



SUCCESS STORIES



Prevention/Suppression Funding

Region 5

Forest Thinning Protects Communities and Critical Wildlife Habitat

Forest Health Protection prevention funds were utilized to thin approximately 592 acres of densely stocked ponderosa and Jeffrey pine forest within the Urban Wildland Interface Zone next to Eagle Lake and the community of Spalding, Eagle Lake Ranger District, Lassen National Forest. The Spalding Wildland Urban Interface Project (Figure 1) was part of a collaborative effort between the Spalding community, Lassen National Forest and Forest Health Protection to reduce hazardous fuel loads surrounding this residential and recreation area and to improve and enhance the existing bald eagle nesting habitat found along the shore of Eagle Lake by accelerating the development of large trees and improving conifer resistance to bark beetle attack.



Stands in the Spalding area contained an overstory of scattered, large diameter ponderosa and Jeffrey pine with an overstocked understory of sapling and pole-sized pines. Stand densities ranged from 89 to 176 square feet/acre. Jeffrey and western pine beetle activity was reducing the number of large diameter trees which are essential for bald eagle nesting and roosting habitat. Additionally, ladder fuels created by the dense thickets of understory trees and an accumulation of coarse woody debris, fine surface litter and duff had put the entire area at risk to a stand replacing wildfire. Historically, these

stands would have experienced frequent low intensity wildfires that would have kept understory trees and fuels at a minimum. Natural fire has now been excluded from the project area for well over ninety years, resulting in as many as 12 missed fire cycles.

The Forest Health Protection funded project consisted of thinning overstocked stands on public lands surrounding hundreds of private residences and four active bald eagle nests. These treatments took a “thin from below” approach to ensure that the largest trees would remain post-treatment. Following the treatment in 2005/2006, at a cost of \$190/acre, the stands contained an average of 60 - 90 square feet of basal area, post-treatment ladder fuels were minimal and understory fuels averaged 2-3 tons per acre (Figures 2 & 3). It is estimated that these treatments have left approximately 40 to 100 trees per acre at a variable spacing that focused on giving individual large diameter trees additional growing space and retaining existing clumps of large trees regardless of spacing. These stocking densities will likely sustain stands in a healthy condition for a period of at least twenty years.

This project has resulted in improved forest health and resiliency by reducing stocking levels in stands that were susceptible to significant impacts from bark beetles and stand replacing wildfire. Post-treatment stand densities will now sustain and enhance individual tree health and vigor well into the future, and, combined with the reduction in surface and ladder fuels, will significantly reduce wildfire intensity. Residual stand conditions will now allow the use of prescribed fire to maintain minimal fuel loads while providing this landscape the natural disturbance needed to function as a fire-dependant ecosystem.

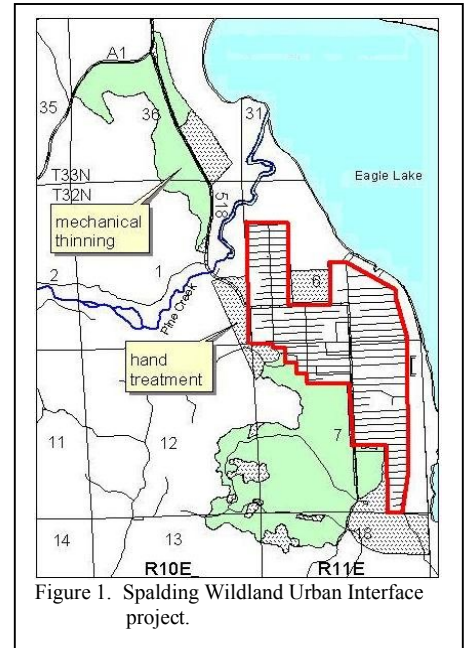


Figure 1. Spalding Wildland Urban Interface project.



Figure 2. Before treatment, dense pine stands were highly susceptible to bark beetle attacks and catastrophic wildfire.



Figure 3. After treatment, thinned stands are much more resilient to the affects of bark beetles and wildfire.