TIMBER SALE REPORT AND APPRAISAL SUMMARY

MONARCH BEETLE SALVAGE TIMBER SALE

Prepared by: _____ Date: 12/14/2015
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: _____ Date: 12/11/2015
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	7,958 CCF
	Total	7,958 CCF

REQUIRED DEPOSITS		
	Road Maintenance	$4.18/CCF
	Surface Rock Replacement	$0.55/CCF
	Slash Deposit	$0.47/CCF
	Reconstruction Eng.	$0.00

TOTAL SALE VALUE	$5.00	$39,790.00
ADVERTISED VALUE	By Species and Product	
LIVE SAWTIMBER	ES, Live and Dead	$5.00/CCF

APPRAISAL BULLETIN NO		BU231015
Support Information		
	Normal Operating Season	6/15 – 10/31
	Fire Liability	$2000.00
	Termination Date	12/15/2020
	Method of Bidding	Sealed Bid
	Escalated	Yes
	Bid Guarantee	$4,000.00
	Minimum Performance Bond	$4,200.00

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 T32N, R5E, Sections 5, 6, 7 and 8 NMPM and all in Conejos County, Colorado. Access from Antonito, Colorado is: West on Highway 17 for about 34 miles to its junction with NFSR 118 (Trujillo Meadows Road). Take NFSR 118 for approximately ½ miles to the start of the sale.

B. Acreage and Volume Data

This sale is comprised of 7 cutting units totaling approximately 283.1 net acres, on National Forest land. This sale was cruised using Point Count Measure (PCM) sampling method. The estimated sale value was $40,341.75, so the cruise must achieve a sampling error of + or – 30%. The actual cruise error was 25.79% for all volume. The volume of the sale was initially 8,729 CCF. Reductions were made for leave trees and hidden defect (the following hidden defects were applied to each species; ESL – 3%, ESR – 5% and ESD – 10%), leaving a final volume of 7,958 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 5.11 (Forest Products) of the revised Rio Grande National Forest Land and Resource Management Plan. For further information, please refer to the Cumbres Vegetation Management Project Record of Decision and Summary.

E. Relationship to Other Uses

See the Cumbres Vegetation Management Project Decision Notice and Summary.

F. Mitigation Measures

Design criteria identified in the Cumbres Vegetation Management Project Record of Decision and Summary and specialist reports specific for this sale are highlighted here.

Timing of Operations

- No hauling during July 3rd through the 5th or weekends from Friday noon to Sunday midnight during big game rifle season. *See contract provision C6.312# SALE OPERATION RESTRICTIONS*
- Under most conditions and unless approved by the District Ranger, logging operations will not be permitted from December 15 to April 1 to reduce potential conflicts with winter recreation activities. *See contract provision C6.312# SALE OPERATION RESTRICTIONS.*

Wildlife/TES/MIS

- The project has been surveyed for TES and MIS species as applicable to project needs. Surveys will continue during project implementation and any potential denning (lynx primarily), burrowing, or nesting sites will be protected as determined by Wildlife personnel. If a TES species is discovered, they will be protected as indicated in the Forest Plan with consultation with the U.S. Fish and Wildlife Service, as necessary. *Contract Provision B6.24 PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, CULTURAL RESOURCES, AND CAVE RESOURCES*
- Gated roads or other closed roads utilized during logging activities and following logging will remain closed to the general public to minimize wildlife disturbance (and for public safety). An exception may be temporarily opening roads for public firewood collection following harvest. *See contract provision C5.41# CLOSURE TO USE BY OTHERS.*

Noxious Weed Management

- All organic material used for rehabilitation: seed, straw, erosion control material, or other, will be certified weed free. See *Contract Provisions C6.602# Protection of Disturbed Areas from Establishment of Noxious Weeds and Contract Provision C6.601# Erosion Control Seeding.*
- By use of standard contract provisions, the timber purchaser or other contractors will be required to clean all logging and construction equipment that operates off roads, prior to entry to the project area. *Contract Provision B6.35 Equipment Cleaning*
- Prior to the start of logging or other new ground disturbance activities, areas will be surveyed and treated for existing populations of weeds. *District Noxious Weeds Coordinator was informed of the area during pre-sale layout and treatments have been planned.*
- 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; areas where borrow material is applied will be documented and inspected for weeds for three years following application.

