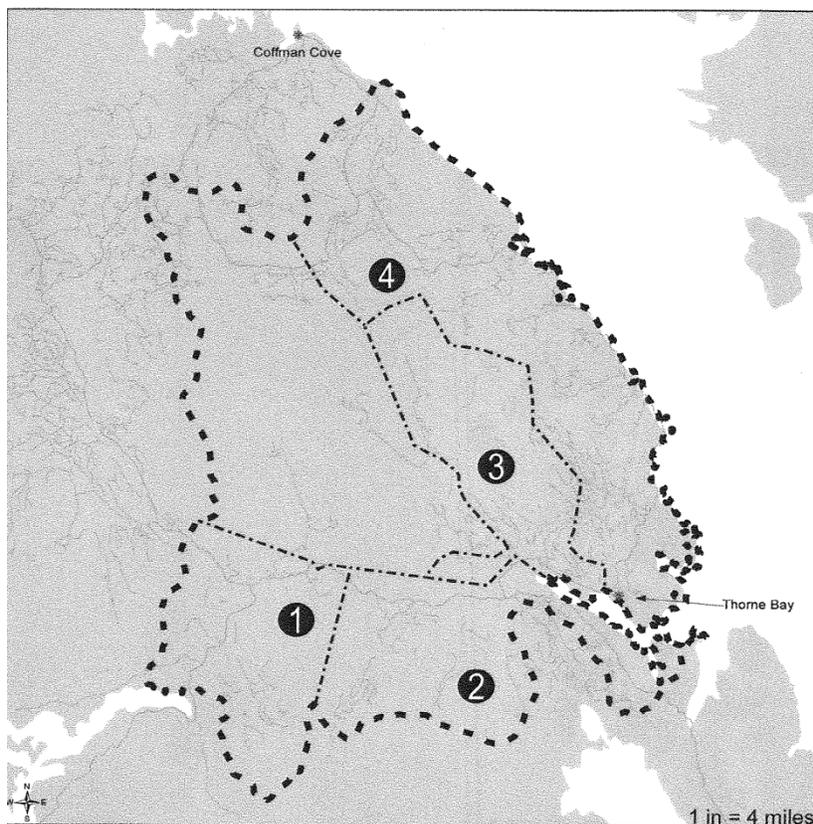


Big Thorne Stewardship Integrated Resource Timber Contract Summary – All Subdivision's



Contract Report of Record
Thorne Bay Ranger District
08/19/2014

Table of Contents

	<u>Page</u>
I. Introduction	3
A. Planning History and NEPA Document	3
II. Description of Timber Contract	3
A. Location	3
B. Size of Contract and Cutting Units	3
C. Timber Specifics	4
1. Timber Cruise	4
2. Volume and Grade	5
3. Timber Characteristics	5
III. Contract Management Aspects	5
A. Operating Period	5
B. Contract Type	5
C. Appraisal Point	5
D. Appraised Rate	6
E. Performance Bond	6
F. Bid Guarantee	6
G. Mobilization	6
H. Fire Liability Calculations	6
IV. Silvicultural Aspects	6
V. Logging Systems	7-11
VI. Harvest Designations	12
VII. Transportation Facilities	12
A. Specified Roads	12
B. Temporary Roads	12-14
C. MAF (Marine Access Facility)	14
D. Right-of-Way	14
VIII. Other Land Management Aspects and Special Conditions	14
IX. Summary of Constructed Costs	15
A. Road Maintenance Deposits	15
B. Surface Rock Replacement Deposits	15
C. Mandatory / Optional Stewardship Items	15
X. Slash Disposal	15
XI. Unit Summaries	16-21
XII. Quality Control Certification	22
Appendix A: Timber Appraisal (See Attachments)	

I. Introduction

A. Planning, History and NEPA Document

The Big Thorne Stewardship Contract (IRTC) was analyzed and cleared by the Big Thorne Timber Sale FEIS. Forrest Cole, Forest Supervisor, signed the Record of Decision on [June 28, 2013](#). The Record of Decision and other relevant NEPA documents are available at the Thorne Bay Ranger District, Thorne Bay, Alaska.

