

Big Jack East WUI Maintenance Q&A

1. Can the proposal submission date be delayed to extend the Q&A period?
 - a. The official Q&A period has been open for the duration of the solicitation. The bid period will not be extended.
2. What licenses/classes are required to perform the work on this project?
 - a. No licenses are required.
3. Can the project area be closed to the public for safety to all?
 - a. A forest closure will not be put in place due to the expedited nature of the project. Public safety is a critical component of project success, and safety considerations will need to be proposed and implemented by the bidder.
4. Are flaggers required on trails within project area?
 - a. Please refer to the “Public Safety Precautions” section on page 4 of the RFP. Public safety precautions are to be proposed by the bidder and considered while scoring the technical proposal.
5. How is dust and noise from operations to be mitigated?
 - a. Dust abatement measures will not be required. Noise will be mitigated via observance of the LOP outlined on page 4 of the RFP.
6. Can mastication be completed in a mosaic pattern that leaves small untreated areas while maintaining enough spacing to prevent flame-length issues?
 - a. Mastication must meet the specifications identified in Appendix E, including average tree spacing.
7. Are there specific training and insurance requirements for work near a powerline? Is a line clearance certification required to operate these units?
 - a. No.
8. What is the required Insurance and bonding?
 - a. Please refer to the “Insurance Requirements” and “Payment/Performance Security” sections on pages 4 and 5 of the RFP.
9. Please provide the PAL history for the project area. How many E & EV days were there and when?
 - a. Public PAL history data website previously hosted by the USFS no longer in operation. Please refer to the “Project Activity Level Climatology” table in Appendices H.1 and H.2 for expected PAL days per Month per PAL value.
10. Is there a fire liability clause within the contract?

- a. Yes, please refer to Appendix G for fire liability. Please also be familiar with Appendices H.1 and H.2 for information regarding the fire plan.
11. Are there winter ops available on this project?
- a. Winter ops permitted only if soil moisture conditions are deemed operable by the USFS and NFF. "Outside Normal Operating Season Standards" document will need to be signed if operations will occur outside normal season.
12. Are there any water regulations or wet weather requirements from Lahontan Regional Water Quality Board?
- a. This project meets the requirements for Category 2 under the Lahontan Timber Waiver - no reporting required.
13. How is mastication around rock out crops and rock piles being addressed?
- a. Please refer to Appendix E for mastication specifications near obstacles. Minimal inoperable ground due to rocks present within project area, prescription will be able to be met. Difficult patches of terrain may be assessed for operability by NFF, USFS, and/or the oversight forester as needed.
14. Will all riparian conservation areas be flagged prior to operations?
- a. No RCAs present in project, but if RCA, endangered species, or other resource concerns are identified, resource protection measures will be implemented as appropriate.
15. Can the mastication requirements be changed from 14" DBH to 12" DBH?
- a. No, mastication will continue to occur on trees up to 14" DBH via NEPA allowance.
16. Can I bid on only one line item?
- a. Yes, but a proposal including the entire scope of work will be more competitive.

Request for Proposals
BIG JACK EAST WUI MAINTENANCE PROJECT
TAHOE NATIONAL FOREST, CA

NFF Background:

The National Forest Foundation (NFF) is a congressionally chartered nonprofit organization with the simple mission of bringing people together to restore and enhance National Forests and Grasslands. The NFF is the leading organization inspiring personal and meaningful connections to our National Forests, the centerpiece of America's public lands. Working on behalf of the American public, the NFF leads forest conservation efforts and promotes responsible recreation. We believe these lands, and all they provide, are an American treasure and are vital to the health of our communities.

Project Background:

The National Forest Foundation (NFF) and the USDA Forest Service – Tahoe National Forest (TNF) are working together to protect the town of Truckee, California by conducting hazardous fuels reduction treatments within the wildland-urban interface. For this project, NFF will be working with staff from the Truckee Ranger District (TKRD) to maintain safe fuel loads in the WUI (Wildland-Urban Interface), as established by and within, the previously treated Big Jack East project area. The selected bidder will enter into a contract through 2027.

The Big Jack East WUI Maintenance Project is located in Placer County, CA; roughly 2.5 miles south of Truckee, CA and east of Highway 89. The project area abuts the Ponderosa Palisades and Martis Camp communities. This project has been designed to prevent the buildup of hazardous fuels following successful fuels reduction efforts, lengthening the effect of past treatments and increasing public and community safety from wildfire.

Statement of Work:

The selected bidder will be responsible for performing mastication on up to 362.2 acres and hand thinning on up to 9.8 acres. The awarded acreage may be greater or less than 372 acres, subject to available funding and as determined by NFF. The final awarded acreage shall be determined through mutual agreement between NFF and the selected bidder prior to execution of the Agreement. The implementation contractor will collaborate with the NFF, NFF's Oversight Forestry Consultant, and TKRD Staff to implement the WUI defense project according to the project appendices.

In addition to the work described above, bidders may choose to bid on the optional scope of work that includes up to 98.79 acres of mastication. The awarded acreage may

be greater or less than the estimated 98.79 acres, subject to available funding. The final awarded acreage shall be determined through mutual agreement between NFF and the selected bidder. Optional acres will reduce fuel loads in a 175-foot buffer around a portion of Liberty Utilities' T-132 powerline adjacent to the Big Jack East WUI Maintenance project area and will be conducted using the same project appendices. If bid on, optional acres may be awarded at the discretion of NFF.

Timeline:

This Request for Proposals will close and all proposals will be due on Friday, August 21, 2026 at 5:00 PM PDT. The NFF anticipates being able to enter a contract with any selected bidder(s) by Thursday, September 10, 2026, with a projected contract start date of Friday, September 18, 2026. Changes in the closing date for this Request for Proposals will be updated on the NFF website at <https://www.nationalforests.org/rfp> under the link for this project's Request for Proposals. All contract related dates are estimates and subject to change at the NFF's sole discretion.

I. PROJECT OVERVIEW AND REQUIREMENTS

General Specifications

(a) Description of Work – This Request for Proposals is for implementation services related to the Big Jack East WUI Maintenance] project, located on the Tahoe National Forest(s). Work on this project will include the retreatment of previously treated acres using mastication and/or hand thinning as appropriate. The selected contractor(s) will be responsible for performing the following deliverables:

1. Mastication on up to 362.2 acres (or agreed-upon number based on budget) according to specifications in Appendix E and mapped in Appendix C.
2. Hand thin and drag material to be chipped or masticated outside unit on up to 9.8 acres according to specifications in Appendix E. Average haul distance for material is approximately 100 feet. Material will not need to be dragged more than 300 feet. Acreage split across 5 irregularly shaped sites.
3. Optional mastication on up to 98.79 acres according to specifications in Appendix E and mapped in Appendix C.

(b) Specifications – Project work shall be accomplished in accordance with the following:

1. Appendix C: Project Map
2. Appendix E: Service Work Specifications
3. Appendix G: Guidelines for Operations
4. Appendix H.1: Fire Plan – Hand Thin
5. Appendix H.2: Fire Plan – Mechanical Thin

Link to download project shapefiles here: <https://nff.box.com/s/461485doj4c9aqntj7o3oht12r1hyuy8>

Bidders shall identify in their proposals what they can supply in terms of materials, labor, equipment, supplies, supervision, quality control, and incidentals required to complete the work as described. Proposals shall be sufficient to guarantee that the selected contractor shall be able to perform all work in a safe and conscientious manner and in accordance with all industry standards.

(c) Project Location – Placer County, CA, approximately 2.5 miles south of Truckee, CA and east of Highway 89. The project area abuts the Ponderosa Palisades and Martis Camp communities. Work will occur in portions of T17N R16E Sections 22, 27, and 34. Placer County, CA. Refer to Appendix C for map details.

(d) Work Schedule –

The project is expected to begin as soon as conditions permit, but no later than Friday, September 18, 2026. The normal operating season covers the period between May 1 and October 15, although work may commence as soon as conditions permit if applicable. All project work associated with Big Jack East WUI Maintenance must conclude on or before December 31, 2027. The NFF and the successful bidder will negotiate a schedule of operations upon award, with mandatory benchmarks to meet NFF's desired goals for project progress. Examples of mandatory benchmarks and desired goals may include, but are not limited to:

- December 31, 2026: Completion of at least 200 acres of mastication work.
- December 31, 2027: Completion of all items contained in the Big Jack East WUI Maintenance Scope of Work.

Additionally, an LOP (limited operating period) shall be in place on Units 1 and 2 to limit operations to no earlier than 7:00 am Pacific Time on Saturdays and Sundays. No LOP will be in place on week days or on Unit 3.

Other Project Requirements

Utilities/Work Site Conditions – In many locations there will be no or limited sanitation, water, electrical or housing services available. Bidders shall consider all relevant factors when submitting proposals for this work. Proposals should account for the need of the selected contractor to make its own arrangements for temporary facilities if required. The work location and conditions for this project are as follows: The NFF will work with the Tahoe National Forest and the selected Contractor to acquire dispersed camping permit(s) if appropriate and requested by the Contractor.

Public Safety Precautions – Project area encompasses or abuts multiple high use road and trail features. With the protection of public safety as a core component of project success, the selected bidder shall be responsible for providing adequate safety measures, as deemed appropriate by NFF and the Forest Service to ensure potential project hazards are thoroughly communicated to nearby residents and recreationalists. Such measures may include, but are not limited to, posted trail guard(s) to intercept trail users before entering a work zone, increased signage along designated roads and trails, and/or adjusting or limiting operation times to coincide with peak trail usage. Measures may not be needed for the entirety of the project, but resources should be available at the request of NFF or the Forest Service. Please ensure approach to achieving this is clearly identified in Technical Proposal.

Insurance Requirements

Upon being notified of bid selection, Bidder agrees that it has, or will procure, and shall maintain the insurance coverage indicated below. The effective date of all coverage shall precede the start of any work.

- a. State minimum workers' compensation insurance coverage for its employees, if any.
- b. Broad form general liability, property damage, and automotive liability insurance in the minimum amount of \$2,000,000 for bodily injury, death, or

damage to property of any person and \$4,000,000 for bodily injury, death, or damage to property of more than one person. The selected Bidder shall name NFF and Truckee Tahoe Airport District as Additional Named Insured and provide NFF with a certificate of insurance evidencing such coverages, prior to the initiation of the Scope of Services.

- c. If the Scope of Services includes professional services as identified herein, Bidders also agree to provide professional errors and omissions liability insurance. Professional services for purposes of this section include, but are not limited to performing architecture, engineering, landscape architecture, land surveying or planning, preparation and signing or stamping of drawings, maps, surveys or construction specifications, or design and development of computer software, programs or websites by the Bidder or by subcontractors on behalf of the Bidder, for which professional liability insurance would typically be required. The minimum coverage limits required are \$1,000,000 for each claim and \$1,000,000 annual aggregate.

Payment/Performance Security

If selected to contract with the NFF, Bidder(s) shall post cash, a letter of credit, bond, or other financial security that is easily convertible into cash in a form acceptable to the NFF, in its sole determination. The security will be used to ensure completion of the work required under any subsequent agreement and payment of all amounts lawfully due to all persons. All persons shall include, but not be limited to, those supplying or furnishing to the Bidder or Bidder's subcontractors with labor, laborers, materials, rental machinery, tools or equipment used or to perform the work. Bidders may incorporate required associated costs into mobilization costs or other approved expenses. Payment or Performance security will be required in the following amounts as applicable:

- a. For work that is classified as construction in accordance with the Miller Act or Little Miller Act or if required per conditions of the funding source, payment and performance bonding will be required in the full amount of any Agreement. For the purposes of this Request for Proposal, construction is defined as "any contract greater than \$100,000 for the construction, alteration, or repair of any public building or public work where the federal government is the owner"; or
- b. If Contractor is subcontracting 15% or more of the total contract value, or if the cost of materials is in excess of the larger of \$100,000 or 50% of the contract total, payment and performance bonding will be required in the full amount of the agreement; or
- c. If the value of the agreement is in excess of \$250,000, Contractor will be required to post financial security in a form acceptable to the NFF in the amount of 5% of the total agreement value up to \$250,000 in total financial security.

The NFF will not provide blanket waivers of payment/performance security requirements though reserves the right to negotiate payment and performance security terms and conditions with selected contractors based upon legal requirements and organizational needs and policies.

Prohibited Telecommunications Services and Equipment

NFF contractors are responsible for compliance with the prohibition on certain telecommunications and video surveillance services or equipment identified in 2 CFR 200.216.

Federal Exclusion Verification

The selected Contractor will be required to affirm that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

Unique Entity Identifier (UEI)

The selected contractor will be required to provide a Unique Entity Identifier (UEI). If bidders have a UEI, please provide it in the proposal or quote.

Federal Flowdown Provisions

NFF funding for projects may vary but will frequently include federal funds. As such, any Agreement associated with this RFP may be subject to flowdown requirements under associated federal or state funding agreements, which are included and made part of by this reference. Federal flowdown requirements are not negotiable by the NFF and will not be removed or edited.

II. REQUIRED COMPONENTS

Technical Proposal

Bidders shall submit a technical proposal for the work described in this RFP. At a minimum, each proposal **must** include the following:

1. An overview and description of the services provided by the Bidder that align with the requests in this RFP.
2. A description of the project management or administration approach that will be followed by the Bidder to ensure that the identified work is completed on time and within budget.
3. A project work plan and schedule that lists in detail the stages of work expected to be completed in this project, all identifiable deliverables, and the dates on which the Bidder would anticipate being able to complete delivery of the work.
4. A project personnel overview identifying key personnel to be utilized if selected to perform the work described in this RFP and any relevant or required credentials or certifications held by the key personnel.
5. An approach to ensuring public safety, especially along high use roads and trails within and adjacent to the project area.

Bidders may also include the following items in proposals as applicable:

1. Any change or risk management approaches utilized by the Bidder when completing projects of the type described in this RFP.

Bidder Qualifications

Bidders shall submit a statement of their qualifications for the work described in this RFP. The statement should include the following items in narrative format:

1. Experience –
 - i. Please provide a brief explanation of previous work experience with land management agencies, noting specifically any work performed on National Forests or Grasslands.
 - ii. Please provide a listing of relevant projects of similar size, scope, and total value performed by the Bidder within the past 5 years.
2. References –
 - i. Please provide three professional references, identifying as applicable any government or conservation nonprofit references.
 - ii. Provide the name, email address, and telephone number for each reference, as well as the dates of the projects during which the Bidder worked with each reference.

Failed Projects or Legal Actions

Bidders shall identify any past failed projects and the reasoning behind the failure or incompleteness. Bidders shall also identify any and all current or pending legal matters in which the Bidder or any of its principals is involved.

Pricing Schedule

Bidders shall price work according to the schedule below. If Bidders believe that an alternative method of pricing is more applicable, they may also provide an alternative pricing schedule in addition to the format requested below. The NFF, in its sole discretion, reserves the right to utilize any alternative pricing schedule proposed by any Bidders.

Prevailing wages may be required per conditions of funding sources. Due to the dynamic and changing nature of NFF funding, the NFF reserves the right to negotiate an increased cost with the selected Bidder in the event that prevailing wages become required for the work described in this RFP. Bidders are advised that recent changes to California prevailing wage law have expanded coverage to include certain fuels reduction activities when funded through state grant agreements. However, this change is based on the effective date of the applicable state funding agreement and does not apply to nonprofit organizations until July 1, 2027 (see California Assembly Bill 338).

All quantities and measurements identified in this RFP are based upon the best knowledge available to the NFF and are subject to change. Payment will only be made for actual work completed. If the opportunity to add additional funding to the work described in this RFP arises, the NFF may increase the quantities of work to be performed as part of this project, as agreed upon by the NFF and the selected Bidder.

	Task/Item - Required	Acres	Cost/Acre	Extended Cost
(a)	Mastication	362.2		
(b)	Hand Thin and Drag + Chip/Masticate	9.8		
			Not to Exceed	

	Task/Item - Optional	Acres	Cost/Acre	Extended Cost
(a)	Optional: Mastication	98.79		
			Not to Exceed	

Payment Schedule

Bidders shall submit a proposed payment schedule consistent with their proposed pricing structure. Lump sum proposals should identify invoicing milestones tied to deliverables or project phases, while time-and-materials proposals should identify the anticipated invoicing frequency, cost of materials/supplies, and the applicable rates for invoicing. Proposed payment schedules are for evaluation purposes only. The final payment structure and invoicing terms will be negotiated with the selected Bidder and incorporated into the executed agreement.

III. SUBMISSION, EVALUATION, AND CONTACTS

Bidder Selection Process:

Bid Submission

Bidders shall submit proposals containing all of the required information described above via email at the address specified below by the stated deadline:

Submission Address: maikin@nationalforests.org

Submission Deadline: 5:00 PM PDT on Friday, August 21, 2026.

Proposals submitted after this RFP closes will not be considered unless approved by the NFF. The NFF will review all proposals determined to be responsive using the evaluation factors listed below. Proposals may be deemed non-responsive for failure to submit any required information or for failure to comply with any terms of this RFP. Non-responsive proposals may be disqualified from evaluation in the sole discretion of the NFF.

Notification

If a proposal is selected by the NFF to advance to the contracting stage, the NFF will notify the successful Bidder via email by Wednesday, September 2, 2026. Once the selected Bidder has been notified, the NFF project representative will coordinate the drafting and negotiation of an NFF agreement outlining the terms and conditions of the work to be performed.

Unsuccessful Bidders will be notified via email as soon as possible after the closing date of this RFP. Please Note: The NFF **will not** share any information about the organizations submitting proposals nor any information regarding the proposals submitted by other organizations. If a Bidder has questions about its proposal, the Bidder may ask the NFF Point of Contact identified below. If an answer can be provided, the NFF will respond via email as soon as it is able to do so.

