



Timber Sale Appraisal
Tone Deaf
Sale AT-341-2017-03-

District: Astoria

Date: December 02, 2016

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,630,868.73	\$347,137.45	\$2,978,006.18
		Project Work:	(\$61,078.00)
		Advertised Value:	\$2,916,928.18



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District: Astoria

Date: December 02, 2016

Timber Description

Location: Portions of Sections 11, 12, 13 and 14, T6N, R7W, W.M., Clatsop County, Oregon.

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	29	0	97
Western Hemlock / Fir	19	0	97
Red Cedar	16	0	97
Alder (Red)	16	0	96

Volume by Grade	2S	3S	4S	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	5,409	502	42	0	0	0	0	5,953
Western Hemlock / Fir	475	178	40	0	0	0	0	693
Red Cedar	11	1	12	0	0	0	0	24
Alder (Red)	0	0	0	122	265	316	232	935
Total	5,895	681	94	122	265	316	232	7,605

Comments: Pond Values Used: Local pond values November, 2016.

Expected Log Markets: Mist, Clatskanie, Tillamook, Forest Grove, Longview (WA), Chehalis (WA), Elma (WA), Warrenton and Garibaldi.

SCALING COST ALLOWANCE = \$5.00/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

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

Slash and Landing Piling (includes move-in and piling materials) = \$20,298

Line Pull in Areas 1 & 3 (5 Acres): \$20/MBF x 255 MBF = \$5,100

TOTAL Other Costs (with Profit & Risk to be added) = \$25,398

Other Costs (No Profit & Risk added):

Waterbar and Block Unsurfaced Spurs w/C315 (3 hrs x \$101) = \$303

Machine Washing for Invasive Weed Compliance = \$2,000

TOTAL Other Costs (No Profit & Risk added) = \$2,303

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary sheet)

TOTAL Road Maintenance: \$24,455/7,605 MBF = \$3.22/MBF



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Logging Conditions

Combination#: 1	Douglas - Fir	62.00%
	Western Hemlock / Fir	62.00%
	Red Cedar	62.00%
	Alder (Red)	62.00%
Logging System:	Shovel	Process: Manual Falling/Delimbing
yarding distance:	Medium (800 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	12	bd. ft / load: 4500
cost / mbf:	\$72.92	
machines:	Shovel Logger	
Combination#: 2	Douglas - Fir	38.00%
	Western Hemlock / Fir	38.00%
	Red Cedar	38.00%
	Alder (Red)	38.00%
Logging System:	Cable: Medium Tower >40 - <70	Process: Manual Falling/Delimbing
yarding distance:	Medium (800 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	9	bd. ft / load: 4600
cost / mbf:	\$159.42	
machines:	Log Loader (A) Tower Yarder (Medium)	



"STEWARDSHIP IN FORESTRY"

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Logging Costs

Operating Seasons: 2.00	Profit Risk: 12%
Project Costs: \$61,078.00	Other Costs (P/R): \$25,398.00
Slash Disposal: \$0.00	Other Costs: \$2,303.00

Miles of Road

Road Maintenance: \$3.22

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	5.0
Western Hemlock / Fir	\$0.00	4.0	4.5
Red Cedar	\$0.00	1.0	4.2
Alder (Red)	\$0.00	2.0	3.0



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
Douglas - Fir									
\$105.79	\$3.32	\$1.15	\$80.34	\$3.34	\$23.27	\$0.00	\$7.00	\$0.30	\$224.51
Western Hemlock / Fir									
\$105.79	\$3.32	\$1.15	\$44.63	\$3.34	\$18.99	\$0.00	\$7.00	\$0.30	\$184.52
Red Cedar									
\$105.79	\$3.32	\$1.15	\$191.28	\$3.34	\$36.59	\$0.00	\$7.00	\$0.30	\$348.77
Alder (Red)									
\$105.79	\$3.35	\$1.15	\$135.20	\$3.34	\$29.86	\$0.00	\$7.00	\$0.30	\$285.99

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$627.63	\$403.12	\$0.00
Western Hemlock / Fir	\$0.00	\$486.33	\$301.81	\$0.00
Red Cedar	\$0.00	\$1,262.98	\$914.21	\$0.00
Alder (Red)	\$0.00	\$657.26	\$371.27	\$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
Red Cedar	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,953	\$403.12	\$2,399,773.36
Western Hemlock / Fir	693	\$301.81	\$209,154.33
Red Cedar	24	\$914.21	\$21,941.04
Alder (Red)	935	\$371.27	\$347,137.45

Gross Timber Sale Value

Recovery: \$2,978,006.18

Prepared By: Andrew Arvin

Phone: 503-325-5451

Final Road Maintenance Cost Summary

Sale: Tone Deaf **MBF:** 7,605
Date: 30-Aug-16 **\$/MBF:** \$2.58
By: J. Choate *FL*

Type	Equipment/Rationale	Move In	Times	Hours	Rate	Cost
Progressive Operations 1st Entry	Grader 14G	\$778	1	8	\$100	\$1,578
Progressive Operations 2nd Entry	Grader 14G Dump Truck 12CY FE Loader C966	\$778 \$163 \$778	1 1 1	16 10 4	\$100 \$79 \$83	\$2,378 \$953 \$1,110
Final Haul Maintenance Haul Route	Grader 14G Dump Truck 12CY Vibratory Roller Water Truck 2,500 gallon FE Loader C966 Labor	\$778 \$163 \$778 \$190 \$778	1 2 1 1 1	35 10 35 20 10	\$100 \$79 \$77 \$89 \$83 \$40	\$4,278 \$1,906 \$3,473 \$1,970 \$1,608 \$400
Total						\$19,654

Progressive Ops. 1st Entry	Production Rates	Miles/day	Distance(miles)	Days
	Grader	2.5	2.5	1.0

Progressive Ops. 2nd Entry	Production Rates	Miles/day	Distance(miles)	Days
	Grader	2.5	2.5	1.0

Final Road Maintenance	Production Rates	Miles/day	Distance(miles)	Days
	Grader	1.5	5.0	3.3
	Vibratory Roller	1.5	5.0	3.3

Sale Number: 341-17-03
Sale Name: Tone Deaf
Date: 08/30/2016

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre
Doug-fir	A	1.0	3.0
Hemlock/Fir	B	1.5	4.5
Hemlock/Spruce	C	2.0	6.0
Hemlock	D	2.0	6.0
Conifer/Hardwood	E	1.5	4.5
Whole Tree Yarding	F	0.5	0.5

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area
1	MC	A	11.0	11	\$129.00	\$1,419.00
2	MC	A	35.0	35	\$129.00	\$4,515.00
3	MC	A	43.0	43	\$129.00	\$5,547.00
In-unit Piling						Sub Total = \$11,481.00
Sale Area	Number of Landings to be Piled	Cost/Landing Pile	Total Cost/Area	Number of In- Unit Piles	Material Cost/Pile	Total Cost/Area
1	4	\$516.00	\$2,064.00	33	\$5.00	\$165.00
2	3	\$516.00	\$1,548.00	105	\$5.00	\$525.00
3	5	\$516.00	\$2,580.00	129	\$5.00	\$645.00
*Cost includes separating firewood					Materials	Sub Total = \$1,335.00
					Landing Piling	Sub Total = \$6,192.00
Move-In Allowance	Number of Move-In's	Total Move-In Allowance			Move-In	Sub Total = \$1,290.00
\$1,290.00	1	\$1,290.00				
Grand Total =						\$20,298.00

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Tone Deaf

ROAD CONSTRUCTION:

Project No. 1	Road segment	Length/Sta	Cost
	1A - 1B, 1C, 2A	13.75	\$14,328
	3A - 3B, 3C - 3D, 3E - 3F	29.70	\$21,062
	TOTALS	43.45	\$35,390

ROAD IMPROVEMENT:

Project No. 2	Road segment	Length/Sta	Cost
	I1 - I2, I3 - I4, I5 - I6	137.00	\$9,120
	TOTALS	137.00	\$9,120

SPECIAL PROJECTS:

Project No. 3	Description	Cost
	Culvert Vacating (V1, 3A to 3B)	\$660
	Project Road Maintenance	\$7,243
	TOTAL	\$7,903

MOVE IN:

Equipment	Cost
Dozer (D8)	\$1,406.00
Dozer (D6)	\$778.00
Excavator (C330)	\$1,406.00
Excavator (C315)	\$805.00
Skidder (C518)	\$717.00
Dump Trucks (12cy x 2)	\$326.00
Dump Trucks (20cy x 2)	\$382.00
Front End Loader (C966)	\$778.00
Backhoe (C580)	\$321.00
Grader (14G)	\$778.00
Vibratory Roller	\$778.00
Water Truck (2,500 gallon)	\$190.00
TOTAL	\$8,665.00

GRAND TOTAL \$61,078

Compiled By: John Choate FL

Date: 09/02/2016

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Tone Deaf NEW CONSTRUCTION: 43.45 STATIONS 0.82 MILES
ROAD: 1A-1B (13.75), 1C, 2A, 2B, 3A-3B (26.50), 3C-3D (1.70), 3E-3F (1.50) IMPROVEMENT: STATIONS 0.00 MILES

POINTS:

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost
Scatter Outside of R/W (3A - 3B, 3E - 3F, Dirt)	2.50	x	\$ 1,337	=	\$3,342.50
Scatter Outside of R/W (1A - 1B, 3C-3D)	1.30	x	\$ 1,337	=	\$1,738.10
Scatter Outside of R/W (1C)	0.25	x	\$ 1,337	=	\$334.25

SUB TOTAL FOR CLEARING & GRUBBING

\$5,415

EXCAVATION

	Material	Cy/amount	x	Rate	=	Cost
1A - 1B	Balanced Construction	\$/STA 9.75	x	\$122.00	=	\$1,189.50
	Drift Earthwork up to 200'	\$/STA 4.00	x	\$190.00	=	\$760.00
	Landing Construction 1A-1B (Pt. 1B)	\$/LDG 1.00	x	\$389.00	=	\$389.00
	Common Drift (>50% Slopes)	\$/CY 1,100.00	x	\$2.10	=	\$2,310.00
	Embankment Compaction	\$/CY 1,100.00	x	\$0.70	=	\$770.00
1C	Landing Construction (1C)	\$/LDG 1.00	x	\$389.00	=	\$389.00
2A	Landing Construction (Pt. 2A)	\$/LDG 1.00	x	\$389.00	=	\$389.00
2B	Landing Construction (Pt. 2B)	\$/LDG 1.00	x	\$389.00	=	\$389.00
3A - 3B	Balanced Construction	\$/STA 26.50	x	\$122.00	=	\$3,233.00
	Landing Construction (Pt. 3B)	\$/LDG 1.00	x	\$389.00	=	\$389.00
	Cutslope Rounding (Sta. 5+50 - 8+50)	\$/STA 3.00	x	\$43.00	=	\$129.00
	Embankment Compaction	\$/CY 1,700.00	x	\$0.70	=	\$1,190.00
	Common Drift (>50% Slopes)	\$/CY 1,700.00	x	\$2.10	=	\$3,570.00
3C-3D	Balanced Construction	\$/STA 1.70	x	\$122.00	=	\$207.40
	Landing Construction (Pt. 3D)	\$/LDG 1.00	x	\$389.00	=	\$389.00
3E-3F	Balanced Construction	\$/STA 1.50	x	\$122.00	=	\$183.00
	Landing Construction (Pt. 3F)	\$/LDG 1.00	x	\$389.00	=	\$389.00

\$5,418.50

\$8,511.00

\$596.40

\$572.00

\$16,265

SUB TOTAL FOR EXCAVATION

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
1A - 1B (0+00)	18" CPP	30	\$19.53	\$585.90					\$0.00
1A - 1B (5+00)	18" CPP	30	\$19.53	\$585.90					\$0.00
3A - 3B (3+80)	15" CPP	30	\$15.80	\$474.00					\$0.00
3A - 3B (4+80)	15" CPP	30	\$15.80	\$474.00					\$0.00
				\$0.00					\$0.00
				\$0.00					\$0.00
				\$0.00					\$0.00
				\$0.00					\$0.00
				\$0.00					\$0.00

Other/miscellaneous:

Culvert stakes & markers:

Description	Quantity	Rate	Cost
	2	\$20.00	\$40.00

\$2,160

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION

Subtotal of Clearing, Exc., Culv.

\$23,840

SURFACING				Subgrade prep:		Description	Stations/ amount	x	Rate/ sta/amt	Cost	
						Grade, Shape and Ditch 16' (1A to 1B, 3A to 3B Sta 0+00 to 8+50, and 3C to 3D)	23.95	x	\$24.83	\$595	
						Grade, Shape and Ditch 14' Outsloped (3A to 3B Sta 8+50 to 26+50, 3E to 3F)	19.50	x	\$18.35	\$358	
						Subgrade Compaction	19.45	x	\$20.19	\$393	
ESTIMATED VALUES											
ROAD SEGMENT 1A to 1B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	1A to 1B		0+00 to 13+75					
				Volume (CY) per	Number of						
Base Rock	4"-0" Crushed	0+00 - 13+75	8	station	50	stations	14.00	700	\$4.19	\$2,933	
Turnarounds	4"-0" Crushed	11+25	8	TA	22	TA's	1	22	\$4.19	\$92	
Turnouts	4"-0" Crushed	4+50, 9+00	8	TO	44	TO's	2	88	\$4.19	\$369	
Landings	6"-0" pit-run	23+65	N/A	landing	88	landings	1	88	\$3.65	\$321	
Curve Widening	4"-0" Crushed	10+00 - 11+25	8	curve	33	curves	1	33	\$4.19	\$138	
Culvert Bedding/Backfill	3/4"-0" Crushed	0+00	N/A	culvert	33	culverts	1	33	\$4.19	\$138	
Junction	3/4"-0" Crushed	0+00	3	junction	11	junctions	1	11	\$4.19	\$46	
Total Rock for Road Segment				1A to 1B				975			\$4,038
ROAD SEGMENT 1C				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	1C		N/A					
				Volume (CY) per	Number of						
Landings	6"-0" pit-run	Pt. 1C	N/A	landing	88	landings	1	88	\$3.65	\$321	
Surface repair	3/4"-0" Crushed	N/A	3	station	19	stations	2.00	38	\$4.19	\$159	
Total Rock for Road Segment				1C				126			\$480
ROAD SEGMENT 2A				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A		N/A					
				Volume (CY) per	Number of						
Landings	6"-0" pit-run	N/A	N/A	landing	88	landings	1	88	\$3.65	\$321	
Total Rock for Road Segment				2A				88			\$321
ROAD SEGMENT 3A to 3B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	3A to 3B		0+00 to 4+00					
				Volume (CY) per	Number of						
Base Rock	4"-0" Crushed	0+00 - 4+00	8	station	50	stations	4	200	\$4.19	\$838	
Turnouts	4"-0" Crushed	2+20	8	TO	44	TO's	1	44	\$4.19	\$184	
Junction	3/4"-0" Crushed	0+00	3	junction	11	junctions	1	11	\$4.19	\$46	
Total Rock for Road Segment				3A to 3B				255			\$1,068
ROAD SEGMENT 3A to 3B (Unsurfaced Subgrade Reinforcement)				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	3A to 3B		4+00 to 8+50					
				Volume (CY) per	Number of						
Subgrade Reinforcement	6"-0" pit-run	3+50 to 8+00	10	station	63	stations	4.50	284	\$3.29	\$933	
Traction Rock	3/4"-0" Crushed	3+50 to 8+00	3	station	25	stations	4.50	113	\$4.19	\$471	
Junction	3/4"-0" Crushed	0+00	3	Junction	11	Junction	1	11	\$4.19	\$46	
Total Rock for Road Segment				3A to 3B				407			\$1,450
ROAD SEGMENT 3C to 3D				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock Rock	3C to 3D		0+00 to 1+70					
				Volume (CY) per	Number of						
Base Rock	4"-0" Crushed	0+00 - 1+70	8	station	50	stations	2	85	\$4.19	\$356	
Landings	6"-0" Pit-run	1+70	8	landing	88	landings	1	88	\$3.65	\$321	
Total Rock for Road Segment				3C to 3D				173			\$677
Processing:				Description				No.sta	Rate/sta	Cost	
				Pit-Run rock compaction (D6)				4.50	\$31.54	\$141.93	
				Water, Process and Compact (Crushed Rock)				19.70	\$56.48	\$1,112.66	
				6"-0"pr (Trailover)	6"-0"pr (Wildgoose)	4"-0" crushed	3/4"-0" crushed	Total			
SUB TOTAL FOR SURFACING				284	352	1,172	217	2,024	2,024	\$10,635	
SPECIAL PROJECTS											
				Description			Cy/Amount	Rate	Cost		
				pit-run development			352	\$2.60	\$915.20		
SUB TOTAL FOR SPECIAL PROJECTS											
GRAND TOTAL										\$915	
										Subtotal of Surfacing & Spec. Proj. \$11,550	
										Subtotal of Clearing, Exc., Culv. \$23,840	
										\$35,390	

