



Timber Sale Appraisal  
Tilden Beach  
Sale WL-341-2017-57-

District: Western Lane

Date: October 11, 2016

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**Cost Summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,033,505.29	\$177,992.48	\$1,211,497.77
		Project Work:	(\$312,360.70)
		Advertised Value:	\$899,137.07



# Timber Sale Appraisal Tilden Beach Sale WL-341-2017-57-

**District: Western Lane**

**Date: October 11, 2016**

## Timber Description

**Location:** Portions of Section 30, T17S, R8W, W.M., Lane County, Oregon.

**Stand Stocking:** 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	97
Western Hemlock / Fir	17	0	97
Red Cedar	29	0	97
Alder (Red)	12	0	97
Maple	13	0	97

Volume by Grade	SM	2S	3S	3S 12"+	4S	Camprun	Total
Douglas - Fir	230	1,400	666	97	116	110	2,619
Western Hemlock / Fir	0	581	419	46	73	37	1,156
Red Cedar	0	52	50	0	3	0	105
Alder (Red)	0	14	144	0	185	165	508
Maple	0	0	33	0	107	20	160
<b>Total</b>	230	2,047	1,312	143	484	332	4,548

**Comments:** Pond Values Used: 3rd Quarter Calendar Year 2016.

SCALING COST ALLOWANCE = \$5.00/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

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

None.

Other Costs (No Profit & Risk added):

Final Road Maintenance = \$11,034

Firewood Sorting and Landing Slash Piling = \$2,000

Logger Option Spur "Area 2" = \$8,865.26

Coos Bay Rail Authority Railroad Crossing = \$1,750

TOTAL Other Costs (No Profit & Risk added) = \$23,649.26



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**Logging Conditions**

**Combination#: 1**

Douglas - Fir	91.04%
Western Hemlock / Fir	92.33%
Red Cedar	95.67%
Alder (Red)	64.27%
Maple	83.12%

**Logging System:** Cable: Large Tower >=70      **Process:** Stroke Delimber  
**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:** 4000  
**cost / mbf:** \$172.22  
**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Large)

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**Combination#: 2**

Douglas - Fir	4.76%
Western Hemlock / Fir	4.47%
Red Cedar	4.33%
Alder (Red)	3.25%
Maple	4.38%

**Logging System:** Cable: Large Tower >=70      **Process:** Stroke Delimber  
**yarding distance:** Long (1,500 ft)      **downhill yarding:** Yes  
**tree size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF  
**loads / day:** 7      **bd. ft / load:** 4000  
**cost / mbf:** \$276.79  
**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Large)

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**Combination#: 3**

Douglas - Fir	4.20%
Western Hemlock / Fir	3.20%
Alder (Red)	32.48%
Maple	12.50%

**Logging System:** Shovel      **Process:** Manual Delimbing  
**yarding distance:** Short (400 ft)      **downhill yarding:** No  
**tree size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF  
**loads / day:** 3      **bd. ft / load:** 4000  
**cost / mbf:** \$277.29  
**machines:** Shovel Logger

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### Logging Costs

Operating Seasons: 2.00	Profit Risk: 15%
Project Costs: \$312,360.70	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$23,649.26

Miles of Road

Road Maintenance: \$0.00

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	3.0	0.0	0.0

### Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.0
Western Hemlock / Fir	\$0.00	3.0	4.0
Red Cedar	\$0.00	1.0	4.5
Alder (Red)	\$0.00	3.0	3.5
Maple	\$0.00	3.0	3.0



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**Logging Costs Breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
<b>Douglas - Fir</b>									
\$181.61	\$3.15	\$1.93	\$66.95	\$0.00	\$38.05	\$0.00	\$7.00	\$5.20	\$303.89
<b>Western Hemlock / Fir</b>									
\$180.26	\$3.15	\$1.93	\$66.95	\$0.00	\$37.84	\$0.00	\$7.00	\$5.20	\$302.33
<b>Red Cedar</b>									
\$176.75	\$3.15	\$1.93	\$178.53	\$0.00	\$54.05	\$0.00	\$7.00	\$5.20	\$426.61
<b>Alder (Red)</b>									
\$209.74	\$3.15	\$1.93	\$76.52	\$0.00	\$43.70	\$0.00	\$7.00	\$5.20	\$347.24
<b>Maple</b>									
\$189.93	\$3.15	\$1.93	\$89.27	\$0.00	\$42.64	\$0.00	\$7.00	\$5.20	\$339.12

