

Tech Notes



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Public Perspectives on Prescribed Fire and Mechanical Thinning

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The Blue Mountains are suffering from large-scale insect and disease epidemics in many areas of unhealthy and overstocked forests, which primarily result from excluding fire from these ecosystems. Managers in the region's four national forests are planning various strategies for restoring forest health; two of the most important tools are prescribed fire and mechanical thinning treatments. When used effectively, benefits from these practices include fuels reduction, wildlife habitat rejuvenation, seedbed preparation, tree species selection, and stocking reduction.

Accurate information about public support for these practices is essential for implementing effective long-term management policies. By assessing public attitudes, we improve our understanding of the often contentious environment in which resource management decisions are made. This technical note presents a partial summary of findings from public opinion surveys conducted in Blue Mountains communities in 1996. Questionnaires about these management practices were developed based on interviews with Forest Service personnel and focus group meetings with community residents. The data reflect responses from a random sample of 535 individuals (56% response rate) who completed a questionnaire mailed to their home.

Prescribed Fire and Mechanized Thinning

Public attitudes about forest fire have been undergoing substantial change in the last 20 years. Prior to the mid-1970s, the Forest Service's policy of immediately suppressing all fires received nearly unanimous public support. This, of course, was due primarily to the agency's aggressive fire-fighting efforts, complete with national public education campaigns and a general interpretation of Smokey the Bear's message to mean that all forest fires have detrimental effects on resources. With more recent emphasis on the use of fire as a management tool, public attitudes have been evolving toward a broader acceptance of fire in forest ecosystems.

Still, a number of public concerns over the use of fire remain. The focus has typically been on risk factors (public

safety and adjacent property), aesthetic concerns (scenic quality and recreation use), health issues (smoke and air quality), ecological effects (on wildlife, vegetation, water quality), and economic effects (loss of commercial timber). A handful of studies conducted in the 1980s indicate public support or opposition is largely related to an individual's knowledge of the uses and effects of fire (Shelby and Speaker 1990). More recent research (Bright 1995) supports this view, suggesting that managers will need to improve their communication about the rationale for prescribed fire policies.

Little social assessment research exists on the public's perspective of mechanized selective thinning as a fuels reduction technique. Most likely, preferences are tied to general attitudes about support for timber harvesting or resource preservation. But a study of forest communities in southeast Alaska on the merits of implementing alternative harvest practices suggests additional factors may be important (Shindler 1997). First is the public's concern over economic risk. Simply, can mechanized selective thinning be profitable? More complicated harvesting systems increase the cost of doing business, from planning and laying out sales to securing equipment.

A second concern is over environmental effects. Multiple entries with ground-based and skyline systems will affect soils, riparian systems, plant and wildlife populations, as well as recreation and scenic quality. The public has yet to understand specific long-term effects on these important resources, and thus may be reluctant to endorse selective thinning programs on a grand scale.

The third issue involves the public's trust of our natural resource agencies to experiment with these silvicultural practices on federal lands. The highly charged sociopolitical environment of recent years has created a credibility gap between large bureaucratic government agencies and constituents. In the case of the Forest Service, many people feel the current levels of timber harvest are already too high and giving the agency additional freedom to cut more trees may not be a good idea, particularly when ecological outcomes are uncertain.

Management practices like prescribed fire and mechanical thinning pose numerous biological and socioeconomic questions that require long-term research using multiple approaches. This project begins to address these issues in an integrated manner by linking with a larger study coordinated

by the Blue Mountains Natural Resources Institute. Cost effectiveness and specific effects on soils, wildlife, and riparian areas have been studied by separate research teams of harvest engineers, soil scientists, and wildlife biologists. Remaining social issues—the public acceptability of these practices, preferences for particular forest policies, and support for Forest Service programs—were undertaken in this study with some important findings reported here.

Findings

An informed citizenry is essential to resource decisions made in the public arena. In this study, more than 90% of all citizens described themselves as at least moderately knowledgeable about national forest issues, and 84% considered themselves informed on specific forest conditions in the Blue Mountains. When asked to judge these conditions, two-thirds (66%) felt that forests in the region were unhealthy.

Respondents were asked to evaluate the effectiveness and problems associated with treatments used to address forest conditions. Table 1 reports opinions about prescribed fire and mechanized thinning; ratings of the practices were similar in most cases. A large majority agree that both treatments are useful in decreasing the chance of wildfire and effectively reducing excess fuels. Similar numbers agree that the practices are useful tools in ridding the forest of insects and disease. Few see harm being done to other desirable forest components; short-term effects on fish, wildlife, water quality, scenic beauty, and recreation uses are acceptable to most people.

Findings about fire-induced problems that affect humans are mixed. Almost two-thirds of the sample (66%) indicated smoke from prescribed fire is acceptable if it results in a healthier forest. However, far fewer (43%) were convinced that the practice does not present a threat to nearby property or forest land.

