"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Green Saddle
Sale AT-341-2022-W00561-01

District: Astoria

Date: March 16, 2022

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,608,300.99	$44,876.96	$1,653,177.95
		Project Work:	($102,424.00)
		Advertised Value:	$1,550,753.95

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Green Saddle
Sale AT-341-2022-W00561-01

District: Astoria **Date: March 16, 2022**

Timber Description

Location:

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	15	0	97
Western Hemlock / Fir	14	0	96
Sitka Spruce	20	0	95
Alder (Red)	14	0	95

Volume by Grade	2S	3S & 4S 6"-11"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	194	424	0	0	0	618
Western Hemlock / Fir	1,217	2,422	0	0	0	3,639
Sitka Spruce	217	83	0	0	0	300
Alder (Red)	0	0	65	38	61	164
Total	1,628	2,929	65	38	61	4,721

Comments: Pond Values Used: Local Pond Values, February, 2022.

Expected Log Markets: Warrenton, Mist, Willamina, Banks, Tillamook, Wauna, Forest Grove,Longview, WA, and Chehalis, WA.

PRICING:

Western Red Cedar and other Cedars stumpage = pond value - (western hemlock) logging cost.
$902.04/MBF = $1,200/MBF - $297.96/MBF

Bigleaf maple and other hardwoods stumpage = pond value - (western hemlock) logging cost.
$102.04/MBF = $400/MBF - $297.96/MBF

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

Fuel cost allowance based on month local pond values were collected.

Machine Washing for Invasive Weed Compliance = $2,000

Traffic Control on Saddle Mountain County Road = 2 flaggers for 5 days @ $720/day = $3,600.00

Machine and labor for county road clean-up at the end of each day (5 days) and end-hauling of material:
8 hours w/C325 log loader @ $145/hr = $1,160
6 hours labor @ $45/hr = $270
3 hours dump truck (12cy) @ $89/hr + $184/move in = $451

Ditch Filters:
Bales of straw 16 @ $12/bale = $192.00
4 hours of labor @ $45/hr = $180.00

Deadman anchor for guylines:
$905 for excavator move in (C315)
6 anchors @ 3 hrs/anchor = 18 hrs
$114/hr for excavator operation (C315)
$114/hr x 18 hrs + $905 = $2,957

Dozer (D7) mobilization for tailhold/guyline anchor:
1 move-in @ $905/move in = $905

Waterbar and block 1A to 1B and 1E to 1F:
Move in C315 Excavator @ $905/move in = $905
6 hrs w/C315 to construct 8 to 10 waterbars @ $114/hr = $684

Install and Remove Temporary Stream Crossing (1 site in Unit 3):
3 hrs w/C325 Log Loader @ $145/hr = $435
2 hours of labor @ $45/hr = $90
3 Straw Bales @ $12.06/bale = $36.18
Total = $561.18

TOTAL Other Costs (with Profit & Risk to be added): $13,883.18

SLASH PILING
(See attached appraisal. Includes move in, pile materials, and end-hauling) = $12,435.00

ROAD MAINTENANCE
(See attached Road Maintenance Cost Summary Sheet)
TOTAL Road Maintenance: $18,853/4,721 MBF = $3.99/MBF

Logging Conditions

Combination#: 1

Douglas - Fir	52.00%
Western Hemlock / Fir	52.00%
Sitka Spruce	52.00%
Alder (Red)	52.00%

Logging System: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing

yarding distance: Long (1,500 ft) **downhill yarding:** No

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

loads / day: 9 **bd. ft / load:** 3800

cost / mbf: $198.83

machines: Log Loader (A)
Tower Yarder (Large)

Combination#: 2

Douglas - Fir	23.00%
Western Hemlock / Fir	23.00%
Sitka Spruce	23.00%
Alder (Red)	23.00%

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: 12 **bd. ft / load:** 3800

cost / mbf: $86.35

machines: Shovel Logger

Combination#: 3

Douglas - Fir	25.00%
Western Hemlock / Fir	25.00%
Sitka Spruce	25.00%
Alder (Red)	25.00%

Logging System: Track Skidder **Process:** Manual Falling/Delimbing

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

tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF

loads / day: 8 **bd. ft / load:** 3700

cost / mbf: $150.52

machines: Log Loader (B)
Track Skidder

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Green Saddle
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District: Astoria **Date: March 16, 2022**

Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	12%
Project Costs:	$102,424.00	**Other Costs (P/R):**	$12,065.00
Slash Disposal:	$12,435.00	**Other Costs:**	$0.00

Miles of Road

Road Maintenance: $3.99

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	$0.00	3.0	4.8
Western Hemlock / Fir	$0.00	3.0	4.5
Sitka Spruce	$0.00	2.0	5.5
Alder (Red)	$0.00	2.0	3.8

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Green Saddle
Sale AT-341-2022-W00561-01

District: Astoria **Date: March 16, 2022**

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$160.88	$4.11	$1.86	$85.83	$2.56	$30.63	$2.63	$2.00	$0.00	$290.50
Western Hemlock / Fir									
$160.88	$4.15	$1.86	$92.45	$2.56	$31.43	$2.63	$2.00	$0.00	$297.96
Sitka Spruce									
$160.88	$4.19	$1.86	$114.54	$2.56	$34.08	$2.63	$2.00	$0.00	$322.74
Alder (Red)									
$160.88	$4.19	$1.86	$165.78	$2.56	$40.23	$2.63	$2.00	$0.00	$380.13

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$791.28	$500.78	$0.00
Western Hemlock / Fir	$0.00	$634.01	$336.05	$0.00
Sitka Spruce	$0.00	$575.85	$253.11	$0.00
Alder (Red)	$0.00	$653.77	$273.64	$0.00

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District: Astoria **Date: March 16, 2022**

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	618	$500.78	$309,482.04
Western Hemlock / Fir	3,639	$336.05	$1,222,885.95
Sitka Spruce	300	$253.11	$75,933.00
Alder (Red)	164	$273.64	$44,876.96

Gross Timber Sale Value

Recovery: $1,653,177.95

Prepared By: John Tillotson **Phone:** 503-325-5451

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: **Green Saddle** **MBF:** 4,721.00
Date: March 8, 2022 **$$/MBF:** $3.99
By: John Tillotson

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	
Interim Operations	Grader 14G	$875	1	12	$113	$2,231	
	Dump Truck 12CY	$184	1	8	$89	$896	
	Rubber tired backhoe	$875	1	4	$87	$1,223	
	Vibratory Roller	$875	1	6	$87	$1,397	
Final Road Maintenance	Grader 14G	$875	1	27	$113	$3,926	
	Dump Truck 12CY	$184	2	12	$89	$1,436	
	FE Loader C966	$875	1	6	$94	$1,439	
	Vibratory Roller	$875	1	21	$87	$2,702	
	Water Truck 2,500 gallon	$214	1	12	$101	$1,426	
	Excavator C315	$905	1	8	$114	$1,817	
	Labor			8	$45	$360	
Total							**$18,853**

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	2.5	3.9	1.6	12

Wawa Mainline (Greenwood) Final Maintenance/Grade

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	2.5	2.0	0.8	6

Final Road Maintenance/Processing

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	3.9	2.6	21
Vibratory Roller	1.5	3.9	2.6	21

Process and compact: All crushed rock roads except for Wawa Mainline (on Greenwood)
Unnamed Spurs: 0.9 Miles
Wawa Mainline (on STATE) = 0.3 Miles
Green Mountain Road = 2.7 Miles
Grade & Process Total = 3.9 Miles

Grade Only: Portions of Wawa Mainline (Greenwood)
Grade Only (as needed) = 2 Miles

Site Prep/Machine Piling Appraisal

Sale Number: AT-341-2021-W00561-01
Sale Name: Green Saddle
Date: 02/09/2022

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre	Landing Production Rate (hrs/30 acres)
Doug-fir	A	0.5	0.5	6
Hemlock/Fir	B	1.3	4.5	8
Hemlock/Spruce	C	1.8	5.0	10
Hemlock	D	1.8	5.0	8
Conifer/Hardwood	E	1.0	2.0	8
Whole Tree Yarding	F	0.5	0.5	12

Unit	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area
1	MC	F	25	13	$145	$1,813
2	MC	F	17	9	$145	$1,233

In-unit Piling **Sub Total =** $3,045

Sale Area	Number of Landings to be Piled	Harvested acres per area	Total Cost/Area	Number of In-Unit Piles	Material Cost/Pile	Total Cost/Area
1	10	57	$3,306	22.5	$5	$113
2	10	68	$3,944	19	$5	$93

*Cost includes separating firewood

Materials **Sub Total =** $205

Landing Piling **Sub Total =** $7,250

Additonal Move-in allowance

Move-In Allowance	Number of Move-In's	Total Move-In Allowance
$1,290.00	1.5	$1,935

Move-In **Sub Total =** $1,935

Slash Endhaul Dump Truck hrs	Cost/Hour	Total	Loader hrs	Cost/Hour	Total
0	$89.00	$0	0	$145	$0

Sub Total = $0

Grand Total = **$12,435**

SUMMARY OF ALL PROJECT COSTS

SALE NAI Green Saddle

Project No. 1: ROAD CONSTRUCTION:

Road segment	*Length (Sta)*	*Length (Mile)*	*Cost*		*With additional fuel allowance per project*
Unsurfaced					
1A to 1B, 1C to 1D, and 1E to 1F	33.7	0.64	$16,433.95		$18,077.34
Surfaced					
2A to 2B, 2C to 2D, and 3A to 3B	25.45	0.48	$16,452.27		$18,097.50
Road Maint.			$1,208.63		$1,329.49
Move-In			$3,331.72		$3,664.89
TOTALS	59.15	1.12		$37,426.57	

Project No. 2: ROAD IMPROVEMENT:

Road segment	*Length (Sta)*	*Length (Mile)*	*Cost*		
I1 to I2, I3 to I4, I5 to I6,	361.75	6.85	$44,361		$48,797.62
I7 to I8, and I9 to I10					
Road Maint.			$1,630		$1,793.41
Move-In			$4,494		$4,943.71
TOTALS	361.75	6.85		$50,486	

SPECIAL PROJECTS (Move-In and Road Maint. are included separetly as needed, for each Special Project)**:**

Description	*Stations*	*Cost*		
Proj. 3 Road Vacating	107.00	$5,200		$5,720.00
TOTAL			$5,200	
10% Increase Fuel Allowance			$9,311.27	

GRAND TOTAL **$102,424**

Compiled By: Cole Hatcher CH Date: 03/14/2022

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Green Saddle

Project No. 1: ROAD CONSTRUCTION:

Road segment	Length/Sta	Length/Mile	Cost	
Unsurfaced				
1A to 1B, 1C to 1D, and 1E to 1F	33.70	0.64	$16,433.95	
Surfaced				
2A to 2B, 2C to 2D, and 3A to 3B	25.45	0.48	$16,452.27	
TOTALS	59.15	1.12		$32,886

Project No. 2: ROAD IMPROVEMENT:

Road segment	Length/Sta	Length/Mile	Cost	
I1 to I2, I3 to I4, I5 to I6, I7 to I8, and I9 to I10	361.75	6.85	$44,361	
TOTALS	361.75	6.85		$44,361

MOVE IN (Construction & Improvement Only)

Equipment	Length/Mile	Cost	
G14 Grader		$875.00	
C966 Loader		$875.00	
C315 Excavator		$905.00	
C330 Excavator		$1,581.00	
D8 Dozer		$1,581.00	
Vibratory Roller		$875.00	
10-12cy Highway Dump Truck (x5)		$920.00	
Water Truck (2,500 gal)		$214.00	
TOTAL			$7,826.00

ROAD MAINTENANCE (Construction & Improvement Only)

	Length/Mile	Cost	
Final Project Road Maintenance	1.16	$2,839.00	
TOTAL			$2,839.00

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Green Saddle — **NEW CONSTRUCTION:** 59.15 **STATIONS** 1.12 **MILES**
ROAD: 1A to 1B (13.2), 1C to 1D (18.5), 1E to 1F (2.0), 2A to 2B (: — **IMPROVEMENT:** _____ **STATIONS** 0.00 **MILES**
2C to 2D (3.2), and 3A to 3B (19.25)

CLEARING & GRUBBING

	Method	Acres/amount	x	Rate	=	Cost
						$0.00
1A to 1B, 1C to 1D, 1E to 1F, 2A to 2B, 2C to 2D, and 3A to 3B	Scatter outside of right of way	4.75	x	$1,503.00	=	$7,143.22

SUB TOTAL FOR CLEARING & GRUBBING $7,143

EXCAVATION

	Material	Cy/amount	x	Rate	=	Cost
1A to 1B						
0+00 to 13+20	Balanced construction ($/sta)	13.20	x	$138.00	=	$1,821.60
10+80	Build turnaround ($/C315)	1	x	$114.00	=	$114.00
13+20	Landing construction ($/ldg)	1	x	$438.00	=	$438.00
1C to 1D						
0+00 to 11+20	Common drift (≤ 50% slopes) ($/cy)	530	x	$2.02	=	$1,070.60
0+00 to 11+20	End-haul excavation (loading and haul up to 5,000')	650	x	$4.50	=	$2,925.00
0+00 to 11+20	Embankment compaction ($/cy)	1,180	x	$0.79	=	$932.20
11+20 to 18+50	Balanced construction ($/sta)	7	x	$138.00	=	$1,007.40
4+80, 13+20, 18+50	Landing construction ($/ldg)	3	x	$438.00	=	$1,314.00
1E to 1F						
0+00 to 2+00	Balanced construction ($/sta)	2.00	x	$138.00	=	$276.00
2+00	Landing construction ($/ldg)	1	x	$438.00	=	$438.00
2A to 2B						
0+00 to 3+00	Balanced construction ($/sta)	3.00	x	$138.00	=	$414.00
1+50	Build turnaround ($/C315)	1	x	$114.00	=	$114.00
3+00	Landing construction ($/ldg)	1	x	$438.00	=	$438.00
2C to 2D						
0+00 to 1+20	Balanced construction ($/sta)	1.2	x	$138.00	=	$165.60
1+20 to 3+20	Drift earth up to 200'	2.0	x	$214.00	=	$428.00
3+20	Landing construction ($/ldg)	1	x	$438.00	=	$438.00
3A to 3B						
0+00 to 19+25	Balanced construction ($/sta)	19.25	x	$138.00	=	$2,656.50

SUB TOTAL FOR EXCAVATION $14,991

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
1C to 1D									
10+85	18" CPP	30	$21.95	$658.50					
2A to 2B									
0+00	18" CPP	40	$21.95	$878.00					
3A to 3B									
2+20	18" CPP	30	$21.95	$658.50					
8+60	18" CPP	30	$21.95	$658.50					

