

TIMBER SALE REPORT AND APPRAISAL SUMMARY

NO NAME BEETLE SALVAGE TIMBER SALE

Prepared by: Vin DuPont Date: 7/19/2016
Vincent DuPont, Pre-Sale Forester
Conejos Peak Ranger District

I certify that this sale meets requirements of the Secretary of Agriculture's Regulation 36 CFR 223.30.

Approved by: Andrea M. Jones Date: 7/18/2016
Andrea Jones, District Ranger
Conejos Peak Ranger District

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I. SUMMARY OF RECOMMENDATIONS

Advertised as Scaled Sale

DEAD AND LIVE SAWTIMBER	Engelmann Spruce	4,215 CCF
	Total	4,215 CCF
REQUIRED DEPOSITS		
	Road Maintenance	\$0.00/CCF
	Surface Rock Replacement	\$0.81/CCF
	Slash Deposit	\$1.01/CCF
	Reconstruction Eng.	\$0.00
TOTAL SALE VALUE	\$5.00	\$21,075.00
ADVERTISED VALUE	By Species and Product	
LIVE SAWTIMBER	ES, Live and Dead	\$5.00/CCF
APPRAISAL BULLETIN NO		
		BU230416
Support Information		
	Normal Operating Season	6/15 – 10/31
	Fire Liability	\$2000.00
	Termination Date	12/31/2019
	Method of Bidding	Sealed Bid
	Escalated	Yes
	Bid Guarantee	\$2,200.00
	Minimum Performance Bond	\$5,500.00

This sale complies with Section 6(g), 3(e) - (f) of the National Forest Management Act of 1976, (36 CFR 233.3), the (revised) Rio Grande National Forest Land and Resource Plan (approved 11/7/96), and the Cumbres Vegetation Management Project Record of Decision.

II. DESCRIPTION OF SALE AREA

A. Location

This sale is found on the Conejos Peak Ranger District of the Rio Grande National Forest. The legal description is: all or portions of T33N, R5E, Section 13 & T33N, R6E, Sections 18 & 19, NMPM and all in Conejos County, Colorado. Access from Antonito, Colorado is: West on Highway 17 for about 27 miles to its junction with NFSR 108. Take NFSR 108 for approximately 1.25 miles to the start of the sale.

B. Acreage and Volume Data

This sale is comprised of 2 cutting unit totaling approximately 182.1 net acres, on National Forest land. This sale was cruised using Point Count Measure Tree (PCM) sampling method. The estimated sale value was \$20,759, so the cruise must achieve a sampling error of + or - 30%. The actual cruise error was 20.96% for all volume. The final sale volume is 4,215 CCF.

Included timber to be harvested: Live and Dead Engelmann spruce.

C. Land Status

National Forest

D. Basis for Selecting the Area

This area was identified for harvest to salvage beetle-infested trees as a result of favorable spruce beetle conditions. The area lies within Forest Products Management area prescription 4.21 (Scenic Byways or Railroads) of the revised Rio Grande National Forest Land and Resource Management Plan. For further information, please refer to the Spruce Hole CE Decision Memo.

E. Relationship to Other Uses

See the Spruce Hole CE Decision Memo.

F. Mitigation Measures

Design criteria identified in the Spruce Hole CE Decision Memo and specialist reports specific for this sale are highlighted here.

Wildlife/TES

- Landings and skid trails will require Forest Service approval before felling operations begin. *See Contract Provisions C6.42# SKIDDING AND YARDING (SPECIAL OBJECTIVES) AND B6.422 LANDINGS AND SKID TRAILS.*
 - Place landings in existing openings away from areas of dense horizontal cover (DHC);

- Place skid trails away from areas of DHC where feasible and at least 100 feet apart.
- Minimize damage to live regeneration (<4"dbh) to the greatest extent possible. *This will be accomplished during sale administration.*
- Snags: Retain one clump of 10-20 snags >10"dbh every 2-3 acres to provide habitat for small mammals and cavity-nesting birds and future CWD. Snags will be marked with paint or designated through contract provisions. Snag clumps are to be selected based on the following criteria:
 - Wildlife use – Snag clumps may be centered surrounding trees with cavities, large cracks, broken tops, and defoliating bark as these provide the greatest use for cavity nesting and roosting species.
 - Biological legacies – These features take a long time to develop and should be retained whenever possible. For the purposes of this analysis these are to be defined as:
 - Trees/snags with old growth character or defects
 - Trees/snags generally larger than the stand average
 - Snags that occurred prior to the spruce beetle infestation
 - Live trees – snag clumps may be centered surrounding live trees to minimize potential for loss due to windthrow and provide additional cover.
 - If possible, a Wildlife Biologist will assist with marking. A sample mark will be conducted with operators present if the project will be implemented D by D; units will be reviewed to determine if objectives are met before progressing to the next.

This was completed during sale layout and leave tree marking.

