



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Florade  
Sale FG-341-2019-W00540-01

District: Forest Grove

Date: October 03, 2018

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**Cost Summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$1,722,212.68	\$0.00	\$1,722,212.68
		<b>Project Work:</b>	\$0.00
		<b>Advertised Value:</b>	\$1,722,212.68



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**Timber Description**

**Location:** Portions of Sectin 11, T1S, R6W, W.M. Washington County, Oregon

**Stand Stocking: 20%**

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	98
Western Hemlock / Fir	19	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	2,136	1,166	3,302
Western Hemlock / Fir	45	24	69
<b>Total</b>	2,181	1,190	3,371

**Comments:** Pond Values Used: Local Pond Values, July 2018.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:  
 $\$1,046.47/\text{MBF} = \$1,333/\text{MBF} - \$286.53/\text{MBF}$

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost:  
 $\$380.47/\text{MBF} = \$667/\text{MBF} - \$286.53/\text{MBF}$

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

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

HAULING COST ALLOWANCE  
Hauling costs equivalent to  $\$950$  daily truck cost.

Other Costs (with Profit & Risk to be added): None

Other Costs (No Profit & Risk added):

Machine Time to Block/Waterbar Roads, and Skid Trails:

10 hours x  $\$150/\text{hour} = \$1,500$

Machine Time to Pile Landing Slash and Sort Firewood:

20 hours x  $\$150/\text{hour} = \$3,000$

Equipment Cleaning: 3 pieces x  $\$1,000/\text{Piece} = \$3,000$

Slash Disposal: 20 acres x  $\$200/\text{acre} = \$4,000$

Weyerhaeuser Road Maintenance Fee =  $3,371 \text{ MBF} \times 5.94 \text{ miles} \times \$1.92 = \$38,445.58$

TOTAL Other Costs (No Profit & Risk added) =  $\$49,945.58$

ROAD MAINTENANCE

Move-in:  $\$4,000$

General Road Maintenance:  $11.5 \text{ miles} \times \$1,200/\text{mile} = \$13,800$

TOTAL Road Maintenance:  $\$17,800/3,371 \text{ MBF} = \$5.28/\text{MBF}$





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**Logging Costs**

<b>Operating Seasons:</b> 1.00	<b>Profit Risk:</b> 10%
<b>Project Costs:</b> \$0.00	<b>Other Costs (P/R):</b> \$0.00
<b>Slash Disposal:</b> \$0.00	<b>Other Costs:</b> \$49,945.58

**Miles of Road**

**Road Maintenance:** \$5.28

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	4.6
Western Hemlock / Fir	\$0.00	2.0	3.9



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**Logging Costs Breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
<b>Douglas - Fir</b>									
\$133.17	\$5.39	\$1.30	\$105.33	\$0.00	\$24.52	\$0.00	\$2.00	\$14.82	\$286.53
<b>Western Hemlock / Fir</b>									
\$133.17	\$5.39	\$1.30	\$124.23	\$0.00	\$26.41	\$0.00	\$2.00	\$14.82	\$307.32

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$800.00	\$513.47	\$0.00
Western Hemlock / Fir	\$0.00	\$694.78	\$387.46	\$0.00



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District: Forest Grove

Date: October 03, 2018

**Summary**

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	3,302	\$513.47	\$1,695,477.94
Western Hemlock / Fir	69	\$387.46	\$26,734.74

**Gross Timber Sale Value**

**Recovery:** \$1,722,212.68

**Prepared By:** Kenton Burns

**Phone:** 503-359-7477

**CRUISE REPORT**  
**Florade**  
**FG-341-2019-W00540-01**

**1. LOCATION:** Portions of Section 11, T1S, R6W, W.M. Washington County, Oregon.

**2. CRUISE DESIGN:**

Pre-cruise evaluation indicated that the stand's average DBH is approximately 16 inches with a Coefficient of Variation of about 55%. For sales of this size and approximate value, ODF cruise standards require a Sampling Error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. Statistical analysis indicated that 37 variable radius plots utilizing a 40 BAF prism would produce an adequate sample size.

**3. SAMPLING METHOD:**

The Timber Sale Area was cruised in August of 2018. The Timber Sale Area was sampled with 38 variable radius grade plots laid out on a 5 chain x 4 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

**4. CRUISE RESULTS**

250 trees were measured and graded producing a cumulative Sampling Error of 4.7% on the Basal Area and 5.0% on the Board Foot Volume.

