Carvin/Clark Hazard Tree Project Implementation

Question & Answer Document (Including 10/21/2026 Pre-Bid Tour Questions)

Can the bid period be extended?

- Due to revisions to the RFP based on answers provided in this document, the **new bid period end date is Monday, November 23, 2026.**

What is the reason behind preferring a cut to length system with forwarders versus ground based skidding?

- We believe this technique and equipment will minimize ground disturbance and compaction as compared to ground-based skidding methods. That said, if you believe alternative methods such as ground-based skidding or shovel logging are necessary and would achieve a similar result, please outline this in detail in your proposal. Details have been added to Appendix E and F.

Is there an expected timber value from the project?

- No, NFF does not have an expected value for the sale of timber associated with this project. NFF recognizes that due to the technical aspect of the project, shorter logs or undesirable lengths may be produced, in addition to the high cost of doing the work, may result in reduced revenue.

Will this project be subject to prevailing wage?

- No, this project is supported by federal funding and on federal property, and is not considered construction of public works.

Is an applicator's license required for the application of borax?

- As of 2024, the State of California Department of Pesticide Regulation requires a Pest Control Business (PCB) license for the application of borax on stumps. For more information, please review the *Updates to Compendium Volume 1: Limiting Allowable Pest Control Associated with Tree Surgery and Woodcutting Activities* letter attached at the end of this Q&A document. Contractors will also be required to submit monthly application logs to NFF, USFS, and Sierra County.

Is the LTO-A or CSLB C-49 licensing a requirement to submit a bid or to complete the project?

- Holding LTO-A is a requirement for this project. Additional certifications, such as CSLB C-49 license, are not a requirement to submit a bid or to complete the project. As stated in the RFP, please list relevant licenses as applicable when detailing your experience with projects of this nature. The selected contractor will be required to hold Loggers Broad Form insurance.

How big is the footprint for the LOPs in Clark Station?

- The exact size of the LOPs and their overlap with Clark Station can be provided in the spring, ahead of operations beginning in the homesite. The LOPs are resurveyed annually. Please refer to the LOP map provided in Appendix C of the RFP.

Is there a limited operating period for working within the recreation sites near cabins?

- As stated in the RFP, work cannot take place on the weekends, or on federal holidays (as listed by the US Office of Personal Management; found here).

Many trees are double marked for this project and by PG&E. Will the contractor be responsible for removing the trees marked by PG&E?

- PG&E has committed to felling all trees double marked by them and NFF/USFS (blue/green tracer paint). The contractor will be responsible for coordinating felling timelines with PG&E. Once felled by PG&E, the contractor will be responsible for the removal of these trees from the homesite. For additional details on these trees, please review the tree inventory list located in the Supplemental Documents linked here: https://nff.box.com/s/7wavaazu7075z6jykpq6mfgv69d2aw1y

Can you please provide the GIS data for the home sites?

- Georeferenced maps, as well as GIS data used to generate these maps (including approximate locations of trees), can be found in the Supplemental Documents link, following this link: https://nff.box.com/s/7wavaazu7075z6jykpq6mfgv69d2aw1y.

Can you provide a tree inventory?

- Data on each tree that is marked and stand tables are available online at the Supplemental Documents link, here: https://nff.box.com/s/7wavaazu7075z6jykpq6mfgv69d2aw1y.

Can water draft sites be made available?

- Yes, water draft sites near the project can be determined in coordination with the Forest Service. The following mitigation measure will apply for the use of water draft sites: for the protection of aquatic species; at any water drafting site, the use of a FGM 5161, or other similar foot valve with openings less than 2mm will be required. Additionally, the foot valve shall be placed in the deepest section of the water source on a shovel or a plastic/canvas bucket, after the site has been inspected for red-legged frogs or their eggs. Details have been added to Appendix E and F.

Is there an option to broadcast chip in the home sites?

- If necessary, specific locations, *at least* 100 feet from cabins/improvements, may be approved by the RPF and USFS to broadcast chip. Chip depth would need to be limited to an average depth of 2" and a maximum depth of 4". Resources such as stream channels and meadows would need to be avoided as well. Details have been added to Appendix E.

Can native material, via chipping, lop/scatter, etc., be used to mitigate erosion control rather than needing to bring in straw waddles or other BMPs?

- Disturbed areas should retain a minimum of 50% soil cover to prevent soil erosion, soil cover could be added if needed with brush/small trees/weed free straw/woodchips. Details have been added to Appendix E.

Will the cabins be vacated during work? Who will be coordinating with the cabin owners during the project?

- The NFF, USFS, and selected contractor will work together to provide cabin owners with project timelines, keeping cabin owners informed when work is planned near their cabin.

Can water lines and sewer lines be flagged consistently with different colors?

- NFF can request this from the cabin owners. If the cabin owners opt not to, this can be a discussion with the oversight RPF.

Will NFF consider changing the bid table to a per tree cost? Does a per acre rate incentivize contractors to avoid more trees and how will this be prevented? Is there a process for determining if a tree will not be cut?

- NFF has revised the bid table, opting to change to a per tree rate via size class for:
    - Line Items 1.a. and 2.a. (Hazard Tree Removal Plus Road Maintenance within both homesites).
    - Size classes:
        - 10.0" - 19.9" DBH
        - 20.0" - 35.9" DBH
        - ≥ 36.0" DBH
- Line Items 1.b. and 2.b. (Borate Stump Treatment within both homesites) have also been updated to a per tree rate in the bid table.
- Please refer to the updated RFP Pricing Schedule for details.
- The contractor may request in writing to leave cut-marked trees. Requested trees will require consensus approval by the NFF, oversight RPF, and a USFS representative prior to being left uncut. Cut-marked trees within the meadow exclusion zones in Clark Station will be left uncut. NFF is aware that many marked trees within both home sites will require specialized equipment due to their proximity to cabins and other infrastructure, these costs should be included and detailed in the submitted proposal.

Can the contractors scan for metal prior to delivering logs to sawmills?

- The selected contractor will be responsible for procuring a log purchase order with a sawmill for merchantable timber and will most likely be responsible for scanning logs for metal prior to delivering to the mill.

What is the specification for the size of downed sticks that will need to be removed?

- Slash resulting from the falling and removal of trees generally constitutes material greater than 3" in diameter and longer than 1 foot. Details have been added to Appendix E.

If the contract cannot be signed in December 2026, can the term date be extended?

- The NFF anticipates a signed contract prior to weather/ground conditions allowing for operations this spring (2027).

Item C. Wood Product Processing and Transportation has estimated tons under each unit. Can this be changed to actual tons removed, shown by weight receipts?

- Invoicing is based on actual tons removed shown by weight receipts.

Is this project area required to have traffic control?

- Trees along State Highway 49 will require traffic control. The selected contractor will be responsible for acquiring an encroachment permit with Caltrans, and will be required to follow all related public safety requirements. Please incorporate associated costs into your bid rates. Details have been added to Appendix E.

Julie Henderson
Director

Gavin Newsom
Governor

Yana Garcia
Secretary for Environmental Protection

11/26/2024

ENF 24-17

To: County Agricultural Commissioners

Updates to Compendium Volume 1: Limiting Allowable Pest Control Associated with Tree Surgery and Woodcutting Activities

This letter announces the availability of, and summarizes updates and revisions to, Volume 1, General Administration of the Pesticide Use Enforcement Program, one of the volumes of the Pesticide Use Enforcement Program Standards Compendium. Updates are enclosed and will also be available online. Please have your staff begin using the updates as soon as possible.

A woodcutter, logger, tree surgeon, arborist, or others may only apply certain pesticides to trees as part of their operations without a Pest Control Business (PCB) license. Food and Agricultural Code (FAC) section 11710 provides a PCB licensing exemption for those regularly engaged in the business of tree surgery to remove of diseased or infested tissues and apply disinfectants to wounds or cavities incidental to tree surgery. All persons advertising, soliciting, or operating as a business applying non-disinfectant pesticides (such as herbicides, insecticides, or fungicides) to trees or stumps require a PCB license from the Department even if such pest control is incidental to the person's main woodcutting, logging, tree surgery, or arborist operations.

This update supersedes previous guidance on the subject and aligns the guidance in Volume 1 with the text of FAC section 11710. In addition, the updated pages address the changes to FAC section 11531 due to Assembly Bill 2113 (Chapter 60, Statutes of 2024).

If you have any questions, please contact the Enforcement Branch Liaison assigned to your county.

Sincerely,

Original signature by:

Alicia Scott for Joshua Ogawa
Chief, Enforcement
Headquarters Branch
916-324-4100

Donna Marciano
Chief, Enforcement
Regional Offices Branch
916-603-7700

Enclosures

- Compendium Vol. 1 Replacement Page Instructions - English
- Compendium Vol. 1 Chapter 3 Updated Pages - English
- Compendium Vol. 1 Chapter 4 Updated Pages - English

CC: Mr. Joe Marade, DPR County/State Liaison
Enforcement Branch Liaisons

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Section 3.4.1
Agricultural Pest Control Business (PCB)

Who needs the PCB license

Any person who advertises, solicits, or operates as a pest control business (see discussion of "business" in Section 3.4.4). This includes the following FAC sections 11403 and 11701:

- Ground and aerial pest control operations, including individuals performing pest control for the accommodation of their neighbors.
- Management companies (e.g.: vineyard management or golf course management) when their services include pest control.
- Packinghouses, shippers, storage facilities, and other processors who treat agricultural commodities owned by another person or firm.
- Maintenance gardeners who engage in pest control for hire (more than incidental to that business's activities).

Exception: Cooperatives are excluded; see discussions on "Business Defined" and "Packing Houses and Other Processors" in Section 3.4.4.

Exemptions to the PCB license

- Structural pest control activities conducted within the scope of, **and** pursuant to, a valid structural pest control business license. (FAC section 11531(a))
- Preservation treatment of fabrics or structural materials. (FAC 11531(b))
- Sanitation services for collection, disposal, and treatment of wastewater, refuse, or sewage. (FAC section 11531(c))
- Seed treatment incidental to regular business. (FAC section 11531(d))
- Live capture and removal, or exclusion, of vertebrate pests, bees, or wasps without the use of pesticides. (FAC section 11531(e))
- Pool cleaning services, unless the person is selling, applying, using, or distributing a restricted material. (FAC section 11531(f))
- Tree surgery involving the removal of diseased or infested tissues or applying disinfectants to wound cavities incidental to tree surgery. (FAC section 11710)
- Gardeners and landscape maintenance service companies, if no pest control work is included as part of their services.

Continued on next page

Agricultural Pest Control Business (PCB), Continued

What's required to obtain a PCB license

An applicant for a PCB or Maintenance Gardner(MG) PCB license must:

1. Complete the *Pest Control Business License Application* (DPR-LIC-042) for each principal and branch location **or** the *Pest Control Business License Application, Maintenance Gardener Only* (DPR-PML-004)[3] location and submit it and all required fees to DPR.
2. Identify an individual who is responsible for the operation of the pest control business for each location listed on the application.
3. Fulfill financial responsibility requirements. (FAC section 11702(c)(2) and 3 CCR section 6524)
4. Submit a Fictitious Business Name Statement from the County Clerk's Office, if applicable[4]. (FAC section 11702(a))
5. For a corporation, submit a Certificate of Good Standing from the Secretary of State. (FAC section 11702(a))
6. Submit the initial license fees for the PCB's principal location and for each branch location **or** the initial license fee for a MG PCB license.
7. Submit the *Supplemental Application Information for Maintenance Gardener Pest Control Business License* (DPR-PML-143) if applicable.

Requirements once licensed

Once licensed, each principal and branch PCB and MG PCB must:

- Register with the CAC in each county where business is conducted. (FAC section 11732)
- Retain agricultural pest control application completion notice records for two years. (3 CCR section 6619)
- Retain pesticide use records for two years. (3 CCR section 6624)
- Submit pesticide use reports (PURs) to the CAC. In addition, school and daycare PURs must be submitted to DPR annually. See Chapter 4 Section 3. (3 CCR sections 6625, 6626(b), 6627 and 6628)
- Have a copy of the restricted materials permit during the application.* (3 CCR section 6632)
- Retain written recommendations and work orders for one year.*(FAC section 12004)
- If the business performs pest control using an aircraft, have an individual who holds a valid Journeyman PCAPC (FAC section 11901).

* Obtaining permits and retaining work orders/recommendations do not apply to MG PCBs

Continued on next page

[3] MG PCBs *by default* do not have branch locations.
[4] See *Pest Control Dealer* in Section 3.3 for information on the Fictitious Business Name Statement

Pest Control Business Interpretation Scenarios, Continued

Maintenance gardeners and landscape services, (continued)

If maintenance gardeners or landscape maintenance companies engage in pest control work separate from the maintenance gardening or landscape maintenance activities, they must be licensed as "full" PCBs. This includes "occasional" pest control work with a small hand-sprayer or hose-end sprayer and the use of snail bait or pesticides provided by a homeowner if done as part of the service.

Whether or not an itemized charge is made for the pest control work has no bearing on the licensing requirement. A maintenance gardener who maintains a supply of pesticides shows evidence of offering pest control as part of their service.

Post-harvest applications at packing houses and other processors

Processors (packing houses, hullers, driers, etc.) applying pesticides (such as fungicides or fumigants to fruits, nuts, grains, or vegetables) must be licensed as PCB if, at the time of treatment, the commodity is owned by the other party and pest control is part of the service provided for compensation. This also includes fungicides or insecticides applied to seeds if it is more than incidental to the regular business (i.e. a company who is in the business of treating seed).

A cooperative is owned by its members and if it handles only commodities from members a license would not be required.

Swimming pool service companies

Interprets FAC section 11531(f)

Persons engaged in the business of servicing swimming pools with a pesticide are exempt from the licensing requirement and are not required to obtain a PCB license unless the business is applying or using a restricted material. Pesticide labeling and worker safety requirements must still be followed. Additionally, the company must still follow the requirements of the local health department relative to the safe use of chlorine in the swimming pool.

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Pest Control Business Interpretation Scenarios, Continued

Vertebrate pest control

Interprets FAC section 11531(e)

The intent with this subsection is to exempt from licensure persons who practice live capture and removal, or exclusion, of vertebrate pests, bees, or wasps, without the use of pesticides. Vertebrate pests include bats, raccoons, skunks, squirrels, mice, rats, and pigeons.

Examples of exempted persons include trappers engaged in the business of live capture and removal of vertebrate pests without the use of pesticides, or falconers using trained raptors to scare off (exclude) nuisance birds from a desired area without killing them. FAC section 11531(e) does not exempt a person from the provisions of Chapter 1.5, Division 3, of the California Fish and Game Code.

Woodcutting: incidental pest control

Interprets FAC section 11701 and 11710

FAC section 11710 provides a PCB licensing exemption to those regularly engaged in the business of tree surgery. The licensing exemption only applies to removal of diseased or infested tissues and application of disinfectants to wounds or cavities incidental to tree surgery. All other pest control activities for hire including those done by woodcutters, loggers, tree surgeons, or arborists require a PCB license from the Department, even if such pest control is incidental to their main woodcutting, logging, tree surgery, or arborist activities.

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Pest Control Business Interpretation Scenarios, Continued

Wood, in-ground pole, railroad tie treaters, wood treatment and wood preservative	**Interprets FAC sections 11531 and 11701** The service of treating utility poles, fence poles, railroad ties, or wood with pesticides to control or prevent wood destroying pests is considered pest control and requires a pest control business license. A business that applies preservative pesticides to wood in a permanent treatment plant is exempt from the pest control business license. (FAC section 11531(b)) Such treatments include the use of pesticides in the manufacture of utility poles, fence posts, stakes, etc. If the pesticide requires supervision of a certified applicator a QAL or QAC is still required. Any treatment to existing structures is considered structural pest control. See also Section 3.3.1 *Pest Control Dealer Interpretation Scenarios.*
Work orders vs. recommenda-tions	See Section 3.2.2 *Interpretation of agricultural PCA scenarios.*

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Pest Control Business Interpretation Scenarios, Continued

Pest Control Equipment Rental

Basic principles

Interprets FAC section 11701 and 3 CCR section 6000

A company that only sells, leases, or rents pest control equipment is not required to be licensed as a PCB. It may do initial setup and calibration of the equipment. Maintenance or repairs (changing oil, fueling, replacing spark plugs, fixing a flat tire, etc.) required to keep the equipment running and are not related to pest control may also be performed. Any further calibration or "in-field" adjusting would require a PCB license.

Note: If an employee maintains, services, repairs, cleans, or handles equipment used to apply pesticides or potentially contaminated with pesticides, the employee must be trained as a handler and the employer must follow the requirements of 3 CCR section 6744.

A PCB license is required of all persons who lease, rent, or provide pest control equipment **and** who mix and dilute the pesticide concentrate, or clean, calibrate, or otherwise service the equipment on the renter's property. When this service is provided as part of a lease or rental agreement, the service is covered by a part of the fee.

If the only service provided is mechanical repair and initial calibration performed on the property of the person who owns the equipment, a PCB license is not required.

If the spray equipment is loaned and the above-described services are provided at no cost, a PCB license is not required.

Occasionally, an equipment owner will provide an operator (applicator) along with the equipment. If the equipment owner pays the operator's salary and worker's compensation, the owner would have to be a licensed PCB. The equipment owner is not required to be licensed if the renter of the equipment pays the operator's salary and compensation.

Continued on next page

Interpretations and Scenarios, Continued

Home gardens/ ranchettes/ farmer's market	Home gardens and ranchettes that produce commodities only for **personal consumption** are exempt from the reporting requirements. This includes pesticide use on pastures for the production of livestock for **personal consumption**. DPR considers these situations home use, not agricultural. Home and ranchette pesticide uses along fence lines and on large landscaped or unimproved areas are exempt from the reporting requirements, as these are considered home use. The home gardens or ranchettes **producing commodities for sale** (including at the local farmers' market, roadside stands, etc.) fall under commercial production of an agricultural commodity. The homeowner or operator of the property is required to obtain an OIN and site ID number and report the use of pesticides applied to those crops as agricultural use, regardless of the size of the production area.
Logging contractors and stump treatments	In some forests, pesticides such as growth inhibitors, herbicides or fungicides may be applied to the stumps soon after cutting. Pesticide treatments to stumps (after the logs have been removed from the site of growth) are agricultural use under FAC section 11408 and fall in the non-production agricultural use sub-category (See Compendium Volume 8, Section 1.1). As covered in Section 3.4.4, if the logging contractor, as part of their service, applies these pesticides a PCB license is required. The use is reported on the *Monthly Summary Pesticide Use Report.*
Non-food / non-feed commodity fumigation	Fumigations of railcars with lumber, furniture, wine barrels, etc. are reported as non-food/non-feed using commodity code 91 on the *Monthly Summary Pesticide Use Report.*

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Interpretations and Scenarios, Continued

Packing house	Pesticide applications in a packing house are considered industrial applications. Pesticides applied to machinery, conveyor belts or other utensils or equipment are not reported, unless restricted materials are used. Post-harvest treatments applied directly to a commodity and restricted material uses are required to be reported
Parks and recreation commodity/site reporting	Applications made by employees of the California Department of Parks and Recreation or by a private pest control company hired by the California Department of Parks and Recreation should add qualifier "-20" to the commodity/site codes.
Pheromones	**Interprets FAC section 12753** Pheromones are considered pesticides and are subject to all pesticide use reporting requirements. Report the total amount of formulated product used. For a liquid pheromone "puffer" this could be either 13.5 fluid ounces or 399 ml. For twist ties, multiply the number of dispensers used by the dispenser content (not the active ingredient per dispenser) to get ounces or grams.
Post-harvest commodity fumigation	The use report must indicate the specific name of the commodity. If multiple commodities are fumigated at same time, they are reported on separate lines. The total product used is to be reported for each commodity in the chamber at the time of application. Use the *Monthly Summary Pesticide Use Report.*
Rodenticide sales by CACs	CACs who sell rodenticides to persons who have OINs from neighboring counties are not required by regulation to submit the quarterly report to those other counties since CACs are not licensed pest control dealers. DPR encourages that such quarterly use reports be sent as a courtesy to applicable counties to inform them of pest control activities and that pesticide use reports could be expected.

Continued on next page

National Forest Foundation

Building 27, Suite 3, Fort Missoula Road
Missoula, Montana 59804
TEL 406.542.2805
nationalforests.org

Request for Proposals

Carvin/Clark Hazard Tree Project Implementation

Yuba River Ranger District, 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 NFF and the USDA Forest Service (USFS) are working together to protect and restore the Tahoe National Forest through targeted efforts in the NFF's Tahoe Headwaters Treasured Landscape site. The Carvin/Clark Hazard Tree Project is a **highly technical** hazard tree removal project designed to reduce the risk to public safety and to create safer and more resilient forests in the Carvin Creek and Clark Station home tracts.

Statement of Work:

The awarded Contractor will: collaborate with the Yuba River Ranger District (YRRD), NFF, and the oversight forester to implement forest health treatments across the project area. The purpose of this project is to remove designated hazard trees within the Carvin Creek and Clark Station home tracts. Safe operations will require exceptional attention to important infrastructure within the project area (such as housing, waterlines, powerlines, roads, etc.). Please refer to Appendix C – Project Maps and the supporting documents (found here) for more details. **Supporting documents folder contains georeferenced maps.**

The Carvin Creek home tract project unit is approximately 33 acres and contains approximately 683 trees marked for removal. The Clark Station home tract project unit is approximately 93 acres and contains approximately 1,829 trees marked for removal. The total project area is approximately 126 acres, consisting of approximately 2,512 trees marked for removal. Please refer to the project appendices, as well as supporting documents (found here), for additional details on tree inventory and tonnage. The logs and biomass produced from this project will become the property of the Contractor who will be responsible for their removal from the project areas. Designated trees may be manufactured into specified log lengths, transported to designated landings, and decked

for removal by the Contractor. All logs and biomass produced within this project must be removed in a timely manner, within the performance period.

Timeline:

This Request for Proposals will close and all proposals will be due on 5:00 PM (PDT) on November 23, 2026. The NFF anticipates being able to enter a contract with any selected bidder(s) by January 2027, with an anticipated contract start date as soon as possible thereafter, to complete the project scope by December 31, 2027. 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.