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	6'x2 1/2" white Carsonite post	3	$23.00	$69.00

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION $2,923

Subtotal of Clearing, Exc., Culv. ***$25,057***

SURFACING

Subgrade prep:	Description	Stations/ amount	x	Rate/ sta/amt	Cost
2A to 2B, 2C to 2D, and 3A to 3B	Grade, Shape and Ditch 16'	25.45	x	$27.91	$710.31
1A to 1B, 1C to 1D, and 1E to 1F	Grade, Shape and Outslope 14'	33.70	x	$20.63	$695.23
All segments	Subgrade Compaction	59.15	x	$22.69	########

ROAD SEGME	2A to 2B			POINT TO POINT		Sta. to Sta.					
				2A to 2B		0+00 to 3+00		TOTAL	Rate/	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		VOLUME (CY)	Sta./ amt.		
Base Rock	6"-0" pit-run	0+00 to 3+00	8	station	50	stations	3.0	150	$2.72	$408	
Junction	3/4"-0" crushed	0+00	N/A	junction	22	junctions	1	22	$10.41	$229	
Turnaround	6"-0" pit-run	1+50	N/A	urnaround	33	turnarounds	1	33	$2.72	$90	
Landings	6"-0" pit-run	3+00	N/A	landing	77	landings	1	77	$2.72	$209	
Total Rock for Road Segment:			2A to 2B					282			$936

ROAD SEGME	2C to 2D			POINT TO POINT		Sta. to Sta.					
				2C to 2D		0+00 to 3+20		TOTAL	Rate/	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		VOLUME (CY)	Sta./ amt.		
Base Rock	6"-0" pit-run	0+00 to 3+20	8	station	50	stations	3.2	160	$2.72	$435	
Landings	6"-0" pit-run	3+20	N/A	landing	77	landings	1	77	$2.72	$209	
Total Rock for Road Segment:			2C to 2D					237			$645

ROAD SEGME	3A to 3B			POINT TO POINT		Sta. to Sta.					
				3A to 3B		0+00 to 19+25		TOTAL	Rate/	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		VOLUME (CY)	Sta./ amt.		
Leveling Rock	6"-0" pit-run		N/A	load	11	loads	4	44	$2.72	$120	
Junction	6"-0" pit-run	0+00	N/A	junction	33	junctions	1	33	$2.72	$90	
Total Rock for Road Segment:			3A to 3B					77			$209

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact Base Rock (4"-0"):	25.45	$63.48	########

		6"-0"pr	4"-0" crushed	3/4"-0" crushed		Total	
SUB TOTAL FOR SURFACING		574	0	22		596	**$6,154**

SPECIAL PROJECTS

Description	Cy/Amount	Rate	Cost
pit-run development	574	$2.92	$1,676.08

SUB TOTAL FOR SPECIAL PROJECTS **$1,676**

Subtotal of Surfacing & Spec. Proj. *$7,830*

Subtotal of Clearing, Exc.,Culv. *$25,057*

GRAND TOTAL **$32,886**

Compiled By: Cole Hatcher Date: ########

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Green Saddle
ROAD: I1 to I2 (6.2), I3 to I4 (197.8), I5 to I6 (8.5), I7 to I8 (8.6), and I9 to I10 (140.65)

NEW CONSTRUCTION: _____ **STATIONS** 0.00 **MILES**
IMPROVEMENT: 361.75 **STATIONS** 6.85 **MILES**

CLEARING & GRUBBING

Method	Acres/amour	x	Rate	=	Cost

SUB TOTAL FOR CLEARING & GRUBBING $0

EXCAVATION

	Material	Cy/amount	x	Rate	=	Cost
I1 to I2						
0+00 to 6+20	Clear alder along ditchline w/C315 ($/hr)	4	x	$114.00	=	$456.00
I5 to I6						
0+00	Widen junction w/C315 ($/hr)	3	x	$114.00	=	$342.00
I7 to I8						
0+00	Widen junction w/C315 ($/hr)	3	x	$114.00	=	$342.00
I9 to I10						
75+60	Install rock ditch filter w/C315 ($/hr)	1	x	$114.00	=	$114.00
112+35	Expand existing roadside landing w/C330 ($/hr	4	x	$175.00	=	$700.00
118+35	Expand existing turnout w/C330 ($/hr)	1	x	$175.00	=	$175.00
118+90	Construct roadside landing w/ C330 ($/hr)	4	x	$175.00	=	$700.00
121+10	Construct roadside landing w/ C330 ($/hr)	4	x	$175.00	=	$700.00
138+20	Locate and clean culvert inlet w/C315 ($/hr)	1	x	$114.00	=	$114.00

SUB TOTAL FOR EXCAVATION $3,643

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
I3 to I4					**I9 to I10**				
196+55	18" ACSP	30	$27.74	$832	84+45	18" ACSP	30	$27.74	$832.20
197+60	18" ACSP	50	$27.74	$1,387					
I7 to I8									
0+00	18" ACSP	40	$27.74	$1,110					

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	6'x2 1/2" white Carsonite post	10	$23.00	$230.00

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION $4,435

Subtotal of Clearing, Exc., Culv. ***$8,078***

SURFACING		Description	Stations/ amount	x	Rate/ sta/amt	Cost
	Subgrade prep: I3 to I4 Sta.(0+00 to 183+30)	Spot Grading on Wa Wa Mainline w/ 14G ($/hr)	12.00	x	$113.00	$1,356.00
	All "I" segments and I3 to I4 Sta. (183+30 to 197+80)	Grade, Shape and Ditch 16'	172.25	x	$27.91	$4,807.50
	All "I" segments and I3 to I4 Sta. (183+30 to 197+80)	Subgrade Compaction	172.25	x	$22.69	$3,908.35
	I1 to I2, I5 to I6, I7 to I8, and I9 to I10	Sod Removal and scatter on site	157.74	x	$26.20	$4,132.79

ROAD SEGMENT	I3 to I4			POINT TO POINT		Sta. to Sta.					
				I3 to I4		0+00 to 197+80					
Application	Rock Size and Type	Location	Depth of Rock (Inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Leveling Rock	1 1/2"-0" crushed	9+50, 33+90, 50+50, 60+75, 68+90, 80+00, 97+60, 122+50, 145+80, 151+00, 165+30, 169+30	N/A	load	11	loads	12	132	$10.41	$1,374	
Leveling Rock	1 1/2"-0" crushed		N/A	load	12	loads	4	48	$10.41	$500	
Turnouts	1 1/2"-0" crushed	190+10	N/A	turnout	11	turnouts	1	11	$10.41	$115	
Culvert Bedding and Backfill	1 1/2"-0" crushed	196+55, 197+60	N/A	culvert	33	culverts	2	66	$10.41	$687	
Total Rock for Road Segment:			I3 to I4					257			$2,675

ROAD SEGMENT	I5 to I6			POINT TO POINT		Sta. to Sta.					
				I5 to I6		0+00 to 8+50					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Leveling Rock	3/4"-0" crushed		N/A	load	11	loads	4	44	$10.41	$458	
Junctions	6"-0" pit-run	0+00	N/A	junction	22	junctions	1	22	$2.72	$60	
Turnouts	3/4"-0" crushed	3+10	N/A	turnout	11	turnouts	1	11	$10.41	$115	
Turnaround	6"-0" pit-run	5+80	N/A	turnaround	22	turnaround	1	22	$2.72	$60	
Total Rock for Road Segment:			I5 to I6					99			$692

ROAD SEGMENT	I7 to I8			POINT TO POINT		Sta. to Sta.					
				I7 to I8		0+00 to 8+60					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Leveling Rock	3/4"-0" crushed		N/A	load	11	loads	4	44	$10.41	$458	
Junctions	6"-0" pit-run	0+00	N/A	junction	22	junctions	1	22	$2.72	$60	
Culvert Bedding and Backfill	3/4"-0" crushed	0+00	N/A	culvert	33	culverts	1	33	$10.41	$344	
Total Rock for Road Segment:			I7 to I8					99			$861

ROAD SEGMENT	I9 to I10			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	I9 to I10 Volume (CY) per		0+00 to 140+65 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Leveling Rock	3/4"-0" crushed	4+40, 6+10, 10+40, 13+10, 14+90, 25+10, 28+70, 47+10, 48+70, 61+45, 67+40, 69+25, 90+95, 93+60, 95+00, 96+30, 100+30, 104+30, 134+25, 135+70	N/A	load	11	loads	20	220	$10.41	$2,290	
Turnouts	3/4"-0" crushed	7+70, 16+00, 68+85, 75+60, 92+50, 101+15, 115+35, 137+35	N/A	turnout	11	turnouts	8	88	$10.41	$916	
Surfacing	3/4"-0" crushed	70+00 to 86+75, 122+85 to 124+50	2	station	13	stations	18.4	239	$10.41	$2,490	
Rock Ditch Filters	6"-4" pit-run	75+60	N/A	3 filter series	11	3 filter series	1	11	$2.72	$30	
Culvert Bedding and Backfill	3/4"-0" crushed	84+45	N/A	culvert	33	culverts	1	33	$10.41	$344	
Landings	6"-0" pit-run	112+35, 118+90	N/A	landing	55	landings	2	110	$2.72	$299	
Total Rock for Road Segment:			I9 to I10					701			$6,369

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact:	172.25	$63.48	$10,934

	24"-12" rr	24"-6" rr	12"-6" rr	6"-4" pr	6"-0"pr	4"-0" crushed	1 1/2"-0" crushed	2"-1" drainrock	3/4"-0" crushed	Total	
SUB TOTAL FOR SURFACING	0	0	0	11	176	0	257	0	712	1,156	**$35,737**

SPECIAL PROJECTS

Description	Cy/Amount	Rate	Cost
pit-run development	187	$2.92	$546.49

SUB TOTAL FOR SPECIAL PROJECTS **$546**

Subtotal of Surfacing & Spec. Proj. *$36,284*

Subtotal of Clearing, Exc.,Culv. *$8,078*

GRAND TOTAL **$44,361**

Compiled By: Cole Hatcher Date: 04/27/2021

	6"-4" pr	6"-0"pr	4"-0" crushed	1 1/2"-0" crushed	3/4"-0" crushed	Total
Total Rock Volumes	11	750	0	257	734	**1,752**

Projects Road Maintenance Cost Summary

Sale: Green Saddle
Date: 27-Apr-21
By: Cole H FL

Type	Equipment/Rationale			Hours	Rate	Cost	
Project Work	Grader 14G			7	$113	$791	
Final Haul	Dump Truck 12CY			4	$89	$356	
Road	FE Loader C966			4	$94	$376	
Maintenance	Vibratory Roller			7	$87	$609	
	Water Truck 2,500 gallon			7	$101	$707	
Total							$2,839

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	1.16	0.8
Vibratory Roller	1.5	1.16	0.8

NOTE:

Simmons Ridge Road		0.52	Miles
Simmons Quarry Road		0.64	Miles
			Miles
			Miles
	TOTAL=	1.16	Miles

CRUSHED ROCK COST

SALE NAME: Green Saddle
PROJECT: No. 2
Stockpile: Simmons Ridge Stockpile

MATERIAL: 3/4"-0" and 1 1/2"-0"

DATE: 05/26/2021
BY: Cole H.

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES 50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
I3 to I4	197.80	257	4.00	2.70	2.60	1.51	0.50	0.30	0.10	11.71
I5 to I6	8.50	55	4.00	3.00	3.00	2.00	0.50	0.30	0.10	12.90
I7 to I8	8.60	77	4.00	3.00	3.00	2.00	0.50	0.30	0.10	12.90
I9 to I10	140.65	580	4.00	2.50	2.55	1.50	0.50	0.30	0.10	11.45
2A to 2B	3.00	22	4.00	2.58	2.60	2.00	1.00	0.50	0.10	12.78
TOTAL	358.55 STA./NO.	991 CU. YD.								AVERAGE HAUL
CUBIC YARD WEIGHTED HAUL			**4.00**	**2.62**	**2.62**	**1.58**	**0.51**	**0.30**	**0.10**	**11.74**

Average Round Trip Distance (miles) 23.48

ROCK HAUL:

Truck type	No. trucks	Delay min.	Efficiency
D20		8	85%
D12	5	6	85%
D10		5	85%

Ave haul: $7.41 /cy
Load: $1.08 /cy
Spread: $1.92 /cy

Production: cy/day = 426

CRUSHED ROCK HAUL COSTS 991 cy @ **$10.41 /cy**

PIT RUN ROCK COST

SALE NAME: Green Saddle
PROJECT: No. 2
QUARRY: West Green Mountain No. 1

MATERIAL: Pit Run

DATE: 05/26/2021
BY: Cole H.

