



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Nor Sam
Sale FG-341-2019-W00551-01

District: Forest Grove

Date: December 19, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,805,371.26	\$13,061.76	\$1,818,433.02
		Project Work:	(\$352,610.00)
		Advertised Value:	\$1,465,823.02



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Date: December 19, 2018

Timber Description

Location: Portions of Sections 19 and 30, T3N, R6W, W.M., and Portions of Section 24, T3N, R7W, W.M., Tillamook County, Oregon

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	98
Western Hemlock / Fir	15	0	98
Alder (Red)	14	0	95

Volume by Grade	2S	3S	4S	Camprun	Total
Douglas - Fir	2,252	1,255	294	0	3,801
Western Hemlock / Fir	352	196	73	0	621
Alder (Red)	0	0	0	32	32
Total	2,604	1,451	367	32	4,454

Comments: Pond Values Used: Local Pond Values, October 2018.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$993.69/\text{MBF} = \$1,268.18/\text{MBF} - \$274.49/\text{MBF}$

BRANDING AND PAINTING COST ALLOWANCE = $\$2.00/\text{MBF}$

FUEL COST ALLOWANCE = $\$3.00/\text{Gallon}$

HAULING COST ALLOWANCE
Hauling costs equivalent to $\$950$ daily truck cost.

Other Costs (with Profit & Risk to be added):
None

Other Costs (No Profit & Risk added):
Machine Time to Block/Waterbar Roads, and Skid Trails:
 $20 \text{ hours} \times \$150/\text{hour} = \$3,000$
Machine Time to Pile Landing Slash and Sort Firewood:
 $20 \text{ hours} \times \$150/\text{hour} = \$3,000$
Equipment Cleaning: $3 \text{ pieces} \times \$1,000/\text{Piece} = \$3,000$
Slash Treatment: $29 \text{ acres} \times \$200/\text{acre} = \$5,800$
TOTAL Other Costs (No Profit & Risk added) = $\$14,800$

ROAD MAINTENANCE

Move-in: $\$4,000$
General Road Maintenance (Combined): $\$15,240$
[Spurs x1 - $.3 \text{ miles} \times \$1,200/\text{mile} = \$360$]
[Salmonberry Road - $8.9 \text{ miles} \times \$1,200/\text{mile} = \$10,680$]
[North Fork Salmonberry Road] - $3.5 \text{ miles} \times \$1,200/\text{mile} = \$4,200$
TOTAL Road Maintenance: $\$19,240/4,454 \text{ MBF} = \$4.32/\text{MBF}$



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Logging Conditions

Combination#: 1

Douglas - Fir	53.66%
Western Hemlock / Fir	51.99%
Alder (Red)	17.81%

Logging System: Cable: Small Tower <=40 **Process:** Stroke Delimber

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

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 7 **bd. ft / load:** 4600

cost / mbf: \$173.91

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

Combination#: 2

Douglas - Fir	46.34%
Western Hemlock / Fir	48.01%
Alder (Red)	82.19%

Logging System: Shovel **Process:** Manual Falling/Delimbing

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

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 10 **bd. ft / load:** 4600

cost / mbf: \$85.60

machines: Shovel Logger



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$352,610.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$14,800.00

Miles of Road

Road Maintenance: \$4.32

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	4.6
Western Hemlock / Fir	\$0.00	2.0	3.8
Noble Fir	\$0.00	2.0	4.0
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	Brand & Paint	Other	Total
Douglas - Fir									
\$132.99	\$4.41	\$1.97	\$105.33	\$0.00	\$24.47	\$0.00	\$2.00	\$3.32	\$274.49
Western Hemlock / Fir									
\$131.51	\$4.41	\$1.97	\$127.50	\$0.00	\$26.54	\$0.00	\$2.00	\$3.32	\$297.25
Alder (Red)									
\$101.33	\$4.54	\$1.97	\$166.25	\$0.00	\$27.41	\$0.00	\$2.00	\$3.32	\$306.82

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$700.00	\$425.51	\$0.00
Western Hemlock / Fir	\$0.00	\$600.00	\$302.75	\$0.00
Alder (Red)	\$0.00	\$715.00	\$408.18	\$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
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,801	\$425.51	\$1,617,363.51
Western Hemlock / Fir	621	\$302.75	\$188,007.75
Alder (Red)	32	\$408.18	\$13,061.76

Gross Timber Sale Value

Recovery: \$1,818,433.02

Prepared By: Adrian Torres

Phone: 503-357-2191

PROJECT COST SUMMARY SHEET

Timber Sale: Nor Sam
Sale Number: 341-19-06

PROJECT NO. 1: ROCKED ROAD CONSTRUCTION

Road Segment	Length	Cost
H to I	16+50	\$26,842.73
	16+50 stations	
	0.31 miles	
Total Rock =		
120 cy	1½" - 0	
1,779 cy	Jaw-run	
Move-in =		\$749.00
TOTAL PROJECT NO. 1 COST =		\$27,591.73

PROJECT NO. 2: DIRT ROAD CONSTRUCTION AND RECONSTRUCTION

Road Segment	Length	Cost
B to C	29+00	\$14,925.58
D to E	10+35	\$2,960.63
F to G	5+40	\$2,063.26
	44+75 stations	
	0.85 miles	
Total Rock =		
72 cy	Riprap	
53 cy	Jaw-run	
Move-in =		\$556.66
TOTAL PROJECT NO. 2 COST =		\$20,506.13

PROJECT NO. 3: ROAD IMPROVEMENT

Road Segment	Length	Cost
A to B	198+40	\$9,106.40
Z to A	475+20	\$202,467.94
	673+60 stations	
	12.76 miles	
Total Rock =		
13,570 cy	1½" - 0	
200 cy	Jaw-run	
Move-in =		\$5,903.60
TOTAL PROJECT NO. 3 COST =		\$217,477.94

PROJECT NO. 4: STOCKPILE CONSTRUCTION

Dimensions	Amount	Cost
200' x 70' x 15'	4,000 cy	\$49,972.80
90' x 65' x 15'	1,500 cy	\$21,941.40
90' x 65' x 15'	1,500 cy	\$15,120.00
Total Rock =		
4,000 cy	1½" - 0	
1,500 cy	4" - 0	
1,500 cy	Jaw-run	
*Stockpile Measurement		
TOTAL PROJECT NO. 4 COST =		\$87,034.20

TOTAL CREDITS = \$352,610.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Nor Sam
 Road Segment: Z to A

Sale Number: 341-19-06
 Improvement: 475+20 stations
9.00 miles

PROJECT NO. 3

IMPROVEMENT

Grade, ditch, & roll 475.20 sta @ \$36.00 per sta = \$17,107.20

TOTAL IMPROVEMENT COSTS = \$17,107.20

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	1½" - 0	\$8.74	\$3.70	\$1.22	13,570	\$185,360.74
				Subtotal =	13,570	\$185,360.74

Totals	All Rock =	13,570
	1½" - 0 =	13,570

TOTAL ROCK COSTS = \$185,360.74

PROJECT NO. 3 TOTAL COST = \$202,467.94

SUMMARY OF CONSTRUCTION COST

Timber Sale: Nor Sam
 Road Segment: A to B

Sale Number: 341-19-06
 Improvement: 198+40 stations
3.76 miles

PROJECT NO. 3

IMPROVEMENT

Grade, ditch, & roll 198.40 sta @ \$36.00 per sta = \$7,142.40

TOTAL IMPROVEMENT COSTS = \$7,142.40

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Spot rock	Jaw-run	\$7.15	\$1.57	\$1.10	200	\$1,964.00
Subtotal =					200	\$1,964.00

Totals

All Rock =	200
Jaw-run =	200

TOTAL ROCK COSTS = \$1,964.00

PROJECT NO. 3 TOTAL COST = \$9,106.40

SUMMARY OF CONSTRUCTION COST

Timber Sale: Nor Sam
Road Segment: B to C

Sale Number: 341-19-06
Reconstruction: 29+00 stations
0.55 miles

PROJECT NO. 2

RECONSTRUCTION

Pickup and install cattle gate	1	ea @	\$500.00	per ea =	\$500.00
Clearing & grubbing (scatter)	0.67	ac @	\$862.40	per ac =	\$577.81
Balanced road reconstruction	29.00	sta @	\$55.00	per sta =	\$1,595.00
Fill reconstruction (18+90)					\$0.00
Excavate & load	185	cy @	\$1.64	per cy =	\$303.71
Endhaul unsuitable fill material	120	cy @	\$0.90	per cy =	\$108.34
Compact waste area	120	cy @	\$0.30	per cy =	\$36.12
Stage material locally	120	cy @	\$0.30	per cy =	\$36.12
Excavate additional fill material	28	cy @	\$1.64	per cy =	\$45.56
Place and Compact fill	148	cy @	\$2.40	per cy =	\$355.56
Pump culvert installation	1	day @	\$150.00	per day =	\$150.00
Fill reconstruction (27+60)					\$0.00
Excavate & load	56	cy @	\$1.64	per cy =	\$91.12
Endhaul unsuitable fill material	22	cy @	\$1.18	per cy =	\$25.57
Compact waste area	22	cy @	\$0.30	per cy =	\$6.50
Stage material locally	51	cy @	\$0.30	per cy =	\$15.17
Place and Compact fill	51	cy @	\$2.90	per cy =	\$146.62
Pump culvert installation	1	day @	\$150.00	per day =	\$150.00
Construct Settling Ponds	6	ea @	\$25.00	per ea =	\$150.00
Construct Turnouts	2	ea @	\$66.00	per ea =	\$132.00
Construct Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Construct landing	1	ea @	\$220.00	per ea =	\$220.00
Grade & roll (outslope)	14.60	sta @	\$32.20	per sta =	\$470.12
Grade, ditch, & roll	14.40	sta @	\$36.00	per sta =	\$518.40

TOTAL RECONSTRUCTION COSTS = \$5,716.22

CULVERTS

Culverts and Bands

18" Diameter	210	LF @	\$20.00	per LF =	\$4,200.00
24" Diameter	130	LF @	\$29.00	per LF =	\$3,770.00

TOTAL CULVERT COSTS = \$7,970.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Energy dissipator	Riprap	\$2.90	\$6.88	\$1.60	72	\$819.36
				Subtotal =	72	\$819.36

Totals

All Rock =	72
Riprap =	72

TOTAL ROCK COSTS = \$819.36

EROSION CONTROL

Winterization waterbarring	7	ea @	\$27.50	per ea =	\$192.50
Grass seed & fertilizer	0.34	ac @	\$500.00	per ac =	\$167.50
Straw Mulch Bale	6	ea @	\$10.00	per ea =	\$60.00

TOTAL EROSION CONTROL COSTS = \$420.00

PROJECT NO. 2 TOTAL COST = \$14,925.58

SUMMARY OF CONSTRUCTION COST

Timber Sale: Nor Sam Sale Number: 341-19-06
 Road Segment: D to E Reconstruction: 10+35 stations
0.20 miles

PROJECT NO. 2

RECONSTRUCTION

Clearing & grubbing (scatter)	0.24	ac @	\$1,078.00	per ac =	\$258.72
Improve Turnouts	1	ea @	\$33.00	per ea =	\$33.00
Improve Turnarounds	1	ea @	\$41.25	per ea =	\$41.25
Improve Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	10.35	sta @	\$36.00	per sta =	\$372.60

TOTAL RECONSTRUCTION COSTS = \$862.57

CULVERTS

Culverts and Bands
 18" Diameter 60 LF @ \$20.00 per LF = \$1,200.00

TOTAL CULVERT COSTS = \$1,200.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Subgrade reinforcement	Jaw-run	\$7.15	\$6.12	\$0.75	53	\$743.06
Subtotal =					53	\$743.06

Totals	All Rock =	53
	Jaw-run =	53

TOTAL ROCK COSTS = \$743.06

EROSION CONTROL

Winterization waterbarring	2	ea @	\$27.50	per ea =	\$55.00
Grass seed & fertilizer	0.12	ac @	\$500.00	per ac =	\$60.00
Straw Mulch Bale	4	ea @	\$10.00	per ea =	\$40.00

TOTAL EROSION CONTROL COSTS = \$155.00

PROJECT NO. 2 TOTAL COST = \$2,960.63

SUMMARY OF CONSTRUCTION COST

Timber Sale: Nor Sam
 Road Segment: F to G

Sale Number: 341-19-06
 Construction: 5+40 stations
0.10 miles

PROJECT NO. 2

CONSTRUCTION

Clearing & grubbing (scatter)	0.62	ac @	\$1,078.00	per ac =	\$668.36
Balanced road construction	5.40	sta @	\$110.00	per sta =	\$594.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Construct Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	5.40	sta @	\$36.00	per sta =	\$194.40

TOTAL CONSTRUCTION COSTS = \$1,853.26

EROSION CONTROL

Winterization waterbarring	2	ea @	\$27.50	per ea =	\$55.00
Grass seed & fertilizer	0.31	ac @	\$500.00	per ac =	\$155.00

TOTAL EROSION CONTROL COSTS = \$210.00

PROJECT NO. 2 TOTAL COST = \$2,063.26

SUMMARY OF CONSTRUCTION COST

Timber Sale: Nor Sam
Road Segment: H to I

Sale Number: 341-19-06
Construction: 16+50 stations
0.31 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	1.90	ac @	\$1,078.00	per ac =	\$2,048.20
Balanced road construction	16.50	sta @	\$110.00	per sta =	\$1,815.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Approach to landing	1.75	sta @	\$110.00	per sta =	\$192.50
Construct Landing	2	ea @	\$314.00	per ea =	\$628.00
Grade, ditch, & roll	16.50	sta @	\$36.00	per sta =	\$594.00

TOTAL CONSTRUCTION COSTS = \$5,426.20

CULVERTS

Culverts and Bands

18" Diameter 60 LF @ \$20.00 per LF = \$1,200.00

Markers & Stakes

Culvert markers 2 ea @ \$10.00 per ea = \$20.00

TOTAL CULVERT COSTS = \$1,220.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Subgrade reinforcement	Jaw-run	\$7.15	\$1.46	\$0.75	212	\$1,984.32
Subtotal =					212	\$1,984.32
Surfacing rock						
Base rock	Jaw-run	\$7.15	\$1.46	\$1.10	977	\$9,481.82
Junction	Jaw-run	\$7.15	\$1.46	\$1.10	48	\$466.08
Turnout	Jaw-run	\$7.15	\$1.46	\$1.10	29	\$281.59
Turnaround	Jaw-run	\$7.15	\$1.46	\$1.10	40	\$388.40
Traction rock	1½" - 0	\$8.74	\$10.70	\$1.22	120	\$2,479.20
Approach to landing	Jaw-run	\$7.15	\$1.46	\$1.10	114	\$1,104.52
Landing	Jaw-run	\$7.15	\$1.46	\$1.10	360	\$3,495.60
Subtotal =					1,687	\$17,697.21

Totals

All Rock =	1,899
1½" - 0 =	120
Jaw-run =	1,779

TOTAL ROCK COSTS = \$19,681.53

EROSION CONTROL

Grass seed & fertilizer	0.95	ac @	\$500.00	per ac =	\$475.00
Straw mulch (bale)	4	ea @	\$10.00	per ea =	\$40.00