II. Description of Timber Contract

A. Location

The ***Big Thorne Stewardship Contract*** Area is located in Southeast Alaska on Prince of Wales, within the boundaries of the Thorne Bay Ranger District of the Tongass National Forest. The contract area is located near the City of Thorne Bay, Alaska and south of the City of Coffman Cove, Alaska. The USGS quadrangle coverage is C-2, C-3, D-2, and D-3.

The legal description of ***Big Thorne Stewardship Contract*** Area is T68S, R81E, Sections 24, 25 and 36; T68S, R82E, Sections 8, 9, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36; T68S, R83E, Section 31; T69S, R82E, Sections 1, 2, 3, 9, 10, 11, 12, 13, 14, 15, 20, 22, 23, 24, 25, 26 and 36; T69S, R83E, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36; T69S, R84E, Sections 18, 19, 28, 29, 30, 31, 32, 33 and 34; T70S, R82E, Section 1; T70S, R83E, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 33, 34, 35 and 36; T70S, R84E, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, 33, 34 and 35; T71S, R81E, Sections 11, 12, 13, 14, 23, 24, 25, 26, 35 and 36; T71S, R82E, Sections 7, 8, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36; T71S, R83E, Sections 1, 2, 3, 10, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36; T71S, R84E, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36; T71S, R85E, Sections 18 and 31; T72S, R81E, Sections 1, 2, 3, 10, 11, 12, 13, 14 and 24; T72S, R82E, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, 31, 32, 33 and 34; T72S, R83E, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24 and 26; T72S, R84E, Sections 1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 14, 15, 16, 18 and 22; T72S, R85E, Section 6; T70S, R82E, Section 1; T73S, R83E, Section 6; and T73S, R82E, Section 1; Copper River Meridian.

The ***Big Thorne Stewardship Contract*** is divided into four subdivisions. Those subdivisions consist of **Steelhead Subdivision 1**, **Rush Peak Subdivision 2**, **North Thorne Subdivision 3** and **Beach Road Subdivision 4**.

B. Size of Sale and Cutting Units

The ***Big Thorne Stewardship Contract*** area is approximately 164,648 acres. The ***Big Thorne Stewardship Contract*** is divided into four subdivisions as noted above. The combined ***Big Thorne***

Stewardship Contract consists of 174 harvest units totaling approximately 3,812 acres; 1,878 acres are identified for Even Aged Harvest/Clearcutting and identified on the Contract Area Map as CC, 42 acres are identified for Individual Tree Marking/Cut Tree Mark and are identified on the Contract Area Map as CTM and 1,892 acres are identified for Uneven Aged Harvest/Designation and are identified on the Contract Map as DxPRE. Cutting Unit boundaries are marked with vertical stripe orange paint, orange tags, and pink flagging. Sample Trees within the units were marked with white paint and red and white flagging during the cruise process.

This contract has included in the four (4) sub divisions, units identified as Reasonable Assurance of Wind Firmness (RAW) units. Volume from the RAW units has been included in the Estimated Sawlog Volume table. The Individual Tree Marked/Cut Tree Marked Units were identified to allow for Reasonable Assurance of Wind Firmness.

There are Harvest Timing Restrictions in the ***Steelhead Subdivision 1***.

Planned Harvest Units

C. Timber Specifics

1. Timber Cruise

The volume estimates for the clear cut CC units and Uneven Aged Harvest units were derived from a PNT Variable Plot cruise. The Individual Tree Marked/Cut Tree Marked Units were identified to allow for Reassurance of Wind Firmness (RAW). The volume estimates for the Individual Tree Marked/Cut Tree Marked Units in this contract were derived from a Sample Tree Cruise. The cruise was calculated in MBF using FS Cruiser and the Cruise Processor. The Net Sawlog combined sampling error for the ***Big Thorne Stewardship Contract*** is 6.32 % which meets the Forest Service sampling error requirement for scaled sales. The minimum merchantable tree and piece size specification is 9.0 inches DBH, containing a 12-foot long log, and 6-inch top minimum diameter log.

**For Cruise Report Information and Cruise Plot Maps, please contact Stanley McCoy; TMA, at the Thorne Bay Ranger District at (907) 828-3244.*

2. Volumes and Grade Distribution:

Sawlog Grade Distribution in MBF

Species	P/S	1	2	3	5	6
Hemlock	261.94	1,815.83	15,022.21	16,940.04	0.00	0.00
Sitka Spruce	880.71	2,782.89	9,002.83	5,227.51	0.00	0.00
Alaska Cedar	0.00	757.26	2,758.58	2,408.26	0.00	504.17
Western Red Cedar	0.00	0.00	0.00	0.00	11,830.52	0.00
Total	1,142.65	5,355.98	26,783.62	24,575.81	11,830.52	504.17

Variations in mbf is due to rounding; Numbers derived from Cruise Report R003 Log Grade Summary.