**5. TREE MEASUREMENT AND GRADING:**

All sample trees were measured and graded following Columbia River Log Scale grade rules and favored 40 foot segments.

a) **Height Standards:**

Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.

b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.

c) **Form Factors** were measured for each grade tree using a form point of 16 feet.

**6. DATA PROCESSING**

a) **Volumes and Statistics**, Cruise estimates and sampling statistics, were derived from Super Ace 2008 cruise software.

b) **Deductions:** Two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

**7. Cruisers:** The sale was cruised by ODF cruisers Kenton Burns and Mark Savage.

Prepared by:

  
Kenton Burns                      9/18/18  
Date

Reviewed by:

  
Erik Marcy                      9-12-18  
Date



TC PSTNDSUM		Stand Table Summary											Page 1		
T01S R06W S11 Ty00MC 80.00		Project FLORADE											Date: 8/21/2018		
		Acres 80.00											Time: 1:19:09PM		
		Grown Year:													
S Spc T	DBH	Sample Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF	8	4	88	76	12.062	4.21	12.06	5.2	25.0	1.79	63	302	143	50	24
DF	9	8	86	72	19.061	8.42	19.06	8.1	41.2	4.41	155	786	353	124	63
DF	10	8	87	81	15.440	8.42	15.44	11.6	55.0	5.12	180	849	410	144	68
DF	11	5	88	88	7.975	5.26	12.76	11.0	47.5	4.01	141	606	321	113	48
DF	12	12	88	94	16.083	12.63	30.83	11.4	47.8	10.03	352	1,474	802	282	118
DF	13	8	87	90	9.136	8.42	17.13	14.0	54.7	6.82	239	936	545	191	75
DF	14	9	87	96	8.862	9.47	16.74	17.3	68.8	8.23	289	1,152	658	231	92
DF	15	6	87	94	5.147	6.32	9.44	19.7	80.9	5.30	186	763	424	149	61
DF	16	9	87	105	6.785	9.47	13.57	25.1	106.1	9.72	341	1,440	778	273	115
DF	17	6	87	96	4.007	6.32	7.35	28.2	110.9	5.91	207	815	473	166	65
DF	18	7	88	113	4.170	7.37	9.53	29.8	117.5	8.09	284	1,120	647	227	90
DF	19	7	87	112	3.742	7.37	9.09	31.6	122.9	8.18	287	1,117	654	229	89
DF	20	5	86	111	2.412	5.26	5.79	35.0	131.7	5.78	203	762	462	162	61
DF	21	13	87	118	5.689	13.68	16.19	34.7	143.0	16.00	562	2,315	1,280	449	185
DF	22	10	87	125	3.988	10.53	11.56	39.7	172.4	13.07	459	1,994	1,046	367	160
DF	23	10	85	121	3.648	10.53	10.58	42.0	177.2	12.67	444	1,875	1,013	356	150
DF	24	7	84	121	2.345	7.37	7.04	44.1	184.8	8.85	311	1,300	708	248	104
DF	25	10	85	122	3.088	10.53	8.96	50.4	211.4	12.86	451	1,893	1,029	361	151
DF	26	13	85	126	3.711	13.68	11.13	53.5	224.9	16.98	596	2,504	1,359	477	200
DF	27	13	85	126	3.442	13.68	10.32	58.6	252.8	17.25	605	2,610	1,380	484	209
DF	28	11	84	134	2.708	11.58	8.12	64.9	284.5	15.02	527	2,312	1,201	421	185
DF	29	11	85	129	2.524	11.58	7.57	67.6	303.0	14.58	512	2,295	1,167	409	184
DF	30	13	85	131	2.788	13.68	8.15	73.1	335.8	16.98	596	2,736	1,358	476	219
DF	31	12	83	134	2.410	12.63	7.23	79.9	356.4	16.46	578	2,577	1,317	462	206
DF	32	1	88	123	.188	1.05	.57	82.0	380.0	1.32	46	215	106	37	17
DF	33	4	82	122	.709	4.21	1.95	89.4	378.2	4.97	174	737	397	139	59
DF	34	7	83	134	1.169	7.37	3.51	95.6	433.8	9.55	335	1,521	764	268	122
DF	35	8	82	137	1.260	8.42	3.62	97.6	432.6	10.08	354	1,568	806	283	125
DF	36	2	82	137	.298	2.11	.89	97.0	485.0	2.47	87	433	198	69	35
DF	37	2	82	134	.282	2.11	.85	110.3	526.7	2.66	93	445	213	75	36
DF	39	1	86	148	.127	1.05	.38	138.2	740.0	1.50	53	282	120	42	23
DF	40	1	79	137	.121	1.05	.36	133.1	606.7	1.37	48	220	110	39	18
DF	42	1	71	133	.109	1.05	.33	135.3	486.7	1.27	44	160	101	36	13
DF	Totals	244	87	98	155.487	256.84	298.10	32.9	141.3	279.28	9,799	42,114	22,343	7,839	3,369
NF	14	1	85	89	.985	1.05	1.97	15.2	55.0	.72	30	108	57	24	9
NF	18	1	86	117	.596	1.05	1.19	36.1	135.0	1.03	43	161	82	34	13
NF	19	1	86	115	.535	1.05	1.07	38.1	135.0	.98	41	144	78	33	12
NF	20	1	83	104	.482	1.05	.96	39.5	130.0	.91	38	125	73	30	10
NF	23	1	83	118	.365	1.05	1.09	40.0	156.7	1.05	44	171	84	35	14
NF	27	1	82	114	.265	1.05	.79	51.7	186.7	.99	41	148	79	33	12
NF	Totals	6	85	106	3.227	6.32	7.08	33.4	121.2	5.68	237	859	454	189	69
Totals		250	87	98	158.714	263.16	305.18	32.9	140.8	284.96	10,036	42,973	22,797	8,029	3,438



