



Examining the influence and effectiveness of communication programs and community partnerships on public perceptions of smoke management: A multi-region analysis

Year One Project Summary: Montana 2011

Investigative Team

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Introduction

Larger scale and more frequent wildland fires over the past decade have made fire and its relationship to forest fuel conditions a significant challenge for land managers. Prescribed fire is one viable tool to address this issue and manage fuel loads. However, smoke from fires (prescribed or wild) affects air quality regardless of boundaries, sometimes at great distances and has the potential to impact communities beyond actual fire ignition zones. Because public acceptance and tolerance of smoke can influence their willingness to support the use of prescribed fire as a management tool, it is important to better understand how agencies communicate with communities during wildland fire and smoke events. This study aims to identify communication programs and the presence of fire-related citizen-agency partnerships and to better understand how these tactics influence citizen tolerance of smoke.

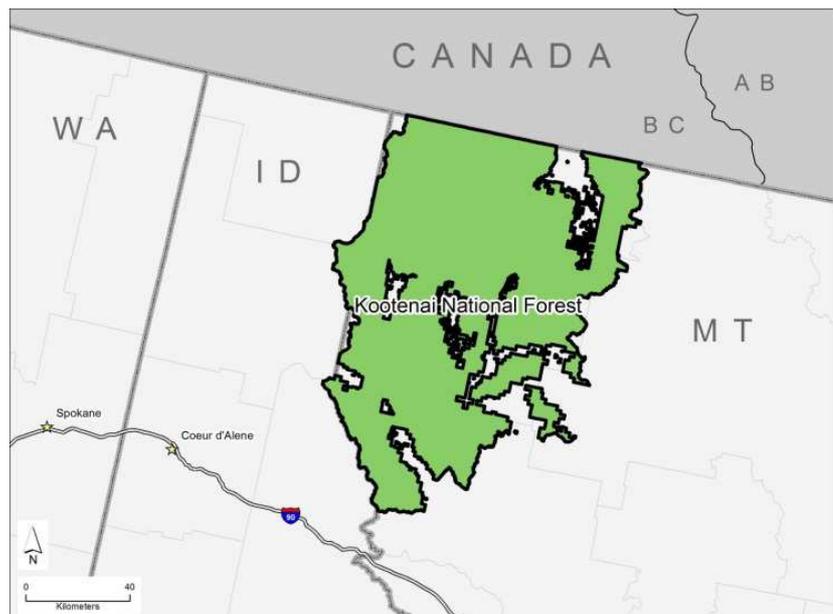
This report summarizes findings from research conducted in northwestern Montana on the topic of smoke and communications related to smoke. These findings are from the first year of a three-year study. Funding for this research was provided by the Joint Fire Science Program.

Study Area

This research focused on communities within and nearby the 2.2 million-acre Kootenai National Forest (KNF) in the upper northwest corner of Montana. It is situated in a region that is largely forested and has a strong natural resource-based economic history. The topography ranges from mountains and valleys near the town of Libby, to rolling hills and open spaces near the town of Eureka. Both communities have gradually moved into a more service-based economy built on tourism and recreation in recent years, though at the time of this research visit, Libby had a relatively high overall unemployment rate of 19.3% resulting from a series of local timber mill closures.

The local topography in and around Libby puts this area at a predisposition for air stagnation and inversions, especially during the cold winter months. This has contributed to a U.S. Environmental Protection Agency (EPA) air quality non-attainment listing for this region. Nevertheless, longtime residents reported significant improvement in air quality over the last decade.

The town of Eureka is situated seven miles south of the Canadian



Border and is known for its mild weather, thus is nicknamed “the Banana Belt” of Montana. Local topography in and around the town provides for both flatland and mountainous regions, but unlike Libby, air stagnation and inversions are not as problematic here and the town of Eureka is within the EPA guidelines for air quality attainment.

Interviews and Selection of Participants

Interviews were conducted in the towns of Libby and Eureka (Montana) from April 19th through April 22nd 2011.

