Timber Sale Appraisal
East Foley TS

Sale TL-341-2019-W00763-01

District: Tillamook

Date: February 20, 2019

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,584,248.31	$653,642.22	$2,237,890.53
		Project Work:	($349,160.00)
		Advertised Value:	$1,888,730.53

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Timber Description

Location: Portions of Sections 5, 6, 7, 8, and 10, T2N, R9W, W.M., Tillamook County, Oregon.

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	95
Western Hemlock / Fir	16	0	95
Sitka Spruce	18	0	95
Alder (Red)	15	0	95
Maple	15	0	95

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	4S	Total
Douglas - Fir	1,219	699	0	0	0	0	0	1,918
Western Hemlock / Fir	2,317	2,324	0	0	0	0	0	4,641
Sitka Spruce	34	19	0	0	0	0	0	53
Alder (Red)	0	0	510	580	278	606	0	1,974
Maple	0	0	0	0	0	0	6	6
Total	3,570	3,042	510	580	278	606	6	8,592

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

Western Red Cedar and Other Cedars Stumpage Price = Pond Value – Logging Cost
$1,250/MBF - $392.86/MBF = $857.14/MBF

Pulp (Conifer and Hardwood) Price = $ 25/ MBF

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 No Profit and Risk Added:

Non-Project road 1# construction: 3+00 stations x $125/station = $375
Non-Project road 2# construction: 0+90 stations x $125/station = $113
Non-Project road 3# construction: 1+80 stations x $125/station = $225
Non-Project road 4# construction: 3+00 stations x $125/station = $375
Non-Project road 5# construction: 1+30 stations x $400/station = $520
Non-Project road 6# construction: 3+40 stations x $400/station = $1,360
Non-Project road 7# construction: 2+90 stations x $400/station = $1,160

Machine Cleaning: $1,000/machine x 2 machines x 2 seasons = $4,000
Slash piling and sorting (Cable Ground): $5/ac x 264 ac. = $1,320
Heliport Construction: $600 ($200/area)
Road blocking $50/ block x 7 roads = $350

Ditch Cleaning and Bank Sluff Removal:
Mobilization: two times – dump truck w/ tilt bed & small excavator: $890 x 2 = $1,780
Small excavator (Cat 312 or equivalent): 40 hours @ $135/ hour = $5,400
Dump truck: 40 hours @ $90/ hour = $3,600

TOTAL Other Costs no Profit and Risk added = $21,178

ROAD MAINTENANCE:
Spot Rocking: 20cy/MMBF/mile x 8.592 MMBF x $22/cy x 10.5 miles / 8,592 MBF= $4.62/MBF
Interim Grading: $1,150/ mile x 8.5 miles x 2 times/ 8,592 MBF = $2.28/MBF
Final Maintenance Grading: $1,500 x 10.5 miles/ 8,592 MBF = $1.83/MBF
Final Maintenance Compaction: $950/mile x 6.0 miles/ 8,592 MBF = $0.66/ MBF
Total Road Maintenance: $9.39/MBF

District: Tillamook **Date: February 20, 2019**

Logging Conditions

Combination#: 1

Douglas - Fir	4.76%
Western Hemlock / Fir	9.48%
Sitka Spruce	4.81%
Alder (Red)	2.27%
Maple	5.00%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 13 **bd. ft / load:** 4000
cost / mbf: $102.77
machines: Forwarder
Harvester

Combination#: 2

Douglas - Fir	61.60%
Western Hemlock / Fir	55.33%
Sitka Spruce	45.75%
Alder (Red)	57.06%
Maple	45.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 8 **bd. ft / load:** 4000
cost / mbf: $243.14
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 3

Douglas - Fir	31.03%
Western Hemlock / Fir	30.48%
Sitka Spruce	49.43%
Alder (Red)	40.49%
Maple	50.00%

Logging System: Cable: Large Tower >=70 **Process:** Harvester Head Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 7 **bd. ft / load:** 4000
cost / mbf: $285.01
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Large)

Combination#: 4

Douglas - Fir	2.61%
Western Hemlock / Fir	4.71%
Alder (Red)	0.19%

Logging System:	Cable: Medium Tower >40 - <70	**Process:**	Harvester Head Delimbing
yarding distance:	Long (1,500 ft)	**downhill yarding:**	Yes
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	6	**bd. ft / load:**	4000
cost / mbf:	$405.23		
machines:	Log Loader (A) Forwarder Harvester Tower Yarder (Medium)		

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Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	10%
Project Costs:	$349,160.00	**Other Costs (P/R):**	$0.00
Slash Disposal:	$0.00	**Other Costs:**	$21,178.00

Miles of Road

Road Maintenance: $9.39

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	4.0
Western Hemlock / Fir	$0.00	3.0	4.0
Sitka Spruce	$0.00	3.0	4.0
Alder (Red)	$0.00	3.0	3.8
Maple	$0.00	3.0	3.8

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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									
$253.68	$9.86	$1.02	$83.13	$0.00	$34.77	$0.00	$2.00	$2.46	$386.92
Western Hemlock / Fir									
$250.23	$9.86	$1.02	$83.13	$0.00	$34.42	$0.00	$2.00	$2.46	$383.12
Sitka Spruce									
$257.08	$9.86	$1.02	$83.13	$0.00	$35.11	$0.00	$2.00	$2.46	$390.66
Alder (Red)									
$257.21	$9.86	$1.02	$87.50	$0.00	$35.56	$0.00	$2.00	$2.46	$395.61
Maple									
$257.06	$9.86	$1.02	$87.50	$0.00	$35.54	$0.00	$2.00	$2.46	$395.44

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$725.42	$338.50	$0.00
Western Hemlock / Fir	$0.00	$583.00	$199.88	$0.00
Sitka Spruce	$0.00	$529.57	$138.91	$0.00
Alder (Red)	$0.00	$726.50	$330.89	$0.00
Maple	$0.00	$473.00	$77.56	$0.00

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Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	1,918	$338.50	$649,243.00
Western Hemlock / Fir	4,641	$199.88	$927,643.08
Sitka Spruce	53	$138.91	$7,362.23
Alder (Red)	1,974	$330.89	$653,176.86
Maple	6	$77.56	$465.36

Gross Timber Sale Value

Recovery: $2,237,890.53

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

"STEWARDSHIP IN FORESTRY"

PROJECT SUMMARY SHEET

Sale: East Foley

CONSTRUCTION

Point	E to F	4+20	stations =	$8,929.70
Point	G to H	3+20	stations =	$7,072.30
			SUBTOTAL CONSTRUCTION	**$16,002.00**

IMPROVEMENT

Point	A to B	13+75	stations =	$19,590.02
			SUBTOTAL IMPROVEMENT	**$19,590.02**

RECONSTRUCTION

Point	A to B	18+45	stations =	$38,531.28
Point	C to D	4+50	stations =	$9,996.75
Point	I to J	58+40	stations =	$214,625.85
			SUBTOTAL RECONSTRUCTION	**$263,153.88**

SPECIAL PROJECTS

Project 3 Install Gate on I to J			560.00
Project 4 Brush	32.4	miles of road	$37,260.00
		SUBTOTAL SPECIAL PROJECTS	**$37,820.00**

MOVE IN **$12,594.10**

GRAND TOTAL **$349,160.00**

SUMMARY OF CONSTRUCTION COST

Sale: **East Foley** Road: **A to B**

Construction -	0+00	stations	Improvement -	13+75	stations	Reconstruction -	18+45	stations
	0.00	miles		0.26	miles		0.35	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Endhaul					0.320	acres @	$1,275.00	per acre =	$408.00	
								TOTAL CLEARING AND GRUBBING		**$408.00**

IMPROVEMENT: EXCAVATION -

Road Earthwork	0+00	to	13+75		13.75	sta. @	$100.00	per sta. =	$1,375.00	
								TOTAL	**EXCAVATION**	**$1,375.00**

RECONSTRUCTION: CLEARING AND GRUBBING -

Endhaul					1.780	acres @	$1,500.00	per acre =	$2,670.00	
								TOTAL CLEARING AND GRUBBING		**$2,670.00**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	13+75	to	32+20		18.45	sta. @	$150.00	per sta. =	$2,767.50	
Pullback & Widen	17+50	to	25+70		2000	cy. @	$2.00	per c.y.=	$4,000.00	
								TOTAL	**EXCAVATION**	**$6,767.50**

