

# FIRE PLANNING FOR PARK LANDSCAPES: AN ECOLOGICAL APPROACH TO MANAGING FUELS AND FIRE REGIMES

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## **ABSTRACT**

Changes in climate, alteration in ignition patterns, and past fire management activities have all resulted in significant changes in the pattern and structure of vegetation within national park landscapes. The National Park Service is faced with the difficult challenge of reducing hazardous fuels while maintaining high level of ecological integrity and aesthetic appeal. Meeting this complex composite of goals requires a structured approach to planning. Ecological modeling efforts and fuels mapping approaches are examined for four parks in California. These tools are combined with traditional approaches to defining desired future conditions. The resulting objects are applied to an ecologically partitioned landscape, through both restoration and maintenance phases of fire management. The resulting implementation models combine both deterministic and stochastic elements of varied fire regimes. The planning approach defined for these parks may serve as a useful example for other western landscapes where the reduction in fire hazard must be achieved while minimizing impacts to ecological and social values.

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