Compiled By: John Choate

Date: 09/02/2016

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Tone Deaf
ROAD: I1 to I2 (74.8), I3 to I4 (47.2)
POINTS: I5 to I6 (15.0)

NEW CONSTRUCTION: _____ STATIONS _____ 0.00 MILES
IMPROVEMENT: 137.00 STATIONS _____ 2.59 MILES

CLEARING & GRUBBING						
Method	Acres/amount	x	Rate	=	Cost	
I1 to I2						
10+00 - 25+50 Daylighting (C330)hrs.	10.0	x	\$155.00	=	\$1,550.00	
(Hand Fallers)days	2.0	x	\$380.00	=	\$760.00	
SUB TOTAL FOR CLEARING & GRUBBING					\$2,310	

EXCAVATION						
Material	Cy/amount	x	Rate	=	Cost	
I1 to I2						
28+50 Install Rock Ditch Filters (C315)hrs.	1.0	x	\$101.00	=	\$101.00	
30+00 Reestablish Ditch Out						
(C315 hrs.)	1.0	x	\$101.00	=	\$101.00	
(D.Truck hrs.)	1.0	x	\$79.00	=	\$79.00	
45+80 - 49+30 Ditchline Clean Out						
(C315 hrs.)	1.0	x	\$101.00	=	\$101.00	
(D.Truck hrs.)	1.0	x	\$79.00	=	\$79.00	
I5 to I6						
6+70 Open Culvert Outlet /						
Reestablish Inlet Catchbasin						
(C315 hrs.)	2.0	x	\$101.00	=	\$202.00	
SUB TOTAL FOR EXCAVATION					\$663	

CULVERT MATERIALS AND INSTALLATION									
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:				
	Culvert Markers	4	\$20.00	\$80.00
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION				
			Subtotal of Clearing, Exc., Culv.	\$3,053

SURFACING		Description		Stations/ amount	Rate/ sta/amt	Cost
Subgrade prep:						
		Scatter Ditch Waste Material (I5 to I6)		15.00	x	\$12.41 \$188.15
		Sod Removal / Subgrade Preparation (I5 to I6)		5.00	x	\$100.00 \$500.00
		Spot Grading (I1 to I2, I3 to I4)		12.00	x	\$100.00 \$1,200.00
ROAD SEGMENT I1 to I2		POINT TO POINT		Sta. to Sta.		
		I1 to I2		0+00 to 74+80		
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	TOTAL VOLUME (CY)
Subgrade Leveling	3/4"-0" crushed	0+00 to 74+80	N/A	load 11	loads 10	110
Turnaround Improvement	3/4"-0" crushed	67+00	N/A	load 11	loads 2	22
Rock Ditch Filter	6"-4" pit-run	28+50	N/A	filter 11	filter 1	11
Total Rock for Road Segment:		I1 to I2				143
ROAD SEGMENT I3 to I4		POINT TO POINT		Sta. to Sta.		
		I3 to I4		0+00 to 47+20		
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	TOTAL VOLUME (CY)
Subgrade Leveling	3/4"-0" crushed	0+00 to 47+20	N/A	load 11	loads 6	66
Total Rock for Road Segment:		I3 to I4				66
ROAD SEGMENT I5 to I6		POINT TO POINT		Sta. to Sta.		
		I5 to I6		0+00 to 15+00		
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	TOTAL VOLUME (CY)
Surfacing	4"-0" crushed	0+00 to 15+00	6	station 38	stations 15.0	570
Junction	3/4"-0" crushed	0+00	N/A	load 11	loads 1	11
Turnaround Improvement	4"-0" crushed	5+60	N/A	load 11	loads 3	33
Landing Improvement	6"-0" pit-run	15+00	N/A	load 11	loads 8	88
Total Rock for Road Segment:		I5 to I6				702
Processing:		Description		No.sta	Rate/sta	Cost
		Water, Process & Compact: (I5 to I6)		15.00	\$56.48	\$847
SUB TOTAL FOR SURFACING		6"-0"pr (Wildgoose)	6"-4"pr (Wildgoose)	4"-0" crushed	3/4"-0" crushed	Total
		88	11	603	209	911
SPECIAL PROJECTS		Description		Cy/Amount	Rate	Cost
		pit-run development		99	\$2.60	\$257.40
SUB TOTAL FOR SPECIAL PROJECTS						\$257
				Subtotal of Surfacing & Spec. Proj.		\$6,067
				Subtotal of Clearing, Exc., Culv.		\$3,053
GRAND TOTAL						\$9,120
Compiled By:		Will Lawrence		Date:		04/27/2016

PIT RUN ROCK COST

SALE NAME:	Tone Deaf
PROJECT:	Project No. 1
QUARRY:	Trailover Quarry

MATERIAL: Pit Run

DATE: 09/02/2016
BY: John Choate

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks:
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$2.03	/cy
Load:	\$0.48	/cy
Spread:	\$0.78	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>4</u>
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 1,247

PIT RUN ROCK HAUL COSTS

284 cy @ \$3.29 /cy

CRUSHED ROCK COST

SALE NAME:	Tone Deaf
PROJECT:	Nos. 1 & 2
QUARRY:	Wild Goose Quarry & Stockpile

MATERIAL: Crushed

DATE: 09/02/2016
BY: John Choate

[illegible]

ROCK HAUL:

Truck type:	<u>D20</u>	No. trucks:	<u>2</u>
Delay min.:	<u>8</u>	Efficiency:	<u>85%</u>

Ave haul:	\$2.87	/cy
Load:	\$0.48	/cy
Spread:	\$0.84	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>2</u>
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 998

CRUSHED ROCK HAUL COSTS 2,201 cy @ \$4.19 /cy

PIT RUN ROCK COST

SALE NAME:	Tone Deaf
PROJECT:	Project Nos. 1 & 2
QUARRY:	Wild Goose Quarry & Stockpile

MATERIAL: Pit Run

DATE: 09/02/2016
BY: John Choate

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$2.38	/cy
Load:	\$0.48	/cy
Spread:	\$0.78	/cy

Truck type: D12 No. trucks: 2
 Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 1,201

PIT RUN ROCK HAUL COSTS

451 cy @ \$3.65 /cy

Tone Deaf

Project No. 3 - Culvert Vacating

Location/Description	C330 Excavator	Truck w/Trailer	Labor	Seeding (V1)	Straw Mulch (V1)	Total
V1, 3A to 3B		0 hrs	3 hrs	20 lb.	4 bales	
Sidecast Pullback	0 hrs					
Remove culverts (3)	2 hrs					
Walk equipment (1 Hour)	1 hrs					
Total	3 hrs	0 hr	3 hrs	20 lb	4 Bales	
Rate	\$155 /hr	\$99 /hr	\$40 /hr	\$1.60 /lb	\$10.73 /Bale	
Cost	\$465	\$0	\$120	\$32	\$43	\$660

Prepared by: John Choate

Date: 09/23/2016

Projects Road Maintenance Cost Summary

Sale: Tone Deaf
Date: 9/2/16
By: John Choate *FL*

Type	Equipment/Rationale			Hours	Rate	Cost
Final Project Haul Road Maintenance	Grader 14G			25	\$100	\$2,500
	Dump Truck 12CY			16	\$79	\$1,264
	FE Loader C966			8	\$83	\$664
	Vibratory Roller			25	\$77	\$1,925
	Water Truck 2,500 gallon			10	\$89	\$890
Total						\$7,243

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days	Hours
1.5	4.80	3.2	25.6
1.5	4.80	3.2	25.6

Wildgoose Quarry to Wildgoose to Trailover Ridge Road to Trailover Road to Music Creek to Sale Area 2 = 4.8 Miles

(Also includes Trailover Quarry Road)

Total Miles = 4.8

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**Tone Deaf
TIMBER CRUISE REPORT
FY 2017**

1. **Sale Area Location:** Areas 1, 2, and 3 are located in portions of Sections 11, 12, 13, and 14, T6N, R7W, W.M., Clatsop County, Oregon.

