



Timber Sale Appraisal  
East Dean  
Sale CS-341-2017-68-

District: Coos

Date: December 13, 2016

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**Cost Summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$395,372.12	\$4,466.90	\$399,839.02
		Project Work:	\$0.00
		Advertised Value:	\$399,839.02



# Timber Sale Appraisal East Dean Sale CS-341-2017-68-

**District: Coos**

**Date: December 13, 2016**

## Timber Description

**Location:** Portions of Section 16, T22S, R11W, W.M., Douglas County, Oregon.

**Stand Stocking:** 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	24	0	95
Western Hemlock / Fir	20	0	95
Alder (Red)	13	0	90

Volume by Grade	3P	SM	2S	3S	3S 12"+	3S 10" - 11"	4S 8" - 9"	6" - 7"	Total
Douglas - Fir	43	157	622	202	43	0	0	0	1,067
Western Hemlock / Fir	0	0	6	3	0	0	0	0	9
Alder (Red)	0	0	0	0	0	6	5	8	19
<b>Total</b>	43	157	628	205	43	6	5	8	1,095

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

19 acres of regeneration harvest containing approximately 14 acres of mature second growth Douglas-fir sawtimber and 5 acres of 53 year-old Douglas-fir, hemlock, and red alder mix.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:  
 $\$745.02/\text{MBF} = \$1,050/\text{MBF} - \$304.98/\text{MBF}$

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

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

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

HAULING COST ALLOWANCE

Hauling costs equivalent to  $\$780$  daily truck cost.

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

FELLING:

Directional Felling/Tree Jacking:  $\$2/\text{MBF} \times 200 \text{ MBF} = \$400$

YARDING AND LOADING:

Cull Sorting/Slash Piling/Landing Cleanup:  $\$125/\text{landing} \times 3 \text{ landings} = \$375$

Rig Tail/Lift Trees:  $\$150/\text{lift tree} \times 3 \text{ lift trees} = \$450$

Artificial Guy Anchors(dozer, skidder):  $\$500/\text{anchor} \times 1 \text{ anchor} = \$500$

Cover Landing Slash Piles w/Sheeting:  $\$50/\text{pile} \times 3 \text{ piles} = \$150$

MISCELLANEOUS COSTS:

Road Maintenance 2000 Road (grade, shape, pull ditches):  $\$24.83/\text{station} \times 147 \text{ stations} = \$3,650.01$

Grader Move-in:  $\$500/\text{grader} \times 1 \text{ grader} = \$500$

Maintenance Rock (Section 2130):  $\$32.59/\text{yard} \times 80 \text{ yards} = \$2,607.20$

Tree Topping @60 feet +:  $\$100/\text{tree} \times 4 \text{ trees} = \$400$

Tree Girdling @60 feet +:  $\$125/\text{tree} \times 4 \text{ trees} = \$500$

TOTAL Other Costs (with Profit & Risk to be added) =  $\$9,532.21$

Other Costs (No Profit & Risk added):

None.



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**Logging Conditions**

**Combination#: 1**                      Douglas - Fir                      74.00%  
   Western Hemlock / Fir                      74.00%  
   Alder (Red)                      74.00%

**Logging System:** Cable: Medium Tower >40 - <70                      **Process:** Manual Delimbing  
**yarding distance:** Medium (800 ft)                      **downhill yarding:** No  
**tree size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF  
**loads / day:** 11                      **bd. ft / load:** 4700  
**cost / mbf:** \$117.99  
**machines:** Log Loader (A)  
                         Tower Yarder (Medium)

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**Combination#: 2**                      Douglas - Fir                      26.00%  
   Western Hemlock / Fir                      26.00%  
   Alder (Red)                      26.00%

**Logging System:** Cable: Medium Tower >40 - <70                      **Process:** Stroke Delimber  
**yarding distance:** Medium (800 ft)                      **downhill yarding:** No  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 9                      **bd. ft / load:** 3800  
**cost / mbf:** \$175.44  
**machines:** Log Loader (A)  
                         Stroke Delimber (A)  
                         Tower Yarder (Medium)