3. Sale Characteristics

Big Thorne Stewardship Sale Characteristics
32 ft. Logs/MBF Gross = 4.08
Ave. MBF Gross Removed/Acre = 21.24
% Woods Defect (with utility) = 41.07
% Scaling Defect (without utility) = 13.32
Weighted Average DBH = 20.33

**Numbers derived from Cruise Report R001 Appraisal Summary Report.*

III. Contract Management Aspects

A. Operating Period.

The **Big Thorne Stewardship Contract** is planned for operations to be completed in **ten (10)** normal operating seasons. The normal operating season runs from May 1st through October 31st. Contract termination date will be **September 30, 2024**.

B. Contract Type - This is an Integrated Resource Timber Contract (IRTC), FS-2400-13 Scaled.

C. Appraisal Point

The timber has been appraised for haul to Klawock, Alaska. The weighted average truck haul from the **Big Thorne Stewardship Contract** area to Klawock, Alaska is approximately 39 miles one-way.

D. Appraised Rates.

Big Thorne Stewardship Contract			
Rates and Volumes by Species			
Species	Estimated Volume MBF	Appraised Rate / MBF	Appraised Rate Total
Western Hemlock Sawlogs	34,040.02	\$2.00	\$68,080.04
Western Red Cedar Sawlogs	11,830.02	\$9.32	\$110,255.79
Sitka Spruce Sawlogs	17,893.95	\$292.90	\$5,241,137.96
Alaska Yellow Cedar Sawlogs	6,428.27	\$173.18	\$1,113,247.80
Western Hemlock Utility	21,796.01	\$2.00	\$43,592.02
Sitka Spruce Utility	5,727.78	\$2.00	\$11,455.56
TOTAL	97,716.55		\$6,587,769.16
The value of the timber removed will be used as payment for the service portion of the contract.			

E. Performance Bond – The Performance Bond for the Big Thorne Stewardship Contract is \$250,000.

F. Bid Guarantee. – No Bid Guarantee is required for this contract.

G. Mobilization – Mobilization costs were calculated at \$99,500 for this contract.

H. Knutson Vandenberg Deposits - A KV Plan has been prepared for this sale. KV deposits in the amount of **\$181,806.00** will be collected from a portion of the stumpage value of this sale to monitor post-harvest regeneration.

I. Fire Liability Costs

Fire Liability Costs for The Big Thorne Stewardship Contract were calculated with the following formula:

$(\text{Total Sale MBF Volume} / \text{number of years to log}) / (300 \text{ MBF per logger}) * 12 \text{ hours/shift} * 10 \text{ shifts} * (\text{AD- C firefighter rate } \$17.40) = \text{Total liability cost is } \$68,011.03.$ Total Fire Liability costs are rounded to \$69,000.

IV. Silvicultural Aspects

The harvest unit prescriptions in this project are identified for Even Aged Clearcut (CC), Individual Tree Marking/Cut Tree Mark (CTM), and Uneven Aged Harvest/ Designation by Prescription (DxPre). Refer to contract Special Provision, K-C.3.5.5#, Designation by Prescription for helicopter unit prescriptions.

V. Total Acres by Logging Systems and Estimated Sawlog Volume per Unit

**The information in the following Logging System Table was used for Forest Service appraisal purposes only. Offerors are required to make their own technical proposals on units.*

