DF		24	3	83	95	1.204	3.78	2.41	54.1	186.7	3.71	130	449	412	145	50
DF		25	1	82	118	.370	1.26	1.11	46.8	190.0	1.48	52	211	164	58	23
DF		26	2	82	94	.684	2.52	1.03	59.1	186.7	1.73	61	191	192	67	21
DF		27	2	86	119	.634	2.52	1.90	56.2	248.3	3.05	107	472	338	119	52
DF		28	1	80	94	.295	1.26	.29	101.7	430.0	.85	30	127	95	33	14
DF		29	1	84	122	.275	1.26	.82	65.1	276.7	1.53	54	228	170	60	25
DF		30	1	82	113	.257	1.26	.77	64.9	256.7	1.42	50	198	158	55	22
DF		33	1	81	113	.212	1.26	.64	78.4	330.0	1.42	50	210	158	55	23
DF	Totals		92	84	88	87.973	115.98	158.42	22.9	85.6	103.59	3,635	13,565	11,499	4,035	1,506
RA		10	1	84	76	2.108	1.15	2.11	14.8	60.0	.86	31	126	95	35	14
RA		12	1	79	84	1.464	1.15	1.46	21.1	70.0	.85	31	102	94	34	11
RA		13	4	80	94	4.988	4.60	7.48	19.1	65.0	3.93	143	486	436	159	54
RA		14	2	81	83	2.151	2.30	3.23	21.6	70.0	1.92	70	226	213	77	25
RA		15	1	85	67	.937	1.15	.94	31.5	90.0	.81	30	84	90	33	9
RA		16	1	85	97	8.23	1.15	1.65	24.8	95.0	1.12	41	156	125	45	17
RA		17	3	83	69	2.188	3.45	2.92	33.0	97.5	2.65	96	284	294	107	32
RA		18	2	82	85	1.301	2.30	2.60	30.3	105.0	2.17	79	273	241	88	30
RA		19	4	85	85	2.335	4.60	3.50	38.0	136.7	3.66	133	479	406	148	53
RA		20	2	85	87	1.054	2.30	2.11	37.8	127.5	2.19	80	269	243	89	30
RA		21	1	86	89	.478	1.15	.96	41.9	135.0	1.10	40	129	122	44	14
RA		22	2	84	77	.871	2.30	1.74	41.6	142.5	1.99	72	248	221	80	28
RA		23	3	82	61	1.195	3.45	1.99	34.3	98.0	1.88	68	195	208	76	22
RA		24	1	83	88	.366	1.15	.73	57.7	185.0	1.16	42	135	129	47	15
RA		31	1	82	81	.219	1.15	.44	88.2	260.0	1.06	39	114	118	43	13
RA	Totals		29	82	82	22.477	33.34	33.85	29.4	97.7	27.36	995	3,309	3,037	1,104	367
OC		16	1	73	66	.497	.69									
OC		17	1	88	90	.441	.69									
OC	Totals		2	80	77	.938	1.39									
Totals			123	83	87	111.389	150.71	192.28	24.1	87.8	130.95	4630	16,874	14,535	5,140	1,873

TC TLOGSTVB		Log Stock Table - MBF																	
		Project: HOPSCTCH																	
T02S R07W S07 TSALE										T02S R07W S07 TSALE									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2										
02S	07W	07	HOPSCOTCH	SALE	111.00	40	123	Date	12/14/2017										
								Time	1:59:22PM										
S	So Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches												
Spp	T	rt de	Len	MBF	Def	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+
RA		Totals	381	3.5	367	19.6				81	84	54	80	56	12				
Total All Species			1,903	1.6	1,873	100.0		237	261	315	360	394	161	129	17				