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### Logging Costs

Operating Seasons: 1.00	Profit Risk: 20%
Project Costs: \$0.00	Other Costs (P/R): \$9,532.21
Slash Disposal: \$0.00	Other Costs: \$0.00

Miles of Road

Road Maintenance: \$0.00

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.7
Western Hemlock / Fir	\$0.00	2.0	4.0
Alder (Red)	\$0.00	2.0	3.5



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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>									
\$132.93	\$0.00	\$4.00	\$87.13	\$8.71	\$46.55	\$0.00	\$7.00	\$0.00	\$286.32
<b>Western Hemlock / Fir</b>									
\$132.93	\$0.00	\$4.00	\$102.38	\$8.71	\$49.60	\$0.00	\$7.00	\$0.00	\$304.62
<b>Alder (Red)</b>									
\$132.93	\$0.00	\$4.00	\$122.57	\$8.71	\$53.64	\$0.00	\$7.00	\$0.00	\$328.85

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$655.33	\$369.01	\$0.00
Western Hemlock / Fir	\$0.00	\$486.67	\$182.05	\$0.00
Alder (Red)	\$0.00	\$563.95	\$235.10	\$0.00



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**Summary**

**Amortized**

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

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	1,067	\$369.01	\$393,733.67
Western Hemlock / Fir	9	\$182.05	\$1,638.45
Alder (Red)	19	\$235.10	\$4,466.90

**Gross Timber Sale Value**

Recovery: \$399,839.02

Prepared By: Jon Haynes

Phone: 541-267-1758

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

Sale Name: East Dean

### Additional "Other Cost" with additional profit and risk to be added:

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
<b>Felling</b>				
Directional Felling/Tree Jacking	MBF	200	\$ 2.00	\$ 400.00
<b>Yarding and Loading</b>				
Cull sorting /slash piling /landing cleanup	landing	3	\$ 125.00	\$ 375.00
Rig tail/lift trees	lift tree	3	\$ 150.00	\$ 450.00
Artificial guy anchors(dozer, skidder)	anchor	1	\$ 500.00	\$ 500.00
Cover landing slash pile w/sheeting	pile	3	\$ 50.00	\$ 150.00
<b>Miscellaneous Costs</b>				
Road Maint. 2000 Rd. ( grade, shape, pull ditches)	per station	147	\$ 24.83	\$ 3,650.01
Grader Move-in	grader	1	\$ 500.00	\$ 500.00
Maintenance rock (Section 2130)	yards	80	\$ 32.59	\$ 2,607.20
Tree topping @ 60 feet +	per tree	4	\$ 100.00	\$ 400.00
Tree girdling @ 60 feet +	per tree	4	\$ 125.00	\$ 500.00

Total additional "Other Cost" with additional profit and risk to be added

**\$ 9,532.21**

### Additional "Other Cost" with no additional profit and Risk

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
Non-required road construction	Stations			\$ -
Non-required road rocking	Cubic Yards			\$ -
Stream clearance	Feet			\$ -
Scaling (high piece count)	MBF		\$ 2.00	\$ -
				\$ -

Total additional "Other Cost" with no additional profit and Risk

**\$ -**



# Operating Periods Restrictions Matrix for

East Dean

341-17-68

Harvesting	January	February	March	April	May	June	July	August	September	October	November	December
			19th 20th		15th 16th			5th 6th	15th 16th	14th 15th		
Felling of Timber Sale Area												
Ground-based Yarding												
Cable Yarding on Unsurfaced Roads												

Project Work	January	February	March	April	May	June	July	August	September	October	November	December
					15th 16th			5th 6th	15th 16th	14th 15th		
Non-project Roads and Landings												



Operations Allowed



Activity Restricted 2 hours before sunset through 2 hours after sunrise



Operations Prohibited - T & E



Operations Prohibited for weather conditions unless otherwise approved in writing by STATE

Operating Matrix represents the seasonal restrictions contained within the body of the timber sale contract. See Section 2455 for further information on seasonal restrictions.

