



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cookie Tin
Sale 341-12-03

District: Tillamook

Date: March 05, 2012

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$969,894.51	\$38,074.96	\$1,007,969.47
Project Work:			\$(299,520.00)
Advertised Value:			\$708,449.47



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timber description

Location: Portions of Section 6, T2N, R7W, and portions of Sections 1 and 12, T2N, R8W, W.M., Tillamook County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	14	0	95
Western Hemlock / Fir	13	0	95
Noble Fir	14	0	95
Alder (Red)	12	0	90

Volume by Grade	2S	3S	4S	Total
Douglas - Fir	165	2,552	1,042	3,759
Western Hemlock / Fir	129	1,597	1,034	2,760
Noble Fir	0	61	14	75
Alder (Red)	0	0	154	154
Total	294	4,210	2,244	6,748



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comments: Pond Values Used: 4th Quarter Calendar Year 2011.

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Costs
 $\$500/\text{MBF} = \$800/\text{MBF} - \$300/\text{MBF}$

Pulp (Conifer and Hardwood) Price = $\$25/\text{MBF}$
(See attached Pulp Appraisal sheet)

SCALING COST ALLOWANCE = $\$5.00/\text{MBF}$

FUEL COST ALLOWANCE = $\$4.00/\text{Gallon}$

HAULING COST ALLOWANCE
Hauling cost equivalent to $\$740$ daily truck cost.

Other Costs (with Profit & Risk to be added):
Brand and Paint: $\$2/\text{MBF} \times 6,748 \text{ MBF} = \$13,496$
TOTAL Other Costs (with Profit & Risk to be added) = $\$13,496$

Other Costs (No Profit & Risk added):
OHV Filter: 1 filter $\times \$75/\text{filter} = \75
Non-Project Road 1: $6/\text{stations} \times \$300/\text{station} = \$1,800$
TOTAL Other Costs (No Profit & Risk added) = $\$1,875$

ROAD MAINTENANCE
Interim Maintenance: $\$250/\text{Mile} \times 14.2 \text{ miles} \times 2 \text{ grading}/6,748 \text{ MBF} =$
 $\$1.05/\text{MBF}$
Maintenance Rock: $(\$9.00/\text{cu. yd.} \times 14.2 \text{ miles} \times 20 \text{ cu.}$
 $\text{yd.}/\text{MMBF}/\text{mile} \times 6.748 \text{ MMBF})/6,748 \text{ MBF} = \$2.56/\text{MBF}$
Final Maintenance:
Grading - $\$500/\text{Mile} \times 14.2 \text{ miles} \times 1 \text{ grading}/6,748 \text{ MBF} = \$1.05/\text{MBF}$
Vibratory Roller: $\$17.75/\text{station} \times 52.8 \text{ stations}/\text{mile} \times 7$
 $\text{miles}/6,748 = \$.97/\text{MBF}$

TOTAL Maintenance Cost = $\$5.63/\text{MBF}$



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logging conditions

combination#: 1

Douglas - Fir	20.00%
Western Hemlock / Fir	30.00%
Noble Fir	15.00%
Alder (Red)	30.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Cable: Large Tower >=70 **Process:** Stroke Delimber
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 10.0 **bd. ft / load:** 3,700
cost / mbf: \$103.42

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

combination#: 2

Douglas - Fir	70.00%
Western Hemlock / Fir	60.00%
Noble Fir	60.00%
Alder (Red)	50.00%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 4.5 **bd. ft / load:** 3,700
cost / mbf: \$200.85

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

combination#: 3

Douglas - Fir	10.00%
Western Hemlock / Fir	10.00%
Noble Fir	25.00%
Alder (Red)	20.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Cable: Small Tower <=40 **Process:** Stroke Delimber
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 8.0 **bd. ft / load:** 3,700
cost / mbf: \$95.75

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



"STEWARDSHIP IN FORESTRY"

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logging costs

Operating Seasons:	3.00	Profit Risk:	10.00%
Project Costs:	\$299,520.00	Other Costs (P/R):	\$13,496.00
Slash Disposal:	\$0.00	Other Costs:	\$1,875.00

Miles of Road

Road Maintenance: \$5.63

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	3.7
Western Hemlock / Fir	\$0.00	2.0	3.6
Noble Fir	\$0.00	2.0	3.6
Alder (Red)	\$0.00	2.0	3.0



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District: Tillamook

Date: March 05, 2012

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$170.85	\$5.91	\$1.95	\$95.46	\$2.00	\$27.62	\$0.00	\$5.00	\$0.28	\$309.07
Western Hemlock / Fir									
\$161.11	\$5.91	\$1.95	\$98.10	\$2.00	\$26.91	\$0.00	\$5.00	\$0.28	\$301.26
Noble Fir									
\$159.96	\$5.91	\$1.95	\$98.10	\$2.00	\$26.79	\$0.00	\$5.00	\$0.28	\$299.99
Alder (Red)									
\$150.60	\$6.19	\$1.95	\$123.33	\$2.00	\$28.41	\$0.00	\$5.00	\$0.28	\$317.76

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$482.16	\$173.09	\$0.00
Western Hemlock / Fir	\$0.00	\$413.83	\$112.57	\$0.00
Noble Fir	\$0.00	\$414.07	\$114.08	\$0.00
Alder (Red)	\$0.00	\$565.00	\$247.24	\$0.00



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summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,759	\$173.09	\$650,645.31
Western Hemlock / Fir	2,760	\$112.57	\$310,693.20
Noble Fir	75	\$114.08	\$8,556.00
Alder (Red)	154	\$247.24	\$38,074.96

Gross Timber Sale Value

Recovery: \$1,007,969.47

Prepared by: David Luttrell

Phone: 503-815-7025

Pulp Appraisal

Sale Name	Cookie Tin
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Species	Douglas-fir	Hemlock	Alder	Noble Fir
Stems Per/ac.	81	71	8	2
Acres	414	414	414	414
Total Stems	33534	29394	3312	828
BF/Stem, Conversion	10	10	10	10
Total MBF Per/Species	335	294	33	8
Pond Value Per/MBF	\$260	\$300	\$340	\$300
* Logging + Hauling Costs	\$253.91	\$253.91	\$253.91	\$253.91
Stumpage	\$6.09	\$46.09	\$86.09	\$46.09
Tons Per/MBF, Conversion	10	10	10	10
Price Per/Ton	\$0.61	\$4.61	\$8.61	\$4.61
Total Tons Per/Species	3353	2939	331	83
Total Value	\$2,042.22	\$13,547.69	\$2,851.30	\$381.63

	Total Price	Price/Ton	Price/MBF
	\$18,822.84	\$2.81	\$28.07
Total Less P/R10%	\$16,940.56	\$2.53	\$25.26

*** Contract Price	\$25
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* Used Hemlock logging and hauling price for all species.

*** Pulp price rounded down to nearest whole dollar



PROJECT SUMMARY SHEET

Sale: Cookie Tin

CONSTRUCTION

Point	C to D	17+90	stations =	\$7,900.58
Point	E to F	14+80	stations =	\$8,614.65
Point	G to H	1+35	stations =	\$960.13
Point	M to N	3+20	stations =	\$1,169.84
SUBTOTAL CONSTRUCTION				<u>\$18,645.20</u>

IMPROVEMENT

Point	E to F	6+10	stations =	\$769.63
Point	I to J	47+20	stations =	\$23,282.29
Point	Q to R	41+90	stations =	\$29,768.58
Point	S to T	1+00	stations =	\$24,036.00
Point	V to W	178+00	stations =	\$60,371.30
SUBTOTAL IMPROVEMENT				<u>\$138,227.80</u>

RECONSTRUCTION

Point	A to B	51+50	stations =	\$78,492.70
Point	G to H	11+40	stations =	\$1,814.12
Point	K to L	23+50	stations =	\$23,644.50
Point	O to P	5+45	stations =	\$9,224.89
SUBTOTAL RECONSTRUCTION				<u>\$113,176.21</u>

SPECIAL PROJECTS

Point U	Hoebet Creek Stream Enhancement	\$9,317.27
Point X	Stockpile	\$14,235.50
SUBTOTAL SPECIAL PROJECTS		<u>\$23,552.77</u>

MOVE IN

\$5,918.02

GRAND TOTAL

\$299,520.00

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Cookie Tin</u>			Road:	<u>A to B</u>		
Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	51+50
	0.00	miles		0.00	miles		0.98
							miles