TOTAL EROSION CONTROL COSTS = \$515.00

PROJECT NO. 1 TOTAL COST = \$26,842.73

SUMMARY OF CONSTRUCTION COSTTimber Sale: Nor SamSale Number: 341-19-06**PROJECT NO. 4: STOCKPILE CONSTRUCTION****ROCK**

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Build & Shape Cost \$/cy	Total CY (Stockpile Measurement)	Rock Cost
Rock Creek Ridge Stockpile Site	1 1/2"-0	\$8.74	\$0.93	\$1.10	4,000	\$49,972.80
Rock Creek Ridge Stockpile Site	4" - 0	\$11.17	\$0.34	\$1.10	1,500	\$21,941.40
North Fork Salmonberry Stockpile Site	4" Jaw-run	\$7.15	\$1.83	\$1.10	1,500	\$15,120.00
Subtotal =					7,000	\$87,034.20

Totals

All Rock =	7,000
1½" - 0 =	4,000
4" - 0 =	1,500
Jaw-run =	1,500

PROJECT NO. 4 TOTAL COST = \$87,034.20

MOVE-IN, WITHIN AREA MOVE, & EQUIPMENT CLEANING COSTS

Timber Sale: Nor Sam

Sale Number: 341-19-06

<u>Equipment</u>	<u>Total</u>
Grader	\$1,060.61
Roller (smooth/grid) & Compactor	\$707.28
Excavator (Large) - Equipment Cleaning	\$2,202.78
Dozer (Large) - Equipment Cleaning	\$2,184.22
Dump Trucks (10cy +)	\$873.13
Water Truck (2,500 Gal)	\$181.22
TOTAL MOVE-IN COSTS =	<u><u>\$7,209.24</u></u>

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Nor Sam
Sale Number: 341-19-06
Quarry Name: N. Fork Salmonberry Quarry

Jaw-run: 2,032 cy (truck measure)
Stockpile (Jaw-run): 1,500 cy (stockpile measure)
Total truck yardage: 3,773 cy
Total in place yardage: 2,903 cy

Swell: 130%
Compaction: 116%

Move-in & Other Base Cost

Quarry development & overburden removal	\$1,700.00
Within area move of excavator	\$437.50
Within area move of dozer	\$401.07
Within area move & setup drill	\$259.90
Within area move of loader	\$376.23
Within area move & setup crusher	\$1,369.07
Clean up quarry	\$300.00
Subtotal =	<u>\$4,843.77</u>
Per CY =	<u>\$1.29</u>

Jaw-run Base Cost

Drill & shoot	<u>\$2.80</u>	/ cy x	<u>2,903</u>	cy =	\$8,128.40
Load crusher	<u>\$0.80</u>	/ cy x	<u>3,773</u>	cy =	\$3,018.40
Crush (Jaw-run)	<u>\$2.10</u>	/ cy x	<u>3,773</u>	cy =	\$7,923.30
Load dump truck	<u>\$0.80</u>	/ cy x	<u>3,773</u>	cy =	\$3,018.40
Subtotal =					<u>\$22,088.50</u>
Per CY =					<u>\$5.86</u>
Total =					<u>\$26,932.27</u>

Jaw-run Base Cost = \$7.15/cy

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: _____ Sale Name _____
 Sale Number: _____ 341-19-06 _____
 Quarry Name: _____ Rock Creek Ridge Quarry _____

1 1/2" - 0: 13,690 cy (truck measure)
 Stockpile (1 1/2"-0): 4,000 cy (stockpile measure)
 Stockpile (4"-0): 1,500 cy (stockpile measure)
 Total truck yardage: 20,070 cy
 Total in place yardage: 17,154 cy

Swell: 130%
 Compaction: 116%
 Screening Loss: 10%

Move-in & Other Base Cost

Quarry development & overburden removal				\$8,500.00
Equipment cleaning & move in excavator				\$1,856.95
Equipment cleaning & move in dozer				\$1,840.31
Move in & setup drill				\$483.32
Move in loader				\$753.98
Move in & setup screen				\$1,808.31
Move in & setup crusher				\$4,202.73
Gradation tests	\$71.50 /2,000cy x	11	tests =	\$786.50
Change gradation				\$275.00
Clean up quarry				\$500.00

Subtotal = \$21,007.10
 Per CY = \$1.05

1 1/2"-0 Base Cost

Drill & shoot	\$2.80	/ cy x	15,666	cy =	\$43,865.71
Load crusher	\$0.80	/ cy x	20,366	cy =	\$16,292.98
Crush (1 1/2" - 0)	\$3.60	/ cy x	13,690	cy =	\$49,282.56
Crush (Stockpile)	\$3.60	/ cy x	4,640	cy =	\$16,704.00
Load dump truck	\$0.80	/ cy x	18,330	cy =	\$14,663.68

Subtotal = \$140,808.93
 Per CY = \$7.69

4"-0 Base Cost

Drill & shoot	\$2.80	/ cy x	1,487	cy =	\$4,164.11
Load crusher	\$0.80	/ cy x	1,933	cy =	\$1,546.67
Screen rock	\$2.90	/ cy x	1,933	cy =	\$5,606.67
Waste reject	\$1.87	/ cy x	193	cy =	\$361.54
Crush (Stockpile)	\$2.60	/ cy x	1,740	cy =	\$4,524.00
Load dump truck	\$0.80	/ cy x	1,740	cy =	\$1,392.00

Subtotal = \$17,594.99
 Per CY = \$10.12

Total = \$179,411.02

1 1/2"-0 Base Cost = \$8.74/cy
 4"-0 Base Cost = \$11.17/cy

CRUISE REPORT
Nor Sam
FG-341-2019-W00551-01

1. LOCATION: Portions of Sections 19 & 30, T3N, R6W, W.M., and Portions of Section 24, T3N, R7W, W.M., Tillamook County, Oregon.

2. CRUISE DESIGN:

Pre-cruise evaluation indicated that the stand's average DBH is approximately 17 inches and the coefficient of variation is about 56%. For sales of this size and approximate value, ODF cruise standards require a sampling error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. The cruise design chosen for this sale is a variable radius sample plot using a 40 BAF prism.

3. SAMPLING METHOD:

The Timber Sale Area was sampled in August, 2018 with 38 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 5 chain x 6 chain grid for the Timber Sale Areas. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS:

201 trees were measured and graded producing a cumulative Sampling Error of 6.7% on the Douglas-fir basal area and 6.7% for the Douglas-fir board foot volume.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following Columbia River Log Scale grade rules and favored 40 foot segments.

- a) **Height Standards:** Total tree heights were measured to the nearest foot. Bole heights were calculated to a top DIB of six inches or 25% of DBH, whichever is larger.
- b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.
- c) **Form Factors:** Measured for each grade tree using a form point of 16 feet.

5. DATA PROCESSING

- a) **Volumes and Statistics:** Cruise estimates and sampling statistics, were derived from Super Ace 2008 cruise software.
- b) **Deductions:** For conifers two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage. For hardwoods five percent was subtracted to account for hidden defect and breakage.

6. Cruisers: The sale was cruised by ODF cruisers Mark Savage, Adrian Torres, and Kenton Burns.

Prepared by: Adrian Torres 12/17/2018
Date

Reviewed by:  12/20/2018
Mark Savage Date

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T03N R07W S24 Ty00MC10.00 T03N R07W S24 Ty00MC40.00 T03N R07W S24 Ty00MC64.00				Project: NORSAM										Page 1							
				Acres 114.00										Date 9/24/2018							
														Time 2:01:39PM							
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									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					
RA			R	100	2.4	293	285	33	100				3862				34	8	81	0.80	3.5
RA Totals				1	2.4	293	285	33	100				3862				34	8	81	0.80	3.5
DF			CU														6	15		0.00	4.1
DF			2M	59	.9	20,337	20,156	2,298			64	36				100	40	15	342	1.80	59.0
DF			3M	33	.8	11,319	11,224	1,280		90	5	5		0	1	98	40	9	120	0.73	93.4
DF			4M	8	.2	2,639	2,634	300		100			13	22	22	43	27	6	42	0.39	63.2
DF Totals				85	.8	34,295	34,014	3,878		38	39	23	1	2	2	95	36	10	155	0.98	219.6
WH			CU														3	9		0.00	2.3
WH			2M	48	1.6	1,849	1,820	207			63	37				100	40	15	341	1.83	5.3
WH			3M	38	.9	1,434	1,421	162		90	10			6	7	88	38	8	101	0.65	14.1
WH			4M	14		523	523	60		100			38	8	20	35	24	6	36	0.37	14.5
WH Totals				9	1.1	3,806	3,764	429		48	34	18	5	3	5	86	31	9	104	0.78	36.2
BM			R	100		151	151	17	100				2575				37	9	120	0.77	1.3
BM Totals				0		151	151	17	100				2575				37	9	120	0.77	1.3
NF			2M	74	4.8	1,406	1,338	153			31	69				100	40	16	424	2.18	3.2
NF			3M	19	3.7	344	331	38		80	20					100	39	10	140	0.91	2.4
NF			4M	7		116	116	13		100				19	38	43	33	6	48	0.45	2.4
NF Totals				4	4.3	1,866	1,786	204		21	27	52		1	2	96	38	11	225	1.32	7.9
Totals					1.0	40,411	40,000	4,560		38	38	24	1	2	3	94	35	10	149	0.96	268.5

All

TC PSTATS			PROJECT STATISTICS						PAGE 1			
			PROJECT NORSAM						DATE 9/24/2018			
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
03N	07	24	00A1	00MC		114.00	38	201	S	W		
03N	07W	24	00A2	00MC								
03N	07W	24	00A3	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			38	201	5.3							
CRUISE			38	201	5.3	12,974	1.5					
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			167	90.1	18.9	122	40.4	175.4	34,295	34,014	7,633	7,633
WHEMLOCK			22	17.3	15.4	96	5.7	22.3	3,806	3,764	871	871
R ALDER			3	2.9	14.3	79	0.8	3.2	293	285	94	94
NOB FIR			8	2.9	22.8	131	1.7	8.3	1,866	1,786	395	395
BL MAPLE			1	.6	16.0	108	0.2	.9	151	151	36	36
TOTAL			201	113.8	18.4	117	49.0	210.2	40,411	40,000	9,029	9,029
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			77.0	6.0	522	555	588					
WHEMLOCK			74.0	16.1	313	374	434					
R ALDER			62.9	43.5	68	120	172					
NOB FIR			39.5	14.9	622	731	840					
BL MAPLE												
TOTAL			77.2	5.4	505	534	563		238	60	26	
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			68.4	5.3	115	121	128					
WHEMLOCK			73.2	16.0	73	86	100					
R ALDER			62.8	43.5	22	39	56					
NOB FIR			34.8	13.1	139	160	181					
BL MAPLE												
TOTAL			68.9	4.9	112	117	123		189	47	21	
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			56.7	9.2	82	90	98					
WHEMLOCK			193.4	31.4	12	17	23					
R ALDER			374.4	60.7	1	3	5					
NOB FIR			326.6	52.9	1	3	4					
BL MAPLE			616.4	99.9	0	1	1					
TOTAL			49.8	8.1	105	114	123		99	25	11	
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			41.6	6.7	164	175	187					
WHEMLOCK			193.8	31.4	15	22	29					
R ALDER			349.2	56.6	1	3	5					
NOB FIR			292.7	47.4	4	8	12					
BL MAPLE			616.4	99.9	0	1	2					
TOTAL			33.3	5.4	199	210	222		44	11	5	

PROJECT STATISTICS

PROJECT NORSAM

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	07	24	00A1	00MC	114.00	38	201	S	W
03N	07W	24	00A2	00MC					
03N	07W	24	00A3	00MC					

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		41.5	6.7	31,724	34,014	36,305			
WHEMLOCK		217.4	35.2	2,438	3,764	5,090			
R ALDER		360.3	58.4	119	285	452			
NOB FIR		293.5	47.6	936	1,786	2,635			
BL MAPLE		616.4	99.9	0	151	301			
TOTAL		35.1	5.7	37,722	40,000	42,278	49	12	5

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		42.9	7.0	7,102	7,633	8,164			
WHEMLOCK		212.5	34.4	571	871	1,170			
R ALDER		360.5	58.4	39	94	149			
NOB FIR		290.5	47.1	209	395	582			
BL MAPLE		616.4	99.9	0	36	71			
TOTAL		34.5	5.6	8,524	9,029	9,534	48	12	5

TC		PLOGSTVB		Log Stock Table - MBF															
T03N R07W S24 Ty00MC10.00 T03N R07W S24 Ty00MC40.00 T03N R07W S24 Ty00MC64.00				Project: NORSAM Acres114.00												Page1 Date9/24/2018 Time2:01:39PM			
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
RA		R	28		4		4	11.6			4								
RA		R	30		8		8	26.1			8								
RA		R	40		21	3.9	20	62.3				9	11						
RA		Totals			33	2.4	33	.7			12	9	11						
DF		2M	38		6		6	.1					6						
DF		2M	40		2,313		2,292	59.1					590	601	797	217	88		
DF		3M	30		3		3	.1			3								
DF		3M	32		5		5	.1			3	2							
DF		3M	34		13		13	.3			13								
DF		3M	36		17		17	.4			15	1							
DF		3M	38		27		27	.7			24	3							
DF		3M	40		1,226		1,215	31.3			131	369	589	58	4	12	12	40	
DF		4M	12		5		5	.1			5	0							
DF		4M	14		6		6	.2			5	0	1						
DF		4M	16		7		7	.2			7								
DF		4M	18		10		10	.3			10	1							
DF		4M	20		11		11	.3			11								
DF		4M	22		16	3.9	15	.4			15								
DF		4M	24		10		10	.3			10								
DF		4M	26		11		11	.3			11								
DF		4M	28		15		15	.4			15								
DF		4M	30		15		15	.4			15								
DF		4M	32		47		47	1.2			47								
DF		4M	34		17		17	.4			17								
DF	4M	36		19		19	.5			19									
DF	4M	38		29		29	.8			29									
DF	4M	40		81		81	2.1			38	7	37							
DF		Totals			3,910		3,878	85.0			445	383	626	653	605	809	229	128	
WH		2M	40		211	1.6	207	48.4					44	88	76				
WH		3M	22		9		9	2.1					9						
WH		3M	34		11		11	2.5			11								
WH		3M	40		144	1.0	142	33.1			34	56	45	7					
WH		4M	12		1		1	.2			1								
WH		4M	16		6		6	1.3			6								
WH		4M	18		5		5	1.3			5								