RECONSTRUCTION: ENDHAUL -

Pullback & Widen	17+50	to	25+70		2000	cy. @	$2.10	per c.y.=	$4,200.00	
Spread & compact					2000	cy. @	$0.50	per c.y.=	$1,000.00	
									TOTAL ENDHAUL	**$5,200.00**

ROCK

0+00 to	32+20	2,350	cy. of	Pit-Run		@	$16.38	per c.y.=	$38,493.00	
Landing Rock	28+45	80	cy. of	Pit-run		@	$16.81	per c.y.=	$1,344.80	
									TOTAL ROCK	**$39,837.80**

SPECIAL PROJECTS

Construct waste areas -	1.00	hours @	$130.00	per hour	$130.00
Grade and shape road -	32.20	stations @	$22.00	per station	$708.40
Roll subgrade w/ vibratory roller prior to rocking -	32.20	stations @	$17.50	per station	$563.50
Grass seed and fertilize -	1.59	acres @	$290.00	per acre	$461.10
				TOTAL SPECIAL PROJECTS	**$1,863.00**

GRAND TOTAL **$58,121.30**

SUMMARY OF CONSTRUCTION COST

Sale: **East Foley** Road: **C to D**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	4+50	stations
	0.00	miles		0.00	miles		0.09	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Endhaul					0.330	acres @	$1,500.00	per acre =	$495.00
								TOTAL CLEARING AND GRUBBING	**$495.00**

RECONSTRUCTION: EXCAVATION -

Road Earthwork					4.50	sta. @	$150.00	per sta. =	$675.00
Widening	0+00	to	1+00		150	cy. @	$2.00	per c.y.=	$300.00
								TOTAL EXCAVATION	**$975.00**

RECONSTRUCTION: ENDHAUL -

Widening	0+00	to	1+00		150	cy. @	$2.10	per c.y.=	$315.00
Spread & compact					150	cy. @	$0.50	per c.y.=	$75.00
								TOTAL ENDHAUL	**$390.00**

ROCK

0+00 to	4+50	350	cy. of	Pit-Run		@	$16.51	per c.y.=	$5,778.50
Landing Rock	4+50	120	cy. of	Pit-run		@	$16.58	per c.y.=	$1,989.60
								TOTAL ROCK	**$7,768.10**

SPECIAL PROJECTS

Construct waste areas -	1.00	hours @	$130.00	per hour	$130.00
Grade and shape road -	4.50	stations @	$22.00	per station	$99.00
Roll subgrade w/ vibratory roller prior to rocking -	4.50	stations @	$17.50	per station	$78.75
Grass seed and fertilize -	0.21	acres @	$290.00	per acre	$60.90
				TOTAL SPECIAL PROJECTS	**$368.65**

GRAND TOTAL **$9,996.75**

SUMMARY OF CONSTRUCTION COST

Sale: **East Foley** Road: **E to F**

Construction -	4+20	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.08	miles		0.00	miles		0.00	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				
0+00		4+20	25%		Outslope	$350	=		$1,470.00	
									TOTAL	**$1,470.00**

ROCK

0+00	to	4+20	330	cy. of	Pit-Run	@	$16.07	per c.y.=	$5,303.10		
Landing Rock		4+20	120	cy. of	Pit-run	@	$16.13	per c.y.=	$1,935.60		
									TOTAL ROCK	**$7,238.70**

SPECIAL PROJECTS

Grade and shape road -	4.20	stations @	$22.00	per station	$92.40	
Roll subgrade w/ vibratory roller prior to rocking -	4.20	stations @	$17.50	per station	$73.50	
Grass seed and fertilize -	0.19	acres @	$290.00	per acre	$55.10	
				TOTAL SPECIAL PROJECTS		**$221.00**

GRAND TOTAL **$8,929.70**

SUMMARY OF CONSTRUCTION COST

Sale: **East Foley** Road: **G to H**

Construction -	3+20	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.06	miles		0.00	miles		0.00	miles

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

Station	to	Station	Avg. Sideslope or Activity	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		2+50	50%		Outslope	$650	=	$1,625.00	
2+50		3+20	Land. Const.		Outslope	$1,200	=	$840.00	
								TOTAL	**$2,465.00**

ROCK

0+00	to	3+20	250	cy. of	Pit-Run	@	$11.98	per c.y.=	$2,995.00		
Landing Rock		3+20	120	cy. of	Pit-Run	@	$12.02	per c.y.=	$1,442.40		
									TOTAL ROCK	**$4,437.40**	

SPECIAL PROJECTS

Grade and shape road -	3.20	stations @	$22.00	per station	$70.40	
Roll subgrade w/ vibratory roller prior to rocking -	3.20	stations @	$17.50	per station	$56.00	
Grass seed and fertilize -	0.15	acres @	$290.00	per acre	$43.50	
				TOTAL SPECIAL PROJECTS		**$169.90**

GRAND TOTAL **$7,072.30**

SUMMARY OF CONSTRUCTION COST

Sale: **East Foley** Road: **I to J**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	58+40	stations
	0.00	miles		0.00	miles		1.11	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

End haul to waste area -				6.300	acres @	$1,800.00	per acre =	$11,340.00	
							TOTAL CLEARING AND GRUBBING		**$11,340.00**

RECONSTRUCTION: EXCAVATION -

Construct Through-Cut	0+00	to	2+30	830	cy. @	$2.00	per c.y.=	$1,660.00
Construct Road Fill	2+30	to	5+70	1400	cy. @	$1.80	per c.y.=	$2,520.00
Road Earthwork - Fill Ditch	5+70	to	9+10	3.40	sta. @	$300.00	per sta. =	$1,020.00
Reconst. Fill X-ing	9+10	to	10+10	500	cy. @	$3.00	per c.y.=	$1,500.00
Widening & Pullback	10+10	to	12+50	800	cy. @	$2.00	per c.y.=	$1,600.00
Widening	12+50	to	14+25	200	cy. @	$2.00	per c.y.=	$400.00
Reconst. Fill X-ing	14+25	to	14+80	200	cy. @	$3.00	per c.y.=	$600.00
Widening	14+80	to	18+40	540	cy. @	$2.00	per c.y.=	$1,080.00
Widening & Pullback	18+40	to	23+50	1280	cy. @	$2.00	per c.y.=	$2,560.00
Road Earthwork	23+50	to	25+50	2.00	sta. @	$400.00	per sta. =	$800.00
Widening & Pullback	25+50	to	30+55	3020	cy. @	$2.00	per c.y.=	$6,040.00
Reconst. Fill X-ing	30+55	to	31+50	400	cy. @	$3.00	per c.y.=	$1,200.00
Widening & Pullback	31+50	to	33+40	1770	cy. @	$2.00	per c.y.=	$3,540.00
Widening	33+40	to	34+40	150	cy. @	$2.00	per c.y.=	$300.00
Widening & Pullback	34+40	to	42+00	9420	cy. @	$2.00	per c.y.=	$18,840.00
Widening	42+00	to	44+00	810	cy. @	$2.00	per c.y.=	$1,620.00
Widening & Pullback	44+00	to	46+00	450	cy. @	$2.00	per c.y.=	$900.00
Widening	46+00	to	53+00	2700	cy. @	$2.00	per c.y.=	$5,400.00
Widening & Pullback	53+00	to	56+00	1840	cy. @	$2.00	per c.y.=	$3,680.00
Widening & Land. Const.	56+00	to	58+40	2.40	sta. @	$700.00	per sta. =	$1,680.00
							TOTAL EXCAVATION	**$56,940.00**

RECONSTRUCTION: ENDHAUL -

Widening & Pullback	10+10	to	12+50	800	cy. @	$1.62	per c.y.=	$1,296.00
Widening	12+50	to	14+25	200	cy. @	$1.68	per c.y.=	$336.00
Widening	14+80	to	18+40	540	cy. @	$1.81	per c.y.=	$977.40
Widening & Pullback	18+40	to	23+50	1280	cy. @	$1.98	per c.y.=	$2,534.40
Widening & Pullback	25+50	to	30+55	3020	cy. @	$2.26	per c.y.=	$6,825.20
Widening & Pullback	31+50	to	33+40	1770	cy. @	$2.44	per c.y.=	$4,318.80
Widening	33+40	to	34+40	150	cy. @	$2.50	per c.y.=	$375.00
Widening & Pullback	34+40	to	42+00	9420	cy. @	$3.07	per c.y.=	$28,919.40
Widening	42+00	to	44+00	810	cy. @	$3.67	per c.y.=	$2,972.70
Widening & Pullback	44+00	to	46+00	450	cy. @	$3.75	per c.y.=	$1,687.50
Widening	46+00	to	53+00	2700	cy. @	$3.93	per c.y.=	$10,611.00
Widening & Pullback	53+00	to	56+00	1840	cy. @	$4.35	per c.y.=	$8,004.00
Spread & compact				22980	cy. @	$0.50	per c.y.=	$11,490.00
							TOTAL ENDHAUL	**$80,347.40**

