



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary McPherson Sale 341-04-65

District: Tillamook

Date: 2/18/04

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$327,137.14	\$80,395.40	\$407,532.54
		<b>Project Work</b>	(\$80,225.00)
		<b>Advertised Value</b>	\$327,307.54



**Timber Sale Appraisal  
Timber Description  
McPherson  
Sale 341-04-65**

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Sections 25, 26, 35, and 36, T3N R9W, W.M. Tillamook County Oregon

**Date:** 2/18/04

**Stand Stocking:** 60%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	11	0	95
Western Hemlock / Fir	13	0	95
Alder (Red)	13	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	54	0	0	54
3S	1,399	24	0	1,423
4S	610	0	0	610
Camprun	0	0	310	310
<b>Total</b>	<b>2,063</b>	<b>24</b>	<b>310</b>	<b>2,397</b>

**Comments:** Pond Values Used: 4th Quarter 2003.

Cedar Stumpage:  $\$1,000/\text{MBF} - \$223.97/\text{MBF} = \$776.03/\text{MBF}$

Additional Costs (Profit and Risk to be added)

Brand and Paint -  $\$2/\text{MBF} \times 2397 \text{ MBF} = \$4794$

Truck assist/ tractor swing  $\$30/\text{MBF} \times 146 \text{ MBF} = \$4380$

Slash piling and sorting:  $151 \text{ acres cable clearcut harvest} \times 1 \text{ hr} / 50 \text{ acres} \times \$110/\text{hour} = \$332$

Total Other Costs + P&R = \$ 9506

Additional Costs (Profit and Risk Included)

Non-Project Roads (seeding included)

Road 1 - 3 Stations x \$ 127.07 = \$381.21

Road 2 - 5 Stations x \$ 127.07 = \$635.35

Road 3 - 4 Stations x \$ 127.07 = \$508.28

Road 4 - 11 Stations x \$ 127.07 = \$1397.77

Pit run surfacing roads 1, 3, and 4 at 50 yd<sup>3</sup> at \$ 7.05/ yd<sup>3</sup> = \$ 6345

Total Other Costs no P&R = \$ 9267.61

Road Maintenance

Grading (twice during the contract)

$\$500/\text{Mile} \times 2 \text{ Gradings} \times 4 \text{ miles} / 2397 \text{ MBF} = \$1.67$

Maintenance Rock - approximately 25 yds<sup>3</sup> / MMBF / Mile

$240 \text{ yds}^3 \times \$7.60/\text{yard} / 2397 \text{ MBF} = \$0.76$

Reprocessing with final maintenance (including water cost)

$136 \text{ stations} \times \$17.76/\text{station} / 2397 \text{ MBF} = \$1.01$

Total Maintenance Cost = \$ 3.44



# Timber Sale Appraisal

## Logging Conditions

### McPherson

### Sale 341-04-65

"STEWARDSHIP IN FORESTRY"

<b>Combination#: 1</b>	Douglas - Fir	68.98%	
	Alder (Red)	45.48%	
<b>Yarding Distance:</b>	Long (1,500 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Stroke Delimber
<b>Tree Size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,800
<b>Cost/MBF:</b>	\$215.96		
<b>Machines:</b>			
	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Medium)		
<b>Combination#: 2</b>	Douglas - Fir	5.72%	
	Western Hemlock / Fir	20.83%	
	Alder (Red)	10.97%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Shovel		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 4,000
<b>Cost/MBF:</b>	\$96.74		
<b>Machines:</b>			
	Shovel Logger		
<b>Combination#: 3</b>	Douglas - Fir	11.34%	
	Western Hemlock / Fir	79.17%	
	Alder (Red)	34.19%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Stroke Delimber
<b>Tree Size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 3,800
<b>Cost/MBF:</b>	\$143.98		
<b>Machines:</b>			
	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Medium)		
<b>Combination#: 4</b>	Douglas - Fir	13.96%	
	Alder (Red)	9.35%	

**Yarding Distance:** Long (1,500 ft)

**Logging System:** Cable: Large Tower >=70

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

**Loads/Day:** 3

**Cost/MBF:** \$328.48

**Downhill Yarding:** No

**Process:** Stroke Delimber

**Bd. Ft./Load:** 3,800

**Machines:**

Log Loader (A)

Stroke Delimber (A)

Tower Yarder (Large)



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal

## Logging Costs

### McPherson

### Sale 341-04-65

Date: 2/18/04

Operating Seasons: 1.6

Profit & Risk: 15%

Project Costs: \$80,225

Other Costs (P/R): \$9,506

Slash Disposal: \$0

Other Costs: \$9,268

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Road Maintenance: \$3.44

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.5
Western Hemlock / Fir	\$0.00	3.0	3.5
Alder (Red)	\$0.00	3.0	2.8



# Timber Sale Appraisal Logging Costs Breakdown McPherson Sale 341-04-65

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>Logging</b>	216.68	134.14	188.80
<b>Road Maintenance</b>	3.62	3.62	3.62
<b>Fire Protection</b>	1.81	1.81	1.81
<b>Hauling</b>	69.16	46.11	53.79
<b>Other (P/R appl.)</b>	3.97	3.97	3.97
<b>Profit &amp; Risk</b>	44.29	28.45	37.80
<b>Slash Disposal</b>	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	2.00
<b>Other</b>	3.87	3.87	3.87
<b>Total</b>	345.40	223.97	295.66

<b>Amortization</b>	0.00	0.00	0.00
<b>Pond Value</b>	502.74	330.00	555.00
<b>Stumpage</b>	157.34	106.03	259.34
<b>Amortized</b>	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary McPherson Sale 341-04-65

**Amortized**

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>MBF</b>	0.00	0.00	0.00
<b>Value</b>	0.00	0.00	0.00
<b>Total</b>	0.00	0.00	0.00

**Unamortized**

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>MBF</b>	2,063.00	24.00	310.00
<b>Value</b>	157.34	106.03	259.34
<b>Total</b>	324,592.42	2,544.72	80,395.40

### Gross Timber Sale Value

**Recovery \$407,532.54**

Prepared by: David Wells

Date: 2/18/04

District: Tillamook

Phone: (503) 842-2545





## PROJECT SUMMARY SHEET

Sale: McPherson

### CONSTRUCTION

Point	C to D	2+20	stations =	\$1,798.69
Point	E to F	4+45	stations =	\$2,605.70
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$4,404.39</b>

### IMPROVEMENT

Point	A to B	157+15	stations =	\$54,262.51
Point	C to D	23+50	stations =	\$19,213.32
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$73,475.83</b>