RECONSTRUCTION

CLEARING, GRUBBING, SCATTERING, EXCAVATION (Including Sidecast Pullback), COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Cost per Station		
0+00		3+50	\$45	=	\$157.50
3+50		13+05	\$254	=	\$2,425.70
13+05		21+15	\$45	=	\$364.50
21+15		31+95	\$537	=	\$5,799.60
31+95		34+00	\$3,890	=	\$7,974.50
34+00		51+50	\$442	=	\$7,735.00
					TOTAL
					\$24,456.80

CULVERTS - MATERIALS & INSTALLATION

Culverts

70	LF of 18"	\$1,225.00	240	LF of 24"	\$5,040.00
44	LF of 30"	\$1,232.00			
		<u>\$2,457.00</u>			<u>\$5,040.00</u>

Culvert Stakes & Markers

8 markers	\$64.00
	<u>\$64.00</u>

TOTAL CULVERTS \$7,561.00

ROCK

0+00	to	51+50	2,420	cy. of	4" Crush	@	\$11.66 per c.y.=	\$28,217.20
5+65	to	6+90	70	cy. of	Pit-Run	@	\$7.05 per c.y.=	\$493.50
Culvert Backfill		51+40	20	cy. of	Pit-Run	@	\$7.15 per c.y.=	\$143.00
Landing Rock		51+50	80	cy. of	4" Crush	@	\$12.00 per c.y.=	\$960.00
Energy Dissipators			40	cy. of	Riprap	@	\$7.43 per c.y.=	\$297.20
Base Rock		29+40	30	cy. of	Pit-Run	@	\$6.81 per c.y.=	\$204.30
Leveling		25+20	60	cy. of	Pit-Run	@	\$6.74 per c.y.=	\$404.40
								TOTAL ROCK
								\$30,719.60

SPECIAL PROJECTS

Reconstruct log culverts/fills -								
Dump Trucks:			44.00	hours @	\$70.00	per hour	\$3,080.00	
Excavator:			44.00	hours @	\$145.00	per hour	\$6,380.00	
Tractor:			22.00	hours @	\$130.00	per hour	\$2,860.00	
Construct waste areas -			2.00	hours @	\$130.00	per hour	\$260.00	
Construct turnaround -			1.00	@	\$75.00	each	\$75.00	
Ditch const. near culverts -			1.65	stations @	\$100.00	per station	\$165.00	
Remove grade irregularity -			2.50	hours @	\$145.00	per hour	\$362.50	
Grade and shape road -			51.50	stations @	\$14.00	per station	\$721.00	
Roll subgrade w/ vibratory roller prior to rocking -			51.50	stations @	\$13.20	per station	\$679.80	
Grass seed and fertilize -			2.60	acres @	\$220.00	per acre	\$572.00	
Mulching -			1.000	acres @	\$600.00	per acre	\$600.00	
								TOTAL SPECIAL PROJECTS
								\$15,755.30

GRAND TOTAL \$78,492.70

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

C to D

Construction -	17+90	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.34	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION AND COMPACTION -

Station	to	Station	Avg. Sideslope	Outslope/Ditch	Cost per Station		
0+00		3+25	50%	Outslope	\$459	=	\$1,491.75
3+25		4+70	45%	Outslope	\$269	=	\$390.05
4+70		7+30	30%	Outslope	\$191	=	\$496.60
7+30		8+50	40%	Outslope	\$243	=	\$291.60
8+50		10+50	55%	Outslope	\$689	=	\$1,378.00
10+50		12+35	45%	Outslope	\$269	=	\$497.65
12+35		13+35	20%	Outslope	\$139	=	\$139.00
13+35		16+40	35%	Outslope	\$191	=	\$582.55
16+40		17+90	30%	Outslope	\$191	=	\$286.50
							TOTAL
							\$5,553.70

SPECIAL PROJECTS

Construct landing @ point D -	1.00	@	\$250.00	each	\$250.00
Construct turnaround -	1.00	@	\$75.00	each	\$75.00
Grade and shape road -	17.90	stations @	\$14.00	per station	\$250.60
Roll subgrade w/ vibratory roller -	17.90	stations @	\$13.20	per station	\$236.28
Remove large stumps -	1.00	lump sum @	\$1,275.00		\$1,275.00
Grass seed and fertilize -	0.95	acres @	\$220.00	per acre	\$209.00
Mulching -	0.085	acres @	\$600.00	per acre	\$51.00
					TOTAL SPECIAL PROJECTS
					\$2,346.88
					GRAND TOTAL
					\$7,900.58

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

E to F

Construction -	14+80	stations	Improvement -	6+10	stations	Reconstruction -	0+00	stations
	0.28	miles		0.12	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING AND END-HAULING -

Station	to	Station	Outslope/Ditch	Cost per Station				
6+10		20+90	Outslope	\$510	=		\$7,548.00	
							TOTAL	\$7,548.00

IMPROVEMENT: CLEARING AND GRUBBING -
Endhaul

0.220	acres @	\$1,500.00 per acre =	\$330.00	
TOTAL CLEARING AND GRUBBING				\$330.00

SPECIAL PROJECTS

Remove super @ 5+30 -	1.00	hours @	\$130.00	per hour	\$130.00	
Construct landing @ point F -	1.00	@	\$250.00	each	\$250.00	
Construct turnaround -	1.00	@	\$75.00	each	\$75.00	
Grade and shape road -	20.90	stations @	\$14.00	per station	\$292.60	
Roll subgrade w/ vibratory roller -	20.90	stations @	\$13.20	per station	\$275.88	
Remove large stumps -	1.00	lump sum @	\$375.00		\$375.00	
Grass seed and fertilize -	0.49	acres @	\$220.00	per acre	\$107.80	
TOTAL SPECIAL PROJECTS						\$1,506.28

GRAND TOTAL **\$9,384.28**

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

I to J

Construction -	0+00	stations	Improvement -	47+20	stations	Reconstruction -	0+00	stations
	0.00	miles		0.89	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Endhaul	0.550	acres @	\$1,500.00	per acre =	\$825.00	
TOTAL CLEARING AND GRUBBING						\$825.00

CULVERTS - MATERIALS & INSTALLATION

Culverts

40	LF of 18"	\$700.00
		\$700.00

0	LF of 24"	\$0.00
		\$0.00

Culvert Stakes & Markers

1	markers	\$8.00
		\$8.00

TOTAL CULVERTS \$708.00

ROCK

0+00 to	47+20	1,660	cy. of	4" Crush	@	\$10.84	per c.y.=	\$17,994.40
Junction Rock	0+00	30	cy. of	4" Crush	@	\$10.53	per c.y.=	\$315.90
Junction Rock	47+20	50	cy. of	4" Crush	@	\$11.15	per c.y.=	\$557.50
Energy Dissipator	40+50	5	cy. of	Riprap	@	\$6.61	per c.y.=	\$33.05
Leveling		120	cy. of	Pit-Run	@	\$7.27	per c.y.=	\$872.40
TOTAL ROCK \$19,773.25								

SPECIAL PROJECTS

Cat work to remove grade irregularities -	3.00	hours @	\$135.00	per hour	\$405.00
Construct ditch -	0.60	stations @	\$100.00	per station	\$60.00
Grade and shape road -	47.20	stations @	\$14.00	per station	\$660.80
Roll subgrade w/ vibratory roller prior to rocking -	47.20	stations @	\$13.20	per station	\$623.04
Grass seed and fertilize -	0.70	acres @	\$220.00	per acre	\$154.00
Mulching -	0.122	acres @	\$600.00	per acre	\$73.20
TOTAL SPECIAL PROJECTS \$1,976.04					

GRAND TOTAL \$23,282.29

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

K to L

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	23+50	stations
	0.00	miles		0.00	miles		0.45	miles

RECONST: CLEARING, GRUBBING, SCATTERING, EXCAVATION (Inc. SCPB), COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Cost per Station	=	
0+00		0+85	\$1,750	=	\$1,487.50
0+85		1+30	\$1,295	=	\$582.75
1+30		1+50	\$2,262	=	\$452.40
1+50		1+95	\$2,978	=	\$1,340.10
1+95		2+20	\$3,671	=	\$917.75
2+20		5+50	\$45	=	\$148.50
5+50		6+20	\$433	=	\$303.10
6+20		7+25	\$45	=	\$47.25
7+25		7+90	\$1,159	=	\$753.35
7+90		9+65	\$45	=	\$78.75
9+65		9+90	\$86	=	\$21.50
9+90		12+60	\$45	=	\$121.50
12+60		13+10	\$86	=	\$43.00
13+10		23+50	\$45	=	\$468.00
					TOTAL
					\$6,765.45