Request for Proposals Only

This is a request for proposals only and bids furnished do not bind the NFF in any way. Selection of a bid will result in the opportunity to contract with the NFF but will not guarantee a resulting contract or any amount of work. The NFF reserves the right to disqualify any incomplete or improper proposal submitted as non-responsive. The NFF may also decide not to select any proposals submitted to this RFP for advancement to contract negotiations. This request does not commit the National Forest Foundation to pay any costs incurred in the preparation or submission of the proposal or to contract for supplies or services.

Evaluation Factors and Scoring

The following factors will be used to evaluate any responsive submitted proposals. The factors, as listed, are ordered from highest priority (Level 3) to lowest priority (Level 1).

Each factor can receive a score from 1 point to 3 points. The number of points awarded will be multiplied by the priority level to determine the total score for each factor. (Example: If Price/Cost (level 3) is awarded 2 points, the total score for price would be 6 points.)

Level 3 Criteria

- Price / cost
- Equipment and contractor capability
- Timing of when contractor can begin and/or finish the project
- Past performance, references, and USFS feedback

Level 2 Criteria

- Technical proposal / proposed approach to project
- Overall strategic benefits to meeting NFF goals and grant needs, requirements, and timelines

Level 1 Criteria

- Benefits to the local community
- Relationship to local community

Point of Contact

Any questions about this Request for Proposals shall be submitted in writing to the NFF contact identified below. Questions determined to be of importance to all potential Bidders will be posted as an attachment to an updated version of this RFP at <https://www.nationalforests.org/rfp>.

Mitch Aikin
National Forest Foundation Central Sierra Project Coordinator
maikin@nationalforests.org

Bid Submission

Submit bids via email to maikin@nationalforests.org by 5:00 PM PDT on Friday, August 21, 2026.

Equal Opportunity Provider

In accordance with Federal law and U.S. Department of Agriculture policy, the National Forest Foundation is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs, or disability.

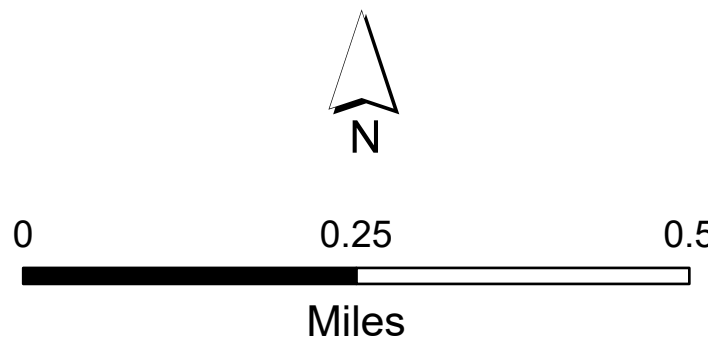
Appendix C: Project Map



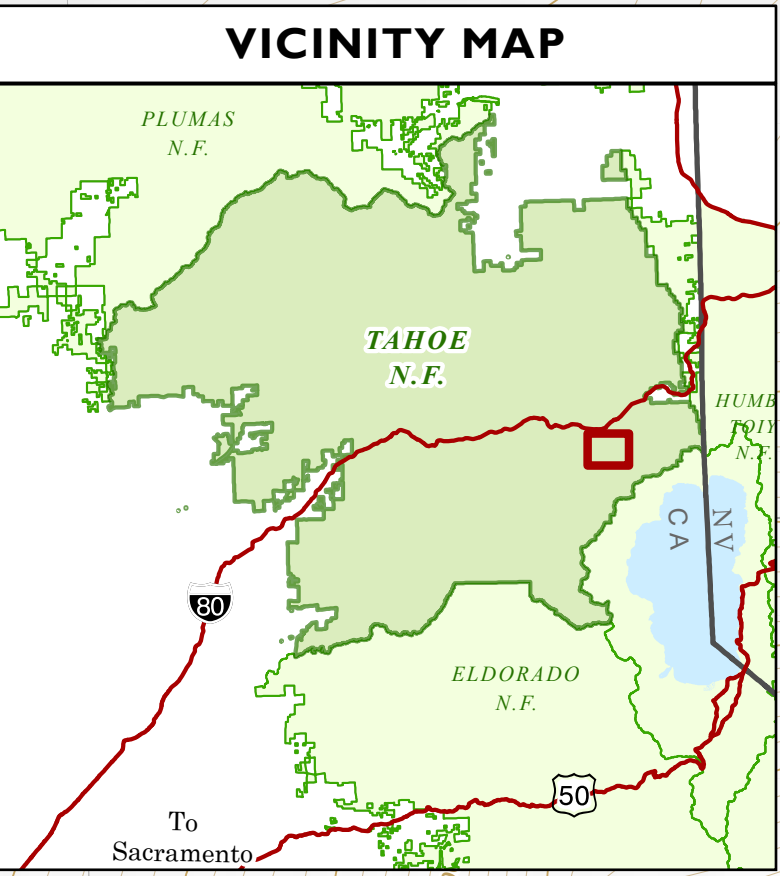
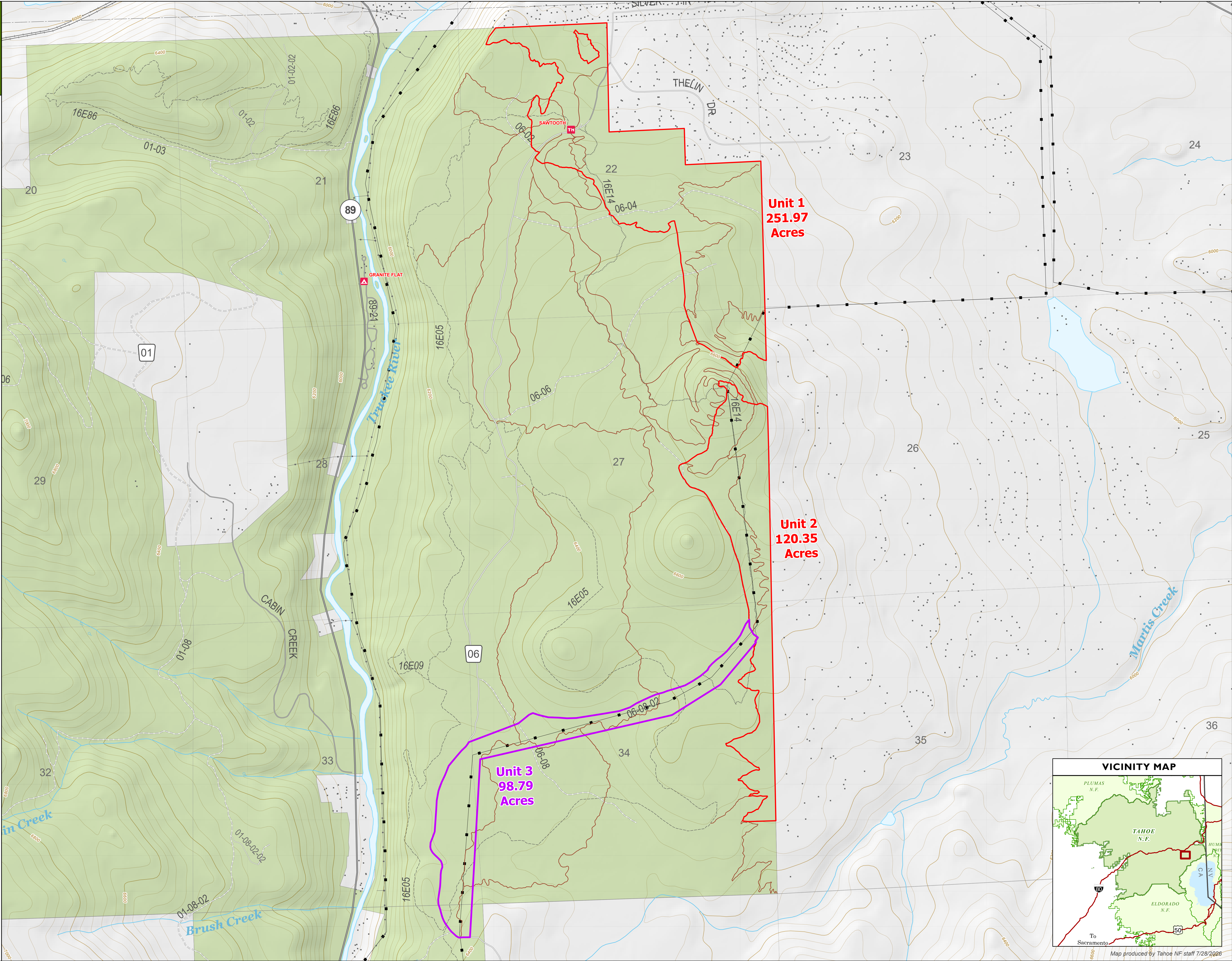
Tahoe National Forest | Truckee Ranger District

Big Jack East WUI Maintenance

- Optional Unit
- Primary Units
- Forest Boundary
- District Boundary
- FS - Other NF
- FS - Tahoe
- Interstate Highway
- State/US Highway
- Improved Road - Paved
- Improved Road - Dirt/Gravel
- Unimproved
- Private/Closed/Unmaintained
- Trail - Motorized Use
- Trail - Non-Motorized Use
- BuildingStructure
- Transmission Line
- Distribution Line
- Railroad
- PipelinePetroleum
- County Boundary
- Index Contour 40 ft
- Contour 40 ft



Note: The USDA Forest Service, Tahoe N.F. uses the most current and complete data available. GIS data and product accuracy may vary. The lines and areas represented on this map are only approximate and their actual location on the ground may vary. This information may be updated, corrected, or otherwise modified without notification.



APPENDIX E

SCHEDULE OF SERVICE ITEMS AND SPECIFICATIONS

E.1 Project Location & Description

Location: The Big Jack East WUI Maintenance Project area is located in northeastern Placer County, California, east of State Route 89 South, west of Martis Valley, and south of the Town of Truckee. It is in portions of: **T17N R16E Sections 22, 27, 33, and 34**. The project aims to provide a buffer to surrounding communities in the event of catastrophic wildfire.

Description: A georeferenced map of the treatment units will be provided. Private property boundaries will be flagged in orange and silver striped ribbon; however, the perimeter of each treatment unit will not be flagged. Sensitive areas that require resource protection measures will be identified and may or may not be flagged, this will be covered in detail during the pre-operational briefing. If map and field boundaries conflict, the field boundaries shall govern. Positions of streams and topographic features, when shown, may be approximate.

Table 1.1: Service work specification summary by treatment type.

Treatment Type - Required	Sum of Acres
Mastication	362.2
Hand Thin and Drag + Chip/Masticate	9.8
Grand Total	372

Treatment Type - Optional	Sum of Acres
Optional: Mastication	98.79
Grand Total	98.79

** See attached map for unit location, treatment, slope, and associated acres.*

E.2 Prescription (Applies to all items)

Residual Tree Spacing: All conifer trees up to 14" in diameter at breast height are to be evaluated for removal. Average spacing between "leave" trees shall be 30 feet, with distances that may vary from 25 feet to 35 feet. All vegetation will be removed beneath retained trees' drip line. Residual trees will not have interlocking crowns or exist within the dripline of other trees. Residual trees should generally cover the entire acre but should not be arranged in a grid-like fashion.

Residual Tree Selection: No sugar pines should be cut. Retained trees should be Sugar or Jeffrey pine when possible. Residual trees should be vigorous, dark green and not chlorotic, with greater than 40% live crown ratio. Trees should have good form with minimal defect and free of obvious pest and pathogens (mistletoe etc.).

Tree species retention preference:

- 1 Sugar pine
- 2 Western white pine
- 3 Jeffrey/ ponderosa pine
- 4 Incense Cedar
- 5 Red fir
- 6 White fir
- 7 Lodgepole pine

Public Safety: Some units are located adjacent to forest trails, forest roads, user created trails and private property. It is the responsibility of the contractor to provide for public safety by providing/ acquiring applicable signage and traffic control where implementation of work may impact roadways or the public.

The Contractor shall adhere to the Manual on Uniform Traffic Control Devices (MUTCD) which is the national standard for all traffic control devices (TCD). TCD are signs, markings, pavement markings, and other devices used to control traffic on all roads open to public travel. TCD shall be constructed, located, installed, and maintained according to the standards contained in the MUTCD.

E.3 SPECIFICATIONS OF SERVICE ITEMS:

Specifications

Item 1: Mastication

Mastication will occur in units as identified on the project map. Mastication work will occur using standard mastication machinery such as a boom or drum masticator. Mastication will begin at private / public ownership interface and work outward to reduce the amount of untreated material between infrastructure and possible operations fires. Masticated material will include surface and ladder fuels including woody shrubs and conifers up to 14 inches DBH. In units identified as Handwork, boom mounted mastication equipment may reach into the unit. Equipment tracks must stay out of handwork units; no soil disturbance shall occur.

Description of work:

1.1 Masticated Trees: Conifers up to 14 inches diameter at breast height (DBH) shall be cut in accordance with retention spacing requirements outlined in E.2. Stump heights shall not exceed 6 inches in height (as measured from the uphill side) with no residual live limbs attached to the stump. All snags 14 inches DBH and below will be treated. Coarse woody debris up to 18 inches diameter will be masticated.

Residual trees shall be un-damaged by contractor's operations, except for minor bark scraping which does not expose the cambium.

1.2 Masticated Shrubs: All brush (excluding Bitterbrush) and shrubs greater than 6 inches tall shall be masticated to a maximum 4 inch height. Only treat Bitterbrush (*Purshia tridentata*) that is: within the drip line of a leave tree, has a height greater than 10" or is within 100 feet of a structure.

Areas left un-masticated should include inoperable locations (steep / rocky, control areas) and areas with low lying non-sprouting species.

Areas of continuous brush will be masticated to break up continuity to prevent continuous movement of fire through brush. Brush shall be masticated to a height of no more than 6 inches from the ground or obstacles (rocks etc.).

1.3 Other Surface Fuels: Masticate all downed wood material that is greater than 3 inches, less than 18 inches in diameter and four feet in length. Dead material that is within 3 inches of the ground does not need treatment.

1.4 Masticated Material: Masticated material shall be no larger than 18 inches in length and 3 inches in diameter.

1.5 Mastication Chip Depth: Chip depth shall not exceed 9 inches and should average no more than 4 inches across the unit. Chipped material shall be broadcast away from any road, highway, system trail and drainage features. No chips shall be present on paved roadbeds or in drainage features.

Item 2: Hand Treatment

There are 5 hand treatment units comprising 9.80 acres. Specifications for these units were designed to reduce ground impacts to sensitive resources. Boom mounted mastication equipment can reach into these units. Equipment tracks must stay out of handwork units; no soil disturbance shall occur.

Hand cut material will be carried outside of the hand treatment units and placed into the mastication unit for treatment. The contractor may use mastication, chipping or a combination of both at their discretion for treatment of the hand cut material. All treatment will be subject to the chip depth requirements in 1.5 Mastication Chip Depth. All activity generated material will be treated. Maximum carry distance within these units should not exceed 300'.

Hand thin trees 11" diameter at breast height (DBH) and below, and brush greater than 6" in height. All material including live trees, snags, live shrubs, dead and down material within the parameters listed below, will be either masticated or chipped.

Description of work:

2.1 Cut live trees: All conifer trees up to 11 inches DBH shall be cut or retained to meet spacing requirements outlined in E.2. Stump heights shall not exceed 6 inches in height (as measured from the uphill side) and no residual live limbs attached to the stump.

2.2 Cut Snags: All snags 11 inches DBH and below will be cut.

2.3 Cut live shrubs: All brush and shrubs greater than 6 inches tall shall be cut to a maximum 4 inch height. Only treat Bitterbrush (*Purshia tridentata*) that is: within the drip line of a leave tree, has a height greater than 10” or is within 100 feet of a structure.

2.4 Dead and Down Material: Dead and down material less than 11” in diameter will be treated. Logs in an extreme state of decay that preclude them from being carried may be left.

2.5 Chipping Requirements: Chip depth shall not exceed 9 inches and should average no more than 4 inches across the unit. Chipped material shall be broadcast and directed away from any road, highway, system trail or drainage feature. No chips shall be present on roadbeds or in drainage features.

E.4: Protection Measures and other concerns

E.4-A: Contractor Responsibility

The Contractor shall provide everything—including, but not limited to, all equipment, supplies, transportation, labor, traffic control / safety measures and supervision--necessary to complete the project, except for that which the Agreement clearly states is to be furnished by the Government. Equipment shall be furnished on a fully operational basis, of modern design, and in good operating condition, with a competent, fully qualified operator.

E.4-B: Stream Protection Zones and other limits of operations.

This section covers requirements to meet the National BMPs for Aquatic and Hydrologic Systems and incorporates Aquatic Eco: 1-4, Veg-1-6 and Fire2.

Units with RCAs (Riparian Conservation Areas) having known areas with restricted operations regarding sensitive sites will be identified for review with contract administrators and operators. Contract maps will be reviewed prior to bid to ensure sensitive areas are adequately represented on the map or on the ground. Agreements with external contractors will identify parties responsible for actions to be conducted. **The GIS map limits may not match the ground at every location; note that flagging on the ground supersedes any GIS mapping technology. All mapping technology should be used as a tool to look for flagging or ground features that indicate equipment exclusion areas.**

RCA Management Area widths are referred to for management objectives. These widths are designated under the Sierra Nevada Plan Amendment and are incorporated for reference. These areas require additional care when checking for applicable mulching requirements and limiting disturbance.

Table 1: Sierra Nevada Forest Plan Amendment (SNFPA) Record of Decision Land Allocations

<i>RCA Designation Type</i>	<i>Width of the Riparian Conservation Area</i>
Perennial Streams	300 feet measured from bank full edge
Seasonal Flowing Streams	150 feet measured from bank full edge
Streams In Inner Gorge	Top of inner gorge if beyond 300 feet
Special Aquatic Features: lakes, wet meadows, bogs, fens, wetlands, vernal pools, and springs:	300 feet from edge of feature or riparian vegetation, whichever is greater (Includes Perennial Streams with Riparian Conditions extending more than 150 feet from edge of stream bank or Seasonally Flowing streams with riparian conditions extending more than 50 feet from edge of stream bank)
Other Hydrologic or Topographic Depressions	RCA width and protection measures determined through project level analysis.