CULVERTS - MATERIALS & INSTALLATION

Culverts							
	30	LF of 18"	$690.00		90	LF of 24"	$2,691.00
	50	LF of 30"	$2,024.46				
	60	LF of 42"	$4,029.37				
Culvert Stakes & Markers							
	5	markers	$40.00				
			$40.00			**TOTAL CULVERTS**	**$9,474.83**

ROCK

0+00 to	10+30	560	cy. of	Crushed	@	$22.70	per c.y.=	$12,712.00
10+30 to	46+00	1,250	cy. of	Crushed	@	$22.92	per c.y.=	$28,650.00
Culvert Backfill/Bedding	Culv. In Exhibit G	170	cy. of	Crushed	@	$22.57	per c.y.=	$3,836.90
Landing Rock	24+75 & 45+40	160	cy. of	Crushed	@	$22.92	per c.y.=	$3,667.20
Fill Armor	9+75	20	cy. of	Riprap	@	$19.82	per c.y.=	$396.40
Junction Rock	0+00	20	cy. of	Crushed	@	$22.55	per c.y.=	$451.00
Energy Dissipator	Culv. In Exhibit G	40	cy. of	Riprap	@	$19.82	per c.y.=	$792.80
							TOTAL ROCK	**$50,506.30**

SPECIAL PROJECTS

Construct waste areas -	5.00	hours @	$145.00	per hour	$725.00
Grade and shape road -	58.40	stations @	$22.00	per station	$1,284.80
Construct/Install rubber water diverter @ 11+00, 16+00, & 32+50	3.00	@	$360.00	each	$1,080.00
Roll subgrade w/ vibratory roller prior to rocking -	58.40	stations @	$17.50	per station	$1,022.00
Remove culverts from state lands	1.00	@	$422.90	total	$422.90
Grass seed and fertilize -	2.95	acres @	$290.00	per acre	$855.50
Mulching -	0.804	acres @	$780.00	per acre	$627.12
				TOTAL SPECIAL PROJECTS	**$6,017.32**

GRAND TOTAL **$214,625.85**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Pit_run	Location:	NE 1/4 SW 1/4 Sec. 12, T2N, R9W, W.M.
Sale:	**East Foley**	Road:	3720 c.y.
Swell:	1.40		
Shirinkage	1.16	Total Truck Loads:	3720 c.y.
Drill Pct.:	0%	In Place Total:	2657 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.							$1,000.00
Rip Rock:	$2.20	/cu.yd.	x	2657	cu.yds.	=	$5,845.40
Load Dump Truck:	$1.00	/cu.yd.	x	3720	cu.yds.	=	$3,720.00
					Subtotal		$10,565.40

Move in Roller and Compactor	1	@	$962.50	=	$962.50
Move in Grader	1	@	$429.33	=	$429.33
Move in D-8	1	@	$1,556.79	=	$1,556.79
Move in Loader	1	@	$1,441.79	=	$1,441.79
Move in Excavator	1	@	$1,556.79	=	$1,556.79
Move in Trucks	3	@	$368.33	=	$1,104.99
Move in Water Truck	1	@	$281.67	=	$281.67
				Subtotal	$7,333.86
			TOTAL PRODUCTION COSTS		$17,899.26

Base Cost= $4.81 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 0 3220 (Pit-Run)	9.87	1.70	4.81	16.38	2350		$38,493.00
A to B Landing Rock (Pit-run)	10.30	1.70	4.81	16.81	80		$1,344.80
C to D 0 450 (Pit-Run)	10.00	1.70	4.81	16.51	350		$5,778.50
C to D Landing Rock (Pit-run)	10.07	1.70	4.81	16.58	120		$1,989.60
E to F 0 420 (Pit-Run)	9.56	1.70	4.81	16.07	330		$5,303.10
E to F Landing Rock (Pit-run)	9.62	1.70	4.81	16.13	120		$1,935.60
G to H 0 320 (Pit-Run)	5.47	1.70	4.81	11.98	250		$2,995.00
G to H Landing Rock (Pit-Run)	5.51	1.70	4.81	12.02	120		$1,442.40
				Total C.Y.	3720	Sub Total	$59,282.00
					TOTAL ROCKING COSTS		$59,282.00

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit: Crushed Location: Commercial Source
Sale: **East Foley** Road: 2220 c.y.

Base Cost/Purchase Price : $9.50 Per Cu.Yd. for 3" - 0" Rock
Base Cost/Purchase Price : $11.25 Per Cu.Yd. for 1 1/2" - 0" Rock
Base Cost/Purchase Price : $8.00 Per Cu.Yd. for 12" - 24" Riprap

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds		ROCK COST
I to J 0 1030 (Crushed)	10.00	3.20	9.50	22.70	560		$12,712.00
I to J 1030 4600 (Crushed)	10.22	3.20	9.50	22.92	1250		$28,650.00
I to J Culvert Backfill/Bedding (Crushed)	10.22	1.10	11.25	22.57	170		$3,836.90
I to J Landing Rock (Crushed)	10.22	3.20	9.50	22.92	160		$3,667.20
I to J Fill Armor (Riprap)	10.22	1.60	8.00	19.82	20		$396.40
I to J Junction Rock (Crushed)	9.85	3.20	9.50	22.55	20		$451.00
I to J Energy Dissipator (Riprap)	10.22	1.60	8.00	19.82	40		$792.80
				Total C.Y.	2220	Sub Total	$50,506.30

TOTAL ROCKING COSTS $50,506.30

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

Sale: **East Foley**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
40.0	Pavement	30
12.0	Main Lines	7
9.0	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	Brush Cutter	$1,247.50		$4.00	0.00	0.00	0	$0.00	$1,247.50
1	Excavators (Small)	$962.50		$22.00	0.00	10.00	10	$220.00	$1,182.50
1	Excavators (Large)	$1,636.79	1	$44.80	0.00	10.00	10	$448.00	$2,084.79
1	Tractors (D7)	$1,716.79	2	$11.30	0.00	10.00	10	$113.00	$1,829.79
1	Tractor (D8)	$1,716.79	2	$15.10	0.00	10.00	10	$151.00	$1,867.79
2	Dump Truck (10 cy +)	$738.16		$2.85	0.00	10.00	10	$57.00	$795.16
2	Dump Truck (Off Hiway)	$3,216.07	1	$4.75	0.00	10.00	10	$95.00	$3,311.07
1	Water Truck (1500 Gal)	$247.00		$2.85	0.00	10.00	10	$28.50	$275.50
					TOTAL MOVE-IN COSTS:				$12,594.10

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
East Foley

1. Type of Sale
Regeneration harvest

2. Legal Description
Portions of Sections 5, 6, 7, 8, and 10, T2N, R9W, W.M., Tillamook County, Oregon.

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

	ACRES Gross	Net
Area 1 (Clearcut)	108	75
Area 2 (Clearcut)	126	97
Area 3 (Clearcut)	128	109
Total	362	281

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
The timber sale areas were cruised using variable plot sampling. Plot and cruise line spacing was 175' by 700' respectively throughout the timber sale area. Cruise lines for each area were aligned on different azimuths to provide uniform coverage. 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 the nearest inch), merchantable bole length (to the nearest foot), form factor, and defect were recorded for all trees. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods, respectively.

B. Plot size
Plot size varied by area and the BAF used was as follows: Area 1 — 46.94, Area 2 & 3 — 40. Point of tree observation was 4.0'.

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. Cruise volumes were grown forward to 2018 from original cruise date.

Net sale acreage was used for volume calculation.

Cruise Statistics (Board Foot Volumes)			
Area	Number of Plots	SE (%)	CV (%)
1	17	8	32.1
2	33	9.8	56.1
3	35	10	59.4

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

Burn: Majority of Area 1 was burned in 1933 (Tillamook Fire), a small portion of Area 2, and Area 3 was entirely burned.

Seeded/Planted: Unknown history of seeding.

Alder spray: None of the sale areas received spraying.