Project Tour:

The NFF and the USFS will host a project tour to help interested contractors gain a better understanding of the project and field any questions. This tour is scheduled to be conducted on Wednesday, October 21, 2026, and if this date changes, bidders will be notified. Plan to meet at the Yuba Pass - CA State SNOPARK (off State Highway 49 in Calpine, CA 96124; Google map link) at 10:00 AM (PDT). Please send an email to twalsh@nationalforests.org by Friday, October 16, 2026, if you would like to attend the tour. Though not required, attending the tour is strongly recommended if you plan to submit a proposal.

I. PROJECT OVERVIEW AND REQUIREMENTS

General Specifications

(a) Description of Work – This Request for Proposals is for hazard tree removal operations and additional project-related service work. Additional information, requirements, and specifications for each item are provided in the attached appendices. The selected contractor(s) will be responsible for performing the following deliverables:

Item 1: Carvin Creek Home Site – 33 acres:

1a) Hazard Tree Removal, Plus Road Maintenance - Removal of marked hazard trees on approximately 33 acres in accordance with Appendix E, F, protection measures in Appendix G, and road maintenance in Appendix I.

1b) Borate Stump Treatment – Borate stump treatments will be utilized in all conifer removal units. Use a registered borate compound (FSM R5 Supplement 2300-92-1 modified by FSH R5 Supplement 3409.11-2010-1) to reduce the probability of infection by *Heterobasidion occidentale* and *H. irregular*, the casual agents of Heterobasidion root disease (formerly referred to as annosus root disease).

1c) Wood Product Processing and Transportation - Transportation of all logs, tops, limbs, and other slash that result from the falling of hazard trees to processing facilities to be identified by the Contractor in accordance with Appendix E, F, and the protection measures in Appendix G.

Sawtimber: 2,015 GT
Biomass – tops, limbs, slash: 495 GT

Item 2: Clark Station Home Site – 93 acres:

2a) Hazard Tree Removal, Plus Road Maintenance - Removal of marked hazard trees on approximately 93 acres in accordance with Appendix E, F, protection measures in Appendix G, and road maintenance in Appendix I.

2b) Borate Stump Treatment - Borate stump treatments will be utilized in all conifer removal units. Use a registered borate compound (FSM R5 Supplement 2300-92-1 modified by FSH R5 Supplement 3409.11-2010-1) to reduce the probability of infection by *Heterobasidion occidentale* and *H. irregular*, the casual agents of Heterobasidion root disease (formerly referred to as annosus root disease).

2c) Wood Product Processing and Transportation – Transportation of all logs, tops, limbs, and other slash that result from the falling of hazard trees to processing facilities to be identified by the Contractor in accordance with Appendix E, F, and the protection measures in Appendix G.

Sawtimber: 5,807 GT
Biomass – slash, tops, limbs: 1,395 GT

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

1. Appendix A – Federal Funding Provisions
2. Appendix C – Project Maps
3. Appendix E.1 – Schedule of Items and Specifications
4. Appendix E.2 – Yuba EA Management Requirements
5. Appendix F – Timber Removal Specifications
6. Appendix G – Guidelines for Operations
7. Appendix H – Fire Plan
8. Appendix I – Road Maintenance Package
9. Appendix J – Pesticide Application Daily Log
10. Supplemental documents found here

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 – Carvin Creek and Clark Station home tracts, off State Highway 49 in Calpine, Sierra County, CA, in the Yuba River Ranger District of the Tahoe National Forest. Please refer to the Appendix C – Project Maps for more details.

(d) Work Schedule – Work will commence as soon as possible post contract signature and run year-round (weather permitting) until end-December 2027. Anticipate delays each summer and fall for Project Activity Level (PAL) days where limited work is allowed due to fire restrictions. Snow cover and wet ground will likely prevent mechanical work during periods in the winter months (November – May).

Operations are prohibited in both home tracts on weekends and federal holidays (as listed by the US Office of Personal Management; found here), unless otherwise approved by the NFF, USFS, oversight forester, and home tract

representative. **The NFF oversight forester must be present onsite each day operations occur.**

Carvin Creek Home Tract Known Wildlife Schedule Constraints:

N/A

Clark Station Home Tract Known Wildlife Schedule Constraints:

Portion of the Clark Station home site overlaps with two Limited Operating Periods (LOP):

- A Northern Goshawk (NOGO) LOP currently prohibits operations from February 15th – September 15th.
- A California Spotted Owl (CSO) LOP currently prohibits operations from March 1st – August 15th.
- Please see Appendix C – General Project Maps for more details.

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 NFF Representative will assist the Contractor in identifying a camping area near the project site if camping is the desired option.

Insurance Requirements

(a) Minimum Insurance. In accordance with the terms of the Services Agreement, prior to the start of any work, the successful Bidder (the "Contractor") will be required to maintain, and ensure that its subcontractors performing work described in the proposal (Subcontractors) maintain, the minimum coverages and comply with the insurance requirements indicated below.

Coverage Requirements

Commercial General Liability Insurance ("CGL"). Commercial general liability insurance, including bodily injury, property damage, personal injury, advertising injury, products and completed operations and contractual liability in the amount no less than:

- $1,000,000 each occurrence;
- $1,000,000 products/completed operations limit;
- $1,000,000 advertising injury and personal injury limit; and
- $2,000,000 general aggregate.

Business Automobile Liability Insurance. If using motor vehicles (owned, hired, or borrowed) to deliver or perform the work described in the proposal, business automobile liability insurance with a minimum limit of $1,000,000 combined single limit each accident for bodily injury and property damage for all owned, rented leased or hired vehicles used in conjunction with the performance of the services.

Workers' Compensation Insurance. Statutory workers' compensation insurance in accordance with all state and local requirements of the state(s) in which services will be performed.

Professional Liability/Errors and Omissions Insurance. Professional or errors and omissions liability insurance with combined single limits of $1,000,000 per occurrence and $1,000,000 aggregate, per year, covering the performance of the successful bidder and any of its Subcontractors under the Services Agreement.

Waiver of Subrogation. All insurance policies shall include a waiver of any and all rights of subrogation or recovery of the insurers thereunder against, inter alia, the NFF, and its assigns, successors, undertakings and their subsidiaries, affiliates, employees, insurers and underwriters, and of any right of the insurers to any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.

Primary and non-contributory. With the exception of Workers' Compensation and Professional Liability insurance (if applicable), all insurance required to be maintained by Contractor shall be primary with respect to all claims arising out of Contractor's performance and/or activities under this Agreement, and any insurance or self-insurance maintained by the NFF shall be excess only and not be required to contribute with it.

"Claims Made" Coverage. Any liability insurance purchased on a "claims made" basis must be continuously maintained for a period equal to the applicable statute of repose, but in any case, not less than 3 years, following final performance or termination of Services, either through the continued purchase of insurance or the purchase of an extended reporting period. The retroactive date applicable to such "claims made" insurance, if any, must precede the first date on which Services are to be performed.

Verification of Coverage. Contractor will have furnished to the NFF original certificates of insurance and amendatory endorsements or copies of the applicable policy language effecting coverage required herein prior to or at the time of execution of the Agreement, and shall further provide evidence that the foregoing is in place and will not be cancelled or reduced during the term of the agreement. Contractor's and any Subcontractors' certificates of insurance will list "The National Forest Foundation" as an Additional Insured on its or their commercial general liability policy and business automobile liability policy (as applicable). Contractor will submit updated certificates of insurance upon expiration of the required policies.

Additional Insurance Requirements. In addition to the minimum insurances set-forth above, the NFF reserves the right to request additional coverage as reasonably necessary based on the scope, nature, and risks associated with the services to be performed, including, but not limited to:

Commercial/Contractor's Pollution Liability Insurance covering clean-up costs, legal fees, and third-party damages from environmental contamination.

Herbicide Applicator Endorsement restoring liability protection for chemical-related pollution and property damage to Contractor's CGL policy.

Loggers Broad Form Endorsement restoring liability protection for specific property damage and operational risk inherent to forestry operations to Contractor's CGL policy.

Umbrella/Excess Liability Insurance raising the limit on existing primary policies if the primary insurance limits are reasonably considered insufficient.

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.

Federal Flowdown Provisions

Flowdown Provisions. NFF funding for projects may vary but will frequently include public 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. Flowdown requirements are not negotiable and will not be removed or edited. While flowdown provisions may change depending on funding, the NFF has identified the following flowdown provisions as currently being required for any Work performed under this RFP and any resulting contract:

- Appendix A: Federal Flowdown Provisions for 1596051

II. REQUIRED COMPONENTS

Technical Proposal

(a) Minimum Requirements. Bidders shall submit a technical proposal for the work described in this RFP. Bidders shall consider all relevant factors when submitting proposals for this work. 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 should account for the need of the selected contractor to make its own arrangements for temporary utilities and facilities, if required. 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. At a minimum, each proposal must include the following:

a. An overview and description of the services, materials, supplies, labor, equipment, utilities, and facilities provided by the Bidder that align with the requests in this RFP.

b. 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.

c. 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.

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

e. 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.

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 list relevant licenses such as **LTO-A (required), Pest Control Business License (required), California State License Board C-49 (Tree and Palm) license, etc.**

   iii. Please provide a listing of relevant projects of similar size, scope, and total value performed by the Bidder within the past 5 years. **Please highlight all experience demonstrating the Bidder's ability to safely implement highly technical hazard tree**

removal operations around sensitive infrastructure such as home tract cabins, powerlines, shallow water lines, etc.

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.

3. UEI. Successful bidders will be required to provide a Unique Entity Identifier (UEI). If you have a UEI, please provide it in your proposal or quote.

4. Federal Exclusion Verification. Bidder(s) 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.

Failed Projects or Legal Actions

Bidders shall identify any past failed projects and the reasoning behind the failure or incompletion. 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.

Proposed unit pricing shall include and reflect anticipated timber revenues. The Contractor assumes all risk and benefit associated with actual timber revenues differing from estimated revenues, and no adjustment to contract pricing will be permitted as a result.

Please factor CA State Highway 49 traffic control into bid rates. The selected contractor will be responsible for acquiring an encroachment permit with Caltrans.

Prevailing wages may be required per conditions of funding sources, if identified in the pricing schedules below. 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.

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.

1. Hazard Tree Removal

The selected Contractor agrees to purchase timber removed from the Project. The selected Contractor agrees to pay the NFF the following timber rates for product removed:

Cutting Unit	Acres	Species	Product	Quantity	Unit of Measure	Rate of Payment $/UOM
All	126	All	Sawtimber	7822	TON	

For timber removal specifications please see Appendix F. Minimum rate for sawtimber is $1.00/TON.

2. Service Work Items

	Task/Item	**Units**	**Number of Units**	**Unit Cost**	**Work Item Cost**	**Project timber revenue used to lower work item cost**	**Extended Cost**
1	**Carvin Creek Home Tract**						
a.	Hazard Tree Removal, Plus Road Maintenance						
	Size Class 1: 10.0” – 19.9” DBH	Tree	383				
	Size Class 2: 20.0” – 35.9” DBH	Tree	252				
	Size Class 3: ≥ 36.0” DBH	Tree	48				
b.	Borate Stump Treatment	Tree	683				
c.	Wood Product Processing and Transportation						
	Saw Timber	GT	2,015				
	Biomass – tops, limbs, slash	GT	495				
2	**Clark Station Home Tract**						
a.	Hazard Tree Removal, Plus Road Maintenance						

	Size Class 1: 10.0” – 19.9” DBH	Tree	877				
	Size Class 2: 20.0” – 35.9” DBH	Tree	791				
	Size Class 3: ≥ 36.0” DBH	Tree	161				
b.	Borate Stump Treatment	Tree	1,829				
c.	Wood Product Processing and Transportation						
	Saw Timber	GT	5,807				
	Biomass – tops, limbs, slash	GT	1,395				

Note: Please factor CA State Highway 49 traffic control into bid rates. The selected contractor will be responsible for acquiring an encroachment permit with Caltrans.

See Appendix E for Service Work Item specifications.

- Cost Per Unit: The amount it will cost the selected contractor to implement and complete each unit of work for a given work item. This includes all costs associated with a completed unit i.e. labor, profit, etc.
- Work Item Cost: The amount it will cost the selected contractor to implement and complete the entire work item. This is calculated by multiplying the '#of units' by 'cost per unit'.
- Project Timber Revenue Used to Lower Cost Per Unit: The amount of timber revenue gained from the project that the contractor plans to contribute in order to lower the overall cost of a work item. Reinvested timber value does not need to equal 100% of revenue generated from project.
- Extended Cost: The cost a contractor seeks for payment from NFF to complete the work item. This cost is calculated by subtracting "Project Timber Revenue Used to Lower Cost" from the "Work Item Cost".

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.

Invoice Number	Milestone/Deliverable	Corresponding Cost
1.		
2.		
3.		
4.		
5.		
	Agreement Total	

Insurance Information. Bidders must identify the insurance coverage currently in place. If available, please attach sample certificates of insurance.

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: twalsh@nationalforests.org

Submission Deadline: 5:00 PM (PDT) on November 23, 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 within 2-weeks post bid closing date. 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
- Project relevant certifications

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.

Tyler Walsh
National Forest Foundation, Central Sierra Project Coordinator
twalsh@nationalforests.org

Bid Submission

Submit bids via email to twalsh@nationalforests.org by 5:00 PM (PDT) on November 23, 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 A

NFF Funding Code: 1596051
NFF Funding Name: SA SPA North Yuba Landscape Resilience Project (Inflation Reduction Act Funds)

Funder Agreement ID: 20-SA-11051700-020

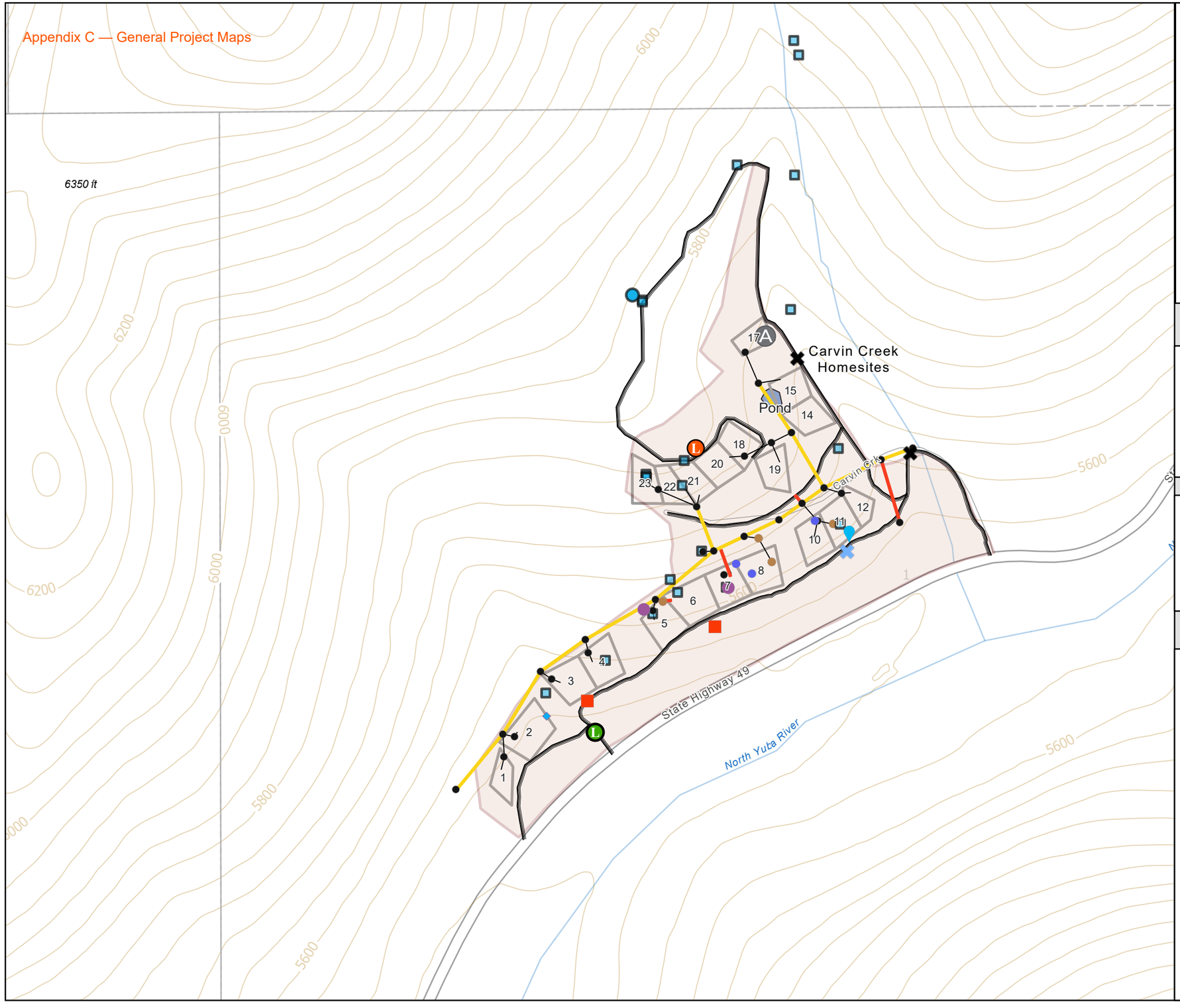
Flowdown Provisions

U.S. FOREST SERVICE ACKNOWLEDGED IN PUBLICATIONS, AUDIOVISUALS AND ELECTRONIC MEDIA.
Award Recipient or Contractor shall acknowledge U.S. Forest Service support in any publications, audiovisuals, and electronic media developed as a result of this agreement.

COPYRIGHTING.
Award Recipient or Contractor is granted sole and exclusive right to copyright any publications developed as a result of this agreement. This includes the right to publish and vend throughout the world in any language and in all media and forms, in whole or in part, for the full term of copyright and all renewals thereof in accordance with this agreement. No original text or graphics produced and submitted by the U.S. Forest Service must be copyrighted. The U.S. Forest Service reserves a royalty-free, nonexclusive, and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use the work for Federal Government purposes. This right must be transferred to any sub-agreements or subcontracts.

This provision includes:

- The copyright in any work developed by Award Recipient or Contractor under this agreement.
- Any right of copyright to which Award Recipient or Contractor purchase(s) ownership with any Federal contributions.



Carvin Creek Summer Home Tract

Proposed Hazard Tree Removal Project

Tahoe National Forest
Yuba River Ranger District

Feet
0 400 800 1,600

N

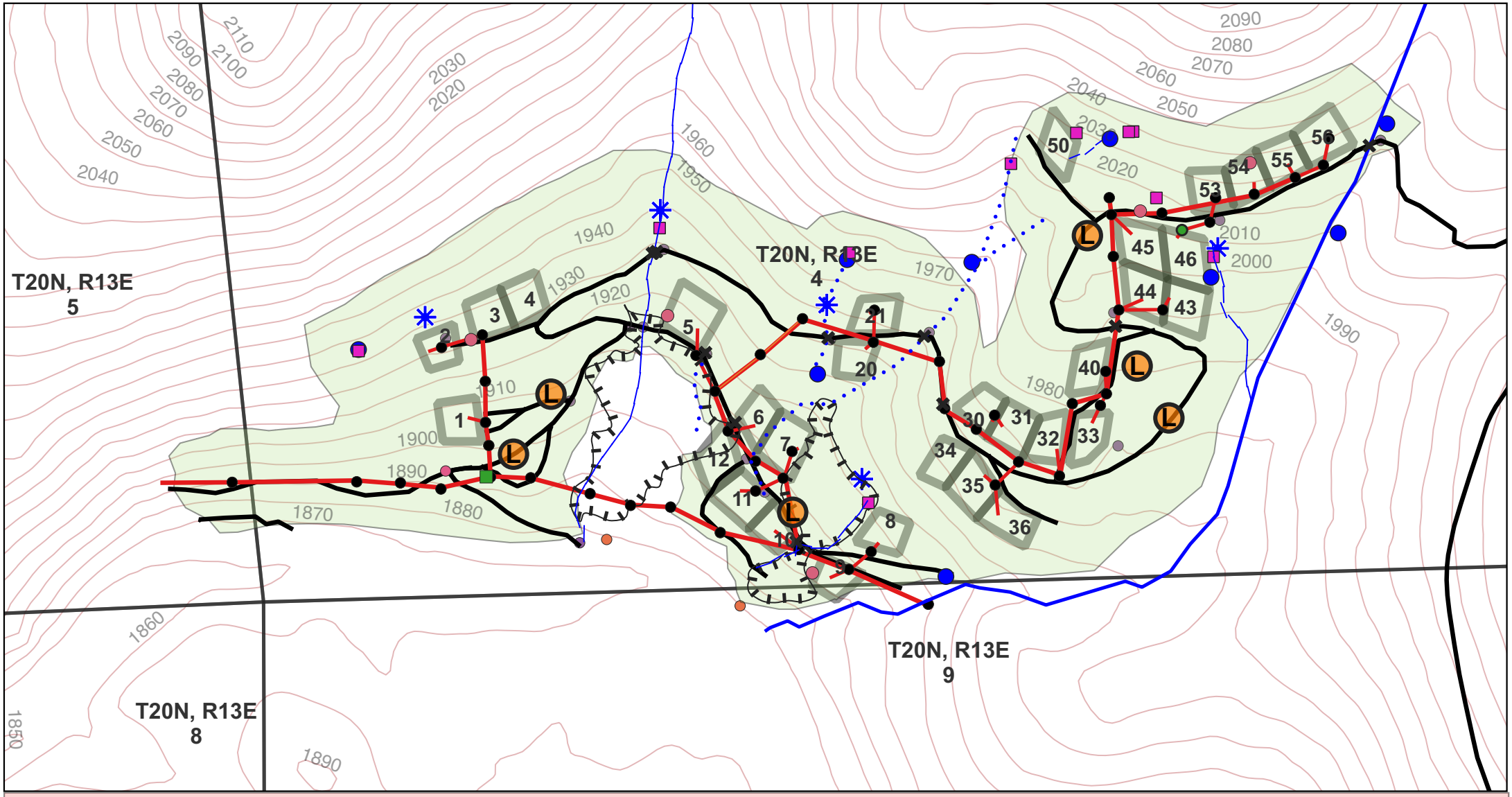
Scale: 1:6,000

Targets and infrastructure are mapped with little or no reference.
Neither the accuracy nor completeness of targets or infrastructure can be guaranteed.