Equipment Limitations and Markers (EKO)

Stream Course Protection Limits (equipment keep out - EKO): Stream Courses and their protection limits are on the Stewardship Agreement or Contract Area Map and/or are flagged/posted on the ground. In general, these EKO areas are designated to be a minimum of 25 feet from a riparian feature as identified by presence of a wet soil type (associated with floodplain, springs or meadows), scour, riparian vegetation, slope break to channel. The EKO boundary is based on the greatest distance from a feature including: channel bank, wet soil type associated with a floodplain, spring or meadow, riparian vegetation, and steepened slope break adjacent to channel. Widths may be increased along incised channels and where the slope directly adjacent to the channel increases. Within any stream course EKO pre-approved crossings may utilized.

Controlled Access Signs: In complex areas EKOs will be increased where hydrologic features merge and may be signed with a special designation called “controlled access” areas. Areas with this designation will be posted on the ground and/or map and will follow requirements, such as entering perpendicular to the drainages within the control area and minimizing entries within or through the control areas. These areas need coordination with the TSA and planned skidding operations.

See the GIS map limits for more information; note that ground conditions, flagging or signs supersede any GIS mapping technology. Exclusion Zones on the Agreement Map should be used as a tool to indicate ground features requiring equipment exclusion.

Draws and Minor Flow Paths: Minor flow paths and draws may be mapped. Where identified as such through mapping or a single flag line the primary protection is to cross perpendicular to the flow path minimize the number of crossings and minimize tracking through swales.

Hydrologic Features and Special Aquatic Features

Springs/Fens: The EKO limits will be increased where hydrologic features merge or drainage becomes complex, where wet soils are present, or as needed to protect spring/fen hydrology at the head of the spring.

Meadows: Tractor operations will be excluded from meadows according to the EKO identified in the field and as identified on the sale area maps. To be clear, stringer meadow/dry meadows and low gradient grasses that flow water in high flow conditions adjacent to a channel are likely to be considered a riparian feature.

Other Sensitive Features: The limits of exclusion may incorporate other hydrologic features that have sensitive soils, or seasonally hold or transport water.

Within some hydrologic features pre-approved crossings may be utilized. The Contract Administrator will review these crossing with a soils or hydrologic specialist prior to agreeing to their use with the Operator.

Equipment Operations within RCAs

All equipment operations should be limited to slopes $\leq 30\%$ where the slope is directly above and runs continuously down to a drainage feature. Keep equipment tracks from moving directly up and down drainage pathways and minimize all equipment movement through swales (typically mapped as ephemeral drainages and having only a single flag line or is a mapped feature). Equipment will avoid seasonally wet areas but will be allowed to reach into the EKO of these locations to meet site objectives. When equipment is operating inside RCAs near the hydrologic feature, minimize ground disturbance with short perpendicular entries into the RCA.

Equipment will not cross seasonal streams except at pre-approved designated crossings. Within RCAs all bare ground resulting from equipment operations will be mulched to standards.

Standard Logging Equipment in RCAs

- **Skid Trail and Other Equipment over Approved Stream Crossings:** Areas identified for stream crossings with skid trails on dry Class III streams and dry Class II intermittent streams will retain the original stream channel configuration. Crossings should be pre-identified during planning. Crossings should be perpendicular to flow and avoid locations near joining tributaries. These skid trail crossings will be constructed with logs, bows, or other pre-approved materials (Humboldt crossings, clean rock, and culverts) and will adequately pass all expected flows. Filter cloth or brow logs designed to prevent discharge of earthen materials to surface waters will be designed to allow for clean removal of installed crossing materials.
- **Low Ground Pressure Equipment over Approved Stream Crossing Locations.** Where low ground pressure equipment can be used to cross channels without disturbance they may be walked across seasonal drainages when no water is present and soils are operable. Crossings must be agreed to by the forest contract administrator and the Operator prior to use. Crossings will be perpendicular to flow and avoid locations near joining tributaries. Crossings should be designed to prevent or minimize the discharge of sediment into water bodies (BMP 4.7).
- **Removal of Crossing Materials.** Crossing materials will be removed as soon as possible following treatment and will be implemented by October 15th of that year. All crossing materials on seasonal channels that consist of additional fill will be removed immediately after use when operating after October 15th of that year. Excess materials must be hauled off site. existing roads

and equipment crossings need to protect and maintain the configuration of bed or banks of the stream channel during operable soil conditions.

- **All Approved Drainage Crossings:** Drainage crossings should meet the terms and requirements of the CVWQCB.

Target Vegetation

All fuels prescriptions and vegetation management operations will be planned to protect riparian vegetation along hydrologic features and in identified meadows and sensitive areas.

E.4-C: Erosion Control

This section covers requirements to meet the National BMPs for Vegetation Management and incorporates Veg: 2, and Fire-2.

Ground Cover Requirements- All Activities:

To protect against accelerated erosion and hydrophobicity and to maintain long-term soil productivity, the following guidelines should be applied during the planning and implementation of fuels treatments and vegetation management. All necessary erosion control measures for logging operations/vegetation management will be implemented as soon as possible after logging operations/vegetation management cease or vegetation management in the area and prior to runoff-producing rainfall. All erosion prevention measures will be implemented by October 15th. For harvest activities approved to continue beyond October 15th, erosion control work shall be kept current immediately preceding expected seasonal periods of precipitation or runoff.

General Vegetation Management

All areas disturbed must be stabilized as defined in the waiver (Attachment A) means: "exposed soils and unstable areas have been treated in such a manner that there is low risk of such soils discharging to a waterbody via runoff, slumping, or wind erosion."

Ground Cover Requirements within RCAs Post-Implementation

Mulching will occur over bare ground created by management activities within RCAs with particular attention paid near the hydrologic features. Upland areas of the RCA will meet the General Ground Cover requirements within the RCAs.

- On soils with low to moderate erosion hazard ratings (0-25% slope), maintain 70% ground cover.
- On soils with very high erosion hazard ratings (greater than 25% slope), maintain 75% ground cover.
- Near stream zones for perennial streams and intermittent streams or seasonally wet areas with riparian and meadow features, approximately 75% ground cover will be required. Large patches of bare ground will be mulched. Within EKO's, ground cover should meet an average of 2 inches in depth and a maximum of 4 inches with 85% ground cover.

- Mulch will be required on endline drag channels that exceed 4 inches depth on greater than 5% slopes in RCAs and 10% slopes on adjacent uplands where endlining is required.
- All areas disturbed from project implementation will be stabilized before the winter period or at conclusion of operations whichever is sooner.

Mulch

Any bare ground resulting from operations will be mulched as needed to maintain ground cover requirements. Native mulch from adjacent areas is preferred (pine needles, slash or wood chips). Certified weed-free mulch could be used if no native materials are available. Mulch depth will be 2 inches and no greater than 4 inches on average across the area.

Roads and Mechanical Equipment

- Follow requirements for Refueling and Servicing of Equipment, follow Wet Weather Period requirements.
- If a local water source is used for fire control or dust control see Section H: Drafting Sites
- Refer to Section I: Hazardous Waste, Spills and Pesticides as needed/

Follow maintenance requirements for roads as necessary.

E.4-D: Soils: All Mechanical Actions and Prescription Burns-Uplands

This section covers requirements to meet the National BMPs for Vegetation Management and incorporates Veg: 1-6, and 10 and Fire-2.

Downed Large Wood Requirements

Maintain downed wood retention adequate to contribute to organic matter while attaining desired conditions. Retain large downed wood while meeting fuels objectives (small areas of moderately heavier concentrations that are not continuous on the landscape).

All down logs greater than 15 inches diameter and 10 feet long will be retained. Crushing of logs with equipment will be avoided. Target down log levels post fuels treatments would be approximately 5 of the largest logs available per acre.

Soil Dryness Criteria in RCAs

Specific harvesting equipment restrictions relating to dry soils are as follows:

- Mechanical equipment would only be operated when soil moisture is less than 20 percent by weight, or when soils are considered operable. The ball method can be used to test for operability. This protocol includes digging a small pit and sampling 4 to 6 inches below the mineral soil surface (i.e., below the surface litter), collecting enough soil to form a 1- to 2-inch ball with hand pressure, picking out excessive rock fragments, and squeezing the ball with 6 directional squeezes. If the ball that is formed holds together under repeated tosses 1 to 2 feet into the air, then the soil would be too wet for equipment operation.

Sensitive Soils in RCAs

All equipment operations will be excluded from Aquoll and Boroll soil or Cryumbrepts-wet soils. These sites are primarily covered within Hydrologically Sensitive areas and provided in a GIS layer. See section B.

E.4-E: Mechanical Operations Uplands

This section covers requirements to meet the National BMPs for Vegetation Management and incorporates Veg: 1-6, and 10.

Other Equipment Operations (Mastication or Other)

Equipment used for fuels and slash treatment will minimize turning which results in ground disturbance. Ground based mechanical equipment will be restricted to slopes less than 30% with specified exceptions including:

- a) On slopes up to 35 percent, low-pressure (i.e. high floatation and/or dual tire) equipment can be used. On slopes up to 40 percent, tracked equipment can be used. While the Forest Service may approve steeper pitches, less than 100 feet, generally on slopes above 40 percent, tethered equipment will be used.
- b) Rutting during operations should not exceed 6 inches depth.
- c) Non-tethered uphill or adverse skidding is restricted to less than 25% in RCAs and 30% elsewhere.
- d) Additional precautions or repairs may be required if excessive disturbance occurs.

Endlining

Trees within the EKO that are marked may be removed by reaching in or Directionally Felled and end lined out of the EKO. Endline furrows created by activities should be disrupted by pulling back the berm or waterbar along the length. Raw ground within the RCA should be mulched. Measures should be effective enough to minimize runoff furrows and prevent erosion or capture of water flows.

Soil Dryness Criteria All Equipment: Mechanical equipment would only be operated when soil moisture is less than 20 percent by weight, or when soils are considered. The ball method can be used to test for operability. This protocol includes digging a small pit and sampling 4 to 6 inches below the mineral soil surface (i.e., below the surface litter), collecting enough soil to form a 1- to 2-inch ball with hand pressure, picking out excessive rock fragments, and squeezing the ball with 6 directional squeezes. If the ball that is formed holds together under repeated tosses 1 to 2 feet into the air, then the soil would be too wet for equipment operation.

E.4-F: Prescribed Fire General Uplands

This section covers requirements to meet the National BMPs for Fire-2 and Plan-3.

Equipment Piling

- Equipment used to pile fuels must be low ground pressure equipment. Materials piled must be free of dirt and debris. Equipment keep out (EKO) limits apply as described in Section B unless specified as an exception for the area.
- Equipment should minimize turning which results in ground disturbance. Reference slope limitations on Other Equipment Operations. Specialized equipment designed for steeper slopes may need additional erosion control measures after operation to smooth out furrows or add cover to meet Forest Plan Standards for soil.
- Equipment piles must not be located within a 100-year floodplain, and must be 25 feet from a Water Body and special hydrologic features, avoid placement in swales and road drainage ways.

Hand Piling

Burn piles in EKO must not be in a 100-year floodplain, must be 25 feet from a WB, be limited to 10 feet in diameter, and cover no more than 10 % of a treatment acre in a EKO (applies to ephemeral drainages where slope exceeds 50 %). Otherwise, maintain piles 25 feet away from drainage scour, or the burn pile activity will follow Attachment Q of Board Order R6T-2014-0030.

E.4-G: Roads

This section covers requirements to meet the National BMPs for Roads and incorporates Roads: 1-6, and 10.

Road Management:

Use of Low Water Crossings on Class I and II drainages on existing roads will incorporate additional measures during haul if needed and where water is flowing in order to prevent sediment transport from increased travel through drainages. This may include additional rock and culvert installations based on site conditions. A 1 foot covering of weed-free straw mulch will be placed between the natural channel and imported fill so no additional fill remains in the existing channel. Fill will be removed to the previous existing dip configuration by October 15th or the first opportunity if conditions allow operations to continue past this date as described below. If such measures are needed the treatments associated with access routes needing these measures will require inclusion as Category 6 Timber Waiver.

Crossings proposed in association with temporary roads will be designed to provide measures to pass flows, and may include extra protection measures, such as gravel, culverts or drainage controls when needed. Typically, the flow volume through these crossings is low and there is a low risk of significant precipitation during the operating period.

Maintain roads to the pre-existing standards for all roads used to provide access. This work includes grading, clearing, ditch and culvert cleaning and repair. The repair work associated with these projects is the maintenance work to repair and restore the road to

accommodate the planned traffic and be consistent with the existing traffic service level, water quality objectives, and Road Management Objectives.

Road Management Objectives for roads that are classified as ML-1 or ML-2 closure would provide measures that discourage OHV use. ML-1 road closure will restore the road bed to hydrologically neutral and may include removal of culverts, dips and blocking. ML-2 closure would provide measures that discourage OHV use and restore the surface features to existing road standards.

Closure can include implementing heavy slash (recommend 200 feet distance, unless unnecessary), rock or tank traps in areas with nearby OHV use, or can include felling, high stump cutting, tank traps and boulder placement to aid in blocking access to closed roads.

Road Dust Abatement: Water will be used on major transportation routes for dust abatement. Water will be preferred except on roads where distance limits practical application of water. Alternative palliatives would be used in accordance with T Spec 806, and cannot be applied within a 25 foot buffer from any flowing water; this includes culverts or bridges that are currently flowing water.

Refueling and Servicing: Refueling will be conducted on areas located away from drainages, wetlands and other waterbodies so that threat of a spill entering a body would not occur through runoff or soil contamination and infiltration of fuels to ground waters. Also refer to Section I below for controlling accidental spills and spill plan and preparedness requirements.

Wet weather clauses are included to limit operations in inclement weather when soils deform or compact so road rutting and deformation do not become significant. Temporary crossings will be removed the same season they are installed, and removal will occur no later than October 15th of the season of installation, or upon the first opportunity where conditions allow operations to continue past this date. No new permanent roads were identified within the proposed action.

E.4-H: Drafting Sites

Water Sources: National BMP Water Uses-3

- Use an approved water source for obtaining water. Water drafting sites in the project area will be established on permanently flowing streams that have sufficient flow to avoid depletion of pool habitat.
- Install screens on water intake lines to prevent entrainment of biota.
- Do not overfill tanks when collecting water as this can lead to increased sedimentation to the stream channel.
- Do not back water trucks beyond the established access developed to access the water source.
- If use of a water source creates sediment movement on access route, apply clean crushed gravel or other means to control sediment, and maintain water quality.

- If a water drafting source within the 100-year floodplain is not currently rocked and added controls are needed to prevent sediment from washing into the water source, use straw bales, staked waddles or other methods to filter sediment.
- Ensure that prohibited discharges to 100-year floodplains do not occur from the maintenance or repair of an existing waterhole within the original footprint. See: Timber Waiver Waste Discharge Prohibition Exemption Information Page 9 of 10 (Attachment N).

For fish-bearing streams:

- The water drafting rate should not exceed 350 gallons per minute for streamflow greater than or equal to 4.0 cubic feet per second (cfs);
- Below 4.0 cfs, drafting rates should not exceed 20% of surface flows;
- Water drafting should cease when bypass surface flows drop below 1.5 cfs.

For non-fish-bearing streams:

- The water drafting rate should not exceed 350 gallons per minute for streamflow greater than or equal to 2.0 cfs;
- Drafting rates should not exceed 50% of surface flows;
- Water drafting should cease when bypass surfaced flows drop below 10 gallons per minute.

E.4- I: Hazardous Waste, Spills and Pesticides

This section covers requirements to meet the National BMPs for Chem 3, Chem 5, and Chem6.

Spill Prevention Control and Countermeasure Plan

Have an approved Spill Prevention Control and Countermeasure plan.

- Ensure that contractors and permit holders provide documentation of proper training in handling hazardous materials.
- Fuels and other toxic materials will be stored outside of RCAs and critical aquatic refuges.
- Plan for appropriate equipment refueling and servicing sites during project planning and design.
- Allow temporary refueling and servicing only at approved locations, which are well away from water or riparian resources, outside of RCAs.
- Develop or use existing fuel and chemical management plans (for example, spill prevention control and countermeasures (SPCC), spill response plan, emergency response plan) when developing the management prescription for refueling and servicing sites.
- Provide training for all personnel handling fuels and chemicals in their proper use, handling, storage, and disposal.
- Avoid spilling fuels, lubricants, cleaners, and other chemicals during handling and transporting.

- All equipment used must be monitored for leaks. Spills must be immediately contained and spilled materials and/or contaminated soils must be properly disposed. An emergency spill kit adequate to contain spills that could result from onsite equipment must be at the project site at all times of equipment use.

E.4-J: Other Resource Considerations (all units)

1. All eligible prehistorical and historical properties would be protected from ground disturbing equipment. Site boundaries would be flagged and equipment and crews would remain outside of that boundary. Hand removal of vegetation would be required in selected sites with slash piled outside of the site boundary for later disposal.
2. The district archaeologist and NFF's oversight forester would work closely with operators during implementation to ensure that ground disturbing activities do not occur within designated archaeological site. Eligible sites would be monitored during and after mechanical treatments.
 - a. NFF's Registered Professional Forester (RPF) will notify the FS Sale Admin and District Archeologist when the implementation contractor is entering a new unit containing exclusion areas (as defined by the Appendix C contract map).
 - b. NFF's Implementation Contractor and NFF's RPF will have a field meeting before entering any new unit with exclusion areas. If any potential language barriers exist, the implementation contractor will utilize a translator to ensure a full understanding of the exclusion areas is clearly communicated to all operators.
 - c. NFF's Implementation Contractor will not operate within 100ft of any exclusion area without direct on-site oversight by an NFF delegate. NFF delegates include NFF's Implementation Contractor Timber Manager, NFF Staff, or NFF's Oversight Forestry Consultant representative. Forest Service delegates (i.e. Heritage Staff, Sale Admin, or Harvest Inspector) may be requested for oversight on a limited basis. If no NFF or FS oversight is available, the implementation contractor will not work within 100ft of any exclusion area.
 - d. NFF's Implementation Contractor will clearly and proactively communicate their schedule to NFF's RPF to facilitate the aforementioned mitigation measures.
3. Cultural Resource Sites: Any cultural resource sites not evaluated prior to mechanical operations will be considered as being eligible for the National Register and will be protected. Archaeologist will be consulted during layout of units that have been identified during project reconnaissance. The areas of concern identified during project reconnaissance will be flagged. These areas will be avoided during operations. Coordinate with archaeological specialist to ensure measures are in place to avoid, flag and avoid, and/or monitor cultural resource sites.

