

Forest Intensive Vegetation Management Co-op Proposal

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Title: Long-term effects of site establishment method and level of subsequent release on three conifer species

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Objectives: Evaluate survival and growth of ponderosa pine, sugar pine, and white fir in response to three types of site preparation and three levels of subsequent selective shrub control.

Procedures: In 1978, a field study was initiated on a heavily infested brushfield located at 5000 ft. on Tahoe National Forest, west of Foresthill, California. The site was cleared for conifer planting by a rotary masticator, fire, or a brushrake, with each treatment replicated three times. Within each of these nine treatment plots, three species of conifers were planted - ponderosa pine, white fir, and sugar pine. Each of the nine plots were further subdivided into three levels of subsequent shrub control - a single herbicide release treatment one year after conifer planting, two release treatments at one and two years after conifer planting, and no release after conifer planting. Tree survival and growth were measured from 1978 to 1983 (Lanini and Radosevich 1986). In a preliminary visit in 1999, it was determined that tree survival and growth were vastly different among treatments. This site represents a unique opportunity to measure the long-term impacts of different site preparation methods in combination with subsequent release on a single site.

We propose to make measurements of tree survival, diameter and height on all trees in the summer of 2000. This will allow evaluation of the long-term effects of site preparation and subsequent release. We will also measure brush volume and species composition to further assess the impacts of treatments. Finally, we will also establish the original plot borders and permanently record the coordinates using a GPS unit. This will allow the site and individual plots to be easily identified at any point in the future and which will facilitate use for tours, classes, etc.

Literature Cited:

Lanini, W.T. and S.R. Radosevich. 1986. Response of Three Conifer Species to Site Preparation and Shrub Control. *Forest Sci.* 32:61-77

Budget : \$5000.00

The budget will be used to hire a student during the summer to aid in making measurements (\$4000) and for travel to the site (16 trips X 200 miles X 0.32/mile @ \$1000).