Creation Date: 11/5/2025

Legend

- Existing Culvert
- Existing Low Water Crossing
- Existing Landing
- Proposed Landing
- Aspen Grove
- Spring
- Communication Box
- Propane Tank
- Utility Pole
- Water Box
- Water Tank
- Tree Attachment
- Satellite Dish
- Well Head
- Low Utility Line
- Overhead High Voltage Power Line
- Secondary Overhead Power Line
- System Road
- Project Boundary
- Carvin Creek Homesites
- Equipment Exclusion Area



Clark Station Proposed Hazard Tree Removal Project

Tahoe National Forest
Yuba River Ranger District

0 500 1,000 1,500 ft

N

Targets and infrastructure are mapped with little or no reference. Neither the accuracy nor completeness of targets or infrastructure can be guaranteed.

Creation Date: September 18, 2026

Legend

- Treatment Area
- Homesites
- Wet Meadows

Water Courses
- Perennial Watercourse
- Intermittent Watercourse
- Ephemeral Watercourse
- Spring

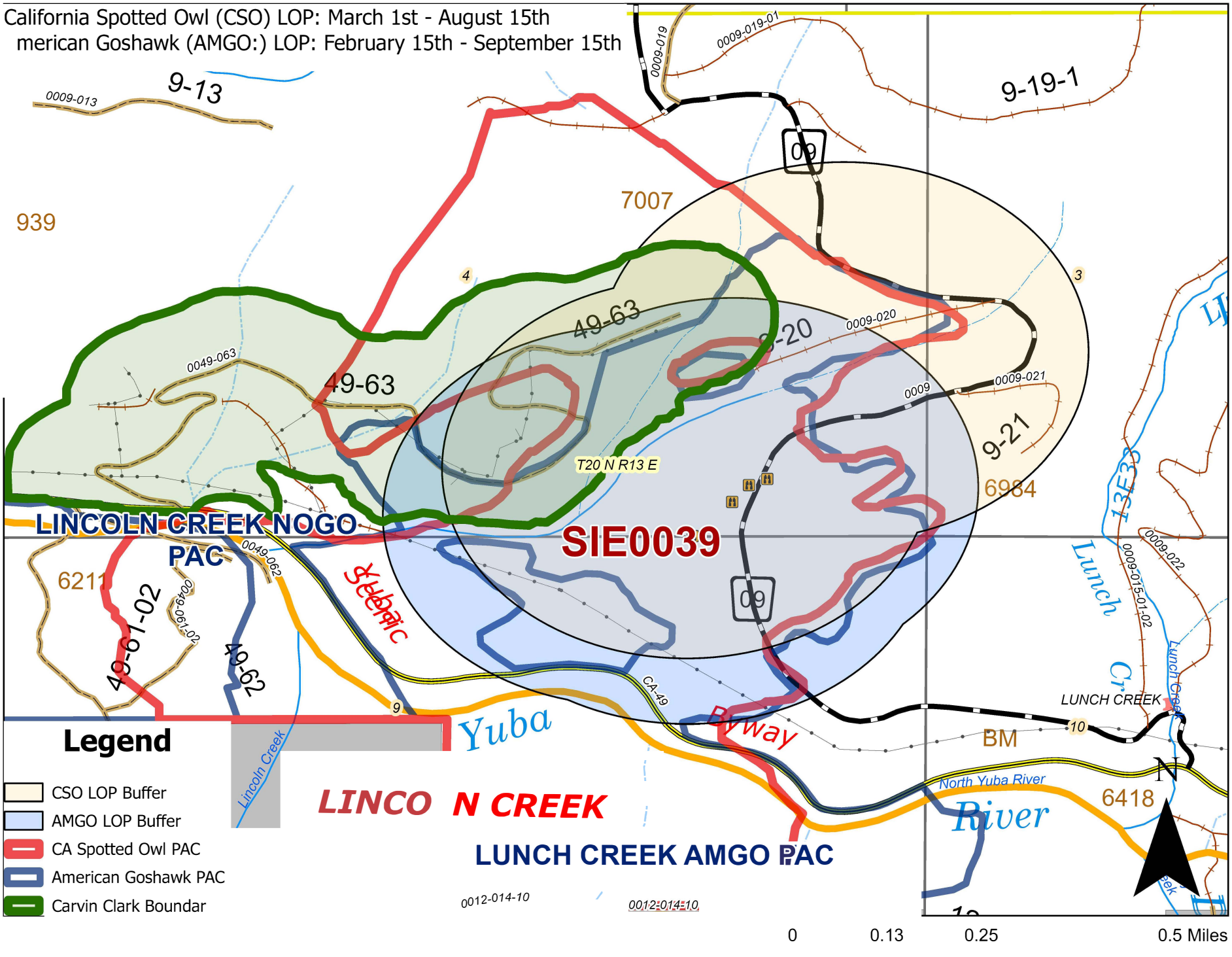
- Culverts
- Landings

Power_Comm Line features
- Overhead High Voltage Line
- Secondary Overhead Power Line
- Communication Line
- Water Line

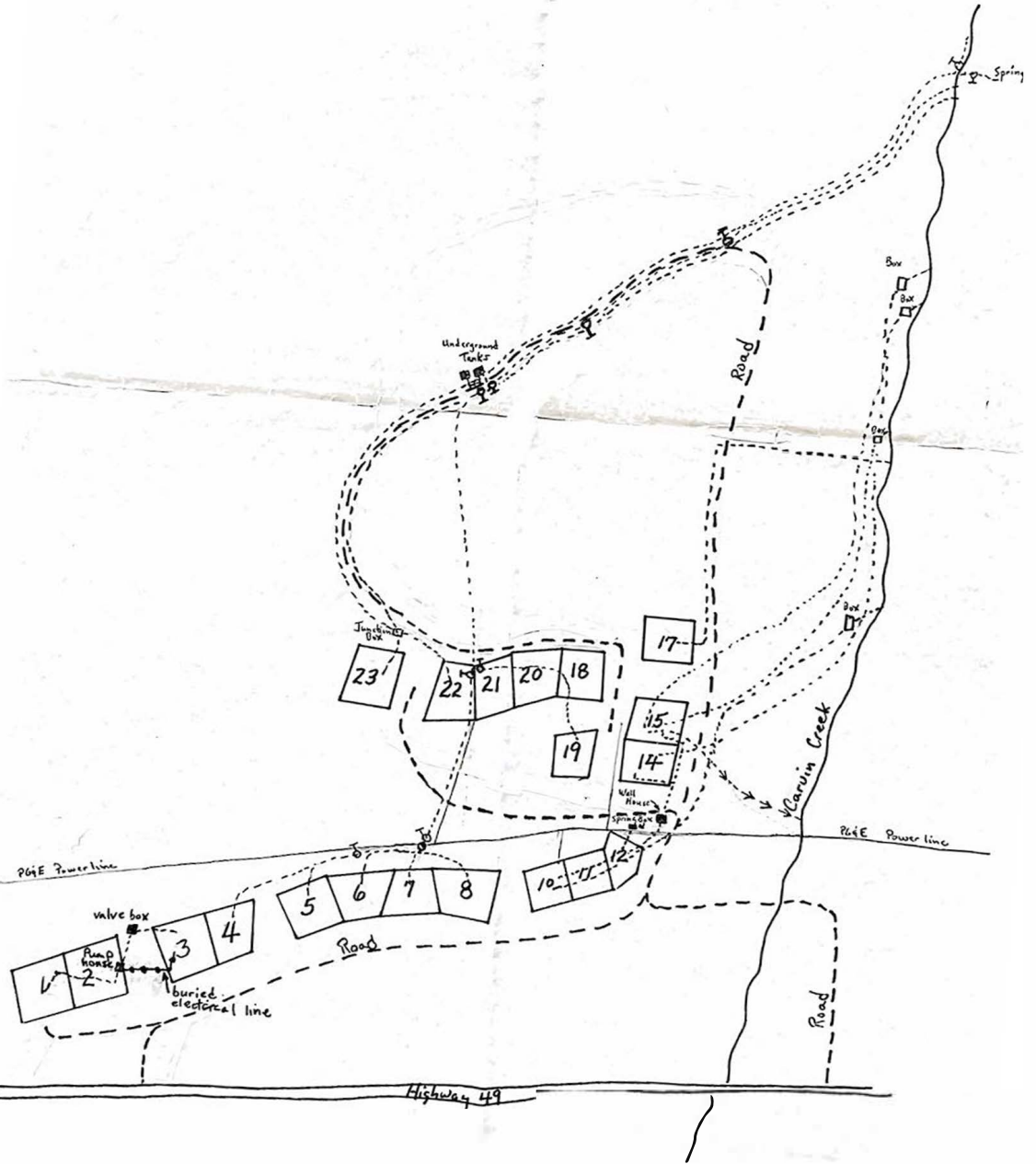
Utility Point features
- Communication Box
- Satellite Dish
- Tree Attachment
- Utility Pole
- Water Box
- Water Tank
- Well Head

Lunch Creek- California Spotted Owl and American Goshawk Limited Operating Period (LOP)

California Spotted Owl (CSO) LOP: March 1st - August 15th
merican Goshawk (AMGO:) LOP: February 15th - September 15th



Carvin Creek Summerhome Tract
Water Systems Map
April 2009



APPENDIX E.1
SCHEDULE OF ITEMS
AND
SPECIFICATIONS

Schedule of Items

	Task/Item	Units	Number of Units
1	**Carvin Creek Home Tract**		
a.	Hazard tree removal, plus road maintenance	Tree	
	Size Class 1: 10.0” – 19.9” DBH	Tree	383
	Size Class 2: 20.0” – 35.9” DBH	Tree	252
	Size Class 3: ≥ 36.0” DBH	Tree	48
b.	Borate stump treatment	Tree	683
c.	Wood Product Transportation		
	Saw timber	GT	2,015
	Biomass – tops, limbs, slash	GT	495
2	**Clark Station Home Tract**		
a.	Hazard tree removal, plus road maintenance	Tree	
	Size Class 1: 10.0” – 19.9” DBH	Tree	877
	Size Class 2: 20.0” – 35.9” DBH	Tree	791
	Size Class 3: ≥ 36.0” DBH	Tree	161
b.	Borate stump treatment	Tree	1829
c.	Wood Product Transportation		
	Saw timber	GT	5,807
	Biomass – tops, limbs, slash	GT	1,395

Item 1: Carvin Creek Homesites

Item 1a – Hazard Tree Removal, Plus Road Maintenance

Within the Carvin Creek homesite, the Contractor shall cut and transport from Project Area all standing live and dead hazard trees designated by the Forest Service and the Registered

Professional Forester (RPF) to processing facilities or other approved disposal sites. Contractor is to remove trees marked with blue/green paint. Work activities shall be accomplished using a cut-to-length harvester and a log forwarder. Hand felling may be required for some trees due to proximity to recreation infrastructure and improvements, requiring specialized felling techniques. Skidding is not preferred within the homesites, unless determined to be necessary. Other equipment such as a grapple truck and Sennebogen may be utilized to remove downed logs and biomass and reduce ground disturbance.

a. Downed logs shall be removed unless identified, by a designated representative, to remain in Project Area for homesite stability or other resource utilization.

b. If a standing tree has been identified, by a designated representative, as unable to be transported until a later time, the bole of the tree needs to be grounded, limbed, slash removed and left in a safe manner within the Project Area. All tree boles, and associated material (e.g. tops, limbs, slash, etc.), should be removed from the Project Area as soon as possible, and must be removed by the contract end date.

c. Directionally fell trees away from all sensitive resources and infrastructure, such as but not limited to: stream courses, meadows, nest trees, developed facilities, improvements, water systems, powerlines, designated roads and trails. Hazard trees inside the Riparian Conservation Area (RCA) will be felled away from stream courses.

d. Operate mechanical equipment when soil moisture conditions are such that compaction, gullying, and/or rutting will be minimal. Outside Normal Operating Season (NOS) or during wet periods within the NOS, utilize the Tahoe Wet Weather Operations Guidelines.

e. Equipment cleaning. All equipment and vehicles 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 the project area.

f. Do not cause ground disturbance. Skidding is only permitted if determined to be necessary.

g. Limit off-road vehicle/equipment use.

h. Pile slash on landing(s) to be removed.

i. Water drafting sites may be utilized with USFS approval. For the protection of aquatic species; at any water drafting site, the use of a FGM 5161, or other similar foot valve with openings less than 2mm will be required. Additionally, the foot valve shall be placed in the deepest section of the water source on a shovel or a plastic/canvas bucket, after the site has been inspected for red-legged frogs or their eggs.

j. Confer with oversight forester on feasibility of safe removal of trees with strike potential of powerlines (within 10ft of a powerline, or otherwise). Coordination by the Contractor and the oversight forester with PG&E may be required for the removal of trees with strike potential to powerlines.

k. For cut-marked trees that are also marked by PG&E: the Contractor is responsible for coordinating felling timelines with PG&E. Once felled by PG&E, the Contractor will be responsible for the removal of these trees from the homesite.

l. The Contractor may request in writing to leave cut-marked trees. Requested trees require consensus approval by the NFF, oversight RPF, and a USFS representative prior to being left uncut.

m. Any damage to home tract infrastructure (e.g. waterlines, cabins, etc.) caused by the Contractor's operations shall be promptly repaired to pre-damage condition at the expense of Contractor.

n. The Contractor is responsible for acquiring a Caltrans encroachment permit for work occurring along CA State Highway 49. The Contractor is responsible for providing for and following all public safety standards regarding traffic control while working along CA State Highway 49, including: road guards, flagging, and warning signs.

o. Additional specifications and requirements for timber removal and landing close out are included in Appendix F and Appendix G.

Road Maintenance

Refer to Appendix I – Road Maintenance Plan.

Item 1b – Borate Stump Treatment

a. Apply registered borate compound. Treat all live conifer stumps greater than three inches in diameter with a registered borate compound (FSM R5 Supplement 2300-92-1 modified by FSH R5 Supplement 3409.11-2010-1) to reduce the probability of infection by *Heterobasidion occidentale* and *H. irregular*, the casual agents of Heterobasidion root disease (formerly referred to as annosus root disease).

b. Ensure that direct application to stumps is made within 500 feet of perennial or intermittent streams, meadows, special aquatic features.

c. Borate compound also shall not be applied to stumps located within 300 feet of live stream courses and meadows/wetlands shown on project maps.

d. Application of borax will also be ceased if there is sustained rainfall, to avoid misapplication and runoff. Contractor shall keep daily record of borate application using

forms that will be provided by NFF. A copy of daily records shall be given to the NFF upon invoicing.

Item 1c – Wood Product Processing and Transportation

Material shall be processed and hauled from designated project landings to processing facilities or other approved disposal sites to be identified by the Contractor. All logs and slash produced as a result of the hazard tree removal must be removed from the homesites prior to contract end.

a. Minimum sawlog specifications

   i. Live and dead trees shall be transported from project area to the processing facility or approved disposal sites. Minimum tree DBH is 10.0 inches with a minimum piece length of 10.0 feet. Minimum top diameter inside bark (d.i.b) of 6 inches on the short axis. Cut stumps to 4.0 inches or less.

   ii. Existing downed trees are to be transported to identified disposal sites or processing facility.

   iii. Saw timber trees will be bucked into commercial lengths when feasible. FSH 2409.11 (Forest Service Scaling Handbook)

   iv. Logs decked at landings shall be no more than 41 feet long. Deck height shall be no more than 20 feet tall.

b. Biomass material specifications

   i. Tops, limbs, and slash developed by Contractor's operations shall be chipped and removed from the project area.

   ii. Slash resulting from the falling and removal of trees generally constitutes material greater than 3'' in diameter and longer than 1 foot.

   iii. Some chipping and broadcasting in select areas may be permitted, as approved by the RPF and USFS. Locations will be *at least* 100 feet from cabins/improvements, and chip depth will be limited to an average depth of 2" and a maximum depth of 4". Resources such as stream channels and meadows must remain free of woodchips.

   iv. If necessary to retain a minimum soil coverage of 50% within disturbed areas, soil cover may be added with brush/small trees/weed free straw/woodchips.

<u>Item 2: Clark Station Homesites</u>

Item 2a – Hazard Tree Removal, Plus Road Maintenance

Within the Carvin Creek homesite, the Contractor shall cut and transport from Project Area all standing live and dead hazard trees designated by the Forest Service and the Registered Professional Forester (RPF) to processing facilities or other approved disposal sites. Contractor is to remove trees marked with blue/green paint. Work activities shall be accomplished using a cut-to-length harvester and a log forwarder. Hand felling may be required for some trees due to proximity to recreation infrastructure and improvements, requiring specialized felling techniques. Skidding is not preferred within the homesites, unless determined to be necessary. Other equipment such as a grapple truck and Sennebogen may be utilized to remove downed logs and biomass and reduce ground disturbance.

a. Downed logs shall be removed unless identified, by a designated representative, to remain in Project Area for homesite stability or other resource utilization.

b. If a standing tree has been identified, by a designated representative, as unable to be transported until a later time, the bole of the tree needs to be grounded, limbed, slash removed and left in a safe manner within the Project Area. All tree boles, and associated material (e.g. tops, limbs, slash, etc.), should be removed from the Project Area as soon as possible, and must be removed by the contract end date.

c. Directionally fell trees away from all sensitive resources and infrastructure, such as but not limited to: stream courses, meadows, nest trees, developed facilities, improvements, water systems, powerlines, designated roads and trails. Hazard trees inside the Riparian Conservation Area (RCA) will be felled away from stream courses.

d. Operate mechanical equipment when soil moisture conditions are such that compaction, gullying, and/or rutting will be minimal. Outside Normal Operating Season (NOS) or during wet periods within the NOS, utilize the Tahoe Wet Weather Operations Guidelines.

e. Equipment cleaning. All equipment and vehicles 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 the project area.

f. Do not cause ground disturbance. Skidding is only permitted if determined to be necessary.

g. Limit off-road vehicle/equipment use.

h. Pile slash on landing(s) to be removed.

i. Water drafting sites may be utilized with USFS approval. For the protection of aquatic species; at any water drafting site, the use of a FGM 5161, or other similar foot valve with openings less than 2mm will be required. Additionally, the foot valve shall be placed

in the deepest section of the water source on a shovel or a plastic/canvas bucket, after the site has been inspected for red-legged frogs or their eggs.

j. Confer with oversight forester on feasibility of safe removal of trees with strike potential of powerlines (within 10ft of a powerline, or otherwise). Coordination by the Contractor and the oversight forester with PG&E may be required for the removal of trees with strike potential to powerlines.

k. For cut-marked trees that are also marked by PG&E: the Contractor is responsible for coordinating felling timelines with PG&E. Once felled by PG&E, the Contractor will be responsible for the removal of these trees from the homesite.

l. The Contractor may request in writing to leave cut-marked trees. Requested trees require consensus approval by the NFF, oversight RPF, and a USFS representative prior to being left uncut.

m. Any damage to home tract infrastructure (e.g. waterlines, cabins, etc.) caused by the Contractor's operations shall be promptly repaired to pre-damage condition at the expense of Contractor.

n. The Contractor is responsible for acquiring a Caltrans encroachment permit for work occurring along CA State Highway 49. The Contractor is responsible for providing for and following all public safety standards regarding traffic control while working along CA State Highway 49, including: road guards, flagging, and warning signs.

o. Additional specifications and requirements for timber removal and landing close out are included in Appendix F and Appendix G.

Road Maintenance

Refer to Appendix I – Road Maintenance Plan.

Item 2b – Borate Stump Treatment

a. Apply registered borate compound. Treat all live conifer stumps greater than three inches in diameter with a registered borate compound (FSM R5 Supplement 2300-92-1 modified by FSH R5 Supplement 3409.11-2010-1) to reduce the probability of infection by *Heterobasidion occidentale* and *H. irregular*, the casual agents of Heterobasidion root disease (formerly referred to as annosus root disease).

b. Ensure that direct application to stumps is made within 500 feet of perennial or intermittent streams, meadows, special aquatic features.

c. Borate compound also shall not be applied to stumps located within 300 feet of live stream courses and meadows/wetlands shown on project maps.

d. Application of borax will also be ceased if there is sustained rainfall, to avoid misapplication and runoff. Contractor shall keep daily record of borate application using forms that will be provided by NFF. A copy of daily records shall be given to the NFF upon invoicing.

Item 2c – Wood Product Processing and Transportation

Material shall be processed and hauled from designated project landings to processing facilities or other approved disposal sites to be identified by the Contractor. All logs and slash produced as a result of the hazard tree removal must be removed from the homesites prior to contract end.

a. Minimum sawlog specifications

    i. Live and dead trees shall be transported from project area to the processing facility or approved disposal sites. Minimum tree DBH is 10.0 inches with a minimum piece length of 10.0 feet. Minimum top diameter inside bark (d.i.b) of 6 inches on the short axis. Cut stumps to 4.0 inches or less.

    ii. Existing downed trees are to be transported to identified disposal sites or processing facility.

    iii. Saw timber trees will be bucked into commercial lengths when feasible. FSH 2409.11 (Forest Service Scaling Handbook)

    iv. Logs decked at landings shall be no more than 41 feet long. Deck height shall be no more than 20 feet tall.

b. Biomass material specifications

    i. Tops, limbs, and slash developed by Contractor’s operations shall be chipped and removed from the project area.

    ii. Slash resulting from the falling and removal of trees generally constitutes material greater than 3’’ in diameter and longer than 1 foot.

    iii. Some chipping and broadcasting in select areas may be permitted, as approved by the RPF and USFS. Locations will be *at least* 100 feet from cabins/improvements, and chip depth will be limited to an average depth of 2" and a maximum depth of 4". Resources such as stream channels and meadows must remain free of woodchips.

iv. If necessary to retain a minimum soil coverage of 50% within disturbed areas, soil cover may be added with brush/small trees/weed free straw/woodchips.