### SPECIAL PROJECTS

Remove Culverts from State Lands				\$358.47
<b>SUBTOTAL SPECIAL PROJECTS</b>				<b>\$358.47</b>

### MOVE IN

\$1,986.31

**GRAND TOTAL**

**\$80,225.00**

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>McPherson</u>		Road: <u>A to B</u>
Construction -	0+00 stations <u>0.00</u> miles		Improvement -
			157+15 stations <u>2.98</u> miles
CLEARING AND GRUBBING -			
Roadside Brushing	2.50	mile @	\$800.00 per mile = \$2,000.00
Scattering	3.97	acres @	\$815.00 per acre = \$3,235.55
Endhaul Large Stumps (150+00 to 157+15)	0.350	acres @	\$1,500.00 per acre = \$525.00
			<b>TOTAL CLEARING AND GRUBBING</b>
			<b>\$5,760.55</b>
EXCAVATION -			
Road Earthwork	21.15	sta. @	\$120.00 per sta. = \$2,538.00
Pullback	54	cy. @	\$1.40 per c.y. = \$75.60
Widening	192	cy. @	\$1.40 per c.y. = \$268.80
Remove outside berms	60	cy. @	\$1.40 per c.y. = \$84.00
Drill and Shoot (Landing & Road)	394	cy. @	\$2.10 per c.y. = \$827.40
Ditchline	80	cy. @	\$1.40 per c.y. = \$112.00
ENDHAUL -			
Pullback	54	cy. @	\$2.76 per c.y. = \$149.04
Ditchline	25+50 to 25+80	10 cy. @	\$3.53 per c.y. = \$35.30
Ditchline	37+75 to 39+30	20 cy. @	\$3.25 per c.y. = \$65.00
Ditchline	71+70 to 73+85	20 cy. @	\$2.48 per c.y. = \$49.60
Ditchline	78+20 to 81+95	30 cy. @	\$2.33 per c.y. = \$69.90
Widening	60+85 to 62+65	192 cy. @	\$2.74 per c.y. = \$526.08
Grade Alignment	151+50 to 152+60	394 cy. @	\$1.26 per c.y. = \$496.44
Remove outside berm	35+60 to 35+80	10 cy. @	\$3.30 per c.y. = \$33.00
Remove outside berm	61+80 to 62+00	20 cy. @	\$2.70 per c.y. = \$54.00
Remove outside berm	68+60 to 68+80	30 cy. @	\$2.55 per c.y. = \$76.50
New culvert excavation material	40	cy. @	\$2.74 per c.y. = \$109.60
Spread & compact	900	cy. @	\$0.35 per c.y. = \$315.00
			<b>TOTAL ENDHAUL</b>
			<b>\$2,048.26</b>
CULVERTS - MATERIALS & INSTALLATION			
	<u>Culverts</u>		
	212	LF of 18"	\$3,127.00
	96	LF of 30"	\$1,992.00
			<u>\$5,119.00</u>
	<u>Half Rounds</u>		
	30	LF of 21"	\$342.00
			<u>\$342.00</u>
	<u>Culvert Stakes &amp; Markers</u>		
	6	stakes	\$48.00
	14	markers	\$84.00
			<u>\$132.00</u>
			<b>TOTAL CULVERTS</b>
			<b>\$6,906.50</b>
SURFACING-			
0+00 to 136+00	3,275	cy. of	Crushed @ \$6.38 per c.y. = \$20,894.50
Culvert Backfill	150	cy. of	Crushed @ \$5.68 per c.y. = \$852.00
Traction	17	cy. of	Crushed @ \$7.50 per c.y. = \$127.50
Junction	0+00	17 cy. of	Crushed @ \$5.52 per c.y. = \$93.84
Energy Dissipator	42+70	10 cy. of	Riprap @ \$13.03 per c.y. = \$130.30
Energy Dissipator	43+20	20 cy. of	Riprap @ \$13.04 per c.y. = \$260.80
Energy Dissipator	49+25	20 cy. of	Riprap @ \$13.13 per c.y. = \$262.60
Energy Dissipator	54+75	10 cy. of	Riprap @ \$13.21 per c.y. = \$132.10
136+00 to 157+15	1,197	cy. of	Pit-Run @ \$6.88 per c.y. = \$8,235.36
Embankment Fill	66+25	50 cy. of	Riprap @ \$13.38 per c.y. = \$669.00
Leveling Fill	117+00	20 cy. of	Pit-Run @ \$5.68 per c.y. = \$113.60
Log Truck Turnaround	136+00	40 cy. of	Pit-Run @ \$6.11 per c.y. = \$244.40
Landing Point "B"	157+15	82 cy. of	Pit-Run @ \$4.01 per c.y. = \$328.82
			<b>TOTAL SURFACING</b>
			<b>\$32,344.82</b>
SPECIAL PROJECTS			
Construct waste areas -	2.00	hours @	\$130.00 per hour = \$260.00
Grade and shape road -	89.15	stations @	\$14.20 per station = \$1,265.93
Roll subgrade w/ vibratory roller prior to rocking -	21.15	stations @	\$11.00 per station = \$232.65
Remove large stumps -	1.00	lump sum @	\$420.00 = \$420.00
Grass seed and fertilize -	1.50	acres @	\$220.00 per acre = \$330.00
Mulching -	1.50	acres @	\$600.00 per acre = \$900.00
			<b>TOTAL SPECIAL PROJECTS</b>
			<b>\$3,408.58</b>
<b>GRAND TOTAL</b>			<b>\$54,262.51</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>McPherson</u>					Road:	<u>C to D</u>
Construction -	<u>2+20</u> stations <u>0.04</u> miles					Improvement -	<u>23+50</u> stations <u>0.45</u> miles
<b>CLEARING AND GRUBBING -</b>							
Scattering		1.77	acres @	\$815.00	per acre =	\$1,442.55	
Endhaul (Large Stumps)		0.19	acres @	\$1,500.00	per acre =	\$285.00	
						<u>TOTAL CLEARING AND GRUBBING</u>	<b>\$1,727.55</b>
<b>EXCAVATION -</b>							
Road Earthwork		23.5	sta. @	\$120.00	per sta. =	\$2,820.00	
Drill and Shoot (Landing & Road)		340	cy. @	\$2.10	per c.y.=	\$714.00	
Full Bench (0+00 to 2+20)		576	cy. @	\$1.40	per c.y.=	\$806.40	
Rip (Landing & Road)		340	cy. @	\$1.75	per c.y.=	\$595.00	
						<u>TOTAL EXCAVATION</u>	<b>\$4,935.40</b>
<b>ENDHAUL -</b>							
Full Bench		576	cy. @	\$1.63	per c.y.=	\$938.88	
Rock		680	cy. @	\$0.68	per c.y.=	\$462.40	
Spread & compact		576	cy. @	\$0.35	per c.y.=	\$201.60	
						<u>TOTAL ENDHAUL</u>	<b>\$1,602.88</b>
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>							
		<u>Culverts</u>					
		0	LF of 18"	\$0.00		0	LF of 24" \$0.00
		0	LF of 30"	\$0.00		0	LF of 36" \$0.00
		0	LF of 42"	\$0.00		0	LF of 48" \$0.00
		0	LF of 54"	\$0.00		0	LF of 60" \$0.00
		0	LF of 66"	\$0.00		0	LF of 72" \$0.00
				<u>\$0.00</u>			<u>\$0.00</u>
		<u>Half Rounds</u>					
		0	LF of 21"	\$0.00		0	LF of 30" \$0.00
		0	LF of 36"	\$0.00		0	LF of 42" \$0.00
				<u>\$0.00</u>			<u>\$0.00</u>
		<u>Culvert Stakes &amp; Markers</u>					
		0	stakes	\$0.00			
		0	markers	\$0.00			
				<u>\$0.00</u>			
						<u>TOTAL CULVERTS</u>	<b>\$0.00</b>
<b>SURFACING-</b>							
0+00 to	25+70	1,449	cy. of	Pit-Run	@	\$7.05 per c.y.=	\$10,215.45
Traction Coat		136	cy. of	Crushed	@	\$7.60 per c.y.=	\$1,033.60
Landing @ Point "D"	23+50	82	cy. of	Pit-Run	@	\$4.01 per c.y.=	\$328.82
						<u>TOTAL SURFACING</u>	<b>\$11,577.87</b>
<b>SPECIAL PROJECTS</b>							
Grade and shape road -		25.7	stations @	\$14.20	per station	\$364.94	
Roll subgrade w/ vibratory roller prior to rocking -		25.7	stations @	\$11.00	per station	\$282.70	
Remove large stumps -		1.00	lump sum @	\$251.07		\$251.07	
Grass seed and fertilize -		0.68	acres @	\$220.00	per acre	\$149.60	
Mulching -		0.2	acres @	\$600.00	per acre	\$120.00	
						<u>TOTAL SPECIAL PROJECTS</u>	<b>\$1,168.31</b>
<b>GRAND TOTAL</b>							<b>\$21,012.01</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>McPherson</u>		Road: <u>E to F</u>
Construction -	4+45 stations <u>0.08</u> miles		Improvement - <u>+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING - Scattering		0.410 acres @	\$815.00 per acre = <u>\$334.15</u> TOTAL CLEARING AND GRUBBING
			<b>\$334.15</b>
EXCAVATION - Road Earthwork		4.45 sta. @	\$65.00 per sta. = <u>\$289.25</u> TOTAL EXCAVATION
			<b>\$289.25</b>
ENDHAUL -			<u>TOTAL ENDHAUL</u> <b>\$0.00</b>
CULVERTS - MATERIALS & INSTALLATION			
	<u>Culverts</u>		
	0 LF of 18"	\$0.00	0 LF of 24" \$0.00
	0 LF of 30"	\$0.00	0 LF of 36" \$0.00
	0 LF of 42"	\$0.00	0 LF of 48" \$0.00
	0 LF of 54"	\$0.00	0 LF of 60" \$0.00
	0 LF of 66"	<u>\$0.00</u>	0 LF of 72" <u>\$0.00</u>
		\$0.00	\$0.00
	<u>Half Rounds</u>		
	0 LF of 21"	\$0.00	0 LF of 30" \$0.00
	0 LF of 36"	<u>\$0.00</u>	0 LF of 42" <u>\$0.00</u>
		\$0.00	\$0.00
	<u>Culvert Stakes &amp; Markers</u>		
	0 stakes	\$0.00	
	0 markers	<u>\$0.00</u>	
		\$0.00	TOTAL CULVERTS <b>\$0.00</b>
SURFACING- 0+00 to	4+45	248 cy. of	Pit-Run @ \$5.47 per c.y. = <u>\$1,356.56</u> TOTAL SURFACING <b>\$1,356.56</b>
SPECIAL PROJECTS			
Grade and shape road -	4.45	stations @	\$14.20 per station \$63.19
Roll subgrade w/ vibratory -	4.45	stations @	\$11.00 per station \$48.95
Remove large stumps -	1.00	lump sum @	\$325.00 \$325.00
Grass seed and fertilize -	0.23	acres @	\$220.00 per acre \$50.60
Mulching -	0.23	acres @	\$600.00 per acre \$138.00
			TOTAL SPECIAL PROJECTS <b>\$625.74</b>
<b>GRAND TOTAL</b>			<b>\$2,605.70</b>