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$600.91	\$297.02	\$0.00
Western Hemlock / Fir	\$0.00	\$457.74	\$155.41	\$0.00
Red Cedar	\$0.00	\$1,150.00	\$723.39	\$0.00
Alder (Red)	\$0.00	\$668.80	\$321.56	\$0.00
Maple	\$0.00	\$430.62	\$91.50	\$0.00



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**Summary**

**Amortized**

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

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	2,619	\$297.02	\$777,895.38
Western Hemlock / Fir	1,156	\$155.41	\$179,653.96
Red Cedar	105	\$723.39	\$75,955.95
Alder (Red)	508	\$321.56	\$163,352.48
Maple	160	\$91.50	\$14,640.00

**Gross Timber Sale Value**

**Recovery:** \$1,211,497.77

**Prepared By:** Nikolai Hall

**Phone:** 541-935-2283

**Summary of "Other Costs" for Timber Sale Appraisals**

Tilden Beach *341-17-57*

**"Other Costs" with Profit and Risk to be Added:**

None

**Total "Other Costs" with Profit and Risk to be Added:**

\$0

**"Other Costs" With No Additional Profit and Risk**

	<u>Units</u>	<u>Quantity</u>	<u>Cost/Unit</u>	<u>Total Cost</u>
Final Road Maintenance	Operation			\$ 11,034
Firewood sorting and landing slash piling	Operation			\$ 2,000
Logger Option Spur	Operation			\$ 8,865
Coos Bay Rail Authority Fees	Operation			\$ 1,750

**Total "Other Costs" With No Additional Profit and Risk:**

\$ 23,649.26

**Cost per MBF**      4,549      MBF

**\$ 5.20**



**341-17-57**  
**Tilden Beach**  
**Combined Project Costs**

Project 1	Improve and construct roads.	\$214,075.00
Project 2	Spread and compact rock for roads.	\$67,132.00
Project 3	Stream crossing pipe installation and fill construct.	\$20,443.20
Project 4	Remove log debris from fill at crossing.	\$5,088.00
Project 5	Conduct roadside brushing on Pat ck rd.	\$2,122.50
Project 6	Install gate on Beecher ck rd.	\$3,500.00
TOTAL PROJECT COSTS		\$312,360.70

State Timber Sale Contract  
Tilden Beach  
341-17-57

### Final Road Maintenance Cost Summary

Totals	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	Pat Ck Rd	TOTAL
Stations	11.00	42.00	23.00	58.00	3.85	17.50	2.00	3.00	
Cost/Sta	\$ 50.45	\$ 50.00	\$ 62.83	\$ 49.66	\$ 123.70	\$ 86.71	\$ 110.00	\$ 280.00	
<b>Total Cost</b>	<b>\$ 555</b>	<b>\$ 2,100</b>	<b>\$ 1,445</b>	<b>\$ 2,880</b>	<b>\$ 476.25</b>	<b>\$ 1,518</b>	<b>\$ 220</b>	<b>\$ 840</b>	<b>\$ 10,034</b>

Spot Rocking	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	Pat Ck Rd	TOTAL
Total Yds	10	30	20	40	10	20		30	
Rock Size	3"-0"	3"-0"	3"-0"	3"-0"	3"-0"	1 1/2"-0"	3"-0"	*3/4"-0"	
\$/yd	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$5.00	\$28.00	
Subtotal	\$ 280	\$ 840	\$ 560	\$ 1,120	\$ 280	\$ 560	\$ -	\$ 840	\$ 4,480

Grade, Shape & Pull Ditches	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	Pat Ck Rd	TOTAL
Stations	11.00	42.00	23.00	58.00	3.85	17.50	2.00	0.00	
\$/STA	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 18.35	
Subtotal	\$ 275	\$ 1,050	\$ 575	\$ 1,450	\$ 96	\$ 438	\$ 50	\$ -	\$ 3,934

Install Waterbars & Oblique Waterbars	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	Pat Ck Rd	TOTAL
# of waterbars		6.00	6.00	6.00		12.00	2.00		
\$/waterbar	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	
Subtotal	\$ -	\$ 210.00	\$ 210.00	\$ 210.00	\$ -	\$ 420.00	\$ 70.00	\$ -	\$ 1,120.00

Landing clean up	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	Pat Ck Rd	TOTAL
Stations			1.00	1.00	1.00	1.00	1.00		
\$/STA	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00		
Subtotal	\$ -	\$ -	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ -	\$ 500

Move In	Initial
Grader	\$ 500
Vibratory Rolloer	
D * Cat	
Excavator	\$ 500
Dump Truck	