Livestock Management

- Forest regeneration will be protected from livestock grazing by using adaptive strategies such as reducing cattle concentrations by avoiding salt/supplement placement in regenerating areas, avoid pushing large numbers of cattle into the area, use riders if needed to disperse large numbers, and maintaining pasture rotation to avoid season-long grazing. *Forest Responsibility post-harvest, to be coordinated with District Range Staff*
- 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. *Forest Responsibility, to be coordinated with District Range Staff*

Protect Improvements

- Protected improvements such as fences, gates, water developments, and recreation facilities (ski yurts, Trujillo Meadows water system) will be identified on sale area maps or in fuel treatment areas during harvest or treatment activities. Damaged improvements will be repaired or replaced, depending upon the amount of damage. *Contract Provision B6.22 Protection of Improvements, Contract Provision B6.221 Protection of Improvements Not Owned by Forest Service*
- Potential hazard trees within 2 tree lengths of the Trujillo Meadows Campground well head and other water system components, or other improvements will be cut and removed. *Contract Provision B6.22 Protection of Improvements.*

Hazard Trees/WUI Thinning

- Hand felling of hazard trees is permitted in the WIZ. Trees shall be directionally felled and may be left in place to maintain or improve stream and riparian health. If necessary, felled trees may be stabilized to prevent movement. The Forest timber sale or contract administrator shall consult the Forest hydrologist or wildlife/fish biologist prior to granting approval to remove hazard trees from WIZ areas along intermittent and perennial streams. *This criteria was addressed during sale layout and is also addressed by contract Provision B6.5(a). No intermittent or perennial stream channels were identified within the cutting units. Any hazard tree felling outside of cutting units would be handled during timber sale administration.*
- Any hazard tree, and associated slash, cut and lying within 100 feet upstream of a perennial or intermittent culvert/bridge crossing and within 25 feet from the stream edge that has the potential to obstruct the crossing shall be stabilized, removed, or moved at least 50 feet upslope away from the stream. *See Contract Provision B6.5 Streamcourse Protection.*
- Felled hazard trees and slash shall be removed from roadside ditches and culverts, including removing from cross drains and sediment traps. *Contract Provision C5.31# Road Maintenance*

Requirements T-802. See also contract provision B6.22 Protection of Improvements and C6.6# Erosion Prevention and Control

- Felled hazard trees may be removed from stream corridors or riparian areas with Forest Service approval when they create unacceptable fuel loading; fail to meet visual objectives; or create unacceptable limits to human, livestock, or wildlife movement. *Managed through provision C6.50#- Streamside Management Zones. Removal of material outside of cutting unit boundaries would require written approval and be subject to Contract Provision B6.5.*
- Hazard trees shall not be skidded across perennial or intermittent stream channels. *See contract Provision B6.5(c). No perennial or intermittent stream channels were identified within the cutting units.*
- If hazard trees need to be removed from WIZ areas, use at least one-end suspension and felled in a way that protects vegetation from damage. *See Contract Provisions C6.42# Skidding and Yarding (Special Objectives) and B6.5(c) Streamcourse Protection. No stream channels were identified within the cutting units and any hazard tree felling outside of cutting units would be handled during timber sale administration.*
- If chipping/grinding or other mastication method is used to treat understory fuels in WUI areas, slash shall not cover more than 50% of ground surface and depth shall not exceed 4 inches to minimize impacts to understory vegetation. Mastication equipment will not be used in WIZ areas. *Not applicable to this contract*
- If WUI thinning areas intersect a WIZ, hand thinning with chainsaws may be used. Hand piles will be located at least 50 feet upslope from perennial or intermittent streams or riparian areas and outside of the channel/swale for ephemeral drainages. *Not applicable to this contract*

Soil and Water Protection

- 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. *See Silvicultural Prescription and contract provision C6.7# Slash Disposal*
- Operate heavy equipment for land treatments only when soils are dry, soil moisture is below the plastic limit, or protected by at least 1 foot of packed snow or 2 inches of frozen soil. *Contract Provision C6.42# Skidding and Yarding*
- Reuse existing skid trails and landings whenever practical. *See Silvicultural Prescription and Contract Provision C6.42#; this objective is met during sale administration.*
- 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 waterbarred 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 C6.42#*
- Skidding equipment will generally be restricted to slopes <35%. *See C6.42#*