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	70	LF of 18"	\$1,009.00		36	LF of 24"	\$972.00
			\$1,009.00				\$972.00
<u>Culvert Stakes & Markers</u>							
3 markers			\$24.00				
			\$24.00				
							TOTAL CULVERTS
							\$2,005.00

ROCK

0+00 to	23+50	1,150	cy. of	4" Crush	@	\$10.86 per c.y.=	\$12,489.00
Energy Dissipators		15	cy. of	Riprap	@	\$6.63 per c.y.=	\$99.45
							TOTAL ROCK
							\$12,588.45

SPECIAL PROJECTS

Construct ditch -	1.00	stations @	\$100.00	per station	\$100.00
Construct turnaround @ 23+25 -	1.00	@	\$75.00	each	\$75.00
Construct waste areas -	1.00	hours @	\$130.00	per hour	\$130.00
Construct ditchout @ 6+20 -	1.00	@	\$60.00	each	\$60.00
Remove logs from fill and reconstruct at 4+10 -	4.00	hours @	\$145.00	per hour	\$580.00
Remove logs from subgrade and reconstruct at 15+55 -	2.00	hours @	\$145.00	per hour	\$290.00
Grade and shape road -	23.50	stations @	\$14.00	per station	\$329.00
Construct waterbar/tank trap @ point K -	1.00	@	\$75.00	each	\$75.00
Roll subgrade w/ vibratory roller prior to rocking -	23.50	stations @	\$13.20	per station	\$310.20
Grass seed and fertilize -	0.94	acres @	\$220.00	per acre	\$206.80
Mulching -	0.216	acres @	\$600.00	per acre	\$129.60
					TOTAL SPECIAL PROJECTS
					\$2,285.60

GRAND TOTAL **\$23,644.50**

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

M to N

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

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

Station	to	Station	Avg. Sideslope	Outslope/Ditch	Cost per Station			
0+00		1+40	25%	Outslope	\$165	=		\$231.00
1+40		3+20	35%	Outslope	\$191	=		\$343.80
TOTAL								\$574.80

SPECIAL PROJECTS

Construct landing @ point N -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	3.20	stations @	\$14.00	per station	\$44.80
Roll subgrade w/ vibratory roller -	3.20	stations @	\$13.20	per station	\$42.24
Remove large stumps -	1.00	lump sum @	\$225.00		\$225.00
Grass seed and fertilize -	0.15	acres @	\$220.00	per acre	\$33.00
TOTAL SPECIAL PROJECTS					\$595.04

GRAND TOTAL **\$1,169.84**

SUMMARY OF CONSTRUCTION COST

Sale:			<u>Cookie Tin</u>			Road:			<u>O to P</u>					
<u>Construction -</u>			0+00	stations	<u>Improvement -</u>			0+00	stations	<u>Reconstruction -</u>			5+45	stations
			0.00	miles				0.00	miles				0.10	miles

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

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station		
0+00		1+00	50%		Outslope	\$459	=	\$459.00
1+00		3+35	60%	0.3	Outslope	\$1,632	=	\$3,835.20
3+35		4+20	40%		Outslope	\$243	=	\$206.55
4+20		4+80	30%		Outslope	\$191	=	\$114.60
4+80		5+45	10%		Outslope	\$90	=	\$58.50
								TOTAL
								\$4,673.85

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>		34	LF of 18"	\$595.00		0	LF of 24"	\$0.00
				\$595.00				\$0.00
<u>Culvert Stakes & Markers</u>		1	markers	\$8.00				
				\$8.00				
								TOTAL CULVERTS
								\$603.00

ROCK

0+00 to	5+45	370	cy. of	Pit-run	@	\$6.82 per c.y.=	\$2,523.40
Landing Rock	5+45	100	cy. of	Pit-Run	@	\$6.86 per c.y.=	\$686.00
Junction Rock	0+00	20	cy. of	Pit-Run	@	\$6.77 per c.y.=	\$135.40
							TOTAL ROCK
							\$3,344.80

SPECIAL PROJECTS

Construct turnaround -	1.00	@	\$75.00	each	\$75.00
Construct landing -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	5.45	stations @	\$14.00	per station	\$76.30
Roll subgrade w/ vibratory roller prior to rocking -	5.45	stations @	\$13.20	per station	\$71.94
Remove large stumps -	1.00	lump sum @	\$75.00		\$75.00
Grass seed and fertilize -	0.25	acres @	\$220.00	per acre	\$55.00
					TOTAL SPECIAL PROJECTS
					\$603.24

GRAND TOTAL **\$9,224.89**

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

Q to R

Construction -	0+00	stations	Improvement -	41+90	stations	Reconstruction -	0+00	stations
	0.00	miles		0.79	miles		0.00	miles

IMPROVE: CLEARING, GRUBBING, SCATTERING, EXCAVATION (Incl. SCPB), COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Outslope/Ditch	Cost per Station		
5+50		16+50	Outslope	\$20	=	\$220.00
16+50		18+85	Outslope	\$65	=	\$152.75
18+85		36+85	Outslope	\$55	=	\$990.00
36+85		37+05	Ditch	\$121	=	\$24.20
37+05		37+20	Ditch	\$1,146	=	\$171.90
37+20		37+65	Ditch	\$1,740	=	\$783.00
37+65		38+10	Outslope	\$728	=	\$327.60
38+10		40+35	Outslope	\$55	=	\$123.75
40+35		40+50	Ditch	\$2,759	=	\$413.85
40+50		40+85	Ditch	\$2,299	=	\$804.65
40+85		41+10	Ditch	\$2,777	=	\$694.25
41+10		41+35	Outslope	\$1,896	=	\$474.00
41+35		41+90	Outslope	\$55	=	\$30.25
						TOTAL
						\$5,210.20

CULVERTS - MATERIALS -

<u>Culverts</u>					
0	LF of 18"	\$0.00	34	LF of 24"	\$714.00
38	LF of 30"	\$1,064.00	0	LF of 36"	\$0.00
		<u>\$1,064.00</u>			<u>\$714.00</u>
<u>Culvert Stakes & Markers</u>					
2 markers		\$16.00			
		<u>\$16.00</u>			
				TOTAL CULVERTS	\$1,794.00

ROCK

16+50 to	41+90	1,220	cy. of	4" Crush	@	\$11.41 per c.y.=	\$13,920.20
Landing Rock	41+90	80	cy. of	4" Crush	@	\$11.68 per c.y.=	\$934.40
Reconstruct Fills	18+00, 37+25, 40+70	600	cy. of	Pit-Run	@	\$6.52 per c.y.=	\$3,912.00
Energy Dissipators		15	cy. of	Riprap	@	\$7.18 per c.y.=	\$107.70
Leveling		150	cy. of	Pit-Run	@	\$6.52 per c.y.=	\$978.00
							TOTAL ROCK
							\$19,852.30

SPECIAL PROJECTS

Improve landing -		1.00	hours @	\$130.00	per hour	\$130.00
Construct waste area @ 23+70 -		1.00	hours @	\$130.00	per hour	\$130.00
Construct turnaround -		1.00	@	\$75.00	each	\$75.00
Remove logs & Reconstruct fills @ 18+00, 37+25 and 40+70 -		10.00	hours @	\$145.00	per hour	\$1,450.00
Cut large stumps below subgrade -		3.00	@	\$25.00	each	\$75.00
Grade and shape road -	16+50 to EOR	25.40	stations @	\$14.00	per station	\$355.60
Roll subgrade w/ vibratory roller prior to rocking -	16+50 to EOR	25.40	stations @	\$13.20	per station	\$335.28
Remove large stumps -		1.00	lump sum @	\$75.40		\$75.40
Grass seed and fertilize -		0.89	acres @	\$220.00	per acre	\$195.80
Mulching -		0.150	acres @	\$600.00	per acre	\$90.00
						TOTAL SPECIAL PROJECTS
						\$2,912.08

GRAND TOTAL

\$29,768.58

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

S to T
Arch Pipe

Construction -	0+00	stations	Improvement -	1+00	stations	Reconstruction -	0+00	stations
	0.00	miles		0.02	miles		0.00	miles