Move in costs associated with one entry for the entire project

**Total Final Maintenance Costs** **\$ 11,034**

341-17-57  
Tilden Beach

## LOGGER OPTION SPUR

<b>Road Name</b>	Spur 3	Pat Ck Rd
<b>Total Stations</b>	3	39

### Earthwork

<b>Clearing and Grubbing</b>	Spur 3	Pat Ck Rd
Acreage	0.3	
Cost/Acre	\$1,337.00	\$1,337.00
<b>Total</b>	<b>\$ 401</b>	<b>\$ -</b>

Excavation yards are bank run from State's design

<b>Construction/Excavation</b>	Spur 3	Pat Ck Rd
Stations	3	
Drift/Excavation Cu Yd.	1000	
\$/sta	\$190.00	\$122.00
Drift/Excavation \$/yd.	\$1.80	
Landing Construction	\$389.00	
<b>Subtotal</b>	<b>\$ 2,759</b>	<b>\$ -</b>

### Subgrade Treatment

<b>Compaction w/ Roller</b>	Spur 3	Pat Ck Rd
Road Stations	3	0
Cost/STA	\$ 20.20	\$ 20.20
<b>Subtotal</b>	<b>\$ 61</b>	<b>\$ -</b>

<b>Grade and Shape</b>	Spur 3	Pat Ck Rd
Road Stations	3	39
Cost/STA	\$ 24.83	\$ 24.83
<b>Subtotal</b>	<b>\$ 74</b>	<b>\$ 968</b>

<b>Move in Cost</b>	
D-7 Cat or equivalent	\$ 300.00
Dump Trucks	\$ 250.00
grader	\$ 100.00
excavator	\$ 300.00
vibratory roller	\$ 100.00
water truck	\$ 50.00

Total Subgrade Construction Cost	\$ 3,295.19	\$ 968.37
Cost/Sta	\$ 1,098.40	\$ 24.83
Total Rock Costs	\$3,502	0
Move In	\$ 1,100	

<b>Grand Total</b>	<b>\$7,896.89</b>	<b>\$ 968.37</b>
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### Rock Quantity (In place)

<b>Base Rock</b>	Spur 3
Rock Size	Jaw Run
Stations	2.00
Approx. yds./sta	44
<b>Subtotal base (cu. yds.)</b>	<b>88</b>

<b>Landings</b>	Spur 3
Rock Size	Jaw Run
Stations	1.00
Approx. yds./sta	40
<b>Subtotal base (cu. yds.)</b>	<b>40</b>

### ROCK COST (Rock + Delivery)

<b>Road Segment/Name</b>	Spur 3
Rock Size	Jaw Run
Approx. cu. yds.	88
Cost/yd. (includes load/spread)	\$25.36
<b>Subtotal Cost "Base" Rock</b>	<b>\$ 2,231</b>

Rock Size	Jaw Run
Approx. cu. yds.	<b>\$ 40</b>
Cost/yd. (includes load/spread)	\$25.36
<b>Subtotal Cost "Landing" Rock</b>	<b>\$ 1,014</b>

Grand total quarry approx. yds.	\$ 128
<b>Total Quarry Rock Cost</b>	<b>\$ 3,246</b>

<b>Compaction w/Processing</b>	Spur 3
Cost/Cu. Yd.	\$2.00
<b>Subtotal Processing</b>	<b>\$ 256</b>

State Timber Sale Contract  
Tilden Beach  
341-17-57

## Stream Crossing "Project # 3"

### Fill Construction At Stream Crossing "52+00"

#### Borrow Waste Transport Productivity

AVG Round Trip Miles	Avg. Speed (MPH)	Dump & Load Time	hrs./trip	# of Trucks
1.0	10	0.2	0.3	2
Loads/hr.	Yds./Load	Yds./hr.	Yds./Day	
3.4	10	67	470	

#### Spread and Construct Crossing

Dozer cost/hr.	Productive Machine Hours	Daily Cost
\$ 150.00	7	\$ 1,050.00

Total Cost/Cu. Yds. \$ 2.24

#### Fill Construction Cost

Cu. Yds.	\$/Yd <sup>3</sup>	Total Cost
4000	\$ 2.24	\$ 8,940.00

### Pipe Install

Transport	Pipe Transport	# of pipes	Cost
	\$ 500.00	2	\$ 1,000.00

Cost of Pipe	cost/lf	length of pipe	# of Pipes	Total Cost
54"	\$ 52.00	70	2	\$ 7,280.00

Total Cost \$ 8,280.00

Install	Bedding /Backfill Cu.Yds	Cost/Cu. Yd.	Rock Costs
	60	\$5.00	\$ 300.00
	Excavator Cost/hr.	hrs. Allocated	Excavator Cost
	\$174	12	\$ 2,088.00

