NARRATIVE DESCRIPTION
Roundabout Mastication Project

Project Summary:
The Roundabout Mastication Project would masticate 200 acres of brush and sub-merchantable size trees in young, established conifer plantations on the Georgetown and Pacific Ranger Districts. The objective of the project is to substantially reduce the density of trees and the quantity of brush in plantations that are from 15-25 years old in order to:

- Reduce the risk of loss of the plantations to stand-replacing wildfire by a reduction in potential fire intensity and rates of spread, thereby
- Providing increased watershed protection as well as maintenance of wildlife habitat while;
- Accelerating the development of key wildlife habitat and old forest characteristics by promoting more rapid tree growth.
- Encourage hardwoods tree development; and
- Facilitate the introduction of prescribed burning.

Detailed Project Description: Scope of work would consist of mechanically masticating excess brush and small trees via the use of a rotating drum or disc, mounted on a track-laying machine with an articulated arm. The equipment grinds, chips and masticates the vegetative material to an end-product that rests within 12 inches of the ground. Individual pieces of masticated, vegetative debris are generally less than 6 feet in length. Residual tree density would be reduced to a target density of approximately 150 trees per acre, from an existing 250 tree/ac density. Brush would be reduced from the current height of approximately 5-8 feet to a slash-mat height of approximately 6-12 inches. The mastication process would create a chip layer of treated woody debris that protects the ground surface from sedimentation while also retarding the rapid germination and re-growth of brush.

Within approximately 5-8 years, after the chip layer has decomposed, the treated stands would be suitable for the reintroduction of prescribed fire. It would be the intent of the treatment to create a suitable situation wherein prescribed fire could then be applied to these plantations to retard brush growth and keep the plantations in a condition where they are much less susceptible to loss due to wildland fire.

Environmental Setting: The environmental setting consists of relatively young plantations that are located both within and outside the Wildland Urban Interface. Approximately 100 acres are located near the small, mountain community of Volcanoville, CA on the Georgetown Ranger District and approximately 100 acres are located in the Crystal Basin recreational area on the Pacific Ranger District, Eldorado National Forest.
The portion of this proposal on the Pacific Ranger District is also within or immediately adjacent to the Union Valley-Silver Creek watershed which was selected by the Eldorado Forest watershed group in 2011 as high priority watershed for restoration efforts. The fuel treatment benefits associated with the Roundabout project have; and will continue to directly and indirectly support the restoration efforts in the larger, watershed restoration endeavor by reducing the risk of wildland fire loss within the masticated plantations.

All of the plantations are located between approximately 3,000-5,500 feet elevation within the mixed conifer forest zone. The mixed conifer zone is positioned above the foothill zone. Historically, wildland fires were generally frequent in these areas, having fire return intervals of 5-15 years. Various human related activities, including fire suppression, grazing, timber harvesting have substantially changed the fire return interval in the west slope of the Sierras. The long-term goal of much of the management on the Eldorado NF is to create vegetation conditions on the ground that would eventually reduce the risk of catastrophic wildfire while simultaneously more readily permitting the reintroduction of prescribed or managed fire on much of the landscape. In order to create appropriate vegetative conditions it is currently necessary to mechanically treat the excess fuel loading that is largely comprised of brush and small conifers.

The plantations proposed for treatment in this project were established in the mid-1980 to mid-1990 period as a result of timber harvests or brush field conversions. The individual plantations are relatively small in land area, varying from approximately 5 to 25 acres in size. The plantations, in their present state, are very susceptible to damage from wildfire because of the combination of excess numbers of young trees with their crowns in contact with a dense layer of brush. The mastication treatment will disrupt the continuity of the brush and tree foliage that currently forms a continuous fuel ladder. The mastication process essentially changes the fuel profile that results in reduction in potential fire behavior, including reduced flame lengths, slower rates of spread and lower fire intensity.

The mastication of established plantations has been an on-going effort for many years and represents one type of treatment that tends to complement a suite of other fuel treatment efforts, including commercial understory thinning, tractor piling of fuels, biomass removal and prescribed fire.

**Funding Sources:** This 200 acre grant request will essentially complete the original Roundabout Mastication Project that consisted of nearly 900 acres of planned mastication. The Roundabout project has been on-going since late 1996 using various funding sources. Primarily the previously completed work has been funded with Forest Service appropriated fuel treatment dollars (WFHF), however in 2011 approximately 100 acres of work was funded using a $55,000 grant from the Eldorado Resource Advisory Committee (RAC).

**Workplan and Schedule**

Since all National Environmental Policy Act (NEPA) analysis and documentation have been previously completed, this grant funding request would be used directly for implementation. Essentially all funds would be used cover the cost of equipment use and operator costs. Required monitoring work would be funded using appropriated funds.
This grant will fund the following activities:

Mastication of 200 acres of 15-25 year-old plantations using a Valmet, track-laying machine and/or a John Deere excavator or a Rayco masticator. The Valmet and John Deere equipment have a 20 ft articulated arm supporting a rotating disc or drum masticating head. The Rayco equipment is track-laying and has a rotating drum that is directly mounted on the equipment without articulation. The equipment is currently owned by the Eldorado NF and operated by Eldorado National Forest equipment operators.