- Salvage Engelmann spruce only, except for trees that otherwise need to be removed for operational/safety purposes. *Engelmann spruce is the only species designated for removal. See contract provision A2 VOLUME ESTIMATE AND UTILIZATION STANDARDS.*
- District wildlife personnel will be notified of any potential denning, burrowing, or nesting activities identified during operations. Upon discovery of a new raptor nest location or other TES wildlife species nesting/breeding (or other critical) site, suspend any active logging or other contract operations underway in the immediate vicinity until a wildlife biologist assesses the situation to determine and recommend to District Ranger appropriate action(s) to take for protection of habitat or individual animals. Examples of appropriate actions include seasonal logging restrictions, nest buffers, and habitat protection measures. *This will be applied if necessary during sale administration.*
- As feasible, trees with important wildlife cavities, even if unmarked, are not to be felled. If any of these trees pose a safety hazard, effort must be made to notify the District Biologist and/or District Ranger before removal is considered. *This will be handled during sale administration. See Contract provision C6.411# FELLING AND BUCKING (SPECIAL OBJECTIVES).*
- Protect existing aspen clones from any incidental damage to the greatest extent practicable. See Contract Provision B6.32 PROTECTION OF RESIDUAL TREES.

Range Resources

- Forest regeneration will be protected from livestock grazing by using adaptive strategies such as reducing livestock concentrations by avoiding salt/supplement placement in regenerating areas, avoid pushing large numbers of livestock into the area, use herders if needed to disperse/move large numbers, and maintaining pasture rotation to avoid season-long grazing. *This would be accomplished following harvesting activity.*
- If current natural barriers are made ineffective by skid trails or tree removal, new fence locations would be identified on a sale area basis. Fences would be constructed as necessary to ensure allotment rotations are in compliance with individual Allotment Management Plans and Annual Operating Instructions. *This would be accomplished following harvest activity as necessary.*
- Rangeland management improvements, including fences & developed springs, will be protected from damage to the extent possible and will be repaired by the purchaser if damaged by them or their operators. *There are no rangeland improvements that need protecting within the sale area.*

Noxious Weeds

- The timber purchaser will be required to clean all logging and construction equipment that operates off roads prior to entry to the project area. *See Contract Provision B6.35 EQUIPMENT CLEANING.*
- Haul routes and highly disturbed areas, such as landings, will be treated for noxious weed infestations as needed for five years following harvest. *Included in SAIP.*
- Road fill and road base material brought in off site will come from a borrow source free of State Listed Noxious Weeds. The Forest Service will inspect and approve the borrow source location prior to materials being hauled to the project area. *No off-site road fill or road base material is required in this contract.*

Timber/Silviculture Resources

- In all salvage stands that exceed 50 percent removal of overstory spruce, reforestation surveys will be conducted, and if the survey indicates that Forest Plan stocking Standards will not be met, these stands will be artificially reforested with Engelmann spruce seedlings to meet or exceed Forest Plan Standards. *This will be completed following harvest activity. Included in SAIP.*
- To protect soil, leave trees, and regeneration, tractor skid roads will be located and approved in advance of falling. Logs will also be skidded with the leading end free of the ground to reduce ground disturbance. *See Contract Provision C6.42# SKIDDING AND YARDING (SPECIAL OBJECTIVES).*

Aquatic Resources

- No harvest equipment or skid trails will be allowed within the aquatic management zone (AMZ - 100 horizontal feet from the top of each stream bank) of all intermittent or perennial stream channels. Skid trail crossings within the AMZ of all streams (including ephemeral) will be minimized and must be approved by the sale administrator. *One ephemeral stream was located in unit 3A. See SAM and Contract Provision C6.50# STREAMSIDE MANAGEMENT ZONES.*

- Within the AMZ of ephemeral stream channels, harvest equipment can operate to remove trees. However, no skid trails are allowed in the AMZ and mechanical ground disturbance in or immediately adjacent to channels (within 25 ft) must be avoided. *See Contract Provision C6.50# STREAMSIDE MANAGEMENT ZONES.*
- A no cut buffer of 100 feet will be maintained from each channels edge of perennial and intermittent streams. *No perennial or intermittent streams were identified within the cutting units.*
 - Within the AMZ of ephemeral channels, trees within the defined channel/swale area may not be harvested. *See Contract Provision C6.50# STREAMSIDE MANAGEMENT ZONES.*
- A 100-ft no-cut buffer will be maintained from the edge of wetlands identified in the analysis area. Any new disturbance within 300 feet of these features will avoid impact to shallow groundwater flow. *No wetlands were identified within or adjacent to the cutting units.*