- During project implementation, temporary roads will be outsloped, covered with slash (when needed), and blocked to vehicle access after the harvest season and before onset of the wet season. *See Contract Provisions B6.63- Temporary Roads and C5.35# Closure of Temporary Roads.*
- Units with an existing detrimental soil disturbance level ≥12% will be treated as necessary to ensure post-treatment forest plan compliance, as determined by Forest Soil Scientist.
  Detrimental disturbance levels will be brought within the 15% standard through post-harvest subsoiling/ripping of primary skid trails, landing, and/or temporary roads to a depth of 12 to 24 inches and seeded or covered with slash after harvest, as needed. If harvested, these treatments will occur on units 1, 2, 6, 7, 11, and 20. It will also include any other units which are determined to exceed 15% detrimental disturbance after harvest. *These will be managed by the Forest Service post-harvest. See Silvicultural Prescription.*
- Temporary stream crossing structures (i.e. culverts, bridges, etc.) will be designed to provide for passage of flows and sediment, withstand expected flood flows, and allow free movement of resident aquatic life. Upon project completion, remove all temporary crossings, restore the channel morphology, and revegetate channel banks. *See Contract Provision B6.50 Streamside Management Zones*
- Slash piles and landings shall be located at least 50 feet (hand piles) or 200 feet (machine piles) from perennial streams, lakes, ponds, wetlands, or riparian areas. *Contract Provision C6.7# Slash Treatment. Hand piling is not applicable to this contract.*
- A 100 foot no timber harvest buffer has been established along both sides of all intermittent and perennial stream channels, wetlands, ponds, or lakes. No heavy equipment will operate within this buffer except at designated crossings, unless authorized by the Forest Service where site-specific conditions would minimize stream and riparian impacts. *Managed throughout unit layout.*
- No timber harvest would occur in the channel/swale of ephemeral channels; Harvest may occur outside the channel, but no skid trails or mechanical disturbance would be permitted within 25 feet of both sides of the channel. *Several ephemeral stream channels have identified within the sale area, See contract provision C6.50# Streamside Management Zones.*
- Hydrology, soils specialists, or their designees will inspect harvest units for seepages or riparian areas. Where found, these features will be protected through sale marking and layout; a 100 ft. no-harvest or skidding buffer will be maintained from the edge of all wetlands. *This was accomplished during pre-sale layout.*
- All roads (existing, new temporary, or old non-system) used for the project will be evaluated to identify and correct erosion or sediment problems. Additional cross drains or other standard measures will be used as appropriate to divert any road drainage into buffer/filter strips and minimize road drainage into steam channels. *See Specified Road Package*

- Existing vegetation on cut and fill slopes would be retained as much as possible to limit sediment movement away from road. *This was accomplished in the design of the specified road package; see also Contract Provision C6.6# Erosion Prevention and Control*
- Where existing roads will be reconstructed within 100 feet of intermittent or perennial streams, hydrology, soil specialists or their designees will be consulted to ensure sediment sources are disconnected from stream channels. If necessary, hardening, filter fence, straw wattles, timber slash windrows, or other measures will be used as appropriate to prevent sediment from entering a stream course. *See Specific Road Package*
- Following logging and/or reforestation operations, all temporary roads used for this project except for temporary roads 1 and 2 will be closed and rehabilitated. *Contract Provision C5.35# Closure of Temporary Roads.*

Scenic Resources

- Visible stumps within the immediate foreground (0-100 feet) of FSRs 118, 118.1C, and Trujillo Meadows campground should be cut as close to the ground as practicable, a maximum stump height of 6 inches is recommended. *Contract Provision C6.411# Felling and Bucking.*
- Avoid creating open linear corridors when removing hazard trees along roads, fences or other linear infrastructure; vary corridor width considering natural vegetation patterns and topography to blend treatments into local landscape. *Not applicable to this contract.*
- Logging activities will not occur within 200 feet of the Continental Divide National Scenic Trail. *Not applicable to this contract.*
- Landings or log decks will not be approved within 100 feet of ski yurts and logging slash will be removed in this area to the extent feasible. *Not applicable to this contract.*

Vegetation Protection/Biodiversity/Regeneration

- 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 to meet or exceed Forest Plan Standards. *This will be managed by the Forest Service post-treatment; see silvicultural prescription.*
- To protect soil, leave trees, and advanced regeneration, tractor skid trails will be located and approved in advance of falling and logs will be skidded with the leading end free of the ground to reduce ground disturbance. *Contract Provision C6.42# Skidding and Yarding (Special Objectives)*
- Protect existing aspen clones from damage and encourage clone expansion by removing encroaching conifers within a tree height of the mature aspen stems. *Contract Provision B6.32 Protection of Residual Trees. Conifer encroachment will be managed by the Forest post-harvest.*