## ROCK DEVELOPMENT COST SUMMARY

Pit:	Pit Run	Location:	NE NE Sec. 35 T3N, R9W, W.M.
Sale:	McPherson	Road:	3118 c.y.
Swell:	1.40	Stockpile:	
Shrinkage	1.16	Total Truck Loads:	3118 c.y.
Drill Pct.:	40%	In Place Total:	2227 c.y.

Pit Development & Endhaul waste material to waste area \$1,140.00

Drill & Shoot:	\$2.10	/cu.yd.	x	891	cu.yds.	=	\$1,871.10
Rip Rock	\$1.75	/cu.yd.	x	1336	cu.yds.	=	\$2,338.00
Load Dump Truck:	\$0.60	/cu.yd.	x	3118	cu.yds.	=	\$1,870.80

Subtotal \$7,219.90

Move in Roller and Compactor (within area)	1	@	\$30.00	=	\$30.00
Move in Grader (within area)	1	@	\$22.00	=	\$22.00
Move in Excavator (within area)	1	@	\$57.79	=	\$57.79
Move in Trucks	4	@	\$93.37	=	\$373.48
Move in Water Truck	1	@	\$109.75	=	\$109.75
				Subtotal	\$593.02

TOTAL PRODUCTION COSTS \$7,812.92  
 Base Cost= \$2.51 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B	\$3.47	\$0.90	\$2.51	\$6.88	1197	\$8,235.36
A to B Leveling Fill	\$2.57	\$0.60	\$2.51	\$5.68	20	\$113.60
A to B Log Truck Turnaround	\$3.00	\$0.60	\$2.51	\$6.11	40	\$244.40
C to D	\$3.64	\$0.90	\$2.51	\$7.05	1449	\$10,215.45
E to F	\$2.06	\$0.90	\$2.51	\$5.47	248	\$1,356.56
Landings B and D	\$0.60	\$0.90	\$2.51	\$4.01	164	\$657.64
				Total C.Y.	3118	Sub Total
						\$21,697.19