# **TIMBER SALE SUMMARY**

## **East Dean**

**1. Type of Sale:** Final Harvest, Recovery, Sealed Bid

**2. Boundary Lines:** Timber sale boundaries are marked on the ground with white "Timber Sale Boundary" posters, red flagging, and red paint at locations shown on the Exhibit "A".

**3. Revenue Distribution:** 100% BOF; 100% Douglas County

**4. Sale Acreage:** The total sale area is approximately 19 acres. Sale acreage was determined from LIDAR imagery using electronic digitizing with the ArcMap 10.3 GIS program. The cruise expansion acres were stratified into mature and young types and include only the timbered acres and not existing interior roads or landings.

	<b>Posted Acres</b>	<b>Interior Roads/Landings</b>	<b>Non-Stocked Acres</b>	<b>Net Cruise Acres</b>	<b>Net Harvest Acres</b>
<b>Sale Area</b>	20.15	1.05	0	19.10	19.10

Acreage by Cruise Strata

	<b>Total Cruise Expansion Acres</b>
<b>Mature Strata</b>	14.24
<b>Young Strata</b>	4.86
<b>Total</b>	19.10

## **5. Volume by Species**

<b>Species</b>	<b>Total Volume (MBF)</b>	<b>Volume (MBF) per Acre</b>
Douglas-fir	1067	56.2
Hemlock	9	0.5
Red Alder	19	1.0
<b>Total</b>	1095	57.7

## **6. Grade:** (by Percent)

<b>Species</b>	<b>3 Peeler %</b>	<b>Special Mill %</b>	<b>2 Saw (12"+) %</b>	<b>3 Saw % (10" – 11") %</b>	<b>Big 3 Saw %</b>	<b>4 Saw % (8" – 9") %</b>	<b>6" – 7" % Hardwood</b>
Douglas-fir	4 %	15 %	58 %	19 %	4%		
Hemlock			69 %	31 %			
Red Alder				32%		25 %	43 %

**7. Cruise:** The cruise from the recently harvested adjacent Dean Scholfield timber sale was used as the basis for East Dean. Stand composition and stocking are very similar for both these sales. Compared to Dean Scholfield, the timber stands in East Dean are slightly older, both in the mature and young strata, contain larger diameter trees with slightly better grade, and has more visible conk in the mature strata. East Dean was therefore adjusted to reflect its particular stand characteristics and the hidden defect percentage was increased due to conk.

Dean Scholfield was variable plot cruised approximately 2 years ago using a nested Big BAF plot method. The Big BAF method is a combination of count plots and individually measured trees. Plots were spaced 90 feet apart on cruise lines spaced 400 feet apart. The sale area was stratified into a mature type and a young type. A 40 BAF full plot was used to determine tree counts for all species. Trees were sighted in at 16 feet in the mature type and young type. A total of 63 count plots were installed. In the mature strata a 250 BAF full plot at 16 feet was taken on every plot to determine which Douglas-fir trees would be fully measured. A total of 40 mature Douglas-fir trees were measured for DBH, height, grade, and defect. In the young strata a 120 BAF full plot at DBH was taken on every plot to determine which Douglas-fir trees would be fully measured. A total of 11 young Douglas-fir trees were fully measured for DBH, height, grade and defect. Minor species were measured on every third plot with a 40 BAF at 16 feet and were not stratified by age. A total of 10 minor species were fully measured. Volume was calculated by preserving cruised log length to maximize grade. Cruise data was compiled using Superace. Cruising was done by ODF Coos District staff Erb, Haynes, and Hall in April 2014.