TC PLOGSTVB				Log Stock Table - MBF															
T03N R07W S24 Ty00MC10.00 T03N R07W S24 Ty00MC40.00 T03N R07W S24 Ty00MC64.00				Project: NORSAM Acres114.00												Page 2 Date 9/24/2018 Time 2:01:39PM			
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+
WH		4M	20	10		10	2.4			2	9								
WH		4M	22	1		1	.3			1									
WH		4M	24	2		2	.4			2									
WH		4M	30	1		1	.3			1									
WH		4M	34	12		12	2.7			12									
WH		4M	36	11		11	2.5			11									
WH		4M	40	10		10	2.4			10									
WH		Totals		434	1.1	429	9.4			96	65	45	60	88	76				
BM		R	34	4		4	25.0			4									
BM		R	40	13		13	75.0					13							
BM		Totals		17		17	.4			4		13							
NF		2M	40	160	4.8	153	74.9					8	39	85	20				
		3M	36	2		2	.9			2									
		3M	38	2		2	.9			2									
		3M	40	36	4.1	34	16.8					27	8						
		4M	26	3		3	1.3			3									
		4M	32	3		3	1.6			3									
		4M	34	2		2	.9			2									
		4M	40	6		6	2.8			6									
NF		Totals		213	4.3	204	4.5			17		27	16	39	85	20			
Total		All Species		4,607	1.0	4,560	100.0			574	457	722	729	732	969	249	128		

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 9/24/2018	
T03N R07W S24 Ty00MC 10.00 T03N R07W S24 Ty00MC 40.00 T03N R07W S24 Ty00MC 64.00					Project NORSAM					Time: 2:01:41PM							
					Acres 114.00					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		
DF	10	4	88	87	8.032	4.38	8.03	12.6	60.0	2.89	101	482	329	115	55		
DF	11	2	85	96	2.876	1.90	2.88	15.1	60.0	1.24	43	173	141	50	20		
DF	12	2	90	117	2.789	2.19	5.58	14.5	67.7	2.30	81	377	262	92	43		
DF	13	1	89	116	1.107	1.02	2.21	17.7	85.0	1.12	39	188	127	45	21		
DF	14	5	86	116	4.918	5.26	9.84	19.5	87.9	5.48	192	865	624	219	99		
DF	15	8	87	114	7.018	8.61	14.04	23.1	100.7	9.24	324	1,413	1,054	370	161		
DF	16	13	87	115	9.614	13.42	21.52	24.1	103.2	14.80	519	2,220	1,687	592	253		
DF	17	8	88	129	5.275	8.31	13.79	26.0	112.5	10.23	359	1,551	1,166	409	177		
DF	18	15	88	118	9.004	15.91	21.64	28.9	116.4	17.82	625	2,518	2,031	713	287		
DF	19	12	87	128	6.523	12.84	17.94	31.4	131.0	16.04	563	2,351	1,829	642	268		
DF	20	16	87	132	7.898	17.23	23.16	33.2	140.9	21.89	768	3,264	2,496	876	372		
DF	21	8	88	127	3.519	8.46	10.07	36.6	157.1	10.50	368	1,582	1,197	420	180		
DF	22	15	87	133	5.802	15.32	16.63	42.9	196.4	20.33	713	3,267	2,317	813	372		
DF	23	7	87	135	2.528	7.29	7.58	45.0	202.4	9.73	342	1,535	1,110	389	175		
DF	24	7	87	132	2.322	7.29	6.59	49.2	218.4	9.25	324	1,440	1,054	370	164		
DF	25	14	87	141	4.325	14.74	13.53	52.1	241.7	20.10	705	3,270	2,291	804	373		
DF	26	7	85	141	1.980	7.30	6.18	56.2	252.3	9.90	347	1,559	1,128	396	178		
DF	27	4	86	141	1.027	4.08	2.82	70.2	326.4	5.65	198	922	644	226	105		
DF	28	4	86	153	.956	4.09	3.07	69.5	344.2	6.09	214	1,058	694	243	121		
DF	29	1	84	154	.191	.88	.57	78.4	383.3	1.28	45	220	146	51	25		
DF	30	3	87	150	.565	2.78	1.70	82.6	406.0	3.99	140	689	455	160	78		
DF	31	1	83	130	.195	1.02	.58	79.9	363.3	1.33	47	212	152	53	24		
DF	32	2	86	148	.392	2.19	1.18	95.2	467.7	3.19	112	550	364	128	63		
DF	33	1	84	154	.197	1.17	.59	98.8	473.3	1.66	58	280	190	67	32		
DF	34	2	85	165	.371	2.34	1.48	88.0	448.7	3.72	131	666	424	149	76		
DF	35	1	84	171	.175	1.17	.70	91.0	460.0	1.82	64	322	207	73	37		
DF	38	2	82	152	.278	2.19	.83	131.9	588.1	3.14	110	491	358	125	56		
DF	40	1	81	166	.101	.88	.30	119.1	700.0	1.02	36	211	117	41	24		
DF	42	1	83	168	.122	1.17	.49	131.0	697.5	1.82	64	339	207	73	39		
DF	Totals	167	87	122	90.099	175.44	215.54	35.4	157.8	217.55	7,633	34,014	24,800	8,702	3,878		
WH	10	2	89	73	3.743	2.04	5.61	7.6	36.7	1.37	43	206	157	49	23		
WH	11	2	88	78	3.319	2.19	5.09	11.0	49.6	1.79	56	252	204	64	29		
WH	12	1	89	75	1.300	1.02	1.30	18.5	60.0	.77	24	78	88	27	9		
WH	13	1	89	110	1.107	1.02	2.21	19.1	85.0	1.35	42	188	154	48	21		
WH	14	1	89	86	.821	.88	1.64	16.8	70.0	.88	28	115	101	31	13		
WH	15	1	85	106	.953	1.17	1.91	24.0	100.0	1.47	46	191	167	52	22		
WH	16	2	85	104	1.569	2.19	3.14	26.0	106.0	2.62	82	333	298	93	38		
WH	18	2	89	132	.993	1.75	2.98	28.0	126.7	2.67	83	377	304	95	43		
WH	20	2	87	123	.870	1.90	2.61	33.9	151.6	2.83	88	396	323	101	45		
WH	21	1	88	115	.424	1.02	1.27	36.6	163.3	1.49	47	208	170	53	24		
WH	22	1	81	108	.443	1.17	.89	52.9	180.0	1.50	47	160	171	53	18		
WH	23	1	86	131	.405	1.17	1.22	34.1	166.7	1.33	42	203	151	47	23		
WH	24	1	86	146	.372	1.17	1.12	55.6	253.3	1.99	62	283	226	71	32		
WH	25	1	84	147	.257	.88	.77	59.9	276.7	1.48	46	214	169	53	24		
WH	26	1	82	123	.238	.88	.71	54.4	216.7	1.24	39	155	142	44	18		
WH	27	2	83	141	.477	1.90	1.43	67.2	284.3	3.08	96	407	351	110	46		
WH	Totals	22	87	96	17.292	22.34	33.90	25.7	111.0	27.86	871	3,764	3,176	992	429		
NF	15	1	91	114	.832	1.02	1.66	23.6	105.0	.94	39	175	107	45	20		
NF	21	1	90	135	.424	1.02	1.27	37.8	146.7	1.15	48	187	132	55	21		
NF	24	1	89	130	.325	1.02	.97	48.4	223.3	1.13	47	218	129	54	25		
NF	26	1	91	138	.277	1.02	.83	61.1	296.7	1.22	51	246	139	58	28		
NF	27	4	87	142	1.064	4.23	3.19	65.9	300.8	5.05	210	960	575	240	109		

TC		PSTNDSUM										Stand Table Summary										Page		2	
																						Date:		9/24/2018	
		T03N R07W S24 Ty00MC 10.00										Project NORSAM										Time:		2:01:41PM	
		T03N R07W S24 Ty00MC 40.00										Acres 114.00										Grown Year:			
		T03N R07W S24 Ty00MC 64.00																							
S Spec T		Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net		Totals										
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons				Cunits	MBF						
NF	Totals	8	89	131	2.922	8.31	7.93	49.8	225.1	9.49	395	1,786	1,082	451	204										
RA	12	1	73	73	1.489	1.17	1.49	17.8	50.0	.73	27	74	83	30	8										
RA	15	1	87	71	.715	.88	.71	33.4	110.0	.66	24	79	75	27	9										
RA	18	1	74	103	.662	1.17	1.32	33.0	100.0	1.20	44	132	137	50	15										
RA	Totals	3	77	79	2.866	3.22	3.53	26.7	80.9	2.59	94	285	295	107	33										
BM	16	1	87	108	.628	.88	1.26	28.4	120.0	.95	36	151	108	41	17										
BM	Totals	1	87	108	.628	.88	1.26	28.4	120.0	.95	36	151	108	41	17										
Totals		201	87	117	113.807	210.20	262.16	34.4	152.6	258.43	9,029	40,000	29,461	10,293	4,560										

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T03N R07W S24 Ty00MC10.00				Project:		NORSAM								Page		1					
				Acres		10.00								Date		9/24/2018					
														Time		1:54:31PM					
Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
					Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
RA		R		100	8.3	978	896	9	100				100				40	9	110	0.83	8.1
RA		Totals		2	8.3	978	896	9	100				100				40	9	110	0.83	8.1
BM		R		100		1,719	1,719	17	100				2575				37	9	120	0.77	14.3
BM		Totals		4		1,719	1,719	17	100				2575				37	9	120	0.77	14.3
DF		CU															6	11		0.00	16.3
DF		2M		73	.8	20,127	19,964	200		43	57			100	40	16	446	2.16	44.8		
DF		3M		25		6,770	6,770	68	100					100	40	8	96	0.63	70.4		
DF		4M		2		441	441	4	100			57	43		18	6	27	0.37	16.4		
DF		Totals		62	.6	27,339	27,176	272		27	32	42	1	1	98	34	11	184	1.15	147.9	
WH		2M		67	3.3	9,935	9,602	96		59	41			100	40	15	325	1.75	29.5		
WH		3M		26		3,807	3,807	38	100					100	40	9	125	0.75	30.5		
WH		4M		7		865	865	9	100			44	36	20	22	6	28	0.38	30.9		
WH		Totals		32	2.3	14,607	14,275	143		33	40	27	3	2	95	34	10	157	1.05	90.9	
Totals					1.3	44,643	44,065	441		33	32	35	1	1	1	96	34	10	169	1.08	261.3

Area 1

TC PSTATS		PROJECT STATISTICS						PAGE	1			
		PROJECT		NORSAM				DATE	9/24/2018			
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
03N	07	24	00A1	00MC	10.00	4	22	S	W			
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			4	22	5.5							
CRUISE			4	22	5.5	1,098	2.0					
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
SAMPLE TREES			TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
DOUG FIR			13	61.1	19.8	123	29.2	130.0	27,339	27,176	5,766	5,766
WHEMLOCK			7	33.4	19.6	120	15.8	70.0	14,607	14,275	3,238	3,238
BL MAPLE			1	7.2	16.0	108	2.5	10.0	1,719	1,719	407	407
R ALDER			1	8.1	15.0	71	2.6	10.0	978	896	272	272
TOTAL			22	109.8	19.2	117	50.3	220.0	44,643	44,065	9,683	9,683
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			74.4	21.4	633	805	978					
WHEMLOCK			47.3	19.3	429	531	634					
BL MAPLE												
R ALDER												
TOTAL			77.8	17.0	549	661	773	253	63	28		
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			65.2	18.8	132	162	193					
WHEMLOCK			50.1	20.4	97	122	147					
BL MAPLE												
R ALDER												
TOTAL			67.4	14.7	118	139	159	190	47	21		
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			47.4	27.1	45	61	78					
WHEMLOCK			179.0	102.3		33	68					
BL MAPLE			200.0	114.3		7	15					
R ALDER			200.0	114.3		8	17					
TOTAL			61.3	35.0	71	110	148	196	49	22		
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			38.7	22.1	101	130	159					
WHEMLOCK			164.1	93.8	4	70	136					
BL MAPLE			200.0	114.3		10	21					
R ALDER			200.0	114.3		10	21					
TOTAL			45.8	26.1	162	220	278	109	27	12		
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			44.1	25.2	20,334	27,176	34,017					
WHEMLOCK			168.7	96.4	517	14,275	28,032					
BL MAPLE			200.0	114.3		1,719	3,683					
R ALDER			200.0	114.3		896	1,921					

TC PSTATS				PROJECT STATISTICS				PAGE	2	
				PROJECT NORSAM				DATE	9/24/2018	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
03N	07	24	00A1	00MC		10.00	4	22	S	W
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			47.5	27.2	32,101	44,065	56,030	118	29	13
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			45.4	25.9	4,272	5,766	7,261			
WHEMLOCK			165.6	94.6	175	3,238	6,300			
BL MAPLE			200.0	114.3		407	873			
R ALDER			200.0	114.3		272	583			
TOTAL			44.2	25.2	7,240	9,683	12,127	102	25	11

TC PLOGSTVB		Log Stock Table - MBF																	
T03N R07W S24 Ty00MC				10.00		Project: NORSAM												Page 1	
						Acres		10.00										Date 9/24/2018	
																		Time 1:54:31PM	
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+
RA		R	40	10	8.3	9	100.0			9									
RA		Totals		10	8.3	9	2.0			9									
BM		R	34	4		4	25.0			4									
BM		R	40	13		13	75.0					13							
BM		Totals		17		17	3.9			4		13							
DF		2M	40	201		200	73.5					22	33	61	69	14			
DF		3M	38	3		3	.9			3									
DF		3M	40	65		65	24.0			15	42	9							
DF		4M	12	1		1	.5			1									
DF		4M	16	1		1	.4			1									
DF		4M	32	2		2	.7			2									
DF		Totals		273		272	61.7			19	44	9	22	33	61	69	14		
WH		2M	40	99	3.3	96	67.3					34	23	39					
WH		3M	40	38		38	26.7			2	25	12							
WH		4M	16	1		1	.6			1									
WH		4M	18	1		1	.8			1									
WH		4M	20	2		2	1.3			2									
WH		4M	22	1		1	1.0			1									
WH		4M	24	2		2	1.2			2									
WH		4M	40	2		2	1.2			2									
WH		Totals		146	2.3	143	32.4			10	25	12	34	23	39				
Total		All Species		446	1.3	441	100.0			34	78	33	56	56	100	69	14		