TOTAL ROCKING COSTS \$21,697.19

### Crushed and Rip Rap Rock Cost Sheet

Stockpile: <u>Cook Creek Stockpile (5.5 Mile Mark)</u> Rip Rap: <u>Jetty Pit</u> Sale: <u>McPherson</u> Swell: <u>0.00</u> Shrinkage: <u>0.00</u> Drill Pct.: <u>0%</u>	Location: Stockpile: <u>Sec. 5, T2N, R8W, W.M.</u> Rip Rap: <u>Sec. 34, T3N, R8W, W.M.</u> Road: <u>3595 c.y.</u> Stockpile: <u>c.y.</u> Total Truck Loads: <u>3595 c.y.</u> In Place Total: <u>c.y.</u>
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Load Crushed Rock:	\$0.60	/cu.yd.	x	3595	cu.yds.	=	\$2,157.00
Load Rip Rap:	\$1.40	/cu.yd.	x	110	cu.yds.	=	\$154.00

Move in Roller and Compactor	1		@	\$282.27	=	\$282.27
Move in Grader	1		@	\$131.40	=	\$131.40
Move in Loader	1		@	\$267.50	=	\$267.50
Move in Excavator (within area)for rip rap	1		@	\$312.26	=	\$312.26
Move in Trucks	4		@	\$93.37	=	\$373.48
Move in Water Truck	1		@	\$109.75	=	\$109.75

Crushed Rock Base Cost:	\$0.92	Per Cu.Yd.		Total crushed rock production cost	\$3,321.40
Rip Rap Base Cost:	\$4.24	Per Cu.Yd.		Total rip rap rock production cost	\$466.26

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B	4.16	1.30	0.92	6.38	3275	20,894.50
A to B Junction	3.30	1.30	0.92	5.52	17	93.84
A to B Culvert Backfill	4.16	0.60	0.92	5.68	150	852.00
A to B Traction	5.28	1.30	0.92	7.50	17	127.50
C to D Traction	5.38	1.30	0.92	7.60	136	1,033.60
A to B Energy Dissipator	7.39	1.40	4.24	13.03	10	130.30
A to B Energy Dissipator	7.40	1.40	4.24	13.04	20	260.80
A to B Energy Dissipator	7.49	1.40	4.24	13.13	20	262.60
A to B Energy Dissipator	7.57	1.40	4.24	13.21	10	132.10
A to B Embankment Fill	7.74	1.40	4.24	13.38	50	669.00
Total C.Y.					3705	Sub Total 24,456.24

<b>TOTAL ROCKING COSTS</b>	<b>24,456.24</b>
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MOVE-IN CALCULATIONS

Sale: McPherson

LOWBOY HAUL (Round Trip)		
DISTANCE	ROADWAY	AVE SPEED (MPH)
48.0	Highway	35
4.0	Main Lines (Off Road)	15
0.0	Pulling Steep Grades	4

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Drill & Compressor	\$282.27		\$46.00	0.00	0.00	0	\$0.00	\$282.27
1	Brush Cutter	\$282.27		\$4.00	0.00	0.00	0	\$0.00	\$282.27
1	Graders	\$131.40		\$3.65	0.00	0.00	0	\$0.00	\$131.40
0	Loader (Small)	\$0.00	1	\$3.55	0.00	0.00	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0.00	0.00	0	\$0.00	\$0.00
1	Rollers & Compactors	\$282.27		\$5.00	0.00	0.00	0	\$0.00	\$282.27
0	Excavators (Small)	\$0.00		\$22.00	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0.00	0.00	0	\$0.00	\$0.00
1	Excavators (Large)	\$420.03	1	\$44.80	0.00	0.00	0	\$0.00	\$420.03
0	Rubber Tired Backhoes/Skidlers	\$0.00		\$3.00	0.00	0.00	0	\$0.00	\$0.00
0	Tractors (D6)	\$0.00	2	\$7.10	0.00	0.00	0	\$0.00	\$0.00
1	Tractors (D7)	\$401.33	2	\$11.30	0.00	0.00	0	\$0.00	\$401.33
0	Tractor (D8)	\$0.00	2	\$15.10	0.00	0.00	0	\$0.00	\$0.00
2	Dump Truck (10 cy +)	\$186.74		\$2.85	0.00	0.00	0	\$0.00	\$186.74
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00

<b>TOTAL MOVE-IN COSTS:</b>	<b>\$1,986.31</b>
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# OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *McPherson*

## 1. Type of Sale

Clearcut – Recovery conifer / Cash hardwoods

## 2. Legal Description

Portions of Sections 25, 26, 35, and 36, T3N, R9W, W.M., Tillamook County, Oregon.

## 3. Sale Acreage

	ACRES		
	<u>Sale</u>	<u>Total</u>	<u>Net</u>
Area 1A (Clearcut)	129	98	98
Area 1B (Retention cut)	18	17	16
Area 2 (Clearcut)	74	62	62
<b>Total</b>	<b>221</b>	<b>177</b>	<b>176</b>

Sale Acres: Area within the Timber Sale Boundary signs.

Total Acres: Sale acres, plus green tree retention areas outside the timber sale boundary; less roads and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Net acres: Used for calculating the advertised volume.

Clearcut/Retention cut - Sale acres, less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Partial Cut - Sale acres minus areas of low stocking, hardwoods, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

## 4. Cruising Procedures

### A. Cruise Method

A total of 61 variable radius plots were taken across the sale areas. Thirty-three plots were used to evaluate Areas 1A and 1B and 28 plots were used to evaluate Area 2. A 10% sample was used to determine the volume of the right-of-way along McPherson Road. Diameters and species were recorded and all trees were graded and measured for merchantable height and form factor. Plots were spaced 400' apart on a grid pattern in Areas 1A and 1B and on a rectangular pattern of 400 feet between lines and 200 feet between plots on Area 2. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots.

### B. Plot size

A basal area factor of 33.61 was used in Areas 1 and 2. The point of observation



was at 4.5 feet.

### **C. Grading System**

All trees were graded according to Columbia River Log Scaling and Grading Rules. Conifer trees were measured to a 5-inch top and hardwood trees were measured to an 8-inch top, both favoring 40-foot lengths. All heights were measured to the nearest foot. All diameters were measured at a height of 4.5 feet to the nearest 1-inch. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

### **5. Computation Procedure**

Measured trees were used to develop volume estimates for each of the areas using the Atterbury SuperA.C.E.98 program. The appraisal volume is the actual volume to be removed and does not include reserved trees located within the clearcut or leave trees in the partial cut.