Compaction	Hand Held Compactor Cost/hr.	hrs.	Compaction Cost
	\$100	6	\$ 600.00

Total Cost \$ 2,988.00

### Seed And Mulch "Crossing fill slopes "

Mulch	Rate	Acres	# of Bales	Cost/Bale	Cost of Mulch
	1 ton/Acre	0.32	10	\$ 5.00	\$ 50

Seed	Rate "lbs./Acre"	Acres	Lbs. of Seed	Cost/Bag	Cost of Seed
	100	0.32	32.00	\$ 70.00	\$ 70.00

Personnel	Personnel	Rate	Hrs./Acre	Cost/Acre	Cost of Personnel
	2	\$ 30.00	6	\$ 360.00	\$ 115.20

Seed and Mulch Cost	Acres	\$/Acre	Total Cost
	0.32	\$ 735.00	\$ 235.20

Total Project Cost \$ 20,443.20

State Timber Sale Contract  
Tilden Beach  
341-17-57

67+60 Log Removal Project  
Project # 4

Construct Access to Log Debris and Remove

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Pioneer Bench	<u>Cost/Sta</u>   <u># of Stations</u>	<u>Bench Cost</u>
	\$ 400.00   2	\$ 800.00
End Haul	<u>Cost/Yd.</u>   <u># of Yds.</u>	<u>End Haul Cost</u>
	\$ 4.50   400	\$ 1,800.00
	<u>Total Cost</u>	<u>\$ 2,600.00</u>

Note: Most of the material needed for endhaul will be old sidecast

Fill Constructions

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Embankment Construct	<u>Cost/hr.</u>   <u>hrs.</u>	<u>Embankment Cost</u>
	\$ 174.00   4	\$ 696.00
Machine Place Material	<u>Cost/hr.</u>   <u>hrs.</u>	<u>Machine Cost</u>
	\$ 174.00   8	\$ 1,392.00
Compact	<u>Cost/hr.</u>   <u>hrs.</u>	<u>Compaction Cost</u>
	\$ 100.00   4	\$ 400.00
	<u>Total Cost</u>	<u>\$ 2,488.00</u>

Note: Sandstone acquired from the widening of 67+66 should be used to build up outer edge.

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**Total Project Costs    \$ 5,088.00**

## Rocking and Compaction

### Rock Quantity (In place)

Base Rock	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Rock Size	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	Jaw Run	
Stations	11.0	42	23.00	58.00	3.85	17.50	2.00	158.00
Approx. yds./sta	17	22	22	33	33	33	44	
<b>Subtotal base (cu. yds.)</b>	<b>187</b>	<b>924</b>	<b>506</b>	<b>1914</b>	<b>127</b>	<b>578</b>	<b>88</b>	<b>4324</b>

Cap Rock	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Rock Size	1 1/2'-0"	1 1/2'-0"	1 1/2'-0"	1 1/2'-0"	0	*3/4'-0"	0	
Stations	11.0	42	23	58		17.5		152.00
Approx. yds./sta	17	22	22	11		17		
<b>Subtotal cap (cu. yds.)</b>	<b>187</b>	<b>924</b>	<b>506</b>	<b>638</b>	<b>0</b>	<b>298</b>	<b>0</b>	<b>2552</b>

Landings	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Rock Size	0	0	Jaw Run	Jaw Run	Jaw Run	Jaw Run	Jaw Run	
Stations			1.00	1.00	1.00	1.00	1.00	5.00
Approx. yds./sta			40	40	40	40	40	
<b>Subtotal base (cu. yds.)</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>200</b>

Additional Rock	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Rock Size	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	1 1/2'-0"	3'-0"	
Turnouts and Turn-Arounds	1	4	3	4		1		
Approx. cu. yds.	20	20	20	20		20		
<b>Subtotal Tunouts/Around (cu. yds.)</b>	<b>20</b>	<b>80</b>	<b>60</b>	<b>80</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>260</b>
Rock Size	3'-0"	3'-0"	3'-0"	3'-0"	0	1 1/2'-0"	0	
Number of Points	3	5	10	13		2		
Curve Widening/Spot Rocking (Yds.)	10	10	10	10		10		
<b>Subtotal Spot/Widening Rock</b>	<b>30</b>	<b>50</b>	<b>100</b>	<b>130</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>330</b>

Energy Dissipator Yds.	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	
Rock Size	Rip Rap	Rip Rap	Rip Rap	Rip Rap	Rip Rap	Rip Rap	Rip Rap	
Approx. Total (cu. Yds.)	10	70	80	90		10		260