Soil Resources

- Forest Plan Standards for soil productivity (15% allowable soil impact to activity area), will be achieved through careful design of skid trails, operating during dry seasons or frozen soil conditions, and use of existing skid trails where practical. *See Contract Provisions C6.411# FELLING AND BUCKING (SPECIAL OBJECTIVES) AND C6.42# SKIDDING AND YARDING (SPECIAL OBJECTIVES).*
- If whole tree yarding is used, limbs and/or tops shall be returned to the unit if 15% or more of the unit has exposed mineral soil; this material shall be distributed in areas primarily comprised of bare mineral soils. A minimum of 10 tons/acre of coarse woody debris will be retained within each unit, unless otherwise approved by the District Ranger. *See Silvicultural Prescription and Contract Provision C6.7# SLASH DISPOSAL.*
- Skid trail locations will be agreed to by the Forest Service in advance of construction; spacing will be approximately 100 feet apart, allowing for topographic variation and skid trail convergence; skid trails will be water-barred at least every 100 feet on gradients greater than 20 percent, otherwise where needed depending on slope and ground conditions as per BMPs; slash will be placed on main skid trails as needed to control erosion. *See Contract Provision C6.42# SKIDDING AND YARDING (SPECIAL OBJECTIVES).*
- Reuse existing skid trails and landings whenever practical. *See Contract Provision C6.42# SKIDDING AND YARDING (SPECIAL OBJECTIVES); this objective is met during sale administration.*
- Skidding equipment will generally be restricted to slopes <35%. *See Contract Provision C6.42# SKIDDING AND YARDING (SPECIAL OBJECTIVES).*

Recreation Resources

- Notify the public of logging activity through media such as local newspapers and the Forest website. *Forest Responsibility.*

- No harvest activity (including log hauling) will occur Thanksgiving weekend (Thursday through Sunday) and from December 2 through April 1, unless approved by the District Ranger. *See Contract Provision C6.312# SALE OPERATIONS RESTRICTIONS.*
- Post caution signs at key intersections along the haul route to alert the public to logging activities. *See Contract Provision B6.33 SAFETY,*
- Use temporary road closures at the intersection of NFSR 108 and SH 17 after which time weather conditions necessitate snowplowing, to prevent other-user ingress into the sale area during the winter season. Barricades may be removed from NFSR 108 after harvest activity has ceased and the road is closed by snowfall. *Forest Responsibility. See also Contract Provision C6.312# SALE OPERATIONS RESTRICTIONS.*
- Avoid/Minimize damage to any designated and/or FS owned infrastructure from tree felling operations and machinery use. *See Contract Provision B6.22 PROTECTION OF IMPROVEMENTS.*
- Inform the recreation special-use administrator six months prior to the planned offer date, so that the yurt permit holder can be notified of the impending sale activity. *Forest Responsibility.*
- Cull logs or boulders will be placed where feasible to restrict off-road travel. *Forest responsibility.*

Scenic Resources

- Landings will be located as far away from the yurt as feasible in order to limit visual impacts. *Not applicable to this contract.*
- Landing piles will be burned as soon as safe and practical to reduce visual impacts. *Forest Responsibility. See also Contract Provision C6.7# SLASH TREATMENT.*
- All stumps within 100 feet of the yurt will be cut to a height of 8 inches or less. *Not applicable to this contract.*

Heritage Resources

- All persons in the area who are associated with this project shall be informed that any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361). Strict adherence to the confidentiality of information concerning the nature and location of archeological resources would be required of the proponent and all of their subcontractors (Archaeological Resource Protection Act, 16 U.S.C. 470hh). *See Contract Provision B6.24 PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, CULTURAL RESOURCES, AND CAVE RESOURCES.*
- If subsurface cultural values are uncovered during operations, all work in the vicinity of the resource will cease and the Authorized Officer with the Rio Grande National Forest (RGNF) notified immediately. The operator shall take any additional measures requested by the RGNF to protect discoveries until they can be adequately evaluated by the permitted archaeologist. Within

48 hours of the discovery, the SHPO and consulting parties will be notified of the discovery and consultation will begin to determine an appropriate mitigation measure. RGNF in cooperation with the operator will ensure that the discovery is protected from further disturbance until mitigation is completed. Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer (36 CFR 800.110 & 112, 43 CFR 10.4). *See Contract Provision B6.24 PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, CULTURAL RESOURCES, AND CAVE RESOURCES.*

- Inadvertent Discoveries: Pursuant to 43 CFR 10.4(g), the holder must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony on federal land. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder must stop activities in the vicinity of the discovery that could adversely affect the discovery. The holder shall make a reasonable effort to protect the human remains, funerary items, sacred objects, or objects of cultural patrimony for a period of thirty days after written notice is provided to the authorized officer, or until the authorized officer has issued a written notice to proceed, whichever occurs first. *See Contract Provision B6.24 PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, CULTURAL RESOURCES, AND CAVE RESOURCES.*
- If any new actions are planned, such as temporary road construction or salvage units in areas not cleared for heritage resources, an additional heritage resource assessment is required to determine if additional survey is needed prior to implementation. *Not applicable to this contract.*

III. CONDITION OF SALE

A. Planned Cutting Methods

The harvest system for this sale is ground-based – tractor/mechanical harvester on included timber.

B. Regeneration and Sale Area Betterment

Some of the area treated may need to be planted per silvicultural prescriptions. KV funding will be required to achieve reforestation objectives.

C. Slash Treatment

C6.7# states how slash will be treated in this sale.