TC		PSTNDSUM										Stand Table Summary										Page		1				
																						Date:		9/24/2018				
T03N R07W S24 Ty00MC 10.00					Project										NORSAM										Time:		1:54:33PM	
					Acres										10.00										Grown Year:			
S Spe	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												
DF		11	1	89	98	15.153	10.00	15.15	12.8	60.0	5.51	193	909	55	19	9												
DF		14	1	86	127	9.354	10.00	18.71	21.5	90.0	11.46	402	1,684	115	40	17												
DF		16	1	80	72	7.162	10.00	7.16	34.9	90.0	7.13	250	645	71	25	6												
DF		18	1	88	122	5.659	10.00	11.32	35.0	145.0	11.28	396	1,641	113	40	16												
DF		20	1	85	127	4.584	10.00	13.75	31.2	126.7	12.23	429	1,742	122	43	17												
DF		22	1	90	140	3.788	10.00	11.36	43.6	210.0	14.13	496	2,387	141	50	24												
DF		25	1	89	168	2.934	10.00	11.73	47.6	240.0	15.90	558	2,816	159	56	28												
DF		26	1	85	166	2.712	10.00	10.85	50.3	240.0	15.55	546	2,604	155	55	26												
DF		28	1	86	162	2.339	10.00	9.35	58.3	297.5	15.55	546	2,783	155	55	28												
DF		29	1	84	154	2.180	10.00	6.54	78.4	383.3	14.61	512	2,507	146	51	25												
DF		30	2	87	156	4.074	20.00	12.22	84.2	413.3	29.34	1,029	5,052	293	103	51												
DF		40	1	81	166	1.146	10.00	3.44	119.1	700.0	11.67	410	2,406	117	41	24												
DF		Totals	13	86	122	61.084	130.00	131.60	43.8	206.5	164.34	5,766	27,176	1,643	577	272												
WH		14	1	89	86	9.354	10.00	18.71	16.8	70.0	10.07	315	1,310	101	31	13												
WH		18	2	89	132	11.318	20.00	33.95	28.0	126.7	30.40	950	4,301	304	95	43												
WH		20	1	90	130	4.584	10.00	13.75	35.8	176.7	15.77	493	2,429	158	49	24												
WH		25	1	84	147	2.934	10.00	8.80	59.9	276.7	16.87	527	2,435	169	53	24												
WH		26	1	82	123	2.712	10.00	8.14	54.4	216.7	14.16	443	1,763	142	44	18												
WH		27	1	81	147	2.515	10.00	7.55	67.6	270.0	16.33	510	2,037	163	51	20												
WH		Totals	7	88	120	33.417	70.00	90.90	35.6	157.0	103.60	3,238	14,275	1,036	324	143												
BM		16	1	87	108	7.162	10.00	14.32	28.4	120.0	10.80	407	1,719	108	41	17												
BM		Totals	1	87	108	7.162	10.00	14.32	28.4	120.0	10.80	407	1,719	108	41	17												
RA		15	1	87	71	8.149	10.00	8.15	33.4	110.0	7.48	272	896	75	27	9												
RA		Totals	1	87	71	8.149	10.00	8.15	33.4	110.0	7.48	272	896	75	27	9												
Totals		22	87	117		109.812	220.00	244.96	39.5	179.9	286.22	9,683	44,065	2,862	968	441												

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
T03N R07W S24 Ty00MC40.00				Project:		NORSAM												Page		1		
				Acres		40.00												Date		9/24/2018		
																		Time		1:57:22PM		
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
									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						
DF			CU															6	17		0.00	3.8
DF			2M	55	1.1	15,975	15,803	632			59	41				100	40	15	339	1.85	46.6	
DF			3M	36	1.8	10,287	10,097	404		81	3	16		1	3	97	39	9	126	0.78	80.4	
DF			4M	9	.7	2,341	2,326	93		100			16	11	23	50	28	6	41	0.37	56.2	
DF Totals				86	1.3	28,603	28,226	1,129		37	34	29	1	1	3	95	35	10	151	0.98	187.0	
WH			CU														9	19		0.00	1.2	
WH			2M	44		1,525	1,525	61			68	32				100	40	15	336	1.80	4.5	
WH			3M	46		1,561	1,561	62		100						100	40	8	104	0.65	15.0	
WH			4M	10		324	324	13		100			38		42	20	23	6	32	0.35	10.0	
WH Totals				10		3,409	3,409	136		55	30	14	4		4	92	33	9	111	0.78	30.6	
NF			2M	92	16.9	646	537	21			37	63				100	40	16	320	2.11	1.7	
NF			4M	8		42	42	2		100						100	32	6	50	0.56	.8	
NF Totals				2	15.9	687	578	23		7	35	58			7	93	37	12	230	1.67	2.5	
RA			R	100		589	589	24		100				52		48	32	8	74	0.78	8.0	
RA Totals				2		589	589	24		100				52		48	32	8	74	0.78	8.0	
Totals					1.5	33,289	32,804	1,312		40	33	27	2	2	3	94	35	10	144	0.96	228.2	

Area 2

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT			NORSAM			DATE	9/24/2018		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
03N	07	24	00A2	00MC		40.00	12	55	S	W		
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			12	55	4.6							
CRUISE			12	55	4.6	4,059	1.4					
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			46	80.9	18.6	119	35.5	153.3	28,603	28,226	6,480	6,480
WHEMLOCK			6	13.6	16.4	109	4.9	20.0	3,409	3,409	799	799
R ALDER			2	6.1	14.1	82	1.8	6.7	589	589	200	200
NOB FIR			1	.8	27.0	139	0.6	3.3	687	578	156	156
TOTAL			55	101.5	18.2	116	43.0	183.3	33,289	32,804	7,636	7,636
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			99.7	14.7	513	602	690					
WHEMLOCK			67.5	30.1	251	358	466					
R ALDER			84.9	79.5	26	125	224					
NOB FIR												
TOTAL			100.9	13.6	483	559	636	407	102	45		
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			86.2	12.7	115	132	148					
WHEMLOCK			62.7	27.9	60	84	107					
R ALDER			81.2	76.0	10	42	74					
NOB FIR												
TOTAL			86.6	11.7	110	124	138	300	75	33		
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			67.7	20.4	64	81	97					
WHEMLOCK			257.5	77.5	3	14	24					
R ALDER			253.4	76.3	1	6	11					
NOB FIR			346.4	104.3		1	2					
TOTAL			60.1	18.1	83	101	120	157	39	17		
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			53.2	16.0	129	153	178					
WHEMLOCK			200.0	60.2	8	20	32					
R ALDER			233.5	70.3	2	7	11					
NOB FIR			346.4	104.3		3	7					
TOTAL			38.9	11.7	162	183	205	66	16	7		
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			52.4	15.8	23,776	28,226	32,677					
WHEMLOCK			201.9	60.8	1,336	3,409	5,483					
R ALDER			244.3	73.6	156	589	1,023					
NOB FIR			346.4	104.3		578	1,182					

TC PSTATS				PROJECT NORSAM				PAGE 2		
								DATE 9/24/2018		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
03N	07	24	00A2	00MC	40.00	12	55	S	W	
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			44.5	13.4	28,405	32,804	37,203	86	22	10
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			54.8	16.5	5,411	6,480	7,549			
WHEMLOCK			196.8	59.3	326	799	1,273			
R ALDER			241.7	72.8	54	200	346			
NOB FIR			346.4	104.3		156	319			
TOTAL			42.8	12.9	6,651	7,636	8,620	80	20	9

TC PLOGSTVB				Log Stock Table - MBF															
T03N R07W S24 Ty00MC 40.00				Project: NORSAM												Page 2			
				Acres 40.00												Date 9/24/2018			
																Time 1:57:21PM			
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		1,332	1.5	1,312	100.0			187	131	204	229	162	211	86	102			

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		9/24/2018	
T03N R07W S24 Ty00MC 40.00				Project						NORSAM				Time:		1:57:23PM	
				Acres						40.00				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		
DF	10	2	89	97	12.223	6.67	12.22	12.8	60.0	4.45	156	733	178	62	29		
DF	12	1	89	118	4.244	3.33	8.49	14.5	70.0	3.50	123	594	140	49	24		
DF	14	2	85	115	6.236	6.67	12.47	19.2	87.5	6.83	240	1,091	273	96	44		
DF	15	3	86	121	8.149	10.00	16.30	24.0	101.7	11.13	390	1,657	445	156	66		
DF	16	2	85	107	4.775	6.67	9.55	25.1	102.5	6.82	239	979	273	96	39		
DF	17	1	85	123	2.115	3.33	4.23	31.6	120.0	3.81	134	508	153	54	20		
DF	18	5	87	113	9.431	16.67	22.64	26.8	103.3	17.28	606	2,339	691	243	94		
DF	19	4	86	127	6.772	13.33	18.62	31.4	127.3	16.64	584	2,370	666	234	95		
DF	20	7	87	126	10.695	23.33	30.56	33.1	133.5	28.81	1,011	4,079	1,152	404	163		
DF	21	2	87	126	2.772	6.67	6.93	41.0	162.0	8.09	284	1,123	324	114	45		
DF	22	1	90	123	1.263	3.33	3.79	38.3	176.7	4.13	145	669	165	58	27		
DF	23	1	88	134	1.155	3.33	3.47	44.6	203.3	4.41	155	705	176	62	28		
DF	24	1	82	107	1.061	3.33	2.12	58.6	215.0	3.55	124	456	142	50	18		
DF	25	4	86	135	3.911	13.33	11.73	50.5	225.8	16.88	592	2,650	675	237	106		
DF	26	2	84	127	1.808	6.67	5.42	52.0	211.7	8.04	282	1,148	322	113	46		
DF	28	1	85	161	.780	3.33	2.34	76.9	386.7	5.13	180	904	205	72	36		
DF	32	1	84	142	.597	3.33	1.79	91.0	436.7	4.65	163	782	186	65	31		
DF	33	1	84	154	.561	3.33	1.68	98.8	473.3	4.74	166	797	190	67	32		
DF	34	2	85	165	1.057	6.67	4.23	88.0	448.7	10.61	372	1,898	424	149	76		
DF	35	1	84	171	.499	3.33	2.00	91.0	460.0	5.18	182	918	207	73	37		
DF	38	1	81	159	.423	3.33	1.27	134.2	676.7	4.86	170	859	194	68	34		
DF	42	1	83	168	.346	3.33	1.39	131.0	697.5	5.17	182	967	207	73	39		
DF	Totals	46	87	119	80.874	153.33	183.23	35.4	154.0	184.68	6,480	28,226	7,387	2,592	1,129		
WH	11	1	89	96	5.051	3.33	10.10	10.0	45.0	3.23	101	455	129	40	18		
WH	15	1	85	106	2.716	3.33	5.43	24.0	100.0	4.18	131	543	167	52	22		
WH	16	1	86	111	2.387	3.33	4.77	29.1	120.0	4.45	139	573	178	56	23		
WH	22	1	81	108	1.263	3.33	2.53	52.9	180.0	4.28	134	455	171	53	18		
WH	23	1	86	131	1.155	3.33	3.47	34.1	166.7	3.79	118	578	151	47	23		
WH	24	1	86	146	1.061	3.33	3.18	55.6	253.3	5.66	177	806	226	71	32		
WH	Totals	6	86	109	13.633	20.00	29.48	27.1	115.6	25.57	799	3,409	1,023	320	136		
RA	12	1	73	73	4.244	3.33	4.24	17.8	50.0	2.08	76	212	83	30	8		
RA	18	1	74	103	1.886	3.33	3.77	33.0	100.0	3.42	124	377	137	50	15		
RA	Totals	2	73	82	6.130	6.67	8.02	25.0	73.5	5.50	200	589	220	80	24		
NF	27	1	84	139	.838	3.33	2.52	62.2	230.0	3.75	156	578	150	63	23		
NF	Totals	1	84	139	.838	3.33	2.52	62.2	230.0	3.75	156	578	150	63	23		
Totals		55	86	116	101.476	183.33	223.25	34.2	146.9	219.51	7,636	32,804	8,780	3,054	1,312		

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)															
T03N R07W S24 Ty00MC64.00				Project: NORSAM										Page 1					
				Acres 64.00										Date 9/24/2018					
														Time 1:58:44PM					
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
							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								
DF	CU																		
DF	2M	59	.8	23,097	22,907	1,466			69	31					100	5 18		0.00	2.3
DF	3M	32	.4	12,674	12,624	808			94	6					1 99	40 15	332	1.75	68.9
DF	4M	9		3,169	3,169	203			100			11	28	20	41	40 9	120	0.73	105.0
DF																27 6	42	0.40	74.9
DF	Totals	88	.6	38,940	38,700	2,477			39	43	19	1	2	2	95	36 10	154	0.96	251.2
NF	2M	72	2.5	2,101	2,048	131				30	70				100	40 17	448	2.19	4.6
NF	3M	21	3.7	613	590	38			80	20					100	39 10	140	0.91	4.2
NF	4M	7		181	181	12			100				22	29	49	33 6	48	0.44	3.8
NF	Totals	6	2.6	2,895	2,819	180			23	26	51		1	2	97	38 11	224	1.28	12.6
WH	CU															2 7		0.00	3.3
WH	2M	33		788	788	50				65	35				100	40 15	385	2.03	2.0
WH	3M	41	2.4	984	961	62			74	26			15	17	68	36 8	88	0.61	11.0
WH	4M	26		594	594	38			100			36	4	17	43	26 7	40	0.37	14.7
WH	Totals	5	1.0	2,366	2,343	150			56	33	12	9	7	11	72	28 8	75	0.63	31.1
Totals			0.8	44,201	43,863	2,807			39	41	20	1	2	2	94	35 10	149	0.95	294.8

Area 3

TC PSTATS						PROJECT STATISTICS				PAGE	1	
						PROJECT NORSAM				DATE	9/24/2018	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
03N	07	24	00A3	00MC	64.00	22	124	S	W			
						TREES	ESTIMATED	PERCENT				
						PER PLOT	TOTAL	SAMPLE				
							TREES	TREES				
TOTAL			22	124	5.6							
CRUISE			22	124	5.6	7,817	1.6					
DBH COUNT												
REFOREST												
COUNT												
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			108	100.4	18.9	123	45.1	196.4	38,940	38,700	8,646	8,646
WHEMLOCK			9	17.1	13.3	82	4.5	16.4	2,366	2,343	545	545
NOB FIR			7	4.7	22.3	130	2.7	12.7	2,895	2,819	607	607
TOTAL			124	122.1	18.4	118	52.6	225.5	44,201	43,863	9,798	9,798
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			56.2	5.4	478	505	533					
WHEMLOCK			108.8	38.4	161	261	361					
NOB FIR			42.3	17.2	610	737	864					
TOTAL			59.1	5.3	474	501	527	139	35	15		
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			54.2	5.2	106	112	118					
WHEMLOCK			105.9	37.4	38	61	83					
NOB FIR			37.7	15.4	132	156	180					
TOTAL			56.7	5.1	105	111	116	128	32	14		
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			48.4	10.6	90	100	111					
WHEMLOCK			170.5	37.2	11	17	23					
NOB FIR			268.4	58.5	2	5	7					
TOTAL			43.9	9.6	110	122	134	80	20	9		
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			32.0	7.0	183	196	210					
WHEMLOCK			162.8	35.5	11	16	22					
NOB FIR			245.1	53.4	6	13	20					
TOTAL			29.3	6.4	211	225	240	36	9	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			33.2	7.2	35,903	38,700	41,498					
WHEMLOCK			169.4	36.9	1,478	2,343	3,208					
NOB FIR			241.2	52.6	1,337	2,819	4,302					
TOTAL			28.8	6.3	41,104	43,863	46,621	35	9	4		
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			33.5	7.3	8,015	8,646	9,277					
WHEMLOCK			171.3	37.3	342	545	749					

TC PSTATS				PROJECT STATISTICS				PAGE	2
				PROJECT NORSAM				DATE	9/24/2018
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	07	24	00A3	00MC	64.00	22	124	S	W
CL	68.1	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
NOB FIR		242.7	52.9	286	607	928			
TOTAL		29.4	6.4	9,169	9,798	10,426	36	9	4