BIG THORNE STEWARDSHIP CONTRACT

Acres by Logging System

Appraised Logging Systems and Acres

Unit Numbers	Total Acres	Appraised Logging System					Estimated Sawlog Volume Per Unit
		Shovel Clearcut	Cable Clearcut	CTM 25% Removal	Heli 25% Removal	Heli 50% Removal	
1	27	27					576.41
2	14	14					298.88
3	10					10	165.01
4	41	27	14				875.29
5	22	11	11				469.67
6	82	54	28				1,750.59
7	14	14					298.88
8	49	16	33				1,046.08
11	20	17	3				426.97
12	15	15					320.23
13	7		7				149.44
14	68	68					1,451.71
15	70	38	32				1,494.41
16	16	10	6				341.58
17	31	10	21				661.81
18	21					21	346.53
19	23	16	7				491.02
20	34	34					725.85
22	22	22					469.67
24	75					75	1,237.60
25	13		13				277.53
26	29	25	4				619.11
33	7					7	125.45
34	8	8					138.66
35	12		12				207.98
36	38	8	30				658.62
37	18	5	13				311.98
38	36				36		645.16
42	47	30	17				814.6
43	10	7	3				173.32
44	10	10					173.32
46	19		19				329.31
47	18		18				311.98
48	13	13					225.32
50	27	27					467.96

BIG THORNE STEWARDSHIP CONTRACT

Acres by Logging System

Appraised Logging Systems and Acres

Unit Numbers	Total Acres	Appraised Logging System					Estimated Sawlog Volume Per Unit
		Shovel Clearcut	Cable Clearcut	CTM 25% Removal	Heli 25% Removal	Heli 50% Removal	
52	20		20				346.64
54	24		24				415.97
55	16		16				277.31
56	18		18				311.98
58	12		12				207.98
59	22		22				381.3
62	17	17					398.97
63	7	7					164.28
89	7	7					164.28
90	18					18	323.59
91	19					19	341.57
92	4	4					93.88
93	6					6	107.86
94	13					13	233.7
95	18	7	11				422.44
96	4					4	71.91
98	5	2	3				117.34
100	17					17	305.61
104	54					54	970.77
105	26					26	467.41
106	16				16		287.64
107	11				11		258.16
108	34					34	611.23
109	19					19	341.57
110	3					3	53.93
111	20					20	359.55
112	4					4	71.91
114	30					30	539.32
120	19	19					445.91
121	30		30				704.06
123	15	5	10				352.03
124	7	7					164.28
125	3					3	53.93
126	1				1		17.98
127	82	41	41				1,924.43
129	12	12					281.62
130	14	11	3				252.11
131	15	9	6				270.11
132	20	11	9				360.15

BIG THORNE STEWARDSHIP CONTRACT

Acres by Logging System

Unit Numbers	Appraised Logging Systems and Acres						Estimated Sawlog Volume Per Unit
	Total Acres	Appraised Logging System					
		Shovel Clearcut	Cable Clearcut	CTM 25% Removal	Heli 25% Removal	Heli 50% Removal	
133	44	44					792.33
135	17					17	285.32
136	7				7		117.49
138	37	21	16				666.28
139	68	33	35				1,224.52
141	27	14	13				486.21
143	99	87	12				1,782.75
149	54				54		1007.02
153	44	21	23				792.33
154	96					96	1,611.23
158	37				37		621
159	9				9		151.05
160	25	25					450.19
161	123				123		2,064.39
162	14	14					252.11
167	10	3	7				180.08
168	43					43	721.7
169	12					12	201.4
171	19				19		318.89
175	63					63	1,057.37
177	55					55	923.1
178	6		6				100.7
179	5					5	83.92
180	6	2	4				108.05
181	6				6		100.7
183	17				17		285.32
184	14	6	8				252.11
185	18	4	14				324.14
186	6	6					108.05
187	3		3				54.02
189	22				22		369.24
190	17		17				306.13
191	12	9	3				216.09
192	19	15	4				342.14
193	6		6				108.05
194	47	28	19				846.36
195	26	13	13				468.2
197	13					13	218.19
200	14		14				252.11

BIG THORNE STEWARDSHIP CONTRACT

Acres by Logging System

Unit Numbers	Appraised Logging Systems and Acres						Estimated Sawlog Volume Per Unit
	Total Acres	Appraised Logging System					
		Shovel Clearcut	Cable Clearcut	CTM 25% Removal	Heli 25% Removal	Heli 50% Removal	
201	113					113	1,896.55
202	47					47	788.83
203	60					60	1007.02
204	9	9					162.07
206	2					2	33.57
207	13		13				234.1
360	25	16	9				533.72
361	19					19	313.53
363	103					103	1,851.65
365	15	15					352.03
368	17	17					398.97
369	15	10	5				352.03
395	58					58	1042.68
401	5	5					106.74
402	7					7	115.51
403	8	8					170.79
404	3	3					64.05
405	3					3	49.5
407	32					32	528.04
447	5	5					117.34
740	49				49		822.4
760	13					13	214.52
795	14					14	234.97
802	2			2			21.78
804	3			3			26.2
805	5			5			91.84
806	5			5			58.04
808	6			6			55.05
816	4			4			34.34
817	3			3			20.84
820	1			1			15.58
823	1			1			8.07
830	2			2			13.89
834	2			2			25.97
850	1			1			8.34