D. Erosion Control

Refer to provisions C6.601# and C6.602#.

E. Specified New Road Construction & Road Reconstruction

No road construction will be required.

IV. APPRAISAL PREMISE

A. Volume Compilation

A summary of the volume determination is attached.

B. Plan of Operation

Three operating seasons are assumed adequate to complete this sale taking into consideration the amount of volume and closure work.

C. Appraisal Point

Montrose, Colorado, is used by the Forest as the standard appraisal point for timber sold from the Forest.

D. Adjustments

Adjustments were not made for deteriorating live timber and for dead volume.

V. APPRAISAL SUMMARIES

See the attached 2400-17 Appraisal Summary. Appraisal Bulletin used for this appraisal = BU230416

VII. VOLUME & COST CALCULATIONS

- Sale Volume Calculations – Appendix A
- Sale Unit Volume Calculations – Appendix B
- Dead and Live Calculations – Appendix C
- Road Maintenance Cost – Appendix D
- Haul Cost – Appendix E
- Average Skid Calculation – Appendix G
- Unusual Adjustment Calculation – Appendix H
- Performance Bond Calculation – Appendix I
- Bid Guarantee – Appendix I
- Fire Liability – Appendix I
- Slash Treatment Plan – Appendix J
- KV Calculations – Appendix K
- Salvage Sale Fund Costs – Appendix L
- Leave Tree Volume Adjustment – Appendix N

Sale Name: No Name Beetle Salvage Timber Sale
Stars Number: 17302
TEA Number: 005
Sale Acres: 182.1
Gross Acres: 243
Sale QMD: 13.4
Sale Ave Diameter: 13.0
MBF:CCF 0.4887

CONTENTS

	/ccf cost	total cost	
<u>Sale Haul Cost</u>	\$ 118.10	\$ 497,796.39	<u>Purchaser Fire Obligation</u>
<u>Sale Haul Miles</u>	246		
<u>Sale Round Trip Minutes</u>	1045		<u>Performance Bond</u>
<u>Sale Slash Cost</u>	\$ 1.01	\$ 4,245.00	<u>Bid Gaurantee</u>
<u>Sale Road Maint Cost</u>	\$ 2.48	\$ 10,453.20	
<u>Sale Temp Road Cost</u>	\$ -	\$ -	

Average Skid Distance (ft) 727

Appendix A

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 27-Jul-16
 From UC5 Report

Volume Calculations

Strata	SPPS	Gross Volume BDFT	Gross Volume CUFT	Net Volume BDFT	Net Volume CUFT	Net Volume MBF	CCF	# Of Trees	Net BF/CF
1	ESD	1,639,820	333,792	1,172,630	239,593	1172.6	2395.9	12373	4.89425818
	ESR	1,014,936	208,211	887,120	181,929	887.1	1819.3	11529	4.87618796
		2,654,756	542,003	2,059,750	421,522	2,060	4,215	23,902	4.88645907

Sawtimber	*CCF				
Recent	1819	43%	\$ 5.00	\$ 9,096.45	
Dead	2396	57%	\$ 5.00	\$ 11,979.65	

Total	Contract Vol.	
4215	100%	\$ 21,076.10
		\$ 5.00

ESR	1819	43%	\$ 5.00	\$ 9,096.45
ESD	2396	57%	\$ 5.00	\$ 11,979.65
Total	1675	100%	\$ 21,076.10	
Ave. Rate			\$ 5.00	

Species/Product	CCF	MBF	QMD	Ratio
ESR/01	1819	844	13.4	0.4886
ESD01	2396	1112	13.4	0.4886
	4215	1956		

Total	QMD
Acres=	13.4
Total	Mean
Trees=	DBH
	13
Volume	MBF
Per Acre	23.15
Volume	CF
Per Tree	17.63
	81.83

volume

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Unit Volume Summary

Unit #	Acres	ESR	ESD	Total Cruise Printout Volume	Total Unit Volume	% of Tot
3	83.7	836.21	1101.26	1937.47	1937	46%
3A	98.4	983.07	1294.67	2277.74	2278	54%
Totals	182.1	1819.28	2395.93	4215	4215	100%

Unit #	# Trees
3	10986
3A	12916
Totals	23,902

unit volume

Appendix C

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Dead and Live Volume Calculations

Per Regional Office Direction for Selling Dead Timber (letter dated August 11, 2004)
Live and Dead sawtimber of each species will be appraised and scaled as one contract group, "Live and Dead Sawtimber"

Cruised Volume CCF

ESR	1819	43%
ESD	2396	57%

Assume sale award August 15, 2016 and termination date December 31, 2019
So, sale contract midpoint is estimated to be August 15, 2018 for normal operating season.