4. Northern goshawk nest: If any active goshawk nest is identified within the boundaries of the project area or directly adjacent to the project area (within 0.25 miles) a buffer would be placed around the active nest and at the discretion of the District Biologist a species specific Limited Operating Period (LOP) may be put into place for the buffer zone.
5. Raptor nest: If any active raptor nest is identified within the boundaries of the project area or directly adjacent to the project area (within 0.25 miles) a buffer would be placed around the active nest and at the discretion of the District Biologist a species specific Limited Operating Period (LOP) may be put into place for the buffer zone.
6. Wildlife TES species: If any Federally threatened, endangered, proposed, or Forest Service sensitive species previously unknown in the project area are detected or found nesting or present within 0.25 miles of project activities, appropriate mitigation measures would be implemented based on input from the aquatic biologist, botanist, and/or wildlife biologist. Measures can include, but are not limited to, flagging and avoiding a plant site, implementing a species specific LOP, or designating a protected activity center.
7. All occurrences of sensitive plants, including all found at a later time, should be flagged and no ground-disturbing activities should be implemented within the flagged areas. Monitoring should take place during project activities and directly after project activities culminate in the vicinity of sensitive plant occurrences to ensure protective measures are sufficient. If impacts to a sensitive plant occurrence are detected, monitoring should take place to determine whether or not the occurrence is still extant (has not been extirpated) and to determine whether impacts will have lasting adverse effects.
8. Botanical Resources: Undetected botanical resources: Any additional TES or TNF Watch list botanical species or other botanical resources discovered prior to or during implementation should be flagged with and avoided completely until it can be assessed for impacts by botanist.
9. Invasive Plant Avoidance areas—
 - a. During all project activities (including prescribed fire), avoid any invasive plant infestation that has not been treated prior to implementation and a 50-foot buffer. Avoidance areas will be flagged in the field, identified on project maps and provided to contractors. Flagging in the field trumps mapped avoidance areas. Invasive plant flagging is orange with “noxious weeds” or “invasive species” lettering.
 - b. Coordinate with botanist at least 60 days before implementation to plan treatment and/or avoidance flagging.

10. Invasive Plant Prevention: Equipment Cleaning—All equipment and vehicles (Forest Service and contracted) operating off-road must be free of invasive plant material before moving into the project area. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material or other such debris. Cleaning shall occur at a vehicle washing station or steam-cleaning facility before the equipment and vehicles enter treatment units.
11. Invasive Plant Prevention: Weed-free construction materials—All gravel, aggregate, fill, mulch, topsoil, erosion control materials and other construction materials are required to be weed-free. When possible, use onsite materials, unless contaminated with invasive species. Otherwise, obtain weed-free materials from sources that have been certified as weed-free.
12. Invasive Plant Prevention: Early Detection—Any additional infestations discovered prior to or during project implementation should be flagged and avoided. Report new infestations.
13. 30-inch dbh Trees: Live conifer trees 30 inches dbh and larger would be retained. Exceptions to this standard would be allowed for equipment operability and trees that pose a hazard as defined by Hazard Tree Guidelines for Forest Service Facilities and Roads in the Pacific Southwest Region.
14. **Down Woody Material:** Retain the largest available down logs (larger than 15 inches diameter and ten feet long). Crushing of large down logs with machinery should be avoided.
15. All specified roads and recreational trails shown on Agreement maps shall be left in the original condition existing prior to the commencement of work on this Agreement. Any water bars on skid trails disturbed by the Contractor's operations shall be restored to the condition prior to damage at the Contractor's expense. Excessive slash and chips cannot be left in the roadways and recreational trails after end of each work day. **All cut vegetation shall be kept within unit boundaries. If slash is felled onto the roadways or recreational trails, it must be removed by the end of each workday.**
16. Protection of Improvements: Contractor shall protect improvements from damage and shall be responsible for their timely restoration if damaged by Contractor's Operations. There are two water diversion improvements located within the project area that will identified and shall need to be protected from any disturbance. If relocation or removal of said improvements is necessary to avoid foreseeable damage by Contractor's Operations, work and cost shall be borne by the contractor. Improvements shall be returned to their original locations following Contractor's Operations.
17. **Servicing and refueling equipment:** Areas shall be located at a minimum of 300 feet from

streams and other wet areas. In case of a HAZMAT spill, the material shall be immediately contained and the Forest Service shall be immediately notified.

Restrictions on Work

Work may be performed at any time during the period of the Agreement, except as outlined here. Nothing in this part shall be construed to take away any of the Government's rights under the Suspension of Work Clause (52.242-14). Restrictions are as follows:

1. In accordance with the fire plan.
2. When the Agreement Officer (or designated representative) determines that adverse weather has made access too dangerous or that continued vehicular travel would cause unacceptable road damage.
3. When the Agreement Officer (or designated representative) determines that continued operation may be injurious to leave trees.
4. If any Sierra Nevada yellow-legged frog is found at any time during implementation of this Project, cease operations in the vicinity of the frog, vacate the immediate area and leave the frog alone. If possible, take a photograph of the frog as follows: top looking down, and side view. No activity will occur in that area until such time as the frog has vacated the area on its own volition. With the exception of a U. S. Fish and Wildlife Service approved biologist, do not handle Sierra Nevada yellow-legged frogs. Report the occurrence as soon as possible to the COR or Designated Representative. Project activities would be halted and USFWS would be contacted to start consultation as required by law.

Public Safety

The Contractor shall provide for public safety when operating equipment within 200 feet of open roadways and trails by posting cautionary signs warning of hazardous work ahead. Warning signs (at least two, one for each direction) shall be posted on roads. These shall be located 200' from the intersection of the road and unit boundary at each edge of the unit. Signs shall be posted whenever working to alert oncoming traffic of the safety hazards associated with the operation. Trails must also be signed unless administratively closed by the Government. Signs shall include phrases similar to "Caution, tree falling stay back 200 feet" and be no less than 3 feet X 3 feet in size. Lettering shall be at least 6 inches in height. **High use trails may require personnel posted on trail to guard public entrance into 200 foot equipment operating area. Where haul route coincides with high recreational use along system roads, an area closure should be considered.**

Accessibility: Most areas are accessible with a 2-wheel drive vehicle after snowmelt. The Government assumes no liability to perform special road maintenance to keep roads open to the project area.

Maps: Maps showing the general vicinity and/or specific work areas are included in *Appendix C*. Maps are general in nature and are not to be considered as definitively identifying locations.

Any prospective Contractor desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing from the party responsible for the agreement soon enough to allow a reply to reach all prospective contractors before the solicitation closing date. Oral explanations or instructions given before award of the agreement will not be binding.

A Public Information Plan will be developed prior to project implementation as a joint effort between the NFF and USFS. The intent of shared public information would be to inform interested parties and residents regarding trail or road closures, the foreseeable schedule for project implementation.

Flagging Identification:

- Boundary: pink flagging and black-white checkered flagging
- Cultural Sites: Blue & Black Striped and/or White with Orange Poke-a-dots
- Riparian Buffers: Blue & White Striped
- Botany (Sensitive Plants): Orange & White with the letters, “ESA”
- Botany (Noxious Weed): Orange with the words, “Noxious Weeds
- Wildlife (Aquatic/Wildlife Sensitive Area): White with Red Dots

E.5 INSPECTION AND ACCEPTANCE PROCEDURES

Specific Inspection Procedures

The contractor will be required to submit self-inspection forms to be reviewed and subsampled prior to payment or acceptance of work. Plot centers will be marked with flagging so that plot centers can be relocated for spot checking purposes. Government representatives and NFF may inspect all or none of the inspection plot locations to verify accuracy. Inspection forms must be submitted to government representatives in a timely manner and should allow up to 10 days for review prior to acceptance of work. Each plot center will include the plot number, unit number, date and inspector’s initials written on the flagging. A plot inspection form will be used to record the findings and will be submitted to the government. Inspection forms will record the following information on each plot:

Performance measures for sub merchantable tree and shrub mastication

1. Spacing of residual trees, brush and shrubs
2. Status of residual tree health (greater than 40% live crown, free of obvious signs of pests and pathogens)
3. Location of residual trees (no interlocking crowns or present within dripline of other trees)
4. No snags less than 12 inches DBH present
5. Height of stumps (<6 inches)
6. Presence of live target shrub species (green leaf manzanita, snowbrush, white thorn)
7. Height of stems of shrubs

Performance measures for surface fuels removal

1. presence of coarse woody debris within stipulated ranges (>4 feet in length and 3 inch diameter and < 12 inches diameter)

Performance measure for mastication

1. Size of masticated material (<24 inches length, 3 inch diameter)
2. Depth of chips shall not exceed 9 inches and will average no more than 4 inches across the unit.

Performance measure for chipping

1. Depth of chips shall not exceed 9 inches and will average no more than 4 inches across the unit.
2. Location of chips (outside of roadways, trails, drainages, adjacent to infrastructure etc.)

Performance measure for pile creation

1. Location of piles
2. Height of piles
3. Diameter of piles
4. High pile density (no light, airy piles)
5. Form of pile (conical)
6. Presence of proper sized covering in proper location

A series of 1/50th acre plots (16.7 foot plot radius) per every 5 acres, with a minimum of three plots per unit, will be sampled by a fixed series of plots evenly distributed over the entire treatment area. The plot size will be a fixed radius measured in horizontal distance with the exception of basal area plots within Item 5 “merchantable material” will be completed using a 10 BAF plot.

On each plot the designated inspectors will record the plot number, whether the plot is satisfactory or unsatisfactory and the reason if unsatisfactory. Each plot will be examined to record findings on individual items as listed below. To be considered satisfactory these items must meet the following criteria:

Government Inspections

Government inspections are for the purpose of satisfying the Government that the services are acceptable and do not relieve the Contractor of the responsibility for maintaining quality control.

The Agreement Officer's Representative or designated inspector will conduct all inspections. The Contractor (or designated representative) is encouraged to be present to observe inspections. Summary results will be made available on request.

Compliance Inspections. Visual compliance inspections will be made on a periodic basis. Such inspections are not final and do not constitute acceptance by the Government.

Final Inspections. Final (formal) inspections for payment will be made on completed sub-items only. The Contractor shall request final inspections in writing and give the Forest Service at least two working days advanced notice. Inspection forms will be provided to the Forest Service at the time of final inspection request. Inspections will be completed within ten working days after the notice is received. If the work is not ready for inspection at the time specified by the Contractor, the cost associated with the inspection attempt may be charged to the Contractor.

Disputed Inspection.

The Contractor may request re-inspection without rework if the results are unacceptable. Re-inspection must be requested in writing within 48 hours after receiving written notice of the inspection results. Re-inspection will be accomplished within five working days after receipt of the Contractor's written request.

The same sampling and inspection procedures will be used, but new samples will be taken. The inspection pattern will be shifted so that new samples will not overlap previously inspected samples. Results will be rounded to the nearest whole percent.

If re-inspection results are within five percentage points of the first inspection, the original inspection result will be used in determining acceptability and payment. If re-inspection results are greater than five percentage points above or below the first inspection, the re-inspection results will be used.

If the re-inspection results are within five percentage points of the first inspection, the Contractor shall pay the actual costs of the re-inspection.

Re-inspection after Rework. Where rework after a failed inspection may improve the inspection results, the Contractor may rework the area and request (in writing) a second inspection. The Government will charge to the Contractor the cost of this additional inspection. Re-inspection will be accomplished within five working days after the notice is received. The results of the second inspection will be final, and no further rework will be permitted. Areas not ready for re-inspection at the time specified by the Contractor will not be re-inspected, and the results of the first inspection will be final.

E.6 Definitions:

Conifer – Typically an evergreen tree, which usually has a single well-defined trunk and/or attains a height greater than 20 feet (i.e. pine, spruce, and fir species)

Control Area (Cultural and/or Threatened and Endangered (T&E) Sites) - Areas delineated by orange and white candy cane flagging for the purpose of protecting resources of concern. Locations where special protection is required to preserve and protect cultural values and species of plants or animals listed on the T&E list.

Crown Ratio – The portion of the total vertical tree height that is occupied by the vertical length of the tree crown.

Damaged/Diseased Tree – Any tree with one or more of the following:

1. Broken or dead top, regardless of cause.
2. Vertical orientation of bole is lost.
3. Visible disruption of roots.
4. Dead or dying limbs/foliage within the upper three-fourths of the live crown

DBH – Diameter of trees measured at breast height (4.5 feet above ground, upslope side of tree).

Diameter - Other vegetation (not trees) is measured 1 foot above ground

Dominant/Co-dominant Tree – Trees generally of good vigor due to being the larger trees in the stand and their crowns receiving full sunlight from above and on much of the sides.

Excess Tree(s) – A tree or group of trees that is left, but should have been cut to meet spacing or trees-per-acre requirements.

Existing Down Woody Material – All logs, stems, limbs and tops of trees and brush, which are dead and lying on the ground prior to Contractor beginning operations.

Hardwood - A broad-leaved tree, which usually has a single well-defined trunk and/or attains a height greater than 20 feet. (i.e. aspen and oak species). Sprouting hardwood species may be in the form of multi-stemmed clumps.

Jackpot - Concentration of slash or natural fuels, heavier than the surrounding areas.

Ladder Fuels - Fuels that provide vertical continuity between the ground and the tree crowns thus are creating a pathway for surface fire to move into the overstory tree crowns.

Leave Tree – A Dominant or Co-dominant tree, which is free from Damage/Disease, or a tree less than the desired DBH specified, and is left uncut (or should have been left uncut) by the Contractor to meet desired spacing or trees per acre requirements. Any live tree greater than 20 inches dbh are automatically considered to be Leave Trees.

Leave Tree Clump – A group of 3 to 12 Dominant and Co-dominant trees in close proximity to one another, which is left (or should have been left) by the contractor to increase stand diversity.

Mobilization - The act of delivering all ordered personnel and equipment to the project area. The price for mobilization shall be included in the proposed unit prices.

Percent Cover – Portion of the project area beneath the drip line of vegetation to be cut or left untreated. Percent cover and treatment will be specified in C.8-2 Specifications.

Reserved Trees or Reserved Areas - Individual species of trees or certain areas within a treatment unit that the contract or COR designates are reserved from treatment.

Residual Tree: See “Leave Tree”

Shrub (or brush) - Vegetation consisting of woody perennial plant smaller than a tree, usually having permanent single or multiple stems originating at or near the ground level not normally reaching 20 feet in height (i.e. bitter brush, manzanita, ceanothus, mountain mahogany, rhododendron, serviceberry, sagebrush, etc.).

Slash – Any cut vegetation and/or existing naturally (dead and down) woody debris. This includes stems, limbs, down logs, and brush that existed from previous activities or was generated by the contractor during current activities. Diameter to be piled, chipped, or removed will be specified. Limbs less than 1 inch in diameter and 2 feet in length are not defined as slash and may be left scattered on the forest floor.

Snag – A dead or living tree that has 10 percent or less live crown.

Superior Vigor Trees – Trees which exhibit healthy, dark green needle color. Needle length is longer, and reaches further back on branches. Needle length on inferior vigor trees is shorter and often tufted nearer branch tips. Recent height growth is also greater on Superior Vigor Trees. May not always be the largest/tallest tree.

Supervisor (foreman) - A working (English speaking) supervisor, who is knowledgeable and experienced in the required work and supervision, shall be provided for each crew and is required to stay with the crew while work is in progress. If crew is non-English speaking, the supervisor must be bilingual in English and the language of the crew members.

Suppressed/Intermediate Tree – Trees generally of poor vigor due to being overtopped or crowded by larger trees. The crowns of these trees usually receive little or no direct sunlight.

Undesirable Vegetation – Conifer trees less than 20.0 inches dbh with one or more of the following attributes:

1. Damaged/Diseased Trees.
2. Trees with Suppressed and/or Intermediate crown position classification.
3. Excess trees not selected as Leave Trees.

Water Body Buffer Zone (WBZ) - A 25 to 300 foot area extending upslope on each side of a stream channel or as described in C.8.2 Specifications.

Wildlife Clumps – An area usually between 1/100 acre and 1/4 acre in size, where no trees have been cut or no trees should have been cut. Wildlife clumps are ideally somewhat denser than the surrounding forest area, and are usually dominated by smaller trees, with fuller crowns. These clumps of trees tend to break up horizontal visibility through the stand, and offer various wildlife species a greater degree of cover and nesting possibilities

APPENDIX G

GUIDELINES FOR OPERATIONS

The following Guidelines for Operations apply to activities under this SPA, when relevant to the project. These guidelines are intended to clarify the expectations of the parties related to these specific areas of operations.