BIG THORNE STEWARDSHIP CONTRACT

Acres by Logging System

Appraised Logging Systems and Acres

Unit Numbers	Total Acres	Appraised Logging System					Estimated Sawlog Volume Per Unit
		Shovel Clearcut	Cable Clearcut	CTM 25% Removal	Heli 25% Removal	Heli 50% Removal	
891	1			1			7.76
892	1			1			5.98
894	3			3			17.13
895	2			2			21.16
900	6					6	100.7
901	10					10	165.01
903	10					10	165.01
907	4				4		66.01
915	27				27		445.54
921	24					24	431.45
930	8					8	134.27
936	17					17	304.66
937	34					34	609.32
941	30				30		419.59
944	24					24	430.11
946	8					8	143.37
947	18					18	322.58
959	13					13	232.98
960	26					26	436.38
962	5					5	83.92
968	5					5	89.89
978	12					12	201.4
984	12				12		201.4
989	5					5	89.89
994	23				23		386.02
995	6					6	107.86
Estimated Total MBF Saw log Volume							70,192.86

BIG THORNE STEWARDSHIP CONTRACT		
Volume by Logging System		
Logging System	Estimated Saw log Volume	% by Volume
Shovel	23,066	33%
Cable	16,048	23%
Helicopter	31,079	44%
Total	70,193	100%

Numbers rounded

**The above listed logging systems were used by the Forest Service in calculating the stump-to-truck cost in the appraisal. These logging systems are not required by the contract. However, the contractor is to include logging systems and yarding methods that will meet the suspension requirements as part of their technical proposal.*

VI. Harvest Designations:

Cutting Unit boundaries are marked with vertical orange stripes, orange tags and pink flagging. Sample Trees within the units are marked with white paint and red and white flagging during the cruise process.

Units that are identified as Individual Tree Marking/Cut Tree Marking (CTM), as designated on the Contract Area Map, are marked with blue paint bands and stump marks and designated for harvest.

Units that are identified for Uneven Aged Harvest/Designation by Prescription (DxPRE), as designated on the Contract Area Map, are required to meet the designation by prescription requirements, DxPRE that are designated for harvest.

The Forest Service will provide marking guides to the contractor that include implementation directions and tables showing the prescribed Basal Area (BA) retention requirements by species for each cutting unit. The Forest Service will also provide a table that converts diameter at breast height (DBH) to BA.

Units that are identified as Even Aged Harvest/ Clearcut (CC) are designated on the Contract Area Map.

VII. Transportation Facilities

A. Specified Roads

There are 4 specified roads of new construction, of 3.07 miles of road. The construction cost for the new specified roads is \$609,666.38; new constructed road costs are included in the appraisal. Additionally, there are 67.61 miles of reconstructed specified roads in the contract. The cost for reconstruction of the roads is \$686,254.15 which is included in the appraisal. Total miles of new and reconstructed road for this contract are 70.68. Engineering costs for new and reconstructed roads is \$1,295,920.53. Refer to the Engineering Road package for road specifications.

Subdivision Specified Road Costs

- Beach Road \$707,488.95
- North Thorne \$158,985.08
- Rush Peak \$358,731.43
- Steelhead \$ 70,715.07

Pre and Post Haul Maintenance are required. Refer to Contract Special Provision, K-F.3.1#, Road Maintenance Requirements for information on specific roads.

B. Temporary Roads

In the *Big Thorne Stewardship Contract* construction of approximately 13.73 miles of temporary road is included by the Forest Service in the appraisal. Additionally, approximately 1.66 miles of temporary road reconditioning cost is included in the appraisal. Landings of approximately 500 square feet have been appraised for shovel and small yarder landings, and landings of approximately 1,500 square feet have been appraised for large yarder landings. Cost included in the appraisal is \$2,807,023.53.