Appraiser Estimates that 100% of the Recent will be dead at Midpoint of Contract

$$1.0 \times 1819 = 1819 \text{ CCF of Recent at Midpoint}$$

Total Dead at Midpoint is 957(R) + 718(D) = 4215 CCF Total Dead at Midpoint

So, Appraise 4215 CCF as Dead Sawtimber
4215 CCF Total Dead ES sawtimber

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Road Maintenance

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Pre Haul Maintenance

Road Number	Termini	Haul Miles		
108.1C	0.00 to 0.62	0.62		
	Total Miles	0.62		
	\$500/mile			\$620.00
	Cost per CCF		\$	0.15

Regular & Post Haul Maintenance

Road Number	Termini	Haul Miles		
108	0.00 to 3.19	3.19		
108.1C	0.00 to 0.62	0.62		
	Total Miles	3.81		
	.17/mile/ccf+POH of 31.54%		\$	3,591.12
	Cost per CCF		\$	0.85

Road Maintenance Deposits

Road Number	Termini	Haul Miles		
	Total Miles	0		
	.17/mile/ccf+FSOH of 15%		\$	-
	Cost per CCF		\$	-

Surface Rock
Replacement Deposits

Road Number	Termini	Haul Miles		
108	0.00 to 3.19	3.19		
	Total Miles	3.19		
	.22/ccf/mile+FSOH of 15%		\$	3,401.80
	Cost per CCF		\$	0.81

Snow Removal Banks only

Road Number	Termini	Haul Miles		
108	0.00 to 3.19	3.19		
108.1C	0.00 to 0.62	0.62		
	Total Miles	3.81		
	Total Trips over 1 Season	3		
	Estimated cost per mile	\$ 187.00	from LLC est.	
	Total Purchaser OH	31.54%		

Estimating 3 seasons, one trip per season

Cost per CCF \$ 0.67

Total Road Maintenance	Purchaser	\$	1.00
Snow Removal	Purchaser	\$	0.67
Road Maintenance Deposits	Purchaser	\$	-
Surface Rock Replacement	Purchaser	\$	0.81
		\$	2.48 per CCF

Appendix E

Haul Cost Calculation Sawtimber
 Appraisal point for conifer is
 Montrose, CO
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No Name Beetle Salvage Timber Sale

Road Number	Termini	Round Trip Haul Miles	Haul Class	% Grade	% Volume	Round Trip Round Trip Time min/mi	Weighted Haul Miles
6530 Rd.	Mill	7.04	2A1	0	100	3.2	2,200
San Juan Ave.	6530 Rd.	1.08	2B1	0	100	3.6	0,300
US 50	San Juan Ave. (in Montrose)	301.56	2C1	0	100	4.2	71,800
CO 114	US 50	259.14	2C1	0	100	4.2	61,700
US 285	CO 114 (in Saguache)	126.36	2B1	0	100	3.6	35,100
US160/ US 285 (Alarr	Int US 160/ US 285 to US285	61.2	2B1	0	100	3.6	17,000
US 285	Int SH 17 to US 160/ US 285	103.68	2B1	0	100	3.6	28,800
SH 17	Horca to US 285	93.24	2C1	0	100	4.2	22,200
SH 17	SH 17 to Horca	11.76	2C1	-6	100	4.2	2,800
NFSR 108	Int NFSR 108.1C to Int SH 17	18.502	3B2	5	100	5.8	3,190
NFSR 108.1C	End to Int NFSR 108	1.581	4B3	0	50	5.1	0,310
		985.143					245,400
	Delay Time	60					
	16.4 hours	1045	Min X	0.113	/ccf/min=		
							\$ 118.10 per CCF sawtimber

0.17



Pilot car use
 Based on 9 ccf per load

CCF Loads
 4,215 468.3

Mileage 10* .38 \$ -
 Salary .5 hrs @ 12/hr \$ -
 Misc Exp \$ -

Total Haul
 \$ 118.10

\$ - /ccf

haul

Appendix F

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No Name Beetle Salvage Timber Sale

Temporary Road Cost Calculations

This sale will require no temporary roads.

Road #	Miles	KM	Construction Needs			
Temp 1	0.14	0.23	Re-Construct			
Total	0.14	0.23				
Clearing and Grubbing (Step 1)						
Road #	Miles	KM				
Temp 1	0.14	0.23				
			0.14	X	\$ 219.91	= \$ 219.91
Culvert Installation Cost (Step 2)						
			Type of Culvert			
			No Culverts Needed	=	\$ -	= \$ -
				=	OX 902.50	= \$ -
Excavation (Step 2)						
Road #	Miles	KM				
Temp 1	0.14	0.23				
			0.14	X	\$ 608.72	(estimate for const. per mi)
						\$ 35.22
Seeding (Step 3)						
Road #	Miles	KM				
Temp 1	0.14	0.23				
			0.14	X	\$ 768.95	(estimate for const. per mi)
						\$ 107.65
TOTAL TEMP PRE-USE COSTS						\$ 412.78
Culterate existing temp road (Step 4)						
Road #	Miles	KM				
Temp 1	0.14	0.23				
			0.14	X	\$ 462.78	(estimate for const. per mi)
						\$ 64.79
TOTAL TEMP POST-USE COSTS						\$ 64.79
TOTAL TEMP ROAD COST						\$ 477.57
COST PER CCF						\$ 0.11
						4215 ccf

temp road

Appendix G

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No Name Beetle Salvage Timber Sa Average Skid Distance