ROCK

Culvert Backfill	80	cy. of	2.5"Crush	@	\$10.24 per c.y.=	\$819.20	
Surfacing	50	cy. of	2.5"Crush	@	\$11.94 per c.y.=	\$597.00	
Fill Armor & Streambed Retention	70	cy. of	Riprap	@	\$7.39 per c.y.=	\$517.30	
						TOTAL ROCK	\$1,933.50

SPECIAL PROJECTS

150" x 96" Arch pipe -	58.00	feet @	\$255.30	per foot	\$14,807.40	
Charge for 1:1 beveled inlet -	1.00	@	\$149.50	each	\$149.50	
Rubber gaskets -	2.00	@	\$95.45	each	\$190.90	
Bands -	2.00	@	\$299.00	each	\$598.00	
Delivery -	1.00	@	\$690.00	each	\$690.00	
Excavator -	20.00	hours @	\$145.00	per hour	\$2,900.00	
Crawler Tractor -	15.00	hours @	\$130.00	per hour	\$1,950.00	
Laborer -	15.00	hours @	\$30.00	per hour	\$450.00	
Grade and shape road -	1.00	stations @	\$15.50	per station	\$15.50	
Hand-Held Compactor/Tamper -	1.00	day @	\$40.00	per day	\$40.00	
Roll subgrade w/ vibratory roller prior to rocking -	1.00	stations @	\$13.20	per station	\$13.20	
Relocate culvert on state lands -	1.00	@	\$93.00	total	\$93.00	
Grass seed and fertilize -	0.25	acres @	\$220.00	per acre	\$55.00	
Mulching -	0.250	acres @	\$600.00	per acre	\$150.00	
TOTAL SPECIAL PROJECTS						\$22,102.50

GRAND TOTAL **\$24,036.00**

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Point U

Hoebet Creek Stream Enhancement

MOVE-IN

\$989.27

SPECIAL PROJECTS

Obtain logs and trees w/ excavator -	8.00	hours @	\$145.00	per hour	\$1,160.00
Load logs w/ excavator -	6.00	hours @	\$145.00	per hour	\$870.00
Haul logs and trees w/ low boy -	16.00	hours @	\$115.00	per hour	\$1,840.00
Unload logs w/ excavator -	8.00	hours @	\$145.00	each	\$1,160.00
Load boulders w/ excavator -	4.00	hours @	\$145.00	per hour	\$580.00
Haul boulders w/ dump truck -	6.00	hours @	\$70.00	per hour	\$420.00
Place trees and boulders w/ Excavator -	12.00	hours @	\$145.00	per hour	\$1,740.00
Scarify and loosen trails and areas of compacted soil -	3.00	hours @	\$145.00	per station	\$435.00
Grass seed -	0.15	acres @	\$220.00	per acre	\$33.00
Mulching -	0.150	acres @	\$600.00	per acre	\$90.00

TOTAL SPECIAL PROJECTS

\$8,328.00

GRAND TOTAL

\$9,317.27

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

V to W

Construction -	0+00	stations	Improvement -	178+00	stations	Reconstruction -	0+00	stations
	0.00	miles		3.37	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering	0.400	acres @	\$980.00	per acre =	\$392.00	
TOTAL CLEARING AND GRUBBING						\$392.00

CULVERTS - MATERIALS & INSTALLATION

Culverts

0	LF of 18"	\$0.00	34	LF of 24"	\$918.00
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Culvert Markers

1 marker	\$8.00
	<u>\$8.00</u>

TOTAL CULVERTS \$926.00

ROCK

0+00 to 178+00	4,960	cy. of	2.5"Crush	@	\$11.14	per c.y. =	\$55,254.40
Base Rock 80+00	10	cy. of	Pit-Run	@	\$7.74	per c.y. =	\$77.40
Energy Dissipator 107+00	10	cy. of	Riprap	@	\$7.33	per c.y. =	\$73.30
TOTAL ROCK							\$55,405.10

SPECIAL PROJECTS

Widen road and end-haul before bridge at 80+00 -	4.00	hours @	\$215.00	per hour	\$860.00
Grade and shape road -	178.00	stations @	\$15.50	per station	\$2,759.00
Grass seed and fertilize -	0.04	acres @	\$220.00	per acre	\$8.80
Mulching -	0.034	acres @	\$600.00	per acre	\$20.40
TOTAL SPECIAL PROJECTS					\$3,648.20

GRAND TOTAL \$60,371.30

SUMMARY OF CONSTRUCTION COST

Sale:

Cookie Tin

Road:

Point X

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	<u>0.00</u>	miles		<u>0.00</u>	miles		<u>0.00</u>	miles

ROCK

Stockpile	1,500	cy. of	2.5"Crush	@	\$8.70 per c.y.=	\$13,050.00	
Stockpile Pad	150	cy. of	Pit-Run	@	\$6.17 per c.y.=	\$925.50	
						TOTAL ROCK	\$13,975.50

SPECIAL PROJECTS

Construct stockpile pad -	2.00	hours @	\$130.00	per hour	<u>\$260.00</u>	
TOTAL SPECIAL PROJECTS						\$260.00

GRAND TOTAL **\$14,235.50**

ROCK PIT AND POINT Y DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Cook Creek Crush	(Rock Source 1)	Location:	SE 1/4 Sec. 34, T3N, R8W, W.M.
Sale:	Cookie Tin		Road:	5170 C.Y.
Swell:	1.40			C.Y.
Shrinkage	1.16		Total Truck Loads:	5170 C.Y.
Drill Pct.:	30%		In Place Total:	3693 C.Y.

Pit and Point Y Development & Cleanup, including clearing and grubbing of Waste Area, overburden endhaul, spread and compact \$1,463.50

Drill & Shoot:	\$2.50 /cu.yd.	x	1108 cu.yds.	=	\$2,770.00
Excavate Rock:	\$1.40 /cu.yd.	x	2585 cu.yds.	=	\$3,619.00
Load Crusher:	\$0.60 /cu.yd.	x	5100 cu.yds.	=	\$3,060.00
Crush Rock:	\$2.70 /cu.yd.	x	5100 cu.yds.	=	\$13,770.00
Load Dump Truck:	\$0.70 /cu.yd.	x	5170 cu.yds.	=	\$3,619.00
Screen 50%	\$0.60 /cu.yd.	x	2585 cu.yds.	=	\$1,551.00

Set-up Crusher	1	@	\$1,598.00	=	\$1,598.00
Within Area Move In Crusher	5.8	miles @	\$50.00	per mile	\$290.00
Within Area Move In and set up Drill and Compressor	5.8	miles @	\$65.00	per mile	\$377.00
Within Area Move in Roller and Compactor	5.8	miles @	\$5.00	per mile	\$29.00
Within Area Move in Grader	5.8	miles @	\$3.65	per mile	\$21.17
Within Area Move in Excavator	5.8	miles @	\$44.80	per mile	\$259.84
Move in Trucks	2	@	\$330.60	=	\$661.20
Within Area Move in Water Truck	5.8	miles @	\$2.85	per mile	\$16.53
Subtotal					\$3,252.74

Base Cost=	\$6.40	Per Cu.Yd.	TOTAL PRODUCTION COSTS	\$33,105.24
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Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
S to T Culvert Backfill (2.5"Crush)	3.09	0.75	6.40	10.24	80	\$819.20
S to T Surfacing (2.5"Crush)	3.09	2.45	6.40	11.94	50	\$597.00
S to T Fill Armor & Streambed Retention	3.09	1.40	2.90	7.39	70	\$517.30
V to W 0 17800 (2.5"Crush)	2.29	2.45	6.40	11.14	4960	\$55,254.40
V to W Energy Dissipator (Riprap)	3.03	1.40	2.90	7.33	10	\$73.30
Total C.Y.					5170	\$57,261.20
Sub Total						\$57,261.20
TOTAL ROCKING COSTS						\$57,261.20

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	FB_8_Crush	(Rock Source 2)	Location:	SE 1/4 Sec. 12, T2N, R8W, W.M.
Sale:	Cookie Tin		Road:	8265 c.y.
Swell:	1.40			c.y.
Shrinkage	1.16		Total Truck Loads:	8265 c.y.
Drill Pct.:	35%		In Place Total:	5904 c.y.