1. **Stewardship Project Area Map (Map).** This is the boundary of the Stewardship Project Area and designated on the ground by the Forest Service to meet the anticipated needs of the parties. The following are identified on the Map:
 - a) Identified patented claims.
 - b) Boundaries of all harvest and stewardship treatment units.
 - c) Diameter limits for overstory and understory removal units.
 - d) Areas where leave trees are marked to be left uncut.
 - e) Specified roads.
 - f) Sources of base course, surface rock, and rock riprap listed in the Schedule of Items;
 - g) Roads where log hauling or use is prohibited or restricted.
 - h) Roads and trails to be kept open.
 - i) Improvements to be protected.
 - j) Locations of known wildlife or plant habitat and cave resources to be protected.
 - k) Locations of areas known to be infested with specific invasive species of concern.
 - l) Maximum stump heights when more than one height is listed by areas.
 - m) Skidding or yarding methods.
 - n) Streamcourses to be protected.
 - o) Locations of meadows requiring protection.
 - p) Locations of wetlands requiring protection.
 - q) Locations of temporary roads to be kept open.
 - r) Payment units, if required
2. **Use of Roads by the Partner.** Contractor is/are authorized to use existing National Forest system roads and specified roads. The Parties will determine that such use will not cause damage to the roads or National Forest resources.
3. **Plan of Operations for Roads.** Annually, prior to start of operations, Contractor will prepare a supplement to the Technical Proposal that shall include a schedule of proposed maintenance and construction progress and a description of planned measures to be taken to provide erosion control for work in progress, including special measures to be taken on any segments of construction not substantially completed prior to periods of seasonal precipitation or runoff. Contractor shall submit a revised schedule when they propose a significant deviation from the progress schedule. Prior to beginning construction on any portion of specified roads identified as sensitive on plans, the parties shall agree on the proposed method of construction and maintenance.
4. **Protection of Residual Trees.** Contractor's operations shall not unnecessarily damage young growth or other trees to be reserved.

5. **Safety.** Contractor's operations shall facilitate the Forest Service's safe and practical inspection of CONTRACTOR's operations and conduct of other official duties on the Stewardship Project Area. CONTRACTOR has/have all responsibility for compliance with safety requirements for CONTRACTOR's employees.

When operations are in progress adjacent or on Forest Service controlled roads and trails open to public travel, CONTRACTOR shall furnish, install, and maintain all temporary traffic controls that provide the user with adequate warning of hazardous or potentially hazardous conditions associated with operations occurring in the area. The parties shall agree to a specific traffic control plan prior to commencement of work. Devices shall be appropriate to current conditions and shall be covered or removed when not needed.

During periods of general recreation activity within Stewardship Project Area or vicinity, the Forest Service may restrict road construction, timber cutting, yarding, and other harvesting operations to days other than Saturdays, Sundays, and holidays.

LOGGING AND MAINTENANCE OPERATIONS SIGNING STANDARDS

All signs must be manufactured & installed as specified in the FHWA "**Manual on Uniform Traffic Control Devices**" (MUTCD) & FS publication "**Standards for Forest Service Signs & Posters**"(EM 7100-15).

SIGN STANDARDS

SHAPE & COLOR: Generally, signs for logging and maintenance operations are either diamond-shaped or rectangular. All signs are **reflective orange background with black legend and border** unless shown otherwise. Handpainted, homemade signs are not legal. Fluorescent paint is not reflectorized.

SUBSTRATE: Sign substrate material may be High Density Overlay (HDO) Plywood, Aluminum, Fiberglass Reinforced Plastic, Corrugated Plastic or Roll-up Fabrics.

SIGN SIZE: Sign size is a factor of speed and MUTCD & FS standards. Where conditions of speed, volume, or special hazard require greater visibility or emphasis, larger signs should be used. Minimum sizes for the most common signs can be found in Figure 4. Refer to the EM-7100-15 for additional sign sizes.

LEGEND: All lettering shall be Series "C" alphabet, conforming to Standard Alphabets for Highway Signs. Letter size is also a function of speed - use letter size and word messages as specified in MUTCD and EM-7100-15.

SIGN PLACEMENT

Signs are to be installed in locations as agreed to in the traffic control plan. All signs are to be removed, covered, or folded when operations are not in progress or the sign message is not

applicable. Signs should generally be located on the right-hand side of the roadway. When special emphasis is needed, signs may be placed on both the left and right sides of the road. Sign message shall be clearly visible to road users, mounted on posts or portable sign stands.

LATERAL CLEARANCE

From the edge of the road - 2 foot minimum, where slope limits to less than 6 feet. 6-12 foot preferred.

HEIGHT

Minimum of 7 feet, measured from the bottom of the sign to the near edge of the travelway. The height to the bottom of a supplemental sign mounted below the primary sign will be 6 feet.

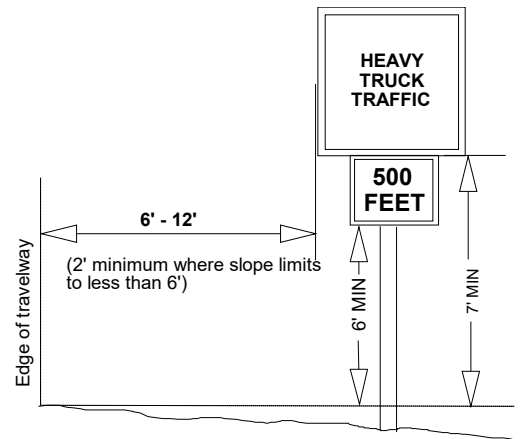


Figure 1: Sign Placement

Dimensions

PLACEMENT DISTANCE

Signs must be located 100-500 feet prior to the activity, (both ends if a through road) and maintained at that distance. This distance is based on speed. Refer to Figure 2 , Table II-1, MUTCD, a portion of which is reproduced here, to determine correct placement distance.

Posted or 85 percentile speed MPH	Deceleration to listed advisory speed MPH				
	10	20	30	40	50
20	NA				
25	100				
30	150	100			
35	200	175			
40	275	250	175		
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

Figure 2: A Portion of MUTCD TABLE II-1

SIGN SUPPORTS

POSTS: Signs are to be mounted on separate posts. Supplemental signs such as Speed Advisory plates are to be mounted on the same post as the primary sign. **Do not mount signs on trees or other signs.** Posts may be wood, metal, carsonite or similar material. Where sign supports cannot be sufficiently offset from the road edge, supports will meet breakaway standards. Single wood posts with less than 24 square inches do not require breakaway design.

TEMPORARY/PORTABLE SUPPORTS: Portable supports may be used for short-term, short-duration, and mobile conditions. MUTCD defines this time period as one work shift, 12 hours or less. All portable supports must meet MUTCD standards, including breakaway. These must be a minimum of 1 foot above the road surface or more if visibility requires it.

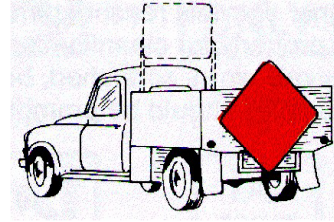
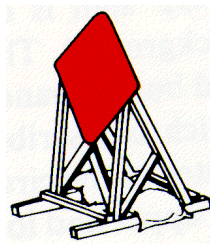
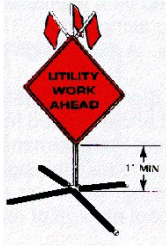


Figure 3: Examples of Temporary/Portable Supports

SIGNS

The following signs meet the intent of the Safety standard. *This is not a complete listing of signs that may be needed.*



FG20-1-48*
FW22-3-30



FG20-2-48



FG20-3-42*



FG20-3a-42



FW20-1-30*



W21-3-30*



FW21-4a-30



FW11-7-24

W22-1-36*



FW8-6-24
24*



FW11-9a-24



W7-3a-24*



W13-1-18**

W20-7aP-

* Specify Distance

Speed

** Specify



BM-L-O



BM-R-O

Barricade Markers (See MUTCD for length and stripe size)

6. **Safety (Timber Hauling).** CONTRACTOR shall secure all products transported by truck with at least two chain or cable wrappers over the load, such wrappers being securely fastened to effectively contain every bolt or log in at least two places.
7. **Accident and Injury Notification.** CONTRACTOR shall notify Forest Service of any lost time personal injury accident or any accident or vandalism resulting in personal property damage over \$400 in value that occurs as a result of or is associated with CONTRACTOR's Operations.

CONTRACTOR shall notify Forest Service within 8 hours of any personal injury accident. For vandalism and personal property accidents, CONTRACTOR shall notify Forest Service at the same time notification is given to the state and local law enforcement authorities.

CONTRACTOR shall take all reasonable measures after an accident or vandalism event to preserve the scene of the incident and provide information to facilitate a Forest Service investigation.

8. **Sanitation and Servicing.** CONTRACTOR shall take all reasonable precautions to prevent pollution of air, soil, and water by CONTRACTOR's operations. Precautions shall include if facilities for employees are established on the Stewardship Project Area, they shall be operated in a sanitary manner. The parties shall agree to the cleanup and restoration of a polluted site. CONTRACTOR shall maintain all equipment operating on Stewardship Project Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. CONTRACTOR shall not service tractors, trucks, or other equipment on National Forest lands where servicing is likely to result in pollution to soil or water. CONTRACTOR shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources. CONTRACTOR shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of free-flowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.
9. **Prevention of Oil Spills.** If CONTRACTOR maintain(s) storage facilities for oil or oil products on the Stewardship Project Area, CONTRACTOR shall take appropriate preventive measures to ensure that any spill of such oil or oil products does not enter any stream or other waters of the United States or any of the individual States. If the total oil or oil products storage exceeds 1,320 gallons in containers of 55 gallons or greater, CONTRACTOR shall prepare a Spill Prevention Control and Countermeasures Plan. Such plan shall meet applicable EPA requirements (40 CFR 112), including certification by a registered

professional engineer. CONTRACTOR shall notify the Forest Service and appropriate agencies of all reportable (40 CFR 110) spills of oil or oil products on or in the vicinity of the Stewardship Project Area that are caused by CONTRACTOR's employees, agents, sub-contractors or their employees or agents, directly or indirectly, as a result of CONTRACTOR's operations. CONTRACTOR will take whatever initial action may be safely accomplished to contain all spills.

10. **Hazardous Substances.** CONTRACTOR shall notify the National Response Center and rvice
11. Service principal contact of all releases of reportable quantities of hazardous substances on or in the vicinity of the Stewardship Project Area that are caused by CONTRACTOR's employees, agents, sub-contractors or their employees or agents, directly or indirectly, as a result of CONTRACTOR's operations, in accordance with 40 CFR 302.
12. **Cleaning Equipment.** In order to prevent the spread of noxious weeds into the Stewardship Project Area, CONTRACTOR shall be required to clean all off-road logging and construction equipment **prior** to entry on to the Stewardship Project Area. This cleaning shall remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds. Only logging and construction equipment so cleaned and inspected by the CONTRACTOR will be allowed to operate within the Stewardship Project Area. All subsequent move-ins of equipment to the Stewardship Project Area shall be treated in the same manner as the initial move in. "Off-road equipment" includes all logging and construction machinery, except for log trucks, chip vans, service vehicles, water trucks, pickup trucks, cars, and similar vehicles.

CONTRACTOR shall employ whatever cleaning methods are necessary to ensure that off-road equipment is free of noxious weeds. Equipment shall be considered free of soil, seed, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required.

As agreed upon, CONTRACTOR shall inspect equipment at cleaning location, and provide documentation of inspection to the Forest Service.

New infestations of noxious weeds, of concern to Forest Service and identified by either CONTRACTOR or Forest Service, on the Stewardship Project Area or on the haul route, shall be promptly reported to the other party. CONTRACTOR and Forest Service shall agree on treatment methods to reduce or stop the spread of noxious weeds when new infestations are found. A current list of noxious weeds of concern to Forest Service is available at each Forest Service office.

13. **Conduct of Logging.** Unless otherwise specifically provided herein, CONTRACTOR shall fell trees designated for cutting and shall remove the portions that meet Utilization Standards, prior to acceptance of work for completion of logging and stewardship projects. Forest Service may make exceptions for occasional trees inadvertently not cut or trees or pieces not removed for good reason, including possible damage to forest resources or gross economic impracticability at the time of removal of other timber.

14. **Felling and Bucking.** Felling shall be done to minimize breakage of included timber and damage to residual timber. Unless agreed otherwise, felling shall be done by saws or shears. Bucking shall be done to permit removal of all minimum pieces. CONTRACTOR may buck out cull material when necessary to produce pieces meeting utilization standards. If necessary to assess extent of defect, CONTRACTOR shall make sample saw cuts or wedges.
15. **Felling in Clearings.** Insofar as ground conditions, tree lean, and shape of clearings permit, trees shall be felled so that their tops do not extend outside clearcutting units, construction clearings, and areas of regeneration cutting.
16. **Stump Heights.** Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in Appendix F (if applicable) except that occasional stumps of greater heights are acceptable when CONTRACTOR determine(s) that they are necessary for safe and efficient conduct of logging. Unless otherwise agreed, CONTRACTOR shall re-cut high stumps so they will not exceed heights specified in F-14 and shall dispose of severed portions in the same manner as other logging debris. The stump heights shown in Appendix F (if applicable) were selected with the objective of maximum reasonable utilization of the timber, unless the Map shows special areas where stump heights are lower for aesthetic, land treatment, or silvicultural reasons.
17. **Bucking Lengths.** Trees shall be bucked in various lengths to obtain the greatest utilization of material meeting utilization standards.
18. **Limbing.** CONTRACTOR shall cut exposed limbs from products prior to skidding, as necessary to minimize damage to the residual stand during skidding. CONTRACTOR may leave uncut those limbs that cannot be cut with reasonable safety.
19. **Skidding and Yarding.** Methods of skidding or yarding specified for particular areas, if any, are indicated on the Map. Outside clearcutting units and construction clearings, insofar as ground conditions permit, products shall not be skidded against reserve trees or groups of reproduction and tractors shall be equipped with a winch to facilitate skidding.
20. **Rigging.** Insofar as practicable, needed rigging shall be slung on stumps or trees designated for cutting.
21. **Landings and Skid Trails.** Location of all landings, tractor roads, and skid trails shall be agreed upon prior to their construction. The cleared or excavated size of landings shall not exceed that needed for efficient skidding and loading operations.
22. **Arches and Dozer Blades.** Skidding tractors equipped with pull-type arches or dozer blades wider than tractor width or C-frame width, whichever is greater, shall not be used in residual timber outside clearcutting units and other authorized clearings, except on constructed tractor roads or landings, unless there is written agreement that residual timber will not be damaged materially by such use.

23. Protection of Streamcourses. CONTRACTOR's Operations shall be conducted to prevent debris from entering streamcourses, except as may be authorized under paragraph (d). In event CONTRACTOR cause(s) debris to enter streamcourses in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, CONTRACTOR shall remove such debris as soon as practicable, but not to exceed 2 days, and in an agreed manner that will cause the least disturbance to streamcourses.

- a) Culverts or bridges shall be required on Temporary Roads at all points where it is necessary to cross Streamcourses. Such facilities shall be of sufficient size and design and installed in a manner to provide unobstructed flow of water and to minimize damage to streamcourses. Trees or products shall not be otherwise hauled or yarded across streamcourses unless fully suspended.
- b) Wheeled or track-laying equipment shall not be operated in streamcourses, except at crossings agreed to by CONTRACTOR and the Forest Service or as essential to construction or removal of culverts and bridges.
- c) Flow in streamcourses may be temporarily diverted only if such diversion is necessary for CONTRACTOR's planned construction and Forest Service gives written authorization. Such flow shall be restored to the natural course as soon as practicable and, in any event, prior to a major storm runoff period or runoff season.

24. Erosion Prevention and Control. CONTRACTOR's operations shall be conducted reasonably to minimize soil erosion. Equipment shall not be operated when ground conditions are such that excessive damage will result. CONTRACTOR shall adjust the kinds and intensity of erosion control work done, to ground conditions and weather conditions and the need for controlling runoff. Erosion control work shall be kept current immediately preceding expected seasonal periods of precipitation or runoff.

Prior to periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, commensurate with its use, CONTRACTOR shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams.

Unless otherwise agreed in writing, after September 15 of each operating season, erosion control work must be kept current. CONTRACTOR shall complete erosion prevention and control work, including streamcourse protection, within 15 calendar days after completion of skidding and/or yarding operations for each landing.

Designation of on the ground work shall be done as promptly as feasible unless it is agreed that the location of such work can be established without marking on the ground.

During periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, commensurate with its use, CONTRACTOR shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams.

When operations are active, erosion control work will be kept current and will be completed as

soon as practicable. Additionally, FS may require special erosion prevention measures which may include, but not limited to; use of certified weed free straw, wood chips, slash, mulch, etc. on areas of bare soil with high erosion hazard potential.

25. **Protection of Improvements.** So far as practicable, CONTRACTOR shall protect specified roads and other improvements (such as roads, trails, telephone lines, ditches, and fences):
- a) Existing in the operating area,
 - b) Determined to have a continuing need or use, and
 - c) Designated on the Map.

CONTRACTOR shall keep roads and trails needed for fire protection or other purposes and designated on the Map reasonably free of equipment and products, slash, and debris resulting from CONTRACTOR's operations. CONTRACTOR shall make timely restoration of any such improvements damaged by CONTRACTOR's operations and, when necessary because of such operations, shall move such improvements.

26. **Meadow Protection.** Reasonable care shall be taken to avoid damage to the cover, soil, and water in meadows shown on the Map. Vehicular or skidding equipment shall not be used on meadows, except where roads, landings, and tractor roads are approved. Unless otherwise agreed, trees felled into meadows shall be removed by endlining. Resulting logging slash shall be removed where necessary to protect cover, soil, and water.

27. **Wetlands Protection.** Wetlands requiring protection under Executive Order 11990 are shown on the Map. Vehicular or skidding equipment shall not be used in such wetlands, except where roads, landings, and tractor roads are approved.

28. **Temporary Roads.** As necessary to attain stabilization of roadbed and fill slopes of temporary roads, CONTRACTOR shall employ such measures as outslowing, drainage dips, and water-spreading ditches. After a temporary road has served CONTRACTOR's purpose, CONTRACTOR shall give notice to the Forest Service and shall remove bridges and culverts, eliminate ditches, outslope roadbed, remove ruts and berms, effectively block the road to normal vehicular traffic where feasible under existing terrain conditions, and build cross ditches and water bars, as staked or otherwise agreed to. When bridges and culverts are removed, associated fills shall also be removed to the extent necessary to permit normal maximum flow of water.