Participants were chosen based on key knowledge, ability to address the research topics, and variability in perspectives and experiences with smoke. Most participants were involved in forest and land management, air quality & policy regulation or with citizen engagement and communication. Thirteen individuals were interviewed, with meetings lasting between 45 minutes and two hours. At the conclusion of these interviews, no new information was being discovered, suggesting that the necessary data to answer our research questions had been successfully collected.

Participant Breakdown

(1) Timber Industry

(1) Non-Governmental Organization

(1) Air Quality

(8) State or Federal Agency

(2) Private Landowner

13 total Participants

General Interview Observations

A commonly-mentioned topic in Libby was the idea of an existing boiler being converted into a biomass facility. Although there was a range of opinions as to the feasibility of such a project, there was consensus on the need for forest slash and fuels disposal locations and/or methods. While some participants felt that prescribed burning was a more viable method for achieving this goal, the classification of the Libby area as an EPA non-attainment region posed regulatory challenges for utilizing this management technique. One participant commented “*The way they have the smoke management structured in this impact zone, burning days are tight.*” The sentiment was that the use of prescribed fire as a management tool was declining, some of which was contingent on the weather conditions in recent years, but overall most felt it was the non-attainment label that caused the greatest reduction in feasible burn days.

Some interview participants expressed feeling unacknowledged by the forest agencies for efforts to improve air quality in the Libby area. Such efforts have led to a drastic improvement in PM 2.5 levels, and interview participants indicated the non-attainment label will hopefully be removed soon. While multiple participants discussed at length the air quality challenges for Libby, many of these same individuals also directed our research group to the successes of forest management in Eureka.

Interview participants in the Eureka region indicated that large prescribed burns were being effectively implemented with little aversion from the community. This was in part due to the fact that previous managers had no escaped burns marring their records, and they had successfully developed trust and communication lines within the community. The idea emerged that the people of Eureka tolerated the

smoke because they *“were used to it.”* The community was referred to as *“experienced”*; they saw and endured smoke on an annual basis.

Another aspect that arose when discussing community tolerance was the ability for the public to see successes on the ground. Visual success in this region was highlighted by a nationally recognized fire event, the Camp 32 Fire of 2005. The successful containment of this fire was attributed to intentionally planned timber harvest and prescribed fire treatments. Managers viewed this not only as a success story for forest treatment, but also as a learning opportunity for the public to understand the positive aspects associated with prescribed burning. A participant remarked on differences in fire behavior between treated vs. untreated forest land: *“It went from the crowns to the ground. When people drive by, it is still a stark contrast. You can tell what happened on either side of the road.”* Forest managers felt that the Camp 32 fire was a real life example for the people in the Eureka area to see firsthand the effectiveness of fuels treatments.

Emerging Findings from Interviews

This section provides additional details discussed during the interviews. It is broken into several themes, with specific items bulleted under those themes. These lists are not all-inclusive; rather, the findings presented here represent some of the most frequently mentioned or interesting findings for each topic.

Concerns Associated with Fire and Smoke

- Loss of credibility from escaped fire or smoke impact on community
- High forest fuel loads resulting from fire suppression; concern for the potential of larger, faster moving wildfires which could result in loss of property/lives
- Smoke drift from regions not under regulation (e.g., other states, Canada)
- Adverse impact to recreational and/or daily activities concerning the public
- The public seeing aesthetical impacts, both during the fire and afterwards
- Public concerns about risk of fire escaping or getting out of control
- Public concerns about health implications from smoke
- Public concerns about liability from a fire crossing property boundaries

Perspectives and Perceptions

- Federal and state policies can be challenging to adhere to
- Public is very grateful when notified of prescribed burning or possible smoke impacts
- New comers to an area not as tolerant of smoke compared to long-timers
- The public sees all agencies as the same; no differentiation between districts or branches
- Some public individuals acknowledge advantage of regulation and appreciate it (esp. for clean air)
- General lack of public understanding for policies and regulations
- Believe public perceives prescribed burning as wasting resources which could be utilized in other ways
- Believe public thinks the federal government does not have support for the town (of Libby)

