

## SECTION C--DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

### C.1 SCOPE OF CONTRACT

**Description of Work:** The intent of this contract is to secure services to mechanically thin conifers and brush cutting according to contract specifications. **Thinning shall consist of selecting crop trees and mechanically cutting all other trees and brush with mastication equipment except for areas designated by the C.O.R.** The C.O.R. will designate areas where the brush may be left, if any, but thinning shall still be done. **Thinning and brush cutting shall be done in a manner that does not damage leave trees not specified to be treated.**

**Units 270-3 and 270-5 can not be treated until after July 2010 due to UC-Davis scientific study.**

### C.2 Project Location & Description

**Location:** The project is located on the Tahoe National Forest, American River Ranger District. T14N, T15N, R12E and R13E.

From Auburn, Ca located near Interstate 80, drive east on Foresthill Road for approximately 6 miles into the town of Foresthill. Turn right on Mosquito Ridge Road (FS-96 RD) and drive approximately 13 miles. Turn left (north) on the Western States Cavanah Deep Road (FS-44 RD) and drive for approximately 1.2 miles. Units generally located west off the FS-33 spur roads. Follow maps to project area.

See attached maps.

**Description:** The perimeters of the sub-items are flagged with yellow color ribbon with black “**Silviculture Boundary**” lettering and solid blue ribbon. In some cases roads, natural tree line or riparian zones may make up part of the boundary of a 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 the stream zones and topographic features, when shown, also may be approximate.

#### **Exclusions (non-work areas):**

The following shall be excluded or protected:

**1. Riparian Conservation Areas:** Perennial streams will have a 300 feet buffer each side, measured from the full edge. Seasonal flowing streams will have a 150 feet buffer, measured from the full edge. Meadows, lakes, and springs will have a 300 feet buffer from edge of feature of riparian vegetation, which ever is greater.

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**2.** Mastication machine must stay outside “**riparian buffer**” zones, but the mastication machine arm may reach inside riparian buffer. **Perennial** streams will have a **100-foot** “riparian buffer” zone along each side of perennial streams, **intermittent** streams will have a **50-foot** “riparian buffer” along each side, and **ephemeral** streams will have a **25-foot** “riparian buffer” zone along each side to limit ground disturbance in the stream/riparian area to limit ground disturbance. Limit ground-based equipment to slopes less than 20% **within** Riparian Conservation Areas. Limit ground-based equipment to slopes less than 30% **outside** of Riparian Conservation Areas.

**3. Controlled sites:** Controlled sites within the project area will be flagged with blue and black stripe flagging and avoided.

**4. Areas of sensitive** plants are flagged out with orange and white-stripped flagging.

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

**6.** Contractor shall protect improvements (such as roads, trails, telephone lines, ditches, and fences) that exist in the operating area and are determined to have a continuing need or use. These improvements shall be left in the original condition existing prior to the commencement of work on this contract. Unless Forest Service authorizes continued use, contractor shall remove or dispose of improvements when no longer needed. Return all Maintenance Level 1 roads to closed, long term storage condition after use by contractor by physically closing roads with log and earthen barriers and stabilizing road surfaces with waterbars and appropriate drainage. 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. Excessive slash cannot be left in the roadways after end of each work day. All cut vegetation shall be kept within unit boundaries. If slash is broadcasted onto the roadways, it must be removed by the end of each workday. Warning signs (at least two) 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. Signs shall include phrases similar to “Caution, flying debris stay back 200 feet” and be no less than 3'X3' in size.

### **C.4 Estimated Start Date & Contract Time**

**Start:** August 4, 2008

**Time:** 156 days

See also Section F

### **C.5 Restrictions on Work**

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

1. In accordance with the fire plan, included in **Section J**.
2. When the Contracting Officer (or designated representative) determines that adverse weather has made access too dangerous or that continued vehicular travel would cause unacceptable road damage.
3. When ground conditions are too wet to continue operations without sustaining resource damage to soils. The Contracting Officer or Contracting Officer's Representative will make this determination. When such conditions exist, the Forest Service will issue a written Suspend Work Order.
4. Low-ground-pressure equipment may operate when soils are dry to a depth of 4 inches. Outside normal operating season (NOS) or during wet periods within the operating contract time, utilize the TNF Wet Weather Operations Guidelines. For unclear situations, or in the event of a difference of opinion between the Forest Service Representative and Contractor, a soil scientist must be consulted.
5. Servicing and refueling of equipment areas shall be located outside of riparian buffer or 100 feet from other wet areas. In case of a HAZMAT spill, the material shall be immediately contained and the Forest Service shall be immediately notified.
6. Within the sub-item boundaries, the Government may exclude non-work areas such as: rocky areas, wildlife areas, and other special areas. The Contracting Officer's Representative will designate non-work areas. Such areas exceeding 1/2 acre in size per unit will be excluded from payment.