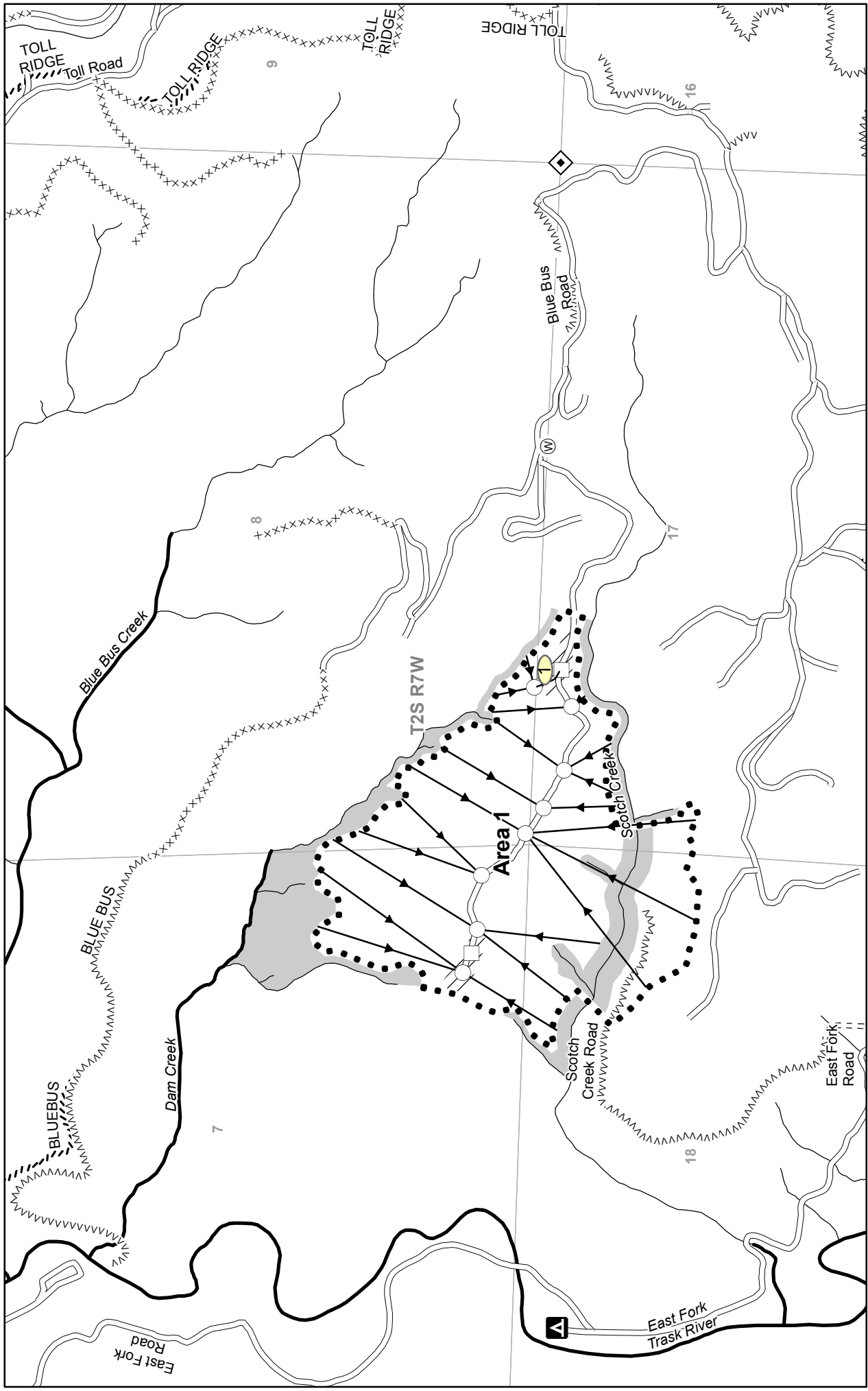
"STEWARDSHIP IN FORESTRY"

Hopscotch

Volume Summary

Area 1-Modified Clearcut				
111 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	13.6	1506	1%	1491
Red alder	3.3	367	2%	360
TOTAL	16.9	1873		1851

TOTAL SALE VOLUME			111 acres	
SPECIES	Cruised Net (MBF)		Net Sale (MBF)	
Douglas-fir	1506		1491	
Red Alder	367		360	
TOTAL	1873		1851	



LOGGING PLAN
Timber Sale Contract No. 341-19-01
HOPSCOTCH
Portions of Sections 7, 8, 17, & 18
T2S, R7W, W.M.,
Tillamook County, Oregon

1,000 0 1,000 Feet

N

Type of Area Operation		Acres
1	Modified Clearcut	145 111
Total		145 111

Tillamook District GIS
 12/04/2017
 This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.

Legend:

- Rock source
- Stock pile
- Waste area
- Bridge
- Gate
- Survey corner
- Truck turn-around
- Dispersed Campsite
- Buffer
- Non-required thinning
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downhill yarding
- Green tree retention area
- Restricted area
- Area boundary
- Sale boundary
- Ownership boundary
- Fish stream
- Non-fish stream
- Unsurfaced road
- Surfaced road
- Paved road
- Abandoned road
- Swing road
- Non-project road
- Blocked road
- OHV trail
- Non-motorized trail
- Transmission line
- Railroad
- Cable yarding
- Ground Landing
- Yarder Landing