Pit Development & Cleanup including clearing and grubbing of Waste Area, overburden endhaul, spread and compact \$2,329.59

Drill & Shoot:	\$2.50	/cu.yd.	x	2066 cu.yds.	=	\$5,165.00
Rip Rock:	\$1.90	/cu.yd.	x	3838 cu.yds.	=	\$7,292.20
Load Crusher:	\$0.60	/cu.yd.	x	8165 cu.yds.	=	\$4,899.00
Crush Rock: (weighted ave. 4" & 2 1/2")	\$2.41	/cu.yd.	x	8165 cu.yds.	=	\$19,677.65
Load Dump Truck:	\$0.70	/cu.yd.	x	8265 cu.yds.	=	\$5,785.50
Screen 15%	\$0.60	/cu.yd.	x	1240 cu.yds.	=	\$744.00

Subtotal \$45,892.94

Move In/Set-up Crusher	1	@	\$2,951.00	=	\$2,951.00
Move In and set up Drill and Compressor	1	@	\$974.05	=	\$974.05
Move in Roller and Compactor	1	@	\$974.05	=	\$974.05
Move in Grader	1	@	\$343.10	=	\$343.10
Move in Excavator	1	@	\$1,726.97	=	\$1,726.97
Move in Trucks	2	@	\$330.60	=	\$661.20
Move in Water Truck	1	@	\$388.60	=	\$388.60
Change Gradation	1	@	\$210.00	=	\$210.00
				Subtotal	\$8,228.97

Base Cost= \$6.55 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$54,121.91

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 0 5150 (4" Crush)	2.66	2.45	6.55	11.66	2420	\$28,217.20
A to B Landing Rock (4" Crush)	3.00	2.45	6.55	12.00	80	\$960.00
A to B Energy Dissipators (Riprap)	2.66	1.40	3.37	7.43	40	\$297.20
I to J 0 4720 (4" Crush)	1.84	2.45	6.55	10.84	1660	\$17,994.40
I to J Junction Rock (4" Crush)	1.53	2.45	6.55	10.53	30	\$315.90
I to J Junction Rock (4" Crush)	2.15	2.45	6.55	11.15	50	\$557.50
I to J Energy Dissipator (Riprap)	1.84	1.40	3.37	6.61	5	\$33.05
K to L 0 2350 (4" Crush)	1.86	2.45	6.55	10.86	1150	\$12,489.00
K to L Energy Dissipators (Riprap)	1.86	1.40	3.37	6.63	15	\$99.45
Q to R 1650 4190 (4" Crush)	2.41	2.45	6.55	11.41	1220	\$13,920.20
Q to R Landing Rock (4" Crush)	2.68	2.45	6.55	11.68	80	\$934.40
Q to R Energy Dissipators (Riprap)	2.41	1.40	3.37	7.18	15	\$107.70
Point X Stockpile (2.5"Crush)	1.15	1.00	6.55	8.70	1500	\$13,050.00
				Total C.Y.	8265	Sub Total \$88,976.00

TOTAL ROCKING COSTS \$88,976.00

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Pit_run	(Rock Source 3)	Location:	SE 1/4, SW 1/4, Sec. 31, T3N, R7W, W.M.
Sale:	Cookie Tin		Road:	1700 c.y.
Swell:	1.40			c.y.
Shrinkage	1.16		Total Truck Loads:	1700 c.y.
Drill Pct.:	0%		In Place Total:	1214 c.y.

Pit Development & Cleanup including clearing and grubbing of Waste Area, overburden endhaul, spread and compact \$994.44

Rip Rock: \$1.90 /cu.yd. x 1214 cu.yds. = \$2,306.60
 Load Dump Truck: \$0.70 /cu.yd. x 1700 cu.yds. = \$1,190.00

Subtotal \$4,491.04

Within Area Move in Roller and Compactor	2.7	miles @	\$5.00	per mile	\$13.50
Within Area Move in Grader	2.7	miles @	\$3.65	per mile	\$9.86
Move in D-8	1	@	\$1,554.54	=	\$1,554.54
Within Area Move in Excavator	2.7	miles @	\$44.80	per mile	\$120.96
Move in Trucks	2	@	\$330.60	=	\$661.20
Within Area Move in Water Truck	2.7	@	\$2.85	per mile	\$7.70

Subtotal \$2,367.76

Base Cost= \$4.03 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$6,858.80

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 565 690 (Pit-Run)	1.92	1.10	4.03	7.05	70	\$493.50
A to B Culvert Backfill (Pit-Run)	2.37	0.75	4.03	7.15	20	\$143.00
A to B Base Rock (Pit-Run)	2.03	0.75	4.03	6.81	30	\$204.30
A to B Leveling (Pit-Run)	1.96	0.75	4.03	6.74	60	\$404.40
I to J Leveling (Pit-Run)	2.49	0.75	4.03	7.27	120	\$872.40
O to P 0 545 (Pit-run)	1.69	1.10	4.03	6.82	370	\$2,523.40
O to P Landing Rock (Pit-Run)	1.73	1.10	4.03	6.86	100	\$686.00
O to P Junction Rock (Pit-Run)	1.64	1.10	4.03	6.77	20	\$135.40
Q to R Reconstruct Fills (Pit-Run)	1.74	0.75	4.03	6.52	600	\$3,912.00
Q to R Leveling (Pit-Run)	1.74	0.75	4.03	6.52	150	\$978.00
V to W Base Rock (Pit-Run)	2.96	0.75	4.03	7.74	10	\$77.40
Point X Stockpile Pad (Pit-Run)	1.39	0.75	4.03	6.17	150	\$925.50
				Total C.Y.	1700	Sub Total
						\$11,355.30

TOTAL ROCKING COSTS \$11,355.30



"STEWARDSHIP IN FORESTRY"

Cookie Tin

Volume Summary

Area 1-Partial Cut				
341 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden & Visible D&B	Net Vol MBF
Douglas-fir	10.2	3488	5.3%	3303
Hemlock	8.0	2717	5.2%	2576
		0	5.0%	0
Noble Fir	0.1	48	5.0%	46
Alder	0.3	118	10.0%	106
TOTAL	18.7	6371		6031

Areas 2-Partial Cut				
53 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol MBF
Douglas-fir	9.1	480	5.0%	456
Hemlock	3.7	194	5.0%	184
		0	5.0%	0
Noble Fir	0.6	31	5.0%	29
Alder	1.0	53	10.0%	48
TOTAL	14.3	758		717

TOTAL SALE VOLUME			394 acres
SPECIES	Gross Vol. (MBF)	Net Vol. (MBF)	
Douglas-fir	3968	3759	
Hemlock	2911	2760	
	0	0	
Noble Fir	79	75	
Red Alder	171	154	
TOTAL	7129	6748	



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Cookie Tin

1. **Type of Sale**

Thinning, Recovery.

2. **Legal Description**

Sections 6, T2N, R7W; Sections 1 and 12, T2N, R8W, W.M., Tillamook County, Oregon.

3. **Sale Acreage**

How the acreage was determined (Sale acreage was determined by GPS and orthophotographs along with GIS).

	ACRES	
	<u>Gross</u>	<u>Net</u>
Area 1 (Partial Cut)	375	341
Area 2 (Partial Cut)	57	53

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. **Cruising Procedures**

A. Cruise Method

A total of 45 variable radius plots were used on the sale area, spaced on a rectangular grid of 166' x 1000'. All plots were full cruise plots. All conifers 8 inches DBH and greater containing 20 net board feet and all hardwoods 10 inches DBH and greater containing 30 net board feet were recorded on all plots. Species were recorded on all trees, and they were graded and measured for merchantable height, diameter, and form factor.

The standard error and the coefficient of variation for the cruise as based on Net/BF per acre shown in the table below.

	Coefficient of Variation	Standard Error
Area 1	42.6	6.8
Area 2	24.4	10.9
Combined	41.1	6.1

B. Plot size

A basal area factor of 40 was used for the sale area. The point of observation is 4.5 feet.

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Tree heights were recorded to a 6 inch top outside bark for all conifers and 7 inches top outside bark for hardwoods; or three tenths (0.3) of DBH for all species, whichever was greater. Log lengths all favored 40 feet for all species. Height and diameter measurement standards were to the nearest foot or inch respectively.

5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, stand tables, and volume for each species and type. This data was then entered into the Volume Summary table to compute sale volumes.

6. Hidden and Visible Defect and Breakage

5% hidden defect and breakage was taken on conifers and 10% hidden defect and breakage was taken on hardwoods. Area 1 there was 0.3 percent visible defect for Douglas-fir and .2 percent visible defect for Hemlock.