**Construction of these roads is not required by the contract. However, the contractor is to include any proposed temporary road construction that will meet the end results as part of their technical proposal.*

TEMPORARY ROAD ESTIMATES USED FOR APPRAISAL PURPOSES ONLY

BIG THORNE STEWARDSHIP CONTRACT		
Unit Number	Estimated Length of Proposed Temporary Road	Estimated Length of Reconditioned Road
1	0.15	0
2	0.08	0
4	0.5	0
5	0.5	0
6	0.39	0
8	0.11	0
11	0.24	0
14	0	0.48
15	0.27	0
16	0.12	0
19	0.13	0
20	0.33	0
26	0.02	0
34	0.11	0
36	0.12	0
37	0.22	0
42	0.41	0
44	0.07	0
46	0.13	0
47	0.4	0
50	0.43	0.43
52	0.04	0
54	0.03	0
55	0.04	0

56	0.14	0.15
62	0.24	0
63	0.14	0
95	0.23	0
120	0.11	0
121	0.22	0
123	0.32	0
124	0.07	0
127	1.16	0.21
129	0.23	0
131	0.21	0
132	0.26	0
133	0.34	0
138	0.48	0
139	0.47	0
141	0.17	0
143	0.47	0
153	0.26	0
162	0.03	0
178	0.07	0.23
184	0.36	0
185	0.46	0
187	0.18	0
190	0.29	0.1
191	0.14	0
195	0.53	0
207	0.27	0.03
360	0.4	0
365	0.08	0
368	0.11	0
369	0.45	0
941	0	0.03
Totals	13.73	1.66

C. Marine Access Facility (MAF) – N/A

D. Right-of-Way- N/A

VIII. Other Land Management Aspects and Special Considerations – There are approximately 14,000 acres of State and private lands within the project area. Refer to the Contract Area Map for approximate locations.

IX. Summary of Constructed Costs

A. Deferred Road Maintenance Deposit: Special Provision K-F.3.2#, Road Maintenance Deposit Schedule is included in the contract. Refer to this provision for deposit cost information and Special Provision K-F.3.1#, Road Maintenance Requirements Table, for information on the specific road(s) requiring deposits, which will be identified by "D" (Deposits to Forest Service). There will be a deposit for Surface Rock Replacement.

B. Surface Rock Replacement Deposits: The deposit for Surface Rock Replacement is \$1.75 per MBF Sawlog.

C. Stewardship Items

Item #	Mandatory Stewardship Items - Description
M1	Balls Lake Trail – Renovation of the 2.3 mile Balls Lake Trail; Trail connects to Eagle Nest’s Campground. Project will place step and run boardwalk in the remaining eroding sections of trail (4,250 feet).
M2	Boy Scout Trail – Renovation of a portion of the Boy Scout Lake area, All Terrain Vehicle (ATV) trail.
M3- M49	Wildlife Habitat Improvement – Pre-commercial thinning of 16’ X16’ Spacing.
M92	Luck Creek Phase I - Wood collection, wood hauling, helicopter transport, road clearing, and construction of in stream structures on the upper 0.2 miles of the East Fork, all sites on the West and Middle Forks, floodplain only sites on the Main stem, and wood additions on six small alluvial fan tributaries.
M93	Engineering - Culvert removal, culvert and bridge installation, and finish grading.

Item #	Optional Stewardship Items - Description
O50- O91	Wildlife Habitat Improvement – Pre-commercial thinning of 14’ X14’ Spacing.
O94	Luck Creek Phase II - Wood collection, helicopter transport, and construction of in stream structures on the lower 0.3 miles of the East Fork and all in stream sites on the Main stem.

X. Slash Disposal

All logging debris shall be removed from road surfaces, cut banks, area ditches, and out of protected streams as directed by the Forest Service.

X1. UNIT SUMMARIES – The information in the following unit summaries was used for Forest Service appraisal purposes **only**. Offerors are required to make their own technical proposals on units.