Previous management: No previous management on any area.

Damage/defect: Swiss needle cast is present in all sale areas.

Sale Area	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Douglas-fir	15	63	5
	Western hemlock	17	70	5
2	Red Alder	16	42	6
	Douglas-fir	21	72	5
	Western Hemlock	17	62	5
3	Red Alder	15	48	6
	Douglas-fir	23	85	5
	Western Hemlock	14	44	5

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

8. Cruiser /Dates

Areas 1, 2, and 3 were cruised in 2017 by ODF staff. Revenue Distribution

FDF: 100%

Tax Code: 5600 is 88%; 5601 is 12%.

Deed Numbers: Deed #15—100%

9. Attachments

Stand Table
Volume Summaries
Log Stock Tables
Logging Plan Map

10. Stand and Log Stock Tables Species Key

DF – Douglas-fir
RA – Red alder
BM—Big Leaf Maple
RC – Western red cedar reserved
SS – Sitka spruce
WH – Western hemlock
SL –Sitka Spruce Leave
WL—Western Hemlock Leave
BL – Big Leaf Maple Leave

FI TSTNDSUM

Stand Table Summary

Project **EFOLEY**

T02N R09W S06 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	06	355	0100	75.00	17	60

T02N R09W S06 T0100

Page: 1
Date: 11/16/2018
Time: 8:27:31AM

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.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
WH		10		86	64	10.870	5.93	10.87	12.6	50.0	4.38	137	543	329	103	41
WH		11		84	79	26.949	17.79	44.92	11.2	42.0	16.17	505	1,886	1,212	379	141
WH		12		90	69	7.548	5.93	7.55	18.5	70.0	4.48	140	528	336	105	40
WH		13		91	105	12.863	11.86	25.73	17.4	75.0	14.33	448	1,930	1,075	336	145
WH		14		86	86	22.183	23.71	44.37	17.2	62.5	24.45	764	2,773	1,834	573	208
WH		16		89	97	12.738	17.79	25.48	26.5	108.3	21.64	676	2,760	1,623	507	207
WH		17		78	98	3.761	5.93	7.52	28.9	95.0	6.96	218	715	522	163	54
WH		18		89	105	10.064	17.79	23.48	30.8	118.6	23.16	724	2,784	1,737	543	209
WH		19		84	102	3.011	5.93	6.02	37.4	130.0	7.20	225	783	540	169	59
WH		20		88	98	2.717	5.93	5.43	41.6	140.0	7.24	226	761	543	170	57
WH		21		86	109	9.859	23.71	22.18	44.4	182.2	31.49	985	4,042	2,362	739	303
WH		22		86	101	2.246	5.93	4.49	53.6	215.0	7.71	241	966	578	181	72
WH		23		86	126	2.055	5.93	6.16	45.6	203.3	8.99	281	1,253	674	211	94
WH		24		88	108	3.774	11.86	9.44	49.9	220.0	15.05	471	2,076	1,129	353	156
WH		25		82	133	1.739	5.93	5.22	55.3	223.3	9.25	289	1,165	694	216	87
WH		26		84	108	3.216	11.86	8.04	62.2	250.0	15.99	500	2,010	1,200	375	151
WH		27		78	100	1.491	5.93	2.98	76.6	225.0	7.30	229	671	547	171	50
WH		28		86	97	1.386	5.93	2.77	79.0	315.0	7.01	219	873	525	164	66
WH		31		86	113	1.131	5.93	3.39	76.3	336.7	8.27	259	1,142	620	194	86
WH		Totals		86	92	139.602	201.57	266.04	28.3	111.5	241.08	7,534	29,662	18,081	5,650	2,225
DF		11		87	63	11.715	7.73	11.71	13.6	40.0	4.55	160	469	341	120	35
DF		12		80	71	4.922	3.87	4.92	19.6	60.0	2.75	97	295	207	72	22
DF		13		83	96	4.194	3.87	8.39	15.6	60.0	3.73	131	503	280	98	38
DF		14		86	83	7.232	7.73	14.46	15.1	55.0	6.21	218	796	466	164	60
DF		15		82	78	6.300	7.73	12.60	16.6	57.5	5.96	209	725	447	157	54
DF		16		83	110	2.769	3.87	5.54	26.2	95.0	4.14	145	526	310	109	39
DF		17		83	101	4.905	7.73	9.81	27.7	100.0	7.75	272	981	581	204	74
DF		21		84	102	3.214	7.73	6.43	43.4	145.0	7.95	279	932	596	209	70
DF		22		86	126	2.929	7.73	8.79	35.2	163.3	8.82	310	1,435	662	232	108
DF		Totals		84	84	48.179	57.98	82.65	22.0	80.6	51.87	1,820	6,661	3,890	1,365	500
WL		22		88	108	1.046	2.76	3.14	37.3	166.7	3.74	117	523	281	88	39
WL		32		88	135	.494	2.76	1.48	96.6	480.0	4.59	143	712	344	107	53
WL		33		91	138	.465	2.76	1.39	107.5	573.3	4.79	150	800	359	112	60
WL		Totals		89	122	2.005	8.28	6.02	68.2	338.2	13.13	410	2,034	984	308	153
RA		10		78	45	5.063	2.76	5.06	9.3	30.0	1.29	47	152	97	35	11
RA		13		78	59	2.996	2.76	3.00	20.7	60.0	1.71	62	180	128	46	13
RA		14		82	38	2.583	2.76	2.58	13.0	60.0	.92	34	155	69	25	12
RA		Totals		79	47	10.641	8.28	10.64	13.4	45.7	3.92	142	487	294	107	36
RC		9		80	17	6.250	2.76	6.25	4.8	20.0	.70	30	125	53	22	9
RC		Totals		80	17	6.250	2.76	6.25	4.8	20.0	0.70	30	125	53	22	9
OC		11		85	62	4.184	2.76									
OC		15		84	55	2.250	2.76									
OC		16		84	56	1.978	2.76									
OC		23		79	49	.957	2.76									
OC		Totals		84	58	9.368	11.04									
Totals				85	85	216.046	289.92	371.60	26.7	104.9	310.70	9936	38,970	23,302	7,452	2,923

FI TLOGSTVB

Log Stock Table - MBF

Project: EFOLEY

T02N R09W S06 T0100

T02N R09W S06 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	06	355	0100	75.00	17	60

Page 1
Date 11/16/2018
Time 8:29:07AM

Spp	ST	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		D	4	28	4		4	.2			4									
WH		CO	2	12	30		30	1.3									30			
WH		CO	2	32	19		19	.9						19						
WH		CO	2	40	1,031	1.3	1,018	45.7						270	296	387	64			
WH		CO	3	31	41		41	1.8			41									
WH		CO	3	32	97	8.6	89	4.0				76	12							
WH		CO	3	35	7		7	.3			7									
WH		CO	3	40	799	1.0	791	35.6			133	317	267	75						
WH		CO	4	14	7		7	.3		7										
WH		CO	4	15	10		10	.5		9	2									
WH		CO	4	19	22		22	1.0		22										
WH		CO	4	21	8		8	.4		8										
WH		CO	4	23	12		12	.5		8	4									
WH		CO	4	25	5		5	.2		5										
WH		CO	4	32	14		14	.7		14										
WH		CO	4	34	44		44	2.0		44										
WH		CO	4	35	10		10	.5		10										
WH		CO	4	36	17		17	.7		17										
WH		CO	4	39	32		32	1.4		32										
WH		CO	4	40	45		45	2.0		45										
WH		Totals			2,254	1.3	2,225	76.1		221	190	393	279	364	296	387	94			
DF		CO	2	40	129	.9	128	25.6						57	71					
DF		CO	3	24	14		14	2.8				14								
DF		CO	3	32	13		13	2.6					13							
DF		CO	3	40	244	.8	243	48.5			31	105	106							
DF		CO	4	18	5		5	1.1		5										
DF		CO	4	20	5		5	.9		5										
DF		CO	4	21	5		5	1.1		5										
DF		CO	4	24	13		13	2.5		13										
DF		CO	4	25	10		10	2.1		10										
DF		CO	4	37	15		15	2.9		15										
DF		CO	4	40	48		48	9.7		48										
DF		Totals			503		500	17.1		102	31	120	120	57	71					
WL		CO	2	40	139	1.3	137	89.7							28	34	35	40		
WL		CO	3	32	9		9	6.2					9							
WL		CO	3	34	2		2	1.5			2									
WL		CO	3	38	2		2	1.6			2									
WL		CO	4	18	2		2	1.0		2										
WL		Totals			154	1.2	153	5.2		2	5		9		28	34	35	40		
RA		H	4	16	12		12	31.8					12							
RA		H	4	25	11		11	31.2			11									
RA		H	4	37	13		13	36.9			13									
RA		Totals			36		36	1.2			25		12							
RC		CO	4	15	9		9	100.0			9									
RC		Totals			9		9	.3			9									

