

# Fire Management and Forest Conditions: Public Acceptance in the Great Lakes Region

## A survey of citizens in Michigan, Wisconsin, and Minnesota

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**Issue:** Public acceptance is critical to successful implementation of natural resource programs on federal lands. Managers concerned with implementing fuel management programs, especially at the wildland-urban interface, need accurate information about public attitudes toward fire and support for fuel reduction practices.

**Objectives:** The purpose of this project is to evaluate the public's perspectives and acceptance of wildland fuel programs on federal forests. The setting is the forest communities of Michigan, Wisconsin, and Minnesota where citizens are familiar with forest conditions and have a stake in management outcomes. Specific objectives include:

- Assess public opinion about treatment alternatives, smoke management, and agency communication strategies in affected communities.
- Identify factors that influence the acceptability of wildland fuel reduction strategies and decision processes.
- Measure public confidence in resource agencies for effective implementation of fuels reduction practices.

**Methods:** This study was part of a larger project that included a national survey, targeted surveys of seven fire-prone areas (in OR, UT, CO, AZ, GA, FL, and the Great Lakes Region) and evaluations of local outreach programs.

Findings presented here are a subset of data from a mail survey conducted in 2003 in communities surrounding National Forest lands in Michigan, Wisconsin, and Minnesota (n=593) to provide managers with locally relevant information about their publics. Discussions with local cooperators (U.S. Forest Service personnel) helped inform questionnaire design.

### Preliminary Results:

- Most respondents thought it was likely that a wildfire will break out in the forests or rangelands near their home in the next five years (Figure 1).

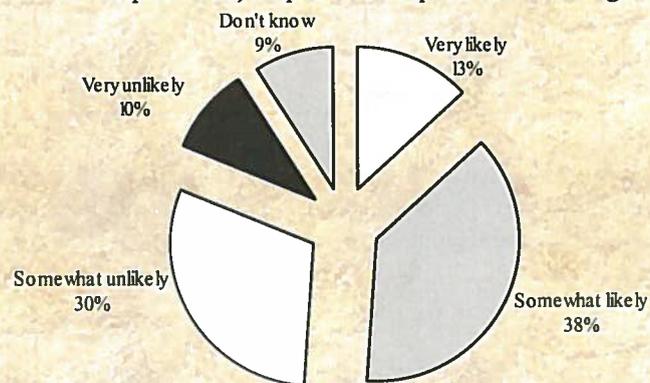


Figure 1: Perceived Likelihood of a Wildfire

Table 1: Acceptance of Fuels Management Practices

	Prescribed Fires	Mechanical Vegetation Removal	Thinning Trees
A legitimate tool that resource managers should be able to use whenever they see fit.	38%	50%	59%
Something that should be done only infrequently, in carefully selected areas.	44%	26%	28%
A practice that should not be considered because it creates too many negative impacts.	3%	3%	1%
An unnecessary practice.	3%	4%	3%
I know too little to make a judgment about this topic.	12%	17%	9%

- After reading a short description of each fuel management practice, respondents gave their opinions on the use of prescribed fire, mechanical vegetation removal, and thinning (Table 1).

Thinning received the most support overall. A majority thought thinning and mechanical removal were legitimate tools that managers should use as they see fit. Respondents showed the most caution regarding prescribed fires.

**Table 2: Concerns about Possible Effects of Prescribed Fire**

	Moderate concern/ Great concern	Not a concern/ Slight concern
Risk of fire going out of control	70%	30%
Increased soil erosion	48%	52%
Loss of wildlife and fish habitat	46%	54%
Damage to private property	45%	55%
Increased levels of smoke	43%	57%
Reduced scenic quality	42%	58%
Economic loss of useable timber	41%	59%
Deteriorated public water supply	38%	62%
Effects on recreation opportunities	35%	65%
Lower traffic safety	21%	79%

➤ Survey participants rated their level of concern about ten possible effects of prescribed fire (Table 2). The highest concern was expressed about the risk of an uncontrolled fire and the least was over effects on traffic safety.