2. **Fund Distribution:** BOF 100%
Tax Code 8-01 (100%)

3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	Existing R/W	New R/W*	Stream Buffer	GTRA	Net Acres	Survey Method
1	Modified Clearcut	57	1	1	1	1	53	GIS
2	Modified Clearcut	37	1	0	0	1	35	GIS
3	Modified Clearcut	70	1	3	7	2	57	GIS
4	Right-of-Way	4	-	-	-	-	4	GIS
TOTALS		168	3	4	8	4	149	

4. **Cruisers and Cruise Dates:** Areas 1, 2, and 3, were cruised by John Choate, Ed Holloran, Andrew Arvin, and Bryce Rodgers on August 26 and 31, 2016.

5. Cruise Method and Computation:

Areas 1, 2, and 3 are Modified Clearcut units and were variable plot cruised using a 40 BAF. The plots are located on a 5.5 chain by 4 chain grid, with every third plot measured and graded. A total of 70 plots were sampled, with 25 measured and graded plots, and 45 count plots (In addition, minor species were measured on four count plots, resulting in 29 measure plots and 41 count plots).

All cruisers used Allegro² Data Collectors, and were downloaded to the Atterbury Super A.C.E. program in District for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

AREA	CRUISE	TRACT	TYPE	ACRES
1, 2, 3	TONEDEAF	AREA123	TAKE	145
4	TONEDEAF	AREA123	RW	4

6. Timber Description:

Areas 1, 2, and 3 are modified clearcut units, approximately 70 to 78 year-old, consisting of Douglas-fir, red alder and Western hemlock, and a minor amount of Western redcedar. The average Douglas-fir tree size to be harvested is 29 inches DBH, with an average height of 96 feet to a merchantable top (40% of DBH). The average Red alder tree size to be harvested is 16 inches DBH, with an average height of 46 feet to a merchantable top (40% of DBH). The average Western hemlock tree size to be harvested is 19 inches DBH, with an average height of 65 feet to a merchantable top (40% of DBH). The average volume (net) is approximately 51 MBF/acre.

Area 4 R/W is similar to the timber description mentioned above for Areas 1, 2, and 3. The average volume (net) is approximately 51 MBF/acre.

7. Statistical Analysis and Stand Summary: (See "Statistics" - Type Reports, attached)

Statistics for Stand B.F. volumes

Area	Estimated CV	Target SE%	Actual CV	Actual SE%
1, 2, and 3	55%	8%	44%	5.2%

8. Volumes by Species and Log Grade: (See "Species, Sort, Grade" - Project Report, attached).

Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

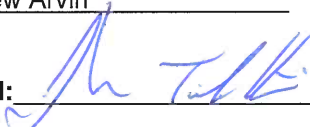
Conifer Species	DBH	Net Vol.	2 Saw	3 Saw	4 Saw	Camp Run	% D & B	% Sale
Douglas-fir	29"	5,953	5,409	502	42	0	1	78
W. hemlock/True-fir	19"	693	475	178	40	0	<1	9
Western redcedar	16"	24	11	1	12	0	<1	1

Hardwood Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
Red Alder	16"	935	316	265	122	232	<1	12

TOTAL NET VOLUME	7,605
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9. Approvals:

Prepared by: Andrew Arvin Date: 9/01/16

Unit Forester Approval:  Date: 10/3/2016

- 10. Attachments:**
- Cruise Designs and Map – 3 pages
 - Volume Report - 3 pages
 - Statistics Reports - 8 pages
 - Log Stock Tables - 3 pages
 - Stand Table Summary – 1 Page

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**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Tone Deaf **Area(s)** 1, 2 and 3

Harvest Type: MC

Approx. Cruise Acres: 148 **Estimated CV%** 55 **Net BF SE% Objective** 8 **Net BF**

Planned Sale Volume: 6.98 **MMBF Estimated Sale Area Value/Acre:** \$14,896

- A. Cruise Goals:** (a) Grade minimum 60 conifer and 15 hardwood trees:
(b) Sample X cruise plots; (c) Other goals X Determine log grades for sale value;
X Determine snag and leave tree species and sizes

B. Cruise Design:

- 1. Plot Cruises:** BAF 40 Full point
Cruise Line Direction(s) Area 1: 114°/294°
Area 2: 52°/232°
Area 3: 26°/206°
Cruise Line Spacing 4 chains
Cruise Plot Spacing 5.5 chains
Grade/Count Ratio 1:2

Grade all cedar and hardwoods. Record all snags as SN and record diameter & total height. If plot lands in buffer then offset at least ½ chain outside the buffer.

C. Tree Measurements:

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" or 40% of dob at 16' form point. Generally, use 7" outside bark for trees less than 18" dbh and 40% of dob @ FP for trees greater than 18" dbh.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; Hardwood form factors are a Standard 87.
- 5. Tree Segments:** Record log segments in "standard" 32" and 40' log lengths whenever possible. Do not record odd segments just to maximize grade. The maximum segment length is 40'. The minimum segment length is 12' for conifer and 8' for hardwoods. Minimum merchantable diameter for conifer is 8" dbh and 10" dbh for hardwoods. One foot of trim is assumed for each merchantable segment.

6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. Sort: Use code "1" (Domestic).
- C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull
Hardwoods: Alder and Maple Grades: 12" + = 1 Sawmill; 10"-12" = 2 Sawmill; 10"-8" = 3 Sawmill; and 8"-6" 4 Sawmill, or R = Camp Run; 0 = Cull.
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.
8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points. On "measure/grade" plots paint the tree diameter on each tree starting with the first tree right of the cruise line direction and continuing clockwise.
9. **Cruising Equipment:** Relaskop, Rangefinder, Biltmore Stick, Compass, Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging.
10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, cruise lines and plot locations, BAF or plot size, measure/count plot ratio, north arrow, and scale bar.

