

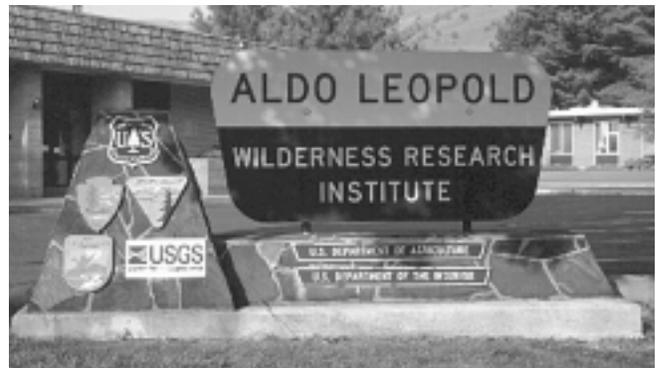
Natural Fire Regimes in Wilderness

BY CAROL MILLER

All four federal wilderness management agencies (National Park Service, U.S. Forest Service, Fish and Wildlife Service, Bureau of Land Management) formally recognize the importance of fire as a natural ecological process and the desirability of restoring the historical role of fire to wilderness ecosystems (Parsons and Landres 1998). Since the 1970s, well over 1 million acres (405,000 ha) have been allowed to burn on federal lands—the vast majority within designated wilderness or similarly managed national parks.

However, fire suppression has been and continues to be the dominant fire management strategy, even within wilderness. Suppression of lightning ignitions is clearly “trammeling” and therefore runs counter to the intent of The Wilderness Act. Indeed, in many areas suppression has resulted in conditions where the “imprint of man’s work” is quite noticeable in large-scale changes to vegetation and historically unprecedented accumulations of dead fuel (e.g., Arno et al. 1997; Covington and Moore 1994). Fire regimes and vegetation have been significantly altered from their historical ranges on approximately 20% of wilderness acreage outside of Alaska and Hawaii (Schmidt et al. 2002). These conditions could very well lead to fire behavior and fire effects that are arguably “unnatural.”

Wilderness fire managers face unique challenges and opportunities for addressing the effects of fire suppression and the conditions that have resulted from decades of fire exclusion. Manipulative methods that could help reverse the effects of fire suppression (e.g., prescribed fire, thinning, and other mechanical techniques) in designated wilderness are limited by legal and policy constraints, as well as public acceptance. Further, reduced access to the interiors of these areas would severely limit the ability to apply such labor-intensive treatments. On the other hand,



wilderness also provides unique opportunities for fire managers. Wilderness and other unroaded areas hold the greatest potential for using lightning-ignited fires as a strategy for thinning forests and reducing accumulated dead wood and litter. At the same time, allowing lightning ignitions to burn can help satisfy legal and policy mandates to restore natural or historical fire regimes and ecosystem conditions.

Underlying the current fire policies that emphasize the use of natural ignitions is the assumption that lightning-caused fires can indeed restore or maintain fire regimes. To date, this assumption has not been tested. In some wilderness areas, the current condition of vegetation and accumulation of dead fuels may preclude allowing fires to burn because the fire would pose an excessive threat to natural resource values within the wilderness and/or to social values in the adjacent wildland urban interface (WUI). In some areas, particularly small wilderness areas with extensive WUI areas, these approaches may never be feasible. Even in larger wilderness areas, there will always be an argument to suppress some natural ignitions under certain conditions because of these risks. In addition, wilderness does not exist in isolation from surrounding lands. Fires

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coauthored by Hendee, George H. Stankey, and Robert C. Lucas, was sponsored by the Forest Service and published by the Government Printing Office. Fulcrum Publishing of Golden, Colorado, produced both the second (1990) and this third edition. Vance G. Martin, president of the International Wilderness Leadership Foundation, wrote both the publisher's Preface and (with Alan Watson) an encouraging chapter on international wilderness. No stone is left unturned in the pursuit of an encyclopedic review of the topic of wilderness management.

For the teacher, study questions and references are offered at the end

of each chapter. I can see this book being effectively used as the textbook for a 10-week college course or a weeklong in-service training session for those who see wilderness as either their vocation or avocation (e.g., trail maintenance volunteers). For resource management professionals and laypersons alike, it paints a comprehensive picture of the history of wilderness designations, the complexities of wilderness management in the face of an expanding human population, and what the future may hold in this regard. I salute Vance Martin and the International Wilderness Leadership Foundation for

sponsoring the thorough updating and republishing of this unique reference work on the state of the planet's wilderness resources. ♪

Reviewed by RUPERT CUTLER, who currently resides in Roanoke, Virginia, and was elected to the Roanoke City Council in 2002. As the assistant secretary of agriculture for conservation, research, and education in the administration of President Jimmy Carter, Dr. Cutler provided wilderness management policy direction and initiated the RARE II roadless area review process at hearings on the Endangered American Wilderness Act of 1978. E-mail: mrcutler@aol.com.

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that start in surrounding areas and otherwise would spread into wilderness are usually suppressed, further limiting the amount of natural fire that occurs within wilderness.

Wilderness fire managers strive to restore or maintain fire as a natural process and they need to know whether they can actually accomplish this objective. We are helping wilderness managers assess whether lightning-caused fires can indeed restore ecosystem conditions and fire regimes in wilderness. In those areas where lightning-caused fires can be allowed to burn, we are developing computer tools that will allow managers to evaluate if there are enough

ignitions for restoring the natural or historical fire regime. In addition, we are attempting to quantify the effect that suppression activities outside of wilderness can have on efforts to maintain natural fire regimes inside of wilderness. ♪

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