Cutting Unit	Av Skid Dist (ft)	Weave Adjust Factor	Adjusted Average Skid Dist (ft)
3	732	1.15	842
3A	533	1.15	613

Average Sale Yarding Distance

Cutting Unit	Adjusted Skid Distance (ft)	Weight (volume ccf)	Wt'd Distance
3	842	4215	3548187
3A	613	4215	2583584
		8430	6131771

Average Yarding Distance (ft)
(adjusted for weave)

727

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No Name Beetle Salvage Timber Sale**Total Advertised Value**

Species	Vol Ccf	Advertised Rates	Value
ALL	4215	\$5.00	\$ 21,075.00 <--From 2400-17

Bid Guarantee - Cash Deposit

10% of Total Advertised Value	\$2,107.50
Rounded to next \$100	\$2,200.00

Minimum Performance Bond

10% of the Bid Value rounded up the next \$ 100 if Total Sale Value is \$10,000 or less or rounded up to the next \$1000 if Total Sale Value is greater than \$10,000 (FSH2409.18-54-1)

10% of Total Advertised Value	\$2,107.50
Rounded to next \$100	\$3,000.00

2nd Method - Based on Penal Sum

Based on cost to repair damage that could occur after one season

All cost are based on Region 2 ,3, & 4 Cost Estimate Guide (3/2013)

Road Maintenance

Estimate 3.81 miles will need maintenance

Move in cost (lowboy & operator)	\$351.31 x number of hours	1 hour	\$351.31
Grader operator/hr	\$24.57 x hours	8 hours	\$196.56
Road Maintenance cost/mile	\$338.00 x miles	3.81 miles	\$1,287.78
		Subtotal	\$1,835.65
	\$1,025.42 x TPOH	1.3154	\$2,414.61
1 GS-11 to administer/day	\$261/day x days	.25 days	\$63.25
1 4x4 PU/mile	\$.57 /mile	50 miles	\$28.50
1 4x4 PU/day (DODGE)	\$17/day	.5 day	\$8.50
		subtotal	\$100.25
	\$100.25 x FSOH	1.1129	\$111.57
	Total Road Maintenance		\$2,526.18

Closure of Skidtrails (water bar, pulling slash, etc)

Estimate 7 Acres

A D-6 cat can close 1 acre of scattered skidtrails in 1.5 hours

D-6 cat / hour	\$78.39 /hr	10.5 hrs	\$823.10
D-6 operator /hr	\$15.08 /hr	10.5 hrs	\$158.34
		subtotal	\$981.44
	\$981.44 x TPOH	1.3154	\$1,290.98
	Total Closure of Skidtrails		\$1,290.98

perform

Erosion Control

3 acres of landings and 7 acres of skid trails

Recommended Seed Mix Gerry Poe Forest Ecologist 03/12/03

<u>Species</u>	<u>% Mix</u>	<u>PLS lbs/ac</u>	<u>\$/lb</u>	<u>\$/ac</u>
slender wheatgrass (san luis)	31%	5.2	\$6.25	\$32.50
Sodar Streambank Wheat Grass	20%	3.4	\$7.75	\$26.35
Bromar Mountain Brome	49%	8.2	\$8.00	\$65.60
Total Cost/ Acre				\$124.45
			<u>Acres</u>	
Total Cost of Seed			10	\$1,244.50
			<u>Qty</u>	
1 GS-7 cost/day	\$176/day		1	\$176.00
1 4x4 PU/mile	\$.57 /mile		50	\$28.50
1 4x4 PU/day (DODGE)	\$17/day		1	\$17.00
			subtotal	\$1,466.00
\$1,129.99 x FSOH			1.1129	\$1,631.51
Total Erosion Control				\$1,631.51

Total Performance Bond Base on Penal Sum

\$5,448.67

Rounded to next \$100

\$5,500

Purchaser Fire Obligation For SP34

3 people x \$18.00/hr (AD-C) x 12 hrs x 3 days
rounded to the next \$100

\$1,944.00

\$2,000.00

(AD-C rate from FSH 5109.34-2015-1 13.6 Exhibit 01)

Slash Treatment Plan **No Name Beetle Salvage Timber Sale**
 27-Jul-16 Updated 03/18/14 by Kent Smith, Fuels and Kevin Duda and Rachael Sanchez, Timber
 All slash will be lopped and scattered down to 2 feet.
 Cost are included in the TEA average cost.

Area treated: 182.1 acres
All Landing slash will be burned by Forest Service.