Log Stock Table - MBF

T03N R07W S24 Ty00MC 64.00

Project: NORSAM
Acres 64.00Page 1
Date 9/24/2018
Time 1:58:44PM

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+	
DF		2M	38	6		6	.2					6								
DF		2M	40	1,473		1,460	59.0					365	441	570	74	11				
DF		3M	34	8		8	.3			8										
DF		3M	36	9		9	.4			8	1									
DF		3M	38	24		24	1.0			24										
DF		3M	40	770		767	31.0			82	205	430	50							
DF		4M	12	2		2	.1			2										
DF		4M	14	5		5	.2			5										
DF		4M	16	1		1	.0			1										
DF		4M	18	6		6	.2			6										
DF		4M	20	8		8	.3			8										
DF		4M	22	13		13	.5			13										
DF		4M	24	10		10	.4			10										
DF		4M	26	7		7	.3			7										
DF		4M	28	13		13	.5			13										
DF		4M	30	13		13	.5			13										
DF		4M	32	35		35	1.4			35										
DF		4M	34	6		6	.3			6										
DF		4M	36	14		14	.5			14										
DF		4M	38	29		29	1.2			29										
DF		4M	40	41		41	1.6			6	7	28								
DF		Totals		2,492		2,477	88.2			289	213	458	420	441	570	74	11			
NF		2M	40	134	2.5	131	72.6							39	71	20				
NF		3M	36	2		2	1.0			2										
NF		3M	38	2		2	1.0			2										
NF		3M	40	36	4.1	34	19.0					27	8							
NF		4M	26	3		3	1.4			3										
NF		4M	32	2		2	.9			2										
NF		4M	34	2		2	1.0			2										
NF		4M	40	6		6	3.2			6										
NF		Totals		185	2.6	180	6.4			15		27	8	39	71	20				
WH		2M	40	50		50	33.6							33	18					
WH		3M	22	9		9	6.1					9								
WH		3M	34	11		11	7.1			11										
WH		3M	40	43	3.4	42	27.8			9	26	7								

Log Stock Table - MBF

T03N R07W S24 Ty00MC 64.00

Project: NORSAM
Acres 64.00Page 2
Date 9/24/2018
Time 1:58:44PM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spe	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				4M 12	1		1	.7			1									
WH				4M 18	4		4	2.8			4									
WH				4M 20	9		9	5.7				9								
WH				4M 30	1		1	1.0			1									
WH				4M 34	6		6	4.2			6									
WH				4M 36	11		11	7.1			11									
WH				4M 40	6		6	3.9			6									
WH				Totals	151		150	5.3			49	34		16	33	18				
Total				All Species	2,829		2,807	100.0			353	247		485	444	514	658	94	11	

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		9/24/2018	
T03N R07W S24 Ty00MC 64.00				Project						NORSAM				Time:		1:58:46PM	
				Acres						64.00				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		
DF	10	2	87	77	6.667	3.64	6.67	12.4	60.0	2.36	83	400	151	53	26		
DF	11	1	82	95	2.755	1.82	2.76	17.1	60.0	1.34	47	165	86	30	11		
DF	12	1	92	116	2.315	1.82	4.63	14.5	65.0	1.91	67	301	122	43	19		
DF	13	1	89	116	1.973	1.82	3.95	17.7	85.0	1.99	70	335	127	45	21		
DF	14	2	87	112	3.402	3.64	6.80	19.1	87.5	3.70	130	595	237	83	38		
DF	15	5	88	108	7.408	9.09	14.82	22.5	100.0	9.51	334	1,482	609	214	95		
DF	16	10	88	121	13.022	18.18	31.25	23.6	103.8	20.98	736	3,242	1,343	471	208		
DF	17	7	89	130	8.074	12.73	21.92	25.3	111.6	15.83	556	2,445	1,013	356	157		
DF	18	9	88	121	9.260	16.36	22.64	29.7	122.3	19.18	673	2,768	1,227	431	177		
DF	19	8	88	129	7.387	14.55	20.32	31.4	133.2	18.17	638	2,706	1,163	408	173		
DF	20	8	87	138	6.667	14.55	20.00	33.5	149.6	19.08	669	2,992	1,221	428	191		
DF	21	6	88	127	4.535	10.91	13.61	35.2	155.6	13.65	479	2,117	873	306	135		
DF	22	13	87	133	8.954	23.64	25.48	43.3	197.3	31.42	1,102	5,028	2,011	706	322		
DF	23	6	87	135	3.781	10.91	11.34	45.1	202.2	14.58	512	2,294	933	328	147		
DF	24	6	88	137	3.472	10.91	10.42	48.0	218.9	14.25	500	2,280	912	320	146		
DF	25	9	88	141	4.800	16.36	14.93	53.5	249.6	22.76	799	3,728	1,457	511	239		
DF	26	4	86	144	1.973	7.27	5.92	60.3	279.2	10.17	357	1,652	651	228	106		
DF	27	4	86	141	1.829	7.27	5.03	70.2	326.4	10.07	353	1,642	644	226	105		
DF	28	2	87	145	.850	3.64	2.55	71.6	346.7	5.21	183	884	333	117	57		
DF	30	1	87	140	.370	1.82	1.11	79.8	393.3	2.53	89	437	162	57	28		
DF	31	1	83	130	.347	1.82	1.04	79.9	363.3	2.37	83	378	152	53	24		
DF	32	1	89	155	.326	1.82	.98	99.9	503.3	2.78	98	492	178	62	31		
DF	38	1	84	143	.231	1.82	.69	129.3	486.7	2.55	90	337	163	57	22		
DF	Totals	108	88	123	100.399	196.36	248.84	34.7	155.5	246.40	8,646	38,700	15,770	5,533	2,477		
NF	15	1	91	114	1.482	1.82	2.96	23.6	105.0	1.68	70	311	107	45	20		
NF	21	1	90	135	.756	1.82	2.27	37.8	146.7	2.05	86	333	132	55	21		
NF	24	1	89	130	.579	1.82	1.74	48.4	223.3	2.02	84	388	129	54	25		
NF	26	1	91	138	.493	1.82	1.48	61.1	296.7	2.17	90	439	139	58	28		
NF	27	3	88	143	1.372	5.45	4.12	67.3	327.8	6.64	277	1,349	425	177	86		
NF	Totals	7	90	130	4.681	12.73	12.56	48.3	224.4	14.56	607	2,819	932	388	180		
WH	10	2	89	73	6.667	3.64	10.00	7.6	36.7	2.45	76	367	157	49	23		
WH	11	1	87	57	2.755	1.82	2.76	13.4	60.0	1.18	37	165	75	24	11		
WH	12	1	89	75	2.315	1.82	2.31	18.5	60.0	1.37	43	139	88	27	9		
WH	13	1	89	110	1.973	1.82	3.95	19.1	85.0	2.41	75	335	154	48	21		
WH	16	1	84	95	1.302	1.82	2.60	22.5	90.0	1.88	59	234	120	38	15		
WH	20	1	85	117	.833	1.82	2.50	32.2	130.0	2.58	81	325	165	52	21		
WH	21	1	88	115	.756	1.82	2.27	36.6	163.3	2.66	83	370	170	53	24		
WH	27	1	85	135	.457	1.82	1.37	66.8	296.7	2.93	92	407	188	59	26		
WH	Totals	9	88	82	17.058	16.36	27.76	19.6	84.4	17.45	545	2,343	1,117	349	150		
Totals		124	88	118	122.138	225.45	289.16	33.9	151.7	278.41	9,798	43,863	17,818	6,270	2,807		

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT			NORSAM			DATE	9/24/2018		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
03N	07	24	00A1	00MC		114.00	38	201	S	W		
03N	07W	24	00A2	00MC								
03N	07W	24	00A3	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			38	201	5.3							
CRUISE			38	201	5.3	12,974	1.5					
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			167	90.1	18.9	122	40.4	175.4	34,295	34,014	7,633	7,633
WHEMLOCK			22	17.3	15.4	96	5.7	22.3	3,806	3,764	871	871
R ALDER			3	2.9	14.3	79	0.8	3.2	293	285	94	94
NOB FIR			8	2.9	22.8	131	1.7	8.3	1,866	1,786	395	395
BL MAPLE			1	.6	16.0	108	0.2	.9	151	151	36	36
TOTAL			201	113.8	18.4	117	49.0	210.2	40,411	40,000	9,029	9,029
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			77.0	6.0	522	555	588					
WHEMLOCK			74.0	16.1	313	374	434					
R ALDER			62.9	43.5	68	120	172					
NOB FIR			39.5	14.9	622	731	840					
BL MAPLE												
TOTAL			77.2	5.4	505	534	563		238	60	26	
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			68.4	5.3	115	121	128					
WHEMLOCK			73.2	16.0	73	86	100					
R ALDER			62.8	43.5	22	39	56					
NOB FIR			34.8	13.1	139	160	181					
BL MAPLE												
TOTAL			68.9	4.9	112	117	123		189	47	21	
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			56.7	9.2	82	90	98					
WHEMLOCK			193.4	31.4	12	17	23					
R ALDER			374.4	60.7	1	3	5					
NOB FIR			326.6	52.9	1	3	4					
BL MAPLE			616.4	99.9	0	1	1					
TOTAL			49.8	8.1	105	114	123		99	25	11	
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			41.6	6.7	164	175	187					
WHEMLOCK			193.8	31.4	15	22	29					
R ALDER			349.2	56.6	1	3	5					
NOB FIR			292.7	47.4	4	8	12					
BL MAPLE			616.4	99.9	0	1	2					
TOTAL			33.3	5.4	199	210	222		44	11	5	

PROJECT STATISTICS

PROJECT NORSAM

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	07	24	00A1	00MC	114.00	38	201	S	W
03N	07W	24	00A2	00MC					
03N	07W	24	00A3	00MC					

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		41.5	6.7	31,724	34,014	36,305			
WHEMLOCK		217.4	35.2	2,438	3,764	5,090			
R ALDER		360.3	58.4	119	285	452			
NOB FIR		293.5	47.6	936	1,786	2,635			
BL MAPLE		616.4	99.9	0	151	301			
TOTAL		<i>35.1</i>	<i>5.7</i>	<i>37,722</i>	<i>40,000</i>	<i>42,278</i>	<i>49</i>	<i>12</i>	<i>5</i>

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		42.9	7.0	7,102	7,633	8,164			
WHEMLOCK		212.5	34.4	571	871	1,170			
R ALDER		360.5	58.4	39	94	149			
NOB FIR		290.5	47.1	209	395	582			
BL MAPLE		616.4	99.9	0	36	71			
TOTAL		<i>34.5</i>	<i>5.6</i>	<i>8,524</i>	<i>9,029</i>	<i>9,534</i>	<i>48</i>	<i>12</i>	<i>5</i>

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T03N R07W S24 Ty00MC10.00 T03N R07W S24 Ty00MC40.00 T03N R07W S24 Ty00MC64.00				Project: NORSAM														Page 1			
				Acres 114.00														Date 9/24/2018			
																		Time 2:01:39PM			
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									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					
RA		R		100	2.4	293	285	33	100				3862				34	8	81	0.80	3.5
RA	Totals			1	2.4	293	285	33	100				3862				34	8	81	0.80	3.5
DF		CU															6	15		0.00	4.1
DF		2M		59	.9	20,337	20,156	2,298			64	36				100	40	15	342	1.80	59.0
DF		3M		33	.8	11,319	11,224	1,280		90	5	5		0	1	98	40	9	120	0.73	93.4
DF		4M		8	.2	2,639	2,634	300		100			13	22	22	43	27	6	42	0.39	63.2
DF	Totals			85	.8	34,295	34,014	3,878		38	39	23	1	2	2	95	36	10	155	0.98	219.6
WH		CU															3	9		0.00	2.3
WH		2M		48	1.6	1,849	1,820	207			63	37				100	40	15	341	1.83	5.3
WH		3M		38	.9	1,434	1,421	162		90	10			6	7	88	38	8	101	0.65	14.1
WH		4M		14		523	523	60		100			38	8	20	35	24	6	36	0.37	14.5
WH	Totals			9	1.1	3,806	3,764	429		48	34	18	5	3	5	86	31	9	104	0.78	36.2
BM		R		100		151	151	17		100					25	75	37	9	120	0.77	1.3
BM	Totals			0		151	151	17		100					25	75	37	9	120	0.77	1.3
NF		2M		74	4.8	1,406	1,338	153			31	69				100	40	16	424	2.18	3.2
NF		3M		19	3.7	344	331	38		80	20					100	39	10	140	0.91	2.4
NF		4M		7		116	116	13		100				19	38	43	33	6	48	0.45	2.4
NF	Totals			4	4.3	1,866	1,786	204		21	27	52		1	2	96	38	11	225	1.32	7.9
Totals					1.0	40,411	40,000	4,560		38	38	24	1	2	3	94	35	10	149	0.96	268.5

TC PLOGSTVB			Log Stock Table - MBF																
T03N R07W S24 Ty00MC 10.00 T03N R07W S24 Ty00MC 40.00 T03N R07W S24 Ty00MC 64.00				Project: NORSAM Acres 114.00												Page 1 Date 9/24/2018 Time 2:01:39PM			
Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Sp	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		R	28			4	11.6			4									
RA		R	30			8	26.1			8									
RA		R	40		3.9	21	62.3				9	11							
RA		Totals				33	2.4	33	.7			12	9	11					
DF		2M	38			6	.1					6							
DF		2M	40			2,313	59.1					590	601	797	217	88			
DF		3M	30			3	.1			3									
DF		3M	32			5	.1			3	2								
DF		3M	34			13	.3			13									
DF		3M	36			17	.4			15	1								
DF		3M	38			27	.7			24	3								
DF		3M	40			1,226	31.3			131	369	589	58	4	12	12	40		
DF		4M	12			5	.1			5	0								
DF		4M	14			6	.2			5	0	1							
DF		4M	16			7	.2			7									
DF		4M	18			10	.3			10	1								
DF		4M	20			11	.3			11									
DF		4M	22		3.9	16	.4			15									
DF		4M	24			10	.3			10									
DF		4M	26			11	.3			11									
DF		4M	28			15	.4			15									
DF		4M	30			15	.4			15									
DF		4M	32			47	1.2			47									
DF		4M	34			17	.4			17									
DF		4M	36			19	.5			19									
DF		4M	38			29	.8			29									
DF		4M	40			81	2.1			38	7	37							
DF		Totals				3,910		3,878	85.0			445	383	626	653	605	809	229	128
WH		2M	40		1.6	211	48.4					44	88	76					
WH		3M	22			9	2.1					9							
WH		3M	34			11	2.5			11									
WH		3M	40		1.0	144	33.1			34	56	45	7						
WH		4M	12			1	.2			1									
WH		4M	16			6	1.3			6									
WH		4M	18			5	1.3			5									

TC PLOGSTVB			Log Stock Table - MBF																
T03N R07W S24 Ty00MC10.00 T03N R07W S24 Ty00MC40.00 T03N R07W S24 Ty00MC64.00				Project: NORSAM										Page 2					
				Acres 114.00										Date 9/24/2018					
														Time 2:01:39PM					
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+
WH		4M	20	10		10	2.4			2	9								
WH		4M	22	1		1	.3			1									
WH		4M	24	2		2	.4			2									
WH		4M	30	1		1	.3			1									
WH		4M	34	12		12	2.7			12									
WH		4M	36	11		11	2.5			11									
WH		4M	40	10		10	2.4			10									
WH		Totals		434	1.1	429	9.4			96	65	45	60	88	76				
BM		R	34	4		4	25.0			4									
BM		R	40	13		13	75.0					13							
BM		Totals		17		17	.4			4		13							
NF		2M	40	160	4.8	153	74.9					8	39	85	20				
		3M	36	2		2	.9			2									
		3M	38	2		2	.9			2									
		3M	40	36	4.1	34	16.8					27	8						
		4M	26	3		3	1.3			3									
		4M	32	3		3	1.6			3									
		4M	34	2		2	.9			2									
		4M	40	6		6	2.8			6									
NF		Totals		213	4.3	204	4.5			17		27	16	39	85	20			
Total		All Species		4,607	1.0	4,560	100.0			574	457	722	729	732	969	249	128		