A. Summary data:

Diam	Ht. Stand	Form Pt.	Form Factor	CV %	SE %
DBH	6" DIB	Mature DF: 16' Young DF: 16' Minor Species: 16'	Recorded for all cruised trees by estimate and measure	49 %	6.2 %

B. Defect and Breakage Summary:

BY PERCENT

SPECIES	CRUISED	HIDDEN DEFECT	BREAKAGE	TOTAL %
DOUGLAS FIR	5	10*	3	18
HEMLOCK	0	3	2	5
RED ALDER	0	6	6	12

\*Conk detected and suspected to be widely distributed

C. Stand Data:

SPECIES	DBH	TREES/ACRE	BASAL AREA/AC	NET MBF/ACRE
DOUGLAS FIR	24"	114	303	56.2
HEMLOCK	20"	2	3	.5
RED ALDER	13"	15	16	1.0

- D. Green Tree Retention: There are six (6) Green Tree Retention (GTR) areas associated with this sale that are reserved from cutting. These areas consist of a Type N perennial stream buffer, four (4) Type N seasonal stream buffers, and an upland pod of individually marked trees and snags. All GTR other than the upland pod is located outside the posted sale boundaries. The table below summarizes the GTR areas.

GTR Area	D-fir Count	Hemlock Cedar Spruce Count	Alder Maple Myrtle Count
Upland Pod	5	--	--
Type N Perennial Stream Buffers	35	14	--
Seasonal Drainages	131	54	31
TOTALS	171	68	31

- E. Down Wood: The down woody debris requirement of this sale is to leave 240 – 480 cubic feet per acre of hard logs across the sale areas. This will be achieved by retaining hard logs containing a minimum of 20 cubic feet for any individual piece. Existing down wood can be used to achieve this target provided they meet the definition of a hard log (sound wood in decay class 1 or 2 indicated by intact bark and original wood color). Tops from created snags may contribute to this down wood target. Snags will be created by topping and girdling in the mature age strata at a rate of 1 snag for every 2 acres mature age strata harvested, for a total of 8 created snags.

**8. Timber Description:** The total sale area of 19 acres is comprised of two different timber age strata. Approximately 14 acres is a 134 year-old mature second growth type and 5 acres is a 53 year-old third growth type. The mature type comprises the bulk of the sale area which is medium to well stocked with large diameter, moderate quality Douglas-fir sawtimber. The younger type is well stocked with good quality Douglas-fir / hardwood mix and is located alongside interior stream drainages.

**9. Topography:** The timber sale area is primarily south facing with slopes greater than 65 percent. A Type N perennial tributary of Miller Creek flows along the southern boundary. Seasonal Type N streams flow along the western and southern boundaries and also originate within the unit.

**10. Logging Method:** The timber sale area is designed to be logged from STATE improved and STATE constructed landing opportunities along the 2000 road. No portions of the sale area are suitable for ground based systems. Full suspension will be required while yarding over the posted stream buffers and other drainages shown on Exhibit A. Single end suspension will be maintained over the remainder of the sale areas. In unit lift/tail trees may be necessary to achieve the required deflection. Lift tree cost has been included in the appraisal. Impacts to the rock surface of the 2000 road are anticipated during yarding and post-haul repair rock has been costed for in the appraisal. Purchaser is responsible for maintenance of the 2000 haul road through the sale area all the way north to the junction with the paved Dean Creek Road. Maintenance of the 2000 haul road has been costed for in the appraisal. If Purchaser chooses not to utilize STATE improved and constructed landings and instead utilizes different locations, Purchaser will bear the cost. In addition if Purchaser opts for winter and wet weather operations, Purchaser will bear the cost of rocking the landings, dirt spurs, and any necessary pre-haul rock spread on the 2000 road.

**11. Access:** (All miles approximate) To access the timber sale area from State Highway 38 take the Dean Creek Road located approximately 6.5 miles east of Reedsport. Proceed on Dean Creek Road for 2.5 miles to the 2000 road at the end of the pavement. Turn right onto the 2000 road and proceed for 2.3 miles uphill to the timber sale area, just past the 2787 road.