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES 50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
I5 to I6	8.50	44		0.50	2.00	1.83	1.00	0.30	0.10	5.73
I7 to I8	8.60	22		0.50	2.00	1.99	1.00	0.30	0.10	5.89
I9 to I10	140.65	121				0.80	0.31	0.20	0.10	1.41
2A to 2B	3.00	260				0.34	0.10	0.10	0.10	0.64
2C to 2D	3.20	237				0.53	0.20	0.10	0.10	0.93
3A to 3B	19.25	77								
TOTAL	183.20 STA./NO.	761 CU. YD.								AVERAGE HAUL
CUBIC YARD WEIGHTED HAUL				0.0	0.2	0.6	0.2	0.1	0.1	1.23

Average Round Trip Distance (miles) 2.47

ROCK HAUL:

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

Truck type: D12 No. trucks: 5
Delay min.: 6 Efficiency: 85%

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

Ave haul: $1.94 /cy
Load: $0.30 /cy
Spread: $0.48 /cy

Production: cy/day = 1,628

PIT RUN ROCK HAUL COSTS 761 cy @ **$2.72 /cy**

Timber Sale
Vacating Costs (Total)

Work Description	Stations	Waterbar	C315	D10/12 trk	Labor	Straw-bales	Seed-lbs
1C to 1D	18.5	7.0	8.0	2.0	1.0	3.0	3.0
V1 to V2	13.0	5.0	6.0	4.0	4.0	6.0	6.0
V3 to V4	25.0	9.0	1.0				
V5 to V6	10.0	4.0					
V7 to V8	18.1	7.0					
V9 to V10	15.2	6.0	6.0	2.0	2.0	3.0	3.0
V11 to V12	7.2	3.0					
Total Quantity (Hours)		41.0	21.0	8.0	7.00	12.00	12.00
Rates		$39.34	$114.00	$89.00	$45.00	$12.06	$1.80
Total Dollars		$1,613	$2,394	$712	$315	$145	$22

Total Cost	**$5,201**	**$5,200**
Total Stations	**107.0**	
Total Miles	**2.0**	

Timber Sale

Vacating Costs V1 to V2

Work Description	Station	Waterbar	C315	D10/12 trk	Labor	Straw-bales	Seed-lbs
Construct waterbars every 300 to 400 feet.	0+00	7					
Remove and haul off culvert.	10+85		2.0	1.25			
Remove and haul off culvert.	12+65		2.0	1.25			
Remove and haul off culvert. Develop 3 foot wide channel.	14+70		4.0	1.25	1.0	3.0	3.0
End of vacate.	18+50						
Total Quantity (Hours/Amount)		7.00	8.00	3.75	1	3	3
Rates		$39.34	$114.00	$89.00	$45.00	$12.06	$1.80
Total Dollars		$275	$912	$334	$45	$36	$5

Total Cost **$1,608**

Timber Sale

Vacating Costs V1 to V2

Work Description	Station	Waterbar	C315	D10/12 trk	Labor	Straw-bales	Seed-lbs
Construct waterbars every 300 to 400 feet.	0+00	5					
Remove and haul off culvert. Develop 3 foot wide channel.	9+10		3.0	2.0	2.0	3.0	3.0
Remove and haul off culvert. Develop 3 foot wide channel.	12+70		3.0	2.0	2.0	3.0	3.0
End of vacate.	13+00						
Total Quantity (Hours/Amount)		5.00	6.00	4	4	6	6
Rates		$39.34	$114.00	$89.00	$45.00	$12.06	$1.80
Total Dollars		$197	$684	$356	$180	$72	$11

Total Cost **$1,500**

Timber Sale
Vacating Costs V3 to V4

Work Description	Station	Waterbar	C315	D10/12 trk	Labor	Straw-bales	Seed-lbs
Construct waterbars every 300 to 400 feet. Construct roadblock.	0+00	9	1.0				
End of vacate.	25+00						
Total Quantity (Hours)		9.00	1.00	0	0	0	0
Rates		$39.34	$114.00	$89.00	$45.00	$12.06	$1.80
Total Dollars		$354	$114	$0	$0	$0	$0

Total Cost **$468**

Timber Sale

Vacating Costs V5 to V6

Work Description	Station	Waterbar	C315	D24 trk	D10/12 trk	Labor	Straw-bales	Seed-lbs
Construct waterbars every 300 to 400 feet.	0+00	4						
End of vacate.	10+00							
Total Quantity (Hours/Amount)		4.00	0.00	0	0	0	0	0
Rates		$39.34	$114.00	$127.00	$89.00	$45.00	$12.06	$1.80
Total Dollars		$157	$0	$0	$0	$0	$0	$0

Total Cost **$157**

Timber Sale

Vacating Costs V7 to V8

Work Description	Station	Waterba	C315	D10/12 trk	Labor	Straw-bales	Seed-lbs
Construct waterbars every 300 to 400 feet.	0+00	7					
End of vacate.	18+10						
Total Quantity (Hours/Amount)		7.00	0.00	0	0	0	0
Rates		$39.34	$114.00	$89.00	$45.00	$12.06	$1.80
Total Dollars		$275	$0	$0	$0	$0	$0

Total Cost **$275**

Timber Sale

Vacating Costs V9 to V10

Work Description	Station	Waterbar	C315	D10/12 trk	Labor	Straw-bales	Seed-lbs
Construct waterbars every 300 to 400 feet. Construct roadblock.	0+00	6	1.00				
Remove and haul off culvert. Develop 4 foot wide channel.	6+00		5.0	2.0	2.0	3.0	3.0
End of vacate.	15+20						
Total Quantity (Hours/Amount)		6.00	6.00	2	2	3	3
Rates		$39.34	$114.00	$89.00	$45.00	$12.06	$1.80
Total Dollars		$236	$684	$178	$90	$36	$5

Total Cost **$1,230**

Timber Sale

Vacating Costs V11 to V12

Work Description	Station	Waterbar	C315	D10/12 trk	Labor	Straw-bales	Seed-lbs
Construct waterbars every 300 to 400 feet.	0+00	3					
End of vacate.	7+20						
Total Quantity (Hours/Amount)		3.00	0.00	0	0	0	0
Rates		$39.34	$114.00	$89.00	$45.00	$12.06	$1.80
Total Dollars		$118	$0	$0	$0	$0	$0

Total Cost **$118**

Green Saddle
TIMBER CRUISE REPORT
FY 2022

1. Sale Area Location: Portions of Section 36, T7N, R9W, and Portions of Sections 7 and 8, T6N, R8W, W.M., Clatsop County, OR.

2. **Fund Distribution:** BOF 100% Tax Code: 1-02 (100%)

3. **Sale Acreage by Unit:**

Unit	Harvest Type	Gross Acres	Stream Buffer Acres	Existing R/W Acres	New R/W Acres	New R/W Non-Stocked	Reserve Tree Area	Net Acres	Survey Method
1	Modified Clearcut	65	4	3	1	--	--	57	GIS
2	Modified Clearcut	134	--	2	<1	--	64	68	GIS
3	Partial Cut	50	5	3	--	--	--	42	GIS
4	In-Unit R/W	3	--	2	--	--	--	1	GIS
4	Out-of_Unit R/W	<1	--	--	--	<1	--	--	GIS
TOTALS		**252**	**9**	**10**	**1**	**<1**	**64**	**168**	

4. Cruisers and Cruise Dates:
Units were cruised by Ryan Simpson, John Czarnecki, Kevin Berry, John Choate, John Tillotson, Avery Petersen, and Justin Bush (December, 2021 through January, 2022).

5. Cruise Method and Computation:

Unit 1: Unit 1 was variable plot cruised with a 40 BAF. A total of 41 plots were sampled on a 5 by 3 chain spacing with a grade to count ratio of 1:1, resulting in 20 grade plots and 21 count plots*.

Unit 2: Unit 2 was variable plot cruised with a 54.45 BAF. A total of 37 plots were sampled on a 7 by 3 chain spacing with a grade to count ratio of 1:1, resulting in 17 grade plots and 20 count plots*. Fixed radius plots were nested at each plot location to gather volume data for sub-merchantable pulp harvest (1/50th acre plots; trees and sound snags 5" to 8" DBH).

Unit 3: Unit 3 was variable plot cruised with a 33.61 BAF. A total of 31 plots were sampled on a 4.5 by 3.5 chain spacing with a count to grade ratio of 1:2, resulting in 11 grade plots and 20 count plots*.

Unit 4: New Right-of-Way consists of spur roads and landings in Unit 2, and one tie-through road in Unit 1. Cruise data for Unit 4 was obtained from the combined U1 and U2A cruises and acreages have been adjusted accordingly.

*The reported numbers of cruise and grade plots vary from those indicated in the SuperACE reports for the U1, U2A, and U3 statistics due to measuring minor species on one of the count plots in each of the cruises. Further variance in the U3_TAKE Statistics can be attributed to recording blank plots where the basal area did not meet the thinning specifications and no take trees were designated.

Data was collected on Allegro 2 data collectors and downloaded to the Atterbury SuperACE 2008 program for computing. See the attached Cruise Designs for more details on the cruise method. The cruise calculations were processed in the Astoria District office.

UNIT	CRUISE	TRACT	TYPE	ACRES
1	GSADD	U1	00MC	58
2	GSADD	U2A	00MC	68
3	GSADD	U3	00PC	42

6. Timber Description:

Unit 1 is a modified clearcut approximately 42 to 67 years old. The stand consists of western hemlock, Douglas-fir, red alder, and a minor component of Sitka spruce. Average take western hemlock is 16 inches DBH and 58 feet to a merchantable top. Average take Douglas-fir is 15 inches DBH and 49 feet to a merchantable top. Average take red alder is 13 inches DBH and 37 feet to a merchantable top. One Sitka spruce was sampled at 16 inches DBH and 54 feet to a merchantable top. Average net volume to be harvested per acre is 23 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

Unit 2 is a modified clearcut approximately 77 to 87 years old. The stand consists of western hemlock, Douglas-fir, Sitka spruce, and a minor component of red alder. Average take western hemlock is 14 inches DBH and 55 feet to a merchantable top. Average take Douglas-fir is 19 inches DBH and 77 feet to a merchantable top. Average take Sitka spruce is 21 inches DBH and 73 feet to a merchantable top. Average take red alder is 15 inches DBH and 49 feet to a merchantable top. Average net volume to be harvested per acre is 45 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point. There is an average of 97 pieces of pulp per acre averaging seven inches DBH and 40 feet in length.

Unit 3 is a partial cut with an average age of 42 years. The stand consists of western hemlock and Douglas-fir. Average take western hemlock is 12 inches DBH and 38 feet to a merchantable top. Average take Douglas-fir is 12 inches DBH and 33 feet to a merchantable top. Average net volume to be harvested per acre is 7 MBF. The target conifer basal area is 140 ft^2 to 160 ft^2 and the target SDI is 34%. Red alder does not count toward the conifer basal area target.

Unit 4 Right-of-Way is similar to the timber description for Units 1 and 2. Average net volume to be harvested per acre is 34 MBF.

7. Statistical Analysis and Stand Summary

Statistics for Stand B.F. volumes*

Unit	Estimated CV	Target SE%	Actual CV	Actual SE%
1	45.0%	9.0%	43.5%	6.8%
2	45.0%	9.0%	27.3%	4.5%
3	34.0%	15.0%	34.1%	6.1%

*Statistics are based upon combined Take and Leave trees.

8. Take Volumes by Species and Log Grade for All Sale Units by MBF:

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

Conifer

Species	DBH	Net Vol.	2 Saw	3 Saw	4 Saw	% D & B	% Sale
western hemlock	14"	3,639	1,217	1,946	476	11.9%	77%
Douglas-fir	15"	618	194	334	90	7.4%	13%
Sitka spruce	20"	300	217	68	15	11.6%	6%
TOTALS		**4,557**	**1,628**	**2,348**	**581**		

Hardwood

Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
red alder	14"	164	38	65	--	61	1.6%	4%
TOTALS		**164**	**38**	**65**	**--**	**61**		

TOTAL VOLUME	4,721 MBF

9. Approvals:

Prepared by: Justin Bush **Date:** 02/18/2022
Unit Forester Approval: [signature] **Date:** 3/7/2022

10. Attachments: Cruise Design and Maps (10 pages)
Volume Reports (5 pages)
Statistics Reports (17 pages)
Stand Table Summaries (3 pages)
Log Stock Table (2 pages)

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Green Saddle **Unit** 1

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 58 **Estimated CV%** 45% Net BF/Acre **SE% Objective** 9% Net BF/Acre

Planned Sale Volume: 2,150 MBF **Estimated Sale Area Value/Acre:** $13,000

A. **Cruise Goals:** (a) Grade minimum 80 conifer trees:
(b) Sample 41 cruise plots (20 grade/ 21 count); (c) Other goals (____ Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

B. **Cruise Design:**

1. **Plot Cruises:** BAF: **40** (Full Point)
   Cruise Line Direction(s) 92°/272°
   Cruise Line Spacing 5 chains (330 feet)
   Cruise Plot Spacing 3 chains (198 feet)
   Grade/Count Ratio 1:1

   Take plots as marked on cruise map.

   Grade minor species (true fir, spruce, maple, and cedar) on count plots if encountered.

   DO NOT: record any 22' log lengths, or any 12', 24', or 32' log lengths for hardwoods.

   DO NOT: record snags < 12" DBH or record snag measurements on count plots.

C. **Tree Measurements:**

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. **Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40% of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
   B. Sort: Use code "1" (Domestic).
   C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
   Hardwoods: #1 Sawmill = 12"+ scaling diameter; #2 Sawmill = 10" and 11"; #3 Sawmill = 8" and 9"; #4 Sawmill = 6" and 7"

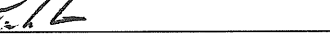
Grade oversized 3-SAW (DIB ≥ 12", knots > 2½" inside scaling cylinder affecting > 50% of log)

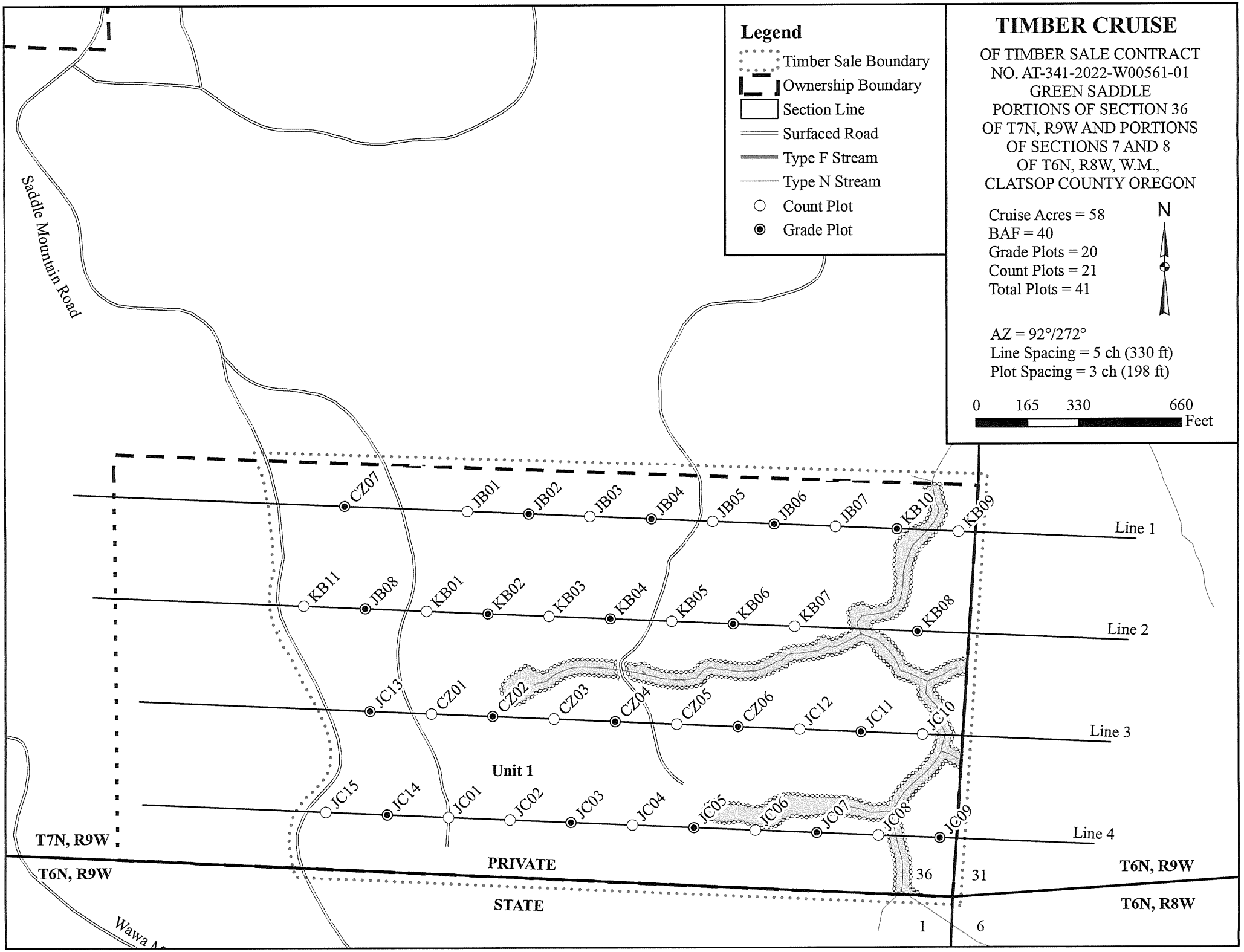
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way if the cruiser chooses.