7. Timber Description

About 92 acres of the Timber Sale area burned in the 1933 Tillamook fire and the remaining areas were burned in the 1945 Salmonberry fire. The stand is comprised of a few dominant trees, some nice co-dominant trees that should respond well to thinning, intermediates and suppressed trees. A few scattered residual conifer are present, mostly hemlock that were not logged during the burn salvage. The entire area has significant natural regeneration of Douglas-fir, hemlock, noble fir and alder. This stand has had no previous management. The timber is approximately 65 years old. There is some scattered bear damage throughout the sale area.

8. Cruiser Names/Dates

Luttrell/Wells/Stumpf/Yao/Brown, August 2007, June 2010.

9. Revenue Distribution

FDF - 100%
Tax Code: 56 - 8%
56-1 - 92%

Deed Numbers: 591, 35 and 70

Revenue Split

Fund 51 – 21%

Fund 75 (Washington County Timber) – 79%

10. Attachments

Stand Table (partial cut)

Volume Summaries

Log Stock Tables

Logging Plan

11. Stand and Log Stock Tables Species Key

DL – Douglas-fir leave

DF – Douglas-fir take

NL – Noble fir leave

NF – Noble fir take

RL – Red alder leave

RA – Red alder take

RC – Western red cedar reserved

SL – Sitka spruce leave

SS – Sitka spruce take

WL – Western hemlock leave

WH – Western hemlock take

OC – Snags over 16" DBH and 15' tall

TC		TLOGSTVB		Log Stock Table - MBF															
				Project: COOKITIN															
T02N R07W S01 TPC										T02N R07W S01 TPC									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	3										
02N	07W	01	AREA1	PC	341.00	39	273	Date	8/25/2010										
								Time	12:50:37PM										
Spp	S	So	Gr	Log	Gross	% Def	Net	% 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
WL	8	4	29		11		11	.7		11									
WL	8	4	32		4		4	.3		4									
WL	8	4	35		9		9	.6		9									
WL	8	4	37		9		9	.6		9									
WL	8	4	39		16		16	1.1		16									
WL	8	4	40		53	12.4	46	3.0		23		23							
WL	8	4	41		12		12	.8		12									
WL	Totals				1,555		1,547	13.0		117	108	91	343	420	214	131	122		
OC	8	4	36		30		30	100.0		30									
OC	Totals				30		30	.3		30									
RA	8	3	20		16		16	13.9				16							
RA	8	3	40		44		44	37.5			44								
RA	8	4	29		26		26	21.7			26								
RA	8	4	40		32		32	26.9			32								
RA	Totals				118		118	1.0			102	16							
NL	8	2	32		41		41	15.8								41			
NL	8	2	40		164		164	62.9					38	24	45	57			
NL	8	3	25		17		17	6.4					17						
NL	8	3	32		28		28	10.7				14	13						
NL	8	3	37		6		6	2.2			6								
NL	8	4	18		3		3	1.2		3									
NL	8	4	19		2		2	.9			2								
NL	Totals				261		261	2.2		3	8	14	13	55	24	86	57		
RL	8	3	32		27		27	62.7					27						
RL	8	4	14		4		4	10.5			4								
RL	8	4	31		11		11	26.8			11								
RL	Totals				42		42	.4			16		27						
NF	8	3	40		37		37	77.8			37								
NF	8	4	20		11		11	22.2		11									
NF	Totals				48		48	.4		11	37								
Total All Species					11,967		11,908	100.0		1672	1471	2115	2706	1530	1507	727	180		

TC	TLOGSTVB																	Log Stock Table - MBF									
Project: COOKITIN																											
T02N R07W S01 TPC																T02N R07W S01 TPC											
Twp		Rge		Sec		Tract				Type		Acres		Plots		Sample Trees				Page		2					
02N		07W		01		AREA2				PC		53.00		6		39				Date		8/25/2010					
																				Time		12:44:39PM					
Spp	S	So	Gr	Log	Gross		%	Net	%	Net Volume by Scaling Diameter in Inches																	
	T	rt	de	Len	MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+							
NF		Totals			31			31	1.9	4				27													
Total All Species					1,615			1,613	100.0	296		247	361	416	178	114											

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)												Page		1				
				Project: COOKITIN												Date		8/25/2010				
																Time		12:48:33PM				
T02N R07W S01 TPC												T02N R07W S01 TPC										
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		CuFt		BdFt				
02N		07W		01		AREA1		PC		341.00		39		273		S		W				
S So Gr T rt ad Spp				% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
									Log Scale Dia.				Log Length				Ln	Bd	CF/ Lf			
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	Ft				
DF				8	2	5		554	554	189			100			100	40	238	1.49	2.3		
DF				8	3	68	.4	6,938	6,908	2,356		96	4			10	90	39	111	0.77	62.3	
DF				8	4	27		2,736	2,736	933	78	22		12	37	14	37	28	32	0.31	85.5	
DF Totals						29	.3	10,228	10,197	3,477	21	71	8	3	10	11	76	32	68	0.56	150.1	
DL				8	2	56	1.1	6,117	6,052	2,064			87	13		100	40	303	1.91	20.0		
DL				8	3	36	.9	3,896	3,860	1,316		81	19		1	21	78	38	121	0.91	31.9	
DL				8	4	8	.5	862	857	292	84	16		18	23	19	40	29	32	0.37	26.9	
DL Totals						31	1.0	10,875	10,770	3,672	7	30	55	8	1	2	9	87	35	137	1.05	78.8
WH				8	2	5		473	473	161			73	27		100	40	259	1.60	1.8		
WH				8	3	58		4,582	4,582	1,562		95	5			13	87	38	108	0.70	42.5	
WH				8	4	37	.4	2,914	2,901	989	54	46		9	20	15	55	30	39	0.35	74.6	
WH Totals						23	.2	7,969	7,956	2,713	20	71	7	2	3	7	13	76	33	67	0.52	118.9
WL				8	2	46		2,093	2,093	714			76	24		100	40	318	1.90	6.6		
WL				8	3	44	.3	2,005	1,999	682		74	26		1	15	85	38	130	0.90	15.3	
WL				8	4	10	4.2	462	443	151	78	22		20	16	9	55	29	34	0.43	13.0	
WL Totals						13	.5	4,560	4,535	1,547	8	35	47	11	2	2	7	89	35	130	0.97	34.9
OC				8	4	100		88	88	30	100					100	36	40	0.34	2.2		
OC Totals						0		88	88	30	100					100	36	40	0.34	2.2		
RA				8	3	51		178	178	61	100			27		73	34	59	0.64	3.0		
RA				8	4	49		168	168	57	100				45	55	34	49	0.40	3.4		
RA Totals						1		346	346	118	100			14	22	64	34	54	0.51	6.4		
NL				8	2	78		602	602	205			52	48		20	80	38	375	2.04	1.6	
NL				8	3	19		147	147	50		67	33		33	55	11	31	108	0.86	1.4	
NL				8	4	3		16	16	5	59	41		100			18	20	0.32	.8		
NL Totals						2		765	765	261	1	14	47	38	2	6	26	65	32	203	1.40	3.8
RL				8	3	62		78	78	27	100				100		32	120	1.06	.7		
RL				8	4	38		46	46	16	100			28		72	24	31	0.62	1.5		
RL Totals						0		125	125	42	100			10		90	26	58	0.79	2.1		
NF				8	3	77		109	109	37	100				100		40	70	0.41	1.6		
NF				8	4	23		31	31	11	100			100			20	20	0.20	1.6		
NF Totals						0		140	140	48	22	78		22		78	30	45	0.34	3.1		
Type Totals							.5	35,095	34,922	11,908	14	53	28	5	3	6	11	81	33	87	0.69	400.4