## C.8 Technical Requirements

### C.8-1 Definitions

**Aggregation** – A pocket of densely packed trees distinct from adjacent areas within a project unit. It is characteristic for trees within aggregations to have a higher percent of **phenotypic defects** due to competition for resources in close proximity to others.

**Conifer** - A cone-bearing tree with needles or leaf scales (e.g. pine, fir, cedar).

**Co-dominant Tree** - A tree with the crown forming the general level of the crown cover and receiving full light from above, but comparatively little from the sides.

**C.O.R.** - Contracting Officer's Representative.

**Crop Tree (Leave Tree)** - Any crop tree without excessive damage, which has a live crown ratio of greater than 40%. The top will not be dead, broken, or forked.

**Damaged tree** – Any crop tree with one or more of the following injuries:

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1. Any true fir that has any bark cut or removed to the cambium regardless of the amount.
2. Any other tree species that has bark cut or removed to the cambium from more than 10% of the circumference of the bole.
3. Any tree that has a broken, forked, or dead top.
4. Any tree that has had 25% or more of the live limbs or branches broken or removed by any operation.
5. Defects, which include sweeps in the bole and crooked boles.

**DBH** - Diameter at breast height; the diameter of a tree measured at a point 4-1/2 feet above the ground on the uphill side of the tree.

**Diseased Trees** – Any tree greater than two feet tall with a diameter less than eleven inches at DBH with one or more of the following diseases:

1. **Mistletoe**: Trees with one or more visible infections on any part of the live crown or stem.
2. **Gall Rust**: Trees with one or more visible cankers on the bole or multiple cankers on the limbs in the green crown.
3. **Chlorosis**: Trees with off color foliage, weak root system and otherwise exhibiting a general unhealthy appearance.
4. **Damage**: Tree that exhibits insect infestation, severe mechanical, animal, or other damages (i.e. trees leaning severely).
5. **White Pine Blister Rust**: On sugar pine, stem / branch cankers, yellow to red flagging of branches and tops.

**Excess Tree** - A tree that is left but should have been cut to meet spacing standards or trees-per-acre requirements.

**Forked Trees** – Trees with one or more forks in the live crown or with old dead or broken-out tops within 13 feet of the ground.

**Hang-up Tree** – A cut tree suspended above the ground by a live tree.

**Hardwood** – A tree with broad leaves rather than needles (e.g., oak, madrone, etc.)

**Insect Infested Tree**– A tree pitching sap from the bark in multiple spots on the bole, frass in cracks of bark or at base of tree, dead or fading top.

**Live Crown Ratio** – The percentage of the live limbs in relation to the total tree height.

**Phenotypic Defects** - Referring to inherited defects or deficiencies caused by local environmental conditions. Examples: Trees with flat top shapes having under 4 inches of leader growth (measure of previous year), forked or multiple tops, twisting in the limbs bole and trees with sweeping, leaning or drooping forms.

**Slash** - All debris resulting from operations including stems, limbs and tops of trees, and brush.

**Streamside Management Zone (SMZ)** - Riparian area protected during logging, mechanical treatments and site preparation. Contains slash and vegetation.

**Suppressed Tree** - Any tree with less than 30% of its total height in live green crown or with less than 4 inches of current leader growth.