TC		PSTNDSUM											Stand Table Summary											Page Date:		1 9/24/2018	
T03N R07W S24 Ty00MC 10.00					Project NORSAM											Time:		2:01:41PM									
T03N R07W S24 Ty00MC 40.00					Acres 114.00											Grown Year:											
T03N R07W S24 Ty00MC 64.00																											
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Totals											
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons	Cunits				MBF											
DF		10	4	88	87	8.032	4.38	8.03	12.6	60.0	2.89	101	482		329	115	55										
DF		11	2	85	96	2.876	1.90	2.88	15.1	60.0	1.24	43	173		141	50	20										
DF		12	2	90	117	2.789	2.19	5.58	14.5	67.7	2.30	81	377		262	92	43										
DF		13	1	89	116	1.107	1.02	2.21	17.7	85.0	1.12	39	188		127	45	21										
DF		14	5	86	116	4.918	5.26	9.84	19.5	87.9	5.48	192	865		624	219	99										
DF		15	8	87	114	7.018	8.61	14.04	23.1	100.7	9.24	324	1,413		1,054	370	161										
DF		16	13	87	115	9.614	13.42	21.52	24.1	103.2	14.80	519	2,220		1,687	592	253										
DF		17	8	88	129	5.275	8.31	13.79	26.0	112.5	10.23	359	1,551		1,166	409	177										
DF		18	15	88	118	9.004	15.91	21.64	28.9	116.4	17.82	625	2,518		2,031	713	287										
DF		19	12	87	128	6.523	12.84	17.94	31.4	131.0	16.04	563	2,351		1,829	642	268										
DF		20	16	87	132	7.898	17.23	23.16	33.2	140.9	21.89	768	3,264		2,496	876	372										
DF		21	8	88	127	3.519	8.46	10.07	36.6	157.1	10.50	368	1,582		1,197	420	180										
DF		22	15	87	133	5.802	15.32	16.63	42.9	196.4	20.33	713	3,267		2,317	813	372										
DF		23	7	87	135	2.528	7.29	7.58	45.0	202.4	9.73	342	1,535		1,110	389	175										
DF		24	7	87	132	2.322	7.29	6.59	49.2	218.4	9.25	324	1,440		1,054	370	164										
DF		25	14	87	141	4.325	14.74	13.53	52.1	241.7	20.10	705	3,270		2,291	804	373										
DF		26	7	85	141	1.980	7.30	6.18	56.2	252.3	9.90	347	1,559		1,128	396	178										
DF		27	4	86	141	1.027	4.08	2.82	70.2	326.4	5.65	198	922		644	226	105										
DF		28	4	86	153	.956	4.09	3.07	69.5	344.2	6.09	214	1,058		694	243	121										
DF		29	1	84	154	.191	.88	.57	78.4	383.3	1.28	45	220		146	51	25										
DF		30	3	87	150	.565	2.78	1.70	82.6	406.0	3.99	140	689		455	160	78										
DF		31	1	83	130	.195	1.02	.58	79.9	363.3	1.33	47	212		152	53	24										
DF		32	2	86	148	.392	2.19	1.18	95.2	467.7	3.19	112	550		364	128	63										
DF		33	1	84	154	.197	1.17	.59	98.8	473.3	1.66	58	280		190	67	32										
DF		34	2	85	165	.371	2.34	1.48	88.0	448.7	3.72	131	666		424	149	76										
DF		35	1	84	171	.175	1.17	.70	91.0	460.0	1.82	64	322		207	73	37										
DF		38	2	82	152	.278	2.19	.83	131.9	588.1	3.14	110	491		358	125	56										
DF		40	1	81	166	.101	.88	.30	119.1	700.0	1.02	36	211		117	41	24										
DF		42	1	83	168	.122	1.17	.49	131.0	697.5	1.82	64	339		207	73	39										
DF		Totals	167	87	122	90.099	175.44	215.54	35.4	157.8	217.55	7,633	34,014		24,800	8,702	3,878										
WH		10	2	89	73	3.743	2.04	5.61	7.6	36.7	1.37	43	206		157	49	23										
WH		11	2	88	78	3.319	2.19	5.09	11.0	49.6	1.79	56	252		204	64	29										
WH		12	1	89	75	1.300	1.02	1.30	18.5	60.0	.77	24	78		88	27	9										
WH		13	1	89	110	1.107	1.02	2.21	19.1	85.0	1.35	42	188		154	48	21										
WH		14	1	89	86	.821	.88	1.64	16.8	70.0	.88	28	115		101	31	13										
WH		15	1	85	106	.953	1.17	1.91	24.0	100.0	1.47	46	191		167	52	22										
WH		16	2	85	104	1.569	2.19	3.14	26.0	106.0	2.62	82	333		298	93	38										
WH		18	2	89	132	.993	1.75	2.98	28.0	126.7	2.67	83	377		304	95	43										
WH		20	2	87	123	.870	1.90	2.61	33.9	151.6	2.83	88	396		323	101	45										
WH		21	1	88	115	.424	1.02	1.27	36.6	163.3	1.49	47	208		170	53	24										
WH		22	1	81	108	.443	1.17	.89	52.9	180.0	1.50	47	160		171	53	18										
WH		23	1	86	131	.405	1.17	1.22	34.1	166.7	1.33	42	203		151	47	23										
WH		24	1	86	146	.372	1.17	1.12	55.6	253.3	1.99	62	283		226	71	32										
WH		25	1	84	147	.257	.88	.77	59.9	276.7	1.48	46	214		169	53	24										
WH		26	1	82	123	.238	.88	.71	54.4	216.7	1.24	39	155		142	44	18										
WH		27	2	83	141	.477	1.90	1.43	67.2	284.3	3.08	96	407		351	110	46										
WH		Totals	22	87	96	17.292	22.34	33.90	25.7	111.0	27.86	871	3,764		3,176	992	429										
NF		15	1	91	114	.832	1.02	1.66	23.6	105.0	.94	39	175		107	45	20										
NF		21	1	90	135	.424	1.02	1.27	37.8	146.7	1.15	48	187		132	55	21										
NF		24	1	89	130	.325	1.02	.97	48.4	223.3	1.13	47	218		129	54	25										
NF		26	1	91	138	.277	1.02	.83	61.1	296.7	1.22	51	246		139	58	28										
NF		27	4	87	142	1.064	4.23	3.19	65.9	300.8	5.05	210	960		575	240	109										

TC		PSTNDSUM										Stand Table Summary										Page		2			
																						Date:		9/24/2018			
		T03N R07W S24 Ty00MC 10.00										Project										NORSAM		Time:		2:01:41PM	
		T03N R07W S24 Ty00MC 40.00										Acres										114.00		Grown Year:			
		T03N R07W S24 Ty00MC 64.00																									
S		Tot							Average Log		Net		Net		Totals												
Spec T		Sample		FF	Av	Trees/	BA/	Logs	Net	Net	Tons/	Cu.Ft.	Bd.Ft.	Tons	Cunits	MBF											
		DBH	Trees	16'	Ht	Acre	Acre	Acre	Cu.Ft.	Bd.Ft.	Acre	Acre	Acre														
NF		Totals	8	89	131	2.922	8.31	7.93	49.8	225.1	9.49	395	1,786	1,082	451	204											
RA		12	1	73	73	1.489	1.17	1.49	17.8	50.0	.73	27	74	83	30	8											
RA		15	1	87	71	.715	.88	.71	33.4	110.0	.66	24	79	75	27	9											
RA		18	1	74	103	.662	1.17	1.32	33.0	100.0	1.20	44	132	137	50	15											
RA		Totals	3	77	79	2.866	3.22	3.53	26.7	80.9	2.59	94	285	295	107	33											
BM		16	1	87	108	.628	.88	1.26	28.4	120.0	.95	36	151	108	41	17											
BM		Totals	1	87	108	.628	.88	1.26	28.4	120.0	.95	36	151	108	41	17											
Totals		201	87	117		113.807	210.20	262.16	34.4	152.6	258.43	9,029	40,000	29,461	10,293	4,560											

TC PSTATS			PROJECT STATISTICS							PAGE	1	
			PROJECT				NORSAM		DATE	9/24/2018		
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt	
03N	07	24	00A1	00MC		10.00		4	22	S	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES		PERCENT SAMPLE TREES				
TOTAL			4	22	5.5							
CRUISE			4	22	5.5	1,098		2.0				
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			13	61.1	19.8	123	29.2	130.0	27,339	27,176	5,766	5,766
WHEMLOCK			7	33.4	19.6	120	15.8	70.0	14,607	14,275	3,238	3,238
BL MAPLE			1	7.2	16.0	108	2.5	10.0	1,719	1,719	407	407
R ALDER			1	8.1	15.0	71	2.6	10.0	978	896	272	272
TOTAL			22	109.8	19.2	117	50.3	220.0	44,643	44,065	9,683	9,683
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			74.4	21.4	633	805	978					
WHEMLOCK			47.3	19.3	429	531	634					
BL MAPLE												
R ALDER												
TOTAL			77.8	17.0	549	661	773	253	63	28		
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			65.2	18.8	132	162	193					
WHEMLOCK			50.1	20.4	97	122	147					
BL MAPLE												
R ALDER												
TOTAL			67.4	14.7	118	139	159	190	47	21		
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			47.4	27.1	45	61	78					
WHEMLOCK			179.0	102.3		33	68					
BL MAPLE			200.0	114.3		7	15					
R ALDER			200.0	114.3		8	17					
TOTAL			61.3	35.0	71	110	148	196	49	22		
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			38.7	22.1	101	130	159					
WHEMLOCK			164.1	93.8	4	70	136					
BL MAPLE			200.0	114.3		10	21					
R ALDER			200.0	114.3		10	21					
TOTAL			45.8	26.1	162	220	278	109	27	12		
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			44.1	25.2	20,334	27,176	34,017					
WHEMLOCK			168.7	96.4	517	14,275	28,032					
BL MAPLE			200.0	114.3		1,719	3,683					
R ALDER			200.0	114.3		896	1,921					

TC PSTATS			PROJECT STATISTICS					PAGE	2	
			PROJECT		NORSAM			DATE	9/24/2018	
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
03N	07	24	00A1	00MC	10.00		4	22	S	W
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			47.5	27.2	32,101	44,065	56,030	118	29	13
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			45.4	25.9	4,272	5,766	7,261			
WHEMLOCK			165.6	94.6	175	3,238	6,300			
BL MAPLE			200.0	114.3		407	873			
R ALDER			200.0	114.3		272	583			
TOTAL			44.2	25.2	7,240	9,683	12,127	102	25	11

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T03N R07W S24 Ty00MC10.00				Project: NORSAM										Page 1							
				Acres 10.00										Date 9/24/2018							
														Time 1:54:31PM							
S Spp	So T	Gr rt	ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									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					
RA		R		100	8.3	978	896	9	100				100				40	9	110	0.83	8.1
RA		Totals		2	8.3	978	896	9	100				100				40	9	110	0.83	8.1
BM		R		100		1,719	1,719	17	100				2575				37	9	120	0.77	14.3
BM		Totals		4		1,719	1,719	17	100				2575				37	9	120	0.77	14.3
DF		CU															6	11		0.00	16.3
DF		2M		73	.8	20,127	19,964	200			43	57			100	40	16	446	2.16	44.8	
DF		3M		25		6,770	6,770	68		100					100	40	8	96	0.63	70.4	
DF		4M		2		441	441	4		100			57		43		18	6	27	0.37	16.4
DF		Totals		62	.6	27,339	27,176	272		27	32	42	1		1	98	34	11	184	1.15	147.9
WH		2M		67	3.3	9,935	9,602	96			59	41			100	40	15	325	1.75	29.5	
WH		3M		26		3,807	3,807	38		100					100	40	9	125	0.75	30.5	
WH		4M		7		865	865	9		100			44	36	20	22	6	28	0.38	30.9	
WH		Totals		32	2.3	14,607	14,275	143		33	40	27	3	2	95	34	10	157	1.05	90.9	
Totals					1.3	44,643	44,065	441		33	32	35	1	1	1	96	34	10	169	1.08	261.3

TC PLOGSTVB				Log Stock Table - MBF															
T03N R07W S24 Ty00MC 10.00				Project: NORSAM Acres 10.00												Page 1 Date 9/24/2018 Time 1:54:31PM			
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+	
RA	R	40	10	8.3	9	100.0			9										
RA	Totals		10	8.3	9	2.0			9										
BM	R	34	4		4	25.0			4										
BM	R	40	13		13	75.0				13									
BM	Totals		17		17	3.9			4	13									
DF	2M	40	201		200	73.5				22	33	61	69	14					
DF	3M	38	3		3	.9			3										
DF	3M	40	65		65	24.0			15	42	9								
DF	4M	12	1		1	.5			1										
DF	4M	16	1		1	.4			1										
DF	4M	32	2		2	.7			2										
DF	Totals		273		272	61.7			19	44	9	22	33	61	69	14			
WH	2M	40	99	3.3	96	67.3				34	23	39							
WH	3M	40	38		38	26.7			2	25	12								
WH	4M	16	1		1	.6			1										
WH	4M	18	1		1	.8			1										
WH	4M	20	2		2	1.3			2										
WH	4M	22	1		1	1.0			1										
WH	4M	24	2		2	1.2			2										
WH	4M	40	2		2	1.2			2										
WH	Totals		146	2.3	143	32.4			10	25	12	34	23	39					
Total	All Species		446	1.3	441	100.0			34	78	33	56	56	100	69	14			