9. **Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint, Permanent Marker.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.)

Cruise Design by: Justin Bush
Approved by: 
Date: 12-29-2021


Legend
Timber Sale Boundary
Ownership Boundary
Section Line
Surfaced Road
Type F Stream
Type N Stream
Count Plot
Grade Plot
TIMBER CRUISE
OF TIMBER SALE CONTRACT
NO. AT-341-2022-W00561-01
GREEN SADDLE
PORTIONS OF SECTION 36
OF T7N, R9W AND PORTIONS
OF SECTIONS 7 AND 8
OF T6N, R8W, W.M.,
CLATSOP COUNTY OREGON
Cruise Acres = 58
BAF = 40
Grade Plots = 20
Count Plots = 21
Total Plots = 41
N
AZ = 92°/272°
Line Spacing = 5 ch (330 ft)
Plot Spacing = 3 ch (198 ft)
0 165 330 660
Feet
Saddle Mountain Road
CZ07 JB01 JB02 JB03 JB04 JB05 JB06 JB07 KB10 KB09
Line 1
KB11 JB08 KB01 KB02 KB03 KB04 KB05 KB06 KB07 KB08
Line 2
JC13 CZ01 CZ02 CZ03 CZ04 CZ05 CZ06 JC12 JC11 JC10
Line 3
Unit 1
JC15 JC14 JC01 JC02 JC03 JC04 JC05 JC06 JC07 JC08 JC09
Line 4
T7N, R9W
T6N, R9W
PRIVATE
STATE
36
31
1
6
T6N, R9W
T6N, R8W
Wawa

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Green Saddle **Unit** 2A

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 68 **Estimated CV%** 45% Net BF/Acre **SE% Objective** 9% Net BF/Acre

Planned Sale Volume: 3,500 MBF **Estimated Sale Area Value/Acre:** $17,500

A. **Cruise Goals:** (a) Grade minimum 80 conifer trees:
(b) Sample 37 cruise plots (17 grade/ 20 count); (c) Other goals: ____ Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

B. **Cruise Design:**

1. **Plot Cruises:** BAF: **54.45** (Full Point); Fixed Radius: **16.7 feet** (1/50 ac)
   Cruise Line Direction(s) 192°/12°
   Cruise Line Spacing 7 chains (462 feet)
   Cruise Plot Spacing 3 chains (198 feet)
   Grade/Count Ratio 1:1

   Take variable plots as marked on cruise map; take fixed plots (utility grade only) at each plot location. Refer to slope correction table for plot radii adjustments.

   Grade minor species (true fir, spruce, maple, and cedar) on count plots if encountered.

   DO NOT: record any 22' log lengths, or any 12', 24', or 32' log lengths for hardwoods.

   DO NOT: record snags < 12" DBH or record snag measurements on count plots.

C. **Tree Measurements:**

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

   Record 5" to 8" DBH trees as utility grade in the fixed plot at every plot location.

2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. **Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40% of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.

   For utility grade trees on the fixed plots, record tree height to a 3" top.

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
   B. Sort: Use code "1" (Domestic).
   C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
   Hardwoods: #1 Sawmill = 12"+ scaling diameter; #2 Sawmill = 10" and 11"; #3 Sawmill = 8" and 9"; #4 Sawmill = 6" and 7"

Grade oversized 3-SAW (DIB ≥ 12", knots > 2½" inside scaling cylinder affecting > 50% of log)

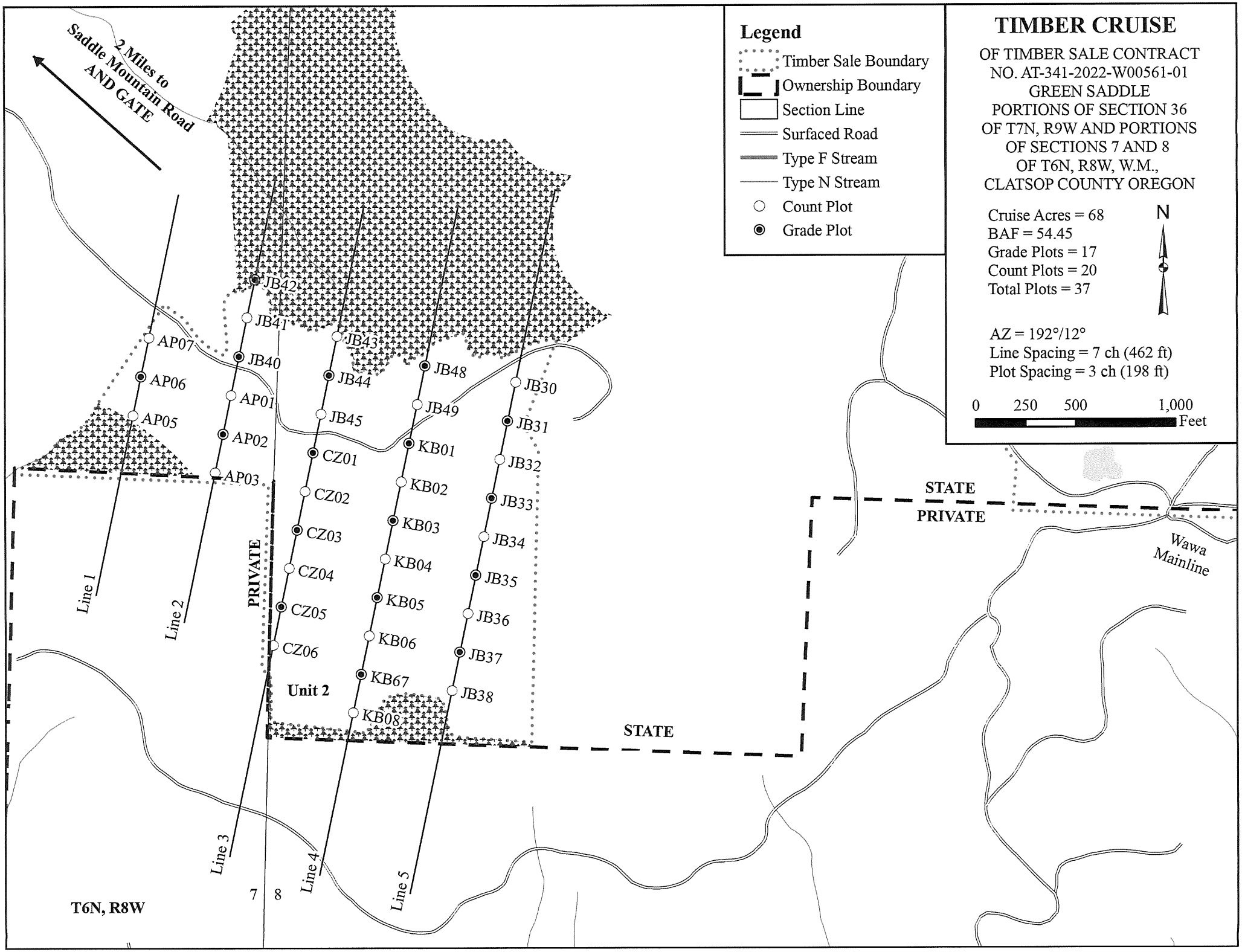
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way if the cruiser chooses.

9. **Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint, Permanent Marker.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.)

Cruise Design by: Justin Bush
Approved by: _____
Date: 1-19-2022


2 Miles to
Saddle Mountain Road
AND GATE
Legend
Timber Sale Boundary
Ownership Boundary
Section Line
Surfaced Road
Type F Stream
Type N Stream
Count Plot
Grade Plot
TIMBER CRUISE
OF TIMBER SALE CONTRACT
NO. AT-341-2022-W00561-01
GREEN SADDLE
PORTIONS OF SECTION 36
OF T7N, R9W AND PORTIONS
OF SECTIONS 7 AND 8
OF T6N, R8W, W.M.,
CLATSOP COUNTY OREGON
Cruise Acres = 68
BAF = 54.45
Grade Plots = 17
Count Plots = 20
Total Plots = 37
N
AZ = 192°/12°
Line Spacing = 7 ch (462 ft)
Plot Spacing = 3 ch (198 ft)
0 250 500 1,000
Feet
JB42
JB41
JB43
JB40
JB44
JB48
JB30
AP07
AP06
AP01
JB45
JB49
JB31
AP05
AP02
CZ01
KB01
JB32
AP03
CZ02
KB02
JB33
CZ03
KB03
JB34
CZ04
KB04
JB35
CZ05
KB05
JB36
CZ06
KB06
JB37
KB67
JB38
KB08
Unit 2
PRIVATE
STATE
PRIVATE
STATE
Wawa
Mainline
Line 1
Line 2
Line 3
Line 4
Line 5
7
8
T6N, R8W

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Green Saddle **Unit** 3

Harvest Type: Partial Cut

Approx. Cruise Acres: 42 **Estimated CV%** 34% Net BF/Acre **SE% Objective** 15% Net BF/Acre

Planned Sale Volume: 294 MBF **Estimated Sale Area Value/Acre:** $2,500

A. **Cruise Goals:** (a) Grade minimum 60 conifer trees: (b) Sample 31 cruise plots (11 grade/ 20 count); (c) Other goals (X Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

B. **Cruise Design:**

1. **Plot Cruises:** BAF: **33.61**
   Cruise Line Direction(s) 360° and 180°
   Cruise Line Spacing 4.5 chains (297 feet)
   Cruise Plot Spacing 3.5 chains (231 feet)
   Grade/Count Ratio 1:2

   Take plots as marked on cruise map.

   Grade minor species (true fir and cedar) on count plots if encountered.

   Thinning Residual Basal Area Target = **150 sq. ft.** (leave 4 to 5 **conifer** trees per plot)

   DO NOT: record any 22' log lengths, or any 12', 24', or 32' log lengths for hardwoods.

   DO NOT: record snags < 12" DBH or record snag measurements on count plots.

C. **Tree Measurements:**

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. **Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40% of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major

conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
   B. Sort: Use code "1" (Domestic).
   C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
   Hardwoods: #1 Sawmill = 12"+ scaling diameter; #2 Sawmill = 10" and 11"; #3 Sawmill = 8" and 9"; #4 Sawmill = 6" and 7"

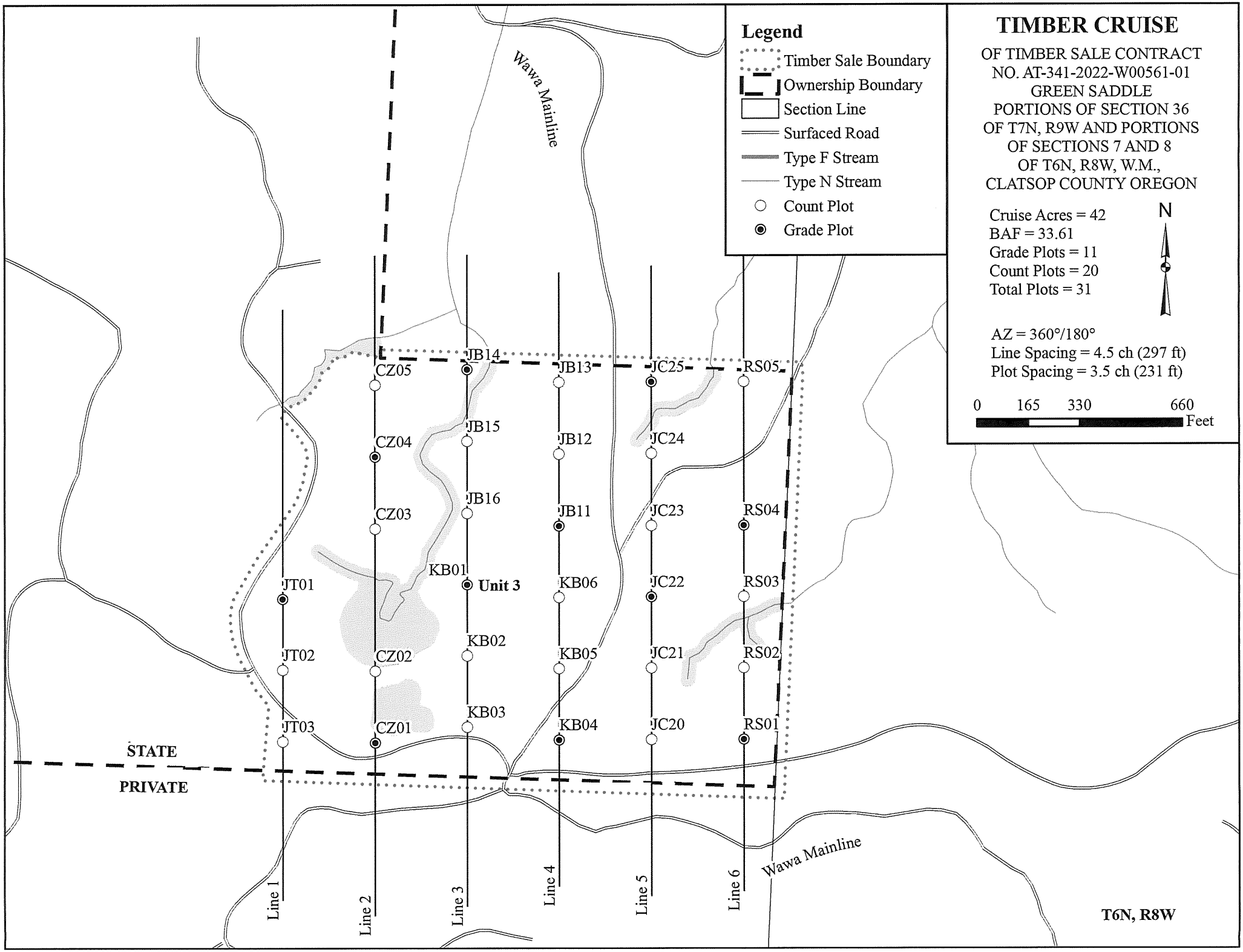
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way if the cruiser chooses.

