



Research Brief for Resource Managers

Release:

June 2013

Contact:

Jon E. Keeley
Liz van Mantgem
Hugh D. Safford

Phone:

(559) 565-3170
(707) 562-8934

Email:

jon_keeley@usgs.gov
evanmantgem@usgs.gov
hughsafford@fs.fed.us

Central and Southern California Team, USGS Sequoia and Kings Canyon Field Station, Three Rivers, CA 93271
Sierra Nevada Team, One Shields Avenue, Davis, CA 95616

Show Finds Inconsistencies Among Light Burn Plans

Show, S. B. 1920. Forest fire protection in California. *The Timberman* 21 (3): 37, 88-90.

In 1920, the two opposing forest protection theories were fire prevention and “light burning,” also known as “controlled burning.” Fire prevention was the publicly popular policy of the Forest Service defended by Stuart Show (pronounced like ‘how’), who depicted light burning advocates as unorganized and in disagreement with one other.

Show demonstrated that three different light burning plans disagreed on whether fire damaged timber or not. The 1st plan was by T. B. Walker and his was the only one to recognize the damage that fire was supposed to cause timber. Walker’s plan incorporated the preparation of the forest for light burning by protecting trees individually, raking the litter away from the base of each tree, cutting down the smaller trees and brush ahead of time, and filling in fire scars with dirt and rocks. The 2nd plan, by S.E. White, required no forest preparation because he didn’t believe mature trees were damaged by light fires. The whole forest was supposed to be burned at once, and the main purpose of the fire was to kill beetles. The 3rd plan, by J.A. Kitts, also assumed no damage by fire and required a 5-year rotation for each forested area, starting with standing snags in the winter, then windfalls and debris.

Show listed 15 pro-light burning arguments and, by the end of this paper, considered them all

Management Implications

- Show argues that systematically repeated, light fires are more damaging than the occasional conflagration.
- Show insists that by essentially removing fire from forests and shrublands, fire protection is cheaper and better supported than any burn plan.

disproved. Specifically, he argued that *conflagrations* should not be feared because in reality, they were much less harmful than systematic, repeated burning, and in truth, they had always occurred. With repeated burning, trees were slowly damaged over time and brush was encouraged. Rather than resolving insect infestations, he insisted that light burning attracted insects and caused beetle infestations.

To quantify the success of the fire suppression program, Show calculated that the Forest Service had increased the fire return interval from every 8 years to every 160 years since 1908, at just a fraction of the cost of light burning methods. At the time, this record alone may have adequately justified the continuation of USFS fire suppression policies for most people.