Cruise Design by: John Choate

Approved by: [Signature]

Date: 6/17/16

Tone Deaf - Area 1, 2, and 3 (MC)

70 Plots Total

Grade Plots: 25

Count Plots: 45

Area 1 AZ: 114/294

Area 2 AZ: 52/232

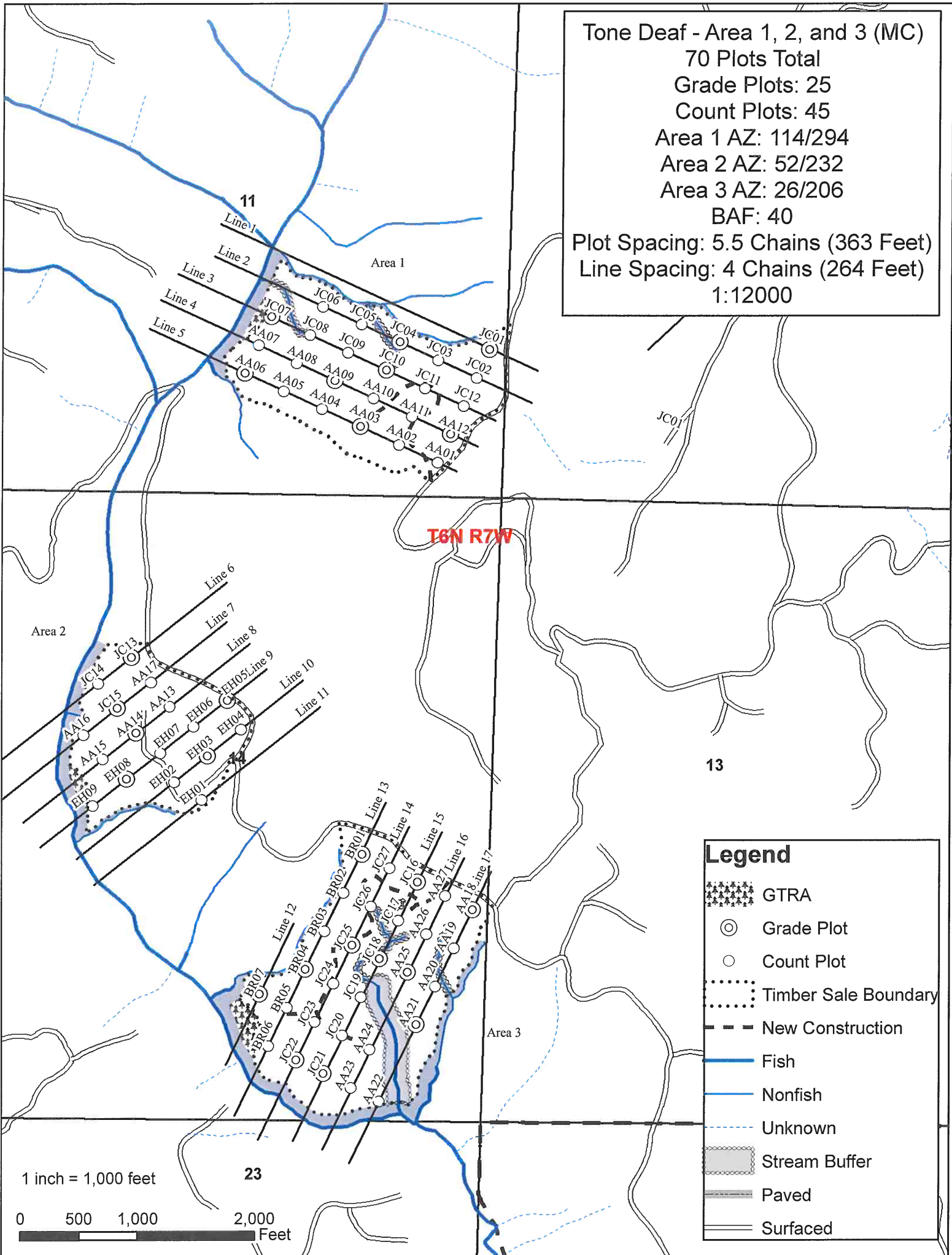
Area 3 AZ: 26/206

BAF: 40

Plot Spacing: 5.5 Chains (363 Feet)

Line Spacing: 4 Chains (264 Feet)

1:12000



1 inch = 1,000 feet

0 500 1,000 2,000 Feet

Legend

- GTRA
- Grade Plot
- Count Plot
- Timber Sale Boundary
- New Construction
- Fish
- Nonfish
- Unknown
- Stream Buffer
- Paved
- Surfaced

Species, Sort Grade - Board Foot Volumes (Project)

T06N R07W S14 TyRW 4.00
T06N R07W S14 TyTAKE 145.00

Project: **TONEDCAF**Acres **149.00**

Page **1**
Date **9/2/2016**
Time **11:46:01AM**

Spp	So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
			Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
							4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
D	DOCU														10	19		0.00	2.8	
D	DO2S	90	1.0	36,675	36,301	5,409		0	19	80	1	0	5	93	39	18	594	3.11	61.1	
D	DO3S	9	.9	3,396	3,367	502		78	22		10	8	32	50	32	9	106	1.06	31.8	
D	DO4S	1	1.7	289	285	42		100			70	30			19	7	33	0.63	8.5	
D Totals		78	1.0	40,360	39,953	5,953		8	19	73	2	1	8	89	34	15	383	2.39	104.3	
A	DOCU														14	18		0.00	1.0	
A	DO1S	33	.5	2,131	2,122	316			87	13		33		67	36	13	236	1.75	9.0	
A	DO2S	29	1.2	1,797	1,775	265		94	6		17		14	69	33	11	141	1.22	12.6	
A	DO3S	13		818	818	122		100			9		41	50	32	9	88	0.88	9.3	
A	DO4S	25		1,560	1,560	232		100			45	5	12	38	25	6	35	0.55	45.1	
A Totals		12	.5	6,306	6,274	935		65	31	4	17	13	12	58	28	8	81	0.90	77.0	
H	DOCU														12	14		0.00	1.4	
H	DO2S	68	.4	3,199	3,188	475		3	58	39	4	3	6	88	36	15	331	2.08	9.6	
H	DO3S	26	.5	1,198	1,191	178		92	8		1	3	36	61	36	9	105	0.87	11.3	
H	DO4S	6		269	269	40		5	95		37	47	16		22	6	30	0.57	8.9	
H Totals		9	.4	4,665	4,648	693		0	31	42	27	5	5	14	76	31	10	148	1.23	31.3
C	DO2S	46		74	74	11			100				100		40	13	240	2.48	.3	
C	DO3S	4		6	6	1		39	61				72	28	34	11	161	1.79	.0	
C	DO4S	50		78	78	12		100			100	0			17	8	31	0.80	2.5	
C Totals		0		159	159	24		51	49		49	0	3	48	19	9	56	1.20	2.9	
Totals			0.9	51,491	51,034	7,605.604		0	17	23	60	5	3	9	84	31	12	237	1.74	215.4

TC PSTATS				PROJECT STATISTICS					PAGE	1		
				PROJECT	TONEDEAF		DATE 10/3/2016					
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
06N	07	14	AREA123	00MC		149.00	70	494	1	W		
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			70	494	7.1							
CRUISE			29	199	6.9	16,113	1.2					
DBH COUNT												
REFOREST												
COUNT			41	273	6.7							
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			114	38.6	28.6	96	32.3	172.6	40,356	39,948	8,548	8,548
R ALDER			46	48.3	15.6	46	16.2	64.0	6,254	6,222	1,925	1,925
WHEMLOCK			28	15.5	18.9	65	7.0	30.3	4,665	4,648	1,197	1,197
SNAG			1	.8	36.0	30	1.0	5.7				
WR CEDAR			3	2.5	15.9	23	0.9	3.4	152	152	64	64
CEDLEAV			3	1.0	22.4	61	0.6	2.9	242	242	90	90
DOUGLEAV			3	.9	21.2	88	0.5	2.3	352	341	97	97
BL MAPLE			1	.5	20.0	50	0.3	1.1	63	63	19	19
TOTAL			199	108.1	21.9	66	60.4	282.3	52,084	51,617	11,940	11,940
CONFIDENCE LIMITS OF THE SAMPLE												
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR												
CL	68.1	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	10	15			
DOUG FIR		59.7	5.6	1,311	1,388	1,466						
R ALDER		68.0	10.0	157	175	192						
WHEMLOCK		69.7	13.4	378	436	495						
SNAG												
WR CEDAR		127.4	88.1	13	113	213						
CEDLEAV		27.0	18.7	201	247	293						
DOUGLEAV		17.7	12.3	325	370	415						
BL MAPLE												
TOTAL		93.7	6.6	848	909	969	351	88	39			
CL	68.1	COEFF		SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	10	15			
DOUG FIR		50.6	4.7	273	287	300						
R ALDER		59.9	8.8	49	54	58						
WHEMLOCK		60.6	11.7	96	108	121						
SNAG												
WR CEDAR		120.9	83.6	8	48	88						
CEDLEAV		39.7	27.4	69	95	121						
DOUGLEAV		14.9	10.3	94	105	116						
BL MAPLE												
TOTAL		79.7	5.6	185	196	207	254	63	28			
CL	68.1	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	10	15			
DOUG FIR		69.6	8.3	35	39	42						
R ALDER		138.3	16.5	40	48	56						
WHEMLOCK		201.8	24.1	12	15	19						
SNAG		523.4	62.5	0	1	1						
WR CEDAR		433.4	51.8	1	2	4						
CEDLEAV		418.6	50.0	1	1	2						
DOUGLEAV		504.3	60.2	0	1	1						