9. **Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint, Permanent Marker.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.)

Cruise Design by: Justin Bush
Approved by: _____
Date: 12-30-2021


Legend
Timber Sale Boundary
Ownership Boundary
Section Line
Surfaced Road
Type F Stream
Type N Stream
Count Plot
Grade Plot
TIMBER CRUISE
OF TIMBER SALE CONTRACT
NO. AT-341-2022-W00561-01
GREEN SADDLE
PORTIONS OF SECTION 36
OF T7N, R9W AND PORTIONS
OF SECTIONS 7 AND 8
OF T6N, R8W, W.M.,
CLATSOP COUNTY OREGON
Cruise Acres = 42
BAF = 33.61
Grade Plots = 11
Count Plots = 20
Total Plots = 31
N
AZ = 360°/180°
Line Spacing = 4.5 ch (297 ft)
Plot Spacing = 3.5 ch (231 ft)
0 165 330 660
Feet
Wawa Mainline
JB14
JB13
JC25
RS05
CZ05
JB15
JB12
JC24
CZ04
JB16
JB11
JC23
RS04
CZ03
KB01
Unit 3
KB06
JC22
RS03
JT01
KB02
KB05
JC21
RS02
JT02
CZ02
KB03
KB04
JC20
RS01
JT03
CZ01
STATE
PRIVATE
Line 1
Line 2
Line 3
Line 4
Line 5
Line 6
Wawa Mainline
T6N, R8W

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T06N R08W S08 Ty00MC
THRU
T07N R09W S36 Ty00MC

Project: GSADD
Acres 168.00

Page 1
Date 2/18/2022
Time 7:39:17AM

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
H		DOCU														11	13		0.00	14.2
H		DO2S	33	13.0	8,323	7,244	1,217			91	9	5		28	67	36	13	203	1.44	35.6
H		DO3S	53	11.4	13,077	11,583	1,946		100			0	7	33	60	35	8	76	0.62	153.3
H		DO4S	14	11.0	3,182	2,832	476	2	98			49	50	1		21	6	24	0.38	120.5
H	**Totals**		77	11.9	24,582	21,658	3,639	0	66	30	3	8	10	27	54	29	8	67	0.66	323.5
S		DOCU														28	7		0.00	1.1
S		DO2S	72	12.0	1,465	1,289	217			34	66		6		94	39	17	428	2.44	3.0
S		DO3S	23	10.6	455	407	68		92	8			5	43	52	36	9	107	0.90	3.8
S		DO4S	5	10.0	96	87	15		100			77	23			17	8	27	0.53	3.2
S	**Totals**		6	11.6	2,017	1,783	300 ~~299~~		26	26	48	4	6	10	80	31	11	161	1.29	11.1
D		DOCU														6	11		0.00	1.8
D		DO2S	31	8.1	1,258	1,156	194			91	9	9		6	84	36	13	213	1.59	5.4
D		DO3S	54	7.1	2,142	1,989	334		100			3	5	37	55	35	8	77	0.68	25.9
D		DO4S	15	6.7	577	538	90		100			39	48	13		23	6	26	0.45	20.5
D	**Totals**		13	7.4	3,976	3,683	618 ~~619~~		69	29	3	10	10	24	56	29	8	69	0.72	53.7
A		DOCU														17	7		0.00	.5
A		DO1S	23		227	227	38			100			62		38	32	12	184	1.47	1.2
A		DO2S	39	3.8	403	387	65		100				100			30	11	118	1.08	3.3
A		DO4S	38		365	365	61		100			23	40		38	25	6	37	0.53	10.0
A	**Totals**		3	1.6	994	978	164		77	23		9	69		23	27	8	65	0.75	15.0
Totals				11.0	31,569	28,103	4,721	0	64	30	6	8	12	25	55	29	8	70	0.69	403.3

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: GSADD

Page 1
Date 2/17/2022
Time 2:11:33PM

T07N R09W S36 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
07N	09W	36	U1_TAKE	00MC	57.00	41	116	1	W

T07N R09W S36 T00MC

Spp	ST	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
H		DO	CU														10	8		0.00	2.6
H		DO	2S	36	10.9	6,599	5,878	335			92	8	2		33	65	36	13	195	1.45	30.1
H		DO	3S	54	10.8	9,774	8,721	497		100				5	31	64	36	8	85	0.72	102.8
H		DO	4S	10	10.0	1,714	1,543	88		100			55	45			21	6	23	0.40	68.4
H	**Totals**			70	10.8	18,087	16,143	920		64	34	3	6	7	29	58	31	8	79	0.77	203.9
D		DO	CU														8	8		0.00	3.4
D		DO	2S	17	7.5	891	825	47			100				26	74	37	12	192	1.53	4.3
D		DO	3S	69	8.8	3,598	3,280	187		100				9	43	48	35	8	81	0.71	40.4
D		DO	4S	14	7.8	714	658	38		100			58	42			21	6	22	0.44	29.6
D	**Totals**			21	8.5	5,203	4,763	271		83	17		8	12	34	46	28	8	61	0.69	77.7
A		DO	1S	22		409	409	23			100			100			30	12	150	1.30	2.7
A		DO	2S	43		784	784	45		100				100			30	10	119	1.06	6.6
A		DO	4S	35		636	636	36		100			34	66			22	6	29	0.48	21.8
A	**Totals**			8		1,829	1,829	104		78	22		12	88			24	8	59	0.72	31.1
S		DO	3S	87	10.0	293	264	15		100					100		32	11	126	1.04	2.1
S		DO	4S	13	10.0	42	38	2		100			100				20	6	18	0.45	2.1
S	**Totals**			1	10.0	335	302	17		100			12		88		26	9	72	0.81	4.2
Type Totals					9.5	25,454	23,036	1,313		69	29	2	7	14	28	50	29	8	73	0.75	317.0

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: GSADD

Page 1
Date 2/18/2022
Time 7:38:33AM

T06N R08W S08 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
06N	08W	08	U2A_TAKE	00MC	68.00	37	116	1	W

T06N R08W S08 T00MC

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
H		DO	CU														11	13		0.00	32.6
H		DO	2S	32	14.4	13,959	11,946	812			89	11	5		22	73	36	13	213	1.44	56.2
H		DO	3S	54	12.3	22,647	19,866	1,351		100			0	9	30	61	35	8	74	0.60	269.8
H		DO	4S	14	12.5	5,657	4,952	337		100			49	50	2		21	6	23	0.37	211.1
H	**Totals**			81	13.0	42,264	36,764	2,500		68	29	4	8	11	24	57	29	8	65	0.63	569.7
D		DO	CU														4	17		0.00	1.5
D		DO	2S	60	8.3	2,337	2,144	146			88	12	12			88	36	14	220	1.61	9.7
D		DO	3S	37	6.5	1,409	1,317	90		100					8	92	37	7	77	0.68	17.1
D		DO	4S	3	5.0	87	82	6		100			100				20	6	19	0.33	4.3
D	**Totals**			8	7.6	3,832	3,543	241		39	53	7	10		3	87	33	10	108	0.95	32.7
S		DO	CU														28	7		0.00	2.7
S		DO	2S	76	12.0	3,594	3,162	215			34	66		6		94	39	17	428	2.44	7.4
S		DO	3S	19	10.8	869	775	53		90	10			6	27	67	37	9	103	0.87	7.6
S		DO	4S	5	10.0	201	181	12		100			73	27			17	8	30	0.56	6.0
S	**Totals**			9	11.7	4,665	4,118	280		21	28	51	3	7	5	85	32	11	174	1.35	23.7
A		DO	CU														17	7		0.00	1.3
A		DO	1S	24		213	213	14			100					100	40	14	290	1.88	.7
A		DO	2S	34	11.5	329	291	20		100				100			30	11	115	1.13	2.5
A		DO	4S	42		361	361	25		100			7			93	35	7	59	0.61	6.2
A	**Totals**			2	4.2	903	865	59		75	25		3	34		63	32	8	81	0.80	10.7
Type Totals					12.3	51,663	45,290	3,080		61	31	8	8	10	20	62	29	8	71	0.68	636.8

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: GSADD

Page 1
Date 2/17/2022
Time 2:11:44PM

T06N R08W S08 T00PC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
06N	08W	08	U3_TAKE	00PC	42.00	31	26	1	W

T06N R08W S08 T00PC

Spp	ST	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
H		DO	2S	31	3.3	1,493	1,443	61			100		13		87		29	12	152	1.34	9.5
H		DO	3S	44		1,991	1,991	84		100					85	15	33	7	62	0.51	32.2
H		DO	4S	25	1.3	1,154	1,138	48	20	80			41	59			21	6	26	0.40	44.0
H	**Totals**			65	1.4	4,637	4,573	192	5	63	32		14	15	64	7	26	7	53	0.57	85.8
D		DO	3S	54	1.9	1,344	1,319	55		100			18		62	20	32	7	64	0.60	20.5
D		DO	4S	46	6.0	1,187	1,116	47		100			16	58	26		25	6	32	0.49	34.5
D	**Totals**			35	3.8	2,532	2,435	102		100			17	27	45	11	28	7	44	0.53	55.0
Type Totals					2.3	7,169	7,007	294	3	76	21		15	19	58	8	27	7	50	0.55	140.8

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T06N R08W S08 Ty00MC .50
T07N R09W S36 Ty00MC .50

Project: GSADD
Acres 1.00

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Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
H		DOCU															11	13		0.00	17.6
H		DO2S		33	13.3	10,279	8,912	9			90	10	4		26	70	36	13	207	1.44	43.2
H		DO3S		54	11.8	16,211	14,293	14		100			0	7	31	62	36	8	77	0.63	186.3
H		DO4S		13	11.9	3,686	3,248	3		100			50	48	1		21	6	23	0.37	139.8
H	**Totals**			77	12.3	30,176	26,453	26		66	30	3	8	10	25	57	29	8	68	0.67	386.8
S		DOCU															28	7		0.00	1.4
S		DO2S		71	12.0	1,797	1,581	2			34	66		6		94	39	17	428	2.44	3.7
S		DO3S		24	10.6	581	520	1		93	7			5	46	50	36	9	108	0.90	4.8
S		DO4S		5	10.0	122	109	0		100			78	22			18	8	27	0.53	4.1
S	**Totals**			6	11.6	2,500	2,210	2		27	26	47	4	6	11	79	31	11	158	1.28	13.9
D		DOCU															6	11		0.00	2.5
D		DO2S		35	8.1	1,614	1,484	1			91	9	9		7	84	37	13	211	1.59	7.0
D		DO3S		56	8.2	2,503	2,298	2		100				6	33	60	36	8	80	0.70	28.7
D		DO4S		9	7.5	400	370	0		100			62	38			20	6	22	0.43	17.0
D	**Totals**			12	8.1	4,518	4,153	4		64	33	3	9	7	21	63	30	8	75	0.77	55.2
A		DOCU															17	7		0.00	.6
A		DO1S		23		311	311	0			100			66		34	32	12	180	1.45	1.7
A		DO2S		40	3.4	557	538	1		100				100			30	11	118	1.08	4.6
A		DO4S		37		498	498	0		100			24	42		34	25	6	36	0.52	14.0
A	**Totals**			4	1.4	1,366	1,347	1		77	23		9	71		20	26	8	64	0.75	20.9
Totals					11.4	38,559	34,163	34		64	30	6	8	12	23	58	29	8	72	0.70	476.9

TC PSTATS

PROJECT STATISTICS

PROJECT GSADD

DATE 3/8/2022

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
06N	08	08	U2A_R/W	00MC	THR	168.00	187	1,098	1	W
07N	09W	36	U1_TAKE	00MC						

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	187	1098	5.9		
CRUISE	89	499	5.6	38,904	1.3
DBH COUNT					
REFOREST					
COUNT	94	571	6.1		
BLANKS	4				
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
WHEMLOCK	354	181.8	14.0	54	52.2	195.4	24,582	21,658	6,797	6,149
DOUG FIR	93	34.1	14.7	48	10.5	40.2	3,976	3,683	1,191	1,142
R ALDER	20	10.5	13.8	40	2.9	10.9	994	978	299	299
S SPRUCE	22	5.1	20.2	70	2.5	11.2	2,017	1,783	491	442
SNAG	10	.1	14.1	50	0.0	.1				
TOTAL	*499*	*231.6*	*14.3*	*53*	*68.2*	*257.9*	*31,569*	*28,103*	*8,778*	*8,032*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - BF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	67.4	3.6	165	171	177			
DOUG FIR	69.9	7.2	130	140	150			
R ALDER	71.3	16.3	106	127	148			
S SPRUCE	88.8	19.4	544	674	805			
SNAG								
TOTAL	*107.7*	*4.8*	*173*	*182*	*191*	*463*	*116*	*51*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - CF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	60.8	3.2	47	49	50			
DOUG FIR	63.9	6.6	40	43	46			
R ALDER	64.2	14.7	33	38	44			
S SPRUCE	76.5	16.7	131	157	183			
SNAG								
TOTAL	*86.7*	*3.9*	*49*	*51*	*53*	*300*	*75*	*33*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	TREES/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	160.2	11.7	161	182	203			
DOUG FIR	194.5	14.2	29	34	39			
R ALDER	430.7	31.5	7	10	14			
S SPRUCE	355.0	25.9	4	5	6			
SNAG	436.9	31.9	0	0	0			
TOTAL	*129.9*	*9.5*	*210*	*232*	*254*	*674*	*169*	*75*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	BASAL AREA/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	148.5	10.8	174	195	217			
DOUG FIR	197.1	14.4	34	40	46			
R ALDER	433.9	31.7	7	11	14			
S SPRUCE	342.2	25.0	8	11	14			
SNAG	440.9	32.2	0	0	0			
TOTAL	*123.4*	*9.0*	*235*	*258*	*281*	*609*	*152*	*68*

PROJECT STATISTICS

PROJECT GSADD

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
06N	08	08	U2A_R/W	00MC	THR	168.00	187	1,098	1	W
07N	09W	36	U1_TAKE	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
WHEMLOCK	149.8	10.9	19,287	21,658	24,030			
DOUG FIR	223.5	16.3	3,082	3,683	4,285			
R ALDER	453.0	33.1	655	978	1,302			
S SPRUCE	375.9	27.5	1,293	1,783	2,272			
SNAG								
TOTAL	*133.1*	*9.7*	*25,370*	*28,103*	*30,835*	*707*	*177*	*79*