Restrictions on Work

Work may be performed at any time during the period of the contract, except as outlined here. Restrictions are as follows:

1. In accordance with the fire plan, included in Appendix H.
2. When the oversight forester or Forest Service determines that adverse weather has made access too dangerous or that continued vehicular travel would cause unacceptable road damage.
3. When the oversight forester or Forest Service determines that continued operation may be injurious to leave trees.
4. Operations are prohibited in both home tracts on weekends and federal holidays (as listed by the US Office of Personal Management; found here), unless otherwise approved by the NFF, USFS, oversight forester, and home tract representative. The oversight forester must be present onsite each day operations occur.
5. For units where activities will occur within either Critical Habitat, or habitat for the Sierra Nevada yellow-legged frog, environmental awareness training will be conducted for contract representatives, contract officers, project managers, and field personnel prior to the onset of project work. Training will include a briefing on the following: (a) How to recognize Sierra Nevada yellow-legged frogs, (b) The specific measures that are being implemented to conserve the species, (c) The penalties for noncompliance, (d) If a Sierra Nevada yellow--legged frog is encountered in the work area, work activities in that area shall cease until the species has moved from the area on its own volition. If any injured or killed Sierra Nevada yellow--legged frogs are found, work activities will immediately cease in the area and the District Biologist will be notified as soon as possible (and no longer than 24 hours) to take appropriate action.
6. In units with a Limited Operating Period (LOP) for Northern Goshawk, limit operations so mechanical activities do not occur from February 15 through September 15 (unless surveys determine that this is not necessary).
7. In units with a Limited Operating Period (LOP) for Northern Goshawk, limit operations so mechanical activities do not occur from March 1 – August 15 (unless surveys determine that this is not necessary).
8. Follow all relevant Yuba EA NEPA management requirements as listed in Appendix E.2.

Protection Measures and Other Concerns

Contractor Responsibility: The Contractor shall provide everything--including, but not limited to, all equipment, supplies, transportation, labor, and supervision--necessary to complete the project, except for that which the contract clearly states is to be furnished by NFF.

Contractor-Furnished Equipment: Equipment shall be furnished on a fully operational basis, of modern design, and in good operating condition, with a competent, fully qualified operator. The Contractor shall furnish all fuel, lubricants, and personnel necessary for the operation of the

equipment. All repairs, service and replacements are the responsibility of the Contractor and shall be at the Contractor's expense. If, during the contract period, the equipment requires repairs before operations can continue, it shall be the responsibility of the Contractor to complete such repairs.

Public Safety**:* The contractor shall provide for public safety when operating equipment within 200 feet of open roadways and designated 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. Any trails in the project area must also be signed. 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.

Project Boundary Description: The perimeters of sub-items will be partially flagged with blue flagging and other areas of the sub-items will be identified with a single piece of flagging. In some cases, roads may make up part of the boundary of the unit and therefore these parts of the unit boundary may or may not be marked or flagged. The project maps are intended to show the general shape and location of the work areas. The map is not intended to be accurate as to precise location and dimension. If the map and field boundaries conflict, the field boundaries shall govern. Positions of streams and topographic features, when shown, also may be approximate.

Applicable Management Requirements

1. Coordinate all trees marked for removal within meadow edges with the wildlife biologist. All trees greater than 20" dbh shall be reviewed by a wildlife biologist prior to removal.

2. Establish a 100-foot "riparian buffer" zone along each side of perennial streams and special aquatic features, 50-foot "riparian buffer" along each side of intermittent streams and establish a 30-foot "riparian buffer" zone along each side of ephemeral streams. Mechanical equipment may not enter riparian buffers. The contractor may reach into riparian buffers with mechanical equipment, or hand-cut, and directionally fell hazard trees away from the riparian buffer.

3. Mechanical equipment shall not enter meadows. Hand felling hazard trees parallel to the contour of the meadow, or reaching into the meadow with mechanical equipment for extraction of hazard trees is acceptable.

4. Survey monuments and bearing trees shall be protected and not damaged in any way.

2. All specified roads and recreational trails shown on contract maps shall be left in the original condition existing prior to the commencement of work on this contract. Any water bars in skid trails disturbed by the Contractor's operations shall be restored to the condition prior to damage at the Contractor's expense. All material and debris on

roadways and recreational trails shall be removed concurrently with operations or at the latest, the end of each workday. All cut vegetation shall be kept within unit boundaries.

3. 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 NFF shall be immediately notified.
4. Within the sub-item boundaries, NFF may exclude non-work areas such as rocky areas, wildlife areas, and other special areas. The NFF or the NFF's oversight forester will designate non-work areas. Such areas exceeding 1/2 acre in size per unit may be excluded from payment.
5. Follow all management requirements listed in the Restrictions on Work section above, and all relevant Yuba EA NEPA management requirements as listed in Appendix E.2.

Inspection and Acceptance of Service Work Items

1. Inspection

During contract administration, the NFF's consulting oversight forester will conduct periodic site inspections verifying blue/green marked trees are cut and removed, all slash is removed, all stumps are treated with borate, and all other specifications listed above are completed. If substantial variations from the project specifications are identified during operations, corrective action will be taken by the contractor as directed by NFF. Log hauling must remain concurrent with operations (within 30 days of cutting) and at the frequency desired by the end use facility.

2. Acceptance

Work on this contract will be deemed acceptable when all specifications listed in Appendix E, F, G, and I have been met. The unit may be reworked as many times as needed and then reinspected. If the Contractor elects to not rework a unit, the Contractor will not receive payment for that item within the associated unit.

The Contractor may invoice on a per tree basis, no more frequently than once per month, as work is deemed to be complete.

Unit close-out will occur once all contractual items for a given unit have been completed. If close-out is not performed, NFF will withhold a percentage of performance security commensurate to the cost of completing close-out procedures.

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

Final Inspections. Final (formal) inspections for payment will be made on completed items only. Contractor shall request final inspections in writing and give NFF at least two working days advanced notice. Inspections will be completed within four 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 completed within five working days after receiving the contractor's written request.

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. Re-inspection will be completed within five working days after the notice is received. 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.

Appendix E.2 - Yuba EA Management Requirements

Table 2-8. Yuba Project Management Requirements

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Cultural Resources Management of Sites.	Cultural resources are managed in accordance with provisions of the Regional Programmatic Agreement Regarding Compliance with Section 106 of the National Historic Preservation Act (R5PA 2013). Protect cultural resources with posted and/or flagged site boundaries. Designate sites on the ground prior to work. Tracked equipment operating off of existing Forest System Roads is generally not permitted within site boundaries. However, mechanized removal of brush or woody material may be permitted within specifically designated areas within site boundaries under prescribed measures to prevent or minimize effects with written approval of the Heritage Program Manager. Vegetative or other protective padding may be used in conjunction with HPM authorization of certain equipment types within site boundaries. Cultural resource sites shall not be used as staging areas or for parking vehicles and equipment. Any project actions planned within site boundaries must be documented and approved by the Heritage Program Manager or delegated Heritage Program Staff (District Archaeologist).	Heritage Program Manager, District Archaeologist, Layout/Contract Specialist, Sale Administrator, Service Contract COR
Cultural Resources Hand Cutting and Hand Piling within sites.	Hand cutting of vegetation is permissible within site boundaries. Hand piles may be established and burned within site boundaries only in specific areas designated by the District Archaeologist.	District Archaeologist; Fuels Officer

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Cultural Resources Felling and Removal of Trees above 10" DBH within Sites.	All trees above 10" DBH will be directionally felled to avoid cultural features and artifacts and either limbed up with the limbs hand piled, and the boles either left on site or fully suspended during removal from the site. Felled trees may be removed using only the following techniques: hand bucking including the use of chainsaws and hand carrying, rubber tired loaders, crane self-loaders or helicopters. These operations require written approval by the District Archaeologist and an archaeologist must be on-site for these operations.	District Archaeologist, Layout/Contract Specialist, Sale Administrator
Cultural Resources Non-Native Invasive Plant Treatments	Non-Native Invasive Plant Treatments involving plant removal within sites requires written approval of the District Archeologist.	District Archaeologist, District Botanist
Cultural Resources Controlled Burning within sites.	Cultural resource sites shall be protected from adverse effects from controlled burning. The District Archeologist will determine which sites can be burned over. Fire control lines shall be constructed outside of site boundaries.	District Archaeologist; Fuels Officer, Burn Boss
Cultural Resources Management of Linear Features	Existing breaches may be used to cross linear features. New breaches may be designated by the District Archaeologist in accordance with the R5PA 2013. Trees should be directionally felled parallel to or away from linear features. Isolated trees inside of linear features may be felled on a case-by-case basis with on-the-ground approval of the District Archaeologist.	District Archaeologist, Layout/Contract Specialist, Sale Administrator, Service Contract COR
Cultural Resources Routine Maintenance of System Roads within Sites.	Routine maintenance and resurfacing of Forest System Roads, limited to the existing road prism, may be conducted within site boundaries. Cultural resources adjacent to, or surrounding roads will be flagged for avoidance prior to road work.	District Archaeologist, District Roads Manager
Cultural Resources Ground Disturbing road work within sites.	Generally reconditioning, reconstruction or obliteration of system or non-system roads should not be conducted within site boundaries. Placing barriers at the site boundary where the road crosses into the site is permitted. Cultural resources adjacent to road work will be flagged for avoidance prior to project implementation. Any ground disturbing road work within sites will require written approval of the District Archaeologist.	District Archaeologist, District Roads Manager

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Cultural Resources Trail Construction	Trails shall be routed to avoid cultural resource sites. Adjacent cultural resource sites will be flagged for avoidance during trail construction.	District Archaeologist, District Trails Specialist
Cultural Resources Aspen Restoration	All arborglyphs should be marked with protective flagging. Competing conifers can be felled and removed following the protocols specified in *Hand Cutting and Hand Piling within sites* and *Felling and Removal of Trees above 10" DBH within Sites* above. These operations require written approval by the District Archaeologist and an archaeologist must be on-site for these operations.	District Archaeologist, District Biologist, Implementation crew leader
Botany - Avoidance	Special status botanical occurrences (T&E, FSS, TNF Watch list) will be flagged and avoided for all ground disturbing activities with a buffer of 100 feet (Units 07, 14, 20, 23, 34, 58, 82, 102, 103, 104, 106, D). Trees will be felled away from known occurrences. All TES botanical species occurrences will be flagged prior to implementation and indicated on project maps.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR
Botany – Roads, Landings, Staging Areas -	Proposed road construction, reconstruction, landings and staging areas in potential habitat for TES botanical species will be designed and marked on the ground only after the areas have been surveyed by a qualified botanist in the proper season.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR, Engineering Representative
Botany – Additional Surveys	Surveys will be completed for Lewisia kelloggii prior to project implementation and all newly discovered populations will be flagged and avoided.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR
Botany – Peat Dominated Soils	No ground disturbance will occur in peat-dominated soils, unless critical to restoring hydrologic function (Unit 101-107).	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR
Botany - Burning	Burn piles will not be placed in known special status botanical occurrences. Fireline will be placed at least 100ft from known occurrences. Under burn is allowed in occurrences when special status species are dormant, except for Lewisia kelloggii. No ground-based prescribed burn activities will occur in Lewisia kelloggii occurrences (A, C, D, G). No ground based prescribed burn activities will occur in Unit B 1.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Invasive Plants - Equipment Cleaning	All equipment and vehicles (Forest Service and contracted) used for project implementation 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 the project area. Equipment used during emergency work or used exclusively on paved surfaces is exempt from the cleaning requirement. When working in known invasive plant infestations, equipment shall be cleaned before moving to other National Forest Service system lands. Avoidance areas will be identified on project maps.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR
Invasive Plants – Use of Certified Weed-Free Materials	All gravel, fill, top soil or other materials are required to be weed-free. When possible, use onsite sand, gravel, rock, top soil or organic matter when possible, unless infested with invasive species; do not use material (or soil) from areas contaminated by invasive species. Obtain materials from sources that have been certified as weed-free.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR
Invasive Plants – Landings and staging area Placement	Avoid disturbance and do not locate landings or stage equipment in known invasive plant infestations.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR
Invasive Plants – Avoidance Areas	Invasive plant infestations will be avoided during equipment traffic and soil-disturbing project activities. Avoidance areas will be flagged prior to implementation and identified on project maps.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR
Invasive Plants – Revegetation of Disturbed Areas	As needed, revegetate landings/staging areas/parking areas/other openings created during project implementation. Seed and plant mixes must be approved the District Botanist or their designated appointee who has knowledge of local flora. Invasive species and persistent non-native species will not be intentionally used in revegetation. Native plant and seed material should be collected from as close to the project area as possible, from within the same watershed, and at a similar elevation whenever possible.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Invasive Plants – Cheat Grass Avoidance	No project activities will be conducted within 100 feet of cheat grass infestation along Forest Road 9-5 until treatment has been conducted.	Botanist, Fuels Officer, Layout/ Contract Specialist, Sale Administrator, Service Contract COR
Forest Vegetation	During harvest operations in mechanical thinning units: Where available, retain 5 percent or more of the total treatment area in lower layers composed of trees 6 to 24 inches dbh (SNFPA S&G 7).	Silviculturist, Wildlife Biologist, Sale Prep Officer, and Sale Administrator.
Forest Vegetation	Apply a registered borate compound to cut conifer stumps > 14 inches diameter in order to reduce the chance of new infection centers being created through harvest activity. Within recreation or administrative sites, all stumps > 3 inches should be treated at the time the conifer is cut. Insure that direct application to stumps is made within 500 feet of perennial or intermittent streams, meadows, special aquatic features. (BMP 1.8)	Silviculturist, Sale Prep Officer, Sale Administrator, Aquatic Biologist, Botanist.
Forest Vegetation	As site specific conditions warrant, line (at the dripline), rake duff and bark sluff away from the base, or implement other protective measures to reduce the risk of mortality to large > 29" dbh conifers prior to prescribed burning. Likewise, remove heavy fuel accumulation away from the boles of the trees. Limit the number of trees treated to 10 trees per acre using the following species priority: Western white pine, sugar pine, Jeffrey pine, red fir, Douglas-fir, ponderosa pine, white fir, incense-cedar, and lodgepole pine.	Silviculturist, Wildlife Biologist, and Fuels Specialist
Forest Vegetation	During implementation of mechanical thinning and fuels reduction treatments, protect from damage by avoidance, raking duff, lining, or other measures listed above identified rust resistant sugar pine (RRSP) or other trees that have been identified as "superior." These trees provide a good genetic basis for seed collection.	Silviculturist, Fuels Specialist, Sale Prep Officer, Sale Administrator.
Forest Vegetation	Avoid piling within the dripline of large trees, snags, and large downed logs according to the silvicultural prescription for the unit. Select piles to retain, generally averaging one pile per acre, or as otherwise designated in the silvicultural prescription.	Silviculturist, Wildlife Biologist, and Fuels Specialist
Forest Vegetation	For all treatments, avoid damaging and do not cut or remove aspen or cottonwood. Stage fall conifers to minimize damage to aspen, if necessary. Harvest activities within aspen stands will be coordinated with a riparian specialist to meet project objectives.	Silviculturist, Sale Administrator, Sale Prep Officer, Fuels Specialist, Riparian Specialist.

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Forest Vegetation	Within aspen stands, avoid prescribed burning where heavy fuels are present.	Silviculturist, Fuels Specialist, Wildlife Biologist
Forest Vegetation	Do not pile or burn piles within aspen stands, unless otherwise coordinated with the wildlife biologist.	Silviculturist, Fuels Specialist, Wildlife Biologist
Forest Vegetation	Where necessary, install temporary electric fencing to protect aspen regeneration from browsing animals.	Silviculturist, Wildlife Biologist, Range Specialist
Forest Vegetation	Utilize whole tree yarding to minimize slash within aspen stands when using ground based equipment.	Sale Administrator, Vegetation Management Officer, Silviculturist
Forest Vegetation	All hand and mechanical treatments will be implemented in accordance with a site specific silvicultural prescription. Silvicultural prescriptions will address the retention and recruitment of large snags, downed logs, coarse woody debris, and non-native invasive weeds.	Silviculturist, Sale Prep Officer, Wildlife Biologist, Fuels Specialist.
Forest Vegetation	Gaps will average ½ acre in size. Gaps less than I acre will not be planted. Gaps will not be placed within RCAs. A portion of the gaps and landings may be planted with native species that naturally occur within the project area.	Silviculturist, Culturist, Sale Prep Officer, Sale Administrator
Forest Vegetation	Distribution line and roadside hazard trees will be removed in accordance with Forest Health Protection (Report # RO-12-01) Hazard Tree Guidelines for Forest Service Facilities and Roads in the Pacific Southwest Region. Roadside hazard trees would be removed from along Highway 49, Gold Lake Highway, and along maintenance level 2 and 3 National Forest system roads within the project area, as determined necessary.	Silviculturist, Sale Prep Officer, Sale Administrator
Forest Vegetation	Slash from treated plantation pine boles 4" or more in diameter will not exceed 3 feet in length to prevent Ips infestation. Likewise, slash will not be piled against residual plantation trees. When possible, defer slash producing activities until after July 15th.	Silviculturist, Sale Prep Officer, Sale Administrator, Culturist, Fuels Specialist.
Forest Vegetation	Before underburning in plantations, the Fuels Specialist will coordinate with the Silviculturist and/or Culturist to implement burning techniques or protection measures (as specified in the burn plan) to minimize mortality of plantation trees.	Fuels Specialist, Silviculturist, Culturist
Wildlife – California spotted owl	To protect the California spotted owl, Limit the Operating Period (LOP) so that activities do not occur from March 1 through August 15 (unless surveys determine that this is not necessary) in the following units: 10, 17, 16, E, D, PG&E power line within Sections 4, 9	District Biologist, Layout/Contract Specialist, Sale Administrator, Fuels Specialist, Service Contract COR

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Wildlife—California spotted owl—Underburning within PAC	Prior to underburning in Unit D, either construct hand line, or hand treat within 500' of the nest tree or activity center through tree pruning and cutting small trees (less than 6" dbh), as needed to protect important elements of owl habitat.	Fuels Specialist, Wildlife Biologist
Wildlife – Northern goshawk	To protect the northern goshawk, Limit the Operating Period so that activities do not occur from February 15 through September 15 (unless surveys determine that this is not necessary) in the following units: 43, western half of 102, PG&E powerline with Section 5, (T20N, R13E); Unit D within 0.6 miles of nest, Unit G-M (western ½); Unit E (eastern ½)	District biologist, Layout/Contract Specialist, Sale Administrator, Fuels Specialist, and Service Contract COR
Wildlife—aquatic resources, Willow flycatcher and Great gray owl LOP for Meadow treatments	Limit the Operating Period so that activities do not occur from February 15 through August 15 (unless surveys determine that this is not necessary) within the following meadows: Bear Trap, Church, Freeman. Prior to implementing projects in these meadows, coordinate the need to implement the L.O.P. and the specific area covered by the L.O.P. within the meadow where the L.O.P. will apply.	District Biologist, Layout/Contract Specialist, Sale Administrator, Fuels Specialist, and Service Contract COR
Wildlife—raptors	To protect raptor nesting, limit the operating season so that activities do not occur March 1 through August 15 within Units 40 and 41. (Note: nest tree is located outside units, and within 0.25 miles.)	District Biologist, Layout/Contract Specialist, Sale Administrator, Fuels Specialist, and Service Contract COR
Wildlife- Sierra Nevada yellow-legged frog	For units where activities will occur within either Critical Habitat, or habitat for the Sierra Nevada yellow-legged frog, environmental awareness training will be conducted for contract representatives, contract officers, project managers, and field personnel prior to the onset of project work. Training will include a briefing on the following: (a) How to recognize Sierra Nevada yellow-legged frogs, (b) The specific measures that are being implemented to conserve the species, (c) The penalties for non-compliance, (d) If a Sierra Nevada yellow--legged frog is encountered in the work area, work activities in that area shall cease until the species has moved from the area on its own volition. If any injured or killed Sierra Nevada yellow--legged frogs are found, work activities will immediately cease in the area and the District Biologist will be notified as soon as possible (and no longer than 24 hours) to take appropriate action.	District Biologist, Layout/Contract Specialist, Sale Administrator, Prep/layout Forester, Fuels Specialist, Marking Crew Foreman, Project Leader

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Wildlife - Bats	Report all mine openings to a wildlife biologist that are identified during project layout. Coordinate any marking of trees and all activities within 500 feet of mine openings. (No units have been identified at this time).	District Biologist, Layout/Contract Specialist, Sale Administrator, Prep/layout Forester, Fuels Specialist, Marking Crew Foreman.
Wildlife - TES	If new Threatened, Endangered, or Forest Service Sensitive (TES) species are listed or discovered or nesting TES are found within 0.25 mile of activities, a limited operating period may be implemented as recommended by a qualified biologist, and approved by the line officer.	District Biologist, Layout/Contract Specialist, Sale Administrator, Service Contract COR
Wildlife – Landing locations, Construction, and use.	Locate landings to avoid removing large trees, large snags, and large downed logs. Sale Preparation and Administration staff will coordinate with other resource specialists (botany, aquatics, wildlife, archaeology) in the placement of new landings that are outside of existing units as proposed/presented within this Environmental Analysis.	Resource specialists, Layout/Contract Specialist, Sale administrator, Service Contract COR
Aquatics—Wildlife and Aquatic resources – Pile Burning	All pile burning must be outside of the inner riparian buffer unless otherwise coordinated with an aquatic biologist. Directional hand pile lighting—all hand piles must be ignited on only one side of the pile, not to exceed half the circumference of the pile, on the side furthest from the nearest aquatic feature.	Fuels Specialist, Aquatic Biologist
Aquatics--	To protect aquatic resources, coordinate all drafting sites with an aquatic biologist prior to use. Water drafting must be done with a hose placed in a bucket in a deep pool. The bucket must be covered by <1 inch mesh, and the mouth of the hose must be covered by ¼ inch mesh. Draft from the deepest part of the pool. Use a low velocity water pump and do not pump ponds to low levels beyond which they cannot recover quickly (within one hour). (BMP 2.5)	Sale Administrator, Contract COR
Wildlife –Down woody debris and treatment units	Where available, retain coarse woody debris as identified in the silvicultural prescription for the Unit. Recruit cull logs or hazard snags (fall and leave) to meet these conditions.	Fuels Specialist, Sale Prep, Wildlife Biologist, Fuels Specialist, Sale Administrator
Wildlife—Snags	Design treatments to retain six of the largest snags per acre. (SNFPA ROD Standard and Guideline No. 11).	District Silviculturist, Fuels Specialist, Sale Administrator