FI TLOGSTVB

Log Stock Table - MBF

Project: **EFOLEY**

T02N R09W S06 T0100

T02N R09W S06 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	06	355	0100	75.00	17	60

Date 11/16/2018

Time 8:29:07AM

Spp	S T	So Gr rt de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
Total All Species				2,957	1.2	2,923	100.0		324	259	513	420	421	396	420	129	40		

FI TSTNDSUM

Stand Table Summary

Project **EFOLEY**

T02N R09W S10 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	10	819	0100	97.00	28	125

T02N R09W S10 T0100

Date: 11/16/201

Time: 8:46:41AM

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.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
WH		9		86	35	7.114	3.14	7.11	5.6	20.0	1.27	40	142	123	39	14
WH		10		86	17	5.762	3.14	5.76	5.9	20.0	1.09	34	115	106	33	11
WH		11		86	82	9.525	6.29	19.05	9.4	40.0	5.72	179	762	555	173	74
WH		12		86	62	8.003	6.29	12.00	12.5	43.3	4.81	150	520	467	146	50
WH		13		84	55	20.458	18.86	34.10	12.1	40.0	13.16	411	1,364	1,276	399	132
WH		14		87	56	5.880	6.29	8.82	16.0	56.7	4.53	141	500	439	137	48
WH		15		86	91	12.805	15.71	28.17	18.8	74.5	16.96	530	2,100	1,646	514	204
WH		16		87	94	4.502	6.29	11.25	20.5	88.0	7.39	231	990	717	224	96
WH		17		88	119	1.994	3.14	5.98	24.3	103.3	4.65	145	618	451	141	60
WH		18		87	108	3.557	6.29	8.89	30.2	118.0	8.59	268	1,049	833	260	102
WH		19		88	119	1.596	3.14	4.79	29.0	116.7	4.45	139	559	432	135	54
WH		20		86	123	5.762	12.57	17.29	33.1	139.2	18.33	573	2,406	1,778	556	233
WH		21		85	101	5.227	12.57	13.07	36.9	140.0	15.41	482	1,829	1,495	467	177
WH		22		86	125	3.572	9.43	8.33	46.6	214.3	12.44	389	1,786	1,207	377	173
WH		23		86	108	1.089	3.14	2.18	59.3	205.0	4.14	129	447	401	125	43
WH		24		88	122	1.000	3.14	3.00	49.5	223.3	4.76	149	670	462	144	65
WH		26		84	127	1.705	6.29	5.11	48.7	236.7	7.97	249	1,210	773	242	117
WH		28		82	113	.735	3.14	2.20	60.7	233.3	4.28	134	514	415	130	50
WH		29		88	106	.685	3.14	2.06	65.8	296.7	4.33	135	610	420	131	59
WH		30		87	109	1.281	6.29	3.84	72.5	326.7	8.91	278	1,255	864	270	122
WH		31		89	107	.600	3.14	1.80	65.0	310.0	3.73	117	558	362	113	54
WH		32		84	118	.563	3.14	1.69	86.4	386.7	4.67	146	653	453	141	63
WH		33		84	116	1.058	6.29	3.17	89.7	395.0	9.11	285	1,254	884	276	122
WH		34		86	126	.498	3.14	1.50	103.9	480.0	4.97	155	718	482	151	70
WH		36		86	128	.445	3.14	1.33	121.8	606.7	5.20	162	809	504	158	78
WH		Totals		86	79	105.415	157.14	212.51	26.6	110.3	180.89	5,653	23,439	17,546	5,483	2,274
RA		9		72	17	4.619	2.04	4.62	4.8	20.0	.61	22	92	59	21	9
RA		10		82	30	3.742	2.04	3.74	7.0	20.0	.72	26	75	70	26	7
RA		11		79	54	6.185	4.08	6.18	13.9	40.0	2.36	86	247	229	83	24
RA		12		78	42	7.795	6.12	7.80	13.4	33.3	2.88	105	260	280	102	25
RA		13		79	67	13.284	12.24	17.71	15.5	48.8	7.54	274	863	732	266	84
RA		14		75	72	7.636	8.16	11.45	19.1	48.3	6.01	218	554	583	212	54
RA		15		75	68	6.652	8.16	9.98	21.3	55.0	5.85	213	549	567	206	53
RA		16		75	66	8.770	12.24	14.62	22.2	58.0	8.91	324	848	864	314	82
RA		17		82	70	3.884	6.12	3.88	42.5	130.0	4.54	165	505	440	160	49
RA		18		75	71	5.774	10.20	10.39	27.9	81.1	7.98	290	843	774	281	82
RA		19		77	73	4.146	8.16	7.26	32.9	90.0	6.57	239	653	637	232	63
RA		20		78	67	4.677	10.20	6.55	35.3	102.9	6.36	231	674	617	224	65
RA		21		77	75	2.545	6.12	5.09	38.1	108.3	5.33	194	552	517	188	53
RA		22		77	70	2.319	6.12	4.64	38.5	108.3	4.91	179	503	477	173	49
RA		25		74	69	.599	2.04	1.20	40.4	135.0	1.33	48	162	129	47	16
RA		26		79	61	1.107	4.08	1.11	91.6	240.0	2.79	101	266	271	98	26
RA		27		72	52	1.027	4.08	1.03	95.7	240.0	2.70	98	246	262	95	24
RA		29		80	58	.445	2.04	.89	59.1	195.0	1.45	53	174	140	51	17
RA		Totals		77	61	85.207	114.29	118.13	24.3	68.3	78.84	2,867	8,064	7,647	2,781	782
DF		11		84	25	3.247	2.14	3.25	6.8	20.0	.63	22	65	61	21	6
DF		21		84	126	1.782	4.29	5.35	35.6	145.0	5.42	190	775	526	184	75
DF		22		83	114	.812	2.14	2.44	35.2	130.0	2.44	86	317	237	83	31
DF		25		84	116	.629	2.14	1.89	47.0	190.0	2.53	89	358	245	86	35
DF		26		85	102	.581	2.14	1.16	69.6	290.0	2.31	81	337	224	78	33
DF		30		82	117	.873	4.29	2.62	70.2	295.0	5.24	184	773	508	178	75

FI TSTNDSUM

Stand Table Summary

Project **EFOLEY**

T02N R09W S10 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	10	819	0100	97.00	28	125

Date: 11/16/201
Time: 8:46:41AM

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.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		31		84	118	.409	2.14	1.23	74.2	320.0	2.59	91	392	252	88	38
DF		35		81	123	.321	2.14	.96	97.1	410.0	2.66	93	394	258	91	38
DF		Totals		84	83	8.653	21.43	18.88	44.3	180.7	23.82	836	3,412	2,310	811	331
SS		15		68	46	1.164	1.43	1.16	28.3	40.0	.86	33	47	83	32	5
SS		22		74	78	1.082	2.86	2.16	43.7	115.0	2.46	95	249	239	92	24
SS		32		82	102	.256	1.43	.51	115.6	440.0	1.54	59	225	149	57	22
SS		Totals		72	66	2.502	5.71	3.84	48.6	135.6	4.85	187	521	471	181	50
BL		24		73	52	.909	2.86	.91	65.9	160.0	1.59	60	146	154	58	14
BL		Totals		73	52	.909	2.86	.91	65.9	160.0	1.59	60	146	154	58	14
BM		11		79	32	2.165	1.43	2.16	9.0	30.0	.52	19	65	50	19	6
BM		12		68	30	1.819	1.43									
BM		Totals		74	31	3.984	2.86	2.16	9.0	30.0	0.52	19	65	50	19	6
SL		14		70	37	1.336	1.43	1.34	18.4	30.0	.64	25	40	62	24	4
SL		Totals		70	37	1.336	1.43	1.34	18.4	30.0	0.64	25	40	62	24	4
Totals				82	70	208.007	305.71	357.78	27.0	99.7	291.14	9646	35,685	28,241	9,357	3,461