STATISTICS

PROJECT GSADD

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
07N	09W	36	U1	00MC	57.00	41	238	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	238	5.8		
CRUISE	21	117	5.6	10,434	1.1
DBH COUNT					
REFOREST					
COUNT	20	115	5.8		
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
WHEMLOCK	76	112.1	15.7	58	38.1	151.2	18,087	16,143	5,350	4,815
DOUG FIR	34	46.2	14.9	49	14.4	55.6	5,203	4,763	1,590	1,510
R ALDER	5	21.8	13.4	37	5.9	21.5	1,829	1,829	546	546
S SPRUCE	1	2.1	16.0	54	0.7	2.9	335	302	99	89
SNAG	1	.8	15.0	35	0.3	1.0				
TOTAL	*117*	*183.0*	*15.3*	*53*	*59.5*	*232.2*	*25,454*	*23,036*	*7,584*	*6,960*

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
WHEMLOCK	53.4	6.1	166	176	187			
DOUG FIR	61.5	10.5	112	125	139			
R ALDER	63.5	31.6	73	106	139			
S SPRUCE								
SNAG								
TOTAL	*58.7*	*5.4*	*148*	*157*	*165*	*137*	*34*	*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
WHEMLOCK	49.9	5.7	49	52	55			
DOUG FIR	56.8	9.7	36	40	43			
R ALDER	57.5	28.6	22	31	40			
S SPRUCE								
SNAG								
TOTAL	*54.5*	*5.0*	*45*	*47*	*50*	*118*	*30*	*13*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	74.5	11.6	99	112	125			
DOUG FIR	109.5	17.1	38	46	54			
R ALDER	226.1	35.3	14	22	30			
S SPRUCE	360.3	56.2	1	2	3			
SNAG	640.3	99.9	0	1	2			
TOTAL	*33.2*	*5.2*	*174*	*183*	*193*	*44*	*11*	*5*

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	72.3	11.3	134	151	168			
DOUG FIR	104.1	16.2	47	56	65			
R ALDER	224.8	35.1	14	21	29			
S SPRUCE	360.3	56.2	1	3	5			
SNAG	640.3	99.9	0	1	2			
TOTAL	*33.4*	*5.2*	*220*	*232*	*244*	*45*	*11*	*5*

STATISTICS

PROJECT GSADD

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
07N	09W	36	U1	00MC	57.00	41	238	1	W

CL: 68.1 % COEFF **NET BF/ACRE** # OF PLOTS REQ. INF. POP.

SD: 1.0 VAR. S.E.% LOW AVG HIGH 5 10 15

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	75.8	11.8	14,234	16,143	18,052			
DOUG FIR	105.1	16.4	3,982	4,763	5,544			
R ALDER	227.9	35.6	1,178	1,829	2,479			
S SPRUCE	360.3	56.2	132	302	472			
SNAG								
TOTAL	*43.5*	*6.8*	*21,471*	*23,036*	*24,602*	*76*	*19*	*8*

TC TSTATS

STATISTICS

PAGE 1

PROJECT GSADD

DATE 2/17/2022

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
07N	09W	36	U1 TAKE	00MC	57.00	41	237	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	237	5.8		
CRUISE	21	116	5.5	10,388	1.1
DBH COUNT					
REFOREST					
COUNT	20	115	5.8		
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
WHEMLOCK	76	112.1	15.7	58	38.1	151.2	18,087	16,143	5,350	4,815
DOUG FIR	34	46.2	14.9	49	14.4	55.6	5,203	4,763	1,590	1,510
R ALDER	5	21.8	13.4	37	5.9	21.5	1,829	1,829	546	546
S SPRUCE	1	2.1	16.0	54	0.7	2.9	335	302	99	89
TOTAL	*116*	*182.2*	*15.3*	*53*	*59.2*	*231.2*	*25,454*	*23,036*	*7,584*	*6,960*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

SAMPLE TREES - BF

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	53.4	6.1	166	176	187			
DOUG FIR	61.5	10.5	112	125	139			
R ALDER	63.5	31.6	73	106	139			
S SPRUCE								
TOTAL	*57.7*	*5.3*	*150*	*158*	*167*	*133*	*33*	*15*

SAMPLE TREES - CF

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	49.9	5.7	49	52	55			
DOUG FIR	56.8	9.7	36	40	43			
R ALDER	57.5	28.6	22	31	40			
S SPRUCE								
TOTAL	*53.4*	*5.0*	*45*	*48*	*50*	*114*	*29*	*13*

TREES/ACRE

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	74.5	11.6	99	112	125			
DOUG FIR	109.5	17.1	38	46	54			
R ALDER	226.1	35.3	14	22	30			
S SPRUCE	360.3	56.2	1	2	3			
TOTAL	*33.7*	*5.3*	*173*	*182*	*192*	*45*	*11*	*5*

BASAL AREA/ACRE

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	72.3	11.3	134	151	168			
DOUG FIR	104.1	16.2	47	56	65			
R ALDER	224.8	35.1	14	21	29			
S SPRUCE	360.3	56.2	1	3	5			
TOTAL	*34.1*	*5.3*	*219*	*231*	*244*	*46*	*12*	*5*

NET BF/ACRE

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	75.8	11.8	14,234	16,143	18,052			
DOUG FIR	105.1	16.4	3,982	4,763	5,544			
R ALDER	227.9	35.6	1,178	1,829	2,479			
S SPRUCE	360.3	56.2	132	302	472			
TOTAL	*43.5*	*6.8*	*21,471*	*23,036*	*24,602*	*76*	*19*	*8*

STATISTICS

PROJECT GSADD

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
07N	09W	36	U1 TAKE	00MC	57.00	41	237	1	W

				NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
CL:	68.1%	COEFF		LOW	AVG	HIGH	5	10	15
SD:	1.0	VAR.	S.E.%						

STATISTICS

PROJECT GSADD

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	08	U2A	00MC	68.00	37	282	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	37	282	7.6		
CRUISE	18	125	6.9	25,406	.5
DBH COUNT					
REFOREST					
COUNT	19	148	7.8		
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
WHEMLOCK	94	313.6	13.8	55	87.3	323.8	42,264	36,764	11,392	10,253
SNAG	9	27.1	14.1	50	7.8	29.4				
DOUG FIR	7	14.8	18.6	77	6.5	28.0	3,832	3,543	1,085	1,031
S SPRUCE	10	10.6	20.8	73	5.5	25.0	4,665	4,118	1,121	1,009
R ALDER	5	7.4	14.8	49	2.3	8.8	903	865	275	275
TOTAL	*125*	*373.6*	*14.3*	*56*	*109.9*	*415.0*	*51,663*	*45,290*	*13,873*	*12,567*

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
WHEMLOCK	76.8	7.9	158	171	185			
SNAG								
DOUG FIR	36.2	14.7	236	277	318			
S SPRUCE	85.2	28.4	521	727	933			
R ALDER	79.4	39.5	90	148	206			
TOTAL	*125.2*	*11.2*	*185*	*208*	*232*	*626*	*156*	*70*

CL: 68.1 %	COEFF		SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	68.7	7.1	44	47	50			
SNAG								
DOUG FIR	34.2	13.9	69	80	92			
S SPRUCE	73.3	24.4	127	168	209			
R ALDER	69.2	34.4	30	45	61			
TOTAL	*104.1*	*9.3*	*50*	*55*	*60*	*433*	*108*	*48*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	53.1	8.7	286	314	341			
SNAG	180.2	29.6	19	27	35			
DOUG FIR	197.0	32.4	10	15	20			
S SPRUCE	155.6	25.6	8	11	13			
R ALDER	367.5	60.4	3	7	12			
TOTAL	*42.8*	*7.0*	*347*	*374*	*400*	*73*	*18*	*8*

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	42.5	7.0	301	324	346			
SNAG	182.9	30.0	21	29	38			
DOUG FIR	198.1	32.5	19	28	37			
S SPRUCE	141.4	23.2	19	25	31			
R ALDER	371.0	60.9	3	9	14			
TOTAL	*30.5*	*5.0*	*394*	*415*	*436*	*37*	*9*	*4*

STATISTICS

PROJECT GSADD

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	**08W**	**08**	**U2A**	**00MC**	68.00	37	282	1	W

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	39.1	6.4	34,401	36,764	39,127			
SNAG								
DOUG FIR	199.7	32.8	2,381	3,543	4,704			
S SPRUCE	155.7	25.6	3,065	4,118	5,172			
R ALDER	391.4	64.3	309	865	1,421			
TOTAL	*27.3*	*4.5*	*43,256*	*45,290*	*47,324*	*30*	*7*	*3*

STATISTICS

PROJECT GSADD

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	08	U2A TAKE	00MC	68.00	37	262	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	37	262	7.1		
CRUISE	18	116	6.4	23,561	.5
DBH COUNT					
REFOREST					
COUNT	19	140	7.4		
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
WHEMLOCK	94	313.6	13.8	55	87.3	323.8	42,264	36,764	11,392	10,253
DOUG FIR	7	14.8	18.6	77	6.5	28.0	3,832	3,543	1,085	1,031
S SPRUCE	10	10.6	20.8	73	5.5	25.0	4,665	4,118	1,121	1,009
R ALDER	5	7.4	14.8	49	2.3	8.8	903	865	275	275
TOTAL	*116*	*346.5*	*14.3*	*56*	*102.0*	*385.6*	*51,663*	*45,290*	*13,873*	*12,567*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

SAMPLE TREES - BF

CL: 68.1 %	COEFF					# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	76.8	7.9	158	171	185			
DOUG FIR	36.2	14.7	236	277	318			
S SPRUCE	85.2	28.4	521	727	933			
R ALDER	79.4	39.5	90	148	206			
TOTAL	*117.6*	*10.9*	*200*	*225*	*249*	*552*	*138*	*61*

SAMPLE TREES - CF

CL: 68.1 %	COEFF					# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	68.7	7.1	44	47	50			
DOUG FIR	34.2	13.9	69	80	92			
S SPRUCE	73.3	24.4	127	168	209			
R ALDER	69.2	34.4	30	45	61			
TOTAL	*96.6*	*9.0*	*54*	*59*	*65*	*373*	*93*	*41*

TREES/ACRE

CL: 68.1 %	COEFF					# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	53.1	8.7	286	314	341			
DOUG FIR	197.0	32.4	10	15	20			
S SPRUCE	155.6	25.6	8	11	13			
R ALDER	367.5	60.4	3	7	12			
TOTAL	*42.8*	*7.0*	*322*	*346*	*371*	*73*	*18*	*8*

BASAL AREA/ACRE

CL: 68.1 %	COEFF					# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	42.5	7.0	301	324	346			
DOUG FIR	198.1	32.5	19	28	37			
S SPRUCE	141.4	23.2	19	25	31			
R ALDER	371.0	60.9	3	9	14			
TOTAL	*27.1*	*4.5*	*368*	*386*	*403*	*29*	*7*	*3*

NET BF/ACRE

CL: 68.1 %	COEFF					# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	39.1	6.4	34,401	36,764	39,127			
DOUG FIR	199.7	32.8	2,381	3,543	4,704			
S SPRUCE	155.7	25.6	3,065	4,118	5,172			
R ALDER	391.4	64.3	309	865	1,421			
TOTAL	*27.3*	*4.5*	*43,256*	*45,290*	*47,324*	*30*	*7*	*3*

STATISTICS

PROJECT **GSADD**

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	08	U2A TAKE	00MC	68.00	37	262	1	W

CL:	68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15

TC TSTATS

STATISTICS

PROJECT GSADD

DATE 2/17/2022

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	08	U3	00PC	42.00	31	236	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	31	236	7.6		
CRUISE	12	77	6.4	9,712	.8
DBH COUNT					
REFOREST					
COUNT	19	152	8.0		
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
HEMLEAV	27	66.5	16.4	52	24.1	97.6	11,330	11,130	3,310	3,310
DOUGLEAV	17	36.5	16.2	51	12.9	52.0	4,613	4,526	1,430	1,430
WHEMLOCK	14	62.2	11.7	38	13.6	46.6	4,637	4,573	1,284	1,284
DOUG FIR	11	49.1	12.1	33	11.2	39.0	2,532	2,435	818	818
ALDRLEAV	4	13.0	14.6	41	4.0	15.2	1,189	1,189	390	390
SPRUCELV	3	2.3	18.7	32	1.0	4.3	511	478	129	129
SNAG	1	1.6	11.0	52	0.3	1.1				
TOTAL	*77*	*231.2*	*14.2*	*43*	*67.8*	*255.9*	*24,812*	*24,331*	*7,361*	*7,361*

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
HEMLEAV	56.8	11.1	201	227	252			
DOUGLEAV	50.1	12.5	121	138	156			
WHEMLOCK	66.8	18.5	87	106	126			
DOUG FIR	62.1	19.6	45	55	66			
ALDRLEAV	74.8	42.8	69	120	171			
SPRUCELV	90.3	62.5	160	427	693			
SNAG								
TOTAL	*86.0*	*9.8*	*144*	*160*	*176*	*295*	*74*	*33*

CL: 68.1 %	COEFF		SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	53.0	10.4	60	67	73			
DOUGLEAV	48.6	12.1	39	44	49			
WHEMLOCK	67.8	18.8	25	31	36			
DOUG FIR	51.7	16.3	16	19	22			
ALDRLEAV	59.8	34.2	26	40	54			
SPRUCELV	89.1	61.6	44	114	184			
SNAG								
TOTAL	*78.7*	*9.0*	*43*	*48*	*52*	*248*	*62*	*28*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	70.8	12.7	58	67	75			
DOUGLEAV	100.9	18.1	30	36	43			
WHEMLOCK	119.0	21.4	49	62	76			
DOUG FIR	123.4	22.1	38	49	60			
ALDRLEAV	169.1	30.3	9	13	17			
SPRUCELV	336.1	60.3	1	2	4			
SNAG	556.8	99.9	0	2	3			
TOTAL	*39.3*	*7.1*	*215*	*231*	*248*	*62*	*15*	*7*

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15

STATISTICS

PROJECT GSADD

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	08	U3	00PC	42.00	31	236	1	W

BASAL AREA/ACRE

CL: 68.1% / SD: 1.0	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
HEMLEAV	62.5	11.2	87	98	109			
DOUGLEAV	98.4	17.7	43	52	61			
WHEMLOCK	108.0	19.4	38	47	56			
DOUG FIR	122.0	21.9	30	39	48			
ALDRLEAV	160.1	28.7	11	15	20			
SPRUCELV	331.3	59.5	2	4	7			
SNAG	556.8	99.9	0	1	2			
TOTAL	*28.7*	*5.2*	*243*	*256*	*269*	*33*	*8*	*4*