29. **Temporary Roads to Remain Open.** All bridges and culverts shall remain in place and ditches shall not be eliminated on Temporary Roads, shown as "Remained Open on the Map. All drainage structures shall be left in functional condition.

30. **Landings.** After landings have served CONTRACTOR's purpose, CONTRACTOR shall ditch and slope them to permit water to drain or spread. Unless agreed to otherwise, cut and fill banks around landings shall be sloped to remove overhangs and otherwise minimize erosion.

31. **Skid Trails and Fire Lines.** CONTRACTOR shall construct cross ditches and water-spreading ditches on tractor roads and skid trails, where needed to prevent erosion. By agreement, CONTRACTOR may use other comparable erosion control measures, such as backblading skid trails, in lieu of cross ditching.
32. **Current Operating Areas.** Where logging, road construction, or other stewardship project work is in progress but not completed, unless agreed to otherwise, CONTRACTOR shall, before operations cease annually, remove all temporary log culverts and construct temporary cross drains, drainage ditches, dips, berms, culverts, or other facilities needed to control erosion. Such protection shall be provided, for all disturbed, unprotected ground that is not to be disturbed further prior to end of operations each year, including roads and associated fills, tractor roads, skid trails, and fire lines. When weather permits operations, CONTRACTOR shall keep such work on any additional disturbed areas as up to date as practicable.
33. **Erosion Control Structure Maintenance.** During the period of this SPA, CONTRACTOR shall provide maintenance of soil erosion control structures constructed by CONTRACTOR until they become stabilized, but not for more than one year after their construction. **No tightly woven fiber mesh or plastic monofilament netting shall be used for soil stabilization.**
34. **Slash Disposal.** CONTRACTOR's timing of product removal and preparatory work shall not unnecessarily delay slash disposal. Specific slash disposal measures to be employed by CONTRACTOR are stated in Appendix E.
35. **Scaling.** Scaling includes:
- a) Various volume determination methods, such as log rule, sampling, measuring, linear measuring, counting, weighing, or another method or combination of methods;
 - b) Various sites, such as truck Scaling stations, rollways, weighing stations, woods landings, water Scaling stations, or other sites.
 - c) Various geographic locations.
36. **Scaling Services.** Scaling services shall be performed by Forest Service personnel or parties under contract to Forest Service, except that weighing services may be performed by personnel or parties approved by the Forest Service. Scaling shall be provided in accordance with the instructions and specifications in Appendix F (if applicable). Scalers shall be currently certified to perform accurate Scaling services. The scaling services provided shall be selected exclusively by the Forest Service. Scaling services may be continuous, intermittent, or extended.
- a) Continuous scaling services is scaling at one site five (5) 8-hour shifts a week, exclusive of Sundays and Federal holidays.
 - b) Intermittent scaling services are non-continuous scaling services.
 - c) Extended scaling services are scaling services exceeding continuous scaling services and may include Sundays and designated Federal holidays.

As mutually agreed to by the parties, the Forest Service may provide other services, such as

but not limited to grading, tagging, or marking of Scaled logs.

37. Scaling Location. The Forest Service shall provide scaling services at the scaling site(s) shown in Appendix F (if applicable). The Scaling site(s) shown in Appendix F (if applicable) normally will be a non-exclusive site where more than one National Forest may be served. CONTRACTOR may request, in writing, an alternate scaling site, such as at a private mill yard, private truck ramp, or a privately operated log transfer facility. The Forest Service may approve an alternate scaling site, when the Forest Service determines that scaling conditions at an alternate site are acceptable. Such conditions shall include at a minimum:

- a) Scaler safety and comfort,
- b) Product accountability and security,
- c) Facilities and practices conducive to accurate and independent Scaling, and
- d) The ability to provide for remote check Scaling.

Upon approval of an alternate scaling site, the Forest Service and CONTRACTOR shall enter into a written memorandum of agreement governing Scaling at that alternate location. CONTRACTOR agree(s) that Forest Service personnel or persons under contract with the Forest Service shall perform scaling services at an alternative scaling site. In no instance shall CONTRACTOR perform scaling services.

37. Scaling Adjustments. The Forest Service shall check the accuracy of the scaling performed on National Forest logs. Scaling will be satisfactory if performed within the accuracy standards in governing instructions identified in Appendix F (if applicable). In the event the Forest Service check scale(s) shows a variance in net scale in excess of the allowable variance, an adjustment to volume reported scaled may be made by the Forest Service. Such adjustment will be based on the difference between Forest Service check Scale(s) and original Scale for SPA volume Scaled within the adjustment period. The volume to which this difference will be applied will be:

- a) One-half of the volume Scaled between the last satisfactory check Scale and the first unsatisfactory check Scale or, if a period of 120 days or more occurs without Scaling National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled after this period and
- b) 100 percent of the volume Scaled between unsatisfactory check Scales and
- c) One-half of the volume Scaled between the last unsatisfactory check Scale and the next satisfactory check Scale, or if no satisfactory check Scale is completed and a period of 120 days or more occurs without Scaling of National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled since the last unsatisfactory check Scale.

Adjustments may increase or decrease the original Scaled volume. Adjustments will be applied to Integrated Resource Account to correct charges for Included Timber, plus deposits, Scaled during the adjustment period.

38. Weighing Services. Weighing services for stumpage payment purposes may be provided by either public or privately owned and operated weighing facilities. A "Weighing Services

Agreement,” approved by the Forest Supervisor, must be executed at each weighing facility providing weighing services.

Scales used to weigh National Forest products for payment purposes must be a currently certified scale in accordance with State law and be capable of weighing the entire load of logs in a single operation. The weighing of less than the entire load or weighing two loads at once is prohibited. Unless otherwise agreed, the minimum sized weighing facility shall be a 60-ton capacity scale with a 10 foot by 70 foot platform or larger. The weighmaster must work in a position where it is possible to verify that the truck wheels are on or off the scales. Weighing facilities shall meet the following minimum requirements:

- a) Be an electronic design,
- b) Use electronic load cells or have a fully enclosed and sealed weigh-beam,
- c) Have digital weight meters sealed with a seal approved by the State,
- d) Have a zero interlocking device on the printer,
- e) Have an automatic zero-setting mechanism,
- f) Have an automatic motion-detecting device,
- g) Be shielded against radio or electromagnetic interference, and
- h) Have a date and time stamp and gross and tare weights that print electronically with each weighing. The Forest Service may waive electronic printing for public or third party weighing facilities. CONTRACTOR shall bear all charges or fees for weighing services.

39. **Presentation for Scaling.** CONTRACTOR shall present products so that they may be Scaled in an eco-nomical and safe manner.

40. **Accountability.** When Scaling is performed away from Stewardship Project Area, products shall be accounted for in accordance with Forest Service written instructions, as follows:

- a) CONTRACTOR shall plainly mark or otherwise identify products prior to hauling;
- b) Forest Service shall issue removal receipts to CONTRACTOR ;
- c) CONTRACTOR shall assign a competent individual at the landing to complete removal receipts and attach them to each load of products removed from Stewardship Project Area;
- d) Removal receipts shall be returned to Forest Service at periodic intervals;
- e) When products are in transit, the truck driver shall possess or display removal receipt and show it upon request as evidence of authority to move products;
- f) The scaler’s portion of removal receipt shall be surrendered at point of Scaling, the unloading point, or as requested by Forest Service; and
- g) CONTRACTOR shall notify Forest Service of lost or off-loaded logs and their location within 12 hours of such loss. CONTRACTOR shall not place products in storage for deferred Scaling until an accountability system has been agreed to in writing for a stated period.

41. **Route of Haul.** As part of the annual Operating Schedule, CONTRACTOR shall furnish a map showing the route of haul over which unscaled products will be transported from the Stewardship Project Area to the approved Scaling location. Such route of haul shall be the shortest, most economical haul route available between the points.

Upon advance written agreement, other routes may be approved. All unscaled products removed from Stewardship Project Area shall be transported over the designated routes of haul. CONTRACTOR shall notify Forest Service when a load of products, after leaving Stewardship Project Area, will be delayed for more than 12 hours in reaching Scaling location.

CONTRACTOR shall require truck drivers to stop, if requested by Forest Service, for the following reasons:

- a) For accountability checks when products are in transit from Stewardship Project Area to the designated Scaling location or
- b) For a remote check Scale when products are in transit after being truck Scaled at the designated Scaling location.

CONTRACTOR and Forest Service shall agree to locations for accountability checks and remote check Scales in advance of haul. Such locations shall be established only in areas where it is safe to stop trucks. The Forest Service shall notify CONTRACTOR of the methods to be used to alert truck drivers of an impending stop.

42. Product Identification. Before removal from the Stewardship Project Area, unless the Forest Service determines that circumstances warrant a written waiver or adjustment, CONTRACTOR shall:

- a) Hammer brand all products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter.
- b) West of the 100th meridian, paint with a spot of highway-yellow paint all domestic processing products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter. Each paint spot must be not less than three (3) square inches in size.

The Forest Service shall assign brands and, if the Stewardship Project Area is within a State that maintains a log brand register, brands shall be registered with the State. CONTRACTOR shall use assigned brand exclusively on logs under this SPA until Forest Service releases brand. CONTRACTOR will furnish and apply highway-yellow paint of a lasting quality (oil-base or equivalent).

All hammer brands and/or highway-yellow paint must remain on logs until they are domestically processed. CONTRACTOR shall replace identifying marks if they are lost, removed, or become unreadable. CONTRACTOR may remanufacture products into different log lengths. Except for logs remanufactured as part of the mill infeed process immediately before processing, remanufactured products must be rebranded with the assigned SPA brand and repainted with highway-yellow paint, unless otherwise agreed to in writing by the Forest Service Representative. For such remanufactured products, Forest Service may approve use of a brand to be used exclusively as a catch brand, in lieu of the assigned SPA brand.

43. Scaling Lost Products. The volume of lost products shall be determined by the best methods currently available, using data from the records for the period in which the loss occurred or the most applicable period if loss should occur substantially after cutting. In the absence of specific information indicating size or species of lost products, species distribution and

volume for entire truckloads shall be assumed to be the same as the average volume Scaled per truck during the report period, and for individual products it shall be assumed that the volume and species were the average volume of the highest priced species Scaled during the report period.

44. **Scaling Lost Sample Loads.** If Scaling is being done by sampling loads of logs, CONTRACTOR shall present such sample loads for Scaling by Forest Service. If loads of logs selected to be sample Scaled are placed in the decks before they are Scaled, they will be considered as lost sample loads. It will be difficult, if not impossible, to determine the volume and species contained in such loads for payment purposes. Therefore, lost sample loads will be deemed to have a Scale volume and species composition equal to that of the highest value load Scaled during the sampling period, as established by Forest Service. If no sample loads were Scaled during the period, the Scale data for the high valued load will be taken from the most current preceding sampling period with Scale. Sample loads lost as a result of Forest Service actions shall be treated as non-Scaled loads.
45. **Scale Reports.** The Forest Service shall provide CONTRACTOR a copy of Forest Service scaler's record, if requested in writing.
46. **Fire Precautions and Control**
- a) **Plans.** Prior to initiating CONTRACTOR's operations during Fire Precautionary Period, CONTRACTOR shall file with Forest Service a Fire Prevention and Control Plan providing for the prevention and control of fires on the Stewardship Project Area and other areas of CONTRACTOR's Operations. Such plan shall include a detailed list of personnel and equipment at CONTRACTOR disposal for implementing the plan. This requirement may be met by preparing a single plan for more than one SPA.
 - b) **Fire Precautions.** Specific fire precautionary measures listed in this Appendix shall be applicable during CONTRACTOR's Operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during CONTRACTOR's operations in Fire Precautionary Period.
 - c) **Substitute Precautions.** The Forest Service may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection or some of the required measures and equipment are unnecessary.
 - d) **Emergency Precautions.** The Forest Service may require the necessary shutting down of equipment on portions of CONTRACTOR's Operations, as specified by the emergency fire precautions schedule. Under such conditions, after CONTRACTOR cease(s) active operations, CONTRACTOR shall release for hire by Forest Service, if needed, CONTRACTOR's shutdown equipment for fire standby on the Stewardship Project Area or other areas of CONTRACTOR's Operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by

CONTRACTOR for other fire fighting or protection from fire. Equipment shall be paid for at fire fighting equipment rates common in the area or at prior agreed rates and, if CONTRACTOR request(s), shall be operated only by personnel approved by the CONTRACTOR. Personnel so hired shall be subject to direction and control by Forest Service and shall be paid by Forest Service at fire fighting rates common in the area or at prior agreed rates.

- e) **Fire Precautionary Period and Fire Precautions.** Specific fire precautionary measures are set forth below. Upon request of Forest Service, CONTRACTOR shall permit and provide an individual to assist in periodic testing and inspection of required fire equipment. CONTRACTOR shall promptly remedy deficiencies found through such inspecting and testing.

- 1. The following requirements shall apply during the period April 1- December 1 and during other such periods as specified by Forest Service.

- 2. *See fire plan*

47. **Fire Control.** CONTRACTOR shall, both independently and in cooperation with Forest Service, take all reasonable and practicable action to prevent and suppress fires resulting from CONTRACTOR's Operations and to suppress any forest fire on Stewardship Project Area. CONTRACTOR's independent initial fire suppression action on such fires shall be immediate and shall include the use of all necessary personnel and equipment at CONTRACTOR's disposal on Stewardship Project Area or within the distance of Stewardship Project Area: **(Initial fire suppression within 25 road miles, and fire suppression re-inforcement within 100 miles).**

- a) **The Partner's Reinforcement Obligations.** Whenever an Operations Fire or Negligent Fire, whether on or off Stewardship Project Area or any other forest fire on Stewardship Project Area, has not been suppressed by initial action and appreciable reinforcement strength is required, Forest Service may require further actions by CONTRACTOR until such fire is controlled and mopped up to a point of safety. Such actions may include any or all of the following as necessary to fight such fire:
- b) **Suspend Operations.** To suspend any or all of CONTRACTOR's Operations.
- c) **Personnel.** To release for employment by Forest Service any or all of CONTRACTOR's personnel engaged in CONTRACTOR's Operations or timber processing within the distance of Stewardship Project Area: ***(25 Road miles)***. Any organized crew so hired shall include CONTRACTOR's supervisor, if any. Personnel so employed shall be paid at Forest Service standard emergency fire fighting rates.
- d) **Equipment.** To make available for Forest Service rental at fire fighting equipment rates common in the area or at prior agreed rates any or all of CONTRACTOR's equipment suitable for fire fighting and currently engaged in CONTRACTOR's Operations within

the distance of Stewardship Project Area: **(100 Road miles)**. Equipment shall be operated only by personnel approved by CONTRACTOR, if so requested by CONTRACTOR.

Limited Liability for Operations Fires.

Maximum Amount of CONTRACTOR's Obligation per Operation's Fire. Entry should be determined as follows and rounded up to the nearest \$100. The minimum amount will be \$1,000.00. If State statute or law defines limited liability, use that determination (e.g. Oregon), otherwise calculate the amount using the following formula:

$[(1) \times (2) + (3) \times (4)] \times (5) = \text{Maximum Amount of Cooperator's Obligation per Operations Fire. Round up to the next \$100.}$

- (1) Equals the number of workers normally required to operate the size of proposed project.

_____ 4 _____ Workers

- (2) Equals the daily (12 hour) wage rate for semi-skilled (AD-1) firefighter.

\$ _____ 15.50 _____ /Hr. x 12 hours = \$ _____ 186 _____

- (3) Equals the number of pieces of equipment normally required to operate the size of proposed project that can effectively cut and clear fire lines.

_____ 4 _____ Pieces of equipment

- (4) Average daily rate for each piece of equipment, including cost of operator, from current local engineering cost guide.

\$ _____ 120 _____ /Hr. x 12 hours = \$ _____ 1440 _____ /12hr.

- (5) Equals the number of days normally required to control and mop up such fires to a point where control lines can reasonably be expected to hold under foreseeable conditions. Minimum is one day and maximum is 10.

_____ 5 _____ days

CONTRACTOR's Obligation per Operations Fire,

Maximum 51,389

Amount: \$ _____

48. Temporary Roads and Skid Trails. CONTRACTOR shall locate Temporary Roads and Skid Trails on locations approved by the Forest Service. Such location shall include the marking of road centerline or grade-line and the setting of such construction stakes as are necessary to provide a suitable basis for economical construction and the protection of National Forest lands.

Temporary road surface width shall be limited to truck bunk width plus four (4) feet, except for needed turnouts which shall not exceed two (2) times the bunk width plus four (4) feet. If shovels or cranes with revolving carriage are used to skid or load, temporary road surface width equal to track width plus tail swing shall be permitted.

As necessary to attain stabilization of roadbed and fill slopes of Temporary Roads, CONTRACTOR shall employ such measures as outsloping, drainage dips, and water-spreading ditches.

49. USE OF TIMBER (Option 1). (a) This agreement is subject to the Forest Resources Conservation and Shortage Relief Act of 1990, as amended (16 USC 620, *et seq.*).

(b) Except for 1/ NA determined pursuant to public hearing to be surplus, unprocessed Included Timber shall not be exported from the United States nor used in direct or indirect substitution for unprocessed timber exported from private lands by Contractor or any person as defined in the Act (16 USC 620e).

(c) Timber in the following form will be considered unprocessed:

(i) Trees or portions of trees or other roundwood not processed to standards and specifications suitable for end product use;

(ii) Lumber, construction timbers, or cants intended for remanufacturing not meeting standards defined in the Act (16 USC 620e); and

(iii) Aspen or other pulpwood bolts exceeding 100 inches in length.

(d) Unless otherwise agreed in writing, unprocessed Included Timber shall be delivered to a domestic processing facility and shall not be mixed with logs intended for export.

(e) Prior to award, during the life of this contract, and for a period of 3 years from Termination Date, Contractor shall furnish to Forest Service, upon request, records showing the volume and geographic origin of unprocessed timber from private lands exported or sold for export by Contractor or affiliates.