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)												Page		1				
				Project: COOKITIN												Date		8/25/2010				
																Time		12:42:41PM				
T02N R07W S01 TPC												T02N R07W S01 TPC										
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		CuFt		BdFt				
02N		07W		01		AREA2		PC		53.00		6		39		S		W				
S So Gr T rt ad				%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
									Log Scale Dia.				Log Length				Ln	Bd	CF/ Lf			
Spp				BdFt	Def%	Gross	Net	Net MBF	4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	Ft	Lf			
DL				8	2	41	4,853	4,853	257	100				100				40	251	1.69	19.3	
DL				8	3	48	.6	5,805	5,767	306	100				2 9 89				39	102	0.73	56.8
DL				8	4	11		1,215	1,215	64	95	5	11 41 18 30				30	31	0.29	38.7		
DL Totals						39	.3	11,873	11,836	627	10	49	41	1 5 6 87				36	103	0.79	114.8	
DF				8	3	67		6,105	6,105	324	100				35 65				36	98	0.74	62.6
DF				8	4	33		2,958	2,958	157	70	30	42 5 53				31	36	0.29	82.3		
DF Totals						30		9,063	9,063	480	23	77	14 25 61				33	63	0.51	144.9		
WH				8	3	56		2,068	2,068	110	100				100				40	107	0.70	19.4
WH				8	4	44		1,599	1,599	85	100				26 49 25				25	28	0.30	56.8
WH Totals						12		3,667	3,667	194	44	56	11 21 67				29	48	0.44	76.1		
WL				8	3	79		2,763	2,763	146	100				100				40	135	0.90	20.5
WL				8	4	21		704	704	37	100				49 51				30	34	0.32	20.5
WL Totals						11		3,467	3,467	184	20	80	10 10 80				35	85	0.65	40.9		
RA				8	4	100		998	998	53	100				49 51				34	48	0.43	20.7
RA Totals						3		998	998	53	100				49 51				34	48	0.43	20.7
NL				8	2	80		665	665	35	100				100				40	240	1.66	2.8
NL				8	3	20		166	166	9	100				100				40	60	0.56	2.8
NL Totals						3		832	832	44	20	80	100				40	150	1.11	5.5		
NF				8	3	88		508	508	27	100				100				40	150	1.26	3.4
NF				8	4	12		68	68	4	100				100				22	20	0.34	3.4
NF Totals						2		576	576	31	12	88	12 88				31	85	0.93	6.8		
Type Totals							.1	30,476	30,438	1,613	18	64	18	2 10 13 76				34	74	0.61	409.8	

TC		Stand Table Summary														
TSTNDSUM		Project COOKITIN														
T02N R07W S01 TPC													T02N R07W S01 TPC			
Twp	Rge	Sec	Tract	Type			Acres	Plots	Sample Trees			Page:	1			
02N	07W	01	AREA1	PC			341.00	39	273			Date:	08/25/2010			
													Time:	12:52:08PM		
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DL		14	3	82	108	2.878	3.08	5.76	18.9	68.3	2.99	109	393	1,019	371	134
DL		15	2	85	106	1.672	2.05	3.34	21.1	77.5	1.94	71	259	662	241	88
DL		16	2	84	96	1.469	2.05	2.94	24.0	92.5	1.94	71	272	662	241	93
DL		17	5	85	93	3.253	5.13	6.51	25.6	95.0	4.57	166	618	1,560	567	211
DL		18	4	84	106	2.322	4.10	4.64	32.0	115.0	4.08	148	534	1,391	506	182
DL		19	7	85	107	3.646	7.18	8.86	30.3	107.6	7.37	268	953	2,512	914	325
DL		20	5	85	97	2.351	5.13	5.64	31.5	117.5	4.88	178	663	1,665	605	226
DL		21	8	84	107	3.411	8.21	7.68	40.4	143.3	8.53	310	1,100	2,908	1,057	375
DL		22	10	84	113	3.885	10.26	9.71	40.6	161.6	10.84	394	1,570	3,696	1,344	535
DL		23	11	84	104	3.910	11.28	10.31	40.8	151.4	11.56	420	1,561	3,943	1,434	532
DL		24	5	84	98	1.632	5.13	3.92	46.7	177.5	5.04	183	695	1,717	625	237
DL		25	7	83	110	2.106	7.18	5.11	54.9	210.0	7.73	281	1,074	2,634	958	366
DL		26	2	84	121	.556	2.05	1.39	60.6	238.0	2.32	84	331	790	287	113
DL		27	2	84	93	.516	2.05	1.03	68.5	237.5	1.95	71	245	664	241	84
DL		28	4	83	99	.959	4.10	1.92	77.6	261.3	4.10	149	501	1,397	508	171
DL		Totals	77	84	104	34.568	78.97	78.76	36.9	136.7	79.83	2,903	10,770	27,220	9,898	3,672
DF		8	1	84	46	2.938	1.03	2.94	4.4	20.0	.37	13	59	127	44	20
DF		9	1	87	94	2.322	1.03	4.64	4.9	25.0	.65	23	116	222	78	40
DF		10	5	84	77	9.402	5.13	13.16	9.0	35.7	3.37	118	470	1,150	403	160
DF		11	7	85	89	10.879	7.18	18.65	10.5	43.3	5.57	196	808	1,900	667	276
DF		12	3	84	97	3.918	3.08	7.84	12.3	46.7	2.75	96	366	936	328	125
DF		13	8	86	96	8.902	8.21	17.80	14.6	57.5	7.39	259	1,024	2,521	885	349
DF		14	10	85	88	9.594	10.26	19.19	16.2	58.5	8.84	310	1,123	3,013	1,057	383
DF		15	9	85	104	7.522	9.23	15.88	20.2	80.0	9.16	321	1,270	3,123	1,096	433
DF		16	9	85	103	6.611	9.23	13.96	23.6	94.2	9.40	330	1,315	3,207	1,125	448
DF		17	17	84	94	11.062	17.44	22.77	25.5	90.0	16.55	581	2,050	5,643	1,980	699
DF		18	4	83	98	2.322	4.10	5.22	27.0	97.8	4.01	141	511	1,369	480	174
DF		19	3	82	102	1.563	3.08	3.13	35.1	108.3	3.13	110	339	1,066	374	115
DF		20	2	85	105	.940	2.05	1.41	45.2	160.0	1.82	64	226	619	217	77
DF		21	1	85	84	.426	1.03	.85	36.4	115.0	.88	31	98	301	106	33
DF		22	2	83	114	.777	2.05	1.94	42.2	158.0	2.33	82	307	796	279	105
DF		23	1	86	87	.355	1.03	.71	47.0	165.0	.95	33	117	325	114	40
DF		Totals	83	85	91	79.533	85.13	150.10	18.0	67.9	77.18	2,708	10,197	26,317	9,234	3,477
WH		9	4	88	64	9.286	4.10	11.61	7.2	36.0	2.66	83	418	909	284	142
WH		10	7	86	83	13.163	7.18	16.92	11.5	48.9	6.24	195	827	2,128	665	282
WH		11	6	85	77	9.325	6.15	10.88	14.5	52.9	5.05	158	575	1,722	538	196
WH		12	9	88	86	11.753	9.23	20.89	13.8	53.1	9.20	288	1,110	3,139	981	379
WH		13	7	87	79	7.789	7.18	13.35	15.9	59.2	6.79	212	790	2,316	724	269
WH		14	5	86	92	4.797	5.13	9.59	18.5	72.0	5.68	177	691	1,936	605	236
WH		15	10	86	95	8.358	10.26	17.55	21.0	82.9	11.78	368	1,454	4,016	1,255	496
WH		16	5	85	99	3.673	5.13	7.35	26.0	101.0	6.11	191	742	2,083	651	253
WH		17	4	86	97	2.603	4.10	5.21	28.9	110.0	4.82	151	573	1,644	514	195
WH		18	1	87	99	.580	1.03	1.16	34.5	120.0	1.28	40	139	437	137	47
WH		20	2	83	85	.940	2.05	1.88	36.9	120.0	2.22	69	226	757	236	77
WH		21	2	82	93	.853	2.05	1.71	44.1	140.0	2.41	75	239	821	256	81
WH		26	1	82	108	.278	1.03	.83	51.2	206.7	1.37	43	172	466	146	59
WH		Totals	63	86	84	73.398	64.62	118.94	17.2	66.9	65.61	2,050	7,956	22,373	6,992	2,713
WL		11	1	85	93	1.554	1.03	3.11	10.9	45.0	1.08	34	140	369	115	48
WL		14	1	82	90	.959	1.03	1.92	17.1	50.0	1.05	33	96	358	112	33
WL		15	1	89	67	.836	1.03	1.67	15.9	70.0	.85	27	117	290	91	40