<table>
<tr><th>Area of Concern</th><th>Management Requirement Designed to Reduce or Prevent Undesirable Effect</th><th>Responsible Persons</th></tr>
<tr><td>Wildlife—Meadow Habitats</td><td>Coordinate all trees marked for removal or girdling within meadows and meadow edges with the wildlife biologist. Focus on lodgepole pine tree removal within the meadow, and thinning within the meadow edge to retain wildlife habitat within the meadow edge. Retain legacy trees and those showing signs of wildlife use (i.e. nests, cavities), and valuable wildlife characteristics (whorled or broken tops, evidence of fungal decay or heart rot). All trees greater than 20” dbh shall be reviewed by a wildlife biologist prior to removal.</td><td>Wildllife Biologist, District Silviculturist, District Hydrologist</td></tr>
<tr><td>Wildlife –Coarse woody debris</td><td>Where available, retain coarse woody debris as identified in the silvicultural prescription for the Unit. Recruit and retain cull logs and fall and leave hazardous snags described in the unit silvicultural prescription.. Emphasize the largest sizes first to meet these conditions. Retain as much existing coarse woody debris as possible during underburn operations.</td><td>Fuels Specialist, Sale Prep, Wildlife Biologist, Sale Administrator</td></tr>
<tr><td>Aquatics</td><td>Special protection measures to be implemented within Riparian Conservation Areas (RCAs) and Riparian Buffers will be identified during unit layout and designated on sale area, contract, or project implementation maps. As appropriate, these areas will be marked using flagging or otherwise identified on the ground prior to implementation. (BMP 1.4 and 1.8)</td><td>District Biologist, Layout/Contract Specialist, Sale Administrator, Service Contract COR, Fuels Specialist</td></tr>
<tr><td>Watershed, Soils, and Aquatic Resources</td><td>Establish Riparian Conservation Areas (RCAs) for all streamcourses, as specified below. Ensure Riparian Conservation Objectives (RCOs) are met within RCAs by adhering to the Riparian Conservation Area (RCA) Guidelines established in BMP 1.8. These guidelines specify the types of activities that can be conducted within RCAs and mitigation measures to minimize impacts to streamcourses and riparian ecosystems. RCA widths are as follows:
<table>
<tr><th>Stream Type</th><th>Width of the Riparian Conservation Area</th></tr>
<tr><td>Perennial Streams</td><td>300 feet each side, measured from bank-full edge</td></tr>
<tr><td>Seasonal Flowing Streams</td><td>150 feet each side, measured from bank-full edge</td></tr>
<tr><td>Streams In Inner Gorge</td><td>Top of inner gorge</td></tr>
<tr><td>Meadows, lakes, and springs</td><td>300 feet from edge of feature or riparian vegetation, whichever is greater</td></tr>
</table></td><td>Planning and Prep Forester, Contract Administrator, Hydrologist, Soil Scientist, and Aquatic Biologist</td></tr>
</table>

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Watershed, Soils, and Aquatic Resources	Outside of Aspen and Meadow Restoration Units: Establish a 100-foot "riparian buffer" zone along each side of perennial streams and special aquatic features, 50-foot "riparian buffer" along each side of intermittent streams and establish a 30-foot "riparian buffer" zone along each side of ephemeral streams. These zones provide for shade and coarse large woody debris (CWD) to the stream channel and adjacent land. Within Aspen and Meadow Restoration Units: Riparian Buffers will be flagged on the ground in coordination with an aquatic biologist, hydrologist, and soil scientist to: (1) Maintain adequate shade to the creek to minimize adverse effects to water temperatures required for local species; (2) Minimize effects to riparian vegetation, (3) Maintain streambank stability and minimize risk of sediment entry into aquatic systems, (4) Minimize impacts to habitat for aquatic- and riparian-dependent species (S&G 92), Limited disturbance to 20 percent or less of streambanks to reduce impacts to cover in aquatic habitats (S&G 103, BMP 1.8).	Planning and Prep Forester, Contract Administrator, Hydrologist, Soil Scientist, and Aquatic Biologist
Watershed, Soils, & Aquatic Resources – RCA Guidelines and Riparian Buffers	Outside of aspen and meadow restoration units, unless otherwise agreed to by an aquatic biologist and hydrologist, *no vegetation treatment or ground-disturbing activities will occur within Riparian Buffers. Directionally fell trees away from the riparian buffer. (BMP 1.8 and 1.9)	Sale Administrator, Sale Prep Forester, COR, Soil Scientist, Hydrologist, Fuels Specialist, Aquatic Biologist.
Wildlife—Sierra Nevada yellow-legged frog	Expand the inner riparian buffer along intermittent drainages to 85' for mechanical disturbances in the following units—Unit 85-- unless an aquatic biologist determines that (1) suitable habitat is not present, or (2) the habitat meets the definition of "verified unoccupied" according to the Biological Assessment.	Sale Prep Forester, Sale Administrator, COR, Aquatic Biologist.
Watershed, Soils, Aquatic, and Botanical Resources—Riparian Buffers,--hand cut, pile and burning piles	Unless otherwise agreed to by the Hydrologist, Botanist, and the Aquatic Biologist, no hand cut, piling, or pile burning will occur within the riparian buffer. (BMP 1.8)	COR, Fuels Specialist, Hydrologist, Botanist, Aquatic Biologist, Planning Forester, Prep Forester, Sale Administrator, Soil Scientist.
Watershed, Soils, and Aquatic Resources	To recruit downed logs and minimize disturbance within riparian areas, fall and leave safety hazard trees within the perennial and intermittent "riparian buffer," unless otherwise agreed to by a hydrologist and aquatic biologist. (BMP 1.8)	Hydrologist, Aquatic Biologist, and Contract Administrator

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Watershed, Soils, and Aquatic Resources	Limit ground based equipment to slopes less than 20 percent within all RCAs. Ground-based equipment may enter the RCA to retrieve tree bundles but is limited to 1-2 passes over the same piece of ground (and must be documented on harvest cards). Hydrologist or soil scientist will field review tractor unit boundaries. (BMP 1.2, 1.4, 1.8 and 1.9)	Planning and Prep Forester, Hydrologist, and Soil Scientist
Watershed, Soils and Aquatic Resources	Minimize the spread of fire into riparian vegetation during prescribed fire activities. No direct ignition will occur within the perennial and intermittent "riparian buffer" and special aquatic features, unless otherwise agreed to by a hydrologist, soil scientist, and aquatic biologist. Fire may back into the perennial and intermittent "riparian buffer". Direct ignition may occur within the 30-foot ephemeral "riparian buffer". (BMP 6.3)	Hydrologist, Aquatic Biologist, District Fuels Specialist, District Fire Management Officer, and Soil Scientist
Watershed and Aquatic Resources	Fuels and other toxic materials will be stored outside of RCAs (Standard and Guide No. 99, BMP 2.10 and2.11).).	Planning Forester, Sale Administrator, COR, or Project Manager
Watershed, Soils, and Aquatic Resources	No new landings or roads will be located within RCAs. Consult with hydrologist or aquatic biologist before using an existing skid trail, landing, or road located within an RCA. Utilize existing landings and skid trails where possible. Locate skid trails at least 75 feet apart except where they converge near a landing. Trees would be directionally felled in tractor units to minimize the number of skid trails and associated ground disturbance. Use end-lining to designated skid trails. (BMP 1.8, 1.10 and 1.12)	Planning Forester, Prep Forester, Sale Administrator, Hydrologist, and Aquatic Biologist
Watershed, Soils, and Aquatic Resources	Locate landings outside of aspen and meadows, unless otherwise coordinated with an aquatic biologist and hydrologist. (BMP 5.3)	Planning Forester, Prep Forester, Sale Administrator, Hydrologist, and Aquatic Biologist
Watershed, Soils, & Aquatic Resources – Slope limitations for ground-based equipment.	Limit the slopes on which tractor prescription activity takes place. To control erosion and soil disturbance, limit downhill tractor activity to less than 35% slopes and uphill to less than 25% unless the leading end is suspended. Tractor piling should be limited to 30% slopes and below. (BMP 1-9 and 5.2)	Planning and Prep Forester, Hydrologist, Soil Scientist, District Fuels Specialist.
Watershed, Soils, & Wildlife – Pile Burning	If burn piles contain greater than 25 percent material greater than 9 inch diameter, burn when soils are moist or wetter. (BMP2.3)	Sale Administrator, Soil Scientist, Hydrologist, District Fuels Specialist, Wildlife Biologist.

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Watershed, Soils – Mechanical Piling	Maintain at least 70 percent effective soil cover during machine piling and maintain as much duff as possible.	Sale Administrator, Soil Scientist, Hydrologist, District Fuels Specialist, Wildlife Biologist.
Watershed, Soils, & Aquatic Resources – Soil moisture	Allow mechanical operations only when soil moisture conditions are such that compaction, gullying, and/or rutting will be minimal. Equipment may operate on designated skid trails when soils are dry to a minimum of 4 inches. Low-ground-pressure equipment may operate off of designated skid trails when soils are dry to a depth of 4 inches. High-ground-pressure equipment may operate off of designated skid trails when soils are dry to a minimum depth of 8 inches. Off of designated skid trails, limit all equipment passes over the same piece of ground to reduce the potential for adverse soil compaction. Outside normal operating season (NOS) or during wet periods within the NOS, utilize the TNF Wet Weather Operations Guidelines. (BMP 1.5 and 5.6)	Sale administrator, COR, Soil Scientist, Hydrologist, Fuels Specialist.
Watershed, Soils, & Aquatic Resources – Tilling roads, landings and skid trails	At a minimum, till/sub-soil landings, portions of skid trails within 200 feet of landings, temporary roads, and unauthorized routes with equipment such as a winged sub-soiler or other tilling device to a maximum depth of 24 inches so that the soil is lifted vertically and fractured laterally to alleviate detrimental compaction (where it occurs) following completion of all management activities. Tillage/sub-soiling will be completed 8 feet from the bole of larger trees so as not to impact root systems.	Planning Forester, Prep Forester, SA, Soil Scientist, Hydrologist, Silviculturist.
Watershed, Soils, & Aquatic Resources – Soil cover	On ground based harvest units, maintain at least 50 percent soil cover. As needed, add soil cover to compacted surfaces to limit accelerated erosion. (BMP 1.13)	Soil Scientist, Culturist, Silviculturist, SA and Fuels Specialist.
Watershed, Soils, & Aquatic Resources – Large Woody Debris	On ground based harvest units where existing large woody debris is not meeting LMP Standard and Guideline 55, mark the snags to be retained as identified in the wildlife MMR. Achieve this on 85 percent of the unit area.	Soil Scientist, Culturist, Silviculturist, SA and Fuels Specialist.
Watershed, Soils, and Aquatic Resources	Decommission identified roads by effectively closing to all vehicle traffic. Treat compacted soils by tilling. Control erosion by adding drainage. Remove culverts, install waterbars, outslope surface and remove berms. Leave vegetated areas undisturbed where possible. Allow to revegetate naturally. (BMP 2.7)	Hydrologist, Layout/contract Specialist, and Fuels Implementation Team

Area of Concern	Management Requirement Designed to Reduce or Prevent Undesirable Effect	Responsible Persons
Visual Quality	Maintain visual quality along the Highway 49 corridor by: where possible, provide screening for landing locations; keep landings as small as possible and as far away from highway as possible; dispose of landing material, including cull logs, as soon as practicable (preferably within 1 year); cut stumps within 50 feet of roadway to 8 inches or less, with slope away from roadway; mark cut trees on back side of tree, away from public view; emphasize varied spacing during mark to mimic a more natural appearance; hand pile un-utilized logging slash within 50 feet of roads within partial retention VQO (Visual Quality Objectives), and 150 feet within full retention VQO. Minimize scorching of remaining vegetation.	Sale Administrator, marking crew, Fuels Officer,

APPENDIX F
Timber Removal Specifications

Carvin/Clark

F.1 – Location and Area -			
This Stewardship Project Area of:	*126*	acres more or less are located in: Tahoe National Forest	*T20N, R12E, sections 1. T20N, R13E, sections31*

Carvin/Clark

F.2 -Volume Estimate and Utilization Standards.

				Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
Species	**Product**	**Estimated Quantity**	**Unit of Measure**	**Diameter Breast High (d.b.h.) *(inches)***	**Number of Minimum Pieces per Tree**	**Length *(feet)***	**Diameter Inside Bark at Small End *(inches)***	**Net Merch. Factor 1/**
CS	Sawtimber	7,822	TON	10	1	10	6	12
OS	Non-Saw	1,890	TON	3	1	6	1	16

1/ Enter Merchantability Factor (Merch. Factor) or Net Scale in % of Gross Scale, whichever is appropriate.

Carvin/Clark

F.3- High Stumps.

Species	Product	Maximum Stump Height (inches)
All	**All**	**4.0**

F.4– Timber Rates. ***(Scaled)***

Carvin/Clark

Cutting Unit Number	Approx. Acres	Species	Product	Quantity	Unit of Measure	Rate of Payment $/UOM	Required Deposit per unit of measure
All	126	CS	Sawtimber	7,822	TON		
All	126	OS	Non-Sawtimber	1,890	TON		

F.6 - Timber Designations. Timber designated for cutting shall be confined to the Project Area. No undesignated timber shall be cut without prior notification to and approval of the Forest Service. Prescriptions/timber designations are included later in this subsection.

	Unit	Acres
Clearcutting Units		
Specified Road Clearing		
Overstory Removal Units		
Understory Removal Units		
Individual Trees	Carvin Creek, Clark Station	126
Incompletely Marked Timber		

Carvin/Clark

F.7 - Cutting Unit Boundary Designation. The boundaries of cutting units are designated as shown in the following table. The trees used for boundary designation are not to be cut.

Cutting Unit	Boundary Paint Color	Boundary Designation
N/A	Orange	Boundaries are marked with 2 **ORANGE** vertical spots facing into the subdivision and/or a single spot facing along the subdivision line and **ORANGE** paint below stump height. Where existing roads are used as subdivision boundaries, these are not painted.

F.8 Tree Designation/Prescriptions.

Cutting Unit	Tree Paint Color	Designation or Specification
All	Green/Blue	Hazard Tree. Notwithstanding B2.32 all dead and unstable live trees which are leaning towards a road or are otherwise hazardous to a road and are sufficiently tall to reach landings or the roadbed of National Forest System roads within Sale Area,

		shall be felled by Contractor when Marked in the specified paint color above and below stump height by Forest Service in advance of felling any other timber in the vicinity. Pieces meeting Utilization Standards from such dead and unstable live trees shall be removed unless Contractor is notified in writing that removal would cause unacceptable damage to areas requiring special protection such as residual timber, roads, administrative sites, streamside management zones, and areas identified on Sale Area Map or on the ground.
All	Blue/Green	Individual Tree Mark. Individual trees are designated for cutting only if Marked above and below stump height with the specified paint color.
All	Orange	Wildlife Trees. Notwithstanding the designation for cutting under B2.31, B2.33, B2.34, or B2.35, trees which are identified by standard Forest Service metal wildlife tree sign or painted with the specified paint color on the uphill and downhill side, shall be left uncut. In event such trees are destroyed in Partner's Operations, Forest Service may designate alternate trees to be saved.
All	Black	Marked Out Trees. When it is necessary to delete previously marked trees, a unique tree marking paint color will be Marked over or adjacent to the original mark, but will not obscure the original marking. Trees Marked with the original marking paint color and the unique tree marking paint color are not Included Timber.

F.9- Control of Operations.

C5.35# – ROAD AND WATER SUPPLY USE. (5/2008) National Forest water supply locations, access, method of filling trucks, period of water availability and procedures designed to maintain water quality at each location shall be agreed in advance of use. Such use shall at no time reduce water supplies to the level that further use may be detrimental to aquatic resources or other established use. Waterholes and other improvements relating to said water supplies shall be put into condition, prior to expected seasonal periods of precipitation or runoff, to avoid resource damage.

Damage to resources at such locations caused by Contractor's Operations, other than fire suppression activities, shall be repaired by Contractor in a timely and agreed manner to the extent practicable to restore and prevent further resource damage.

Unless otherwise agreed, Contractor's use of roads and other water supply requirements shall conform to the following table.

SPECIFICATIONS PURSUANT TO C5.35# - REQUIREMENTS OF ROAD AND WATER SUPPLY USE

Load Limitations	Contractor shall notify Forest Service in writing of the planned size and load distribution for equipment which exceeds the State of California Vehicle Code legal size and weight, and the National Forest System roads to be used. Such notice may be part of plan of operation under B6.311. Within l5 days after receipt of the written notice Forest Service shall notify Contractor in writing of any regulations or restrictions that may be needed to protect National Forest Transportation Facilities. A written permit shall be required for moving any vehicle which is in excess of the established legal size and weight which is not listed in the above plan, except as may be authorized in prior written agreements.
Existing Non-National Forest System Roads	Roads not shown on Sale Area Map may be used as Temporary Roads if there is agreement before use is started.
Snow Removal	If Contractor removes snow from roads, such work shall be done with Forest Service approval and in a manner that will protect roads and adjacent resources. Snow berms shall be removed or placed to avoid accumulation of melt water on the road and prevent water concentration on erosive slopes or soils. Snow must not be removed to the road surface. A minimum **3** inch snow depth must be left to protect the roadway. If the road surface is damaged, Contractor shall replace lost surface material and repair structures damaged in blading operations prior to hauling, unless climatic conditions prevent necessary work from being accomplished or as otherwise agreed in writing. Single lane roads shall be plowed full width including turnouts. In event double lane roads are not plowed to full width, warning signs shall be required and plowing shall be no less than single lane (12 feet) with intervisible turnouts.

C6.22# - PROTECTION OF IMPROVEMENTS. (5/2008) Contractor shall notify Forest Service at least <**10**> days prior to any operations in the vicinity of improvements identified on Sale Area Map. Contractor shall protect such improvements from damage and shall be responsible for their timely restoration if damaged by Contractor's Operations. 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 party listed in the table below. If Contractor is required to move or relocate the improvements, they shall move or relocate the improvements

listed in the following table to locations and in a manner as specified in drawings or in specifications attached hereto. Improvements shall be returned to their original locations following Contractor's Operations.

See table below for improvements to be protected.

SPECIFICATIONS PURSUANT TO C6.22# – PROTECTION OF IMPROVEMENTS.

Improvement	Owner's or Permittee's Name	Timing	Specifications	Work and Cost of Removal or Relocation Borne by
All infrastructure present in home sites	USFS	10 Days	Move, Remove, and Replace	Contractor

C6.24# – SITE SPECIFIC SPECIAL PROTECTION MEASURES. (4/04) Special protection measures needed to protect known areas identified on Sale Area Map or on the ground include:

Cultural Resource Protection Measures: No timber removal or equipment is permitted within areas identified as requiring standard resource protection measures. The project area has been surveyed by Forest Service heritage professionals and no cultural resources are known to exist within the boundaries. If during the course of operations, previously unkonwn cultural resources are discovered, all work within their vicinity will be stopped and the Forest Service heritage professional will be notified.

Wildlife and Botanical Protection Measures: As shown on the Sale Area Map- No operations permitted within zone flagged with Orange/White candy stripped flagging with "Special Treatment Zone" or Orange with "Noxious Weeds" in Black letters. Trees to be felled away from flagged zone. No equipment will be allowed within the boundaries. Slash will not be deposited within the Controlled Area.

For the protection of aquatic species; at any water drafting site, the use of a FGM 5161 or other similar foot valve with openings less than 2mm will be required. Additionally the foot valve shall be placed in the deepest section of the water source on a shovel or a plastic/canvas bucket, after the site has been inspected for frogs or their eggs.

Cave Resource Protection Measures: N/A

C6.315# - SALE OPERATIONS SCHEDULE. (8/2006) Unless otherwise agreed in writing, Contractor's Operations shall be performed in accordance with the following schedule:

SCHEDULE PURSUANT TO C6.315# - SALE OPERATIONS SCHEDULE (8/2006)

Subdivision/ Area/Unit	Conditions of Operation	Purpose

Portion of Clark Station	No operations from 2/15 to 9/15	To protect the goshawk
Portion of Clark Station	No operations from 3/1 to 8/15	To protect the California spotted owl
All Units	During the wet season (defined as starting with the first frontal rain system that deposits a minimum of 0.25 inches of rain on or after October 15th and ending April 15th), no ground disturbance or prescribed burning (underburning and pile burning) would occur within 300 feet of suitable breeding habitat for California red legged frog for 72 hours following a rain event.	To Protect Red Legged Frog
All	Mechanical and skidding operations will only be permitted when soil moisture conditions are such that compaction, gullying, and/or rutting will be minimal. Equipment may operate on designated skid trails when soils are dry to a minimum of 4 inches. Low-ground pressure equipment may operate off of designated skid trails when soils are dry to a depth of 4 inches. High-ground pressure equipment may operate off of designated skid trails when soils are dry to a depth of 8 inches. Off of designated skid trails, limit all equipment passes over the same piece of ground to reduce the potential for adverse soil compaction. Outside Normal Operating Season (NOS) or during wet periods within the NOS, utilize the TNF Wet Weather Operations Guidelines.	To protect soil from compaction, gullying, and/or rutting.

C6.41# – FELLING, BUCKING, AND LIMBING. (8/2007) Unless otherwise agreed in writing, Contractor's felling, bucking, and limbing operations shall be conducted as specified in the table below.