Log Stock Table - MBF

T01S R06W S11 Ty00MC 80.00

Project: FLORADE  
Acres 80.00

Page 1  
Date 8/21/2018  
Time 1:19:07PM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
DF		2M	14		9		9	.3					3					6	
DF		2M	16		6		6	.2										6	
DF		2M	24		4		4	.1					4						
DF		2M	34		11		11	.3										11	
DF		2M	36		31		31	.9							11		8	12	
DF		2M	40		2,140		2,119	62.9					321	445	778	512	63		
DF		3M	20		3		3	.1							3				
DF		3M	22		1		1	.0			1								
DF		3M	26		1		1	.0			1								
DF		3M	28		6		6	.2		6	1								
DF		3M	30		5		5	.2		4	1								
DF		3M	32		54		54	1.6		53	1								
DF		3M	34		34		34	1.0		24	2	8							
DF		3M	36		16		16	.5		4	12								
DF		3M	38		53		53	1.6		27	26								
DF		3M	40		810		806	23.9		196	261	307	7		13			22	
DF		4M	12		14	9.6	13	.4		10	0		3						
DF		4M	14		24		24	.7		20	4								
DF		4M	16		16		16	.5		7	9								
DF		4M	18		12		12	.3		12									
DF		4M	20		23		23	.7		23	1								
DF		4M	22		36		36	1.1		29	6								
DF		4M	24		17		17	.5		16	1								
DF		4M	26		16		16	.5		16									
DF		4M	28		26		26	.8		26									
DF		4M	30		24		24	.7		23	1								
DF		4M	38		3		3	.1		3									
DF		Totals			3,395		3,369	98.0		499	327	316	333	449	805	537	102		
NF		2M	40		46	3.3	45	64.8					26	10	9				
NF		3M	40		22		22	31.7		9	13								
NF		4M	12		0		0	.3		0									
NF		4M	14		1		1	.8		1									
NF		4M	18		2		2	2.3		2									
NF		Totals			70	2.2	69	2.0		11	13		26	10	9				
Total		All Species			3,465		3,438	100.0		510	340	316	359	458	814	537	102		