TC		PSTNDSUM										Stand Table Summary										Page		1	
																						Date:		9/24/2018	
T03N R07W S24 Ty00MC					10.00					Project					NORSAM					Time:		1:54:33PM			
										Acres					10.00					Grown Year:					
S Spec T				Tot					Average Log		Net		Net		Totals										
	DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF										
DF	11	1	89	98	15.153	10.00	15.15	12.8	60.0	5.51	193	909	55	19	9										
DF	14	1	86	127	9.354	10.00	18.71	21.5	90.0	11.46	402	1,684	115	40	17										
DF	16	1	80	72	7.162	10.00	7.16	34.9	90.0	7.13	250	645	71	25	6										
DF	18	1	88	122	5.659	10.00	11.32	35.0	145.0	11.28	396	1,641	113	40	16										
DF	20	1	85	127	4.584	10.00	13.75	31.2	126.7	12.23	429	1,742	122	43	17										
DF	22	1	90	140	3.788	10.00	11.36	43.6	210.0	14.13	496	2,387	141	50	24										
DF	25	1	89	168	2.934	10.00	11.73	47.6	240.0	15.90	558	2,816	159	56	28										
DF	26	1	85	166	2.712	10.00	10.85	50.3	240.0	15.55	546	2,604	155	55	26										
DF	28	1	86	162	2.339	10.00	9.35	58.3	297.5	15.55	546	2,783	155	55	28										
DF	29	1	84	154	2.180	10.00	6.54	78.4	383.3	14.61	512	2,507	146	51	25										
DF	30	2	87	156	4.074	20.00	12.22	84.2	413.3	29.34	1,029	5,052	293	103	51										
DF	40	1	81	166	1.146	10.00	3.44	119.1	700.0	11.67	410	2,406	117	41	24										
DF	Totals	13	86	122	61.084	130.00	131.60	43.8	206.5	164.34	5,766	27,176	1,643	577	272										
WH	14	1	89	86	9.354	10.00	18.71	16.8	70.0	10.07	315	1,310	101	31	13										
WH	18	2	89	132	11.318	20.00	33.95	28.0	126.7	30.40	950	4,301	304	95	43										
WH	20	1	90	130	4.584	10.00	13.75	35.8	176.7	15.77	493	2,429	158	49	24										
WH	25	1	84	147	2.934	10.00	8.80	59.9	276.7	16.87	527	2,435	169	53	24										
WH	26	1	82	123	2.712	10.00	8.14	54.4	216.7	14.16	443	1,763	142	44	18										
WH	27	1	81	147	2.515	10.00	7.55	67.6	270.0	16.33	510	2,037	163	51	20										
WH	Totals	7	88	120	33.417	70.00	90.90	35.6	157.0	103.60	3,238	14,275	1,036	324	143										
BM	16	1	87	108	7.162	10.00	14.32	28.4	120.0	10.80	407	1,719	108	41	17										
BM	Totals	1	87	108	7.162	10.00	14.32	28.4	120.0	10.80	407	1,719	108	41	17										
RA	15	1	87	71	8.149	10.00	8.15	33.4	110.0	7.48	272	896	75	27	9										
RA	Totals	1	87	71	8.149	10.00	8.15	33.4	110.0	7.48	272	896	75	27	9										
Totals	22	87	117		109.812	220.00	244.96	39.5	179.9	286.22	9,683	44,065	2,862	968	441										

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT			NORSAM			DATE	9/24/2018		
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt	
03N	07	24	00A2	00MC		40.00		12	55	S	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES		PERCENT SAMPLE TREES				
TOTAL			12	55	4.6							
CRUISE			12	55	4.6	4,059		1.4				
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			46	80.9	18.6	119	35.5	153.3	28,603	28,226	6,480	6,480
WHEMLOCK			6	13.6	16.4	109	4.9	20.0	3,409	3,409	799	799
R ALDER			2	6.1	14.1	82	1.8	6.7	589	589	200	200
NOB FIR			1	.8	27.0	139	0.6	3.3	687	578	156	156
TOTAL			55	101.5	18.2	116	43.0	183.3	33,289	32,804	7,636	7,636
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			99.7	14.7	513	602	690					
WHEMLOCK			67.5	30.1	251	358	466					
R ALDER			84.9	79.5	26	125	224					
NOB FIR												
TOTAL			100.9	13.6	483	559	636	407		102	45	
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			86.2	12.7	115	132	148					
WHEMLOCK			62.7	27.9	60	84	107					
R ALDER			81.2	76.0	10	42	74					
NOB FIR												
TOTAL			86.6	11.7	110	124	138	300		75	33	
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			67.7	20.4	64	81	97					
WHEMLOCK			257.5	77.5	3	14	24					
R ALDER			253.4	76.3	1	6	11					
NOB FIR			346.4	104.3		1	2					
TOTAL			60.1	18.1	83	101	120	157		39	17	
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			53.2	16.0	129	153	178					
WHEMLOCK			200.0	60.2	8	20	32					
R ALDER			233.5	70.3	2	7	11					
NOB FIR			346.4	104.3		3	7					
TOTAL			38.9	11.7	162	183	205	66		16	7	
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			52.4	15.8	23,776	28,226	32,677					
WHEMLOCK			201.9	60.8	1,336	3,409	5,483					
R ALDER			244.3	73.6	156	589	1,023					
NOB FIR			346.4	104.3		578	1,182					

TC PSTATS		PROJECT STATISTICS						PAGE	2
		PROJECT NORSAM						DATE	9/24/2018
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	07	24	00A2	00MC	40.00	12	55	S	W
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		44.5	13.4	28,405	32,804	37,203	86	22	10
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		54.8	16.5	5,411	6,480	7,549			
WHEMLOCK		196.8	59.3	326	799	1,273			
R ALDER		241.7	72.8	54	200	346			
NOB FIR		346.4	104.3		156	319			
TOTAL		42.8	12.9	6,651	7,636	8,620	80	20	9

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T03N R07W S24 Ty00MC40.00				Project:		NORSAM												Page		1	
				Acres		40.00												Date		9/24/2018	
																		Time		1:57:22PM	
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									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								
DF			CU														6	17		0.00	3.8
DF			2M	55	1.1	15,975	15,803	632			59	41				100	40	15	339	1.85	46.6
DF			3M	36	1.8	10,287	10,097	404		81	3	16		1	3	97	39	9	126	0.78	80.4
DF			4M	9	.7	2,341	2,326	93		100			16	11	23	50	28	6	41	0.37	56.2
DF Totals				86	1.3	28,603	28,226	1,129		37	34	29	1	1	3	95	35	10	151	0.98	187.0
WH			CU														9	19		0.00	1.2
WH			2M	44		1,525	1,525	61			68	32				100	40	15	336	1.80	4.5
WH			3M	46		1,561	1,561	62		100						100	40	8	104	0.65	15.0
WH			4M	10		324	324	13		100			38		42	20	23	6	32	0.35	10.0
WH Totals				10		3,409	3,409	136		55	30	14	4		4	92	33	9	111	0.78	30.6
NF			2M	92	16.9	646	537	21			37	63				100	40	16	320	2.11	1.7
NF			4M	8		42	42	2		100						100	32	6	50	0.56	.8
NF Totals				2	15.9	687	578	23		7	35	58			7	93	37	12	230	1.67	2.5
RA			R	100		589	589	24		100				52		48	32	8	74	0.78	8.0
RA Totals				2		589	589	24		100				52		48	32	8	74	0.78	8.0
Totals					1.5	33,289	32,804	1,312		40	33	27	2	2	3	94	35	10	144	0.96	228.2

TC PLOGSTVB				Log Stock Table - MBF															
T03N R07W S24 Ty00MC40.00				Project: NORSAM												Page 2			
				Acres 40.00												Date 9/24/2018			
																Time 1:57:21PM			
S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Sp	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		1,332	1.5	1,312	100.0			187	131	204	229	162	211	86	102			

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 9/24/2018	
T03N R07W S24 Ty00MC40.00					ProjectNORSAM					Time:		1:57:23PM					
					Acres40.00					Grown Year:							
S Spec T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net	Totals				
	DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre					Bd.Ft. Acre	
DF	10	2	89	97	12.223	6.67	12.22	12.8	60.0	4.45	156	733	178	62	29		
DF	12	1	89	118	4.244	3.33	8.49	14.5	70.0	3.50	123	594	140	49	24		
DF	14	2	85	115	6.236	6.67	12.47	19.2	87.5	6.83	240	1,091	273	96	44		
DF	15	3	86	121	8.149	10.00	16.30	24.0	101.7	11.13	390	1,657	445	156	66		
DF	16	2	85	107	4.775	6.67	9.55	25.1	102.5	6.82	239	979	273	96	39		
DF	17	1	85	123	2.115	3.33	4.23	31.6	120.0	3.81	134	508	153	54	20		
DF	18	5	87	113	9.431	16.67	22.64	26.8	103.3	17.28	606	2,339	691	243	94		
DF	19	4	86	127	6.772	13.33	18.62	31.4	127.3	16.64	584	2,370	666	234	95		
DF	20	7	87	126	10.695	23.33	30.56	33.1	133.5	28.81	1,011	4,079	1,152	404	163		
DF	21	2	87	126	2.772	6.67	6.93	41.0	162.0	8.09	284	1,123	324	114	45		
DF	22	1	90	123	1.263	3.33	3.79	38.3	176.7	4.13	145	669	165	58	27		
DF	23	1	88	134	1.155	3.33	3.47	44.6	203.3	4.41	155	705	176	62	28		
DF	24	1	82	107	1.061	3.33	2.12	58.6	215.0	3.55	124	456	142	50	18		
DF	25	4	86	135	3.911	13.33	11.73	50.5	225.8	16.88	592	2,650	675	237	106		
DF	26	2	84	127	1.808	6.67	5.42	52.0	211.7	8.04	282	1,148	322	113	46		
DF	28	1	85	161	.780	3.33	2.34	76.9	386.7	5.13	180	904	205	72	36		
DF	32	1	84	142	.597	3.33	1.79	91.0	436.7	4.65	163	782	186	65	31		
DF	33	1	84	154	.561	3.33	1.68	98.8	473.3	4.74	166	797	190	67	32		
DF	34	2	85	165	1.057	6.67	4.23	88.0	448.7	10.61	372	1,898	424	149	76		
DF	35	1	84	171	.499	3.33	2.00	91.0	460.0	5.18	182	918	207	73	37		
DF	38	1	81	159	.423	3.33	1.27	134.2	676.7	4.86	170	859	194	68	34		
DF	42	1	83	168	.346	3.33	1.39	131.0	697.5	5.17	182	967	207	73	39		
DF	Totals	46	87	119	80.874	153.33	183.23	35.4	154.0	184.68	6,480	28,226	7,387	2,592	1,129		
WH	11	1	89	96	5.051	3.33	10.10	10.0	45.0	3.23	101	455	129	40	18		
WH	15	1	85	106	2.716	3.33	5.43	24.0	100.0	4.18	131	543	167	52	22		
WH	16	1	86	111	2.387	3.33	4.77	29.1	120.0	4.45	139	573	178	56	23		
WH	22	1	81	108	1.263	3.33	2.53	52.9	180.0	4.28	134	455	171	53	18		
WH	23	1	86	131	1.155	3.33	3.47	34.1	166.7	3.79	118	578	151	47	23		
WH	24	1	86	146	1.061	3.33	3.18	55.6	253.3	5.66	177	806	226	71	32		
WH	Totals	6	86	109	13.633	20.00	29.48	27.1	115.6	25.57	799	3,409	1,023	320	136		
RA	12	1	73	73	4.244	3.33	4.24	17.8	50.0	2.08	76	212	83	30	8		
RA	18	1	74	103	1.886	3.33	3.77	33.0	100.0	3.42	124	377	137	50	15		
RA	Totals	2	73	82	6.130	6.67	8.02	25.0	73.5	5.50	200	589	220	80	24		
NF	27	1	84	139	.838	3.33	2.52	62.2	230.0	3.75	156	578	150	63	23		
NF	Totals	1	84	139	.838	3.33	2.52	62.2	230.0	3.75	156	578	150	63	23		
Totals		55	86	116	101.476	183.33	223.25	34.2	146.9	219.51	7,636	32,804	8,780	3,054	1,312		

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT			NORSAM			DATE	9/24/2018		
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt	
03N	07	24	00A3	00MC		64.00		22	124	S	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES		PERCENT SAMPLE TREES				
TOTAL			22	124	5.6							
CRUISE			22	124	5.6	7,817		1.6				
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			108	100.4	18.9	123	45.1	196.4	38,940	38,700	8,646	8,646
WHEMLOCK			9	17.1	13.3	82	4.5	16.4	2,366	2,343	545	545
NOB FIR			7	4.7	22.3	130	2.7	12.7	2,895	2,819	607	607
TOTAL			124	122.1	18.4	118	52.6	225.5	44,201	43,863	9,798	9,798
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			56.2	5.4	478	505	533					
WHEMLOCK			108.8	38.4	161	261	361					
NOB FIR			42.3	17.2	610	737	864					
TOTAL			59.1	5.3	474	501	527	139	35	15		
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			54.2	5.2	106	112	118					
WHEMLOCK			105.9	37.4	38	61	83					
NOB FIR			37.7	15.4	132	156	180					
TOTAL			56.7	5.1	105	111	116	128	32	14		
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			48.4	10.6	90	100	111					
WHEMLOCK			170.5	37.2	11	17	23					
NOB FIR			268.4	58.5	2	5	7					
TOTAL			43.9	9.6	110	122	134	80	20	9		
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			32.0	7.0	183	196	210					
WHEMLOCK			162.8	35.5	11	16	22					
NOB FIR			245.1	53.4	6	13	20					
TOTAL			29.3	6.4	211	225	240	36	9	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			33.2	7.2	35,903	38,700	41,498					
WHEMLOCK			169.4	36.9	1,478	2,343	3,208					
NOB FIR			241.2	52.6	1,337	2,819	4,302					
TOTAL			28.8	6.3	41,104	43,863	46,621	35	9	4		
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			33.5	7.3	8,015	8,646	9,277					
WHEMLOCK			171.3	37.3	342	545	749					

TC PSTATS		PROJECT NORSAM							PAGE 2	DATE 9/24/2018
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
03N	07	24	00A3	00MC	64.00		22	124	S	W
CL	68.1	COEFF		NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.00	VAR.		S.E.%	LOW	AVG	HIGH	5	10	15
NOB FIR			242.7	52.9	286	607	928			
TOTAL			29.4	6.4	9,169	9,798	10,426	36	9	4

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T03N R07W S24 Ty00MC64.00						Project: NORSAM						Page 1									
						Acres 64.00						Date 9/24/2018									
												Time 1:58:44PM									
Spp	So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre		
							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										
DF	CU																				
DF	2M	59	.8	23,097	22,907	1,466			69	31					100	5	18		0.00	2.3	
DF	3M	32	.4	12,674	12,624	808			94	6				1	99	40	15	332	1.75	68.9	
DF	4M	9		3,169	3,169	203			100			11	28	20	41	40	9	120	0.73	105.0	
DF																27	6	42	0.40	74.9	
DF	Totals	88	.6	38,940	38,700	2,477			39	43	19	1	2	2	95	36	10	154	0.96	251.2	
NF	2M	72	2.5	2,101	2,048	131				30	70				100	40	17	448	2.19	4.6	
NF	3M	21	3.7	613	590	38			80	20					100	39	10	140	0.91	4.2	
NF	4M	7		181	181	12			100					22	29	49	33	6	48	0.44	3.8
NF	Totals	6	2.6	2,895	2,819	180			23	26	51		1	2	97	38	11	224	1.28	12.6	
WH	CU																				
WH	2M	33		788	788	50				65	35				100	2	7		0.00	3.3	
WH	3M	41	2.4	984	961	62			74	26				15	17	68	40	15	385	2.03	2.0
WH	4M	26		594	594	38			100			36	4	17	43	36	8	88	0.61	11.0	
WH																26	7	40	0.37	14.7	
WH	Totals	5	1.0	2,366	2,343	150			56	33	12	9	7	11	72	28	8	75	0.63	31.1	
Totals			0.8	44,201	43,863	2,807			39	41	20	1	2	2	94	35	10	149	0.95	294.8	