### **6. Hidden Defect and Breakage**

A 5% deduction was applied to the volume to account for the defect and breakage.

### **7. Timber Description**

This area was burned in the 1933 Tillamook Fire and 1945 Wilson River. The timber on sale area is 35 to 40 years old. Areas 1A and 1B are predominantly a stand of seeded Douglas-fir with a component of red alder from natural regeneration. Area 2 is a mixed stand of seeded Douglas-fir with scattered other conifers and hardwoods. All areas have dense conifer on the upper slopes and scattered alder and conifer in the draws and flats. The current stand condition is closed-single canopy. Douglas-fir has moderate to severe symptoms of Swiss needle cast.

### **8. Cruiser Names/Dates**

Wells / Bond / Lieske, November 2003.

### **9. Revenue Distribution**

FDF: 100%	Tax Code: 56-1 – 100%
Deed Number: 35	100% Rehabilitation Obligated

### **10. Attachments**

Stand Tables  
Volume Summary  
Logging Plan

Stand Table Summary

Project MCPHERSN

AREA 1A PAGE 1 OF 1

T03N R09W S36 T0120

T03N R09W S36 T0120

Twp Rge Sec Tract  
03N 09W 36 AREA 1

Type  
0120

Acres  
1.00

Plots  
33

Sample Trees  
205

Page: 1  
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S Spc T	Sample			Av	Trees/ BA/ Logs			Average Log		Net		Net	Totals		
	DBH	Trees	FF	Ht	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
DFX	7	2	85	17	6.914	2.04	6.91	3.0	20.0	.73	21	138	1	0	0
DFX	8	11	86	39	31.822	11.20	31.82	4.5	22.7	4.87	143	723	5	1	1
DFX	9	17	85	52	38.907	17.31	38.91	7.1	30.6	9.14	276	1,190	9	3	1
DFX	10	15	85	67	28.494	15.28	35.96	8.8	35.7	10.29	316	1,282	10	3	1
DFX	11	20	84	75	30.784	20.37	47.49	10.2	39.7	15.48	485	1,886	15	5	2
DFX	12	30	85	80	39.283	30.55	70.62	11.4	42.4	25.48	808	2,997	25	8	3
DFX	13	18	85	75	19.812	18.33	37.41	12.5	44.7	14.53	467	1,671	15	5	2
DFX	14	28	84	84	26.726	28.52	51.59	16.2	57.2	25.70	835	2,951	26	8	3
DFX	15	21	84	87	17.602	21.39	34.35	18.9	66.8	19.80	649	2,295	20	6	2
DFX	16	13	84	86	9.504	13.24	19.01	21.7	76.8	12.46	412	1,460	12	4	1
DFX	Totals	175	85	67	249.848	178.23	374.08	11.8	44.4	138.48	4,412	16,593	138	44	17
RA	10	2	88	54	3.735	2.04	3.73	8.7	35.0		33	131		0	0
RA	11	2	87	55	2.980	2.04	2.98	12.6	49.6		38	148		0	0
RA	12	3	88	60	3.890	3.06	3.89	16.6	60.0		64	233		1	0
RA	13	2	88	58	2.300	2.04	2.30	17.1	60.4		39	139		0	0
RA	14	3	87	75	2.858	3.06	3.81	20.4	77.5		78	295		1	0
RA	15	3	88	73	2.468	3.06	4.11	19.8	82.1		81	337		1	0
RA	16	1	88	68	.729	1.02	1.46	18.0	75.0		26	109		0	0
RA	17	2	84	44	1.285	2.04	1.28	25.3	44.9		33	58		0	0
RA	21	1	88	100	.423	1.02	.85	46.4	180.0		39	152		0	0
RA	Totals	19	87	62	20.669	19.35	24.41	17.7	65.7		431	1,603		4	2
DL	17	3	83	71	1.977	3.06	3.95	22.6	66.4	2.69	89	263	3	1	0
DL	18	3	83	91	1.729	3.06	3.46	32.5	101.7	3.35	112	352	3	1	0
DL	19	1	92	124	.528	1.02	1.06	41.5	160.0	1.30	44	169	1	0	0
DL	20	1	84	88	.467	1.02	.93	37.5	115.0	1.03	35	107	1	0	0
DL	25	1	85	99	.299	1.02	.60	67.0	230.0	1.16	40	137	1	0	0
DL	28	1	82	99	.238	1.02	.71	54.0	186.7	1.11	39	133	1	0	0
DL	Totals	10	84	87	5.239	10.18	10.72	33.5	108.4	10.64	359	1,162	11	4	1
WH	22	1	86	87	.386	1.02	.77	50.0	165.0	1.13	39	127	1	0	0
WH	Totals	1	86	87	.386	1.02	.77	50.0	165.0	1.13	39	127	1	0	0
Totals		205	85	67	276.142	208.79	409.98	12.8	47.5	150.24	5241	19,485	150	52	19

Leave Conifer - 5.6 TPA - 11.5ft<sup>2</sup>BA

DFX = DOUGLAS-FIR TAKE TREES

DL = DOUGLAS-FIR LEAVE TREES

T03N R09W S36 T0135

T03N R09W S36 T0135

Twp Rge Sec Tract Type Acres Plots Sample Trees  
03N 09W 36 AREA 1B 0135 1.00 33 205