NET BF/ACRE

CL: 68.1% / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
HEMLEAV	65.3	11.7	9,825	11,130	12,435			
DOUGLEAV	98.7	17.7	3,725	4,526	5,328			
WHEMLOCK	110.0	19.7	3,670	4,573	5,476			
DOUG FIR	123.8	22.2	1,894	2,435	2,975			
ALDRLEAV	163.9	29.4	839	1,189	1,539			
SPRUCELV	374.8	67.3	157	478	800			
SNAG								
TOTAL	*34.1*	*6.1*	*22,844*	*24,331*	*25,817*	*46*	*12*	*5*

TC TSTATS

STATISTICS

PAGE 1

PROJECT GSADD

DATE 2/17/2022

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	08	U3 LEAVE	00PC	42.00	31	157	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	31	157	5.1		
CRUISE	12	52	4.3	5,035	1.0
DBH COUNT					
REFOREST					
COUNT	19	101	5.3		
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
HEMLEAV	27	66.5	16.4	52	24.1	97.6	11,330	11,130	3,310	3,310
DOUGLEAV	17	36.5	16.2	51	12.9	52.0	4,613	4,526	1,430	1,430
ALDRLEAV	4	13.0	14.6	41	4.0	15.2	1,189	1,189	390	390
SPRUCELV	3	2.3	18.7	32	1.0	4.3	511	478	129	129
SNAG	1	1.6	11.0	52	0.3	1.1				
TOTAL	*52*	*119.9*	*16.1*	*50*	*42.4*	*170.2*	*17,643*	*17,323*	*5,259*	*5,259*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

SAMPLE TREES - BF

CL: 68.1 % SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
HEMLEAV	56.8	11.1	201	227	252			
DOUGLEAV	50.1	12.5	121	138	156			
ALDRLEAV	74.8	42.8	69	120	171			
SPRUCELV	90.3	62.5	160	427	693			
SNAG								
TOTAL	*75.7*	*10.5*	*176*	*197*	*217*	*229*	*57*	*25*

SAMPLE TREES - CF

CL: 68.1 % SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
HEMLEAV	53.0	10.4	60	67	73			
DOUGLEAV	48.6	12.1	39	44	49			
ALDRLEAV	59.8	34.2	26	40	54			
SPRUCELV	89.1	61.6	44	114	184			
SNAG								
TOTAL	*68.2*	*9.4*	*53*	*59*	*64*	*186*	*46*	*21*

TREES/ACRE

CL: 68.1 % SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
HEMLEAV	70.8	12.7	58	67	75			
DOUGLEAV	100.9	18.1	30	36	43			
ALDRLEAV	169.1	30.3	9	13	17			
SPRUCELV	336.1	60.3	1	2	4			
SNAG	556.8	99.9	0	2	3			
TOTAL	*23.5*	*4.2*	*115*	*120*	*125*	*22*	*6*	*2*

BASAL AREA/ACRE

CL: 68.1 % SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
HEMLEAV	62.5	11.2	87	98	109			
DOUGLEAV	98.4	17.7	43	52	61			
ALDRLEAV	160.1	28.7	11	15	20			
SPRUCELV	331.3	59.5	2	4	7			
SNAG	556.8	99.9	0	1	2			
TOTAL	*17.6*	*3.2*	*165*	*170*	*176*	*12*	*3*	*1*

TC TSTATS

STATISTICS

PROJECT GSADD

DATE 2/17/2022

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	**08W**	**08**	**U3 LEAVE**	**00PC**	42.00	31	157	1	W

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	65.3	11.7	9,825	11,130	12,435			
DOUGLEAV	98.7	17.7	3,725	4,526	5,328			
ALDRLEAV	163.9	29.4	839	1,189	1,539			
SPRUCELV	374.8	67.3	157	478	800			
SNAG								
TOTAL	*26.5*	*4.8*	*16,500*	*17,323*	*18,147*	*28*	*7*	*3*

TC TSTATS

STATISTICS

PAGE 1

PROJECT GSADD

DATE 2/17/2022

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	08	U3 TAKE	00PC	42.00	31	79	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	31	79	2.5		
CRUISE	11	25	2.3	4,677	.5
DBH COUNT					
REFOREST					
COUNT	16	53	3.3		
BLANKS	4				
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
WHEMLOCK	14	62.2	11.7	38	13.6	46.6	4,637	4,573	1,284	1,284
DOUG FIR	11	49.1	12.1	33	11.2	39.0	2,532	2,435	818	818
TOTAL	*25*	*111.4*	*11.9*	*36*	*24.9*	*85.7*	*7,169*	*7,007*	*2,102*	*2,102*

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
WHEMLOCK	66.8	18.5	87	106	126			
DOUG FIR	62.1	19.6	45	55	66			
TOTAL	*74.3*	*15.2*	*71*	*84*	*97*	*230*	*57*	*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
WHEMLOCK	67.8	18.8	25	31	36			
DOUG FIR	51.7	16.3	16	19	22			
TOTAL	*69.3*	*14.1*	*22*	*25*	*29*	*200*	*50*	*22*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	119.0	21.4	49	62	76			
DOUG FIR	123.4	22.1	38	49	60			
TOTAL	*74.8*	*13.4*	*96*	*111*	*126*	*223*	*56*	*25*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	108.0	19.4	38	47	56			
DOUG FIR	122.0	21.9	30	39	48			
TOTAL	*70.8*	*12.7*	*75*	*86*	*97*	*200*	*50*	*22*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	110.0	19.7	3,670	4,573	5,476			
DOUG FIR	123.8	22.2	1,894	2,435	2,975			
TOTAL	*76.3*	*13.7*	*6,047*	*7,007*	*7,967*	*233*	*58*	*26*

TC PSTATS

PROJECT STATISTICS

PROJECT GSADD

DATE 3/8/2022

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08	08	U2A_R/W	00MC	1.00	78	520	1	W
07N	09W	36	U1_R/W	00MC					

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	78	520	6.7		
CRUISE	39	242	6.2	278	86.9
DBH COUNT					
REFOREST					
COUNT	39	263	6.7		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	170	212.9	14.3	55	62.8	237.5	30,176	26,453	8,371	7,534
DOUG FIR	41	30.5	15.8	56	10.5	41.8	4,518	4,153	1,337	1,270
SNAG	10	14.0	14.1	50	4.0	15.2				
R ALDER	10	14.6	13.8	40	4.1	15.1	1,366	1,347	410	410
S SPRUCE	11	6.4	20.1	70	3.1	14.0	2,500	2,210	610	549
TOTAL	*242*	*278.3*	*14.6*	*55*	*84.7*	*323.6*	*38,559*	*34,163*	*10,728*	*9,763*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - BF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	66.9	5.1	165	174	183			
DOUG FIR	65.3	10.2	136	151	167			
SNAG								
R ALDER	73.2	24.4	96	127	158			
S SPRUCE	91.0	28.8	480	674	868			
TOTAL	*108.7*	*7.0*	*171*	*184*	*196*	*472*	*118*	*52*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - CF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	60.2	4.6	47	49	52			
DOUG FIR	59.7	9.3	42	47	51			
SNAG								
R ALDER	66.0	22.0	30	38	47			
S SPRUCE	78.4	24.8	118	157	196			
TOTAL	*87.8*	*5.6*	*48*	*51*	*54*	*308*	*77*	*34*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	TREES/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	81.9	9.3	193	213	233			
DOUG FIR	140.9	15.9	26	30	35			
SNAG	272.6	30.8	10	14	18			
R ALDER	271.2	30.7	10	15	19			
S SPRUCE	216.8	24.5	5	6	8			
TOTAL	*59.3*	*6.7*	*260*	*278*	*297*	*140*	*35*	*16*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	BASAL AREA/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	67.0	7.6	219	237	255			
DOUG FIR	137.6	15.6	35	42	48			
SNAG	275.3	31.1	10	15	20			
R ALDER	270.8	30.6	11	15	20			
S SPRUCE	207.7	23.5	11	14	17			
TOTAL	*46.9*	*5.3*	*306*	*324*	*341*	*88*	*22*	*10*

PROJECT STATISTICS

PROJECT GSADD

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08	08	U2A_R/W	00MC	1.00	78	520	1	W
07N	09W	36	U1_R/W	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

WHEMLOCK	67.2	7.6	24,442	26,453	28,465			
DOUG FIR	148.3	16.8	3,456	4,153	4,849			
SNAG								
R ALDER	280.6	31.7	919	1,347	1,774			
S SPRUCE	231.1	26.1	1,632	2,210	2,788			
TOTAL	*50.3*	*5.7*	*32,218*	*34,163*	*36,107*	*101*	*25*	*11*

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 3/8/2022

T06N R08W S08 Ty00MC
THRU
T07N R09W S36 Ty00MC

Project GSADD
Acres 168.00

Time: 8:36:54AM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
H		8	2	89	39	4.023	1.40	4.02	5.4	18.0		22	72		36	12
H		9	15	85	63	23.089	10.20	26.27	8.6	30.2		227	793		381	133
H		10	14	87	93	17.340	9.37	27.84	10.4	40.2		288	1,119		484	188
H		11	18	87	82	17.477	11.45	23.12	13.2	46.9		306	1,083		514	182
H		12	29	87	80	24.251	19.05	39.42	13.7	46.6		538	1,836		904	308
H		13	30	86	70	17.360	16.00	30.20	14.8	44.9		446	1,357		749	228
H		14	32	87	90	16.282	17.41	31.29	18.9	68.5		591	2,144		994	360
H		15	26	86	82	10.161	12.47	18.03	20.0	68.3		360	1,231		605	207
H		16	29	87	88	11.051	15.43	22.62	24.3	86.5		549	1,956		923	329
H		17	36	87	79	12.072	19.03	24.14	25.2	86.7		609	2,093		1,023	352
H		18	36	87	91	9.949	17.58	21.49	30.0	106.1		644	2,279		1,082	383
H		19	28	86	84	6.312	12.43	13.34	31.1	102.2		415	1,363		697	229
H		20	19	87	95	5.180	11.30	11.65	36.5	142.0		425	1,653		713	278
H		21	12	87	99	2.902	6.98	6.97	36.6	132.3		255	922		429	155
H		22	4	87	104	.790	2.09	1.58	45.9	175.7		73	278		122	47
H		23	6	83	87	.959	2.77	1.92	50.6	165.4		97	317		163	53
H		25	2	86	104	.412	1.40	1.24	42.6	189.0		53	234		88	39
H		26	2	88	104	.381	1.40	.76	74.7	297.0		57	226		96	38
H		27	8	83	86	1.049	4.17	2.10	56.6	201.8		119	423		199	71
H		28	2	80	101	.328	1.40	.66	45.4	166.5		30	109		50	18
H		29	2	82	61	.148	.68	.15	107.1	288.0		16	43		27	7
H		30	2	75	113	.286	1.40	.57	52.7	220.5		30	126		51	21
H		Totals	354	87	81	181.804	195.42	309.37	19.9	70.0		6,149	21,658		10,331	3,639
D		11	6	85	47	8.065	5.32	8.06	12.3	36.7		99	296		167	50
D		12	14	84	59	4.989	3.92	5.70	14.0	43.9		80	251		134	42
D		13	8	86	77	4.906	4.52	7.89	15.8	50.1		125	395		210	66
D		14	12	83	68	4.278	4.57	6.68	16.9	49.2		113	328		189	55
D		15	10	86	72	2.281	2.80	4.11	18.5	59.1		76	243		127	41
D		16	9	85	67	2.239	3.13	4.08	20.3	63.2		83	258		139	43
D		17	4	84	81	.710	1.12	1.42	24.7	80.8		35	115		59	19
D		18	8	86	97	1.872	3.31	3.74	31.2	106.9		117	400		196	67
D		19	4	84	83	.569	1.12	1.14	30.2	90.2		34	103		58	17
D		20	8	86	96	2.006	4.38	4.01	39.0	130.3		157	523		263	88
D		21	2	88	104	.677	1.63	1.35	47.5	161.5		64	219		108	37
D		22	2	85	123	.617	1.63	1.85	34.5	136.2		64	252		107	42
D		23	4	82	102	.759	2.19	1.52	52.0	165.0		79	250		132	42
D		25	2	85	76	.164	.56	.33	49.9	156.8		16	51		28	9
D		Totals	93	85	69	34.132	40.19	51.88	22.0	71.0		1,142	3,683		1,918	619
S		13	2	82	61	1.107	1.02	1.11	9.0	36.0		10	40		17	7
S		16	4	86	80	1.448	2.02	2.90	23.9	83.4		69	241		116	41
S		17	2	92	103	.647	1.02	1.29	31.9	117.0		41	151		69	25
S		19	2	89	103	.518	1.02	1.04	43.2	162.0		45	168		75	28
S		20	2	83	111	.468	1.02	1.40	32.4	108.0		45	151		76	25
S		29	2	85	138	.222	1.02	.67	80.4	378.0		54	252		90	42
S		31	2	83	97	.195	1.02	.39	104.4	387.0		41	151		68	25
S		34	2	75	108	.162	1.02	.49	84.6	291.0		41	141		69	24
S		35	2	86	124	.153	1.02	.31	139.9	751.5		43	229		72	39
S		37	2	81	141	.137	1.02	.41	129.6	627.0		53	257		89	43
S		Totals	22	85	91	5.056	11.20	9.99	44.2	178.4		442	1,783		742	299
A		10	2	86	40	2.694	1.47	2.69	9.0	30.0		24	81		41	14
A		12	2	87	69	.917	.72	.92	24.0	70.0		22	64		37	11

Stand Table Summary

Date: 3/8/2022

T06N R08W S08 Ty00MC
THRU
T07N R09W S36 Ty00MC

Project GSADD

Acres 168.00

Time: 8:36:54AM

Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
A		13	4	86	43	2.375	2.19	2.38	19.3	49.9		46	118		77	20
A		15	2	87	63	1.197	1.47	2.39	18.5	65.0		44	156		74	26
A		16	6	86	63	2.084	2.91	3.65	23.3	78.5		85	287		143	48
A		17	2	87	69	.932	1.47	1.86	25.5	90.0		48	168		80	28
A		21	2	86	96	.299	.72	.60	50.0	175.0		30	105		50	18
A		Totals	20	86	55	10.498	10.95	14.49	20.6	67.5		299	978		502	164
SN		12	2	87	85	.025	.02									
SN		13	1	89	55	.011	.01									
SN		14	3	88	45	.027	.03									
SN		15	1	85	35	.002	.00									
SN		16	1	88	45	.007	.01									
SN		17	1	88	95	.006	.01									
SN		19	1	89	17	.005	.01									
SN		Totals	10	88	60	.083	.09									
Totals			499	86	78	231.573	257.85	385.74	20.8	72.9		8,032	28,103		13,493	4,721