TC PLOGSTVB				Log Stock Table - MBF															
T03N R07W S24 Ty00MC 64.00				Project: NORSAM Acres 64.00										Page 1 Date 9/24/2018 Time 1:58:44PM					
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+
DF		2M	38	6		6	.2					6							
DF		2M	40	1,473		1,460	59.0					365		441	570	74	11		
DF		3M	34	8		8	.3			8									
DF		3M	36	9		9	.4			8	1								
DF		3M	38	24		24	1.0			24									
DF		3M	40	770		767	31.0			82	205	430	50						
DF		4M	12	2		2	.1			2									
DF		4M	14	5		5	.2			5									
DF		4M	16	1		1	.0			1									
DF		4M	18	6		6	.2			6									
DF		4M	20	8		8	.3			8									
DF		4M	22	13		13	.5			13									
DF		4M	24	10		10	.4			10									
DF		4M	26	7		7	.3			7									
DF		4M	28	13		13	.5			13									
DF		4M	30	13		13	.5			13									
DF		4M	32	35		35	1.4			35									
DF		4M	34	6		6	.3			6									
DF		4M	36	14		14	.5			14									
DF		4M	38	29		29	1.2			29									
DF		4M	40	41		41	1.6			6	7	28							
DF		Totals		2,492		2,477	88.2			289	213	458	420	441	570	74	11		
NF		2M	40	134	2.5	131	72.6							39	71	20			
NF		3M	36	2		2	1.0			2									
NF		3M	38	2		2	1.0			2									
NF		3M	40	36	4.1	34	19.0					27	8						
NF		4M	26	3		3	1.4			3									
NF		4M	32	2		2	.9			2									
NF		4M	34	2		2	1.0			2									
NF		4M	40	6		6	3.2			6									
NF		Totals		185	2.6	180	6.4			15		27	8	39	71	20			
WH		2M	40	50		50	33.6							33	18				
WH		3M	22	9		9	6.1					9							
WH		3M	34	11		11	7.1			11									
WH		3M	40	43	3.4	42	27.8			9	26	7							

Log Stock Table - MBF

T03N R07W S24 Ty00MC 64.00

Project: NORSAM
Acres 64.00Page 2
Date 9/24/2018
Time 1:58:44PM

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+
WH		4M	12	1		1	.7			1									
WH		4M	18	4		4	2.8			4									
WH		4M	20	9		9	5.7				9								
WH		4M	30	1		1	1.0			1									
WH		4M	34	6		6	4.2			6									
WH		4M	36	11		11	7.1			11									
WH		4M	40	6		6	3.9			6									
WH		Totals		151		150	5.3			49	34		16	33	18				
Total		All Species		2,829		2,807	100.0			353	247		485	444	514	658	94	11	

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 9/24/2018		
T03N R07W S24 Ty00MC64.00					ProjectNORSAM					Time:		1:58:46PM						
					Acres64.00					Grown Year:								
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Totals		
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons	Cunits				MBF		
DF		10	2	87	77	6.667	3.64	6.67	12.4	60.0	2.36	83	400		151	53	26	
DF		11	1	82	95	2.755	1.82	2.76	17.1	60.0	1.34	47	165		86	30	11	
DF		12	1	92	116	2.315	1.82	4.63	14.5	65.0	1.91	67	301		122	43	19	
DF		13	1	89	116	1.973	1.82	3.95	17.7	85.0	1.99	70	335		127	45	21	
DF		14	2	87	112	3.402	3.64	6.80	19.1	87.5	3.70	130	595		237	83	38	
DF		15	5	88	108	7.408	9.09	14.82	22.5	100.0	9.51	334	1,482		609	214	95	
DF		16	10	88	121	13.022	18.18	31.25	23.6	103.8	20.98	736	3,242		1,343	471	208	
DF		17	7	89	130	8.074	12.73	21.92	25.3	111.6	15.83	556	2,445		1,013	356	157	
DF		18	9	88	121	9.260	16.36	22.64	29.7	122.3	19.18	673	2,768		1,227	431	177	
DF		19	8	88	129	7.387	14.55	20.32	31.4	133.2	18.17	638	2,706		1,163	408	173	
DF		20	8	87	138	6.667	14.55	20.00	33.5	149.6	19.08	669	2,992		1,221	428	191	
DF		21	6	88	127	4.535	10.91	13.61	35.2	155.6	13.65	479	2,117		873	306	135	
DF		22	13	87	133	8.954	23.64	25.48	43.3	197.3	31.42	1,102	5,028		2,011	706	322	
DF		23	6	87	135	3.781	10.91	11.34	45.1	202.2	14.58	512	2,294		933	328	147	
DF		24	6	88	137	3.472	10.91	10.42	48.0	218.9	14.25	500	2,280		912	320	146	
DF		25	9	88	141	4.800	16.36	14.93	53.5	249.6	22.76	799	3,728		1,457	511	239	
DF		26	4	86	144	1.973	7.27	5.92	60.3	279.2	10.17	357	1,652		651	228	106	
DF		27	4	86	141	1.829	7.27	5.03	70.2	326.4	10.07	353	1,642		644	226	105	
DF		28	2	87	145	.850	3.64	2.55	71.6	346.7	5.21	183	884		333	117	57	
DF		30	1	87	140	.370	1.82	1.11	79.8	393.3	2.53	89	437		162	57	28	
DF		31	1	83	130	.347	1.82	1.04	79.9	363.3	2.37	83	378		152	53	24	
DF		32	1	89	155	.326	1.82	.98	99.9	503.3	2.78	98	492		178	62	31	
DF		38	1	84	143	.231	1.82	.69	129.3	486.7	2.55	90	337		163	57	22	
DF		Totals	108	88	123	100.399	196.36	248.84	34.7	155.5	246.40	8,646	38,700		15,770	5,533	2,477	
NF		15	1	91	114	1.482	1.82	2.96	23.6	105.0	1.68	70	311		107	45	20	
NF		21	1	90	135	.756	1.82	2.27	37.8	146.7	2.05	86	333		132	55	21	
NF		24	1	89	130	.579	1.82	1.74	48.4	223.3	2.02	84	388		129	54	25	
NF		26	1	91	138	.493	1.82	1.48	61.1	296.7	2.17	90	439		139	58	28	
NF		27	3	88	143	1.372	5.45	4.12	67.3	327.8	6.64	277	1,349		425	177	86	
NF		Totals	7	90	130	4.681	12.73	12.56	48.3	224.4	14.56	607	2,819		932	388	180	
WH		10	2	89	73	6.667	3.64	10.00	7.6	36.7	2.45	76	367		157	49	23	
WH		11	1	87	57	2.755	1.82	2.76	13.4	60.0	1.18	37	165		75	24	11	
WH		12	1	89	75	2.315	1.82	2.31	18.5	60.0	1.37	43	139		88	27	9	
WH		13	1	89	110	1.973	1.82	3.95	19.1	85.0	2.41	75	335		154	48	21	
WH		16	1	84	95	1.302	1.82	2.60	22.5	90.0	1.88	59	234		120	38	15	
WH		20	1	85	117	.833	1.82	2.50	32.2	130.0	2.58	81	325		165	52	21	
WH		21	1	88	115	.756	1.82	2.27	36.6	163.3	2.66	83	370		170	53	24	
WH		27	1	85	135	.457	1.82	1.37	66.8	296.7	2.93	92	407		188	59	26	
WH		Totals	9	88	82	17.058	16.36	27.76	19.6	84.4	17.45	545	2,343		1,117	349	150	
Totals			124	88	118	122.138	225.45	289.16	33.9	151.7	278.41	9,798	43,863		17,818	6,270	2,807	

VOLUME SUMMARY

Nor Sam
FG-341-2019-W00551-01

December 2018

VOLUMES IN MBF

AREA 1: MC (10 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	200	68	4	0	272
	Hidden D&B (2%)	(4)	(1)	(0)	(0)	(5)
	NET TOTAL	196	67	4	0	267
	% of Total	73	25	1	0	
Western Hemlock	Cruise Volume	96	38	9	0	143
	Hidden D&B (2%)	(2)	(1)	(0)	(0)	(3)
	NET TOTAL	94	37	9	0	140
	% of Total	67	26	7	0	
Red Alder	Cruise Volume	0	0	0	9	9
	Hidden D&B (5%)	(0)	(0)	(0)	(0)	(0)
	NET TOTAL	0	0	0	9	9
	% of Total	0	0	0	100	

AREA 2: MC (40 ACRES)

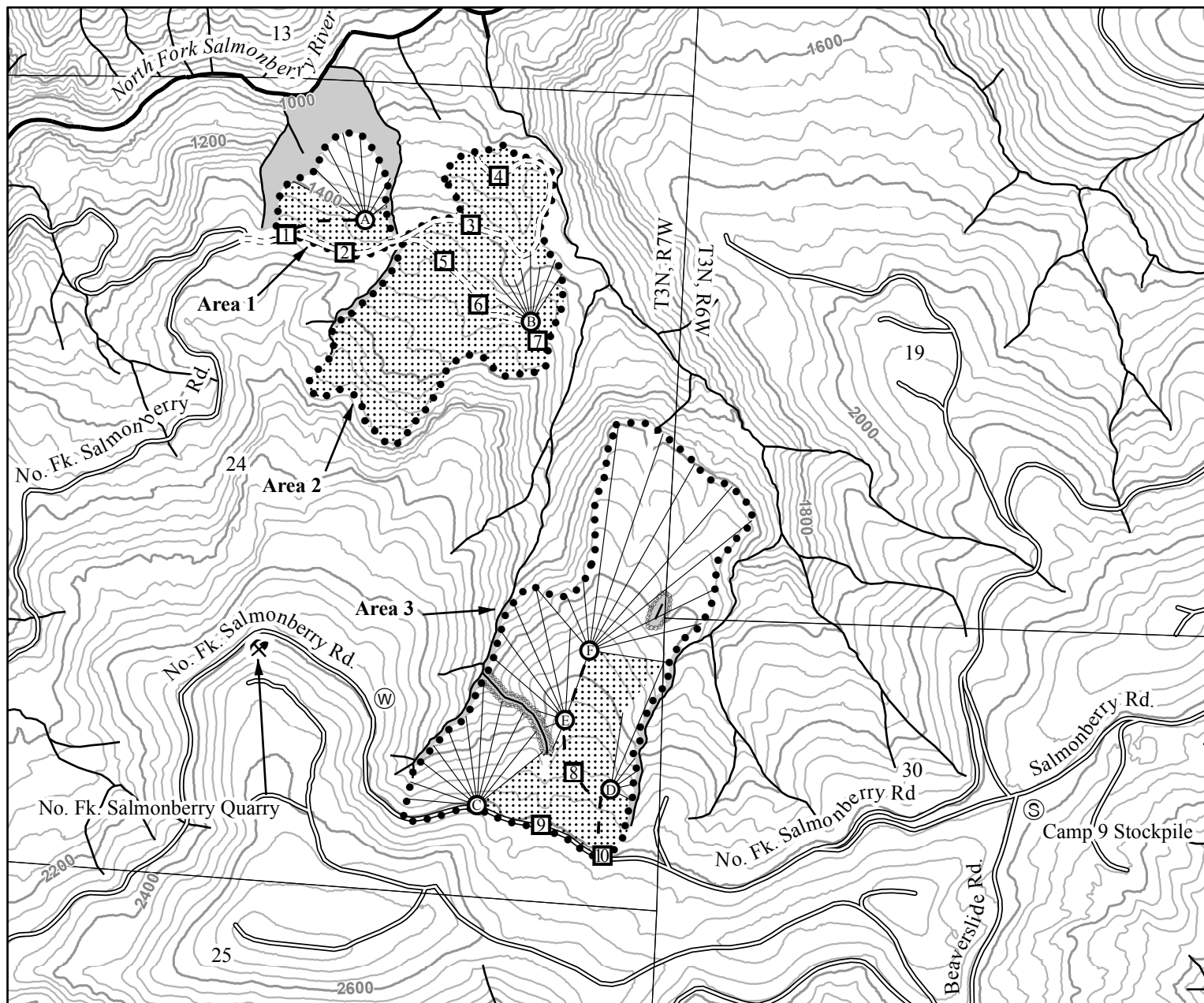
SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	632	404	93	0	1,129
	Hidden D&B (2%)	(13)	(8)	(2)	(0)	(23)
	NET TOTAL	619	396	91	0	1,106
	% of Total	56	36	8	0	
Western Hemlock	Cruise Volume	61	62	13	0	136
	Hidden D&B (2%)	(1)	(1)	(0)	(0)	(2)
	NET TOTAL	60	61	13	0	134
	% of Total	45	46	9	0	
Noble Fir	Cruise Volume	21	0	2	0	23
	Hidden D&B (2%)	(0)	(0)	(0)	(0)	(0)
	NET TOTAL	21	0	2	0	23
	% of Total	91	0	9	0	
Red Alder	Cruise Volume	0	0	0	24	24
	Hidden D&B (5%)	(0)	(0)	(0)	(1)	(1)
	NET TOTAL	0	0	0	23	23
	% of Total	0	0	0	100	

AREA 3: MC (64 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	1,466	808	203	0	2,477
	Hidden D&B (2%)	(29)	(16)	(4)	(0)	(49)
	NET TOTAL	1,437	792	199	0	2,428
	% of Total	59	33	8	0	
Western Hemlock	Cruise Volume	50	62	38	0	150
	Hidden D&B (2%)	(1)	(1)	(1)	(0)	(3)
	NET TOTAL	49	61	37	0	147
	% of Total	33	41	26	0	
Noble Fir	Cruise Volume	131	38	12	0	181
	Hidden D&B (2%)	(3)	(1)	(0)	(0)	(4)
	NET TOTAL	128	37	12	0	177
	% of Total	72	21	7	0	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	2,252	1,255	294	0	3,801
Western Hemlock	203	159	59	0	421
Noble Fir	149	37	14	0	200
Red Alder	0	0	0	32	32
Total	2,604	1,451	367	32	4,454



Legend

- • • Timber Sale Boundary
- Surfaced Roads
- - - Unsurfaced Roads
- - - New Road Construction
- Type F-Stream
- Type N-Stream
- Stream Buffer Boundary
- Stream Buffer
- Tractor Landing
- Cable Landing
- Tractor Yarding Area
- Cable Yarding Area
- Quarry
- Rock Stockpile
- Waste Area
- 40 Foot Contour Band
- 200 Foot Contour Band
- Section Line

LOGGING PLAN

FOR TIMBER SALE CONTRACT # FG-341-2019-W00551-01
NOR SAM
PORTIONS OF SECTIONS 19 & 30, T3N, R6W, W.M., &
PORTIONS OF SECTION 24, T3N, R7W, W.M.,
TILLAMOOK COUNTY, OREGON

Forest Grove District GIS
December, 2018

This product is for informational use and may not be
suitable for legal, engineering, or surveying purposes.

1:12,000

1 inch = 1,000 feet



APPROXIMATE NET ACRES

	TRACTOR	CABLE
AREA 1	5	5
AREA 2	38	2
AREA 3	15	49
TOTAL	58	56