### ROCK COST (Rock + Delivery)

Road Segment/Name	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Rock Size	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	Jaw Run	
Approx. cu. yds.	187	924	506	1914	127	578	88	4324
Cost/yd. (includes load/spread)	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$25.36	
<b>Subtotal Cost "Base" Rock</b>	<b>\$ 935</b>	<b>\$ 4,620</b>	<b>\$ 2,530</b>	<b>\$ 9,570</b>	<b>\$ 635</b>	<b>\$ 2,888</b>	<b>\$ 2,231</b>	<b>\$ 23,409</b>

Rock Size	1 1/2'-0"	1 1/2'-0"	1 1/2'-0"	1 1/2'-0"	0	*3/4'-0"	0	
Approx. cu. yds.	187	924	506	638	0	298	0	2552
Cost/yd. (includes load/spread)	\$5.00	\$5.00	\$5.00	\$5.00	\$0.00	\$27.72	\$0.00	
<b>Subtotal Cost "Cap" Rock</b>	<b>\$ 935</b>	<b>\$ 4,620</b>	<b>\$ 2,530</b>	<b>\$ 3,190</b>	<b>\$ -</b>	<b>\$ 8,247</b>	<b>\$ -</b>	<b>\$ 19,522</b>

Rock Size	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	1 1/2'-0"	3'-0"	
Approx. cu. yds. <b>Tunouts/Arounds</b>	20	80	60	80	0	20	0	260
Cost/yd. (includes load/spread)	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	
Subtotal	\$100.00	\$400.00	\$300.00	\$400.00	\$0.00	\$100.00	\$0.00	
Rock Size	3'-0"	3'-0"	3'-0"	3'-0"	0	1 1/2'-0"	0	
Approx. cu. Yds. <b>Spot/Widening</b>	30	50	100	130	0	20	0	330
Cost/yd. (includes load/spread)	\$5.00	\$5.00	\$5.00	\$5.00	\$0.00	\$5.00	\$0.00	
Subtotal	\$150.00	\$250.00	\$500.00	\$650.00	\$0.00	\$100.00	\$0.00	
Rock Size	Rip Rap	Rip Rap	Rip Rap	Rip Rap	Rip Rap	Rip Rap	Rip Rap	
Approx. cu. Yds. <b>Energy Dissipator</b>	10	70	80	90	0	10	0	260
Cost/yd. (includes load/spread)	\$4.00	\$4.00	\$4.00	\$4.00	\$4.00	\$4.00	\$4.00	
Subtotal	\$40.00	\$280.00	\$320.00	\$360.00	\$0.00	\$40.00	\$0.00	
<b>Subtotal Cost "Additional" Rock</b>	<b>\$ 290</b>	<b>\$ 930</b>	<b>\$ 1,120</b>	<b>\$ 1,410</b>	<b>\$ -</b>	<b>\$ 240</b>	<b>\$ -</b>	<b>\$ 3,990</b>

Rock Size	\$ -	\$ -	Jaw Run	Jaw Run	Jaw Run	Jaw Run	Jaw Run	
Approx. cu. yds.	\$ -	\$ -	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	200
Cost/yd. (includes load/spread)	\$0.00	\$0.00	\$25.36	\$25.36	\$25.36	\$25.36	\$25.36	
<b>Subtotal Cost "Landing" Rock</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,014</b>	<b>\$ 1,014</b>	<b>\$ 1,014</b>	<b>\$ 1,014</b>	<b>\$ 1,014</b>	<b>\$ 5,070</b>

Grand total quarry approx. yds.	394	1928	1112	2672	167.05	935	128	7336
<b>Total Quarry Rock Cost</b>	<b>\$ 2,160</b>	<b>\$ 10,170</b>	<b>\$ 7,194</b>	<b>\$ 15,184</b>	<b>\$ 1,650</b>	<b>\$ 12,388</b>	<b>\$ 3,246</b>	<b>\$ 51,992</b>

Compaction w/Processing	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Cost/Cu. Yd.	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.50	\$2.00	
<b>Subtotal Processing</b>	<b>\$ 788</b>	<b>\$ 3,856</b>	<b>\$ 2,224</b>	<b>\$ 5,344</b>	<b>\$ 334</b>	<b>\$ 2,338</b>	<b>\$ 256</b>	<b>\$ 15,140</b>

\$/yd <sup>3</sup> rock in place & compacted	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	Total
<b>Total Rock Costs</b>	<b>\$2,948</b>	<b>\$14,026</b>	<b>\$9,418</b>	<b>\$20,528</b>	<b>\$1,984</b>	<b>\$14,726</b>	<b>\$3,502</b>	<b>\$ 67,132</b>

Move-in included in subgrade construction  
Due to rounding, the numbers in the table above may not add up to the totals shown.

