Massack Hazardous Fuels Reduction

Final Report

7/1/08

General

The Massack Hazardous Fuels Reduction project was a property owner initiated project to reduce dangerous forest fuels. The project area is a contiguous 160 acre south-facing hill slope with three private owners, who approached the Plumas County Fire Safe Council in early 2006. The project was funded by CalFIRE (under California Proposition 40, voter approved bond funds) for $117,250 in May, 2006. The project was completed in April of 2008. A total of 125 acres were masticated in the project. ~ $121,000 was expensed on the project, including additional planning funds from Plumas Board of Supervisors.

Project Area

Massack is a sparsely populated forested area, north of state highway 70 and approximately 3 miles east of Quincy, the County seat. Massack is within the extended Wildland Urban Interface and is a populated area needing fuels treatments, as discussed in the 2004 Plumas County Wildfire Protection Plan developed by the Fire Safe Council.

The discussion from that plan follows.

**Community: Massack**

**Dominant Historic Large Fire Behavior by Community:**
Uphill runs for one burning period on southwest slopes, highway and railroad ignitions.

**Tactical Considerations:**

**Fuels Comments/Recommendations:**
Included in proposed PNF DFPZs. Increase defensible space around structures beyond 30 feet and treat fuels between structures

**Photopoints**

QY 4

**Fire Behavior**
Moderate Fire Behavior with Passive Crown Fire.

Massack is also within the Plumas National Forest area included in the major ‘Empire’ project. This project includes an analysis of 103,000 acres, known locally as Grizzly Ridge or the Mt. Hough area (within the Mt Hough Ranger District). The western end of the 30 mile-long Grizzly Ridge separates Spanish and Indian Valleys, two of the most
populated areas in the county. The ridge and its road system is the primary location of the Empire project’s DFPZs. The Forest Service issued its Empire project Environmental Impact Statement in 2007. The project is currently under appeal and is enjoined (as of 7/08) by a three judge panel from the Ninth Federal Circuit Court (SF). The project seeks to reduce fuels on 5,033 acres within the 103,000 acre analysis area, primarily through the implementation of a system of DFPZs (Defensible Fuel Profile Zones) along roads and ridgetops in the area.

The Massack area is surrounded on three sides with these proposed DFPZs. The attached maps show the proposed DFPZ system around the project area.

**Project Contract and Bidding History**

PCFSC received landowner applications in early 2006. PCFSC had discussions with USDA Natural Resources Conservation Service on the possible use of their “EQIP” program for forest thinning, which had previously been used for single or a few landowners [but was then oversubscribed]. PCFSC submitted funding requests to California Department of Forestry and Fire Protection (CDF, now known as CalFIRE) for Proposition 40 funds in early 2006 and also to Plumas County Board of Supervisors for federal Secure Rural Schools Title III funds for planning purposes.

The Board of Supervisors’ funds were allocated in 6/06. The Prop 40 funds contract (Contract # 8CA05692) was executed in May of 2006 with a completion date of 12/07. The CDF agreement was subsequently extended until 5/08.

PCFSC first issued a Request for Proposals to California Registered Professional Foresters (RPFs) in 3/06 for four separate hazardous fuels reduction projects, including Massack. A proposal was accepted in 7/06 from Wayland Resource Management for the project. They were subsequently succeeded by North Valley Resource Management. These firms designed the project, developed the environmental background as well as permits on the project and oversaw the eventual on-the-ground work of the timber contractor.

The thinning work was initially put to bids on 5/22/07 for all 160 acres. It called for a combination of thinning techniques including biomass thin from below [which generates sawlogs and chips for the biomass electric plant], hand piling/chipping and/or mastication. There were seven bids submitted on 9/11/07 after a field tour. The bids ranged from $129,000 to $767,000. The various bids had “overages” [bid amounts above all the funds available] of between $41,600 and $574,945. A major reason for the bid ‘overages’ was that the log and chip market and revenues predicted in the grant application ($112,000) were beginning to (at least temporarily) disappear in this part of Plumas County. This was somewhat due to the general slowdown in the housing market at that time. Additionally, the local market for logs and chips, particularly at the mill in nearby Quincy, had been almost eliminated by the mill’s necessary response to the large amount of log material anticipated to come to the mill from their land holdings at the “Moonlight” fire in August and September, 2007. This wildfire, at 65,000 acres, was the
largest in Plumas County’s recorded history. Thus, the project could not be carried out as originally designed.

The project was subsequently restructured in four major ways, after consultation among the landowners, PCFSC, CalFIRE and the forester:

- Project treatment acreage was dropped from 160 down to 125 acres. These acreage changes included landowner requested screens from nearby roads, archeological sites as well as riparian areas (see maps),
- Project treatments were changed to be exclusively on-site mastication of the forest fuels,
- Due to the bidding and seasonal issues, the CDF contract was extended spring of 2008,
- Matching requirements from sale of logs and chips were eliminated by CDF due to the weather and the mastication technique (which includes only on-site treatment and no revenue opportunities).

The project was then put out to bids (on line and mail) to meet these new requirements and three responsive bids were received on 12/24/07. The bid *Prospectus* is attached. Pearson Forest Management was the lowest responsive bidder and a contract ($100,000) was executed on 12/31/07 to carry out the work.

The work was fully accomplished by 4/15/08.

**Financial**

**Cost areas**

The costs totaled $121,310.94 on the project or $970.48 per acre treated. Logging contractor costs were $800.00 per acre.