(f) Prior to delivering unprocessed Included Timber to another party, Contractor shall require each buyer, exchange, or recipient to execute an acceptable agreement that will:

(i) Identify the Federal origin of the timber;

(ii) Specify domestic processing for the timber involved;

(iii) Require the execution of such agreements between the parties to any subsequent transactions involving the timber;

(iv) Require that all hammer brands and/or yellow paint must remain on logs until they are either legally export- ed or domestically processed, whichever is applicable; and

(v) Otherwise comply with the requirements of the Act (16 USC 620d).

(g) No later than 10 days following the execution of any such agreement between Contractor and another party, Contractor shall furnish to Forest Service a copy of each such agreement. Contractor shall retain, for 3 years from Termination Date, the records of all sales, exchanges, or dispositions of all Included Timber.

(h) Upon request, all records dealing with origin and disposition of Included Timber shall be made available to Contracting Officer.

For breach of this Subsection, Forest Service may terminate this agreement and take such other action as may be provided by statute or regulation, including the imposition of penalties. When terminated by Forest Service under this Subsection, Forest Service will not be liable for any Claim submitted by Contractor relating to the termination.

APPENDIX H.1: FIRE PLAN FOR MANUAL THIN
FIRE PLAN FOR CONSTRUCTION AND SERVICE CONTRACTS: HAND THIN
08/02/2012

1. **SCOPE:**

The provisions set forth below outline the responsibility for fire prevention and suppression activities and establish a suppression plan for fires within the contract area. The contract area is delineated by map in the contract. The provisions set forth below also specify conditions under which contract activities will be curtailed or shut down.

2. **RESPONSIBILITIES:**

A. Contractor

- (1) Shall abide by the requirements of this Fire Plan.
- (2) Shall take all steps necessary to prevent his/her employees, subcontractors and their employees from setting fires not required in completion of the contract, shall be responsible for preventing the escape of fires set directly or indirectly as a result of contract operations, and shall extinguish all such fires which may escape.
- (3) Shall permit and assist in periodic testing and inspection of required fire equipment. Contractor shall certify compliance with specific fire precautionary measures in the fire plan, before beginning operations during Fire Precautionary Period and shall update such certification when operations change.
- (4) Shall designate in the Fire Plan and furnish on Contract Area, during operating hours, a qualified fire supervisor authorized to act on behalf of Contractor in fire prevention and suppression matters.

B. Forest Service/NFF

The Forest Service or NFF may conduct one or more inspections for compliance with the Fire Plan. The number, timing, and scope of such inspections will be at the discretion of agency employees responsible for contract administration. Such inspections do not relieve the Contractor of responsibility for correcting violations of the fire plan or for fire safety in general, as outlined in paragraph 2.A above.

3. **DEFINITIONS:**

The following definitions shall apply:

Active Landing: A location the Contractor may be skidding logs into, or performing other operations such as delimbing, log manufacturing, and chipping logs. Except for EV and E days, loading logs or stockpiling chips only, on a cleared landing, does not constitute an Active Landing.

Hot Saw: A harvesting system that employs a high-speed (>1100 rpm) rotating felling head, i.e., full rotation lateral tilt head.

Mechanical Operations: The process of felling, skidding, chipping, shredding, masticating, piling, log processing and/or yarding which requires the use of motorized power which includes, chainsaws, chippers, motorized carriages, masticators, stroke delimbers, skidders, dozers etc.

4. **TOOLS AND EQUIPMENT:**

The Contractor shall comply with the following requirements during the fire precautionary period, as defined by unit administering contracts:

The Fire Precautionary Period is set by the State of California which is April 1 through December 1 of any year.

- **This contract ☒ requires, ☐ does not require, a Fire Box and associated Fire Tools according to CPRC Section 4428.**

A. Fire Tools and Equipment: Contractor shall meet minimum requirements of Section 4428 of the California Public Resources Code (C.P.R.C.). Fire tools kept at each operating landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in Contractor's Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. All required fire tools shall be maintained in suitable and serviceable condition for firefighting purposes.

Trucks, tractors, skidders, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.

Where cable yarding is used, Contractor shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump within 25 feet of each tail and corner block.

B. Fire Extinguishers: Contractor shall equip each internal combustion yarder, fuel truck, and loader with a fire extinguisher for oil and grease fires (4-A:60-B:C).

Skidders and tractors shall be equipped with a minimum 5-BC fire extinguisher.

All Fire Extinguishers shall be mounted, readily accessible, properly maintained and fully charged.

Contractor shall equip each mechanized harvesting machine with hydraulic systems, powered by an internal combustion engine (chipper, feller/buncher, harvester, forwarder, hot saws, stroke delimber, etc), except tractors and skidders, with at least two 4-A:60-B:C fire extinguishers or equivalent.

C. Spark Arresters and Mufflers: Contractor shall equip each operating tractor and any other internal combustion engine with a spark arrester, except for motor vehicles equipped with a maintained muffler as defined in C.P.R.C. Section 4442 or tractors with exhaust-operated turbochargers. Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the National Wildlife Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be maintained in good operating condition. Every motor vehicle subject to registration shall at all times be equipped with an adequate exhaust system meeting the requirements of the California Vehicle Code.

D. Power Saws: Each power saw shall be equipped with a spark arrester approved according to C.P.R.C. Section 4442 or 4443 and shall be maintained in effective working order. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating power saw. In addition, a size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can but not more than 300 feet from each power saw when used off cleared landing areas.

- **This contract ☐ requires, ☒ does not require, Section 4E of the Fire Plan.**

E. Tank Truck or Trailer: Contractor shall provide a **water tank truck or trailer** on or in proximity to Contract Area during Contractor's Operations hereunder during Fire Precautionary Period. When Project Activity Level B or higher is in effect, a tank truck or trailer shall be on or immediately adjacent to each active landing, unless otherwise excepted when Hot Saws or Masticators are being used. See Section 6 for specific contract requirements.

The tank shall contain at least 300 gallons of water available for fire suppression. Ample power and hitch shall be readily available for promptly and safely moving tank over roads serving Contract Area. Tank truck or trailer shall be equipped with the following:

- (1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on Contract Area using a 5/16 inch orifice in the Forester One Inch In-Line Gauge test kit. Pump shall meet or exceed the pressure value in the following table for nearest temperature and elevation:

T e m p	Sea Level		1000 Feet		2000 Feet		3000 Feet		4000 Feet		5000 Feet		6000 Feet		7000 Feet		8000 Feet		9000 Feet		10000 Feet	
55	179	23	174	23	169	23	165	22	161	22	157	22	153	22	150	21	146	21	142	21	139	21
70	175	23	171	23	166	22	162	22	158	22	154	22	150	21	147	21	143	21	139	21	136	20
85	171	23	168	23	163	22	159	22	155	22	151	21	147	21	144	21	140	21	136	20	133	20
100	168	23	164	23	159	22	155	22	152	22	148	21	144	21	141	21	137	20	133	20	131	20
	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M

The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.

- (2) 300 feet of 3/4-inch inside diameter rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than approximately 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings, or other failures.
- (3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range
Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

- (4) Sufficient fuel to run the pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

When Contractor is using Hot Saws or Masticators, an additional 250 feet of light weight hose, approved by the Forest Service, shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurtenances in (2) and (3) above.

This equipment and accessories shall be deliverable to a fire in the area of operations and is subject to the requirements for each specific activity level identified in Section 6.

F. Compressed Air Foam System: A Compressed Air Foam System (CAFS) is a fire suppression system where compressed air is added to water and a foaming agent. By agreement, Contractor may substitute a CAFS or functional equivalent in lieu of the tank truck, trailer or fire extinguishers, provided it meets or exceeds the following specifications and requirements:

- Variable foam expansion ratio – 10:1 to 20:1.
- Units shall be kept fully charged with air; water and foam concentrate as recommended by the manufacturer and have the appropriate tools to service the system.
- The unit shall contain enough energy to empty tank and clear hose prior to exhausting propellant.
- The unit shall be capable of being completely recharged within 10 minutes.

5. When used on cable yarding landings, the unit shall be outfitted for immediate attachment to carriage and transported without damage to the unit.

Fire extinguishers required for Hot Saws, Masticators and similar equipment identified in Section 4 B. above may be substituted with a 3 gallon CAFS.

Tank truck, trailer or equivalent may be substituted with a 30 Gallon CAFS with at least 550 feet of one inch hose and an adjustable nozzle with enough water, air and foam concentrate for at least one recharge.

This equipment and accessories shall also be deliverable to a fire in the area of operations and subject to the requirements for each specific activity level identified in Section 6.

5. **GENERAL**

- A. **State Law:** In addition to the requirements in this Fire Plan, the Contractor shall comply with all applicable laws of the State of California. In particular, see California Public Resource Codes.
- B. **Permits Required:** The Contractor must secure a special written permit from the District Ranger or designated representative before burning, welding or cutting metal or starting any warming fires. If contract requires Blasting and Storing of Explosives and Detonators, an Explosives Permit may be required pursuant to the California Health and Safety Code, Section 12101.
- C. **Blasting:** Contractor shall use electric caps only unless otherwise agreed in writing. When blasting is necessary in slash areas, a Fire Patrolperson equipped with a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump shall remain in the immediate area for an hour after blasting has been completed.
- D. **Smoking:** Smoking shall not be permitted during fire season, except in a barren area or in an area cleared to mineral soil at least three feet in diameter. In areas closed to smoking, the CO may approve special areas to be used for smoking. The Contractor shall sign designated smoking areas. Contractor shall post signs regarding smoking and fire rules in conspicuous places for all employees to see. Contractor's supervisory personnel shall require compliance with these rules. Under no circumstances shall smoking be permitted during fire season while employees are operating light or heavy equipment, or walking or working in grass and woodlands.
- E. **Storage and Parking Areas.** Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least 10 feet unless otherwise specified by local administrative unit. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least 10 feet from such engine. The COR shall approve such sites in writing.
- F. **Reporting Fires:** As soon as feasible but no later than 15 minutes after initial discovery, Contractor shall notify Forest Service of any fires on Contract Area or along roads used by Contractor. Contractor's employees shall report all fires as soon as possible to any of the following Forest Service facilities and/or personnel listed below, but not necessarily in the order shown:

	Name	Office Address	Office telephone
Dispatch Center	Call First	13120 Loma Rica Drive, Grass Valley, CA 95945	530-477-7237
Nearest FS Station	Truckee RD	10811 Stockrest Springs Rd Truckee, CA 96161	530-587-3558
Inspector	Dwight Clark	10811 Stockrest Springs Rd Truckee, CA 96161	530-563-2229
COR	Sonya Lucatero	10811 Stockrest Springs Rd Truckee, CA 96161	530-941-7945
District Ranger	Jonathan Cook- Fisher	10811 Stockrest Springs Rd Truckee, CA 96161	530-721-3007

When reporting a fire, provide the following information:

- Your Name
- Call back telephone number
- Project Name
- Location: Legal description (Township, Range, Section); and Descriptive location (Reference point)
- Fire Information: Including Acres, Rate of Spread and Wind Conditions.

▪ **This contract ☒ requires, ☐ does not require, Section 5G of the Fire Plan.**

- G. **Communications:** Contractor shall furnish a serviceable telephone, radio-telephone or radio system connecting each operating side with Contractor's headquarters. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service may accept a reasonable alternative location. The communication system shall provide prompt and reliable communications between Contractor's headquarters (or agreed to alternative) and Forest Service via commercial or Forest Service telephone.

▪ **This contract ☒ requires, ☐ does not require, Section 5H of the Fire Plan.**

- H. **Fire Patrolperson:** Contractor shall furnish a qualified fire patrolperson each operating day when Project Activity Level C or higher is in effect. When on duty, sole responsibility of patrolperson shall be to patrol the operation for prevention and detection of fires, take suppression action where necessary and notify the Forest Service as required. This Fire patrol is required on foot, unless otherwise agreed. By agreement, one patrolperson may provide patrol on this and adjacent projects. No patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

The Contractor shall, prior to commencing work, furnish the following information relating to key personnel:

<u>Title</u>	<u>Name</u>	<u>Telephone Number</u>
<u>Fire Supervisor</u>		
<u>Fire Patrolperson</u>		

- I. **Clearing of Fuels:** Contractor shall clear away, and keep clear, fuels and logging debris as follows:

Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:	10 feet slope radius
Tail or corner haulback blocks:	All running blocks shall be located in the center of an area cleared to mineral soil at least 15 feet in diameter.
Lines near, between or above blocks:	Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.

6. **EMERGENCY PRECAUTIONS**

Contractor's Operations shall conform to the limitations or requirements in the Project Activity Level (PAL) table below. Project Activity Levels applicable to this project shall be the predicted activity levels for the Fire Danger Rating Area(s), or fire weather station(s) stated in the Contract Area Map Legend on Integrated Resource Service Contracts (IRSC's), and other contracts where applicable.

Fire Danger Rating Area/Fire Weather Station for Project

Rice Canyon

The Forest Service, in its sole discretion, may change the predicted activity level if the current fire suppression situation, weather and vegetation conditions warrant an adjustment. If practicable, Forest Service will determine

the following day's activity level by 6:00 PM. Contractor shall obtain the predicted Project Activity Level from the appropriate Ranger District Office before starting work each day.

Phone Number or Website to obtain Predicted Activity Levels:

East Side PALS 530-478-6176

Forest Service may change the Project Activity Level Table to other values upon revision of the National Fire Danger Rating System. When Contractor is notified, the revised Project Activity Levels will supersede the levels in the Project Activity Level Table below.

PROJECT ACTIVITY LEVEL

Level	<i>Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.</i>
A	Minimum requirements noted above in Sections 4 and 5.
B	1. Tank truck, trailer, or approved CAFS substitute shall be on or adjacent to the Active Landing.
C	1. When Hot Saws or Masticators are operating, a tank truck, trailer, or approved CAFS substitute shall be within ¼ mile of these operations. Effective communications shall exist between the operator and the Active Landing. 2. Immediately after Mechanical Operations cease, Fire patrol is required for two hours.
D	1. Immediately after Hot Saw or Masticator operations cease, Fire patrol is required for three hours. 2. No Dead Tree felling after 1:00 PM, except recently dead. 3. No burning, blasting, welding or cutting of metal after 1:00 PM, except by special permit.
Ev	1. The following activities may operate all day: a) Loading and hauling logs decked at approved landings. b) Loading and hauling chips stockpiled at approved landings. c) Servicing equipment at approved sites. d) Dust abatement, road maintenance (Chainsaw use prohibited), culvert installation within cleared area, chip sealing, paving, earth moving or rock aggregate stock pile loading and installation (does not include pit or quarry development). e) Chainsaw and log processing operations associated with loading logs or other forest products at approved landings. 2. Hot Saws or Masticators may operate until 1:00 PM; provided that: a) A tractor with a blade or other equipment capable of constructing fireline is on or adjacent to the active landing or within ¼ mile of the operating equipment. This piece of equipment shall have effective communication with the Hot Saw or Masticator. b) Any additional restrictions specified by the Forest. 3. All other conventional Mechanical Operations are permitted until 1:00 PM. 4. Some operations may be permitted after 1:00 PM, on a case-by-case basis, under the terms of a PAL Ev Variance Agreement. Activities for which a Variance may be issued are: • Rubber Tire Skidding • Chipping on Landings • Helicopter Yarding • Fire Salvage When approved by a Line Officer, a Variance Agreement can be implemented when the criteria specified in the agreement are met and mitigation measures are in place. This approval is good for ten (10) days unless cancelled sooner or extended by the Contracting Officer for an additional ten (10) days. Variance approval can be withdrawn at the sole discretion of the Forest Service. Variance approval is contingent on the 7-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of Contractor's equipment for prevention and suppression readiness, type of operation and social and community considerations etc. (See attached Project Activity Level Variance Agreement).

Level	<i>Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.</i>
E	The following activities may operate all day: 1. Loading and hauling logs decked at approved landings. 2. Loading and hauling chips stockpiled at approved landings. 3. Servicing Equipment at approved sites. 4. Dust abatement, road maintenance (chainsaw use prohibited) or loading stock piles and rock aggregate installation (does not include pit or quarry development). 5. Chainsaw operation associated with loading at approved landings. All other activities are prohibited.

This Project utilizes “The Project Activity Level” (PAL), an industrial operation’s fire precaution system. The following Climatology Chart indicates the Historic Activity Levels for the Project Fire Danger Rating Area or Fire Weather Station utilized on this Project. This is only a historical average of the Activity Levels for the identified Fire Danger Rating Area or Weather Station.

Project Activity Level Climatology								
Fire Danger Rating Area/Weather Station	Stampede/Dog Valley				Years Analyzed		2001-2011	
	A	B	C	D	Ev	E	Days	
Month	Expected Days per Month at Each PAL Value						Analyzed	
May	6.3	8.6	11.8	3.2	1.0	0.0	31	
June	3.7	6.6	13.0	5.2	1.5	0.0	30	
July	0.6	2.0	12.4	9.0	6.5	0.5	31	
August	0.9	1.9	9.4	9.0	8.7	1.1	31	
September	2.1	3.2	11.4	6.8	5.9	0.6	30	
October	4.6	5.9	12.1	6.1	2.3	0.0	31	
November	10.3	8.9	9.4	1.2	0.2	0.0	30	

Region 5 Project Activity Level (PAL) Ev Variance Application/Agreement

Project Name: _____

Contract Number: _____

Contractor Name: _____

Request #__, for period: _____

Units/Subdivisions Affected: _____

Location of operation:	
Slope	
Aspect	
Elevation	
Fuels on site	
Fuels in surrounding area	
7 Day PAL Outlook	
Short range predictions (Red Flags)	
Fuel Moistures	
Response time of suppression resources	
Potential for ignition	
RAWS location	
Current Fire Situation:	
Draw down information	
National Readiness Level	
Contractual considerations:	
Normal Operating Season	
Frequency of recent contract fires in area	
Type of operation	
Contractors past/current performance & equipment readiness	
Other site specific mitigation or precaution (i.e. Contractors proposals)	
Social & Community Considerations:	
Proximity of high value resources	
Sensitivity of location	

Proposed Actions:

Description of Mitigation Measures:

Remarks:

Fire Management Officer Concurrence

Date

Line Officer Approval

Date

I have considered the above request and determined the specified mitigation measures or actions must be implemented to continue operations in Project Activity Level Ev. Unless extended, the approval remains in effect for ten (10) calendar days unless cancelled sooner or extended by the Forest Service for an additional ten (10) days. At the sole discretion of the Forest Service, this variance can be modified and/or cancelled at no cost to the government.