State Timber Sale Contract  
341-17-57  
Tilden Beach

**Subgrade Construction/Culverts**  
Processing and Decking Right-of-Way Logs Not Included

Totals	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Stations	11	39	23	58	3.85	17.5	2	154
Cost/Sta	\$ 280.19	\$ 778.35	\$ 2,018.08	\$ 1,460.64	\$ 1,626.45	\$ 2,079.83	\$ 647.36	
<b>Cost</b>	<b>\$ 3,082</b>	<b>\$ 30,356</b>	<b>\$ 46,416</b>	<b>\$ 84,717</b>	<b>\$ 6,262</b>	<b>\$ 36,397</b>	<b>\$ 1,295</b>	<b>\$ 208,525</b>

**Earthwork**

Clearing and Grubbing	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Acreage	0.4	1.4	0.83	2.00	0.35	1.6	0.18	
Cost/Acre	\$ 1,337	\$ 1,337	\$ 1,337	\$ 1,337	\$ 1,337	\$ 1,337	\$ 1,337	
Total	\$ 535	\$ 1,872	\$ 1,110	\$ 2,674	\$ 468	\$ 2,139	\$ 241	\$ 9,039

Excavation yards are bank run from State's design

Construction/Excavation	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Stations	11	39	23	58	3.85	17.5	2	
Drift/Excavation Cu Yd.		500			3000		400	
\$/sta	\$80.00	\$190.00	\$190.00	\$190.00	\$190.00	\$190.00	\$122.00	
Drift/Excavation \$/yd.		\$1.80			\$1.50		\$1.80	
Landing Construction					\$389.00	\$778.00		
<b>Subtotal</b>	<b>\$ 880</b>	<b>\$ 8,310</b>	<b>\$ 4,370</b>	<b>\$ 11,020</b>	<b>\$ 5,621</b>	<b>\$ 4,103</b>	<b>\$ 964</b>	<b>\$ 35,267</b>

**End-haul** Costs are in addition to construction costs above Refer to the Endhaul costing summary for specific costing summary.

<b>Subtotal</b>		\$9,894	\$23,824	\$50,844		\$21,495		\$ 106,057
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Drill & Shoot			Beecher Segment 3	Beecher Segment 4		Spur 2		TOTAL
Cu Yd.			1000	1000		1,000		
\$/yd.			\$ 6.70	\$ 6.70		\$ 6.70		
<b>Subtotal</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 6,700</b>	<b>\$ 6,700</b>	<b>\$ -</b>	<b>\$ 6,700</b>	<b>\$ -</b>	<b>\$ 20,100</b>

**Culverts**

Plastic	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	
Length (ft.)		40		40				80
Diameter (3" x 1")	24"	24"	24"	24"	24"	24"	24"	
Cost/Foot	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00	
Subtotal	0	\$ 840.00	0	\$ 840.00	0	0	0	
Plastic	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	
Length (ft.)	40	240	320	320		40		960
Diameter	18"	18"	18"	18"	18"	18"	18"	
Cost/Foot	\$ 13.00	\$ 13.00	\$ 13.00	\$ 13.00	\$ 13.00	\$ 13.00	\$ 13.00	
Subtotal	\$ 520.00	\$ 3,120.00	\$ 4,160.00	\$ 4,160.00	\$ -	\$ 520.00	\$ -	
<b>Subtotal</b>	<b>\$ 520</b>	<b>\$ 3,960</b>	<b>\$ 4,160</b>	<b>\$ 5,000</b>	<b>\$ -</b>	<b>\$ 520</b>	<b>\$ -</b>	<b>\$ 14,160</b>
<b>Installation Cost</b>	<b>\$ 652</b>	<b>\$ 4,564</b>	<b>\$ 5,216</b>	<b>\$ 5,868</b>	<b>\$ -</b>	<b>\$ 652</b>		<b>\$ 16,952</b>

\*Plastic culverts was used for costing purposes based on prices as of 08/09/2016

**Subgrade Treatment**

Compaction w/ Roller	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Road Stations	11	39	23	58	3.85	17.5	2	154
Cost/STA	\$ 20.20	\$ 20.20	\$ 20.20	\$ 20.20	\$ 20.20	\$ 20.20	\$ 20.20	
Subtotal	\$ 222	\$ 788	\$ 465	\$ 1,172	\$ 78	\$ 354	\$ 40	\$ 3,118

Grade and Shape	Beecher A to B	Beecher B to C	Beecher C to D	Beecher D to E	Spur 1	Spur 2	Spur 2a	TOTAL
Road Stations	11	39	23	58	3.85	17.5	2	
Cost/STA	\$ 24.83	\$ 24.83	\$ 24.83	\$ 24.83	\$ 24.83	\$ 24.83	\$ 24.83	
Subtotal	\$ 273	\$ 968	\$ 571	\$ 1,440	\$ 96	\$ 435	\$ 50	\$ 3,833

Move in Cost	Initial
D-7 Cat or equivalent	\$ 1,500
3 Dump Trucks	\$ 250
grader	\$ 500
excavator	\$ 1,500
vibratory roller	\$ 200
water truck	\$ 100
Drill	\$ 1,000
small excavator	\$ 500

**Project Cost** \$ 208,525.00

**Move In Cost** \$ 5,550

**Total Cost** \$ 214,075.00

Due to rounding, the numbers in the table above may not add up to the totals shown.