Finally, statements addressed attitudes toward the legitimacy of prescribed fire and mechanized thinning as well as the Forest Service's ability to implement effective programs. Large majorities believe both treatments are legitimate management tools and that overall, the benefits derived are worth the risks. People's level of trust in the Forest Service to implement a responsible and effective program is more di-

Table 1. Public Attitudes about Prescribed Fire and Mechanized Thinning

Agreement on management issues:	Prescribed Fire	Mechanized Thinning
decreases the chance of high-intensity wildfires.	74%	79%
effectively reduces the amount of excess fuels in the forests.	70%	77%
effectively keeps insects and diseases at minimum levels by maintaining healthy trees.	71%	76%
causes acceptable short-term impacts to water quality and fish habitat.	65%	61%
creates acceptable changes in native wildlife habitat.	70%	69%
causes only short-term damage to scenic beauty.	76%	66%
has acceptable short-term effects on recreation uses.	74%	77%
smoke levels are acceptable if it means a healthier forest.	66%	
is of little or no threat to nearby property and forest land.	43%	
is a legitimate management tool.	70%	77%
overall, the benefits of prescribed fire (or mechanized thinning) are worth it.	65%	75%
I trust the Forest Service to implement a responsible and effective program.	51%	58%

Table 2. Public Perception about Prescribed Fire

	Agree
I usually have difficulty knowing which is burning--a natural forest fire or a management ignited prescribed fire.	42%
All fires, regardless of origin, should be put out as soon as possible.	30%
Scientific experimentation with prescribed fire is appropriate on insect infested sites.	73%
Prescribed fires waste trees that should be used for wood products.	45%
In my area, smoke levels from fire are not a problem for me or my family.	76%
Prescribed fire should not be used because of potential health problems from smoke.	11%
Prescribed fire is not the problem when it comes to air quality.	52%

vided. In each case, slight majorities (51% & 58% respectively) gave the agency a vote of confidence.

For frame of reference about people's understanding of forest fires, citizens were given an additional set of statements. We first asked if people had trouble knowing which type of fire was burning; 42% said they had difficulty telling the difference between a natural forest fire and a management ignited prescribed fire. In a similar question elsewhere on the questionnaire, respondents were asked about being able to tell the difference between a prescribed fire and field burning. In



this case responses were similar, less than half (44%) said they could.

Only about 30% agreed that all fires, regardless of origin, should be put out as soon as possible. This suggests a degree of public knowledge about the utility of fire programs as well as an understanding that fire can be controlled. In further support of the use of fire, about three-fourths (73%) believe experimentation on insect-infected sites is appropriate. However, many individuals (45%) showed a preference for increased timber production by agreeing that prescribed fires waste trees that should be cut for other purposes.

Clear majorities indicate that smoke is not a problem for most families (76%), nor are people in favor of banning prescribed fire practices because of the effects of smoke on health. A slim majority (52%) agree that prescribed fire is not the problem when it comes to air quality.

Overall, people were able to prioritize their preferences for three management options for treating the existing build up dead trees. Table 3 shows that over three-fourths ranked selective thinning as their first choice over prescribed fire. A few (8%) wanted no management, instead preferring nature take its course.

Table 3. Preference among Treatments

<i>Rank your preference for treating the existing buildup of dead trees in the Blue Mountains:</i>	
Most preferred:	
selective thinning	76%
prescribed fire	16%
nothing, let nature take its course	8%

The relationship between forest management agencies and local publics is an important one. To more thoroughly understand the public's perception of forest management decisionmaking, we asked about their views on public/agency interactions (Table 4).

Table 4. Perspectives on Public/Agency Interaction

	Agree
The Forest Service does a good job of providing information about its management activities.	31%
Agencies like the Forest Service and the BLM are open to public input and use it to shape forest management decisions.	37%
Forest managers usually create plans without input from local communities surrounding national forests.	53%
Our federal forest management systems need major changes, not just minor adjustments.	56%
The Forest Service should provide a stronger leadership role.	52%
Reliable knowledge about forest ecosystems is lacking.	45%

The data show only 31% agreed the Forest Service does a good job of providing information about its activities or that our resource agencies are open to public input. A majority (53%) believed that forest managers usually create plans without listening to their local communities. Most people agreed (56%) our management systems need major changes and the Forest Service should provide a stronger leadership role. Other results show that for many people, questions exist whether we know enough about our forest ecosystems. Less than half of those responding (45%) believe we have reliable information.

Conclusions and Discussion

In terms of public support for prescribed fire and mechanical thinning, findings from this study are not particularly difficult to interpret. Most people are receptive, and in many cases strongly supportive, of the use of both management practices as fuels reduction techniques in the Blue Mountains. Large majorities agreed with their use for specific management purposes and were willing to live with resulting effects. It is also clear that people prefer one treatment, mechanical thinning, over the other. But I believe it is probably safe to say that using the practices in tandem is also a preference. That is, people are likely to support removal of timber through thinning as a first step with fire as a follow-up measure. The overall acceptance of these practices is most likely much higher than resource managers anticipated given the turmoil that seems to surround most forestry decisions.

Yet, it is apparent several issues need more attention. A substantial segment of the public believe that all fires should be extinguished, suggesting that fire education is still needed in these communities. However, this also could be another indication of a stronger preference for thinning programs over the use of fire. Additional interaction with key publics will be useful. Views on smoke management indicate a general acceptance of smoke from prescribed fire. However, the data also suggest a need to help people understand when prescribed fires are burning and to recognize the sources of smoke in their local areas. Although few see the practices as involving risk, a question remains about fire being a threat to nearby property. In addition, trust issues surrounding the use of these practices are not completely resolved. When coupled with findings about the agency's ability to provide information or involve communities, these public perceptions point to a need for more effective forms of citizen/agency communication.

Often loud voices or interest group agendas are the driving forces in agency/public discourse and require most of the attention. It is easy to construe these strong opinions as representing the public at large. This study reveals the views of the general public with empirical data. From this information, it could be con-



cluded that the general population in the study area is in support of the Forest Service increasing its efforts to use prescribed fire and mechanical thinning in the Blue Mountains. It is also likely that citizens would prefer the agency to provide stronger leadership locally, particularly if this direction includes increased interaction with communities.

While these findings reflect the views of the general public, recent history indicates that numerous factors play a role in shaping forest policy. Even though people are receptive to these ideas, many will be waiting to see how well they work before making final judgments. Informative programs that help people understand ecosystem management practices, and inclusive ones where people can contribute to plans involving difficult but necessary tradeoffs, often mean the difference between success and frustration.

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