



# Prescribed fire: What influences public approval?

[Sarah M. McCaffrey In: Dickinson, Matthew B., ed. 2006. Fire in eastern oak forests: delivering science to land managers, proceedings of a conference; 2005 November 15-17; Columbus, OH. Gen. Tech. Rep. NRS-P-1. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 192-198.](#)

## MANAGEMENT IMPLICATIONS

- Public support of prescribed fire was strongly shaped by the following variables: familiarity with the practice, trust in land management agencies, and concerns about smoke and fire control
- Interaction between agency personnel and the public was the most helpful way to build acceptance amongst those surveyed
- Agency efforts to increase public familiarity with prescribed fire as a management tool may increase public approval

In this paper, Sarah McCaffrey reviewed several studies that investigated public perceptions of prescribed fire and identified variables that influenced public approval. Results from these studies were consistent across the regions studied, despite some local variation. Overall, approval of prescribed fire use was high (80-90%). The variables that had the most influence on approval were trust, knowledge, and concerns about smoke and fire control.

Trust in agencies and the land managers conducting prescribed burns was consistently an important variable. One study found trust to be a significant predictor of approval in all four sites studied, with the largest effect in Missouri. Views of land management agency competence (also a form of trust) was shown to be

positively associated with higher acceptance of prescribed fire. Interestingly, in Utah, trust of agencies was lower in rural areas compared to urban areas and decreased after an escaped prescribed burn.

Participant knowledge of and familiarity with prescribed fire was another variable consistently associated with higher acceptance levels across all studies and regions. Older studies not considered in this review corroborated this finding. In one Massachusetts study, respondents with a higher knowledge of prescribed fire were less concerned about smoke, aesthetics, potential effects on wildlife, and use near homes. In another study, respondents in Minnesota were notably more educated about the effects of prescribed fire and more accepting of the practice, while those from Michigan were the least informed and supportive. One study found that understanding the positive effects of prescribed fire relating to restoration and wildlife positively influenced public opinion, although the effect varied by state.

Evidence was also found that personal knowledge of prescribed fire influenced attitudes about smoke; the more familiar participants were with the ecological benefits of prescribed fire, the more they tolerated smoke.

Some 30% of surveyed respondents considered smoke to be a health issue; this made prescribed fire a particularly salient issue to this group. However, one study found that beliefs about smoke were significantly related to approval in only one of the four states studied. Participants in another study suggested that having advanced warning would allow those who are sensitive to smoke (e.g., asthma sufferers) to make the necessary preparations.

Another common variable that affected public acceptance was concern of escaped fires. In one study reviewed, authors found that concern over prescribed fires escaping negatively affected public perception of prescribed fire. Escaped fires tend to garner public attention more than successful prescribed burns, and likely negatively



*Members of the public discuss prescribed fire options with an employee of the United States Forest Service in Michigan. Photo courtesy of Sarah M. McCaffrey.*



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sway public opinion. In focus groups led by the author, participants suggested that land management agencies should focus more effort on showcasing successful prescribed burns and that increased awareness of these successes would lead to higher acceptance. Other variables that may influence public opinion of prescribed fire were also tested in several studies, including past fire experience, wildlife concerns, and aesthetic preferences. These variables were not consistently found to

be significant predictors of public opinion across different regions.

While these results were telling about public perceptions of prescribed fire, it is important for managers to consider local variations, avoid preconceived notions, and to remember that understanding is a two-way street. Local history and culture does affect public beliefs about the use of fire. It is also important to avoid assumptions of public opinion based on demographic characteristics and location.

Lastly, interaction with agency personnel was the most helpful way to build acceptance amongst participants. As the use of prescribed fire increases, it is essential for agencies to involve the public in management planning. This practice builds trust and increases public knowledge and awareness of prescribed fire, and, ultimately, may influence public approval.

## FOR FURTHER READING

[McCaffrey, S.M. 2006. The public and wildland fire management: social science findings for managers. Gen. Tech. Rep. NRS-1. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 202 p.](#)

