

Title of Study: Predicting public acceptance of fuel management at the Lake States forest interface

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Findings

For an audience without specialized knowledge of your discipline, describe in 500 words or less: This study examined beliefs, attitudes, and intent to support three fuel management approaches – prescribed burning, mechanical fuel reduction, and defensible space ordinances, in three wildland urban interface (WUI) areas in the U.S, the areas where homes and other buildings meet or intermingle with undeveloped wildland creating a fuel environment in which fire can move readily between buildings and vegetation fuels. Besides the a priori factors prescribed by the theory, the influence of three additional explanatory variables was assessed: personal importance, trust, and past experience. Despite significant differences in the ratings of these explanatory variables among study sites, personal importance of a fuel management approach was consistently found to be significantly related to attitude toward that approach; and trust in an agencies' implementation of that approach was consistently found to be significantly related to intent to approve the use of that approach. Past experience was not a significant predictor of attitudes toward fuel management. Implications for wildland resource and fire managers are discussed.

What was the issue or problem you were trying to address?

In fire-prone areas of the U.S., land managers encounter varying levels of public support for forest fuels management strategies (e.g., prescribed fire). This research examines homeowners' attitudes toward and approval of using fuel management approaches in WUI areas: specifically, prescribed burning, mechanical fuel reduction and defensible space ordinances. We sought to test the strength of beliefs and attitudes in predicting support for implementing each fuel management approach. We explored relationships among beliefs held about each fuel management approach, attitude toward these approaches, and intention to approve of the implementation of each approach.

Why is this issue/problem important? (e.g., put the problem in a broader context)

In some WUI areas, support for the land manager's preferred approach to fuels management is so low that it forestalls prudent risk reduction actions. Understanding the explanatory factors underlying expressed levels of support for fuels management strategies will help public land management agencies develop meaningful partnerships and public participation strategies with affected publics.

What did you discover? What are the implications or significance of the findings to managers, decision makers, and/or the general public?

Results of this study provide guidance for natural resource managers and community-based groups working to mitigate the negative effects of wildland fire on quality of life, personal property investment, and government budgets. First, managers should target salient beliefs, particularly those related to reducing the cost of firefighting. Homeowners believe that each of the fuels management approaches (FMAs) – prescribed burning, mechanical treatment, and defensible space ordinances – could lead to reduced firefighting costs. Where such cost savings are achievable, this economic message should be integrated into the rationale used by local, state, and federal resource managers to reduce fuel loading in WUI areas. Second, two factors are particularly relevant in predicting strong approval of FMAs. The importance of a FMA to a homeowner and trust in an agency implementing the FMA have potential to improve attitudes or approval of resource manager fuel reduction efforts. Homeowners who personalize or make these FMAs central to their living in the WUI are likely to have more positive attitudes. The findings for defensible space, an approach which requires active homeowner participation, are particularly compelling in terms of the strong positive relationship between personal relevance and positive attitudes. Trust in FMA implementation centers on homeowners' thinking that the government makes good decisions when selecting FMAs. Finally, this study shows that homeowners living in WUI areas are generally supportive of the three fuel management approaches studied, though each FMA is viewed differently and the ranking of FMAs varies regionally.