**Thinning** - The cutting of trees to meet the short term desired condition.

**True fir** – This classification refers to the conifer species red fir & white fir.

## C.8-2 Specifications

### 8-2.1 Selection of Crop (Leave) Trees for Plantations:

Leave trees shall generally be those of the tallest height, largest crown, and straightest boles that are free of damage due to insects, disease, physical and mechanical causes. The Contractor shall select leave tree using the following priorities:

1. Leave all conifers that exceed 10 inches in DBH.
2. Leave the largest DBH, healthiest, most species diversified 2-3 hardwoods per acres. Leave all hardwoods that exceed 10 inches in DBH.
3. Select leave trees from healthy undamaged conifers as necessary to achieve an average **spacing of 20' X 20'** (approximately 108 trees per acre). Spacing may be varied up to 25 percent to select the most desirable tree. However, spacing control using the original guides shall be maintained whenever possible. The number of trees per acre shall not be materially increased or decreased.
4. Select leave trees with the desired species mixture composition provided it is at least 2/3 the height of comparison trees. The desired

species priority when choosing leave trees are as follows starting from the greatest preference: **i)** Douglas-fir, **ii)** healthy sugar pine, **iii)** ponderosa pine, **iv)** incense cedar, **v)** red/ white fir.

**5.** Select trees with an increasing height growth pattern.

**6.** If no healthy undamaged tree exists at the required spacing interval, leave tree with minor damage.

### **8-2.2 Selection of Cut Trees**

Cut and masticate all conifer trees less than 10 inches at DBH that do not meet the definition of a crop tree while observing spacing requirements.

### **C8-2.3 Mastication Standards**

All slash and other vegetative debris shall meet the following specifications when greater than two feet from any obstacle, crop tree, or hardwood:

1. No slash and other vegetative debris shall be more than **18** inches deep as measured from the ground level.

2. All conifer and brush stumps shall be a maximum height of **6** inches above the average ground level as measured on the uphill side or **6** inches above natural obstacles (i.e. logs, rocks).

3. No individual pieces of slash or vegetative debris shall be greater than **4** feet in length.

4. All boles or pieces up to **10** inches in diameter shall be masticated.

5. No damage to crop trees or Sugar Pine as a result of contract operations is permitted.

6. All cut vegetation shall be kept within unit boundaries. Any cut vegetation falling into ditches, roads, road banks, trails or adjacent units shall immediately be removed **by the end of the day**.

**7. All brush within the work areas shall be masticated as close to the leave trees as possible without damage to the leave trees, with the exception of brush designated as not to be treated by the C.O.R.**

8. No masticated or cut material shall lean against or be suspended by a leave crop tree.

### **8-2.4 Treatment of Snags**

1. Retain 4 or more of the largest snags per acre over **10** inches in DBH that do not create a hazard to performing work shall be.
2. Snags over **10** inches DBH creating a hazard to performing work will be cut and masticated (according to mastication specifications) only upon approval of the COR.
3. Snags less than **10** inches DBH shall be masticated.

### **8-2.5 Treatment of Logs**

Do not masticate or otherwise damage any existing down logs greater than **10** inches in diameter on the large end.

### **8-2.6 Treatment of Pacific Yew**

All Pacific Yew trees (*Taxus brevifolia*) will be left and no work will be performed within **5** feet of these trees. These trees will **not** be considered in spacing requirements or in trees-per-acre counts.

**C.8-3 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 equipment shall be of low ground pressure type which meets the following specifications:**

1. **Ground pressure shall not exceed a maximum of 8 psi.**
2. **Machine width maximum shall not exceed 12 feet.**
3. **Machine shall be equipped with a masticating or mulching head capable of reaching at least 20 feet from center of machine to perform the work described in the scope of the contract.**
4. Machine shall be free of fluid leaks and have hoses in good operating condition.
5. 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.

**C.8-4 Government-Furnished Property-** None. See Section G.

**C.8-5 Public Safety-** The contractor shall provide for public safety when operating equipment within 200 feet of open roadways by posting cautionary signs warning of hazardous work ahead. Warning signs will be placed not less than 100 feet, or more than 200 feet, from the unit so as to be visible to oncoming traffic. Trails in the area of work shall also have warning signs posted when work is in progress. See also **C.2 7 and 8**.

**C.8-6 Salvage Rights**

1. The contractor is permitted to purchase salvage rights to material to be treated within the sub-item boundaries. Salvage material may be removed from within the sub-item boundaries provided the project work is progressing as scheduled and removal is completed prior to the expiration of contract time. Rights to and material not removed from the project prior to expiration of contract time shall revert back to the Government. If salvage rights are granted to the contractor, he must obtain a Road Use Permit before hauling material on Forest Service roads. The permit is obtainable from the District Ranger's Offices and will specify any required road maintenance fees, dust abatement requirements, or other stipulations.

**2. *The Contractor shall not be permitted to use any kind of logging equipment to yard salvaged materials from the project units to the roads.***