SPECIFICATIONS AND TREATMENTS PURSUANT TO C6.41# - FELLING, BUCKING AND LIMBING
(8/2007)

Treatment Method	Felling, Bucking and Limbing Specifications
Limbing	Contractor shall, prior to yarding/skidding operations, cut exposed limbs from products which are to be yarded/skidded. Such limbing of stems shall be done to a top diameter of approximately 3 inches, at which point the top shall be cut from the remainder of the stem.
Directional Felling "DF"	Included Timber shall be directionally felled away from stream courses, structures, survey monuments, and private property, and controlled areas with the use of specialized equipment. Such directional felling shall not be required when in the faller's judgment it is unsafe to do so, and shall be left standing.
Treatment of Stumps "TS"	Contractor shall treat stumps of all live conifer trees equal to or greater than **3** inches stump diameter, (measured inside bark) unless otherwise agreed in writing. Treatment shall be with a borate compound registered by EPA in the State of California for prevention of annosus root disease. Treatment shall consist of removal of sawdust and other loose debris from the cut surface of the stump and application of a thin layer of the borate compound uniformly over the entire cut surface, including exposed wood surfaces on the stump sides, at the rate specified on the product label. Any surface irregularities on the stump preventing application of a uniform layer of borate compound shall be cut level prior to treatment. Unless waived in writing, Contractor shall also apply an approved colorant mixed with the borax to insure complete coverage. Treatment should be done as soon as possible but shall be completed no later than 4 hours after felling, otherwise stumps shall be re-cut and treated. Contractor shall not apply borate compound during heavy rain fall or when such precipitation rate is predicted within 24 hours of application to cause borate compound to be flushed off the stump and become ineffective, in that case treatment shall be reapplied. Application shall be completed within 24 hours of the precipitation

	having ceased. Borate compound also shall not be applied to stumps located within 300 feet of live stream courses and meadows/wetlands shown on Sale Area Map and/or 10 feet of sensitive plant location boundaries as flagged on the ground. Contractor shall provide the borate compound and colorant and apply it in compliance with the State of California laws and regulations pertaining to pesticides and pest control operations. Borate compound storage shall be located such that any spillage will not contaminate water. All spills shall be promptly cleaned up and spilled material disposed of according to the product label. All spills occurring in water or over 1/2 pound shall be reported to Forest Service within 3 hours. Contractor shall submit at the end of each month a "Daily Summary of Pesticide Use Reports" to the appropriate County Agricultural Commissioner with a copy to the NFF.

Maximum Log Length

Cut trees shall be bucked so that resulting logs shall not exceed the maximum log length including trim allowance shown in following table:

Unit Number	Maximum Log Length
All	41'

Minimum Stump Height

Unit/Subdivision	Minimum Stump Height (inches)	Purpose or Reason
All	3 inches	Facilitate timber accountability

C6.42# - GROUND BASED REMOVAL. (8/2006) Unless otherwise agreed in writing, the method of removal of included timber shall be as defined in the following table:

(8/2006)

Map Symbol	Requirements
TRAC	Skid road pattern shall be agreed in advance of felling and main skid roads shall be flagged on the ground in advance of felling. Contractor shall stage-log by felling and skidding Included Timber in two or more separate operations when necessary to prevent undue damage to the resources or residual stand. Needed tractor trails shall be constructed in advance of skidding. Products shall be end-lined as needed to protect resources or residual timber from unnecessary damage. The number of chokers shall be limited as necessary to avoid unnecessary damage to resources or residual timber. By agreement, tractors may be used to separate products to prevent stain
SUSP	Products shall be skidded with leading end clear of ground.
SPACE	Skid roads will average 75 feet from center to center, except where converging.
ENDL	Endlining shall not be required for distances in excess of **75** feet uphill, and **100** feet downhill.

MH	Contractor shall cut Included Timber and move it to designated skid trails using equipment with a boom having an operating radius of at least **20** feet for bunching trees, capable of severing, lowering and placing trees up to **24** inches diameter at stump height on the ground prior to skidding. Such equipment must be capable of operating on slopes up to **30%**. _____ Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources from unnecessary damage. Trees which exceed capability of specified equipment may be felled, bucked and skidded in a manner consistent with the requirements of B6.41 - Felling and Bucking, C6.41# - Felling, Bucking, and Limbing Requirements and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.
CTL	Included Timber shall be felled, limbed and bucked by a self-propelled mechanical harvester capable of producing finished sawlogs or chippable boles. Limbs of Included Timber shall be placed evenly in the machinery forwarding trail prior to product removal. The harvester shall be an all-wheel drive machine with at least 3 axles and a processing head mounted on a boom having a minimum-operating radius of 20 feet. Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources or residual timber from unnecessary damage. All Products shall be removed by an all-wheel drive forwarder with at least 3 axles capable of self-loading and unloading. The forwarder shall carry all products free of the ground during removal. The loading crane shall have a minimum-operating radius of 15 feet. Log landings and transfer points shall be agreed in advance of harvesting.

C6.6# - EROSION PREVENTION AND CONTROL. (5/2008) Erosion prevention and control work, including stream course protection, required by C6.5 and B6.6 shall be completed within l5 calendar days after skidding operations related to each landing are substantially completed or after Forest Service designation on the ground of work where such designation is required hereunder. Said time limit shall be exclusive of full days lost in Contractor's Operations due to causes beyond Contractor's control. Such on the ground designation 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. After September 15 and as long thereafter as operations continue the work shall be done as promptly as practicable. Damage resulting from Contractor's Operations due to failure to perform required work shall be repaired by Contractor.

Notwithstanding other provisions in this contract and unless otherwise agreed in writing, any hay, straw, or mulch used in this contract shall be State of California certified weed free.

Additional erosion control requirements of this contract are listed in the following table.

SPECIFICATIONS PURSUANT TO C6.6# - EROSION PREVENTION AND

CONTROL.
(5/2008)

Vegetative Soil Stabilization: N/A

Special Erosion Prevention Measures: Contractor shall give adequate treatment by spreading slash or wood chips or by agreement giving other treatment to portion of tractor roads, skid trails, landings, cable yarding corridors, tractor-end lined corridors and Temporary Road fills where necessary to supplement other erosion prevention measures required elsewhere in this contract. In no event shall Contractor be required to treat more acres than that shown in the legend of Sale Area Map. The specific locations to be treated shall be designated on the ground by Forest Service. These special erosion prevention measures are to be done within the same date and time periods as stated above.

Soil Scarification: N/A

Backblading: Within recreation development sites and public use areas designated on Sale Area Map, Contractor shall, at Forest Service request, backblade skid trails in lieu of cross ditching.
Tillage: In addition to meeting the requirements of B6.64, unless otherwise agreed in writing, tillage shall be required on the areas listed in the following table.

Tillage shall be accomplished by equipment that will lift and fracture the soil by vertical and lateral shattering, leaving soil loosened through the full width and depth of the compacted layer with the topsoil remaining substantially in place rather than being inverted.

Tillage depth is shown in the following table. Agreement in writing may be made to a lesser depth if rocks or other limiting site conditions are encountered.
Tillage shall be limited to periods when soil dryness will result in crumbled soil, avoiding the formation of large clods. Contractor and Forest Service shallagree in writing on the timing of completion of such work to coordinate with desirable soil moisture conditions.

Areas to Till	Tillage Depth (Inches)	Maximum Acres to Treat
Landings	12	Unestimated
Main Skid Roads and Tractor Roads designated by Forest Service	12	

C6.7# - SLASH TREATMENT. (8/2006) Contractor shall treat slash defined in specifications below, within designated areas. Work required of Contractor shall be in accordance with the following slash plan and specifications, and the Sale Area Map.

Vegetative debris larger than 1 inch in diameter outside bark and 3 feet long resulting from Contractor's Operations, other than Construction Slash, is Logging Slash. Measures to be taken by Contractor for treatment of Logging Slash are set forth below unless otherwise agreed in writing.

Forest Service and Contractor shall jointly develop a schedule for completion of slash treatment on the various portions of Sale Area prior to Contractor's Operations.

Removing may be substituted for treatment of any other specified method.

By agreement in writing, certain slash may be left for fuelwood. When the specified treatment is by a combination of methods, Logging Slash not treated by one of the methods shall be treated by the other(s).

See the slash treatment specification table below.

SPECIFICATIONS PURSUANT TO C6.7# - SLASH TREATMENT (8/2006)

Specified slash treatment methods shall be shown as listed in the following tables:

Slash Treatment Methods

Symbol	Method	Definition
Chip	"Chipping"	Chippable Logging Slash up to 4 inches in d.o.b. shall be processed through a chipping machine. Chips shall be scattered to a loose depth not exceeding 3 inches in designated areas more than 100 feet from structures.
Deck	"Decking" Large material	Logging Slash 10 inches or larger in large end d.o.b. and 10 feet or more in length shall be Decked for removal by Contractor by piling pieces parallel to each other.
Mach	"Machine Piling"	Concentrations of Logging Slash, excluding scattered individual pieces, shall be Machine Piled for disposal by Contractor.
Remove	"Removing"	Logging Slash on landings shall be chipped and hauled to facilities idenified by the Contractor.
Fell	“Damaged Small Trees”	Unless treated under other provisions, all trees smaller than the minimum d.b.h. in A2, over 5 feet in height, and damaged beyond recovery by Contractor's Operations shall be felled. Such trees shall be limbed to a stem diameter outside bark of approximately 3 inches,

at which point the top shall be cut from the remainder of the stem, and shall be bucked into lengths not exceeding 20 feet.

UNIT AND SUBDIVISION SLASH TREATMENT SPECIFICATIONS

	SLASH TREATMENT	
Subdivision or Unit No	Specified Method	Prohibited Method
All	Chip,Fell, Remove,YUMD	All other

LANDINGS AND DISPOSAL SITES. Unutilized logs accumulated at landings and disposal sites shall be Decked by Partner and removed. The maximum height of decks is shown in the following table. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the following table.

		SLASH TREATMENT	
	Subdivision or Unit No.	Specified Method	Maximum Height of Decks
Landings	ALL	Deck, Mach	20

ADDITIONAL SLASH TREATMENT REQUIREMENTS. Contractor shall perform work according to the specifications in the attached Table, unless otherwise agreed in writing.

Subdivision	Additional Slash Treatment Requirements
All mechanized cutting units	Yard all stem material to a top d.o.b. of 1 inch, from timber designated for cutting.. Slash and Substandard Material accumulated at the landings shall be Decked or Machined Piled, in accordance with specifications above.

View	"Visible Slash Treatment"	Designated on Sale Area Map with boundaries posted on the ground are **roads/trails** with distance limitations for visible slash treatment. Within such units and the area of visible Logging Slash adjacent thereto, Logging Slash shall be treated by Contractor. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these means unless a method is specified or prohibited on Sale Area Map. Logging Slash not readily treated by the selected or specified method shall be removed to designated areas or treated as agreed.
YUMD	"Yarding Unutilized Material-Decking"	All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized material shall be Yarded to landings and Decked. Where this is impractical, or other reasons, other locations shall be agreed upon.

Unit	Large End d.o.b. (in)	Length (feet)
ALL	15	10

C6.815 – THIRD PARTY SCALING SERVICES. (4/04) Notwithstanding the requirement for Forest Service or parties under contract to Forest Service to provide Scaling services under B6.81, Scaling designated in A10 shall be conducted by a third party Scaling organization approved by Forest Service. Scaling shall be done in accordance with A9 and Contractor shall bear costs for Scaling service.

In the event third party Scaling service is suspended for causes such as strikes, termination of third party's approval to Scale National Forest logs by Forest Service, or Contractor's failure to pay third party Scaling costs, hauling operations shall be suspended until agreed alternate Scaling services are provided or service by third party is resumed.

When an approved alternate Scaling location pursuant to B6.811 does not have an approved third party scaling organization as a commonly used Scaling services provider, Forest Service or parties under contract to Forest Service shall provide Scaling services at the approved alternate location. In such an event, the cost of waived third party Scaling listed in A10 shall be charged to Timber Sale Account.

If Forest Service and Contractor agree in writing that another party under contract to Forest Service will perform Scaling, the contract will be modified to include C6.816 and Timber Sale Account will be charged for such Scaling.

F.10 - Roads. The Contractor is/are authorized to construct and maintain roads, bridges, and

other transportation facilities, as needed for conducting treatments on National Forest and other lands where Forest Service has such authority.

- Road Maintenance Requirements. See Appendix I: Carvin Clark Road Maintenance Plan. The Contractor shall maintain roads in accordance with the following Road Maintenance Requirements:

Road Maintenance Requirements Summary

				Applicable Road Maintenance Specifications																												
				Prehaul											During								Posthaul										
Road Number	From	To	Miles	T 801	T 802	T 803	T 804	T 805	T 806	T 807	T 809	T 810	T 811		T 801	T 802	T 803	T 804	T 805	T 806	T 807		T 801	T 802	T 803	T 804	T 805	T 806	T 807	T 808	T 809	T 810	T 811
49-54	HWY 49	Mile Post 0.81	0.81		P	P		P		P						P	P		P	P				P	P		P						
49-54-01	49-54 Road	HWY 49	0.32		P	P		P		P						P	P		P	P				P	P		P						
49-63	HWY 49	Mile Post 1.78	1.78		P	P		P		P						P	P		P	P				P	P		P						

F.10-c - Use of Roads By the Contractor. The Contractor's use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed to otherwise:

Code	Use Limitations
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by the Forest Service to inform the public of use restrictions. The Contractor's use of roads coded R, A, or W shall be in accordance with the following restrictions:

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		

F.11– Scaling Instructions and Specifications.

Name and Date of Governing Instructions:	FSH 2409.11a, National Forest Cubic Log Scaling Handbook, as amended and supplemented. Governing instructions for products contained in E.2.

F.12– Scaling Services.

Species	Product	Unit of Measure	Site and Geographic Location	Method	Standard Estimated Cost per Unit $
ALL	ALL	TON		100% Weight	0.00

F.14- Title Passage.

Scaled. All right, title, and interest in and to any included timber shall remain with the Forest Service until it has been cut, scaled, and removed from the Sale Area or other authorized cutting area, and paid for, at which time title shall then vest withthe Contractor. Timber cut under cash deposit or acceptable payment guarantee shall be considered to have been paid for. Title to any included timber that has been cut, scaled and paid for, but not removed from the Sale Area or other authorized cutting area by the **Error! Reference source not found.** on or prior to the termination date, shall remain with the Forest Service.

F.15– Liability.

Liability for Loss. If Included Timber is destroyed or damaged by an unexpected event that significantly changes the nature of Included Timber, such as fire, wind, flood, insects, disease, or similar cause, the party holding title shall bear the timber value loss resulting from such destruction or damage; except that such losses after removal of timber from the Sale Area, but before scaling, shall be borne by the Contractor at current Rates and Required Deposits. Deterioration or loss of value of salvage timber is not an unexpected event.

In the event Included Timber to which Forest Service holds title is destroyed, the Contractor will not be obligated to remove and pay for such timber. In the event Included Timber to which Forest Service holds title is damaged, the Forest Service shall make an appraisal to determine for each species the difference between the appraised unit value of Included Timber immediately prior to the value loss and the appraised unit value of timber after the loss. Current Rates in effect at the time of the value loss shall be adjusted by differences to become the redetermined rates. There shall be no obligation for the Forest Service to supply, or for the Contractorto accept and pay for, other timber in lieu of that destroyed or damaged. This Subsection shall not be construed to relieve either party of liability for negligence.

Limited Liability for Operations Fires.

Maximum Amount of the 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) x (2) + (3) x (4)] x (5) = 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.

$16.08/Hr. x 12 hours = $192.96

(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.

3 Pieces of equipment

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

$350.00/Hr. x 12 hours = $4,200.00/12hr.

(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

Cooperator's Obligation per Operations Fire, Maximum Amount: $ 67,000

APPENDIX G
GUIDELINES FOR OPERATIONS

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

1. **Sale Area Map (Map).** This is the boundary of the Sale Area as shown in Appendix C and designated on the ground by the Forest Service to meet the anticipated needs of the parties. The following may be 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 Contractor.** The 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. The 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.** The Contractor's operations shall not unnecessarily damage young growth or other trees to be reserved.

5. **Safety.** The 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 Sale Area. The 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 warming 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 Sale 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.

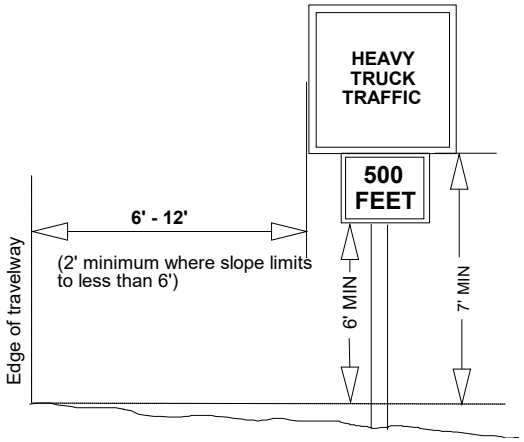


Figure 1: Sign Placement

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.

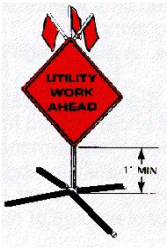
Posted or 85 percentile speed MPH	Decelaration to listed advisory speed MPH				
	10	**20**	**30**	**40**	**50**
20	NA				
25	100				
30	150	100			
35	200	175			
40	275	250	175		
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

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.



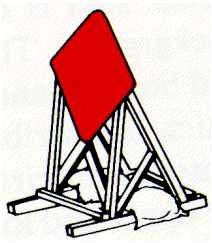
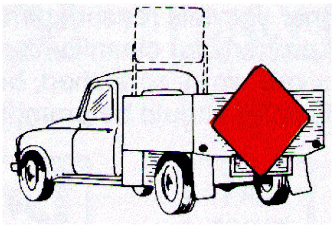




Figure 3: Examples of Temporary/Portable Supports

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*



FG20-2-48



FG20-3-42*



FG20-3a-42

FW22-3-30



FW20-1-30*



W21-3-30*



FW21-4a-30



FW11-7-24

W22-1-36*



FW8-6-24



FW11-9a-24



W7-3a-24*



W13-1-18**

W20-7aP-24*

* Specify Distance

** Specify Speed



BM-L-O



BM-R-O

Barricade Markers (See MUTCD for length and stripe size)

6. **Safety (Timber Hauling).** The 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.** The 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.

   The 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.

   The 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.** The 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 Sale Area, they shall be operated in a sanitary manner. The parties shall agree to the cleanup and restoration of a polluted site. The Contractor shall maintain all equipment operating on Sale Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. The 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. The 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. The 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 Sale 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. The 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 Sale Area that are caused by Contractor's employees, agents, contractors or their employees or agents, directly or indirectly, as a result of Contractor's operations. The Contractor will take whatever initial action may be safely accomplished to contain all spills.

10. **Hazardous Substances.** The Contractor shall notify the National Response Center and Forest Service principal contact of all releases of reportable quantities of hazardous substances on or in the vicinity of the Sale Area that are caused by Contractor's employees, agents, contractors or their employees or agents, directly or indirectly, as a result of Contractor's operations, in accordance with 40 CFR 302.

11. **Washing Equipment.** In order to prevent the spread of noxious weeds into the Sale Area, Contractor shall be required to clean all off-road logging and construction equipment **prior** to entry on to the Sale 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 Sale Area. All subsequent move-ins of equipment to the Sale 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.

    The 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 Sale Area or on the haul route, shall be promptly reported to the other party. The 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.

12. **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.

13. **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. The Contractor may buck

out cull material when necessary to produce pieces meeting utilization standards. Such bucked out material shall contain a minimum amount of sound wood, not in excess of the net scale in percentage of gross scale, or based on the merchantability factor. If necessary to assess extent of defect, Contractor shall make sample saw cuts or wedges.

14. **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.

15. **Stump Heights.** Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in Appendix E and Appendix F 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 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.

16. **Bucking Lengths.** Trees shall be bucked in various lengths to obtain the greatest utilization of material meeting utilization standards.

17. **Limbing.** The Contractor shall cut exposed limbs from products prior to skidding, as necessary to minimize damage to the residual stand during skidding. The Contractor may leave uncut those limbs that cannot be cut with reasonable safety.

18. **Skidding and Yarding.** Methods of skidding or yarding specified for particular areas, if any, are indicated in Appendix F. 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.

19. **Rigging.** Insofar as practicable, needed rigging shall be slung on stumps or trees designated for cutting.

20. **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.

21. **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.

22. **Protection of Streamcourses.** The 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.

23. **Erosion Prevention and Control.** The 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. The 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, 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, 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, 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.

24. **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.

    The 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. The 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.

25. **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.

26. **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.

27. **Temporary Roads.** 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. 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.

28. **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.

29. **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.

30. **Skid Trails and Fire Lines.** The 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.

31. **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.

32. **Erosion Control Structure Maintenance.** During the period of this contract, 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.

33. **Slash Disposal.** The 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 and Appendix F.

34. **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.

35. **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. 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.

36. **Scaling Location.** The Forest Service shall provide scaling services at the scaling site(s) shown in Appendix F. The Scaling site(s) shown in Appendix F normally will be a non-exclusive site where more than one National Forest Contractor may be served. The 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. The 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. 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. The Contractor shall bear all charges or fees for weighing services.

39. **Presentation for Scaling.** The 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 Sale Area, products shall be accounted for in accordance with Forest Service written instructions, as follows:
    a) The Contractor shall plainly mark or otherwise identify products prior to hauling;
    b) Forest Service shall issue removal receipts to Contractor;
    c) The Contractor shall assign a competent individual at the landing to complete removal receipts and attach them to each load of products removed from Sale 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) The Contractor shall notify Forest Service of lost or off-loaded logs and their location within 12 hours of such loss. The 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 Sale 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 Sale Area shall be transported over the designated routes of haul. The Contractor shall notify Forest Service when a load of products, after leaving Sale Area, will be delayed for more than 12 hours in reaching Scaling location.

    The 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 Sale 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.

The 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 Sale 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 Sale Area is within a State that maintains a log brand register, brands shall be registered with the State. The Contractor shall use assigned brand exclusively on logs under this contract until Forest Service releases brand. The 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. The Contractor shall replace identifying marks if they are lost, removed, or become unreadable. The 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 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.

    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. The Contractor shall promptly remedy deficiencies found through such inspecting and testing.

1. The following requirements shall apply during the period **April 1 to December 31** and during other such periods as specified by Forest Service.

2. C7.2# - SPECIFIED FIRE PRECAUTIONS. (06/2012)

Partner or a designated Partner's Representative shall certify compliance with specific Timber Sale Contract and California Public Resources Code (CPRC) fire precautionary measures in B7.1 Plans, C7.2# and C7.22#. Certification shall be provided prior to starting operations during Fire Precautionary Period and shall be updated as needed.

