

Wildfires in the southern Great Plains and novel approaches to fuels management

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The unprecedented pulse of wildfire activity at the wildland-urban interface in the southern Great Plains requires innovative approaches to the management of volatile fuels that have arisen as a result of long-standing changes to disturbance dynamics in rangeland ecosystems. In recent years, the amount of area burned and number of structures lost to wildfires in this region has far exceeded rates from previous decades. Multiple interacting feedbacks have led to this pulse of wildfire activity. Legislation restricting the occurrence of prescribed fire, the alteration of human ignition sources, and modifications to herbivore distributions and subsequent reductions in herbaceous biomass and continuity have contributed to uninhibited woody plant encroachment and the widespread conversion of rangelands to high density *Juniperus* woodlands. Providing solutions in response to these emerging fuels and wildfire problems represents a major challenge for today's rangeland managers. I introduce a novel approach to the reduction of volatile fuels that are based on experimental fires conducted during periods of high wildfire activity. I demonstrate how landscapes can be designed to control the spread of wildfires in southern rangelands and highlight local land ownerships that have begun to use this approach as a as a fuels management strategy in areas dominated by *Juniperus* species.