**Table 3: Attitudes about Smoke**

	Agree
Smoke from prescribed fire has never been an issue with me	65%
Smoke levels from prescribed fire are a concern, but I think they are managed acceptably	57%
I worry about the effects of smoke from prescribed fire on public health	38%
I worry about the effects of smoke from prescribed fire on travel safety	32%

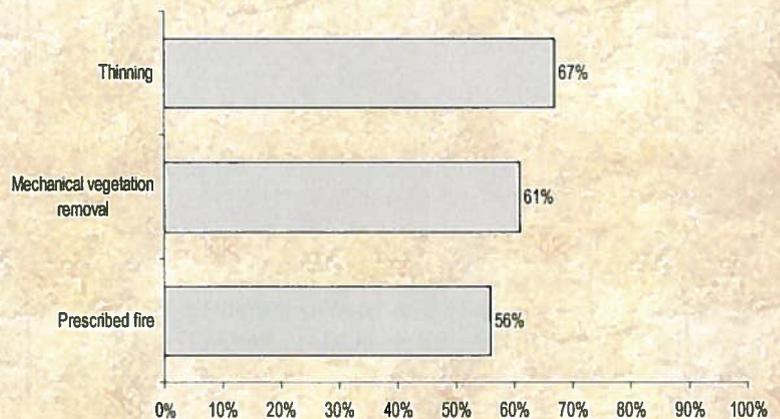
➤ More specific findings about smoke from prescribed fire (Table 3) suggest that it is managed acceptably.

**Table 4: Trust in Agencies to Make Good Decisions about Wildfire Management**

	Full/Moderate	None/Limited	No opinion
U.S. Forest Service	72%	19%	9%
State Dept. of Natural Resources	68%	23%	9%
Private timber and paper companies	49%	36%	15%
County government	44%	38%	18%
City government	29%	45%	26%
Native American Tribes	25%	46%	29%

➤ The trust citizens have in land management agencies influences their judgments about the implementation of fuel management practices. Table 4 shows that over two-thirds of participants rated the U.S. Forest Service and State Department of Natural Resources as trustworthy decision-makers.

➤ Participants were asked specifically about their confidence in the Forest Service to use certain fuel management practices (Figure 2). They reported the most confidence in the agencies' ability to use thinning, though a majority also reported confidence in the use of each practice.  
(scale: none, limited, moderate, full)



**Figure 2: Confidence in Forest Service Use Fuel Treatments (percent citing full or moderate confidence)**

Information and knowledge play an important role in forming support for management practices. Citizens rated the usefulness of 13 different information programs in the Great Lakes Region (Figure 3). Ratings were influenced by factors such as ease of understanding and credibility. For presentation purposes, the outreach programs are depicted as either interactive or uni-directional. Interactive programs are those that provide for either personal contact with agency representatives or on-the-ground learning experiences. Uni-directional programs are those that typically involve a one-way flow of communication from the agency to the public.

Overall the four most useful programs were interactive, indicating greater dividends may be achieved from this form of outreach. Of the interactive programs only public meetings failed to resonate with a substantial number of respondents.