Contracting Officer

Date

Contractor Representative

Date

**APPENDIX H.2: FIRE PLAN FOR MECHANICAL THIN
FIRE PLAN FOR CONSTRUCTION AND SERVICE CONTRACTS: MECHANICAL THIN
08/02/2012**

1. **SCOPE:**

The provisions set forth below outline the responsibility for fire prevention and suppression activities and establish a suppression plan for fires within the contract area. The contract area is delineated by map in the contract. The provisions set forth below also specify conditions under which contract activities will be curtailed or shut down.

2. **RESPONSIBILITIES:**

A. Contractor

- (1) Shall abide by the requirements of this Fire Plan.
- (2) Shall take all steps necessary to prevent his/her employees, subcontractors and their employees from setting fires not required in completion of the contract, shall be responsible for preventing the escape of fires set directly or indirectly as a result of contract operations, and shall extinguish all such fires which may escape.
- (3) Shall permit and assist in periodic testing and inspection of required fire equipment. Contractor shall certify compliance with specific fire precautionary measures in the fire plan, before beginning operations during Fire Precautionary Period and shall update such certification when operations change.
- (4) Shall designate in the Fire Plan and furnish on Contract Area, during operating hours, a qualified fire supervisor authorized to act on behalf of contractor in fire prevention and suppression matters.

B. Forest Service/NFF

The Forest Service or NFF may conduct one or more inspections for compliance with the Fire Plan. The number, timing, and scope of such inspections will be at the discretion of agency employees responsible for contract administration. Such inspections do not relieve the Contractor of responsibility for correcting violations of the fire plan or for fire safety in general, as outlined in paragraph 2.A above.

3. **DEFINITIONS:**

The following definitions shall apply:

Active Landing: A location the contractor may be skidding logs into, or performing other operations such as delimbing, log manufacturing, and chipping logs. Except for EV and E days, loading logs or stockpiling chips only, on a cleared landing, does not constitute an Active Landing.

Hot Saw: A harvesting system that employs a high-speed (>1100 rpm) rotating felling head, i.e., full rotation lateral tilt head.

Mechanical Operations: The process of felling, skidding, chipping, shredding, masticating, piling, log processing and/or yarding which requires the use of motorized power which includes, chainsaws, chippers, motorized carriages, masticators, stroke delimiters, skidders, dozers etc.

4. **TOOLS AND EQUIPMENT:**

The contractor shall comply with the following requirements during the fire precautionary period, as defined by unit administering contracts:

The Fire Precautionary Period is set by the State of California which is April 1 through December 1 of any year.

- This contract ☒ requires, ☐ does not require, a Fire Box and associated Fire Tools according to CPRC Section 4428.

A. Fire Tools and Equipment: Contractor shall meet minimum requirements of Section 4428 of the California Public Resources Code (C.P.R.C.). Fire tools kept at each operating landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in contractor's operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. All required fire tools shall be maintained in suitable and serviceable condition for fire fighting purposes.

Trucks, tractors, skidders, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.

Where cable yarding is used, contractor shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump within 25 feet of each tail and corner block.

B. Fire Extinguishers: Contractor shall equip each internal combustion yarder, fuel truck, and loader with a fire extinguisher for oil and grease fires (4-A:60-B:C).

Skidders and tractors shall be equipped with a minimum 5-BC fire extinguisher.

All Fire Extinguishers shall be mounted, readily accessible, properly maintained and fully charged.

Contractor shall equip each mechanized harvesting machine with hydraulic systems, powered by an internal combustion engine (chipper, feller/buncher, harvester, forwarder, hot saws, stroke delimeter, etc), except tractors and skidders, with at least two 4-A:60-B:C fire extinguishers or equivalent.

C. Spark Arresters and Mufflers: Contractor shall equip each operating tractor and any other internal combustion engine with a spark arrester, except for motor vehicles equipped with a maintained muffler as defined in C.P.R.C. Section 4442 or tractors with exhaust-operated turbochargers. Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the. National Wildlife Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be maintained in good operating condition. Every motor vehicle subject to registration shall at all times be equipped with an adequate exhaust system meeting the requirements of the California Vehicle Code.

D. Power Saws: Each power saw shall be equipped with a spark arrester approved according to C.P.R.C. Section 4442 or 4443 and shall be maintained in effective working order. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating power saw. In addition, a size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can but not more than 300 feet from each power saw when used off cleared landing areas.

- This contract ☒ requires, ☐ does not require, Section 4E of the Fire Plan.

E. Tank Truck or Trailer: Contractor shall provide a **water tank truck or trailer** on or in proximity to Contract Area during contractor's operations hereunder during Fire Precautionary Period. When Project Activity Level B or higher is in effect, a tank truck or trailer shall be on or immediately adjacent to each active landing, unless otherwise excepted when Hot Saws or Masticators are being used. See Section 6 for specific contract requirements.

The tank shall contain at least 300 gallons of water available for fire suppression. Ample power and hitch shall be readily available for promptly and safely moving tank over roads serving Contract Area. Tank truck or trailer shall be equipped with the following:

- (1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on Contract Area using a 5/16 inch orifice in the Forester One Inch In-Line Gauge test kit. Pump shall meet or exceed the pressure value in the following table for nearest temperature and elevation:

T e m p	Sea Level		1000 Feet		2000 Feet		3000 Feet		4000 Feet		5000 Feet		6000 Feet		7000 Feet		8000 Feet		9000 Feet		10000 Feet	
55	179	23	174	23	169	23	165	22	161	22	157	22	153	22	150	21	146	21	142	21	139	21
70	175	23	171	23	166	22	162	22	158	22	154	22	150	21	147	21	143	21	139	21	136	20
85	171	23	168	23	163	22	159	22	155	22	151	21	147	21	144	21	140	21	136	20	133	20
100	168	23	164	23	159	22	155	22	152	22	148	21	144	21	141	21	137	20	133	20	131	20
	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M

The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.

- (2) 300 feet of 3/4-inch inside diameter rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than approximately 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings, or other failures.
- (3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range
Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

- (4) Sufficient fuel to run the pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

When contractor is using Hot Saws or Masticators, an additional 250 feet of light weight hose, approved by the Forest Service, shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurtenances in (2) and (3) above.

This equipment and accessories shall be deliverable to a fire in the area of operations and is subject to the requirements for each specific activity level identified in Section 6.

F. Compressed Air Foam System: A Compressed Air Foam System (CAFS) is a fire suppression system where compressed air is added to water and a foaming agent. By agreement, contractor may substitute a CAFS or functional equivalent in lieu of the tank truck, trailer or fire extinguishers, provided it meets or exceeds the following specifications and requirements:

1. Variable foam expansion ratio – 10:1 to 20:1.
2. Units shall be kept fully charged with air; water and foam concentrate as recommended by the manufacturer and have the appropriate tools to service the system.
3. The unit shall contain enough energy to empty tank and clear hose prior to exhausting propellant.
4. The unit shall be capable of being completely recharged within 10 minutes.
5. When used on cable yarding landings, the unit shall be outfitted for immediate attachment to carriage and transported without damage to the unit.

Fire extinguishers required for Hot Saws, Masticators and similar equipment identified in Section 4 B. above may be substituted with a 3 gallon CAFS.

Tank truck, trailer or equivalent may be substituted with a 30 Gallon CAFS with at least 550 feet of one inch hose and an adjustable nozzle with enough water, air and foam concentrate for at least one recharge.

This equipment and accessories shall also be deliverable to a fire in the area of operations and subject to the requirements for each specific activity level identified in Section 6.

5. **GENERAL**

- A. **State Law:** In addition to the requirements in this Fire Plan, the contractor shall comply with all applicable laws of the State of California. In particular, see California Public Resource Codes.
- B. **Permits Required:** The contractor must secure a special written permit from the District Ranger or designated representative before burning, welding or cutting metal or starting any warming fires. If contract requires Blasting and Storing of Explosives and Detonators, an Explosives Permit may be required pursuant to the California Health and Safety Code, Section 12101.
- C. **Blasting:** Contractor shall use electric caps only unless otherwise agreed in writing. When blasting is necessary in slash areas, a Fire Patrolperson equipped with a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump shall remain in the immediate area for an hour after blasting has been completed.
- D. **Smoking:** Smoking shall not be permitted during fire season, except in a barren area or in an area cleared to mineral soil at least three feet in diameter. In areas closed to smoking, the CO may approve special areas to be used for smoking. The contractor shall sign designated smoking areas. Contractor shall post signs regarding smoking and fire rules in conspicuous places for all employees to see. Contractor's supervisory personnel shall require compliance with these rules. Under no circumstances shall smoking be permitted during fire season while employees are operating light or heavy equipment, or walking or working in grass and woodlands.
- E. **Storage and Parking Areas.** Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least 10 feet unless otherwise specified by local administrative unit. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least 10 feet from such engine. The COR shall approve such sites in writing.
- F. **Reporting Fires:** As soon as feasible but no later than 15 minutes after initial discovery, the contractor shall notify Forest Service of any fires on Contract Area or along roads used by the contractor. Contractor's employees shall report all fires as soon as possible to any of the following Forest Service facilities and/or personnel listed below, but not necessarily in the order shown:

	Name	Office Address	Office telephone
Dispatch Center	Call First	13120 Loma Rica Drive, Grass Valley, CA 95945	530-477-7237
Nearest FS Station	Truckee RD	10811 Stockrest Springs Rd Truckee, CA 96161	530-587-3558
Inspector	Dwight Clark	10811 Stockrest Springs Rd Truckee, CA 96161	530-563-2229
COR	Sonya Lucatero	10811 Stockrest Springs Rd Truckee, CA 96161	530-941-7945
District Ranger	Jonathan Cook- Fisher	10811 Stockrest Springs Rd Truckee, CA 96161	530-721-3007

When reporting a fire, provide the following information:

- Your Name
- Call back telephone number
- Project Name designee

- Location: Legal description (Township, Range, Section); and Descriptive location (Reference point)
- Fire Information: Including Acres, Rate of Spread and Wind Conditions.

▪ This contract ☒ requires, ☐ does not require, Section 5G of the Fire Plan.

- G. **Communications:** Contractor shall furnish a serviceable telephone, radio-telephone or radio system connecting each operating side with contractor's headquarters. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service may accept a reasonable alternative location. The communication system shall provide prompt and reliable communications between contractor's headquarters (or agreed to alternative) and Forest Service via commercial or Forest Service telephone.

▪ This contract ☒ requires, ☐ does not require, Section 5H of the Fire Plan.

- H. **Fire Patrolperson:** Contractor shall furnish a qualified fire patrolperson each operating day when Project Activity Level C or higher is in effect. When on duty, sole responsibility of patrolperson shall be to patrol the operation for prevention and detection of fires, take suppression action where necessary and notify the Forest Service as required. This Fire patrol is required on foot, unless otherwise agreed. By agreement, one patrolperson may provide patrol on this and adjacent projects. No patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

The Contractor shall, prior to commencing work, furnish the following information relating to key personnel:

<u>Title</u>	<u>Name</u>	<u>Telephone Number</u>
<u>Fire Supervisor</u>		
<u>Fire Patrolperson</u>		

- I. **Clearing of Fuels:** Contractor shall clear away, and keep clear, fuels and logging debris as follows:

Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:	10 feet slope radius
Tail or corner haulback blocks:	All running blocks shall be located in the center of an area cleared to mineral soil at least 15 feet in diameter.
Lines near, between or above blocks:	Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.

6. **EMERGENCY PRECAUTIONS**

Contractor's Operations shall conform to the limitations or requirements in the Project Activity Level (PAL) table below. Project Activity Levels applicable to this project shall be the predicted activity levels for the Fire Danger Rating Area(s), or fire weather station(s) stated in the Contract Area Map Legend on Integrated Resource Service Contracts (IRSC's), and other contracts where applicable.

Fire Danger Rating Area/Fire Weather Station for Project

Rice Canyon

The Forest Service, in its sole discretion, may change the predicted activity level if the current fire suppression situation, weather and vegetation conditions warrant an adjustment. If practicable, Forest Service will determine the following day's activity level by 6:00 PM. Contractor shall obtain the predicted Project Activity Level from the appropriate Ranger District Office before starting work each day.

Phone Number or Website to obtain Predicted Activity Levels:

East Side PALS 530-478-6176

Forest Service may change the Project Activity Level Table to other values upon revision of the National Fire Danger Rating System. When Contractor is notified, the revised Project Activity Levels will supersede the levels in the Project Activity Level Table below.

PROJECT ACTIVITY LEVEL

Level	<i>Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.</i>
A	Minimum requirements noted above in Sections 4 and 5.
B	1. Tank truck, trailer, or approved CAFS substitute shall be on or adjacent to the Active Landing.
C	1. When Hot Saws or Masticators are operating, a tank truck, trailer, or approved CAFS substitute shall be within ¼ mile of these operations. Effective communications shall exist between the operator and the Active Landing. 2. Immediately after Mechanical Operations cease, Fire patrol is required for two hours.
D	1. Immediately after Hot Saw or Masticator operations cease, Fire patrol is required for three hours. 2. No Dead Tree felling after 1:00 PM, except recently dead. 3. No burning, blasting, welding or cutting of metal after 1:00 PM, except by special permit.
Ev	1. The following activities may operate all day: a) Loading and hauling logs decked at approved landings. b) Loading and hauling chips stockpiled at approved landings. c) Servicing equipment at approved sites. d) Dust abatement, road maintenance (Chainsaw use prohibited), culvert installation within cleared area, chip sealing, paving, earth moving or rock aggregate stock pile loading and installation (does not include pit or quarry development). e) Chainsaw and log processing operations associated with loading logs or other forest products at approved landings. 2. Hot Saws or Masticators may operate until 1:00 PM; provided that: a) A tractor with a blade or other equipment capable of constructing fireline is on or adjacent to the active landing or within ¼ mile of the operating equipment. This piece of equipment shall have effective communication with the Hot Saw or Masticator. b) Any additional restrictions specified by the Forest. 3. All other conventional Mechanical Operations are permitted until 1:00 PM. 4. Some operations may be permitted after 1:00 PM, on a case-by-case basis, under the terms of a PAL Ev Variance Agreement. Activities for which a Variance may be issued are: • Rubber Tire Skidding • Chipping on Landings • Helicopter Yarding • Fire Salvage When approved by a Line Officer, a Variance Agreement can be implemented when the criteria specified in the agreement are met and mitigation measures are in place. This approval is good for ten (10) days unless cancelled sooner or extended by the Contracting Officer for an additional ten (10) days. Variance approval can be withdrawn at the sole discretion of the Forest Service. Variance approval is contingent on the 7-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of contractor's equipment for prevention and suppression readiness, type of operation and social and community considerations etc. (See attached Project Activity Level Variance Agreement).

Level	Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.
E	The following activities may operate all day: 1. Loading and hauling logs decked at approved landings. 2. Loading and hauling chips stockpiled at approved landings. 3. Servicing Equipment at approved sites. 4. Dust abatement, road maintenance (chainsaw use prohibited) or loading stock piles and rock aggregate installation (does not include pit or quarry development). 5. Chainsaw operation associated with loading at approved landings. All other activities are prohibited.

This Project utilizes “The Project Activity Level” (PAL), an industrial operation’s fire precaution system. The following Climatology Chart indicates the Historic Activity Levels for the Project Fire Danger Rating Area or Fire Weather Station utilized on this Project. This is only a historical average of the Activity Levels for the identified Fire Danger Rating Area or Weather Station.

Project Activity Level Climatology								
Fire Danger Rating Area/Weather Station	Stampede/Dog Valley				Years Analyzed		2001-2011	
	A	B	C	D	Ev	E	Days	
Month	Expected Days per Month at Each PAL Value						Analyzed	
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June	3.7	6.6	13.0	5.2	1.5	0.0	30	
July	0.6	2.0	12.4	9.0	6.5	0.5	31	
August	0.9	1.9	9.4	9.0	8.7	1.1	31	
September	2.1	3.2	11.4	6.8	5.9	0.6	30	
October	4.6	5.9	12.1	6.1	2.3	0.0	31	
November	10.3	8.9	9.4	1.2	0.2	0.0	30	

Region 5 Project Activity Level (PAL) Ev Variance Application/Agreement

Project Name: _____

Contract Number: _____

Contractor Name: _____

Request #__, for period: _____

Units/Subdivisions Affected: _____

Location of operation:	
Slope	
Aspect	
Elevation	
Fuels on site	
Fuels in surrounding area	
7 Day PAL Outlook	
Short range predictions (Red Flags)	
Fuel Moistures	
Response time of suppression resources	
Potential for ignition	
RAWS location	
Current Fire Situation:	
Draw down information	
National Readiness Level	
Contractual considerations:	
Normal Operating Season	
Frequency of recent contract fires in area	
Type of operation	
Contractor's past/current performance & equipment readiness	
Other site specific mitigation or precaution (i.e. Contractor's proposals)	
Social & Community Considerations:	
Proximity of high value resources	
Sensitivity of location	

Proposed Actions:

Description of Mitigation Measures:

Remarks:

Fire Management Officer Concurrence

Date

Line Officer Approval

Date

I have considered the above request and determined the specified mitigation measures or actions must be implemented to continue operations in Project Activity Level Ev. Unless extended, the approval remains in effect for ten (10) calendar days unless cancelled sooner or extended by the Forest Service for an additional ten (10) days. At the sole discretion of the Forest Service, this variance can be modified and/or cancelled at no cost to the government.

Contracting Officer

Date

Contractor Representative

Date