PROJECT STATISTICS									
TC PSTATS					PROJECT TONEDEAF				
					PAGE 2				
					DATE 10/3/2016				
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	07	14	AREA123	00MC	149.00	70	494	1	W
CL	68.1		COEFF		TREES/ACRE			# OF PLOTS REQ.	INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10
BL MAPLE			587.3	70.1	0	1	1		
TOTAL			47.9	5.7	102	108	114	91	23
CL	68.1		COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.	INF. POP.
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10
DOUG FIR			64.1	7.7	159	173	186		
R ALDER			138.5	16.5	53	64	75		
WHEMLOCK			199.1	23.8	23	30	37		
SNAG			523.4	62.5	2	6	9		
WR CEDAR			384.3	45.9	2	3	5		
CEDLEAV			434.4	51.9	1	3	4		
DOUGLEAV			506.1	60.4	1	2	4		
BL MAPLE			587.3	70.1	0	1	2		
TOTAL			31.0	3.7	272	282	293	38	10
CL	68.1		COEFF		NET BF/ACRE			# OF PLOTS REQ.	INF. POP.
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10
DOUG FIR			64.6	7.7	36,866	39,948	43,030		
R ALDER			146.1	17.4	5,136	6,222	7,307		
WHEMLOCK			208.3	24.9	3,492	4,648	5,804		
SNAG									
WR CEDAR			373.6	44.6	84	152	220		
CEDLEAV			433.3	51.7	117	242	368		
DOUGLEAV			492.0	58.8	141	341	542		
BL MAPLE			587.3	70.1	19	63	107		
TOTAL			43.8	5.2	48,915	51,617	54,319	77	19
CL	68.1		COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.	INF. POP.
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10
DOUG FIR			64.5	7.7	7,890	8,548	9,206		
R ALDER			144.4	17.2	1,593	1,925	2,257		
WHEMLOCK			205.9	24.6	903	1,197	1,492		
SNAG									
WR CEDAR			372.7	44.5	35	64	92		
CEDLEAV			443.9	53.0	42	90	138		
DOUGLEAV			496.1	59.2	39	97	154		
BL MAPLE			587.3	70.1	6	19	33		
TOTAL			38.6	4.6	11,389	11,940	12,491	60	15

TC PSTATS				PROJECT STATISTICS				PAGE 1			
				PROJECT	TONEDCAF	DATE		9/2/2016			
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	07	14	AREA123	RW	149.00	140	960	1	W		
06N	07W	14	AREA123	TAKE							
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL				140	960	6.9					
CRUISE				56	390	7.0	15,696	2.5			
DBH COUNT											
REFOREST											
COUNT				84	539	6.4					
BLANKS											
100 %											
STAND SUMMARY											
				SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET
				TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC
										CF/AC	CF/AC
DOUG FIR				231	38.7	28.6	96	32.3	172.6	40,360	39,953
R ALDER				94	48.7	15.7	46	16.5	65.1	6,306	6,274
WHEMLOCK				56	15.5	18.9	65	7.0	30.3	4,665	4,648
WR CEDAR				9	2.5	16.0	24	0.9	3.5	159	159
TOTAL				390	105.3	21.7	67	58.2	271.6	51,491	51,034
										11,755	11,755
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF						# OF TREES REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR				60.4	4.0	1,320	1,375	1,429			
R ALDER				67.5	7.0	161	173	185			
WHEMLOCK				69.1	9.2	396	436	477			
WR CEDAR				80.1	28.3	113	158	202			
TOTAL				92.5	4.7	879	922	966	342	85	38
CL	68.1	COEFF	SAMPLE TREES - CF						# OF TREES REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR				51.1	3.4	275	285	294			
R ALDER				59.5	6.1	50	53	57			
WHEMLOCK				60.0	8.0	100	108	117			
WR CEDAR				80.0	28.2	45	63	81			
TOTAL				78.8	4.0	191	198	206	248	62	28
CL	68.1	COEFF	TREES/ACRE						# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR				134.5	11.4	34	39	43			
R ALDER				208.9	17.6	40	49	57			
WHEMLOCK				292.6	24.7	12	15	19			
WR CEDAR				595.9	50.3	1	3	4			
TOTAL				118.1	10.0	95	105	116	557	139	62
CL	68.1	COEFF	BASAL AREA/ACRE						# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR				129.3	10.9	154	173	191			
R ALDER				208.3	17.6	54	65	77			
WHEMLOCK				289.2	24.4	23	30	38			
WR CEDAR				523.7	44.2	2	4	5			
TOTAL				105.8	8.9	247	272	296	447	112	50
CL	68.1	COEFF	NET BF/ACRE						# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR				129.9	11.0	35,571	39,953	44,334			
R ALDER				218.6	18.5	5,116	6,274	7,433			
WHEMLOCK				301.1	25.4	3,466	4,648	5,830			
WR CEDAR				498.7	42.1	92	159	226			

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT TONEDEAF							DATE	9/2/2016
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07	14	AREA123	RW	149.00	140	960	1	W	
06N	07W	14	AREA123	TAKE						
CL	68.1		COEFF		NET BF/ACRE		# OF PLOTS REQ.		INF. POP.	
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL			113.6	9.6	46,138	51,034	55,930	515	129	57
CL	68.1		COEFF		NET CUFT FT/ACRE		# OF PLOTS REQ.		INF. POP.	
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR			129.7	11.0	7,613	8,550	9,486			
R ALDER			216.5	18.3	1,586	1,941	2,296			
WHEMLOCK			298.0	25.2	896	1,197	1,498			
WR CEDAR			500.0	42.2	38	66	94			
TOTAL			110.1	9.3	10,662	11,755	12,847	484	121	54

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT TONEDEAF				DATE	9/2/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07W	14	AREA123	TAKE	145.00	70	476	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	70	476	6.8							
CRUISE	27	192	7.1	15,266	1.3					
DBH COUNT										
REFOREST										
COUNT	43	275	6.4							
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE		TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
TREES		/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	114	38.6	28.6	96	32.3	172.6	40,356	39,948	8,548	8,548
R ALDER	47	48.7	15.7	46	16.5	65.1	6,306	6,274	1,941	1,941
WHEMLOCK	28	15.5	18.9	65	7.0	30.3	4,665	4,648	1,197	1,197
WR CEDAR	3	2.5	15.9	23	0.9	3.4	152	152	64	64
TOTAL	192	105.3	21.7	67	58.2	271.4	51,479	51,023	11,750	11,750
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUG FIR	59.7	5.6	1,311	1,388	1,466					
R ALDER	67.9	9.9	156	173	191					
WHEMLOCK	69.7	13.4	378	436	495					
WR CEDAR	127.4	88.1	13	113	213					
TOTAL	92.0	6.6	870	932	994	338	85	38		
CL: 68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUG FIR	50.6	4.7	273	287	300					
R ALDER	59.8	8.7	49	53	58					
WHEMLOCK	60.6	11.7	96	108	121					
WR CEDAR	120.9	83.6	8	48	88					
TOTAL	78.7	5.7	189	200	211	247	62	27		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUG FIR	69.6	8.3	35	39	42					
R ALDER	135.7	16.2	41	49	57					
WHEMLOCK	201.8	24.1	12	15	19					
WR CEDAR	433.4	51.8	1	2	4					
TOTAL	51.3	6.1	99	105	112	105	26	12		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUG FIR	64.1	7.7	159	173	186					
R ALDER	135.2	16.1	55	65	76					
WHEMLOCK	199.1	23.8	23	30	37					
WR CEDAR	384.3	45.9	2	3	5					
TOTAL	34.2	4.1	260	271	283	47	12	5		
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUG FIR	64.6	7.7	36,866	39,948	43,030					
R ALDER	143.6	17.1	5,199	6,274	7,350					
WHEMLOCK	208.3	24.9	3,492	4,648	5,804					
WR CEDAR	373.6	44.6	84	152	220					
TOTAL	45.5	5.4	48,249	51,023	53,796	83	21	9		