14 landings (based on logging plan). Average landing size is .29ac

4

Labor	GS Level	Rate/Day	# Personnel	# of Days	Total Cost
	GS-7	\$250.00	2	3	\$1,500.00
2 days burning, 1/2 day of patrol, 1/2 day of planning & getting permit					
	Total Labor				\$1,500.00
	District OH 15%				\$225.00
	Subtotal				\$1,725.00
Misc Supp (Fuel, Tools & LumiGel)					\$40.00
Smoke Permit-CO					\$700.00
Sub Total					\$740.00
Total					\$2,465.00
Rounded next \$10					\$2,470.00
Treatment cost / Acre					\$617.50 <=== direct cost, for entry into FACTS
Treatment cost / Total					\$ 4,245.00

Derived from the average smoke permit cost over the past year

W/ Inflation and OH --> from FACTS
 Inflation = 2% and OH = 41.5%

Total Appraisal Cost	\$ 4,245.00
Total Appraisal Cost / Ccf	\$1.01 TOTAL
Required Deposit	\$ 4,245.00
Required Deposit / Ccf	\$1.01 DEPOSIT

Appendix K

27-Jul-16

No Name Beetle Salvage Timber Sale

KV Calculations

Treatment	Activity Code (10)	Cost per Unit (12)	No. of Units (13a)	Total Costs (13b)	Units Financed (14a)	Cost Finance (14b)	Priority
<u>Stocking Survey year 1</u>	4341	\$10.19	182.1	\$1,855.00	182.1	\$595.00	1
<u>Stocking Surveys year 3</u>	4341	\$10.81	146.9	\$1,588.00	146.9	\$658.00	1
<u>Plantation Survival Survey year 1</u>	4342	\$10.81	37	\$400.00	37	\$596.00	1
<u>Plantation Survival Survey year 3</u>	4342	\$11.24	37	\$416.00	37	\$658.00	1
<u>Noxious Weed Treatment Year 1</u>	2510	\$470.43	29	\$13,642.00	23	\$10,819.89	2
<u>Noxious Weed Treatment Year 2</u>	2510	\$479.84	15	\$7,198.00	0	\$0.00	2
<u>Noxious Weed Treatment Year 3</u>	2510	\$489.43	7	\$3,426.00	0	\$0.00	2
<u>Noxious Weed Treatment Year 4</u>	2510	\$499.22	4	\$1,997.00	0	\$0.00	2
<u>Noxious Weed Treatment Year 5</u>	2510	\$509.21	2	\$1,018.00	0	\$0.00	2
<u>Tree Planting</u>	4431	\$728.68	22	\$16,031.00	0	\$0.00	3
Total				\$31,541.00		\$15,079.00	
				Total w/Program Support (19)		\$20,010.00	

Total Sale Value	\$21,075.00
Funded SSF	\$0.00
NFF Minimum @ .25/Ccf	\$1,053.75
Available For All KV (20)	\$20,021

Condition Surveys

<div style="border: 1px solid black; padding: 5px;"> Condition Surveys: Walk through Surveys determining if areas will need site prep or artificial regeneration estimate acres of walk through surveys at 64.9 acres. Cost of \$9.09/ac. before inflation or W/O admin cost was used as a base cost in FACTS to create inflated </div>	Labor	GS Level	Rate/Day	# of Days	Total Cost
		1 GS-9	\$235.00	3	\$705.00
		1 GS-5	\$155.00	3	\$465.00
		Total Labor			\$1,170.00
	Equipment	Mileage	Miles/day	# of days	Total Cost
		\$0.57	50	3	\$85.50
		FOR	FOR/day	# of days	
		\$ 233.00	\$17.00	3	\$51.00
		Total Equip.			\$136.50
	Misc Supp	(Fuel & Tools)			\$75.00
Sub Total				\$1,381.50	
15% District Overhead				\$207.23	
Total				\$1,588.73	
Rounded next \$10				\$1,590.00	
Treatment cost / Acre				\$8.73	

Noxious Weeds

<div style="border: 1px solid black; padding: 5px;"> Noxious weed spraying will occur in the 1st year after harvest on disturbed areas usch as landings, roads and skid trails. </div>	Assume 10 acres of skid trails and landings	
	Total acres treated during treatment	10 acres
	Average District cost per acre is approximately \$350/acre (KV Regional cost guide)	
	1st application: \$350 per acre x 5.5 acres =	\$ 3,500.00
	District OH @ 15%	\$ 525.00
	Total Cost	\$ 4,025.00
	Rounded to next \$10	\$ 4,030.00
Total Cost per acre	\$ 403.00	

Tree Planting

<div style="border: 1px solid black; padding: 5px;"> Planting - Using Forester estimate for planting, tree storage and contract </div>	22 Acres	\$600.00 Per Acre	Forest Estimate
	\$13,200.00		Total cost of tree Planting

Appendix K

Acres (Landings and Skid trails)		10	
Cost Per Project	\$	4,000.00	Forest Hydrologist estimates 1 wk use; Covers post-subsoil seeding cost
Cost Per Acre	\$	400.00	

<u>Supplement</u>		
Each		23
Cost Each	\$	115.00

Control livestock use that threatens plantations and/or regeneration and prevent livestock use in openings created by timber harvest that would delay successful regeneration of shrub and tree components (per Canada Lynx Conservation Assessment and Strategy standars as amended 2003): by providing funding to purchase Crystalyx (supplement) to draw livestock away from sale area for five years at a cost of approximately \$2,645.00/year, for a