FI TLOGSTVB

Log Stock Table - MBF

Project: EFOLEY

T02N R09W S10 T0100

T02N R09W S10 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	10	819	0100	97.00	28	125

Page 1
Date 11/16/2018
Time 8:48:10AM

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	24	53		53	2.3								53				
WH		CO	2	40	1,233	1.5	1,214	53.4						202	353	236	320	103		
WH		CO	3	32	220	5.2	209	9.2				101	97	11						
WH		CO	3	34	14		14	.6					14							
WH		CO	3	40	421		421	18.5			8	193	182	37						
WH		CO	4	13	8		8	.3		7	1									
WH		CO	4	14	1		1	.1		1										
WH		CO	4	15	24		24	1.0		11	1	11								
WH		CO	4	16	27		27	1.2		20		7								
WH		CO	4	17	6		6	.3		6										
WH		CO	4	18	19		19	.8		19										
WH		CO	4	19	7		7	.3			7									
WH		CO	4	20	14		14	.6		3	2	10								
WH		CO	4	21	11		11	.5		11										
WH		CO	4	22	23		23	1.0		7		17								
WH		CO	4	23	16		16	.7		14	2									
WH		CO	4	24	5		5	.2		3	2									
WH		CO	4	25	10		10	.4		10										
WH		CO	4	26	21		21	.9		21										
WH		CO	4	27	3		3	.2		3										
WH		CO	4	28	17		17	.8		17										
WH		CO	4	29	9		9	.4		9										
WH		CO	4	32	107		107	4.7		1	55	50								
WH		CO	4	33	10		10	.4		10										
WH		CO	4	35	2		2	.1		2										
WH		CO	4	36	7		7	.3		7										
WH		CO	4	39	16		16	.7		16										
WH		Totals			2,304	1.3	2,274	65.7		197	79	390	292	250	353	289	320	103		
RA		H	3	40	16		16	2.1					16							
RA		H	1	32	16		16	2.0								16				
RA		H	2	25	13		13	1.6							13					
RA		H	2	32	76		76	9.8						61	15					
RA		H	2	40	42		42	5.4						42						
RA		H	3	32	97	.5	96	12.3					87	9						
RA		H	3	40	68		68	8.6					68							
RA		H	4	13	6		6	.8			6									
RA		H	4	14	2		2	.3			2									
RA		H	4	15	12		12	1.5			11	1								
RA		H	4	16	3		3	.4			3									
RA		H	4	17	10		10	1.3			3	7								
RA		H	4	18	9		9	1.2			9									
RA		H	4	19	19		19	2.5			16	3								
RA		H	4	20	40		40	5.1			7	11	23							
RA		H	4	21	6		6	.8			6									
RA		H	4	22	16	4.6	16	2.0			13	2								
RA		H	4	23	23		23	2.9			10	13								
RA		H	4	24	10		10	1.3			10									
RA		H	4	27	8		8	1.0			8									
RA		H	4	28	2		2	.3			2									

FI TLOGSTVB

Log Stock Table - MBF

Project: **EFOLEY**

T02N R09W S10 T0100

T02N R09W S10 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	10	819	0100	97.00	28	125

Page 2
Date 11/16/2018
Time 8:48:10AM

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+
RA		H	4	29	19		19	2.4			19									
RA		H	4	31	13		13	1.7			13									
RA		H	4	32	67	2.8	65	8.3				65								
RA		H	4	37	9		9	1.1				9								
RA		H	4	39	48		48	6.2			48									
RA		H	4	40	120		120	15.3			40	79								
RA		H	4	41	15		15	1.9			15									
RA		Totals			785		782	22.6			242	190	194	113	28	16				
DF		CO	2	40	254		254	76.6						10	84	76	84			
DF		CO	3	32	7		7	2.0						7						
DF		CO	3	40	54		54	16.4				15	30	10						
DF		CO	4	12	1		1	.2		1										
DF		CO	4	16	2		2	.5		2										
DF		CO	4	18	2		2	.6		2										
DF		CO	4	20	6		6	1.9		6										
DF		CO	4	23	1		1	.2		1										
DF		CO	4	25	1		1	.4		1										
DF		CO	4	29	4		4	1.1		4										
DF		Totals			331		331	9.6		16		15	36	20	84	76	84			
SS		CO	2	40	34		34	67.5							15		19			
SS		CO	3	32	6	8.3	6	11.4						6						
SS		CO	3	40	3		3	5.9				3								
SS		CO	4	18	1		1	2.1		1										
SS		CO	4	33	5		5	8.9		5										
SS		CO	4	36	2		2	4.2		2										
SS		Totals			51	1.0	50	1.5		8		3	6		15		19			
BL		H	3	20	6		6	43.8							6					
BL		H	3	40	8		8	56.2					8							
BL		Totals			14		14	.4					8		6					
BM		H	4	21	6		6	100.0			6									
BM		Totals			6		6	.2			6									
SL		CO	4	27	4		4	100.0		4										
SL		Totals			4		4	.1		4										
Total All Species					3,495		3,461	100.0		225	328	597	536	382	487	381	422	103		

FI TSTNDSUM

Stand Table Summary

Project EFOLEY

T02N R09W S10 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	10	832	0100	109.00	35	103

T02N R09W S10 T0100

Date: 11/16/201

Time: 9:02:13AM

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.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA		9		86	50	5.033	2.22	5.03	7.7	30.0	1.06	39	151	115	42	16
RA		11		78	63	10.107	6.67	13.48	10.4	37.5	3.88	140	505	423	153	55
RA		12		83	61	5.662	4.45	8.49	10.1	33.3	2.36	86	283	257	94	31
RA		13		78	81	12.061	11.12	21.71	13.3	41.1	7.93	288	892	864	314	97
RA		14		81	74	12.479	13.34	20.80	17.5	58.0	10.01	364	1,206	1,091	397	131
RA		15		77	78	19.929	24.46	32.61	21.5	61.7	19.28	701	2,011	2,102	765	219
RA		16		79	75	9.554	13.34	17.52	22.1	74.5	10.64	387	1,306	1,160	422	142
RA		17		80	70	8.463	13.34	15.52	24.4	80.9	10.40	378	1,255	1,134	412	137
RA		18		79	73	8.807	15.56	15.10	30.3	90.0	12.59	458	1,359	1,373	499	148
RA		19		79	85	4.517	8.89	9.03	34.3	107.5	8.53	310	971	930	338	106
RA		20		92	34	1.019	2.22	1.02	33.1	120.0	.93	34	122	101	37	13
RA		22		81	85	.842	2.22	1.68	45.9	135.0	2.13	77	227	232	84	25
RA		23		81	77	1.541	4.45	3.08	46.9	135.0	3.98	145	416	433	158	45
RA		Totals		79	72	100.015	122.29	165.07	20.6	64.9	93.71	3,408	10,706	10,215	3,715	1,167
DF		13		85	62	2.052	1.89	4.10	9.9	35.0	1.16	41	144	127	44	16
DF		15		81	55	1.541	1.89	3.08	12.4	45.0	1.09	38	139	119	42	15
DF		16		78	58	1.355	1.89	1.35	31.9	60.0	1.23	43	81	134	47	9
DF		17		81	85	2.400	3.78	4.80	23.7	80.0	3.25	114	384	354	124	42
DF		20		86	90	.867	1.89	1.73	35.4	115.0	1.75	61	199	191	67	22
DF		23		89	129	1.967	5.67	5.90	45.3	208.9	7.63	268	1,233	831	292	134
DF		24		84	124	1.806	5.67	5.42	44.6	191.1	6.88	241	1,036	750	263	113
DF		25		84	103	.555	1.89	1.66	44.1	180.0	2.09	73	300	228	80	33
DF		26		89	117	.513	1.89	1.54	53.6	236.7	2.34	82	364	255	90	40
DF		27		84	114	.952	3.78	2.85	55.2	230.0	4.49	158	657	490	172	72
DF		28		89	142	.442	1.89	1.33	73.0	370.0	2.76	97	491	301	106	54
DF		29		89	129	.412	1.89	1.24	73.7	363.3	2.60	91	450	283	99	49
DF		30		88	118	.385	1.89	1.16	72.6	336.7	2.39	84	389	261	92	42
DF		31		84	129	1.444	7.57	4.69	74.3	336.2	9.94	349	1,577	1,084	380	172
DF		32		84	116	.339	1.89	1.02	79.3	340.0	2.30	81	345	250	88	38
DF		35		83	140	.283	1.89	.85	104.5	460.0	2.53	89	391	276	97	43
DF		36		85	146	.535	3.78	2.14	91.3	482.5	5.57	195	1,033	607	213	113
DF		37		85	143	.507	3.78	2.03	94.6	493.8	5.47	192	1,001	596	209	109
DF		Totals		84	101	18.356	54.86	46.90	49.0	217.8	65.47	2,297	10,213	7,137	2,504	1,113
WH		10		83	40	9.524	5.19	9.52	7.7	30.0	2.34	73	286	255	80	31
WH		11		77	43	7.871	5.19	7.87	12.0	40.0	3.04	95	315	331	103	34
WH		12		86	49	3.307	2.60	3.31	14.3	30.0	1.52	47	99	166	52	11
WH		13		81	66	5.636	5.19	8.45	16.3	46.7	4.41	138	395	481	150	43
WH		15		78	45	2.117	2.60	2.12	23.9	40.0	1.62	51	85	176	55	9
WH		16		88	63	1.860	2.60	1.86	28.4	120.0	1.69	53	223	184	58	24
WH		17		80	88	1.648	2.60	3.30	28.1	90.0	2.95	93	297	321	101	32
WH		19		81	69	1.319	2.60	2.64	27.6	95.0	2.33	73	251	254	79	27
WH		Totals		81	51	33.283	28.57	39.07	15.9	49.9	19.89	622	1,949	2,168	677	212
WL		18		86	83	.647	1.14	1.29	29.9	100.0	1.23	39	129	134	42	14
WL		19		86	109	.580	1.14	1.16	40.8	155.0	1.52	47	180	165	52	20
WL		25		89	125	.671	2.29	2.01	55.9	265.0	3.60	112	533	393	123	58
WL		26		89	109	.310	1.14	.93	53.3	230.0	1.59	50	214	173	54	23
WL		Totals		87	106	2.208	5.71	5.40	46.0	195.7	7.94	248	1,056	865	270	115
BL		25		70	73	.335	1.14	.67	49.6	135.0	.88	33	91	96	36	10