TC TSTNDSUM

Stand Table Summary

Project GSADD

T06N R08W S08 T00PC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
06N	08W	08	U3_LEAVE	00PC	42.00	31	52

T06N R08W S08 T00PC

Page: 1
Date: 02/17/20
Time: 2:13:09PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
HL		11	1	80	70	5.476	3.61	5.48	18.0	60.0		99	329		41	14
HL		12	2	86	53	9.612	7.23	14.21	12.6	39.7		180	564		75	24
HL		13	3	85	60	11.762	10.84	15.68	18.0	57.5		282	902		119	38
HL		14	3	84	72	10.397	10.84	20.79	16.3	50.1		339	1,042		142	44
HL		16	1	86	82	2.588	3.61	5.18	26.0	95.0		135	492		57	21
HL		17	1	85	57	2.293	3.61	4.59	21.5	70.0		99	321		41	13
HL		18	2	85	80	4.090	7.23	8.18	32.5	102.5		266	838		112	35
HL		20	5	87	82	8.283	18.07	16.57	41.0	142.0		679	2,352		285	99
HL		21	4	87	89	6.010	14.46	12.02	48.1	173.8		578	2,089		243	88
HL		22	1	85	89	1.369	3.61	2.74	51.0	175.0		140	479		59	20
HL		23	2	84	76	2.505	7.23	5.01	50.5	157.5		253	789		106	33
HL		24	1	86	84	1.150	3.61	2.30	58.5	205.0		135	472		57	20
HL		26	1	85	79	.980	3.61	1.96	64.5	235.0		126	461		53	19
HL		Totals	27	85	71	66.516	97.58	114.70	28.9	97.0		3,310	11,130		1,390	467
DL		13	1	85	46	3.321	3.06	3.32	17.0	50.0		56	166		24	7
DL		14	3	85	71	8.591	9.18	14.32	17.6	58.0		252	830		106	35
DL		15	1	86	61	2.495	3.06	4.99	15.0	55.0		75	274		31	12
DL		16	4	85	62	8.770	12.25	15.35	18.0	57.1		276	877		116	37
DL		17	4	84	77	7.768	12.25	13.59	27.1	82.9		369	1,126		155	47
DL		19	1	85	81	1.555	3.06	3.11	31.0	105.0		96	327		40	14
DL		20	2	84	80	2.806	6.12	5.61	35.7	105.0		201	589		84	25
DL		22	1	85	87	1.160	3.06	2.32	45.0	145.0		104	336		44	14
DL		Totals	17	85	69	36.466	52.04	62.61	22.8	72.3		1,430	4,526		601	190
AL		10	1	87	80	6.957	3.79	6.96	17.0	60.0		118	417		50	18
AL		16	1	87	51	2.718	3.79	2.72	30.0	60.0		82	163		34	7
AL		20	1	87	72	1.739	3.79	3.48	36.5	125.0		127	435		53	18
AL		21	1	87	35	1.578	3.79	1.58	40.0	110.0		63	174		27	7
AL		Totals	4	87	67	12.992	15.18	14.73	26.5	80.7		390	1,189		164	50
SL		13	1	85	20	1.568	1.45	1.57	14.0	50.0		22	78		9	3
SL		25	1	85	69	.424	1.45	.85	55.5	205.0		47	174		20	7
SL		31	1	86	89	.276	1.45	.55	108.5	410.0		60	226		25	9
SL		Totals	3	85	38	2.268	4.34	2.97	43.4	161.2		129	478		54	20
SN		11	1	86	52	1.643	1.08									
SN		Totals	1	86	52	1.643	1.08									
Totals			52	85	69	119.885	170.22	195.02	27.0	88.8		5259	17,323		2,209	728

TC PLOGSTVB

Log Stock Table - MBF

T06N R08W S08 Ty00MC
THRU
T07N R09W S36 Ty00MC

Project: GSADD
Acres 168.00

Date 2/17/2022
Time 2:12:36PM

Spp	S T	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
H		DO	2S	16	9	14.3	8	.2							8					
H		DO	2S	20	57	11.9	50	1.4						8	29	13				
H		DO	2S	32	400	11.2	355	9.8				11		309	10	26				
H		DO	2S	40	945	13.7	815	22.4						433	254	128				
H		DO	3S	20	4	10.0	4	.1					4							
H		DO	3S	26	53	10.0	48	1.3			4	44								
H		DO	3S	28	46	10.0	41	1.1			11	10	20							
H		DO	3S	30	57	10.0	51	1.4			3	30	18							
H		DO	3S	32	655	12.7	572	15.7			215	199	158							
H		DO	3S	34	62	10.0	56	1.5			39	4	13							
H		DO	3S	36	119	13.0	104	2.9			72	31								
H		DO	3S	38	74	10.0	66	1.8			35		31							
H		DO	3S	40	1,115	10.9	993	27.3			253	234	505							
H		DO	4S	12	13	10.0	11	.3			9	3								
H		DO	4S	14	33	6.4	31	.9			29	2								
H		DO	4S	16	79	10.6	71	1.9			69	1								
H		DO	4S	18	28	7.7	26	.7			18	8								
H		DO	4S	20	105	10.0	94	2.6			93	1								
H		DO	4S	24	97	9.0	89	2.4		9	71	8								
H		DO	4S	26	41	7.1	38	1.1			38									
H		DO	4S	28	74	14.0	64	1.8			64									
H		DO	4S	30	55	18.0	45	1.2			45									
H		DO	4S	32	8	28.0	6	.2			6									
H		Totals			4,130	11.9	3,639	77.1		9	1077	587	749	750	301	167				
S		DO	2S	30	13	10.0	12	4.0									12			
S		DO	2S	40	233	12.1	205	68.3						20	40	13	79	52		
S		DO	3S	28	4	10.0	3	1.1					3							
S		DO	3S	32	33	11.5	30	9.9				6	18		5					
S		DO	3S	38	5	10.0	4	1.4					4							
S		DO	3S	40	35	10.0	31	10.4			11		20							
S		DO	4S	12	7	10.0	7	2.2					7							
S		DO	4S	14	3	10.0	2	.8			1		1							
S		DO	4S	20	2	10.0	2	.7			2									
S		DO	4S	26	4	10.0	3	1.1			3									
S		Totals			339	11.6	299	6.3			18	6	53	20	46	13	91	52		

TC PLOGSTVB

Log Stock Table - MBF

T06N R08W S08 Ty00MC
THRU
T07N R09W S36 Ty00MC

Project: GSADD
Acres 168.00

Date 2/17/2022
Time 2:12:36PM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
D		DO	2S	16	19	5.0	18	2.9								18				
D		DO	2S	32	15	13.8	13	2.0						13						
D		DO	2S	40	178	7.9	164	26.5						93	71					
D		DO	3S	20	10		10	1.6					10							
D		DO	3S	28	2	5.0	2	.3			2									
D		DO	3S	30	17	9.3	15	2.5					15							
D		DO	3S	32	124	10.1	112	18.1			38	28	45							
D		DO	3S	34	11		11	1.8			11									
D		DO	3S	36	52	5.0	49	8.0			18	32								
D		DO	3S	38	8	5.0	7	1.2			7									
D		DO	3S	40	136	6.2	128	20.7			46	23	59							
D		DO	4S	12	1	5.0	1	.2			1									
D		DO	4S	16	9	17.9	7	1.2			7									
D		DO	4S	18	7	3.5	7	1.1			7									
D		DO	4S	20	21	3.7	20	3.2			13	7								
D		DO	4S	24	22		22	3.5			22									
D		DO	4S	26	8	5.0	7	1.2			7									
D		DO	4S	28	10	1.7	10	1.6			10									
D		DO	4S	30	4	5.0	4	.6			4									
D		DO	4S	32	15	20.0	12	1.9			12									
D		Totals			668	7.4	619	13.1			206	90	129	106	71	18				
A		DO	1S	30	23		23	14.3						23						
A		DO	1S	40	15		15	8.9							15					
A		DO	2S	30	68	3.8	65	39.6					65							
A		DO	4S	16	4		4	2.4			4									
A		DO	4S	18	5		5	3.2			5									
A		DO	4S	20	5		5	2.9			5									
A		DO	4S	24	14		14	8.3			14									
A		DO	4S	26	11		11	6.5			11									
A		DO	4S	38	3		3	1.8			3									
A		DO	4S	40	20		20	12.1			20									
A		Totals			167	1.6	164	3.5			61		65	23	15					
Total		All Species			5,304	11.0	4,721	100.0		9	1362	683	995	898	432	198	91	52		

LOGGING PLAN MAP

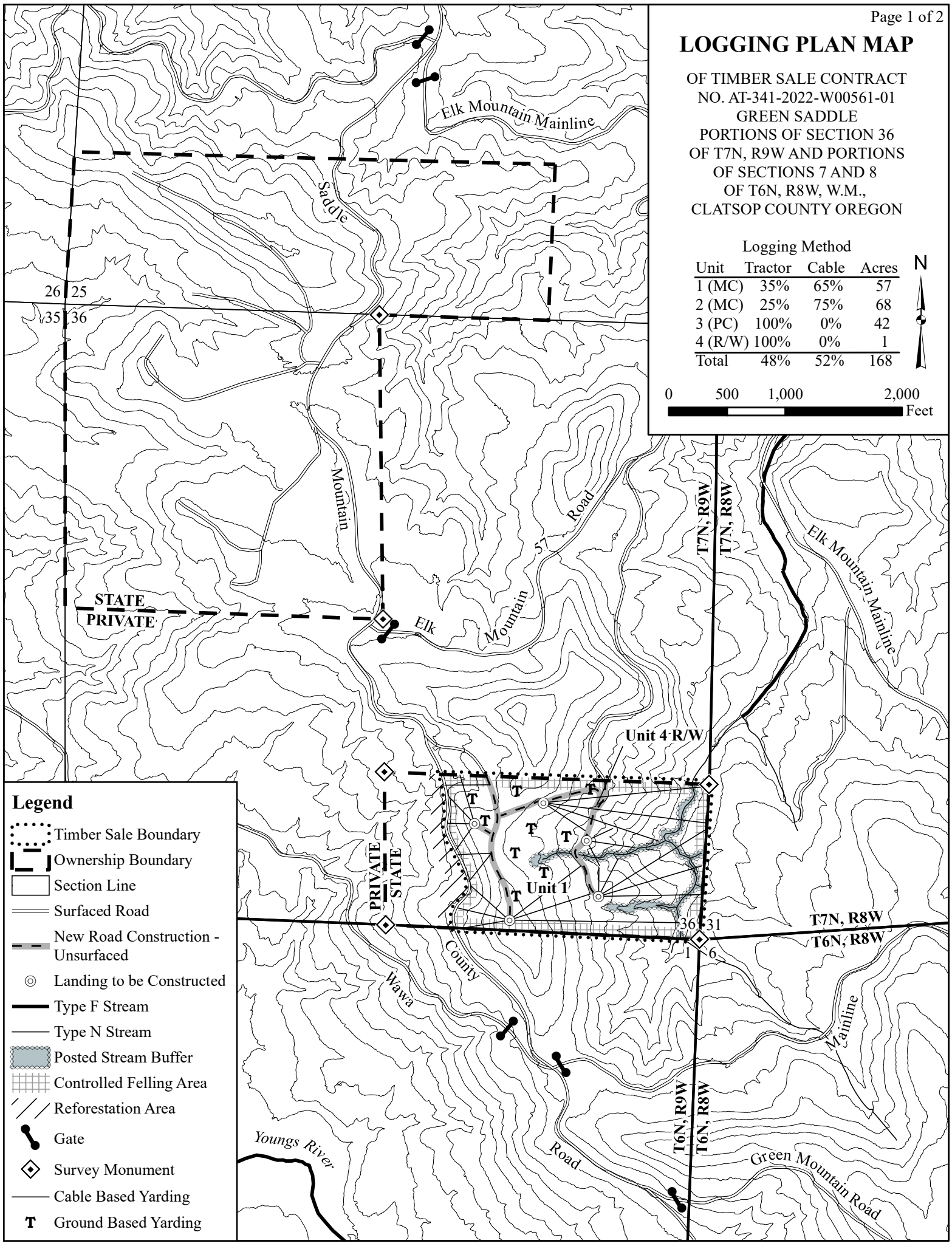
OF TIMBER SALE CONTRACT
NO. AT-341-2022-W00561-01
GREEN SADDLE
PORTIONS OF SECTION 36
OF T7N, R9W AND PORTIONS
OF SECTIONS 7 AND 8
OF T6N, R8W, W.M.,
CLATSOP COUNTY OREGON

Logging Method

Unit	Tractor	Cable	Acres
1 (MC)	35%	65%	57
2 (MC)	25%	75%	68
3 (PC)	100%	0%	42
4 (R/W)	100%	0%	1
Total	48%	52%	168

N

0 500 1,000 2,000 Feet



Legend

- Timber Sale Boundary
- Ownership Boundary
- Section Line
- Surfaced Road
- New Road Construction - Unsurfaced
- Landing to be Constructed
- Type F Stream
- Type N Stream
- Posted Stream Buffer
- Controlled Felling Area
- Reforestation Area
- Gate
- Survey Monument
- Cable Based Yarding
- T Ground Based Yarding

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2022-W00561-01
GREEN SADDLE
PORTIONS OF SECTION 36
OF T7N, R9W AND PORTIONS
OF SECTIONS 7 AND 8
OF T6N, R8W, W.M.,
CLATSOP COUNTY OREGON

N

Logging Method

Unit	Tractor	Cable	Acres
1 (MC)	35%	65%	57
2 (MC)	25%	75%	68
3 (PC)	100%	0%	42
4 (R/W)	100%	0%	1
Total	48%	52%	168

0 500 1,000 2,000 Feet

Legend

- Timber Sale Boundary
- Ownership Boundary
- Section Line
- Unsurfaced Road
- Surfaced Road
- New Road Construction - Surfaced
- Existing Landing
- Landing to be Constructed
- Type F Stream
- Type N Stream
- Non-posted Stream Buffer
- Controlled Felling Area
- "1 A" Point For Poject Work
- Reserve Tree Area
- Reforestation Area
- Survey Monument
- T Ground Based Yarding
- Cable Based Yarding
- Temporary Stream Crossing
- Blocked Road

Green Mountain Road
Saddle Mountain County Road
Wawa Mainline
YR 98
YR 98F Road
YR 108
81-A
V1
V2
Unit 2
Unit 3
Unit 4 R/W
STATE
PRIVATE
6 5
7 8
5 4
8 9
7 8
18 17
8 9
17 16