



Research Brief for Resource Managers

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What limits flexible fire management—public or agency pressure?

Steelman, T.A., and McCaffrey, S.M. 2011. What is limiting more flexible fire management—public or agency pressure? Journal of Forestry. 109(8): 454-461. <http://cnr.ncsu.edu/blogs/firechasers/files/2012/01/What-Is-Limiting-More-Flexible-Fire-Management-2.pdf>

Fire management is dictated by community and political pressure—at least that's what conventional wisdom in the fire community tells us. However, few studies have investigated the validity of that axiom, and little is known about the relative influence of internal and external pressures on fire management decisions. In this era of changing climates, intense fire activity, and reduced budgets, flexible fire management may be the most prudent approach, and it is important to understand the source of and context for limitations on more flexible strategies.

Background and Methods

This study investigated internal and external influences on fire management through case studies of two wildfires in the summer of 2008.

The paper describes shifts over time in policy-level directives from strict suppression to use of a broader range of tools that recognize fire as an ecosystem component. However, it also points out that despite these shifts, there remains a continued emphasis on suppression.

Understanding internal (e.g., culture, agency attitudes, planning documents) and external (e.g., political pressure, community expectations) factors at the local level may be necessary to more fully appreciate the challenges to more flexible fire management.

Management Implications

- Both internal and external factors can influence fire management, but internal factors may be most important for facilitating or hindering flexibility.
- Internal guiding documents need to be predisposed to flexible response.
- Community and political pressures are less influential than conventional wisdom tells us, because public views are not monolithic and can be changed.
- Agency attitudes are changing to be more supportive of flexible fire management.
- Greater congruence between internal documents and public and political beliefs can lead to more flexible responses.

In the summer of 2008, researchers visited two wildfires: the Gap Fire in southern California, which was managed under a full suppression strategy, and the Gunbarrel Fire in Wyoming, which initially used a wildland fire use strategy and was later switched to a monitor, confine, and contain strategy.

The Gap Fire took place in an urban-interface area that was densely populated; approximately 3,000 homes were at risk, at an estimated value of over \$2 billion. Suppression costs totaled over \$16 million, and no homes were lost. The Gunbarrel Fire took place on national forest lands near Yellowstone National Park. Seven outbuildings were lost, 245 houses were threatened, and suppression cost just over \$9 million.

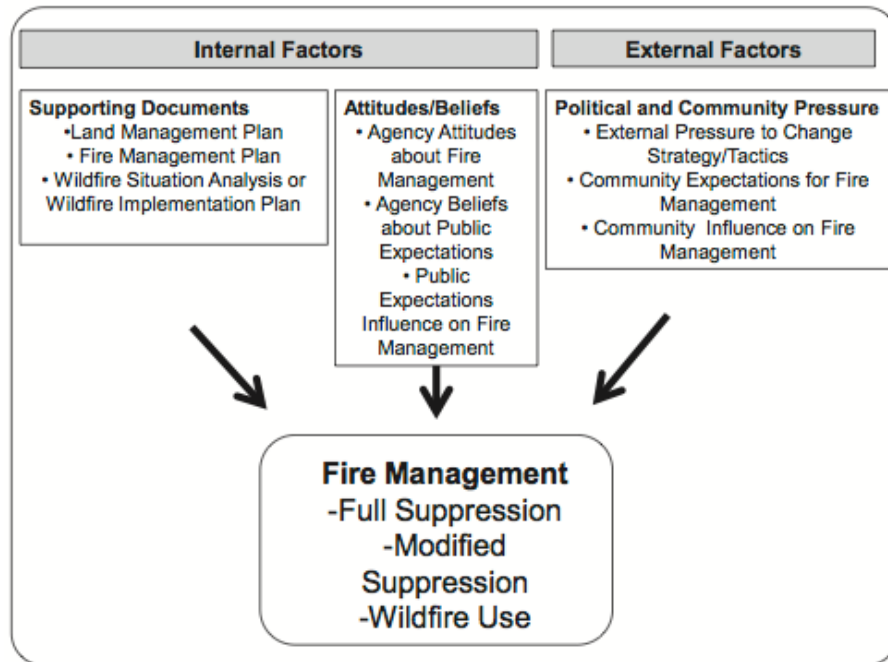


Figure 1. Conceptual framework for understanding internal and external factors in fire management.