# Cruise Report

Tilden Beach

SALE # 341-17-57

**Sale Area:** Portions of Section 30, T17S, R8W, W.M., Lane County, Oregon. The sale's net harvestable acres are 116. There are approximately 31 acres of stream buffers. Acres were determined using a combination of aerial photos, GPS, GIS, and topographic maps.

**Stand Description:** Tilden Beach Areas 1 and 2 are harvest units dominated by 75-80 year old Douglas-fir. A significant component of Western hemlock is present. The stand contains scattered Western Red Cedar, Bigleaf maple, and Red Alder. Area 1 totals 111 acres and Area 2 is 5 acres. Both stands are highly variable. Some areas are relatively dense with tall, straight, defectless Douglas-fir. Other areas have scattered conifer surrounded by hardwoods. Area 2 is more open and has a larger alder and cedar component than Area 1. The brush component is also variable. Much of the stand consists of primarily salmonberry, evergreen huckleberry, and vine maple. Some areas are primarily sword fern, salal and Oregon grape. The slopes are mostly 50-80%, broken by tributary stream. A few elongated flatter benches occur on the west side of Little Beecher Ck.

Tilden Beach Area 3, the Right-of-Way, is approximately 24 acres of 60-75 year old timber outside of the sale boundary of Area 1 and 2. Area 3 is approximately 6 acres of new road construction, and 18 acres of road reconstruction. Most of the mature timber in the existing road right-of-way consists of red alder, with scattered Douglas-fir and western hemlock.

**Cruise Method:** Areas 1 and 2 were cruised in a grid pattern using a systematic variable radius plot sampling method. 77 plots were cruised in an alternating cruise-count pattern. Every tree was graded using the official rules for log scaling for the above species. 40, 36, and 32 foot lengths were favored for #2 and #3 sawlog grades. Deductions for defect were estimated on a tree by tree basis. The top diameter was determined at 40% form factor. Logs that were not at least 12 feet in length and having at least 20 bf were not counted.

Volumes for Area 3 were calculated based on cut-out volumes from a similar right-of-way recently harvested as part of a nearby timber sale. The "Tilden Top" right-of-way produced approximately 2.48 net MBF per station. Tilden Beach Area 3 has 134 stations of right-of-way, which equates to an estimated 332 total net MBF. ODF personnel determined by ocular estimate an approximate percentage by species of 50% red alder, 33% Douglas-fir, 11% western hemlock and 6% bigleaf maple.

**Cruiser:** Nikolai Hall, Chad Howard

**Volume Tables:** Volumes for Area 1 and 2 were computed by using the SuperACE program.



**Area 1 Net Cruised Volume (MBF)**

Species	Avg. DBH	Special Mill	2 Saw	3 Saw	3 Saw 12"+	4 Saw	Sub-Total
Douglas-fir	18.9	230	1386	665	97	116	2494
Western Hemlock	17.1		533	384	46	70	1033
Red Alder	12.4		14	133		183	330
Big Leaf Maple	12.9				33	107	140
Western Red Cedar	27.7		39	49		3	91