Listing of specific fire precautionary measures in the following subsections is not intended to relieve Partner in any way from compliance with State fire laws covering fire prevention and suppression equipment applicable to Partner's Operations.

Upon request of Forest Service, Partner shall permit and assist in periodic testing and inspection of required fire equipment.

The following definitions shall apply to C7.2# and C7.22#:

Active Landing: A location Partner is skidding logs into, or performing other operations such as delimbing, log manufacturing, and chipping logs. Except for EV and E days, loading logs or stockpiled 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, piling, log processing and/or yarding which requires the use of motorized power which includes, chainsaws, chippers, motorized carriages, masticators, stroke delimbers, skidders etc.

Specific equipment requirements and fire precautionary measures are shown in the following table and in C7.22#:

A. Fire Tools and Equipment	Partner shall meet applicable parts of Section 4428 of the CPRC. Unless agreed otherwise, Fire tools kept at each Active 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 Partner's Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. Fire tools shall be kept in a sealed fire tool box adjacent to the Active Landing and readily accessible in event of fire. Where cable yarding is used, Partner shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a serviceable 5 gallon backpack pump filled with water or a fire extinguisher bearing a label showing at least a 4-A rating must be within 25 feet of each tail and corner block.

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.

All required fire tools shall be maintained in suitable and serviceable condition for fire fighting purposes.

B. Fire Extinguishers

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

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

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

Partner shall equip all mechanized harvesting machines and log processors with hydraulic systems, powered by an internal combustion engine (e.g. masticator, chipper, feller/buncher, harvester, forwarder, Hot Saw, stroke delimber, etc), with at least two 4-A:60-B:C fire extinguishers or an acceptable CAFS substitute identified in Section K.

C. Spark Arresters and Mufflers

Except for tractors and other equipment with exhaust-operated turbochargers, Partner shall equip each operating tractor and any other internal combustion engine with an approved spark arrester. There shall be no exhaust bypass on any system.

Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the National Wildfire Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be properly mounted and maintained according to manufacturer's specifications.

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 and maintained in effective working order as identified in the Spark Arrestor Guide in Section C. above and according to applicable parts of CPRC Section 4442 or 4443. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating saw.

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.

E. Fire Supervisor & Fire Patrolperson

Partner shall designate in the fire plan required by B7.1 and furnish on Sale Area during operating hours a fire supervisor, named in writing and authorized to act on behalf of Partner in fire prevention and suppression matters.

Unless agreed otherwise, Partner shall furnish and designate in writing, a Fire Patrolperson each operating day when Project Activity Level C or higher is in effect. When on duty, the Fire Patrolperson is required to patrol the operation for the prevention and detection of fires, to take suppression action where necessary and to notify Forest Service as required under Sections I. Reporting Fires and L. Communications. This Fire Patrol is required on foot, unless otherwise agreed.

By written agreement, one Fire Patrolperson may provide patrol on this and adjacent projects or sales. No Fire Patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

F. Seasonal Permits

Partner shall obtain written permits from Forest Service before allowing welding, warming fires or burning, subject to C7.22# – Emergency Precautions.

G. Clearing of Fuels

Partner 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 on a cable yarding operation shall be located in the center of an area that is 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.

H. Smoking

All smoking shall be confined within a car, truck, crew rig or other enclosed cab after 1:00 PM on Ev days and all hours on E days (C7.22#). At other times, any smoking shall be done while sitting in an area at least 3 feet in diameter, cleared of flammable materials. Burning tobacco and matches shall be extinguished before they are properly disposed.

I. Reporting Fires

As soon as feasible, but no later than **15 minutes** after discovery, Partner shall notify Forest Service of any fires on Sale Area or along roads used by Partner.

J. Tank Truck

Partner shall provide a water tank truck or trailer on or in proximity to Sale Area during Partner's Operations hereunder during Fire Precautionary Period unless otherwise agreed.

Tank truck or trailer shall contain at least 300 gallons of water and comply with the following requirements:

(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 Sale Area by Forest Service using a 5/16 inch orifice with a one inch in line test kit and shall meet or exceed the pressure values identified in the following table for nearest temperature and elevation:

Temp	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
	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM

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 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 pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

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

(6) 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 C7.22#.

K. Compressed Air Foam System (CAFS)

A fire suppression system where compressed air is added to water and a foaming agent. By agreement, Partner 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 propellent.
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 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 C7.22#.

L. Communications

Partner shall furnish a serviceable communications system such as a telephone, radio-telephone, radio system or satellite phone connecting each operating side within the Sale Area with Partner's headquarters, and capable of notifying Forest Service within **15 minutes** of discovery of any fires on the Sale Area or along Partner’s haul route. When such headquarters is at a location which makes communication to it clearly impractical,

Forest Service may agree to a reasonable alternative notification method.

A Citizen's Band (CB)radio is not acceptable communications.

M. Cable Yarding Tank Unit

When all or part of Included Timber will be harvested by a long span (over 1,500 feet)cable yarding operation, Partner shall provide at each active cable yarding landing a tank truck, trailer or acceptable CAFS substitute which can be lifted and transported by the carriage.

The unit shall meet the same requirements as specified for the tank truck, trailer or approved CAFS substitute.

N. Helicopter Yarding Fire Precautions

Partner shall provide and maintain fire equipment as follows:

1. The fire tool box required under this provision shall be equipped for attachment to the helicopter long line so that it may be hauled to needed locations. Such attachment device shall not interfere with access to fire tools. Unless agreed otherwise, the fire tool box shall be located at the Active Landing ready for immediate dispatch.
2. An external helibucket readily attachable to the helicopter, with a capacity of at least 500 gallons, and having a remote control door mechanism adequate for rapid dropping of water. The helibucket shall be located at the helicopter service landing and shall be filled with water ready for immediate dispatch unless otherwise agreed.
3. All aircraft used in conjunction with Partner's Operations shall be equipped with an operable radio system capable of meeting Region Five avionics requirements.
4. For protection of fuel servicing operations, fire extinguishers which have the following ratings based on the open hose discharge capacity, i.e., "broken hose," of the aircraft fueling system shall be readily available:
   a. Where said capacity does not exceed 200 gallons per minute, at least one approved extinguisher having a minimum rating of 20-B;
   b. Where said capacity is in excess of 200 gallons per minute, but not over 350 gallons per minute, one approved extinguisher having a minimum rating of 80-B;
   c. Where said capacity is in excess of 350 gallons per minute, two approved extinguishers, each having a minimum rating of 80-B.
5. By agreement, a suitable CAFS may also be used in lieu of the above extinguishers.
6. Extinguishers of over 50 pounds gross weight shall be of wheeled type or be mounted on carts to provide mobility and ease of handling.

C7.22# - EMERGENCY PRECAUTIONS. (06/2012) Partner's Operations shall conform to the limitations or requirements in the Project Activity Level (PAL) table below. Unless otherwise agreed in writing, Project Activity Levels applicable to this project shall be the predicted levels for the Fire Danger Rating Area(s), or fire weather station(s) stated in the Sale Area Map legend.

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. Partner shall obtain the predicted Project Activity Level from the appropriate Ranger District Office before starting work each day.

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

PROJECT ACTIVITY LEVEL (PAL) – C7.22# - EMERGENCY PRECAUTIONS

PROJECT ACTIVITY LEVEL TABLE

Level	***Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.***
A	Minimum required by C7.2#.
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 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 or other equipment with a blade 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 Forest Service. Variance approval is contingent on the 7-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of Partner's equipment for prevention and suppression readiness, type of operation and social and community considerations etc. (See attached Project Activity Level Variance Agreement).
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.

47. **Fire Control.** The 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. The 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: ***(fill-in 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: ***(fill-in 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: ***(fill-in miles)***. Equipment shall be operated only by personnel approved by Contractor, if so requested by Contractor.

48. **Temporary Roads and Skid Trails**. The 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.

APPENDIX H
FIRE PLAN FOR CONSTRUCTION AND SERVICE CONTRACTS
03/06/2013

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

The Forest Service 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 de-limbing, 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 de-limbers, 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 de-limber, 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 C 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:

Temp	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
	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM

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 appurturances 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, 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	**Grass Valley**	**13120 Loma Rica Road, Grass Valley, CA 95945**	**(530)477-7237 or 911**
Nearest FS Station	Tahoe Supervisor's Officer	631 Coyote Street Nevada City, CA 95959	(530)265-4371
Inspector(s)	Chris Pennington	631 Coyote Street Nevada City, CA 95959	(530)478-6830 (530)913-3016
COR	Bill Butterfield	631 Coyote Street Nevada City, CA 95959	(530)478-6269
District Ranger	Amber Nelson	631 Coyote Street Nevada City, CA 95959	(530)559-6260

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 Patrol Personnel**: Contractor shall furnish a qualified fire patrol person each operating day when Project Activity Level C or higher is in effect. The patrol person will observe and patrol project area for a certain duration of time as all project work concludes at the end of each workday, the COR will evaluate and provide the required timeframe to the contractor. When on duty, sole responsibility of patrol person 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 patrol person may provide patrol on this and adjacent projects. No patrol person 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:

Title	Name	Telephone Number
Fire Supervisor		
Fire Patrol Personnel		

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 haul back 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 Stampede (East Side PAL)

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: 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.

TNF PAL QR CODE

PROJECT ACTIVITY LEVEL

Level	*Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.*
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).
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 stockpiles 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:	**TNF West SIG**				Years Analyzed		1994-2013	
	A	B	C	D	Ev	E	Days	
Month	Expected Days per Month at Each PAL Value						Analyzed	
July	0.1	2.7	18.0	7.8	2.4	0.0	615	
August	0.2	1.5	8.3	11.7	8.1	1.2	612	
September	1.1	2.6	8.3	9.7	5.3	3.1	599	
October	4.5	4.8	12.1	6.9	2.4	0.2	595	

I have considered the above request and determined specific mitigation measures or actions must be implemented to operate. Unless extended, the approval remains in effect for thirty (30) calendar days. At the sole discretion of the Forest Service, this plan can be modified and/or cancelled at no cost to the government.

Fire Management Officer Concurrence — Date

Line Officer Approval — Date

Contracting Officer — Date

Contractor Representative — Date

Appendix I – Road Maintenance Package

Road Maintenance Specifications

For
Timber Sale Contracts

Carvin/Clark Hazard Tree Project

	Specification Number	Specification Title
X	T-800	Definitions
	T-801	Slide and Slump Repair
X	T-802	Ditch Cleaning
X	T-803	Surface Blading
	T-804	Surface Repair
X	T-805	Drainage Structures
X	T-806	Dust Abatement
X	T-807	Roadside Vegetation
	T-808	Miscellaneous Structures
	T-809	Waterbars
	T-810	Barriers
	T-811	Surface Treatment

17-2400-15
(5/83)

Timber Sale Road List Worksheet

Carvin/Clark Hazard Tree Project

Road Number	From	To	Miles
49-54	HWY 49	Mile Post 0.81	0.81
49-54-01	49-54 Road	HWY 49	0.32
49-63	HWY 49	Mile Post 1.78	1.78

Dust Abatement Plan (C5.4) (T-806)

Timber Sale: Carvin/Clark Hazard Tree Project

Road Segment	Material Type or Grade	Applicaation Initial	Rate Subsequent	Frequency of Subsequent Applications	Preparation Method	Wt. To Volume Conversion Factor
49-54 49-54-01 49-63	Water	N/A	N/A	3 Times Daily or as Needed to Abate Dust	T-803 as Needed	N/A
	Magnesium Chloride	0.30 Gallon Per Square Yard	0.30 Gallon Per Square Yard	Each 2000 MBF Hauled (or as needed to abate dust)	Method 1	191 Gallons Per Ton @ 60 Degrees F.

Road Maintenance Plan

Timber Sale: Carvin/Clark Hazard Tree Project

				Applicable Road Maintenance Specifications																													
				Prehaul											During								Posthaul											
Road Number	From	To	Miles	T 800 1	T 800 2	T 800 3	T 800 4	T 800 5	T 800 6	T 800 7	T 800 9	T 800 10	T 800 11		T 800 1	T 800 2	T 800 3	T 800 4	T 800 5	T 800 6	T 800 7		T 800 1	T 800 2	T 800 3	T 800 4	T 800 5	T 800 6	T 800 7	T 800 8	T 800 9	T 800 10	T 800 11	
49-54	HWY 49	Mile Post 0.81	0.81		P	P		P		P					P	P		P	P			P	P		P							
49-54-01	49-54 Road	HWY 49	0.32		P	P		P		P					P	P		P	P			P	P		P							
49-63	HWY 49	Mile Post 1.78	1.78		P	P		P		P					P	P		P	P			P	P		P							

P = Maintenance work to be performed by the purchaser
S = Maintenance work where the costs will be shared with the Forest Service
Maximum volume of Purchasers responsibilitiy for slide and slump repair is N/A cubic yards (T-810)
Appraisal estimate for surfacing repair equals N/A cubic yards (T-804).
Waterbar locations shall be staked prior to removal.

Road Maintenance T-Specifications

for

Timber Sale Contracts

No.	Specification Title
T-800	Definitions
T-801	Slide and Slump Repair
T-802	Ditch Cleaning
T-803	Surface Blading
T-804	Surfacing Repair
T-805	Drainage Structures
T-806	Dust Abatement
T-807	Roadway Vegetation
T-808	Miscellaneous Structures
T-809	Waterbars
T-810	Barriers
T-811	Surface Treatment

SPECIFICATION T-800 DEFINITIONS

Wherever the following terms or pronouns are used in Specifications T-801 through T-811, the intent and meaning shall be interpreted as follows:

800-1.1 - Agreement. Maintenance projects require a mutually acceptable method to resolve the problems which arise when incompatible situations arise between drawings and specifications and actual conditions on the ground to allow orderly and satisfactory progress of the maintenance.

These specifications have been developed in anticipation of those problem areas and have provided that such changes will be by agreement.

It is intended that drawings and specifications will govern unless "on-the-ground" conditions warrant otherwise, when specifications call for "Agreement", "agreed", or "approval" such agreement or approval shall be promptly confirmed in writing.

800-1.2 - Annual Road Maintenance Plan. A plan prepared by various users of one or several roads. The plan is an agreement on maintenance responsibilities to be performed for the coming year.

800-1.3 - Base Course. Material used to reinforce subgrade or, as shown on drawings, placed on subgrade to distribute wheel loads.

800-1.4 - Berm. Curb or dike constructed to prevent roadway runoff water from discharging onto embankment slope.

800-1.5 - Borrow. Select material taken from designated borrow sites.

800-1.6 - Crown, Inslope, and Outslope. The cross slope of the traveled way to aid in drainage and traffic maneuverability.

800-1.7 - Culverts. A conduit or passageway under a road, trail, or other obstruction. A culvert differs from a bridge in that it is usually entirely below the elevation of the traveled way.

800-1.8 - Drainage Dip. A dip in the traveled way which intercepts surface runoff and diverts the water off the traveled way. A drainage dip does not block the movement of traffic.

800-1.9 - Drainage Structures. Manufactured structures which control the runoff of water from the roadway including inslope, overside drains, aprons, flumes, downdrains, downpipes, and the like.

800-1.10 - Dust Abatement Plan. A table which lists the road, dust palliative, application rates, and estimated number of subsequent applications.

800-1.11 - Lead-off Ditches. A ditch used to transmit water from a drainage structure or drainage dip outlet to the natural drainage area.

800-1.12 - Material. Any substances specified for use in the performance of the work.

800-1.13 - Prehaul Maintenance. Road maintenance work which the Purchaser determines must be accomplished to maintain the roads to a satisfactory condition commensurate with the Purchaser's use, provided Purchaser's Operations do not damage improvements under B6.22 or National Forest resources and hauling can be done safely. This work will be shown in the Annual Road Maintenance Plan as provided in B/BT6.31.

Prehaul Maintenance work the Purchaser elects to perform will be in compliance with the Road Maintenance T-Specifications.

800-1.14 - Roadbed. The portion of a road between the intersection of subgrade and sideslopes, excluding that portion of the ditch below subgrade.

800-1.15 - Road Maintenance Plan. A table which shows applicable road maintenance specifications to be performed by Purchaser on specific roads.

800-1.16 - Roadside. A general term denoting the area adjoining the outer edge of the roadway.

800-1.17 - Roadway. The portion of a road within the limits of excavation and embankment.

800-1.18 - Shoulder. That portion of roadway contiguous with traveled way for accommodation of stopped vehicles, for emergency use, and lateral support of base and surface course, if any.

800-1.19 - Slide. A concentrated deposit of materials from above or on backslope extending onto the traveled way or shoulders, whether caused by mass land movements or accumulated ravelling.

800-1.20 - Slough. Material eroded from the backslope which partially or completely blocks the ditch but does not encroach on the traveled way so as to block passage of traffic.

800-1.21 - Slump. A localized portion of the roadbed which has slipped or otherwise become lower than that of the adjacent roadbed and constitutes a hazard to traffic.

800-1.22 - Special Project Specifications. Specifications which detail conditions and requirements peculiar to the individual project.

800-1.23 - Subgrade. Top surface of roadbed upon which base course or surface course is constructed. For roads without base course or surface course, that portion of roadbed prepared as the finished wearing surface.

800-1.24 - Surface Course. The material placed on base course or subgrade primarily to resist abrasion and the effects of climate. Surface course may be referred to as surfacing.

800-1.25 - Surface Treatment Plan. A table which lists the roads and surface treatments to be applied.

800-1.26 - Traveled Way. That portion of roadway, excluding shoulders, used for the movement of vehicles.

800-1.27 - Turnouts. That portion of the traveled way constructed as additional width on single lane roads to allow for safe passing of vehicles.

800-1.28 - Water Source. A place designated on the Sale Area Map for acquiring water for road maintenance purposes.

800-1.29 - Waterbar. A dip in the roadbed which intercepts surface runoff and diverts the water off the roadway. A waterbar is not designed to be traversable by logging trucks.

SPECIFICATION T-801 SLIDE AND SLUMP REPAIR

DESCRIPTION

1.1 Slide removal is the removal from Roadway and disposal of any Material, such as soil, rock, and vegetation that cannot be routinely handled by a motorgrader during Ditch Cleaning, T-802, and Surface Blading, T-803 Operations.

Slump repair is the filling of depressions or washouts in Roadway which cannot be routinely filled by a motor grader during Surface Blading, T-803 Operations.

Slide removal and Slump repair includes excavation, loading, hauling, placing, and compacting of waste or replacement Material and the development of disposal or borrow areas.

REQUIREMENTS

3.1 Slide Material, including soil, rock and vegetative matter which encroaches into the Roadway, shall be removed. The slope which generated the Slide Material shall be reshaped during the removal of the Slide Material with the excavation and loading equipment. Slide Material deposited on the fillslope and below the Traveled Way will not be removed unless needed for slope stability or to protect adjacent resources.

Surface and Base Courses shall not be excavated during Slide removal operations.

Slide Material which cannot be used for other beneficial purposes shall be disposed of at disposal sites shown on Sale Area Map. Material placed in disposal sites will not require compaction unless compaction is shown on Road Maintenance Plan.

3.2 When filling Slumps or washouts, Material shall be moved from agreed locations or borrow sites shown on Sale Area Map, placed in layers, and compacted by operating the hauling and spreading equipment uniformly over the full width of each layer.

Existing aggregate surfacing shall be salvaged when practical and relaid after depressions have been filled.

Damaged aggregate base, aggregate surfacing, and bituminous pavement shall be repaired under Specification T-804 Surfacing Repair.

The repaired areas of the Slump shall conform to the cross-section which existed prior to the Slump and shall blend with the adjacent undisturbed Traveled Way.

3.3 The maximum volume of Purchaser responsibility for Slide and Slump repair is shown on Road Maintenance Plan. Greater volumes of Slide and Slump repair not qualifying as Catastrophic Damage are Forest Service responsibility.

SPECIFICATION T-802 DITCH CLEANING

DESCRIPTION

1.1 Ditch cleaning is removing and disposing of all Slough Material from Roadway ditches to provide a free-draining waterway.

REQUIREMENTS

3.1 Ditch cleaning shall be repeated during the year as often as necessary to facilitate proper drainage.

3.2 All Slough Material or other debris which might obstruct water flow in the Roadway ditch shall be removed. Material removed from the ditch, if suitable, may be blended into existing native road surface or Shoulder or placed in designated Berms in conjunction with Surface Blading T-803 operations.

Material removed from ditches that is not by Agreement blended into existing roads or placed in Berms shall be loaded and hauled to the disposal site shown on Sale Area Map.

3.3 Roadway backslope or Berm shall not be undercut.

SPECIFICATION T-803 SURFACE BLADING

DESCRIPTION

1.1 Surface blading is keeping a native or aggregate Roadbed in a condition to facilitate traffic and provide proper drainage. It includes maintaining the Crown, Inslope or Outslope of the Traveled Way, Turnouts, and Shoulder; repairing Berms; blending approach road intersections; and cleaning bridge decks, Drainage Dips, and Lead-off Ditches.

REQUIREMENTS

3.1 Surface blading shall be performed before, during, and after Purchaser's use as often as necessary to facilitate traffic and proper drainage.

3.2 The surface blading shall preserve the existing cross-section. Surface irregularities shall be eliminated and the surface left in a free-draining state and to a smoothness needed to facilitate traffic. Surface Material which has been displaced to the Shoulders or Turnouts shall be returned to the Traveled Way. The blading operation shall be conducted to prevent the loss of surface Material and to provide for a thorough mixing of the Material being worked.

3.3 Water, taken from Water Sources designated on Sale Area Map, shall be applied during blading if sufficient moisture is not present to cut, mix, or compact the surface Material.

3.4 On native surfaced roads, Material generated from backslope Sloughing, and ditch cleaning may be blended with the surface Material being worked. On aggregate surfaced roads this Material shall not be blended with Surface or Base Course Material unless agreed otherwise.

3.5 Roadway backslopes or Berms shall not be undercut, nor shall new Berms be established unless agreed otherwise.

Berms shall be repaired by placing Material, as needed to restore the Berm, to reasonably blend with existing line, grade, and cross-section.