BIG THORNE STEWARDSHIP CONTRACT								
Unit Number	Appraised Logging Systems and Acres						Appraised Access	
	Total Acres	Appraised Logging System Acres					Access Road Number	Temporary Road Length
		Shovel Clearcut	Cable Clearcut	RAW 25% Removal	Helicopter 25% Removal	Helicopter 50% Removal		
1	27	27					FS Road 2030000	.15 Miles
2	14	14					State Highway 929	.08 Miles
3	10					10		
4	41	27	14				FS Road 2030000	.50 Miles
5	22	11	11				FS Road 2030111 off 203110	.50 Miles
6	82	54	28				FS Road 2030100	.40 Miles
7	14	14					FS Road 2030120	
8	49	16	33				FS Road 2030100 and FS Road 2030120	.11 Miles
11	20	17	3				FS Road 2030000 and FS Road 2030200	.25 Miles
12	15	15					FS Road 2030000 and FS Road 2030205	
13	7		7				FS Road 2030000	
14	68	68					FS Road 2030120	
15	70	38	32				FS Road 2030120	.27 Miles
16	16	10	6				FS Road 2030100	.12 Miles
17	31	10	21				FS Road 2030120	
18	21					21		
19	23	16	7				FS Road 2030121	
20	34	34					FS Road 2030121	.33 Miles
22	22	22					FS Road 2000300	
24	75					75		
25	13		13				FS Road 2000400	
26	29	25	4				FS Road 2000400	
33	7					7		
34	8	8						.11 Miles
35	12		12				FS Road 3012000 and FS Road 3012200	
36	38	8	30				FS Road 3012000 and FS	.12 Miles

							Road 3012100	
37	18	5	13				FS Road 3012000 and FS Road 3012140	.22 Miles
38	36					36	FS Road 3012000 and FS Road 3012180	
42	47	30	17					.41 Miles
43	10	7	3				FS Road 3013000 and FS Road 3013100	
44	10	10					FS Road 3013000 and FS Road 3013200	.07 Miles
46	19		19				FS Road 3013000	.13 Miles
47	18		18				FS Road 3013000	.40 Miles
48	13	13					FS Road 3013000	
50	27	27					FS Road 3013000, FS Road 3013150, and FS Road 3013155	.43 Miles
52	24	1	23				FS Road 3013000, FS Road 3013150, and FS Road 3013155	.04 Miles
54	24		24				FS Road 3013000 and FS Road 3013150	.03 Miles
55	16		16				FS Road 3013000 and FS Road 3013150	.04 Miles
56	18		18				FS Road 3013000 and FS Road 3013150	.14 Miles
58	12		12				FS Road 3013000 and FS Road 3013150	
59	22		22				FS Road 3013000 and FS Road 3013150	
62	17	17					FS Road 3015000 and FS Road 3015050	.24 Miles
63	7	7					FS Road 3015000 and FS Road 3015050	.14 Miles
89	7	7					FS Road 3015000 and FS Road 3016010	
90	18					18		
91	19					19		
92	4	4					FS Road 3015000 and FS Road 3016010	
93	6					6		
94	13					13		
95	18	7	11				FS Road 3015000 and FS Road 3016010	.23 Miles
96	4					4		
98	5	2	3				FS Road 3015000 and FS Road 3016010	

100	17					17		
104	54					54		
105	26					26		
106	16					16		
107	11					11		
108	34					34		
109	19					19		
110	3					3		
111	20					20		
112	4					4		
114	30					30		
120	19	19					FS Road 3017000 and FS Road 3017100	.11 Miles
121	30		30				FS Road 3015000, FS Road 3015600, and FS Road 3015635	.22 Miles
123	15	5	10				FS Road 3000120 and FS Road 3000124	.32 Miles
124	7	7					FS Road 3000120	.07 Miles
125	3					3		
126	1					1		
127	82	41	41				FS Road 3000120 and FS Road 3000127	1.16 Miles
129	12	12					FS Road 3000120	.23 Miles
130	14	11	3				FS Road 3000120	
131	15	9	6				FS Road 3000120	0.21 Miles
132	23	14	9				FS Road 3018130	0.26 Miles
133	44	44					FS Road 3018122	0.34 Miles
135	17					17		
136	7					7		
138	37	21	16				FS Road 3000170	0.48 Miles
139	68	33	35				FS Road 3018550	0.47 Miles
141	27	14	13				FS Road 3000190 and FS Road 3000195	0.17 Miles
143	99	87	12				FS Road 3000195	0.47 Miles
149	54					54		
153	44	21	23				FS Road 3000270	0.26 Miles
154	96					96		
158	37					37		
159	9					9		
160	25	25					FS Road 3000300	
161	123					123		
162	14	14					FS Road 3023500	0.03 Miles