FI TSTNDSUM

Stand Table Summary

Project **EFOLEY**

T02N R09W S10 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	10	832	0100	109.00	35	103

Date: 11/16/201
Time: 9:02:13AM

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.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
BL		Totals	70	73	.335	1.14	.67	49.6	135.0	0.88	33	91	96	36	10
RC		15	80	29	2.794	3.43	2.79	16.4	30.0	1.07	46	84	117	50	9
RC		Totals	80	29	2.794	3.43	2.79	16.4	30.0	1.07	46	84	117	50	9
SS		16	65	17	.819	1.14	.82	13.7	20.0	.29	11	16	32	12	2
SS		Totals	65	17	.819	1.14	.82	13.7	20.0	0.29	11	16	32	12	2
Totals			80	71	157.809	217.14	260.72	25.6	92.5	189.26	6665	24,115	20,629	7,265	2,629

FI TLOGSTVB

Log Stock Table - MBF

Project: EFOLEY

T02N R09W S10 T0100

T02N R09W S10 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	10	832	0100	109.00	35	103

Page 1
Date 11/16/2018
Time 9:48:18AM

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		CO	3	32	18		18	1.6					18							
RA		CO	4	21	5		5	.4			5									
RA		CO	4	40	18		18	1.6			18									
RA		H	4	22	12		12	1.1				12								
RA		H	4	23	9		9	.8			9									
RA		H	2	24	13		13	1.1						13						
RA		H	2	40	87		87	7.5						87						
RA		H	3	12	11		11	.9					11							
RA		H	3	24	14		14	1.2					14							
RA		H	3	29	17		17	1.5					17							
RA		H	3	32	142		142	12.2					122	20						
RA		H	3	40	205		205	17.6					205							
RA		H	4	14	11		11	.9			11									
RA		H	4	15	14		14	1.2			14									
RA		H	4	16	29		29	2.5			29									
RA		H	4	18	8		8	.7			8									
RA		H	4	19	16		16	1.3			16									
RA		H	4	20	24		24	2.0			9	15								
RA		H	4	21	14		14	1.2			14									
RA		H	4	22	26		26	2.2			26									
RA		H	4	23	15		15	1.3			15									
RA		H	4	24	23		23	2.0			23									
RA		H	4	25	4		4	.4			4									
RA		H	4	27	9		9	.8			9									
RA		H	4	28	3		3	.2			3									
RA		H	4	31	21		21	1.8			21									
RA		H	4	32	188	4.9	178	15.3			13	165								
RA		H	4	34	18		18	1.6			18									
RA		H	4	35	14		14	1.2			14									
RA		H	4	40	189	1.0	187	16.1			59	128								
RA		Totals			1,178		1,167	44.4			339	320	388	120						
DF		CO	2	22	16	8.0	15	1.4								15				
DF		CO	2	40	853	1.3	842	75.7						42	89	311	267	133		
DF		CO	3	20	15		15	1.3					15							
DF		CO	3	21	3		3	.3		3										
DF		CO	3	22	5		5	.4		1				4						
DF		CO	3	24	14		14	1.3		1				9	5					
DF		CO	3	26	2		2	.2		2										
DF		CO	3	32	15		15	1.3					15							
DF		CO	3	33	3		3	.3				3								
DF		CO	3	35	2		2	.2			2									
DF		CO	3	39	3		3	.3			3									
DF		CO	3	40	148	.9	146	13.1			9	28	63	29		18				
DF		CO	4	15	1		1	.1		1										
DF		CO	4	16	1		1	.1		1										
DF		CO	4	18	3		3	.3		2	1									
DF		CO	4	19	1		1	.1			1									
DF		CO	4	22	18		18	1.6		7		11								
DF		CO	4	24	5		5	.5		5										

FI TLOGSTVB

Log Stock Table - MBF

Project: EFOLEY

T02N R09W S10 T0100

T02N R09W S10 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02N	09W	10	832	0100	109.00	35	103

Page 2
Date 11/16/2018
Time 9:48:18AM

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		CO	4	25	3		3	.2		3										
DF		CO	4	26	4		4	.4		4										
DF		CO	4	27	2		2	.2			2									
DF		CO	4	30	2		2	.2		2										
DF		CO	4	34	7		7	.6		7										
DF		Totals			1,127	1.2	1,113	42.3		39	18	42	93	83	93	343	267	133		
WH		CO	2	32	23		23	10.8						23						
WH		CO	3	32	24		24	11.5					24							
WH		CO	3	40	55		55	25.7				28	27							
WH		CO	4	15	9		9	4.0			9									
WH		CO	4	16	6	50.0	3	1.4		3										
WH		CO	4	24	4		4	2.0		4										
WH		CO	4	26	16		16	7.3		16										
WH		CO	4	27	16		16	7.3		16										
WH		CO	4	28	5		5	2.5		5										
WH		CO	4	35	9		9	4.3		9										
WH		CO	4	36	14	25.0	11	5.1		11										
WH		CO	4	37	12		12	5.8		12										
WH		CO	4	40	26		26	12.1			26									
WH		Totals			219	3.0	212	8.1		76	34	28	51	23						
WL		CO	2	40	82		82	71.0						22		59				
WL		CO	3	40	29	2.4	29	25.0			4		17	7						
WL		CO	4	12	0		0	.3			0									
WL		CO	4	19	1		1	.6			1									
WL		CO	4	27	2		2	1.8		2										
WL		CO	4	29	1		1	1.3			1									
WL		Totals			116		115	4.4		2	7		17	30		59				
BL		H	2	32	8		8	85.2							8					
BL		H	4	18	1		1	14.8				1								
BL		Totals			10		10	.4				1			8					
RC		CO	4	24	9		9	100.0		9										
RC		Totals			9		9	.3		9										
SS		CO	4	16	2		2	100.0		2										
SS		Totals			2		2	.1		2										
Total All Species					2,661	1.2	2,629	100.0		129	399	392	549	256	102	402	267	133		

"STEWARDSHIP IN FORESTRY"