3.6 Drainage Dips and Lead-off Ditches shall be cleaned and maintained to reasonably blend with existing line, grade, and cross-section.

3.7 Intersecting roads shall be bladed for a distance of 50 feet to assure proper blending of the two riding surfaces.

3.8 Rocks or other Material remaining on the Traveled Way after the final pass that are larger than 4 inches in diameter or are larger than the maximum size of imported surfacing shall be removed from the Traveled Way. The oversized Material shall be disposed of by sidecasting, unless shown otherwise on Sale Area Map. Sidecasting into streams, lakes, or water courses will not be permitted.

3.9 Material resulting from work under this specification shall not remain on or in structures, such as Culverts, overside drains, cattleguards, ditches, Drainage Dips, and the like.

3.10 Material resulting from work under this specification, plus any accumulated debris, shall be removed from bridge decks and the deck drains opened.

SPECIFICATION T-804 SURFACING REPAIR

DESCRIPTION

1.1 Surfacing repair is repairing potholes or small soft areas in the Traveled Way. It includes area preparation and furnishing and placing all necessary Materials, and other work necessary to repair the surface.

MATERIALS

2.1 Material used in the repair of soft areas on aggregate or native surfaced roads may be acquired from approved commercial sources, Forest Service Borrow areas shown on Sale Area Map, or Borrow sources agreed to. The quality and quantity of the imported Material used in the repair will be limited to that needed to provide a stable Traveled Way for hauling and to minimize damage to the road and adjacent resources. The quantity of imported surface repair Material used in the appraisal estimate will be shown on Road Maintenance Plan. However, the magnitude of the work may vary depending on Purchaser's hauling schedule and ground conditions.

2.2 Material used in the repair of bituminous pavements may be acquired from local commercial sources. If a mixing table is required, the location shall be approved by the Forest Service. The bituminous mixture to be used by the Purchaser shall be approved by the Forest Service. The Purchaser's share of the quantity of bituminous mixture used in the appraisal estimate will be shown on Road Maintenance Plan. However, Purchaser's share of the work may vary depending on Purchaser's hauling schedule, ground conditions, other traffic, etc.

REQUIREMENTS

3.1 Work under this specification shall be performed in a timely manner to reduce further deterioration of the Traveled Way.

3.2 Soft spots on aggregate or native surfaces shall be repaired by placing the imported Surface Course on top of the soft spot. Layers of imported Material shall be placed until a firm surface is produced.

3.3 Bituminous Pavement Repairs. The areas to receive bituminous pavement repairs will be marked on the road surface by the Forest Service just prior to Purchaser performing the work.

3.4 Potholes (deep patch). Surface Course and Base Course Materials shall be excavated to a depth necessary to reach firm, suitable Material. The minimum depth of excavation shall be 2 inches and the maximum depth of excavation shall be to the top of the Subgrade.

The edges of the prepared hole shall be extended to form a vertical face in unfractured asphalt surfacing. The prepared hole shall generally be circular or rectangular in shape, dry, and cleaned of all loose Material.

Prepared potholes shall be patched or barricaded immediately.

The faces of the prepared hole shall be tacked with a slow-setting emulsified asphalt.

The bituminous mixture shall be placed in layers not exceeding a compacted depth of 2 inches. Each layer shall be compacted thoroughly with hand or mechanical tampers or rollers. Compaction shall not be done with equipment wheels.

Upon completion, the compacted patch in the pothole shall be flush, with a tolerance or approximately ¼ inch to ½ inch above the level of the adjacent pavement.

3.5 Skin Patches. Prior to skin patching, potholes shall be patched and the surface shall be cleaned of loose and deleterious material. Apply a tack coat with a slow-setting emulsified asphalt at the rate of 0.1 gallons per square yard. Bituminous mixture shall be distributed uniformly with feathered edges in layers not to exceed 2 inches compacted depth. When multiple layers are ordered, joints shall be offset at least 6 inches between layers.

Each layer shall be compacted by two passes with a 7-10 ton steel roller or comparable vibratory roller.

3.6 Asphalt Berm. Damaged segments of Berm shall be removed and the exposed ends beveled at approximately 45 degrees from vertical. The Berm foundation shall be cleaned and patched as necessary. The foundation and joining surfaces shall be coated with a slow-setting emulsified asphalt. Asphalt mix shall be placed and compacted to conform with the shape and alignment of the undamaged segment.

3.7 Disposal. All Materials removed from potholes, patches, and Berms shall be disposed of at disposal sites shown on Sale Area Map.

SPECIFICATION T-805 DRAINAGE STRUCTURES

DESCRIPTION

1.1 This work consists of maintaining Drainage Structures and related items such as inlet and outlet channels, existing riprap, trash racks, and drop inlets.

MATERIALS

2.1 All Materials used in the maintenance of Drainage Structures shall conform by type and specification to the Material in the structure being maintained.

REQUIREMENTS

3.1 Drainage Structures and related items shall be cleared of all foreign Material which has been deposited above the bottom of the structure and all vegetative growth which interferes with the flow pattern. Material removed that cannot be incorporated into maintenance work shall be hauled to a disposal site shown on Sale Area Map.

3.2 If outlet or inlet riprap was installed by Purchaser as a construction item or existed prior to Purchaser's haul, it shall be maintained in good condition including the replacement of riprap if necessary to previous line, grade, and cross-section.

3.3 Perform maintenance to insure the proper functioning of the head walls, aprons, inlet assemblies, overside drains, riprap, trash racks, and other facilities related to the Drainage Structure.

SPECIFICATION T-806 DUST ABATEMENT

DESCRIPTION

1.1 This work shall consist of preparing Traveled Way and furnishing and applying Materials to abate dust.

MATERIALS

2.1 The roads requiring dust abatement, type of dust abatement Material to be used, the rates of application, and frequency of applications will be shown on Dust Abatement Plan (B/BT5.3, B/BT6.31, and C/CT5.31#). The Dust Abatement Plan may be changed by written Agreement.

2.2 Water. The locations of Water Sources are shown on Sale Area Map.

2.3 Dust abatement Materials shall meet the requirements of the following subsections of Forest Service Specifications for Construction of Roads and Bridges or attached Special Project Specifications.

Emulsified Asphalt	702
Blotter Material	703.12
Magnesium or Calcium Chloride Brine	723.01
Calcium Chloride Flake	723.02
Lignin Sulfonate	723.03

2.4 Testing of Materials. Certification and sampling of bituminous Materials lignin sulfonate, and magnesium chloride shall be in accordance with subsections 105.04 or 723.04 of Forest Service Specifications for Construction of Roads and Bridges.

REQUIREMENTS

3.1 General. Dust abatement Materials shall be applied to the road surface as necessary to control road surface loss, provide for road user safety, and minimize damage to adjacent resources.

3.2 Compaction. When the methods listed below specify compaction, Traveled Way shall be compacted by an 8 to 10 ton pneumatic, steel-wheeled or equivalent vibrating roller making 2 passes over the full Traveled Way and Shoulder width, unless compaction is not required on the Dust Abatement Plan (B/BT5.3, B/BT6.31, and C/CT5.31#).

3.3 Preparation to Dust Abatement Materials Other Than Water. The following applies to all methods of preparation:

Bituminous residue shall be scarified and pulverized to produce loosened Material not exceeding 4 inches in greatest dimension.

Traveled Way shall be bladed in accordance with T-803.

Prior to applying DO-6BA, DO-6PA, or DO-8, the top 2 inches of Traveled Way shall contain not less than 80 percent nor more than 120 percent of optimum moisture as determined by AASHTO T-99, Method C. Prior to applying other bituminous Material, Traveled Way shall have a moisture content between 1 and 3 percent. If surface dusting prevents the bituminous Material from penetrating, a light application of water shall be applied just prior to applying the bituminous Material.

Lignin Sulfonate and magnesium chloride shall be applied when the top 1 inch of Traveled Way contains not less than 3 percent moisture, nor more than 120 percent of optimum moisture as determined by AASHTO T-99, Method C.

Moisture content will be determined in accordance with AASHTO T-217 OR T-239.

One or more of the following methods shall be used, as specified in the Dust Abatement Plan (B/BT5.3, B/BT6.31, and C/CT5.31#).

Method 1. Compact Traveled Way and apply the dust abatement Material.

Method 2. Develop a layer of loose Material approximately 1 inch in depth for the full width of Traveled Way. Apply the dust abatement Material to this loose Material and compact after penetration. If traffic makes maintenance of the loose Material difficult, 1 inch of the Material may be bladed into a windrow along the Shoulder. The specified moisture content shall be maintained in the windrow and the top 1 inch of Traveled Way. The windrow shall be bladed to a uniform Material. When the dust abatement Material has penetrated, Traveled Way shall be compacted.

Method 3. Blade 1 inch of Material from Traveled Way into a windrow along the Shoulder. Maintain the specified moisture content in the windrow and the top inch of Traveled Way. Apply half the dust abatement Material. When the dust abatement Material has penetrated, the windrow shall be bladed to a uniform depth across dust abatement Traveled Way, and the remaining dust abatement Material shall be applied. Traveled Way shall be compacted.

Method 4. Develop a layer of loose Material approximately 2 inches in depth for the full width of Traveled Way. Apply half the dust abatement Material to the loose Material. Blade the top 2 inches into a windrow along the Shoulder. Apply the remaining dust abatement Material to Traveled Way and the Berm. Spread the Berm evenly across Traveled Way and compact.

3.4 Preparation for Dust Abatement with Water. Traveled Way shall be prepared in accordance with Specification T-803 Surface Blading when required.

3.5 Application Tolerance. Dust abatement Materials other than water shall be applied within 0.05 gallons per square yard of the rate specified.

3.6 Mixing Requirements. DO-6BA, DO-6PA, and DO-8 shall be thoroughly circulated in the distributor within 1 hour of application.

3.7 Weather Limitations. Dust abatement Materials shall not be applied when it is raining.

Bituminous Material shall be applied when the surface temperature of Traveled Way is 50 degrees Fahrenheit or higher.

Lignin sulfonate and magnesium chloride shall be applied when the atmospheric temperature is 40 degrees Fahrenheit or higher.

3.8 Blotter Material. Blotter Material shall be spread in a sufficient quantity to prevent tire pickup.

SPECIFICATION T-807 ROADWAY VEGETATION

DESCRIPTION

1.1 This work includes removal of brush and trees from within the Roadway limits.

REQUIREMENTS

3.1 Vegetative matter within the Roadway which impedes vehicular travel or interferes with road maintenance operations, such as surface blading and ditch and culvert cleaning shall be removed. Downed timber meeting utilization standards shall be cut in appropriate lengths and decked along the Roadside in locations where the Traveled Way or sight distances will not be impaired.

3.2 Vegetative matter removed from the Roadway shall be treated by the specified method shown on Sale Area Map and as required by C/CT6.7#.

SPECIFICATION T-808 MISCELLANEOUS STRUCTURES

DESCRIPTION

1.1 Maintenance of miscellaneous structures includes cattleguards, gates, and other similar structures that have been previously installed to insure safe and efficient operation of the road.

MATERIALS

2.1 Any Materials needed in the maintenance of miscellaneous structures shall be similar in type and quality to the Material in the structure being maintained.

REQUIREMENTS

3.1 Cattleguards. Loose rails shall be welded or bolted back in place.

Excess Material carried into the cattleguard shall be removed when drainage is blocked or when it reaches 6 inches from the bottom of the cattleguard frame. Drainage into and from the cattleguard shall be kept open.

3.2 Gates. Gates shall be kept in good repair and made to swing easily. Hinges or latches shall be repaired if not operating properly.

Brush and debris shall be removed from within the swinging radius.

SPECIFICATION T-809 WATERBARS

DESCRIPTION

1.1 This work consists of installing or removing Waterbars in the Roadbed.

REQUIREMENTS

3.1 Waterbars shall be installed on roads shown on Road Maintenance Plan in accordance with the attached drawings and at locations designated or staked on the ground.

All Material excavated shall be used in the installation of the Waterbar. Bermed Material shall be compacted by operating heavy equipment over the length and width of the Berm.

3.2 Waterbars shall be removed on roads shown on Road Maintenance Plan by blading the Berm into the adjacent depression to form a smooth transition along the Traveled Way. The length and width of the fill Material shall be compacted by the equipment performing the work.

3.3 Waterbars may be required to be installed between seasons of use and then removed when haul is resumed. Waterbar installation may also be required when use of a road has been completed.

SPECIFICATION T-810 BARRIERS

DESCRIPTION

1.1 This work shall consist of furnishing, installing, or removing barriers. Gates are not included.

MATERIALS

2.1 Materials for barriers shall meet the requirements as shown on attached drawings.

REQUIREMENTS

3.1 Barriers shall be installed in accordance with the attached drawings.

The location of barriers to be removed or installed is shown on Sale Area Map. Installation or removal may occur as often as road use is terminated and resumed.

SPECIFICATION T-811 SURFACE TREATMENT

DESCRIPTION

1.1 This work shall consist of applying a chip seal, sand seal, or fog seal to the Traveled Way.

Chip seals may consist of single or double applications of bituminous Material and cover aggregate.

MATERIALS

2.1 The roads requiring surface treatments, the type of seal coat to be applied, the rate of application, and type and grade of bituminous Material, and the rate of application and grading of cover aggregate will be shown on Surface Treatment Plan (B/BT5.3, B/BT6.31, and C/CT5.31#).

2.2 Emulsions used for fog seals shall be diluted with an equal amount of water and shall be applied at the diluted application rate shown on Surface Treatment Plan (B/BT5.3, B/BT6.31, and C/CT5.31#).

2.3 Seal coat Materials shall meet the requirements of the following subsections of Forest Service Specifications for Construction of Roads and Bridges or attached Special Project Specifications:

Bituminous Materials	
Asphalt Cement	702.01
Liquid Asphalts	702.02
Emulsified Asphalt	702.03
Application Temperatures	702.04
Cover Aggregate	703.11
Blotter Material	703.12
Water for Diluting	725.01

2.4 The cover aggregate shall be surface damp at the time of application when using emulsified asphalt and dry when using an asphalt cement or liquid asphalt. Excess water on the aggregate surface will not be permitted.

REQUIREMENTS

3.1 Traffic. Traffic shall be maintained in accordance with B/BT6.33.

3.2 Weather Limitations. Fog seal and chip seal shall not be applied when the weather is foggy or rainy.

Seal coats requiring cover aggregate shall not be applied when the temperature of the surface being treated is below 70 degrees Fahrenheit in the shade.

Fog seal coats shall not be applied when the surface temperature is below 40 degrees Fahrenheit in the shade.

3.3 Equipment. The following equipment or its equivalent shall be used:

A distributor truck equipped to spread the Material uniformly at the designated rate, within the temperature range specified and within 0.04 gallons per square yard of the rate specified. The distributor shall be equipped with a thermometer and a hand hose with spray nozzle.

A rotary power broom and/or blower.

When cover aggregates are applied: A pneumatic tire roller, 8-ton minimum weight with all tires equally inflated to a pressure of at least 90 pounds per square inch. Rollers shall be equipped with devices for applying water to the tires.

Self-propelled aggregate spreader supported by at least four wheels equipped with pneumatic tires on two axles, situated so that at no time will the tires contact the uncovered bituminous Materials. The aggregate spreader shall be equipped with positive controls so that the required amount of Materials will be deposited uniformly over the full width.

Trucks with spreading attachments shall not be used.

3.4 Preparation of Surface. Immediately before applying the bituminous Material, the surface to be sealed shall be cleaned of all foreign and loose Material.

3.5 Application of Bituminous Material. Bituminous Material shall be applied in a uniform, continuous spread. The distributor shall be moving forward at proper application speed at the time the spray bar is opened. Skipped areas or deficiencies shall be corrected prior to the application of cover aggregate.

The spread of bituminous Material shall not be more than 6 inches wider than the width to be covered by the cover aggregate. Operations shall not proceed if the bituminous Materials are allowed to cool, set up, dry, or otherwise impair retention of cover aggregate.

Fog seal shall be allowed to penetrate and dry before traffic is permitted on the sealed portion.

The surfaces of structures and trees adjacent to the area being treated shall be protected to prevent their being spattered or marred.

3.6 Application of Cover Aggregate and Blotter. Immediately following the application of the bituminous Material, cover aggregate shall be spread at the specified rate. Joints between adjacent applications of cover aggregate shall be approximately in the center of two-lane roads.

The aggregate spreader shall not be operated at speeds which cause the aggregate to roll over after striking the bituminous Material. The cut-off of aggregate shall be complete, and any excess aggregate shall be removed from the surface prior to resuming operations. Immediately after the cover aggregate has been spread, any piles, ridges, and uneven distribution shall be corrected.

Cover aggregate may be applied by hand in areas inaccessible to spreading equipment.

Rolling shall begin immediately after spreading the cover aggregate and shall consist of a minimum of two complete coverages.

The second treatment of a double chip seal shall not be applied until at least 24 hours after completion of a first treatment, when an emulsion or asphalt cement is used. If a medium cure liquid asphalt is used, 48 hours shall be allowed between applications. Prior to the second treatment, any loose cover aggregate remaining on the surface after the first treatment shall be removed in such a manner that the cover aggregate set in the bituminous material will not be displaced.

After rolling, traffic shall be controlled to a maximum speed of 15 miles per hour for a period of 4 hours.

The day following the final application of cover aggregate, any concentrations of loose cover aggregate shall be redistributed without disturbing the embedded aggregate. Four days after the final application of cover aggregate, all excess cover aggregate shall be removed. During this period, any bituminous Material that comes to the surface shall be covered with additional cover aggregate or approved blotter Material.

3.7 Blotter Material for fog seals shall be spread in sufficient quantity to prevent tire pickup.

Appendix J – Pesticide Application Daily Log

PESTICIDE APPLICATION DAILY LOG

Addendum to Form FS 2100-2. See Reverse Side for Instructions.

*Required

APPLICATOR INFORMATION

*Agency/Contractor:	*Applicator Name/Phone/Email:	*CA DPR License #:

SITE INFORMATION

*Project Name:	NEPA ID#:	Forest/District	Location Name/Sale Org/#

*GPS (UTMs or Lat/Long):	*Target Pest(s)

Notes (Soil Type, Stump Category, Diameter Range, Proximity to Water, etc.):

APPLICATION INFORMATION

*Date Planned:	*Date of Application:	*Application Area (include UOM):	Wind speed (mph)	Temp °F	Rel Humidity %	Slope %

Application Equipment:	*Application Method:	*Calibrated Spray (GPA)

*Vol Applied (incl. UOM)	*Calibrated Volume (incl. UOM)	*Product Rate (incl. UOM)	% Solution (mark one)*		
				a.i.	v/v

*Product/Trade Name	Active Ingredient (a.i)	*Diluent

NOTES:

Pesticide Application Reporting Instructions

Two types of information are required are required by USDA for pesticide treatments on NFS lands: the Pesticide Use Proposal (PUP) (Form FS 2100-2) and daily logs of the actual application. The state of CA also requires information specific to site, time, and amount of chemicals applied. This report documents the actual application of pesticides using site- and application- specific data. There are three possible scenarios for **Application Information:**

1. **Single Product:** A single formulation/a.i. is used, with or without any adjuvents.
2. **Product Mix:** A commercial pesticide formulation or product with two or more Active Ingredients (a.i's). A daily log record is created with one product name and two a.i.'s.
3. **Tank Mix:** Two or more pesticide products custom-mixed in a single spray tank by an applicator. A daily log record is created with two chemical a.i.'s, and a % solution or two a.i. rates are recorded for each chemical.
4. **Two Applications with one Product:** When a pesticide product is applied on different parts of a site requiring different equipment and calibrations, multiple daily log records are required (one for each).

Agency/Contractor: The name of the organization, business, or contracting entity applying the pesticide

Applicator Name/Phone/Email: The name, phone, and email contact for the person applying the pesticide(s).

CA DPR License #: The QAC, QAL, or PCA/PCB associated with the person applying the pesticide.

Project Name: The name of the project, as recorded on the PUP and as associated with the project NEPA

NEPA ID#: The record ID associated with the project NEPA

Forest/District: The name and/or district of the USFS national forest system and/or district

Location Name/Sale Org/#: The site-specific location/geographical name, the sale name or reference #/ID

Application Date: MM/DD/YYYY

Target Pest(s): Include all species targeted by the tank mix on-site for this daily log

Date Planned: The original targeted or proposed date of application MM/DD/YYYY

Date of Application: The actual date of application MM/DD/YYYY

Application Area: The non-overlapping area (ac) where pesticides are applied on a particular date.

Application Method: Backpack Spray ("BS + modifier: spot spray SP", broadcast spray BR", or basal bark spray BB"); Cut-Stump ("CS"—include size class range); Hack-and-Squirt "HS"; Soil Application ("SA"); Soil Injection ("SO"), Stem Injection ("ST"); Bark Application ("BA"—include diameter range); Fumigation (FU); Boom System ("BS"—include tank size); Aerial Application (AA)

Calibrated Spray (GPA): The amount of spray, in gallons per acre (GPA) of field-calibrated equipment

Volume Applied: The total volume (diluents, pesticides, and adjuvants) applied on-site for a specified date

Calibrated Volume: The acre-volume of mix to be applied based on calibrated output of applicator, equipment, and application method. The area-volume (gallons per acre) should be used to determine the mixing rate.

Product Rate: The label rate in which the product is to be applied, typically expressed as ounces or pounds of product per acre. Product Rate along with Calibrated Volume is used to determine a mixing rate. Calibrated volume is required when using product rate.

%Solution: The amount of pesticide in the final mix expressed as a percentage of the total solution mixed in the tank. This value is typically a volume/volume (v/v) ratio or may be expressed as an active ingredient concentration (a.i). %Solution is used when the pesticide application is not area based, but rather is individual plant treatment such as stump applications. Example: 1.0% solution is 1gal of product in 100 gallons of dilutant.
Calibrated volume is not required with "%Solution".

Product Trade Name: The name of the pesticide product applied to the site. You may enter multiple product names if the products are components of a tank mix.

Active Ingredient: The active ingredient (common name) of the product formulation, may include multiple entries if a product mix is chosen.

Diluent: Enter the carrier for the pesticide. For most applications the Dilutant will be water.

Notes: Narrative field to allow the user space for additional information on the daily treatment