



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

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*Year One Project Summary: South Carolina 2011*

### ***Investigative Team***

Christine Olsen, PhD, Oregon State University

Eric Toman, PhD, The Ohio State University

Danielle Mazzotta, Graduate Student Researcher, Oregon State University

Devyani Singh, Graduate Student Researcher, The Ohio State University



## 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.

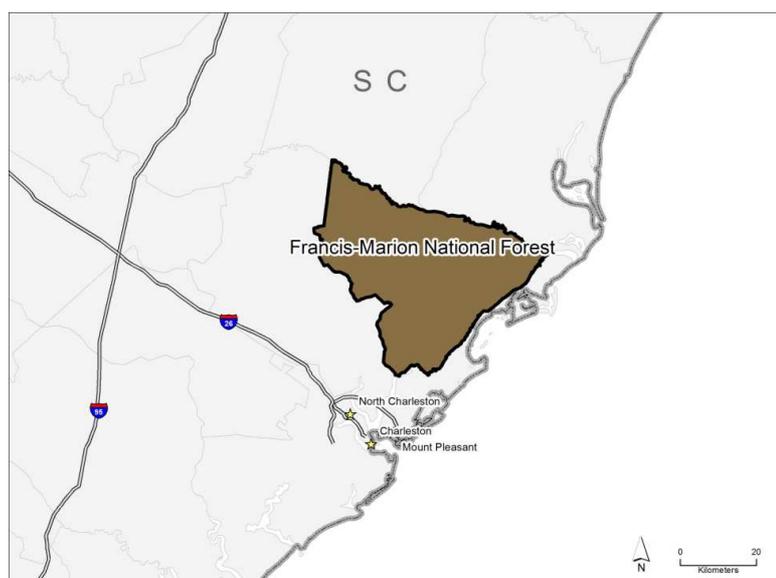
This report summarizes findings from research conducted in the coastal region of South Carolina on the topic of smoke and communications related to smoke. These findings are from the first year of a three-year study. Funding for this research was provided by the Joint Fire Science Program.

## Study Area

This research focused on communities within and nearby the 259,000-acre Francis Marion National Forest (FMNF) in the coastal plain of South Carolina. It is situated between the major metropolitan areas of Myrtle Beach and Charleston and offers an array of recreational opportunities for the public including hiking, biking, motorcycle riding, and canoeing. The ecosystem in the FMNF is extremely diverse, ranging from pine stands to swamp and marshland.

In 1989, winds from Hurricane Hugo leveled more than a third of the forest in this region. The resurgence of young trees and understory shrubs in the years following this disturbance posed a heightened threat of catastrophic fire. Faced with the unprecedented problem of disposal of the dense vegetation, management agencies implemented chipping operations. Today the excess material continues to be utilized as a biomass energy source for local power production.

Fire protection in this region is largely carried out by the South Carolina Forestry Commission and the US Forest Service. Additionally, there are approximately 439



county, municipal, and volunteer fire departments across the state which assist in controlling wildland fires. Some fire departments include teams specifically trained in fighting wildland fire.

## *Interviews and Selection of Participants*

Interviews were conducted in Charleston and Mt. Pleasant (Charleston County), Columbia (Richland and Lexington Counties), and Cordesville (Berkeley County) from March 2<sup>nd</sup> through March 5<sup>th</sup> 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. Six interviews were conducted with a total of fifteen individuals, ranging from 45 minutes to almost 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***

(2) Non-Governmental Organization

(2) Air Quality

(6) State or Federal Agency

(5) Local fire protection

**15 total participants**

## *General Interview Observations*

A topic that came up frequently during interviews was the perception that a fairly large portion of the public did not recognize the importance of fire on the landscape as it relates to ecosystem fire dependency. Interview participants often felt that the public largely recognized the benefits of prescribed fire treatments, and were willing to endure the smoke impact so long as the duration was kept to a minimum. One participant commented: *“They [management] have no problems doing prescribed burns, the community is very much aware about the purpose of a prescribed burn and know what to expect when the burning season is taking place.”*

Although the factors that influenced this perception of acceptance were not easy to isolate, many participants alluded to a long-standing cultural acceptance of fire. Those that had resided in the area for an extended period of time had the mindset that “burning was not a big deal.” They had experienced smoke and fire over the course of their life, and prescribed fire impact was nothing out of the ordinary. When asked about the factors that led to better public acceptance, an interviewee responded: *“It is a societal and historical thing; just how the people view the woods and forest.”*

However, along with the impression that long-residing locals had a good understanding of fire’s place in a healthy ecosystem, there was the sentiment that the influx of newcomers to the region was changing the overall public standpoint on prescribed fire. Many forest managers considered this a challenge. Referring to urban growth, one manager commented: *“More and more neighborhoods are popping up closer and closer to these broad areas of land that are being used for tree harvesting.”*

As populations grow, an oft-cited concern of management professionals was the fear of smoke entering roadways. The possibility of smoke reducing visibility posed a potential risk for vehicular accidents. This

concern led managers to concentrate efforts on developing relationships with the South Carolina Department of Transportation. By working together, both parties could respond in a timelier, more effective manner to address smoke impacts. Road closures were often implemented when smoke impacts were imminent. For commuters, these closures meant travel delays, and were reported to have resulted in complaints and frustration with the Forest Service.