**DETAILED PROJECT DELIVERABLES**

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<tr>
<th>DETAILED PROJECT DELIVERABLES</th>
<th>TIMELINE</th>
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<tr>
<td>Mastication of 200 acres of 15-25 year-old plantations</td>
<td>Initiate work in fall of CY 2012 and complete all work in summer of CY 2013</td>
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<tr>
<td>Complete Progress/Final Reports to SNC on Project Deliverables</td>
<td>December 2013</td>
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**Restrictions, Technical/Environmental Documents and Agreements**

**Restrictions/Agreements:** There are no property restrictions and/or encumbrances that could adversely impact project completion. All work would be restricted to established plantations on public lands administered by the Eldorado National Forest.

**Regulatory Requirements/Permits:** No permits are required for this project. The Eldorado Forest has right of way access to all areas proposed for treatments.

**CEQA/NEPA:** All National Forest NEPA analysis and documentation for the site specific project implementation have been completed. A site-specific Decision Memo was approved by the District Ranger on the Georgetown and Pacific Ranger Districts on 8/25/2006. The project record contains specialist reports addressing archaeological resources, wildlife, noxious weeds, sensitive plants and animals, watershed effects and a fuels analysis.

The Forest would coordinate with the SNC to ensure that CEQA requirements would also be met. The SNC would act as lead agency in securing compliance with all CEQA requirements. The Roundabout Mastication project should be an “Exempted Project” under the CEQA regulations.

**Organizational Capacity**

The Eldorado National Forest has and continues to implement numerous mastication projects within established plantations since the advent of specialized equipment in the late 1960’s. The Georgetown Ranger District currently has over 2,000 acres of mastication scheduled to be
completed by private contractors within awarded stewardship/timber contracts. The Eldorado NF has completed numerous mastication projects for purposes of fuels reduction or conifer release on thousands of acres over the recent years.

The Forest also currently has 3 very experienced, permanent employees and one seasonal employee and 3 mastication machines that are dedicated to vegetation treatments on a full-time basis. These employees typically perform mastication projects on several national forests on an annual basis and have completed thousands of acres of work over the past two decades.

**Cooperation and Community Support**

The Georgetown Ranger District has participated in annual community fuel reduction awareness meetings in Volcanoville over the last several years. It is the intent of these meetings to annually remind residents of the need for fuel treatment work on both private and public land. The local community has generally strongly supported fuel treatments upon the local, national forest lands. In some instances, right of ways have been granted to the Forest Service to complete fuel treatment projects. The Roundabout project has received local support from Volcanoville residents.

The NEPA project-scoping effort (completed in 2006) produced two, oral public responses, both supporting the project as documented in the approved Decision Memo. No comments were received indicating concerns or non-support. Generally, the public views the type of work proposed herein as non-controversial and tends to either be silent or support such activities.

**Long-term Management and Sustainability**

Follow-up prescribed burning is planned within the treated plantations 8-10 years after treatment. Said follow-up treatment will require appropriate NEPA analysis at the time of planned implementation and will of course be dependent upon funding. However, even without the intended prescribed burning occurring, there would be dramatic short-term and longer-term benefits from plantation mastication, including an immediate reduction in potential fire flame lengths, fire intensity and fire rates of spread because of the changes in vegetation density and fuel profiles. These recognized fire behavior changes increase the sustainability of the plantations, reduce the susceptibility of the treated areas to wildfire in the long-term and permit much safer fire suppression actions should they be necessary.

**Performance Measures**

Number of Acres Treated: 200 acres

*Resources Leveraged for the Sierra Nevada:* The Roundabout Project has been an active project for approximately 5 years. During this 5 year period nearly 600 acres have been treated. The Forest Service expended approximately $285,000.00 and the El Dorado Resource
Advisory Committee allocated $55,000.00 in FY2011 for 100 acres of mastication on this project.

*Number and Diversity of People Reached:* Public notification of this project occurred in 2006 as a Public Notice in the Mountain Democrat Newspaper and via a scoping document mailed to recipients that had expressed an interest in these types of projects. It is presumed that several hundred individuals were contact via the newspaper or direct mailings.

*Number and Type of Jobs Created:* On the basis of approximately $50,000.00/job, the expenditure of $110,000.00 would directly create or fund approximately 2 full-time jobs. The indirect benefits in terms of employment are not known, however equipment repair, fuel purchases indirectly benefit local vendors.

*Number and Value of New, Improved, or Preserved Economic Activities:* The reduction in the flammability of 200 acres of plantations may indirectly reduce the cost of fire fighting efforts should these or adjacent areas be subjected to a wildfire. Private landowners commonly respond to fuel treatments on their own lands when they witness investments on public property in their neighborhoods.