United States Department of Agriculture

Forest Service

Northern California Shared Service Area

2400 Washington Avenue
Redding, CA 96001
(530) 244-2978
(530) 242-2237 – TDD
http://www.r5.fs.fed.us/shastatrinity

File Code: 3420 **Date:** January 27, 2000
Route To:

Subject: Hazard Tree Conditions Near the Deer Mountain Snowmobile Park (Pomeroy TS Area), Goosenest RD (FPM Report N00-3)

To: Forest Supervisor, Klamath National Forest

On December 1, 1999 and January 13, 2000, Dave Schultz (Entomologist) and I accompanied Roger Siemers to the Deer Mountain Road and Snowmobile Park. On January 13, we were accompanied by Lew Erickson, Jerry Mosier, Jim Stout and Dale Oberlag. The purpose of the trips was to assess hazard tree conditions and develop management alternatives to reduce potential tree failures and improve tree health, while retaining scenic and wildlife values.

On our first visit, we initially concentrated our efforts on the two mile long segment of the Deer Mountain road, west of the snowmobile trailhead. Because we were mainly concerned with trees that could fall into the roadway, we looked at insect, disease and defect conditions within 100 feet of the road. Vegetation along this corridor consists mainly of mixed ages of ponderosa pine and white fir, with lesser numbers of lodgepole pine and juniper. A number of kinds of tree defects were identified. In many of the older the white firs, bole decay associated with old white fir dwarf mistletoe infections (caused by the parasitic flowering plant, *Arceuthobium abietinum*, f. sp. *concoloris)* was noted. Annosus root disease centers (caused by the fungus, *Heterobasidion annosum)* are scattered throughout the area, which can cause butt rot in white fir. Scattered white fir dwarf mistletoe infection centers were identified in the white firs, along with occasional Elytroderma needle blight infections (caused by the fungus, *Elytroderma deformans)* in the ponderosa pine. Lightening damage, dead and forked tops were also noted in individuals of all species. However, in spite of the defects that were identified, only a handful of trees are immediately hazardous and should be removed. These consist of highly defective or decayed trees that are within falling distance of the road. Many other defective trees and tree parts are also present, but they are not large enough to fall into the road, or the defects are not severe enough to warrant immediate removal. This latter category includes most trees with dwarf mistletoe and Elytroderma brooms, most trees with forked tops (except for those in lodgepole pine) and most with spike tops and lightening scars. It must also be kept in mind that since the road to the snowmobile park presents only moving, transient targets, the likelihood that a falling tree would hit something is much less than it is near permanent structures or parked vehicles.

We next visited the area around the snowmobile area parking lot. Again, little immediate hazard was noted. Two lodgepole pines near the restroom, one with a broken top and one twisted tree with likely decay underneath should probably be removed. We next visited a portion of the snowmobile trail east of the parking area. Four white firs were noted alongside a major intersection that should be removed. One has several large dwarf mistletoe brooms that could fall into the road. Another has a hollow, decayed base, and another has a large basal scar that is likely decayed underneath. The last tree has a forked top that could easily fall into the road. Evidence that these firs are alongside an annosus root disease center (hollow stumps and dead

seedlings) was also noted.

Although little immediate tree hazard is present in the Pomeroy area, in general the stands are overstocked and declining. Flattened tops and reduced tree rings on tree cores taken with an increment borer indicate that overall tree growth is slowing. This condition is particularly noticeable in the white firs, which generally have shorter life span and are more susceptible to insects and diseases. Unless something is done, additional trees (mostly white firs) will continue to die and need immediate removal as hazard trees. Lack of active management will mean that the diseases and insects will select the trees that will remain, and overall scenic, forest health and wildlife values will decline. Application of a general thinning in which the largest, healthiest, least defective and least insect and disease-prone trees are retained would do much to achieve long-term stand resilience and reduce the need to continually enter the area to remove new hazard trees. This approach would essentially remove a large number of the white firs. Because the time is coming where the leave trees will no longer be able to respond to the thinning, the sooner this treatment is applied, the better. Target spacing would be one in which the crowns of adjacent trees do not touch, though some variability may be made to better achieve scenic objectives. In addition, from the standpoint of diseases and insects, cut trees may be left on the ground to achieve coarse woody debris/wildlife values.

During the second trip to the area, the group developed four management alternatives that integrate various degrees of hazard tree, forest health, visual and wildlife concerns. Since hazard tree abatement is a national Forest Service policy, removal of "immediate need" hazard trees will take place regardless of the alternative that is chosen. The alternatives are as follows:

1. Apply a generic thinning prescription (16-20' spacing).
2. Apply a thin that maintains the healthiest trees.
3. Apply a thin that maintains the large white firs.
4. Apply Alternative #2, but maintain a limited number of large white fir.

Alternative #1 would provide increased vigor to many of the trees in the area, but does little to address specific hazard, disease or insect concerns. Alternative #2 is essentially the "forest health" prescription described above. While at the site, the group discussed the need to retain some of the large white fir for scenic and wildlife values. Alternative #3 carries this idea to the extreme, and while it provides for immediate scenic and wildlife needs, it is likely that such a prescription would result in the creation of many hazard trees and non-vegetated areas in the future. Alternative #4 incorporates the best elements of Alternatives 2 and 3 by providing a thin that will enhance present and future tree vigor and resiliency in most areas, while providing the immediate scenic and wildlife benefits that the older white firs have to offer. Because this approach provides a balance of benefits, the group agreed that this would be the best approach to take. However, from the standpoint of obtaining the maximum benefit from the thinning, it is important that only a limited number of the "best of the best" white firs be retained. In particular, no large white firs should be retained in or around annosus root disease centers, since these individuals are much more likely to die in the near future and leave a hole in the stand. Wherever possible, white firs that are infected with dwarf mistletoe should also not be retained, because they are less vigorous and will also continue to infect nearby firs. In general, the fewer the number of large white firs that are retained, the fewer insect, disease and hazard problems will arise to be addressed in the future.

If you have any questions or comments on the contents of this report, feel free to contact me here in Redding (530-242-2336). As Dave and I said previously, we are available to assist with choosing which white firs should be retained, and are available to help in any other way that is needed.

/s/ Pete Angwin
Plant Pathologist
Northern California Shared Service Area

cc: tfarmer/r5,klamath
rsiemers/r5,klamath
doberlag/r5,klamath
lerikson/r5,klamath
jperkins/r5,klamath
jstout/r5,klamath
jmosier/r5,klamath
rsvilich/r5,klamath