Year	cost/ year	FSOH @ 15%	Total Cost	Rounded to next \$10
1	\$ 2,645.00	\$ 396.75	\$ 3,041.75	\$ 3,050
2	\$ 2,645.00	\$ 396.75	\$ 3,041.75	\$ 3,050
3	\$ 2,645.00	\$ 396.75	\$ 3,041.75	\$ 3,050
4	\$ 2,645.00	\$ 396.75	\$ 3,041.75	\$ 3,050
5	\$ 2,645.00	\$ 396.75	\$ 3,041.75	\$ 3,050
		\$ -	\$ -	\$ 15,250
			Cost per acre	\$ 3.62

Salvage volume for this sale is 100% of the sale volume.

Salvage Volume

4215 ccf

Cost calculations and assumptions are based on funding for salvage sale prep and admin for FY 13.

	\$/CCF	CCF	Total Cost
Preparation:	\$25.57	4215	\$107,777.55
Administration	\$8.50	4215	\$35,827.50
Engineering	\$9.00	4215	\$37,935.00
Other Resources	\$5.00	4215	\$21,075.00
Subtotal	<u>\$48.07</u>		<u>\$202,615.05</u>
Inflation (2% per year from TIM)	2.0%		\$223,703.39
Forest Assessment Rate	<u>77.1%</u>		<u>\$396,178.70</u>
Total CCF	\$ 93.99	4215	\$484,809.00
50% Additional Collection			\$242,405.00
Surcharge	\$/CCF	4215	\$0.00
Total Sale Planned Collection			\$727,214
National Support 77.1%			\$560,682
Total Sale Value	\$21,075.00		
Funded KV	\$20,021.25		\$20,021.25
25 cents per ccf (min NFF)	\$1,053.75		
Available for SSF	\$0.00		\$0.00
Max Collection	\$1,287,896		

(line 8 by 8a)

(line 9a by 8a)

(line 9b by 8a)

(line 10 by 8a)

(line 11 by 8a)

(line 12 by 8b)

(line 12 by 8a)

Appendix M

From Cost Estimating Guide for Road Construction- March 2013

Step 1 - Clearing and Grubbing- Sec 201

Clearing and grubbing - ac/mile from Table 31	1.83
Unit cost for 12 MBF/ac -Figure 1	\$669.04
Percent labor - labor % in Table 29	40%
Adj. factor for D-B wages - CO Area 1, Page 8	1.48
Topographi factor for gentle slope (5%), Table 12	0.80
Adj. factor for timber sale wages - Table 30	0.00
Slash/cleanup factor for on-site disposal - Table 13	1.1
Cost per Mile	\$ 1,570.75

Step 1a - Felling, Bucking, & Skidding

Base Skid-Yard Cost from current TEA Bulletin (MBF)	\$ 104.71
Harvest volume per acre (MBF)	0.00
Cost per Mile	\$ -
NET Cost per Mile	\$ 1,570.75

Step 2 - Excavation- Sec 204

Excavation - cubic yards/mile - Table 31	386
Base cost for excavation (\$/cy) - from past guide	\$ 1.68
Adj. factor for type of material - Table 15	1.0
Percent labor - labor % in Table 29	20%
Adj. factor for D-B wages - CO Area 1, Page 8	0.95
Adj. factor for timber sale wages - Table 30	0.00
Cost per Mile	\$ 608.72

Culverts

32" Culvert length	0
Installation of 32" culvert (\$/LF) - Table 29	\$ 47.50
Percent labor - Sec 302	30%
Adj. factor for D-B wages - CO Area 1, Table 21	0.93
Adj. factor for timber sale wages - Table 30	0.00
Install Cost	\$ -
TOTAL Cost per Mile excavation/culvert install	\$ 608.72

Step 3 - Seeding- Sec 157 & 625

Seeding - Table 31	1.69
Unit cost for seeding w/o fertilizer/mulch from past guide	\$ 500.00
Percent labor - labor % in Table 29	35%
Adj. factor for D-B wages - CO Area 1, Page 8	0.91
Adj. factor for timber sale wages - Table 30	0.00
Cost per Mile	\$ 768.95

Step 4 - Obliteration- Sec 211

Outside road (\$/mile) - Page 23	\$487.14
Rip roadbed (\$/mile) - Sec. 211	\$ -
Percent labor - labor % in Table 29	20%
Adj. factor for D-B wages - CO Area 1, Page 8	0.95
Adj. factor for timber sale wages - Table 30	0.00
Number of culverts removed	0.00
Culvert removal cost - Sec. 211	\$104.89
Cost per Mile	\$ 462.78

Step 5 - Total Unit Cost

Cost per Mile	\$ 3,411.21
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Pre-Use cost per mile	\$ 2,179.47
Post-Use cost per mile	\$ 1,231.73
Culvert Removal	\$ -