Finally, liability from unintended smoke impacts causing vehicular accidents appeared to be a large barrier for managers and the public alike. To address this challenge, a new state bill was introduced that would redefine some of the liability, allowing private individuals greater leeway in conducting burns with reduced risk of being found negligent should a smoke-related accident occur. The bill was signed into law in April 2012 (one year after the research visit). Additionally, liability insurance as a product for private landowners was being developed in hopes that it would promote more prescribed burning on private lands.

### ***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**

- fire regulations becoming more stringent which could potentially limit management capabilities
- public safety associated with reduced visibility from smoke on roadways
- liability associated with vehicular accidents resulting from smoke on roadways
- hear public is concerned with liability of escaped fire running onto neighbor's property
- public is concerned about health implications from smoke, especially in respiratory-compromised individuals
- public is inconvenienced by fire and smoke on daily routines
- believe public is concerned about aesthetical impacts (during and after fire)

#### **Perspectives and Perceptions**

- not everyone will be on board with management decisions; there will always be conflict of opinions
- only a portion of the public recognizes trade-offs between management now and reduced fire/smoke risk later
- the public is disconnected with the risk associated with wildland fire
- prescribed burning needs to be "marketed" more to the public
- the public needs to see prescribed fire used successfully to accept it
- see public believes they are not included in agency decision making

#### **Public Communication**

- websites need to be interactive and easy to use
- communication messages about fire or smoke need to be clear; different sources should not be contradictory
- early communication is important

- delegate a person or group to maintain communication lines with the public to ensure that when projects get busy communication is not forgotten or lost

### **Partnerships and Collaboration**

- enabled development of better working relationships were built among colleagues
- opportunity to make more informed decisions about fire and smoke management
- many participants felt they were able to accomplish more on the ground than they would have been able to do otherwise
- provided a place for community involvement
- fostered project support
- got people on the same page (increased shared understanding)
- acknowledgement of multiple perspectives increased understanding of impacted area and needs of the community during smoke or fire event
- regular meetings helped facilitate progression (of the partnership)
- assisted in maintaining consistent communication lines

### **Challenges**

- previous notification/communication regarding prescribed burning seen as unclear and confusing
- uncertainty as to how to effectively implement public communication and outreach programs
- balancing multiple concerns and/or objectives (e.g., visibility, liability, risk reduction)
- time commitment required to accomplish projects that included fire and smoke
- funding sources for fire and smoke management programs

#### *Specifically related to working with the public*

- participation/interest levels peak during fire or smoke event but quickly dissipate
- maintaining consistent level of public involvement
- lack of public understanding for policies and agency organizational structure

### **Opportunities Identified for Future Progress**

- appointing a primary public communicator (for example, a communication officer)
- providing staff training on how to effectively and positively interface with the public
- sharing information with other individuals in the field of fire and smoke to increase collaboration and learning opportunities
- extending efforts and rethinking management plans
  - getting stakeholders on board earlier
  - building local ties and community connections
- prescribed burning is a cost effective management technique; using this point as a public education opportunity
  - highlight the ability to accomplish more with limited funds
- prescribed fire councils as an effective tool in lobbying for policy change; also an avenue to build partnerships
- liability insurance; balancing out the perceived risk associated with prescribed burning

## *Take Away Messages*

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### **Think about scenarios – know what to expect and prepare for these possibilities**

Negative public response to smoke events can be minimized. During planning stages for prescribed burns, consider opportunities to reach out to the public before for the event. Where possible, utilize workshops or fieldtrips that introduce the public to relevant information. Fire and smoke awareness campaigns provide the opportunity to publically address smoke management challenges on a local level and as they arise. The ideal outcome of preemptive outreach is a more receptive public to controlled burns and overall better awareness and response when wildfire events occur.

### **Employ local opportunities to address the concern of liability**

Liability is an overarching concern for most managers. Local policies that mitigate the liability concern for managers and landowners are a positive step towards addressing this issue. When implemented properly and effectively, managers may have the ability to publically showcase the use of prescribed fire. Visual successes have the potential to increase public support for fire on the landscape. Additionally, the possibility of burn liability insurance may prove valuable.

### **Clearly define objectives and goals when working with other managers or agencies**

Lack of communication pertaining to smoke management and wildfire risk was a widespread concern across interviews. While collaborative cross-agency efforts have the potential to derive benefits such as the identification of opposing concerns or values, these benefits cannot appropriately be capitalized on if objectives and goals are not clearly stated. To effectively work through differences, players must be aware of their communication styles and messages and work towards universal understanding across the group. During the process of decision making, hang-ups are less likely to occur if these base objectives are previously established. Additionally, when public messages are developed, conflicting information can be better avoided. Objectives and goals are best established and shared among agencies from the onset of the project.

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**For more information, please contact Dr. Christine Olsen at 541-737-8669 or [christine.olsen@oregonstate.edu](mailto:christine.olsen@oregonstate.edu).**