Management of Giant Sequoia on Mountain Home Demonstration State Forest

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Mountain Home Demonstration State Forest is a 4,800 acre tract of forest land in Tulare County managed by the California Department of Forestry and Fire Protection. The State Forest lies within the Tule River watershed some 22 air miles northeast of Porterville. Elevations range from 4,500 feet to 7,500 feet. Vegetation on the forest is dominated by a mixed-conifer forest with over 5,000 individual old-growth giant sequoia trees.

History

The Mountain Home Tract has a long history of timber and recreational use. Lumbering began on Mountain Home in 1885 with the construction of several sawmills. Many giant sequoias were logged from the Mountain Home area in the period from 1885 through 1905.

Recreational use of the Mountain Home area began at the same time as the lumbering activity. Mountain Home was a popular destination for people trying to escape the heat of the San Joaquin Valley in the summer. Several resorts and a hotel were established at Mountain Home around the turn of the century.

In the early 1940's, old-growth giant sequoias were again being cut at rapid rate in the southern Sierra Nevada. In the Visalia-Fresno area, the Native Sons and Daughters of the Golden West made a special project of saving the mammoth trees of the Mountain Home Tract. As a result of their efforts, the State of California purchased the Mountain Home Tract in 1946 from the Michigan Trust Company and it became a State Forest.

Authority and Statutes

The statute under which Mountain Home Demonstration State Forest is managed is found in Section 4658 of the Public Resources Code. It reads "The Mountain Home Tract Forest in Tulare County shall be developed and maintained, pursuant to this chapter, as a multiple-use forest, primarily for public hunting, fishing, and recreation." Policy direction which is provided by the State Board of Forestry, states that "The primary purpose of the State Forest program is to conduct innovative demonstrations, experiments, and education in forest management. All State Forest land should serve this purpose in some way." In addition, "timber production will be subordinate to recreation" on Mountain Home Demonstration State Forest.

The 1986 Management Plan for the State Forest adopted by the State Board of Forestry provides for the following management guidelines for giant sequoia: old-growth giant sequoias will be protected in all management activities and young-growth giant sequoia will be considered as replacements for the old-growth component with selected trees allowed to grow into the old-growth class. These young stands will also be considered as a marketable and valuable timber resource and should be managed as a commercial species. Harvesting of the young stands should be done in conjunction with studies to determine the best management strategies for the species.

Recreation

The extensive groves of old-growth giant sequoias are a major attractive feature of Mountain Home Demonstration State Forest. Many visitors come specifically to the State Forest to view these magnificent trees. Visitor use on the State Forest in 1991 totaled over 78,000 visitor days. The State has developed 96 campsites in six campgrounds on the forest. The decision has been made to construct and maintain recreational facilities in a rustic condition and discourage commercial recreational development. In addition, management activities undertaken on the forest are specifically tailored to be compatible with the recreational use of the forest.

Experiments and Demonstrations

One of the primary purposes of the State Forest is to conduct experiments and demonstrations in forest management. Much of the research on Mountain Home has been focused on giant sequoia. Research on giant sequoias has been conducted under contract by the University of California, Berkeley, California Polytechnic State University at San Luis Obispo, and the University of Arizona Tree Ring Laboratory. Experiments have also been conducted by the State Forest staff.

Major experimental work has included management strategies for young-growth giant sequoia, young-growth giant sequoia volume tables, regeneration and response of giant sequoia to different management activities, fire history, and growth and yield of young-growth stands.

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1An abbreviated version of this paper was presented at the Symposium on Giant Sequoia: Their Place in the Ecosystem and Society, June 23-25, 1992, Visalia, California.
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Results of experimental work is published in California Forestry Notes and in university and experiment station publications. A periodic newsletter is also published which describes the various management activities undertaken on the State Forest.

**Timber Management**

The State has been active in timber management on Mountain Home since its acquisition. Commercial species on the forest include ponderosa pine, sugar pine, white fir, incense cedar, and young-growth giant sequoia. Standing old-growth giant sequoia are protected and not considered a commercial species. Estimated volume of timber on the forest, excluding old-growth giant sequoia, totals over 110 million board feet. Total growth is over 2 million board feet per year.

Silvicultural systems on the State Forest are predominantly single tree and group selection. This selective cutting has been used around and within giant sequoia groves. The objectives of this harvesting has been the removal of overmature pine, fir, and cedar while encouraging natural reproduction of giant sequoia and other species. The soil disturbance that results from timber harvesting activities provides an ideal seedbed for giant sequoia reproduction.

Excellent reproduction of giant sequoia has occurred after timber harvesting in most areas. Tree planting of giant sequoia and other species is also undertaken to insure reproduction. An additional benefit of timber management has been the improved vistas of the old-growth trees. The giant sequoias are more visible and impressive in areas where selective removal of the other species has occurred.

Extensive stands of young-growth giant sequoias also exist on Mountain Home. The primary goal in the management of these stands is the perpetuation of selected trees into the old-growth class. We are experimenting with thinning these dense stands to increase the growth on selected leave trees. Prescribed fire has also been used to reduce the fuel loading and protect the stands from a catastrophic wildfire.

**The Future**

Mountain Home will continue to be managed as a working forest, outdoor laboratory and an area for public recreation and enjoyment. We will try to broaden our understanding of giant sequoia through experimental work and observations following management activities. Our primary objective for the future will be to protect and insure the continuation of the giant sequoia as a part of the forest.