



SUCCESS STORIES



Prevention/Suppression Funding

Region 5

Meeting Multiple Resource Objectives through Forest Thinning Projects

Forest Health Protection prevention and suppression funds were utilized to thin approximately 125 acres of densely stocked forest within the Urban Wildland Intermix Zone around the Warner Valley, Almanor Ranger District, Lassen National Forest. The Warner Road Late Seral Habitat Improvement/Enhancement Project, implemented during the winter of 2004/2005, was designed to protect existing large diameter trees, accelerate the development of additional large trees to improve migratory bird habitat, improve conifer resistance to bark beetle attack, and reduce the risk of catastrophic fire. This project also served as a demonstration to those adjacent private landowners interested in doing similar work on their land.



Figure 1. Before treatment, lodgepole pine was growing in dense thickets beneath old growth Jeffrey and ponderosa pine.



Figure 2. After treatment, stand is now more open, providing growing space for young Jeffrey and ponderosa pine and reducing the chance of stand replacing fire.

Stands in the Warner Valley area contained an overstory of scattered large diameter ponderosa pine, Jeffrey pine, and white fir and an overstocked understory dominated by white fir and lodgepole pine saplings and poles (Figures 1 & 3). Disease and insect activity, primarily Jeffrey and mountain pine beetle, and lodgepole western gall rust were evident. The white fir and lodgepole pine, through competition and overstocking had made the residual pine more susceptible to insect attack. Additionally, ladder fuels created by dense thickets of understory trees combined with heavy fuel loadings had put all overstory conifers at risk of loss to stand replacing wildfire.

Most of the area (100 acres) was treated mechanically at a cost of \$300/acre. The rest was hand thinned and piled (25 acres) at a cost of \$450/acre. All designated submerchantable and existing down material was removed by a contractor. All designated lodgepole pine saw timber was thinned, delimbed, and decked by the contractor, and then made available to the public for fuel wood. To help defray the service contract costs, all other designated conifer saw logs were sold to and removed by the contractor. Following the treatment, the stands contained an average of 150 -175 square feet of uneven-aged conifers dominated by large diameter ponderosa and Jeffrey pine. Ladder fuels are minimal and understory fuels now average 10-15 tons per acre (Figures 2 & 4). This thinning project was a successful first step in meeting the long-term objective for this area, which is to create uneven-aged, healthy stands of predominantly larger diameter mixed conifer trees. Additionally, the stands will maintain a crown closure of 50%, fuel loadings of 10-15 tons per acre, and provide a safe location to make a stand against wildfires for the community of Warner Valley.



Figure 3. Before treatment, mixed conifer stands were overstocked and highly susceptible to bark beetle attacks.



Figure 4. After treatment, many small and medium diameter trees (all < 24" dbh) have been removed to open up the stand.