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	TONEDEAF			DATE	9/2/2016
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	07W	14	AREA123	TAKE	145.00	70	476	1	W
CL: 68.1 %	COEFF		NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15
CL: 68.1 %	COEFF		NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15
DOUG FIR	64.5	7.7	7,890	8,548	9,206				
R ALDER	141.8	16.9	1,613	1,941	2,270				
WHEMLOCK	205.9	24.6	903	1,197	1,492				
WR CEDAR	372.7	44.5	35	64	92				
TOTAL	40.7	4.9	11,179	11,750	12,321		66	17	7

TC TSTATS				STATISTICS				PAGE 1			
				PROJECT		TONEDEAF		DATE 9/2/2016			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	07W	14	AREA123	RW	4.00	70	484	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL		70	484	6.9							
CRUISE		29	198	6.8	430	46.0					
DBH COUNT											
REFOREST											
COUNT		41	264	6.4							
BLANKS											
100 %											
STAND SUMMARY											
SAMPLE		TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES		/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
DOUG FIR		117	39.9	28.3	96	32.9	174.9	40,532	40,109	8,628	
R ALDER		47	48.7	15.7	46	16.5	65.1	6,306	6,274	1,941	
WHEMLOCK		28	15.5	18.9	65	7.0	30.3	4,665	4,648	1,197	
WR CEDAR		6	3.4	18.3	36	1.5	6.3	406	406	157	
TOTAL		198	107.6	21.7	67	59.4	276.6	51,909	51,438	11,925	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUG FIR		61.2	5.7	1,285	1,362	1,439					
R ALDER		67.9	9.9	156	173	191					
WHEMLOCK		69.7	13.4	378	436	495					
WR CEDAR		69.0	30.7	125	180	235					
TOTAL		93.2	6.6	853	913	974	347	87	39		
CL: 68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUG FIR		51.8	4.8	269	282	296					
R ALDER		59.8	8.7	49	53	58					
WHEMLOCK		60.6	11.7	96	108	121					
WR CEDAR		71.0	31.6	49	71	94					
TOTAL		79.2	5.6	186	197	208	250	63	28		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUG FIR		66.3	7.9	37	40	43					
R ALDER		135.7	16.2	41	49	57					
WHEMLOCK		201.8	24.1	12	15	19					
WR CEDAR		322.8	38.5	2	3	5					
TOTAL		48.3	5.8	101	108	114	93	23	10		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUG FIR		61.8	7.4	162	175	188					
R ALDER		135.2	16.1	55	65	76					
WHEMLOCK		199.1	23.8	23	30	37					
WR CEDAR		279.1	33.3	4	6	8					
TOTAL		31.6	3.8	266	277	287	40	10	4		
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUG FIR		63.0	7.5	37,092	40,109	43,126					
R ALDER		143.6	17.1	5,199	6,274	7,350					
WHEMLOCK		208.3	24.9	3,492	4,648	5,804					
WR CEDAR		286.6	34.2	267	406	545					
TOTAL		43.8	5.2	48,749	51,438	54,127	77	19	9		

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	TONEDEAF			DATE	9/2/2016
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	07W	14	AREA123	RW	4.00	70	484	1	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.	INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.	INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	62.5	7.5		7,985	8,628	9,272			
R ALDER	141.8	16.9		1,613	1,941	2,270			
WHEMLOCK	205.9	24.6		903	1,197	1,492			
WR CEDAR	288.3	34.4		103	157	212			
TOTAL	38.6	4.6		11,375	11,925	12,474	59	15	7

Log Stock Table - MBF

T06N R07W S14 TyRW 4.00
T06N R07W S14 TyTAKE 145.00

Project: **TONEDCAF**
Acres **149.00**

Page **1**
Date **9/2/2016**
Time **11:46:02AM**

S T Spp	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+
D	DO	2S	16	17		17	.3						4			13			
D	DO	2S	20	42	1.7	41	.7										41		
D	DO	2S	26	4		4	.1						4						
D	DO	2S	28	6		6	.1							6					
D	DO	2S	32	261		260	4.4						41	86	21	80	31		
D	DO	2S	34	34		34	.6									34			
D	DO	2S	36	95		95	1.6						6	53	36				
D	DO	2S	40	5,006	1.1	4,952	83.2					25	174	378	1204	1620	1119	431	
D	DO	3S	16	24		24	.4			1		13	6	3					
D	DO	3S	18	5		5	.1					5							
D	DO	3S	20	21		21	.4					9	9	3					
D	DO	3S	22	9		9	.1				3	3	3						
D	DO	3S	23	3		3	.1					3							
D	DO	3S	24	8		8	.1				5	3							
D	DO	3S	26	10		10	.2			3	3	3							
D	DO	3S	30	12		12	.2				8	4							
D	DO	3S	32	140	3.1	135	2.3			34	18	34	10	21	19				
D	DO	3S	34	24		24	.4			5	9	11							
D	DO	3S	36	22		22	.4				15	7							
D	DO	3S	40	228		228	3.8			27	27	141		17	17				
D	DO	4S	16	28	2.6	27	.5			11	16								
D	DO	4S	20	3		3	.0				3								
D	DO	4S	22	4		4	.1			1	3								
D	DO	4S	24	7		7	.1			7									
D	DO	4S	30	2		2	.0			2									
D	Totals			6,014	1.0	5,953	78.3			91	107	262	258	567	1296	1748	1191	431	
A	DO	1S	24	18		18	1.9						18						
A	DO	1S	26	21		21	2.3								21				
A	DO	1S	30	67		67	7.1						11	36	20				
A	DO	1S	40	212		211	22.5						146	19	46				
A	DO	2S	16	15		15	1.6							15					
A	DO	2S	20	31		31	3.3					31							
A	DO	2S	32	36		36	3.9					36							
A	DO	2S	40	186	1.8	183	19.5					183							
A	DO	3S	16	8		8	.8				8								
A	DO	3S	20	3		3	.3				3								

Log Stock Table - MBF

T06N R07W S14 TyRW	4.00
T06N R07W S14 TyTAKE	145.00

Project: TONEDEAF
Acres 149.00

Page 3
Date 9/2/2016
Time 11:46:02AM

S T Spp	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+
C	DO	4S	20	5		5	21.4			3	2								
C	DO	4S	30	0		0	.2			0									
C	Totals			24		24	.3			3	8	0	11	0					
Total	All Species			7,672		7,604	100.0		2	397	234	661	522	742	1625	1799	1191	431	