TC PSTATS		PROJECT STATISTICS							PAGE	1
		PROJECT		FLORADE			DATE		8/21/2018	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
01S	06	11	00A1	00MC	80.00	38	250	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
			PLOTS	TREES	TREES	TREES				
TOTAL			38	250	6.6					
CRUISE			38	250	6.6	12,697	2.0			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	244	155.5	17.4	98	61.6	256.8	42,437	42,114	9,799	9,799
NOB FIR	6	3.2	18.9	106	1.5	6.3	878	859	237	237
<b>TOTAL</b>	<b>250</b>	<b>158.7</b>	<b>17.4</b>	<b>98</b>	<b>63.0</b>	<b>263.2</b>	<b>43,314</b>	<b>42,973</b>	<b>10,036</b>	<b>10,036</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		75.9	4.9	542	569	597				
NOB FIR		50.4	22.4	251	323	396				
<b>TOTAL</b>		<b>76.2</b>	<b>4.8</b>	<b>536</b>	<b>563</b>	<b>590</b>	<b>232</b>	<b>58</b>	<b>26</b>	
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		71.7	4.6	124	130	136				
NOB FIR		48.7	21.7	70	89	108				
<b>TOTAL</b>		<b>71.7</b>	<b>4.5</b>	<b>124</b>	<b>129</b>	<b>135</b>	<b>205</b>	<b>51</b>	<b>23</b>	
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		65.1	10.5	139	155	172				
NOB FIR		379.5	61.5	1	3	5				
<b>TOTAL</b>		<b>64.8</b>	<b>10.5</b>	<b>142</b>	<b>159</b>	<b>175</b>	<b>168</b>	<b>42</b>	<b>19</b>	
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		28.7	4.6	245	257	269				
NOB FIR		376.2	61.0	2	6	10				
<b>TOTAL</b>		<b>29.3</b>	<b>4.7</b>	<b>251</b>	<b>263</b>	<b>276</b>	<b>34</b>	<b>9</b>	<b>4</b>	
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		31.3	5.1	39,977	42,114	44,252				
NOB FIR		379.9	61.6	330	859	1,387				
<b>TOTAL</b>		<b>30.6</b>	<b>5.0</b>	<b>40,840</b>	<b>42,973</b>	<b>45,106</b>	<b>37</b>	<b>9</b>	<b>4</b>	
CL	68.1	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		29.2	4.7	9,335	9,799	10,264				
NOB FIR		374.9	60.8	93	237	380				
<b>TOTAL</b>		<b>28.7</b>	<b>4.7</b>	<b>9,569</b>	<b>10,036</b>	<b>10,503</b>	<b>33</b>	<b>8</b>	<b>4</b>	

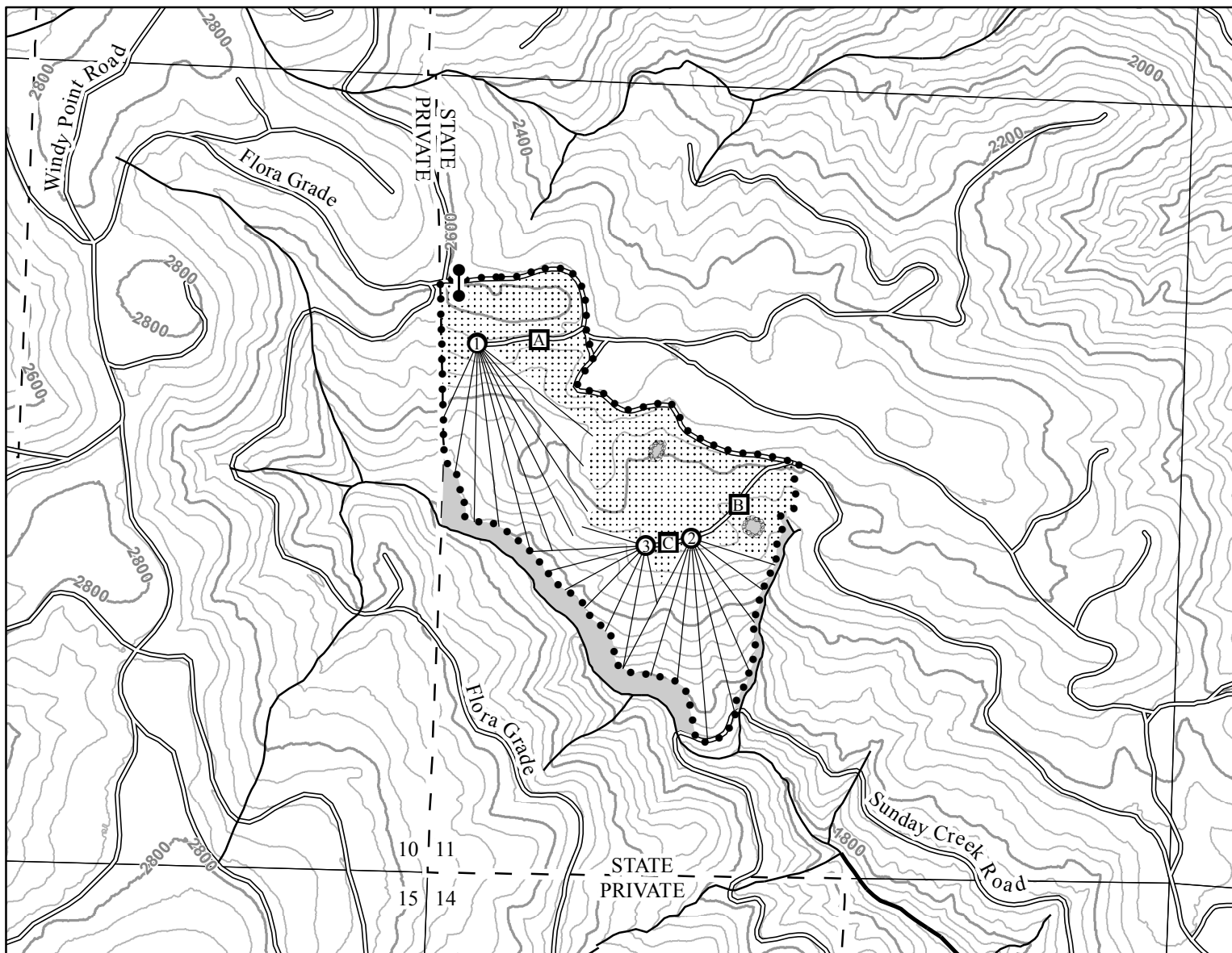
**TIMBER SALE SUMMARY**  
**Florade**  
**Contract No. FG-341-2019-W00540-01**