- Believe public perceives regulation (for burn days) as unfair, the public is over regulated
- Believe public sees tolerance for smoke and prescribed fire as part of the local culture; fire and smoke belong here

Public Communication

- Early communication regarding projects/potential community impact seen as imperative
- Coordination of public outreach messages across agencies seen as beneficial
- Look for teachable moments; address issues while in the public eye
- Reduce inconsistency in terminology & avoid jargon or overly scientific terms

Partnerships and Collaboration

- Provided more avenues for public outreach
- Allowed for representation of diverse interests and perspectives
- Provided a pathway for intra-organizational information sharing
- Improved ability to prioritize multi-stakeholder needs
- Management goals sometimes accomplished without as many hang-ups
- This type of effort often required more time to reach a group consensus for management decisions
- Two examples of local collaborative/partnership bodies seen as having a positive impact in the area: The Idaho-Montana Airshed Group, and the Regional Firewise Program.

Challenges

- EPA air quality non-attainment label; regulations make activities more difficult
- Time involved navigating state and national policies
- Burn days are very limited (burners have to wait for windows to get projects accomplished)
- Woodstove use is common; smoke produced from burning impacts air quality
- Addressing multiple objectives and management goals
- Locating funding sources for fire and smoke management programs
- Burning near urban interface zones; minimal tolerance
- Frequent litigation tying up money and time
- Lack of public understanding for regulation boundaries (e.g., inside versus outside of designated smoke-sensitive areas)

Opportunities

- Much of the public acknowledges the benefits of fire
- Unifying themes/common goals have ability to increase acceptance of projects, unify people
- Model successful programs/successes or build on existing ones to establish trust with the public
- Seeking out improved technology and resources that already exist

Take Away Messages

Consider Opportunities for Bringing a Unifying Theme into Projects and Objectives

While decreased risk of wildfire is a merited benefit to prescribed burning, expanding on other benefits from this same activity will likely resonate with more people. Highlighting other advantages to a project (e.g., improved wildlife habitat, hunting opportunities, berry production) will make the project more appealing to a broader base of people. By making a project represent multiple benefits, there is better opportunity to resonate with differing views and values. Similarly, when trying to bring individuals together for project planning or to work through a public concern, attempt to identify a unifying framework that individuals from differing backgrounds can associate with.

Widen the Project scope: Bring in Other People to Increase Overall Accomplishment

By involving different perspectives and interests from the onset, the chances of reaching hang-ups later on are minimized. Early identification and outreach to groups or individuals that could possibly have concerns later provides a benefit to management efforts by identifying and potentially addressing these conflicts ahead of time. Additionally, when groups or individuals feel that their opinions were valued and expressed successfully, they are less likely to react negatively to similar future projects. By expanding management scope and objectives to be inclusive of more stakeholders, managers have the potential to reach a broader base of resources. Monetary support may come from avenues not previously considered and social links that may not have previously existed can arise.

Identify Opportunities to Connect to the Public and to Distribute Information

Think beyond traditional communication tactics such as newspapers and websites and think more about upfront outreach and communication. Of particular interest are activities that promote sincere public contemplation or involvement. For example, a simulated fire was modeled for one community using realistic weather and forest conditions. The model included the speed at which the fire traveled and the impact that it would have on the local population. The developer included pictures and images of the impacts. This simulation was presented at community events with the goal of creating a better public understanding of forest-fuel conditions was achieved. Out of this presentation, facilitated discussions arose as to the ways community members could mitigate fire risk. In this same community, elementary Firewise education programs were utilized to connect to students and families. Delivering communication in ways that promote involvement tend to be longer lasting than when communication regarding fire or smoke is delivered through non-interactive sources.



Thank you to the participants in Libby and Eureka for making this study possible. **For more information, please contact Dr. Christine Olsen at 541-737-8669 or christine.olsen@oregonstate.edu.**