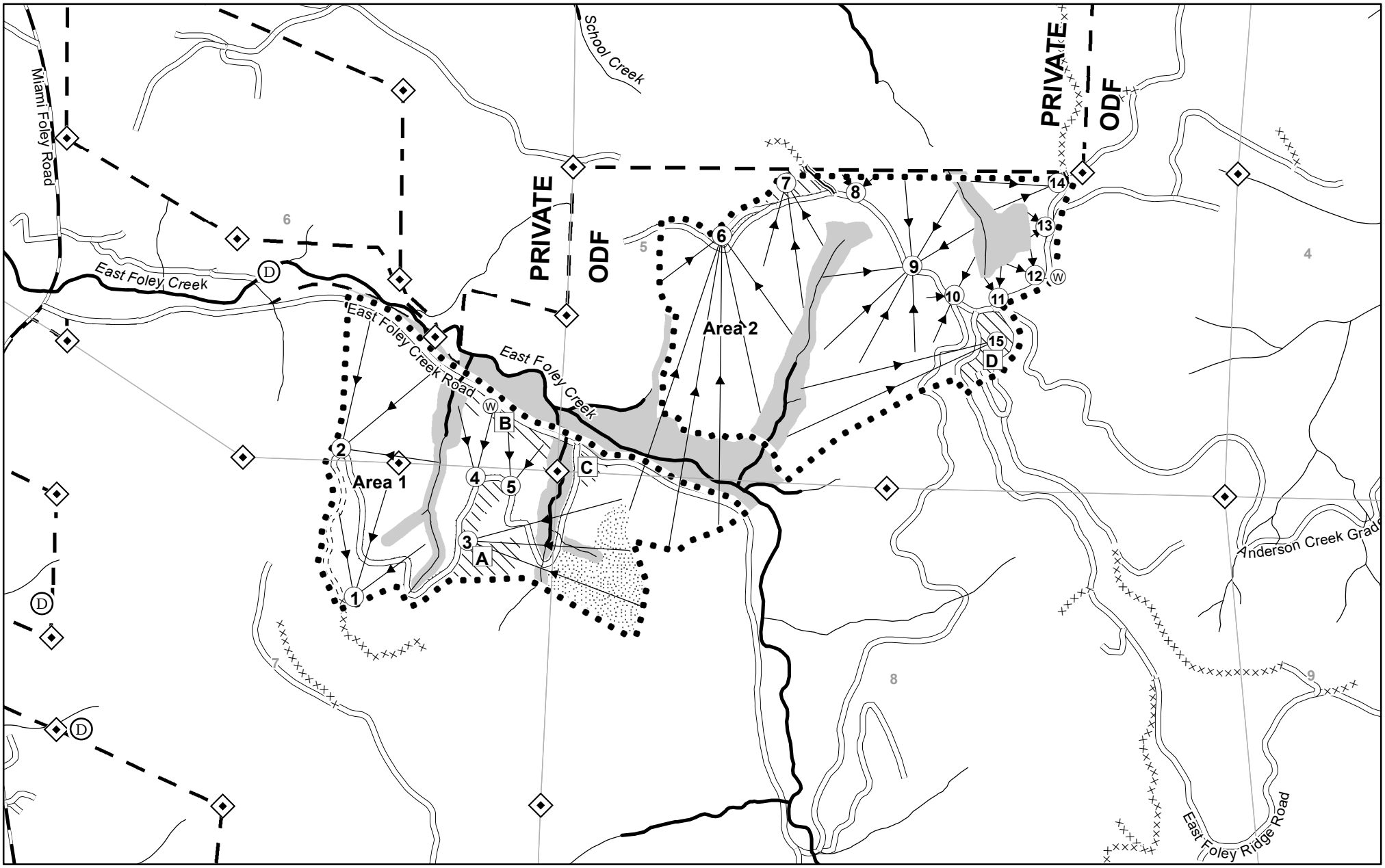
East Foley

TL-341-2019-W00763-01

Volume Summary

Area 1-Modified Clearcut				
		75	acres	
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Western hemlock	30	2225	1%	2202
Douglas-fir	7	500	1%	495
Red Alder	0	37	2%	36
TOTAL	37	2761		2733

Area 2-Modified Clearcut				
		97	acres	
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Western hemlock	23	2274	1%	2251
Red Alder	8	782	2%	767
Douglas-fir	3	331	1%	328
Sitka Spruce	1	51	1%	50



Rock source
Stock pile
Waste area
Bridge
Gate
Survey corner
Domestic water supply intake
Truck turn-around
Helicopter landing zone
Cultural site

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

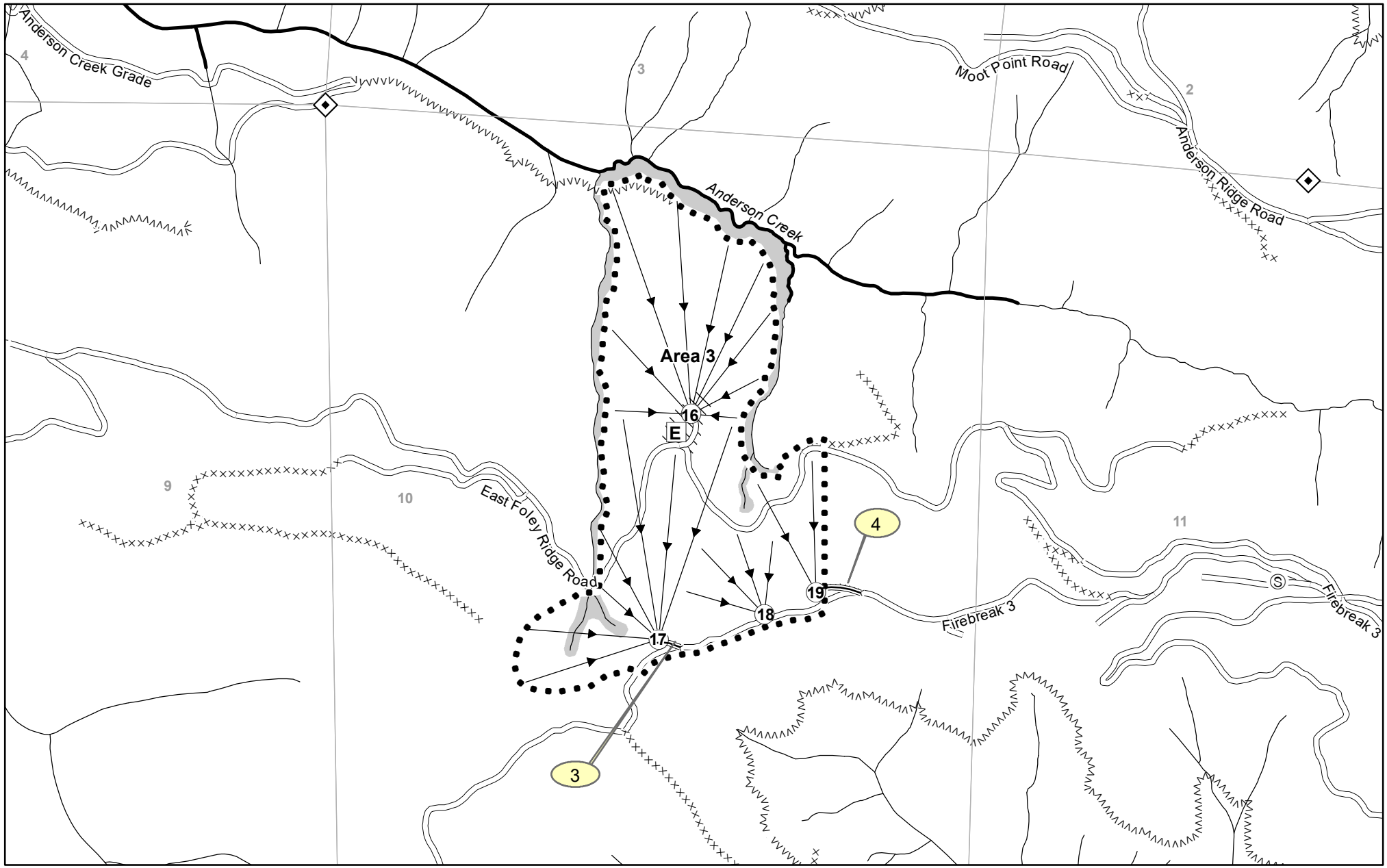
LOGGING PLAN
Timber Sale Contract No.
TL-341-2019-W00763-01
EAST FOLEY
Portions of Sections 5, 6, 7, 8, and 10
T2N, R9W, W.M.,
Tillamook County, Oregon

N

1,000 0 1,000 Feet

Area	Type of Operation	Acres Gross	Net
1	Modified Clearcut	106	75
2	Modified Clearcut	126	97
3	Modified Clearcut	128	109
Total		360	281

Tillamook District GIS
9/10/2018
This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.



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