- Trees with known active bird nests, any cavities, or those otherwise marked as wildlife trees will be designated for retention. *Contract Provision C6.411# Felling and Bucking (Special Objectives)*
- Retain all live/uninfested trees in salvage units, except for trees that need to be removed for operational/safety purposes. *See contract provision C2.3521# Designation by Species and Diameter*
- Effects to understory vegetation and dense horizontal cover will be minimized to benefit snowshoe hare and lynx by identifying skid trail locations away from dense understory and spacing skid trails at least 100 feet apart, allowing for topographic variation and skid trail convergence; Incidental damage will be limited to a maximum of 30% of DHC over a unit area average. *See Silvicultural Prescription and Contract Provision C6.42# Skidding and Yarding (Special Objectives)*
- Place landings in open areas if available, to protect understory. *Contract Provision C6.42# Skidding and Yarding (Special Objectives)*
- Retain patches of overstory trees with dense understory. *Accomplished during pre-sale layout. See also Contract Provision C6.411# Felling and Bucking (Special Objectives)*
- Leave sufficient trees or retain existing large woody debris (a minimum of 10-15 tons per acre in spruce fir) on harvested sites to retain moisture, trap soil movement, provide microsites for establishment of forbs, grasses, shrubs and trees, and to provide habitat for wildlife. *Contract Provision C6.7# Slash Treatment*
- Require the use of mechanical felling in units 12 and 15 to further minimize impacts to DHC. *This applies to cuttings units E & B of this contract. See contract provision C6.411# Felling and Bucking (Special Objectives).*
- Retain a minimum of 4 spruce snags per acre in various conditions of decay and distribution. Retain the largest snags possible with those > 11 inches dbh being most desirable. Retain all soft snags unless they are a safety hazard. *Contract Provision C2.3521# Designation by Species and Diameter*
- Seeding of disturbed sites would utilize a native subalpine grass mix and application prescriptions. *Contract Provision C6.601# Erosion Control Seeding*

Public Safety

- Roads used for vegetation treatment and log haul would be maintained in accordance with the contract requirements. Temporary traffic control in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) would be utilized for roads open to public motor vehicle use. *Contract Provision C5.31# Road Maintenance Requirements. See also Contract Provision B6.33 Safety, and Vicinity map for temporary traffic controls.*
- Notify the public of logging and/or burning activities through media such as local newspapers, radio, and the Forest website. *Forest Responsibility*

- Caution signs notifying public of logging activities will be prominently displayed at start of all open roads and all junctions. *Contract Provision B(T) 6.33 Warning Sign Placement*
- All gated roads will remain closed during harvest activities. *Contract Provision C5.41# Closure to Use by Others*
- Dust abatement will be required on FSR 118 during July and August, as needed. *Not applicable to this contract, due to distance from campground.*
- Hazard trees up to 2.0 tree heights will be removed along open roads and roads used for project implementation. Hazard trees will be removed within 2 tree heights of ski yurts. *Handled through normal harvest activities.*

Heritage

- The Discovery and Education stipulation below will be emphasized in areas with large aspen to avoid and protect undocumented arborglyphs. *Standard provision B6.24 PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, CULTURAL RESOURCES, AND CAVE RESOURCES*
- Any new road construction or improvements not previously analyzed within this environmental analysis will require a review and potential inventory by Forest Service archaeologists. *See Heritage Section in the Cumbres Vegetation Record of Decision. Not applicable to this contract*
- All persons associated with operations under this authorization must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the Rio Grande National Forest authorized officer of the findings. The discovery must be protected until notified in writing to proceed by the authorized officer (36 CFR 800.110 & 112, 43 CFR 10.4). *Contract provision B6.24 PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, CULTURAL RESOURCES, AND CAVE RESOURCES*

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

Reconstruction of Road 116, 116.1B and 116.1C is required. Refer to appendix O and Monarch Beetle Salvage road package for details.

IV. APPRAISAL PREMISE

A. Volume Compilation

A summary of the volume determination is attached.

B. Plan of Operation

Five 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 = BU231015

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
Temporary Road Calculation – Appendix F
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
Temporary Road Worksheet – Appendix M
Leave Tree Volume Adjustment – Appendix N