Page: 1  
Date: 2/9/04  
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S Spc	T	Sample				Av			Average Log		Net		Net		Totals		
		DBH	Trees	16'	Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft Acre	Tons	Cunits	MBF	
DFX	7	2	85	17	6.914	2.04	6.91	3.0	20.0	.73	21	138	1	0	0		
DFX	8	11	86	39	31.822	11.20	31.82	4.5	22.7	4.87	143	723	5	1	1		
DFX	9	17	85	52	38.907	17.31	38.91	7.1	30.6	9.14	276	1,190	9	3	1		
DFX	10	15	85	67	28.494	15.28	35.96	8.8	35.7	10.29	316	1,282	10	3	1		
DFX	11	19	84	74	29.295	19.35	44.52	10.2	39.7	14.55	456	1,767	15	5	2		
DFX	12	30	85	80	39.283	30.55	70.62	11.4	42.4	25.48	808	2,997	25	8	3		
DFX	13	17	85	73	18.690	17.31	35.17	12.3	43.7	13.48	433	1,537	13	4	2		
DFX	14	24	84	85	22.871	24.44	44.79	16.1	56.3	22.15	720	2,523	22	7	3		
DFX	15	11	84	87	9.198	11.20	17.54	19.2	69.5	10.26	336	1,220	10	3	1		
DFX	16	3	85	79	2.236	3.06	4.47	20.2	69.6	2.73	90	311	3	1	0		
DFX	18	1	80	86	.576	1.02	1.15	27.6	90.0	.95	32	104	1	0	0		
DFX	Totals	150	85	65	228.287	152.77	331.87	10.9	41.6	114.63	3,631	13,791	115	36	14		
DF	11	1	83	95	1.489	1.02	2.98	9.8	40.0	.93	29	119	1	0	0		
DF	13	1	84	105	1.122	1.02	2.24	15.0	60.0	1.05	34	135	1	0	0		
DF	14	4	85	84	3.856	4.07	6.80	16.9	63.0	3.55	115	428	4	1	0		
DF	15	10	84	87	8.404	10.18	16.81	18.6	64.0	9.53	312	1,075	10	3	1		
DF	16	10	84	89	7.268	10.18	14.54	22.1	79.0	9.73	322	1,149	10	3	1		
DF	17	3	83	71	1.977	3.06	3.95	20.3	66.4	2.41	80	263	2	1	0		
DF	18	2	84	94	1.153	2.04	2.31	30.8	107.5	2.12	71	248	2	1	0		
DF	19	1	92	124	.528	1.02	1.06	37.3	160.0	1.17	39	169	1	0	0		
DF	20	1	84	88	.467	1.02	.93	34.7	115.0	.96	32	107	1	0	0		
DF	25	1	85	99	.299	1.02	.60	64.0	230.0	1.10	38	137	1	0	0		
DF	28	1	82	99	.238	1.02	.71	50.9	186.7	1.04	36	133	1	0	0		
DF	Totals	35	84	88	26.800	35.65	52.93	21.0	74.9	33.60	1,110	3,964	34	11	4		
RA	10	2	88	54	3.735	2.04	3.73	8.7	35.0		33	131		0	0		
RA	11	2	87	55	2.980	2.04	2.98	12.6	49.6		38	148		0	0		
RA	12	3	88	60	3.890	3.06	3.89	16.6	60.0		64	233		1	0		
RA	13	2	88	58	2.300	2.04	2.30	17.1	60.4		39	139		0	0		
RA	14	3	87	75	2.858	3.06	3.81	20.4	77.5		78	295		1	0		
RA	15	3	88	73	2.468	3.06	4.11	19.8	82.1		81	337		1	0		
RA	16	1	88	68	.729	1.02	1.46	18.0	75.0		26	109		0	0		
RA	17	2	84	44	1.285	2.04	1.28	25.3	44.9		33	58		0	0		
RA	21	1	88	100	.423	1.02	.85	46.4	180.0		39	152		0	0		
RA	Totals	19	87	62	20.669	19.35	24.41	17.7	65.7		431	1,603		4	2		
WH	22	1	86	87	.386	1.02	.77	50.0	165.0		1.13	39	127		1	0	
WH	Totals	1	86	87	.386	1.02	.77	50.0	165.0		1.13	39	127		1	0	
Totals		205	85	67	276.142	208.79	409.98	12.7	47.5		149.36	5211	19,485		149	52	19

CONIFER LEAVE TREES - 27 TPA 37 ft<sup>2</sup>/ACRE BA

DFX = TAKE TREES DOUGLAS-FIR

DF = LEAVE TREES DOUGLAS-FIR

Stand Table Summary

Project MCPHERSN

AREA 2 PAGE 1 OF 2

T03N R09W S36 T0220

T03N R09W S36 T0220

Twp Rge Sec Tract  
03N 09W 36 AREA 2

Type Acres Plots Sample Trees  
0220 1.00 28 137

Page: 1  
Date: 12/2/03  
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S Spc T	Sample			Av	Trees/ BA/ Logs			Average Log		Net		Net Bd.Ft Acres	Totals		
	DBH	FF Trees	Ht 16'	Tot	Acres	Acres	Acres	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acres	Cu.Ft. Acres		Tons	Cunits	MBF
DFX	7	1	80	17	5.209	1.20									
DFX	8	1	85	48	3.439	1.20	3.44	4.6	20.0	.54	16	69	1	0	0
DFX	9	3	86	43	8.308	3.60	8.31	6.0	26.7	1.65	50	222	2	0	0
DFX	10	3	84	55	6.647	3.60	6.65	9.9	33.4	2.15	66	222	2	1	0
DFX	11	9	84	48	16.378	10.80	16.38	11.2	33.3	5.87	184	545	6	2	1
DFX	12	6	83	44	9.361	7.20	10.84	10.2	27.0	3.48	110	293	3	1	0
DFX	13	7	85	61	9.223	8.40	10.55	16.8	51.3	5.51	177	541	6	2	1
DFX	14	8	84	58	9.033	9.60	14.70	13.7	40.7	6.19	201	598	6	2	1
DFX	15	8	85	72	7.947	9.60	14.90	16.1	52.7	7.35	241	785	7	2	1
DFX	16	2	84	72	1.734	2.40	3.47	16.5	47.9	1.74	57	166	2	1	0
DFX	17	1	84	61	.762	1.20	1.52	18.3	70.0	.84	28	107	1	0	0
DFX	18	2	81	70	1.359	2.40	2.04	28.6	76.7	1.74	58	156	2	1	0
DFX	20	2	86	87	1.100	2.40	2.20	35.1	122.5	2.28	77	270	2	1	0
DFX	21	3	85	86	1.531	3.60	3.06	35.5	96.4	3.20	109	295	3	1	0
DFX	22	3	83	97	1.364	3.60	4.09	29.6	110.0	3.54	121	450	4	1	0
DFX	23	3	84	86	1.248	3.60	2.50	46.8	153.3	3.40	117	383	3	1	0
DFX	Totals	62	84	54	84.643	74.42	104.64	15.4	48.8	49.46	1,612	5,102	49	16	5
DF	24	3	81	106	1.140	3.60	2.66	50.3	177.2	3.88	134	472	4	1	0
DF	25	2	87	95	.708	2.40	1.78	46.6	165.9	2.40	83	296	2	1	0
DF	26	2	88	104	.654	2.40	1.63	54.3	229.9	2.55	89	375	3	1	0
DF	27	1	89	121	.293	1.20	.88	59.8	256.7	1.51	53	226	2	1	0
DF	28	2	85	110	.556	2.40	1.67	57.0	235.0	2.72	95	392	3	1	0
DF	29	2	86	110	.525	2.40	1.58	60.6	272.9	2.73	95	430	3	1	0
DF	30	1	84	94	.245	1.20	.73	59.5	243.3	1.24	44	179	1	0	0
DF	31	3	85	102	.689	3.60	1.60	81.5	336.0	3.70	130	536	4	1	1
DF	36	1	88	135	.167	1.20	.67	63.3	357.5	1.19	42	239	1	0	0
DF	38	1	85	127	.154	1.20	.46	109.2	470.0	1.42	50	217	1	1	0
DF	39	1	84	102	.145	1.20	.43	107.1	483.3	1.30	46	210	1	0	0
DF	Totals	19	85	106	5.274	22.81	14.09	61.2	253.4	24.65	862	3,571	25	9	4
RA	10	2	82	35	4.316	2.40	4.32	6.3	20.0		27	86		0	0
RA	11	4	85	44	7.388	4.80	7.39	9.7	35.3		72	260		1	0
RA	12	4	86	59	6.113	4.80	7.64	12.7	48.0		97	367		1	0
RA	13	4	83	32	5.189	4.80	5.19	13.0	37.5		68	195		1	0
RA	14	4	84	60	4.541	4.80	4.54	23.8	91.8		108	417		1	0
RA	15	1	84	84	.978	1.20	.98	36.3	190.0		36	186		0	0
RA	16	3	86	52	2.579	3.60	2.58	29.2	93.3		75	241		1	0
RA	18	1	79	23	.679	1.20	.68	12.2	20.0		8	14		0	0
RA	19	1	80	32	.616	1.20	.62	29.0	40.0		18	25		0	0
RA	21	1	83	33	.514	1.20	.51	34.0	40.0		17	21		0	0
RA	24	1	79	65	.382	1.20	.38	84.0	180.0		32	69		0	0
RA	25	1	79	49	.352	1.20	.35	76.1	160.0		27	56		0	0
RA	29	1	84	26	.262	1.20	.26	56.8	40.0		15	10		0	0
RA	32	3	83	61	.652	3.60	.86	85.4	285.0		73	245		1	0
RA	33	1	79	53	.202	1.20	.20	145.4	490.0		29	99		0	0
RA	Totals	32	84	47	34.764	38.41	36.50	19.2	62.7		702	2,290		7	2
WH	23	1	80	77	.416	1.20	.83	49.5	135.0	1.20	41	112	1	0	0
WH	26	2	80	80	.651	2.40	.98	66.3	183.3	1.87	65	179	2	1	0
WH	27	1	81	90	.302	1.20	.60	73.0	220.0	1.27	44	133	1	0	0
WH	28	3	79	111	.840	3.60	2.24	69.5	217.4	4.46	156	487	4	2	0