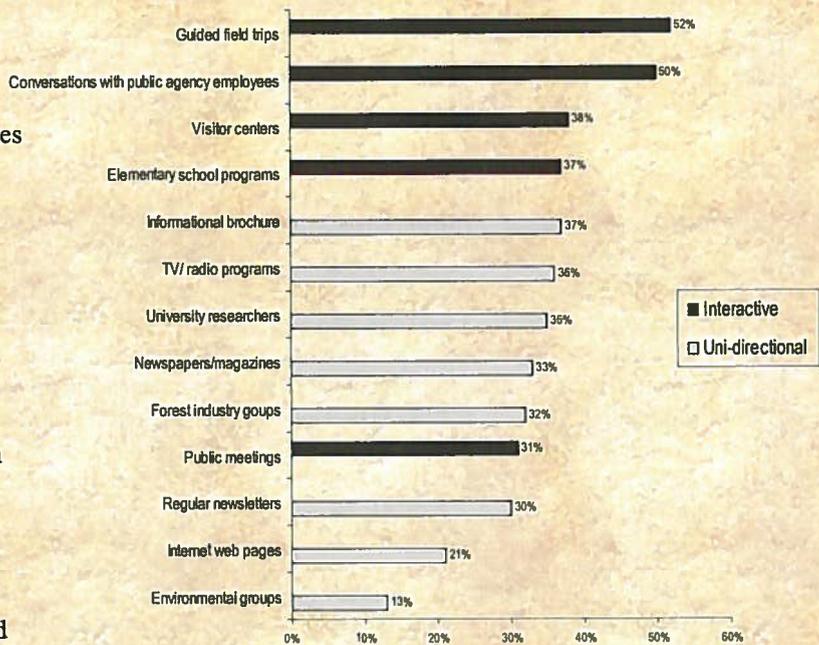


Figure 3: Usefulness of Fire Information Programs

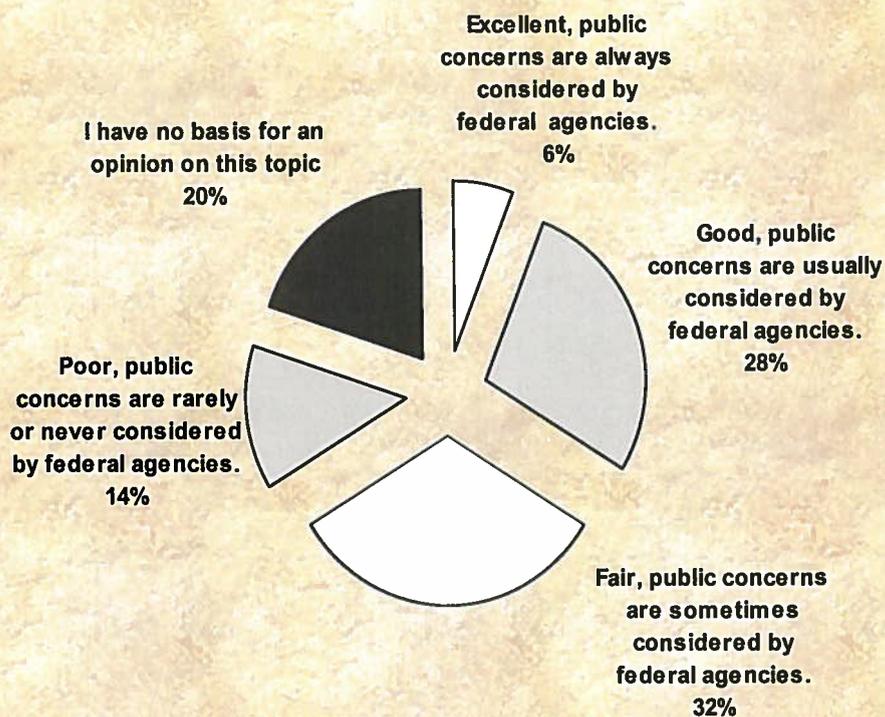


Figure 4: How Well Agencies Consider Public Concerns

Positive citizen-agency relationships are key to successful implementation of forest practices. Citizens rated how well the U.S. Forest Service has done in considering public concerns in their management activities. Overall 34% rated the agency as excellent or good at this important aspect of managing public lands (Figure 4).

**Conclusion:** Respondents are aware of a high risk for wildfire in the Great Lakes region and overall are very supportive of fuel treatments. They are willing to give managers the greatest discretion to implement thinning programs and also indicated the most trust in agencies to utilize this treatment. While generally concerned with potential impacts from prescribed fire, risk of a fire going out of control drew particular concern from a strong majority of respondents. Many were concerned about impacts from smoke, but findings further suggest that although smoke is an inconvenience, most respondents feel that it is managed in an acceptable manner. A substantial majority place trust in the Forest Service and the State Department of Natural Resources to make good decisions regarding fire. Participants recognized four interactive forms of communication (guided field trips, conversations with agency personnel, visitor centers, and school programs) as the most useful outreach activities for fire management. Finally, about one-third of the participants gave the Forest Service good marks for incorporating public concerns in management plans.

The management issues discussed in this study are all important to citizens, especially when their local communities are subject to the threat of wildfire and various fuel treatments. Although responses show a majority of the public in favor of fire management practices, a number of citizens still are likely to withhold their full support of manager's actions. Experience from forest communities indicates that citizens will be waiting to see how well these policies play out before making final judgments.

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