Interviews were conducted with federal agency staff and community members at each fire. Community members were divided into two groups: those that had a formal role in the fires (e.g., emergency personnel), and those who had less formal roles (e.g., key community members). Interviews were transcribed, and data were coded and analyzed for key themes. The researchers also reviewed key planning documents for each management area and fire.

Results: Gap Fire

Planning documents were a key constraint on management actions during the Gap Fire. The Land Management Plan (LMP) and Fire Management Plan (FMP) only allowed for a full suppression approach, due to the location in the wildland-urban interface. However, interviews with fire staff and community members demonstrated that both internal and external factors played a role in the management approach on the Gap Fire.

Fire managers did not feel that they were personally predisposed to a full suppression

approach. The Incident Commander and others expressed experience and interest in using alternative tactics on fires when appropriate. However, when asked about their views of public pressure, responses were mixed; some said that their actions were influenced by their perceptions of public opinion, whereas others relied more on professional judgment. Others identified local political interests as a dominant force. Overall, federal agency managers were divided on whether internal agency pressures or external public and political pressures had more influence on management decisions on the Gap Fire.

Community members were also divided in their feelings about the fire. Some felt strongly about the full suppression strategy, whereas others would have supported a less aggressive approach; some tried to influence fire management by calling political representatives, and others did not get involved.

Results: Gunbarrel Fire

Planning documents facilitated the approach on the Gunbarrel Fire; both the LMP and the FMP permitted flexibility in response, and the Wildfire

Implementation Plan (WFIP) allowed a wide range of management actions. These internal factors appeared to be most influential on the Gunbarrel Fire.

Agency managers on the Gunbarrel Fire expressed an evolving attitude toward fire management. The Incident Commander reflected on the evolution of his own personal perception of fire—in the past, he viewed it as a destructive force, but at the time of the interview, he considered it a “natural process with a lot of value.” Likewise, when asked about public perceptions, agency managers explained that the public expects them to protect resources at risk—not just put the fire out—but they felt they could inform public expectations by working closely with communities to explain what management responses were and were not feasible. These fire managers felt that both internal and external factors had an influence on the Gunbarrel Fire, but that internal factors (like the planning documents) were most influential because they allowed for a flexible approach.

Like the Gap Fire, community members were divided in their feelings about the Gunbarrel Fire. Some felt it should be put out, but many described fire as a natural process and expressed support for the management approach that was taken. And though a few community members made some local-level efforts to influence management of the fire, many did not. Community members expressed support for the proactive efforts that the local national forest had taken ahead of time.

Conclusions

The overarching policy direction in fire management is for increased flexibility, but there are factors that can constrain or facilitate that type of approach. This study highlights a number of important influences, including the content of internal guiding documents, managers’ perceptions of public opinion as well as internal agency culture, and the extent of investment in community outreach and collaboration. All of these factors operate within a “nested structure of influence,” where flexibility at the national and regional levels may foster a more flexible approach at the local level. Perhaps most surprising is this study’s finding that internal

factors like planning documents—and not community and political pressure—are having the biggest influence on fire management strategies.

Suggestions for further reading:

Toman, E, M Stidham, S McCaffrey, and B Shindler. 2013. **Social Science at the Wildland-Urban Interface: a Compendium of Research Results to Create Fire-Adapted Communities**. US Dept. of Agriculture, Forest Service, Northern Research Station. General Technical Report NRS-111. <http://www.treesearch.fs.fed.us/pubs/43435>

McCaffrey, SM and CC Olsen. 2012. **Research Perspectives on the Public and Fire Management: A Synthesis of Current Social Science on Eight Essential Questions**. US Dept. of Agriculture, Forest Service, Northern Research Station. General Technical Report NRS-104. <http://www.treesearch.fs.fed.us/pubs/41832>

Quinn-Davidson, LN and JM Varner. 2012. **Impediments to prescribed fire across agency, landscape and manager: an example from northern California**. International Journal of Wildland Fire 21, 210–218. http://norcalrxfirecouncil.org/uploads/QuinnDavidson_Varner_IJWF.pdf