TC TSTNDSUM		Stand Table Summary										AREA 2 PAGE 2 OF 2			
Oregon Dept of Forestry		Project MCPHERSN													
T03N R09W S36 T0220										T03N R09W S36 T0220					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees			Page:					
03N	09W	36	AREA 2	0220	1.00	28	137			2					
										Date:	12/2/03				
										Time:	1:26:58PM				
S Spec	T	Av			Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
		Sample DBH	FF Trees	Ht 16' Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
WH	Totals	7	80	93	2.209	8.40	4.65	65.7	195.9	8.79	306	912	9	3	1
SS	8	1	61	38	3.439	1.20	3.44	5.0	10.0		17	34		0	0
SS	13	1	61	75	1.302	1.20	1.30	27.0	60.0		35	78		0	0
SS	14	1	61	33	1.091	1.20									
SS	21	1	77	38	.499	1.20									
SS	22	1	80	24	.459	1.20	.46	30.0	30.0		14	14		0	0
SS	26	2	77	60	.651	2.40	1.30	41.5	125.0		54	163		1	0
SS	28	1	62	43	.281	1.20	.28	94.0	40.0		26	11		0	0
SS	32	1	61	69	.215	1.20	.43	87.5	130.0		38	56		0	0
SS	40	1	62	63	.138	1.20	.28	63.5	200.0		17	55		0	0
SS	Totals	10	64	46	8.075	12.00	7.49	26.9	54.9		202	411		2	0
WHX	10	1	81	86	2.201	1.20	2.20	17.0	60.0	1.22	37	132	1	0	0
WHX	11	1	77	17	1.852	1.20									
WHX	16	1	88	73	.860	1.20	1.72	21.5	70.0	1.12	37	120	1	0	0
WHX	18	1	80	57	.679	1.20	.68	36.0	50.0	.73	24	34	1	0	0
WHX	19	1	80	71	.610	1.20	1.22	30.0	85.0	1.08	37	104	1	0	0
WHX	Totals	5	81	59	6.202	6.00	5.82	23.3	67.0	4.15	135	390	4	1	0
MA	14	1	80	18	1.123	1.20	1.12	11.0	30.0		12	34		0	0
MA	48	1	69	55	.096	1.20	.10	120.0	390.0		11	37		0	0
MA	Totals	2	79	21	1.218	2.40	1.22	19.5	58.2		24	71		0	0
Totals		137	83	54	142.385	164.45	174.41	22.0	73.1	87.06	3843	12,747	87	38	13