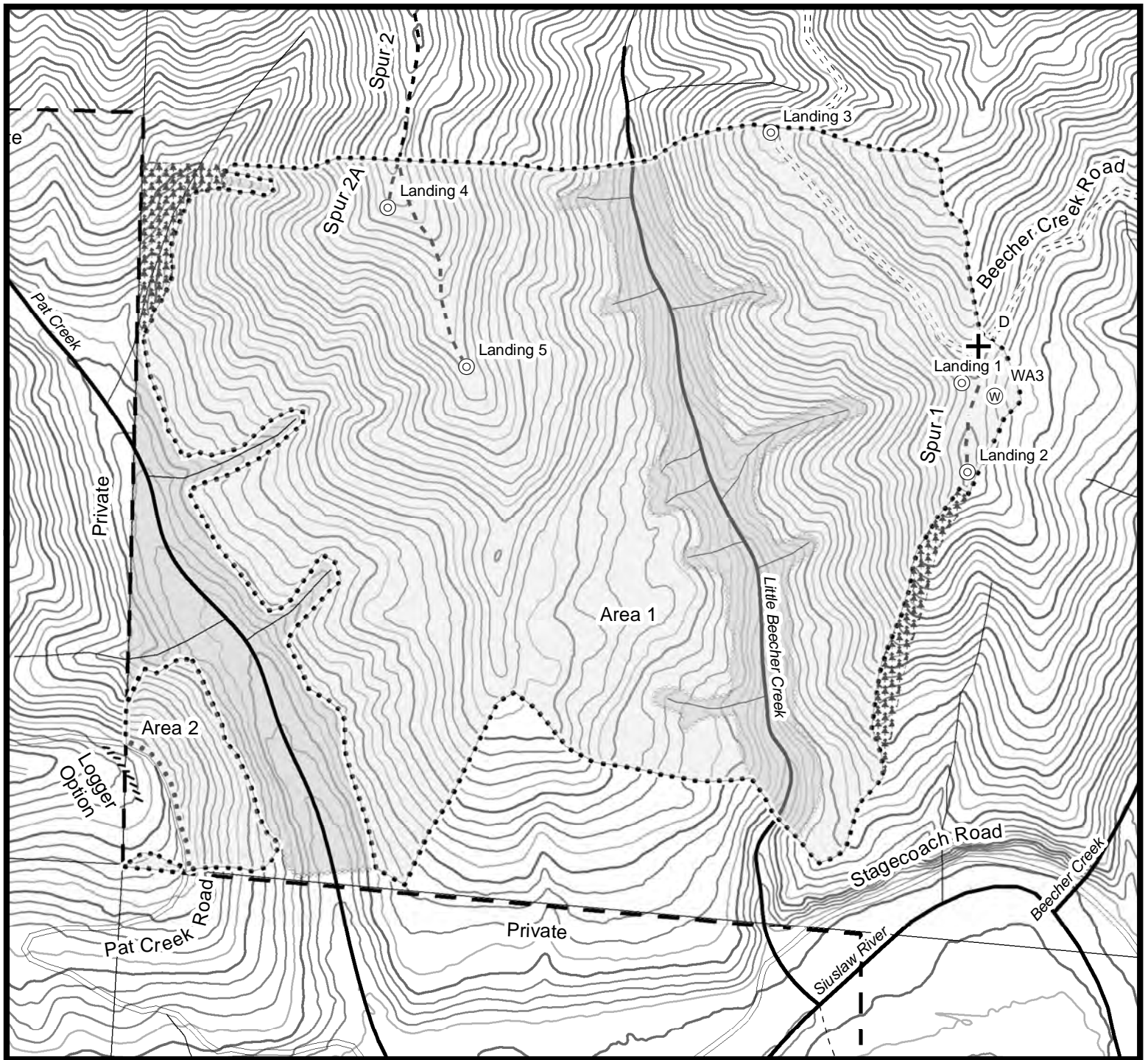
**Area 1 Total (MBF): 4088****Area 2 Net Cruised Volume (MBF)**

Species	Avg. DBH	Special Mill	2 Saw	3 Saw	3 Saw 12"+	4 Saw	Sub-Total
Western Hemlock	18.2		48	35		3	86
Douglas-fir	34.4		14	1			15
Western Red Cedar	43.4		13	1			14
Red Alder	12.3			11		2	13

**Area 2 Total (MBF): 128****Area 3, Right-Of-Way, Calculated Volume**

Species	Camp Run (MBF)
Red Alder	165
Douglas-fir	110
Western Hemlock	37
Big Leaf Maple	20
Area 3, Total (MBF):	<b>332</b>

**Total Sale Volume: 4548 MBF**



## Logging Plan

OF TIMBER SALE CONTRACT NO. 341-17-57  
TILDEN BEACH AREAS 1 AND 2  
PORTIONS OF SECTION 30, T17S, R8W, W.M.  
LANE COUNTY, OREGON

APPROXIMATE NET ACRES	
100% CABLE YARDING	
AREA 1	111 ACRES (MC)
AREA 2	5 ACRES (MC)
TOTAL	116 ACRES (MC)

### Legend

- Timber Sale Boundary
- ODF Ownership
- \*•\* Reserved Tree Area

### Roads

- Surfaced road
- - Reconstruction - not drivable
- /// Logger Option
- - - New Road Construction

### Streams

- Fish
- Nonfish
- - Unknown
- ⊙ Landing
- Ⓜ Potential Waste Areas

Contour interval 20 feet

0 500 1,000 Feet

1 inch = 500 feet

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"STEWARDSHIP IN FORESTRY"