TC		PSTNDSUM		Stand Table Summary										Page		1			
														Date:		10/3/2016			
T06N R07W S14 Ty00MC				149.00		Project TONEDEAF										Time:		10:06:41AM	
						Acres 149.00										Grown Year:			
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals					
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF			
D		13	2	86	39	3.285	3.03	3.28	15.0	40.0		49	131		73	20			
D		19	3	85	89	2.306	4.54	3.84	36.6	114.0		141	438		210	65			
D		21	2	90	116	1.259	3.03	3.15	40.6	178.0		128	560		190	83			
D		22	2	84	104	1.147	3.03	2.87	43.4	164.0		124	470		185	70			
D		23	2	88	103	1.049	3.03	2.62	47.8	186.0		125	488		187	73			
D		24	7	86	114	3.373	10.60	9.16	51.0	200.5		467	1,836		696	274			
D		25	4	89	120	1.776	6.06	4.44	63.0	266.0		280	1,181		417	176			
D		26	3	88	117	1.232	4.54	2.87	71.3	294.3		205	846		305	126			
D		27	6	85	128	2.284	9.08	6.47	67.8	281.2		439	1,820		654	271			
D		28	10	88	136	3.540	15.14	10.62	73.6	335.7		782	3,565		1,165	531			
D		29	6	87	132	1.980	9.08	5.61	80.6	370.0		452	2,076		674	309			
D		30	3	88	130	.925	4.54	2.78	81.4	362.2		226	1,005		337	150			
D		31	13	87	136	3.755	19.68	10.97	91.3	426.8		1,002	4,685		1,492	698			
D		32	6	86	143	1.626	9.08	4.88	99.3	461.7		485	2,252		722	336			
D		33	9	86	144	2.294	13.62	7.39	95.0	467.2		702	3,453		1,047	515			
D		34	4	89	147	.960	6.06	2.64	125.1	638.2		330	1,685		492	251			
D		35	4	86	146	.906	6.06	2.72	119.7	595.0		326	1,618		485	241			
D		36	3	92	134	.642	4.54	1.93	121.6	646.7		234	1,246		349	186			
D		37	6	86	141	1.216	9.08	3.65	130.7	648.9		477	2,368		710	353			
D		38	4	87	153	.769	6.06	2.31	149.1	765.8		344	1,766		512	263			
D		39	1	85	125	.182	1.51	.55	134.0	660.0		73	361		109	54			
D		40	2	86	140	.347	3.03	1.04	150.8	760.0		157	791		234	118			
D		41	2	90	146	.330	3.03	.99	170.5	890.0		169	882		252	131			
D		42	2	88	167	.315	3.03	1.26	150.5	856.3		189	1,078		282	161			
D		43	5	87	148	.751	7.57	2.25	184.2	954.7		415	2,150		618	320			
D		45	1	86	129	.137	1.51	.41	133.7	740.0		55	304		82	45			
D		48	1	92	157	.120	1.51	.36	249.7	1390.0		90	502		134	75			
D		51	1	85	146	.107	1.51	.32	255.0	1216.7		82	389		122	58			
D		Totals	114	87	121	38.615	172.57	101.38	84.3	394.0		8,548	39,948		12,736	5,952			
A		10	2	86	24	5.102	2.78	5.10	7.5	25.0		38	128		57	19			
A		11	2	86	47	4.216	2.78	4.22	14.0	40.0		59	169		88	25			
A		12	3	86	47	5.314	4.17	7.09	13.5	42.5		96	301		143	45			
A		13	4	86	67	6.038	5.57	10.57	16.3	55.7		172	589		256	88			
A		14	4	87	49	5.206	5.57	6.51	19.0	54.0		124	351		184	52			
A		15	2	87	52	2.267	2.78	2.27	30.0	60.0		68	136		101	20			
A		16	2	87	71	1.993	2.78	3.99	23.2	77.5		93	309		138	46			
A		17	5	86	73	4.413	6.96	8.83	26.9	90.0		237	794		354	118			
A		18	6	86	83	4.724	8.35	9.45	33.2	111.7		314	1,055		468	157			
A		19	6	87	81	4.240	8.35	8.48	36.5	124.2		310	1,053		461	157			
A		20	1	86	65	.638	1.39	1.28	33.5	95.0		43	121		64	18			
A		21	2	86	61	1.157	2.78	2.31	36.0	120.0		83	278		124	41			
A		23	2	86	83	.964	2.78	2.41	42.8	156.0		103	376		154	56			
A		24	2	86	73	.886	2.78	1.77	53.7	197.5		95	350		142	52			
A		25	2	86	60	.816	2.78	.82	59.0	90.0		48	73		72	11			
A		30	1	87	64	.283	1.39	.57	74.5	245.0		42	139		63	21			
A		Totals	46	86	59	48.258	64.00	75.64	25.5	82.3		1,925	6,222		2,869	927			
H		12	1	82	41	1.377	1.08	1.38	15.0	30.0		21	41		31	6			
H		13	2	89	43	2.347	2.16	2.35	17.5	45.0		41	106		61	16			
H		15	2	86	65	1.763	2.16	2.64	23.7	80.0		63	212		93	32			
H		16	1	89	77	.775	1.08	1.55	23.5	85.0		36	132		54	20			
H		17	3	89	86	2.059	3.24	4.12	29.2	103.3		120	425		179	63			
H		18	2	87	80	1.224	2.16	2.45	32.0	102.5		78	251		117	37			

TC		PSTNDSUM		Stand Table Summary										Page Date:		2 10/3/2016	
T06N R07W S14 Ty00MC 149.00					Project		TONEDEAF					Time:		10:06:41AM			
					Acres		149.00					Grown Year:					
S Spc	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
H		19	1	88	85	.549	1.08	1.10	37.5	150.0		41	165		61	25	
H		20	1	92	121	.496	1.08	1.49	39.0	180.0		58	268		86	40	
H		21	1	92	111	.450	1.08	1.35	39.3	176.7		53	238		79	36	
H		22	2	88	121	.819	2.16	2.05	44.2	180.0		91	369		135	55	
H		23	2	89	104	.750	2.16	1.87	53.4	206.0		100	386		149	58	
H		24	3	87	112	1.033	3.24	3.10	50.2	207.8		156	644		232	96	
H		25	1	82	89	.317	1.08	.63	68.5	235.0		43	149		65	22	
H		26	1	86	132	.293	1.08	.88	67.0	293.3		59	258		88	38	
H		27	1	85	103	.272	1.08	.54	86.0	340.0		47	185		70	28	
H		28	1	86	99	.253	1.08	.51	91.0	360.0		46	182		69	27	
H		29	2	87	121	.472	2.16	1.41	77.8	363.3		110	514		164	77	
H		30	1	89	70	.220	1.08	.44	77.5	280.0		34	123		51	18	
H		Totals	28	87	81	15.469	30.29	29.86	40.1	155.7		1,197	4,648		1,784	693	
DL		20	1	86	103	.349	.76	.70	43.5	150.0		30	105		45	16	
DL		21	1	86	124	.317	.76	.95	38.3	143.3		36	136		54	20	
DL		23	1	85	99	.264	.76	.53	56.5	190.0		30	100		44	15	
DL		Totals	3	86	109	.930	2.29	2.18	44.4	156.8		97	341		144	51	
CL		19	1	82	71	.484	.95	.97	27.0	85.0		26	82		39	12	
CL		24	1	74	92	.303	.95	.61	51.0	145.0		31	88		46	13	
CL		26	1	72	94	.258	.95	.52	64.0	140.0		33	72		49	11	
CL		Totals	3	77	83	1.045	2.86	2.09	43.1	116.0		90	242		134	36	
C		12	1	78	17	1.455	1.14	1.46	10.0	30.0		15	44		22	7	
C		17	1	81	24	.725	1.14	.73	19.0	30.0		14	22		21	3	
C		26	1	78	83	.310	1.14	.62	57.0	140.0		35	87		53	13	
C		Totals	3	79	27	2.490	3.43	2.80	22.7	54.4		64	152		95	23	
M		20	1	86	59	.524	1.14	.52	37.0	120.0		19	63		29	9	
M		Totals	1	86	59	.524	1.14	.52	37.0	120.0		19	63		29	9	
SN		36	1	88	31	.808	5.71										
SN		Totals	1	88	31	.808	5.71										
Totals			199	86	84	108.139	282.29	214.48	55.7	240.7		11,940	51,617		17,791	7,691	

LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-17-03
TONE DEAF
PORTIONS OF SECTIONS 11, 12, 13 AND 14 OF T6N, R7W,
W.M., CLATSOP COUNTY, OREGON

Approximate Net Acreage	
Area	MC Acres
Area 1 (MC) -	53
Area 2 (MC) -	35
Area 3 (MC) -	57
Area 4 (R/W) -	4
Total Sale Acreage =	149

Logging Breakdown	Tractor	Cable
Area 1 (MC) -	21%	79%
Area 2 (MC) -	100%	0%
Area 3 (MC) -	76%	24%
Area 4 R/W	100%	0%
Total=	62%	38%