Leave Conifer 15 TPA - 22ft<sup>2</sup> BA

DFX = DOUGLAS-FIR TAKE TREES

DF = DOUGLAS-FIR LEAVE TREES

WHX = WESTERN HEMLOCK TAKE TREES

WH = WESTERN HEMLOCK LEAVE TREES



## McPherson

### Volume Summary

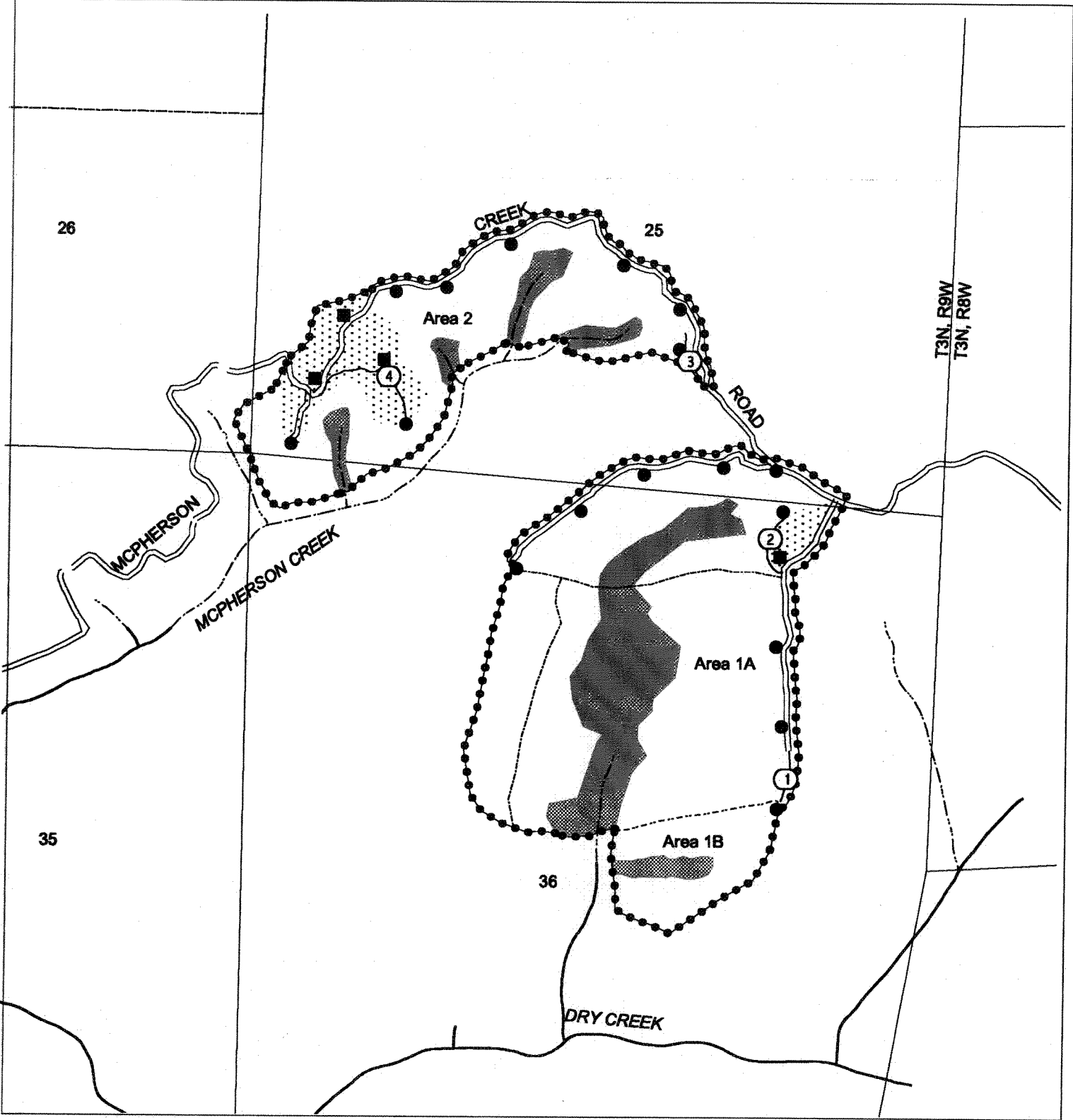
<b>Area 1A</b>					
98 acres					
SPECIES	Gross MBF/ Acre	Net MBF/ Acre	Net MBF	Hidden D&B	Adj Net Vol MBF
Douglas-fir	16.7	16.6	1627	5%	1546
Alder	1.6	1.6	157	5%	149
<b>TOTAL</b>	<b>18.3</b>	<b>18.2</b>	<b>1784</b>		<b>1695</b>

<b>Area 1B</b>					
16 acres					
SPECIES	Gross MBF/ Acre	Net MBF/ Acre	Net MBF	Hidden D&B	Adj Net Vol MBF
Douglas-fir	13.9	13.8	221	5%	210
Alder	1.6	1.6	26	5%	25
<b>TOTAL</b>	<b>15.5</b>	<b>15.4</b>	<b>247</b>		<b>247</b>

<b>Area 2</b>					
62 acres					
SPECIES	Gross MBF/ Acre	Net MBF/ Acre	Net MBF	Hidden D&B	Adj Net Vol MBF
Douglas-fir	5.2	5.1	316	5%	300
Hemlock	0.4	0.4	25	5%	24
Alder	2.4	2.3	143	5%	136
<b>TOTAL</b>	<b>8.0</b>	<b>7.8</b>	<b>484</b>		<b>484</b>

<b>Area Right of Way</b>					
SPECIES	Gross MBF	Net MBF	Hidden D&B	Adj Net Vol MBF	
Douglas-fir	7.4	7.4	5%	7.0	
<b>TOTAL</b>	<b>7.4</b>	<b>7.4</b>		<b>7.0</b>	

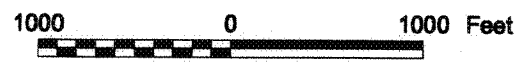
<b>TOTAL SALE VOLUME</b>			
SPECIES	MBF	% D&B	Net Vol. (MBF)
Douglas-fir	2171	5%	2063
Hemlock	25	5%	24
Alder	326	5%	310
<b>TOTAL</b>	<b>2522</b>		<b>2397</b>



- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▤ Ground yarding
- ▨ Helicopter yarding
- Buffer
- ▨ Non-required thinning
- ⊂ Green tree retention area
- Setting boundary
- - - Area boundary
- Sale boundary
- Ownership boundary
- Type-F stream
- - - Type-N stream
- === Surfaced road
- == Unsurfaced road
- State highway
- County road
- ② Non-project road
- - - Swing road
- ⋯ Abandoned road
- ⊖ OHV trail
- ⋯ Non-motorized trail

**LOGGING PLAN**  
 Timber Sale Contract No. 341-04-65  
 McPherson  
 Portions of Sections 25, 26, 35, and 36,  
 T3N, R9W, W. M.  
 Tillamook County, Oregon

Area	Type of Operation	Acres Sale	Acres Net
1A	Clearcut	129	98
1B	Retention cut	18	16
2	Clearcut	74	62
<b>Total</b>		<b>221</b>	<b>176</b>





## Oregon Department of Forestry

### WRITTEN PLAN

"STEWARDSHIP IN FORESTRY"

**SALE NAME:** McPherson

**PROTECTED WATERS:** Unnamed tributary to Dry Creek, small Type F stream.

**Definitions:** Stream buffer: 100 feet horizontal distance from the stream bank of Type F.

**LOCATION:** Portions of Section 36, T3N, R9W, W.M., Tillamook County.

**Activity:** Cable lines and corridors across stream

**Protection measures:**

- Trees within the stream buffer are reserved from cutting, except as approved by ODF to facilitate logging operations. Trees felled within this zone will be left for down wood.
- Trees that enter Type F streams will be left for down wood.
- Cable corridors will be at least of 100 feet apart where they extend over or through the Type F stream and buffer.
- Logs will be fully suspended when yarding across Type F streams and logs will be at least one-end suspended when being yarded through the buffer.

**Date:** December 2, 2003

**Prepared by:** David Wells, Forester