There were four cost areas on this project:

<table>
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<th>Plumas Corporation Salaries and Benefits (including monitoring)</th>
<th>Plumas Corporation General Administration</th>
<th>Registered Professional Forester</th>
<th>Logging Contractor</th>
<th>Total $s</th>
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<td>13.6 %</td>
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Plumas County Fire Safe Council

MASSACK HAZARDOUS FUEL REDUCTION PROJECT

Project Prospectus

The Massack Hazardous Fuel Reduction Project (MHFR) was developed as part of the Plumas County Fire Safe Council's (PFSC) strategy to reduce hazardous fuel conditions surrounding communities at risk. The project is located in the Massack area, T24N, R10E, within Section 14, MDBM, in Plumas County. Access is available from State Highway 70-89 and United States Forest Service Road 25N41. Approximately 125 acres of private property has been identified for pre-commercial thinning and ground fuels reduction. This prospectus is intended to solicit potential contractors interested in performing hazardous fuel reduction tasks to the specifications provided below.

Proposition 40 (California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act of 2002: Sierra Nevada Forest Land and Fuels Management) has provided project funding per Grant Agreement 8CAJ05692.

Project Permit Specifications:
The 2007 California Forest Practice Rules shall govern operations. Compliance will be graded by the specifications below and aided with the use of the U.S. Forest Service General Technical Report PNW 51 and 52 photo series (attached).

Treatment Area Designation:
A Registered Professional Forester (RPF) or supervised designee has identified the treatment area on the ground, flagged with surveyor’s ribbon. Color codes and significance are as follows:

- **Solid Red**: Property boundary, DO NOT CROSS.
- **Blue and White Candy-Striped**: Watercourse Protection Zone, no operations, DO NOT CROSS.
- **Fluorescent Pink stamped “Timber Harvest Boundary”**: Out area, no operations.

The external boundary of the treatment area has been established with red flagging. Operations shall not extend beyond the external boundary.

Treatments:
Hazardous fuel reduction operations will utilize mechanical mastication to remove ladder and surface fuels within the project area. Activities will include mastication of approximately 125 acres of brush and trees to create a fire resilient stand with projected flame lengths of less than four feet for reducing the rate of fire spread, duration, and intensity. The following treatment specifications pertain to the entire treatment area:

- Only trees 10 inches diameter breast height and under may be masticated.
- Residual tree spacing shall be between 15 to 25 feet, consisting primarily of the most fire resistant, healthy and vigorous dominant and co-dominant trees from the pre-harvest stand. Should the final stand appear to be reaching the maximum tree spacing, the contractor shall contact the RPF to discuss potential adjustments to the residual stand.
- The Contractor shall select the highest quality conifer to leave, and then remove all surrounding competing conifers to the designated spacing above. Residual timber (leave trees) shall consist of healthy, vigorous dominant and co-dominant trees with full crowns, having greater than 40% live crown, that are free of defect, and are of the best physical examples of the pre-harvest stand tree species.
* Surface fuels in the harvest area, including logging slash and debris, low brush, and deadwood, that could promote the spread of wildfire, shall also be treated to achieve the goal of an average of four-foot maximum flame length.
* Treatment shall include the removal of all dead, diseased, dying, or suppressed trees 10" DBH or under of any species as described above.
* Conifer retention priority shall be in the following order: sugar pine, ponderosa pine, Douglas-fir, incense-cedar, white fir. Oaks are scheduled for retention.
* Within the project area, mastication operations are prohibited within the Watercourse Protection Zone of all watercourses and all archaeological sites.
* Stocking shall be met by retaining 100 healthy, vigorous dominant trees per acre over 4" in DBH for Site III timberlands or 75 square feet of conifer basal area as determined by the RPF.
* Treatment shall occur on all slopes up to 40%.
* Contractor shall make every effort to reduce masticated material to an average depth of 6 inches or less.

Desired Stand Conditions:
Fuel conditions (surface, ladder, and canopy) should not contribute to initiating or sustaining a crown fire and should have projected flame lengths of less than 4' in the surface fuels. Stand resilience from fire would be high. The resulting stand would appear open and park-like with the primary carrier of the fire being needles and/or grasses. When a fire passes, there may be occasional torching of brush or smaller trees in openings where larger trees don’t exist, but there would generally be a continuous horizontal and vertical break of forest canopy over light surface fuels. There should be less than 20% brush or small trees remaining post-treatment that would contribute to elevating a surface fire into the crowns of the desired leave stand. Occasional patches of small trees and brush may be retained, providing that they do not contribute to the potential of fire laddering into the canopy of the residual stand.

Contract Terms and Timing of Operations:
Operator must be a licensed contractor or California Licensed Timber Operator (LTO), with liability insurance of no less than $1 million, Worker’s Compensation on any and all employees, and liability insurance on each vehicle utilized for the project. Your bid shall provide details regarding your capacity to complete the project on or before February 15, 2008, and the earliest date you can start operations.

Your bid will be reviewed by Registered Professional Forester (RPF) Danielle Banchio, RPF#2808, who will then discuss potential operators with the appropriate PFSC representatives to determine the successful bidder. The RPF and the PFSC reserve the right to reject any or all bids. The winning bidder shall provide details of how they shall conduct operations along with a timeline for operations, to be strictly adhered to.

All operations shall begin by agreement upon contract execution with project completion no later than February 15th, 2008. Operators shall work diligently to achieve total project completion as no extensions of this deadline are possible.

Bid Date
The contractor shall provide a lump-sum bid for this project to North Valley Resource Management, PO Box 53, Taylorsville, CA. 95983 no later than December 24, 2007. Bids can also be faxed to North Valley Resources at (530)284-1801.

Pre-Work Meeting:
Prior to operations, the contractor shall meet with a North Valley Resource Management representative to discuss operations.

Method of Payment:
The contractor may submit an invoice to the Plumas Corporation twice monthly for work completed. Payment shall be made following confirmation of work completion and acceptance of work by the supervising RPF.

MHFR