167	10	3	7				FS Road 3023535	
168	43					43		
169	12					12		
171	19					19		
175	63					63		
177	55					55		
178	6		6				FS Road 3000000_39.71L	0.07 Miles
179	5					5		
180	6	2	4				FS Road 3000000	
181	6					6		
183	17					17		
184	14	6	8				FS Road 3026100_0.08L	0.36 Miles
185	18	4	14				FS Road 3025500	0.46 Miles
186	6	6					FS Road 3025500	
187	3		3				FS Road 3026000	0.18 Miles
189	22					22		
190	17		17				FS Road 3030110	0.29 Miles
191	12	9	3				FS Road 3030000	0.14 Miles
192	19	15	4				FS Road 3030000	
193	6		6				FS Road 3030000	
194	47	28	19				FS Road 3030200	
195	26	13	13				FS Road 3030200	0.53 Miles
197	13					13		
200	14		14				FS Road 3000329	
201	113					113		
202	47					47		
203	60					60		
204	9	9					FS Road 3000000	
206	2					2		
207	13		13				FS Road 3030100_3.47L	0.27 Miles
360	25	16	9				FS Road 2000400	.40 Miles
361	19					19		
363	103					103		
365	15	15					FS Road 3017000 and FS Road 3017100	.08 Miles
368	17	17					FS Road 3017000 and FS Road 3017200	.11 Miles
369	15	10	5				FS Road 3017000 and FS Road 3017200	.45 Miles
395	58					58		
401	5	5					FS Road 2000440	
402	7					7		
403	8	8					FS Road 2000440	

404	3	3					FS Road 2000440	
405	3					3		
407	32					32		
447	5	5					FS Road 3015000 and FS Road 3015600	
740	49					49		
760	13					13		
795	14					14		
802	2			2			State Highway 929	.08 Miles
804	3			3			FS Road 2030000	.50 Miles
805	5			5			FS Road 2030111 off 203110	.50 Miles
806	5			5			FS Road 2030100	.40 Miles
808	6			6			FS Road 2030100 and FS Road 2030120	.11 Miles
816	4			4			FS Road 2030100	.12 Miles
817	3			3			FS Road 2030120	
820	1			1			FS Road 2030121	.33 Miles
823	1			1			FS Road 3000120 and FS Road 3000124	.32 Miles
830	2			2			FS Road 3000120	
834	2			2			FS Road 3013000 and FS Road 3013150	.11 Miles
850	1			1			FS Road 3012000 and FS Road 3012200	.43 Miles
891	1			1			FS Road 3030000	0.14 Miles
892	1			1			FS Road 3030000	
894	3			3			FS Road 3030200	
895	2			2			FS Road 3015000 and FS Road 3016010	.23 Miles
900	6					6		
901	10					10		
903	10					10		
907	4					4		
915	27				27			
921	24					24		
930	8					8		
936	17					17	FS Road 3013000, FS Road 3013150, and FS Road 3013155	
937	34					34		
941	30					30		
944	24				24			
946	8					8		

947	18					18		
959	13					13		
960	26					26		
962	5					5		
968	5					5		
978	12					12		
984	12				12			
989	5					5		
994	23				23			
995	6					6		

IX. Quality control Certification

The District Ranger certifies that contract preparation and layout meet the specifications of the environmental document authorizing this project, and that:

- a. Silvicultural treatments, prescribed by a qualified silviculturist, are appropriate to the management objectives of the contract.
- b. Designated trees and harvest units represent proper silvicultural prescriptions.
- c. Considering quality land management objectives, the most economical logging systems were chosen.
- d. Resources other than timber were considered in the layout, and the contract. Adverse effects were avoided by careful layout.
- e. Fire protection, prescriptions, erosion control, and other phases of environmental protection were included in the field layout, and in the contract.
- f. The timber cruise for this contract meets all regional standards and guidelines.

Prepared by: Nick Reynolds
Forester

Date: 08/11/2014

Updated by: /s/Nancy Soriano
Timber Resource Specialist

Date: 08/21/2014

Reviewed by: Craig Anderson
Timber Sale Preparation Program Manager

Date: 08/21/2014

Approved by: Charles Streuli
Ecology, Fire and Forest
Management Staff Officer

Date: 08/21/2014