TC		Stand Table Summary														
Project														COOKITIN		
T02N R07W S01 TPC														T02N R07W S01 TPC		
Twp	Rge	Sec	Tract	Type			Acres		Plots	Sample Trees			Page:	2		
02N	07W	01	AREA1	PC			341.00		39	273			Date:	08/25/2010		
														Time:	12:52:08PM	
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft.	Bd.Ft.	Tons	Cunits	MBF
WL		16	3	88	101	2.204	3.08	4.41	26.7	106.7	3.77	118	470	1,284	401	160
WL		17	4	89	103	2.603	4.10	5.86	26.8	105.6	5.02	157	618	1,712	535	211
WL		18	5	89	100	2.902	5.13	6.38	31.0	120.0	6.34	198	766	2,162	675	261
WL		19	1	87	100	.521	1.03	1.04	39.8	155.0	1.33	41	161	452	141	55
WL		20	3	87	103	1.410	3.08	3.29	37.8	141.4	3.98	124	465	1,356	424	159
WL		21	2	86	98	.853	2.05	1.71	44.2	162.5	2.41	75	277	822	257	95
WL		22	2	85	84	.777	2.05	1.55	45.0	147.5	2.24	70	229	763	239	78
WL		23	2	87	101	.711	2.05	1.42	56.1	215.0	2.55	80	306	870	272	104
WL		24	1	85	106	.326	1.03	.65	62.8	245.0	1.31	41	160	448	140	55
WL		25	1	83	103	.301	1.03	.60	65.5	245.0	1.26	39	147	430	134	50
WL		29	1	83	110	.224	1.03	.22	137.6	600.0	.98	31	134	336	105	46
WL		32	1	84	116	.184	1.03	.55	84.1	366.7	1.48	46	202	506	158	69
WL		34	1	79	106	.163	1.03	.33	125.4	470.0	1.31	41	153	445	139	52
WL		42	1	69	84	.107	1.03	.21	164.5	435.0	1.12	35	93	383	120	32
WL		Totals	31	87	98	16.634	31.79	34.93	34.1	129.8	38.08	1,190	4,535	12,985	4,057	1,547
NL		20	1	87	114	.470	1.03	1.41	28.3	116.7	.96	40	165	326	136	56
NL		24	2	86	113	.653	2.05	1.63	46.3	212.0	1.81	76	346	618	258	118
NL		28	1	88	145	.240	1.03	.72	71.0	353.3	1.23	51	254	418	174	87
NL		Totals	4	87	119	1.363	4.10	3.76	44.3	203.3	4.00	167	765	1,363	568	261
RA		10	1	80	60	1.880	1.03	1.88	10.8	40.0	.56	20	75	190	69	26
RA		11	1	80	84	1.554	1.03	1.55	17.1	60.0	.73	27	93	250	91	32
RA		12	1	80	71	1.306	1.03	1.31	19.6	60.0	.71	26	78	240	87	27
RA		14	1	79	46	.959	1.03	.96	15.1	50.0	.40	14	48	136	49	16
RA		16	1	80	57	.735	1.03	.73	33.3	70.0	.67	24	51	229	83	18
RA		Totals	5	80	66	6.434	5.13	6.43	17.3	53.8	3.06	111	346	1,045	380	118
NF		11	1	88	100	1.554	1.03	3.11	10.1	45.0	.76	32	140	258	108	48
NF		Totals	1	88	100	1.554	1.03	3.11	10.1	45.0	0.76	32	140	258	108	48
RL		15	1	80	42	.836	1.03	.84	22.1	40.0	.59	18	33	201	63	11
RL		17	1	80	63	.651	1.03	1.30	19.6	70.0	.81	25	91	278	87	31
RL		Totals	2	80	51	1.486	2.05	2.14	20.5	58.3	1.41	44	125	479	150	42
OC		9	1	79	80	2.709	1.20	2.19	12.3	40.0	.67	27	88	230	92	30
OC		10	1	81	67	2.194	1.20									
OC		17	1	86	34	.759	1.20									
OC		18	1	84	74	.677	1.20									
OC		37	1	80	48	.160	1.20									
OC		48	1	88	17	.095	1.20									
OC		Totals	6	81	68	6.594	7.18	2.19	12.3	40.0	0.67	27	88	230	92	30
Totals		272		85	90	221.565	280.00	400.35	23.1	87.2	270.58	9231	34,922	92,269	31,477	11,908

TC		Stand Table Summary														
Project																
COOKITIN																
T02N R07W S01 TPC													T02N R07W S01 TPC			
Twp	Rge	Sec	Tract	Type				Acres		Plots	Sample Trees			Page: 1		
02N	07W	01	AREA2	PC				53.00		6	39			Date: 08/25/2010		
Time: 12:46:26PM																
S Spc	T	Av							Average Log		Net		Net	T o t a l s		
		Sample DBH	FF Trees	Ht 16'	Tot	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
DL		13	2	82	106	14.465	13.33	28.93	16.3	60.0	12.96	471	1,736	687	250	92
DL		14	1	85	100	6.236	6.67	12.47	19.4	75.0	6.67	243	935	353	129	50
DL		15	1	83	113	5.432	6.67	10.86	22.5	80.0	6.71	244	869	356	129	46
DL		18	3	84	105	11.318	20.00	26.41	28.9	105.7	21.02	764	2,792	1,114	405	148
DL		20	2	82	123	6.112	13.33	15.28	36.5	140.0	15.32	557	2,139	812	295	113
DL		21	2	84	103	5.543	13.33	11.09	44.5	150.0	13.55	493	1,663	718	261	88
DL		25	2	80	96	3.911	13.33	9.78	48.9	174.0	13.16	478	1,701	697	254	90
DL		Totals	13	83	106	53.018	86.67	114.82	28.3	103.1	89.39	3,251	11,836	4,738	1,723	627
DF		10	2	83	79	24.446	13.33	24.45	13.1	50.0	9.10	319	1,222	482	169	65
DF		11	1	82	99	10.102	6.67	20.20	9.9	45.0	5.72	201	909	303	106	48
DF		12	2	82	96	16.977	13.33	33.95	11.9	45.0	11.51	404	1,528	610	214	81
DF		13	1	82	85	7.233	6.67	14.47	13.2	50.0	5.44	191	723	288	101	38
DF		15	1	82	80	5.432	6.67	10.86	16.7	60.0	5.17	181	652	274	96	35
DF		16	4	83	96	19.099	26.67	33.42	26.5	95.7	25.29	887	3,199	1,340	470	170
DF		18	1	81	104	3.773	6.67	7.55	32.2	110.0	6.93	243	830	367	129	44
DF		Totals	12	82	90	87.061	80.00	144.90	16.7	62.5	69.16	2,427	9,063	3,666	1,286	480
WH		9	1	84	27	15.090	6.67	15.09	4.6	20.0	2.23	70	302	118	37	16
WH		10	1	83	37	12.223	6.67	12.22	7.2	30.0	2.83	88	367	150	47	19
WH		11	1	86	59	10.102	6.67	10.10	15.5	40.0	5.02	157	404	266	83	21
WH		12	1	88	101	8.488	6.67	16.98	14.6	60.0	7.94	248	1,019	421	132	54
WH		15	2	85	81	10.865	13.33	21.73	19.1	72.5	13.25	414	1,575	702	219	83
WH		Totals	6	85	56	56.768	40.00	76.12	12.8	48.2	31.27	977	3,667	1,657	518	194
WL		13	1	88	94	7.233	6.67	14.47	15.9	60.0	7.34	229	868	389	122	46
WL		16	1	84	98	4.775	6.67	9.55	25.2	95.0	7.70	241	907	408	128	48
WL		17	2	84	92	8.459	13.33	16.92	27.6	100.0	14.96	467	1,692	793	248	90
WL		Totals	4	85	94	20.466	26.67	40.93	22.9	84.7	30.01	938	3,467	1,590	497	184
RA		10	1	79	64	12.223	6.67	12.22	11.5	40.0	3.86	141	489	205	74	26
RA		12	1	80	69	8.488	6.67	8.49	19.1	60.0	4.47	163	509	237	86	27
RA		Totals	2	79	66	20.711	13.33	20.71	14.6	48.2	8.33	303	998	442	161	53
NL		21	1	84	102	2.772	6.67	5.54	44.5	150.0	5.91	246	832	313	131	44
NL		Totals	1	84	102	2.772	6.67	5.54	44.5	150.0	5.91	246	832	313	131	44
NF		19	1	82	79	3.386	6.67	6.77	28.9	85.0	4.70	196	576	249	104	31
NF		Totals	1	82	79	3.386	6.67	6.77	28.9	85.0	4.70	196	576	249	104	31
Totals		39 83 84				244.182	260.00	409.80	20.3	74.3	238.77	8337	30,438	12,655	4,419	1,613