1. **Location:** Portions of Section 11, T1S, R6W, W.M., Washington County, Oregon.
2. **Type of Sale:** This timber sale is 80 net acres of Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, Washington County.
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise:** The Timber Sale was cruised by ODF Cruisers in August of 2018. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of an over-stocked 67 year old Douglas-fir stand with minor amounts Noble fir and other conifers. The stand has an average of 263 ft<sup>2</sup> of basal area all species, an average Douglas-fir DBH of 17 inches, and an estimated average net Douglas-fir volume of approximately 42 MBF per acre.

7. **Volume Summary**

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	2,136	960	206	3,302
Noble Fir	45	22	2	69
Total	2,181	982	208	3,371

8. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 75%, and variable in aspect. The timber sale is 43% ground-based yarding and 57% cable yarding. The average cable corridor length is 750 feet and the average horizontal skid trail length is approximately 400 feet.
9. **Access:** From Forest Grove, proceed south 15 miles on Highway 47 to Pike Road. Turn right onto Pike Road and continue for 4.5 miles. Pike Road then becomes Turner Creek Road. Continue on Turner Creek Road for 4 miles to Weyerhaeuser gate. Continue through this gate on Turner Creek Road for 4.5 miles. Turn Right onto North Fork Trask River Road and continue for 1.5 miles to a second Weyerhaeuser gate. Continue through this gate on North Fork Trask River Road for 4.3 miles. Turn right onto Sunday Creek Road and continue for 3.5 miles to the south end of the sale area.



### Legend

- Timber Sale Boundary
- ⊘ Stream Buffer Boundary
- ▒ Stream Buffer
- Fish Stream
- Non-Fish Stream
- Surfaced Roads
- Cable Landing
- Tractor Landing
- △ Cable Yarding Area
- ▒ Ground
- - - ODF Ownership Boundary
- Sections
- 40 ft contours
- 200 ft contours
- Gate

## LOGGING PLAN

FOR TIMBER SALE CONTRACT # 341-2019-W00540-01  
 FLORADE  
 PORTIONS OF SECTION 11, T1S, R6W, W.M.  
 WASHINGTON COUNTY, OREGON

Forest Grove District GIS  
 August, 2018

This product is for informational use and may not be  
 suitable for legal, engineering, or surveying purposes.

1:12,000  
 1 inch = 1,000 feet



### APPROXIMATE NET ACRES

TOTAL	TRACTOR	CABLE
80	34	46