**12. Projects:** none

## CRUISE VOLUME COMPUTATION REPORT

SALE NAME:	East Dean	DATE:	10/25/2016
LEGAL LOCATION:	Portions of Section 16, T22S, R11W WM. Douglas County, OR	BY:	J. Haynes

### FIELD CULL PERCENTAGE

#### Sale Area

Species	Doug-fir	Spruce	Cedar	Hemlock	Red Alder	Bigleaf Maple
Field cull	5%	0	0%	0	0%	0

### NET FIELD VOLUME MBF (Gross vol. less field cull)

SPECIES>>>>>	Doug-fir	Spruce	Cedar	Hemlock	Red Alder	Bigleaf Maple	TOTAL
Sale Area	1226	0	0	9	22	0	1257
		0	0	0	0	0	0
TOTAL	1226	0	0	9	22	0	1257

### HIDDEN DEFECT AND BREAKAGE

Species	Doug-fir	Spruce	Cedar	Hemlock	Red Alder	Bigleaf Maple
Hidden cull	0.10	0	0	0.03	0.06	0
Breakage	0.03	0	0	0.02	0.06	0
TOTAL	0.13	0.00	0.00	0.05	0.12	0.00

### NET VOLUME BY MBF BY AREA

SPECIES>>>>>	Doug-fir	Spruce	Cedar	Hemlock	Red Alder	Bigleaf Maple	TOTALS
Sale Area	1067	0	0	9	19	0	1095
TOTALS	1067	0	0	9	19	0	1095

### NET VOLUME BY GRADE AND MBF

Grade >>>>>>>>>>	2PEE	3PEE	S.M.	2SAW (12"+)	3SAW (10"-11")	Big 3 SAW	4SAW (8"-9")	(6"-7")
Sale Area								
Doug-Fir	0	43	157	622	202	43	0	0
Hemlock	0	0	0	6	3	0	0	0
Red Alder	0	0	0	0	6	0	5	8
Cedar	0	0	0	0	0	0	0	0
Maple	0	0	0	0	0	0	0	0

### GRADE DISTRIBUTION BY PERCENT

Grade >>>>>>>>>>	2PEE	3PEE	S.M.	2SAW (12"+)	3SAW (10"-11")	Big 3 SAW	4SAW (8"-9")	(6"-7")
Sale Area								
Doug-fir	0%	4%	15%	58%	19%	4%	0%	0%
Hemlock	0%	0%	0%	69%	31%	0%	0%	0%
Red Alder	0%	0%	0%	0%	32%	0%	25%	43%
Cedar	0%	0%	0%	0%	0%	0%	0%	0%
Maple	0%	0%	0%	0%	0%	0%	0%	0%





**LOGGING PLAN**  
**Sale No. 341-17-68**  
**East Dean**  
 Portions of Section 16  
 T22S, R11W, W.M.  
 Douglas County, Oregon  
 Regulated Use Area CS-1  
 100% BOF

20 foot contours

Approximately 19 Net  
 Harvest Acres



500 250 0 500  
 Feet  
 1:6,000 1 inch = 500 feet

The information shown on Exhibit "A" map(s) are approximate locations. Exact locations of features represented by map symbols will be determined on site and shall depend upon the conditions that exist on site. Activities shall be conducted based upon features determined on site rather than features shown on maps.

Timber Sale Boundary

Reforestation Area

Cable Yarding

**Roads**

Existing Road  
 STATE Maintained

Existing Road  
 Purchaser Maintained

**Project Points**

Landing

Road Point

Waste Area

**Streams**

Type F Stream

Perennial Type N  
 Stream

Seasonal Type N  
 Stream

Unclassified

Streambuffers /  
 Green Tree Retention Areas

Individual Green Tree Retention