



SUCCESS STORIES



Western Bark Beetle Initiative Funding

Region 5

Going Beyond Normal Fuels Treatments in the Wildland Urban Interface Improves Tree Vigor and Reduces Susceptibility to Bark Beetles

In 2008-2009, Forest Health Protection's Western Bark Beetle Initiative funding was used to thin approximately 562 acres of densely stocked ponderosa and Jeffrey pine plantations and 1,615 acres of native ponderosa pine stands in the Wildland Urban Interface (WUI) near the communities of Old Station and Johnson Park, Hat Creek Ranger District, Lassen National Forest. The Old Station WUI Vegetation Treatment project was part of a collaborative effort between the community of Old Station, a newly formed Fire Safe Council, Lassen National Forest and Forest Health Protection, to reduce hazardous fuel loads surrounding the residential and recreation area, and to improve conifer resistance to bark beetle attack.

Forests in the Old Station area include native stands of eastside ponderosa pine and a 48 year old "Penny Pines" plantation. The Johnson Park area consists of native stands of ponderosa pine mixed with Oregon white oak. All of these areas were overstocked with Stand Density Index (SDI) values exceeding 390 in many locations. The upper management level SDI in this area for ponderosa pine is 365. Above this, bark beetle outbreaks are



Figure 1. Thinned Penny Pines plantation.

imminent and even at SDI values exceeding 230, significant bark beetle caused tree mortality can be expected.

The Hat Creek Ranger District's management approach for this area went beyond what would be normally required to effectively reduce fuels and limit wildfire intensity. Typical fuels treatments focus on surface and ladder fuels and not a significant reduction in stand density. Although these types of treatments meet fuels objectives, residual stands may still remain overstocked and vulnerable to successful bark beetle attack.

The Old Station WUI Vegetation Treatment project focused on density reduction; thinning stands down to an average SDI value of 160 (Figure 1). Thinning to this level greatly improves growing conditions for the residual trees and will sustain these stands in a healthy condition for a period of at least twenty years.



Figure 2. Delimber cleaning up saw logs for local mill.

Multiple forest products resulted from this project including biomass and saw logs (Fig. 2 & 2). The biomass was removed as wood chips and delivered to a local co-generation plant and the saw logs were delivered to a local mill. Having this infrastructure in place allowed for a very economical project with considerable savings to the US Forest Service. This savings allowed for the original 1,022 acre, two-year target to be increased by 1,155 more acres at a final average cost of \$44 per acre. In all, 15,000 tons of wood fiber was removed from the project area.

In an effort to increase public awareness about forest health issues and highlight the values of this thinning project, District personnel created a public information poster that will be displayed at a scenic overlook adjacent to the project area. This poster will provide detailed information about the need to reduce stand density to minimize bark beetle-caused tree mortality and the goal of restoring eastside pine ecosystems to a more natural and resilient condition.



Figure 3. Grinder creating wood chips for local co-generation plant.