



Public Views and Attitudes Concerning Fire and Fuels Reduction Strategies in the Valles Caldera National Preserve (VCNP) New Mexico

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The Valles Caldera National Preserve (VCNP), located in the heart of the Jemez Mountains in northcentral New Mexico, is a special place for many residents of the region. The large volcanic caldera, formerly the privately owned Baca Ranch, is an 89,000-acre property known for its scenic meadows and abundant wildlife, including herds of elk. The U.S. purchased the property in 2000, and the VCNP is now managed by a private trust, many of whose members serve through presidential appointment. Discussions are currently underway in the Senate concerning a proposal to transfer the VCNP to the National Park Service for management.

The VCNP has a long history of human use, with many Native American groups considering the caldera and its volcanic domes sacred. Between the later half of the nineteenth century and its purchase by the U.S. a decade ago, livestock grazing and industrial timbering were the area's primary uses.

As documented in tree-ring records, fire occurred regularly throughout the Jemez Mountains during pre-European settlement times. Native flora and fauna were adapted to these frequent burns, which played an essential part of the region's ecology by maintaining a patchwork of habitats in various stages of post-fire recovery across the dimensions of space and time. The area's indigenous peoples also depended on these fires for sustaining their relationships with the plants and animals; the people's traditional life ways depended on access to ecologically diverse forest habitats. Fire suppression policies, which were adopted in the late nineteenth century, in part, to enhance the production of commercially valuable timber resources, have played a contributing role in the reduction in ecological diversity throughout the Jemez Mountains. For example, trees of particular species and ages now grow in stands that are much larger and more homogeneous than those of only a few centuries earlier. These same fire suppression policies also have contributed to increased fire fuel loads in the region's forests by allowing the growth of denser timber stands and the accumulation of duff and dead wood. Consequently, the forests within the VCNP and on the surrounding Jemez Mountains slopes, are increasingly at risk for experiencing catastrophic wildfire.



Forest burned during the Cerro Grande Fire of 2000, near Los Alamos, NM, showing forest that was in need of thinning. Credit: U.S. Dept. of Energy

work to reintroduce fire in the ecosystem and conduct thinning projects. They are also examining how grazing, by cattle and a rapidly growing elk population alike, can either enhance or hinder their ability to fulfill their mandate under varying natural environmental conditions and land use practices over time.

Use, Access, and Fire/Fuels Management: User Group Attitudes and Preferences The Valles Caldera occupies a highly visible place in the hearts and minds of many members of the public, from Native Americans to ranchers and recreationists. Thus, obtaining input and building support from these groups for the VCNP's management and restoration efforts are critical. With funding provided by the US Forest Service, Rocky Mountain Research Station, and the VCNP, we designed a project to provide the VCNP managers with information about public desires and concerns that they can use in their efforts to promote greater understanding and support for fuels reduction and restoration initiatives.

The first phase of our data collection consisted of in-depth, expert interviews that focused on user groups' preferences concerning fire and fuels management strategies. We conducted 19 interviews with ranchers, tour operators, environmental educators, recreationists, a climate scientist, and a Forest Service silviculturist. The interviews averaged 2.5 hours and were taped. We are about to begin a series of similar interviews with Native American groups, who consider the Preserve a sacred place, and with residents of nearby traditional Hispanic communities whose families have depended on the Jemez Mountains for many generations.

Interview topics included perceptions of wildfire and views and attitudes concerning management of both wild and prescribed fires. Fuels reduction practices were also a topic of discussion. We were especially interested in learning people's views on wildfire suppression and prescribed fire use because many of the Phase I participants are from Los Alamos, which was severely damaged during the Cerro Grande Fire in 2000 and is still coping with the burn's lasting consequences a decade later.

The common topics interviewees discussed included:

- Concerns over escaped prescribed fires, but also the absolute importance of returning fire to the Jemez Mountain ecosystem.
- Role of fire in maintaining forest health and reducing high fuel loadings after years of suppression.
- Problems with aggressive suppression.
- Role of mechanical thinning and prescribed burning in the Wildland-Urban Interface (WUI) and the back country.
- Importance of community fire education.
- Importance of responsible media coverage.

Public Perceptions of Wildfire and Wildfire Management

Study participants stressed the importance of long-term planning, interagency coordination and cooperation, clear communication among the region's diverse local, state, federal and tribal land management agencies and the public, and valuing the experience of local communities and their work with the agencies. People shared a common opinion that wildfire management decisions should be flexible and based on local conditions. As one individual keenly observed, "Fires really are particular to the places where they are happening... They reflect that place, and they reflect the weather."



*San Antonio Creek flowing through meadow, VCNP.
Credit: William Barfuss*

We also sought to understand if area residents viewed wildfire in a positive or negative light. In general, they see wildfire as part of the natural system. One Los Alamos resident, a biologist, described her view of fire ecology by saying that before the La Mesa Fire that burned across the northern part of the Bandelier National Monument in 1977, she saw wildfire as a bad thing because of the lessons she learned during the "Smokey Bear" campaign of the 1950s and 1960s. She describes her experiences observing natural processes following the La Mesa Fire, including new plant life growing rapidly in the blackened soil left by the fire only a few days earlier, as a "life changing moment." This experience helped her understand that fire had a necessary and important place in the forest ecology of the Jemez Mountains. She now views fire, even catastrophic wildfire, as one of the ways "nature heals itself."

Another individual spoke of the importance of educating the public about the essential role of fire in sustaining a healthy ecosystem by helping them understand fire's beneficial aspects. He remarked "People who live in the mountains ought to understand that...every time they see a puff of smoke that it's not death and destruction. Maybe the word that should come to mind is 'rejuvenation' or something a little more positive. It doesn't take long... (to) see something better coming back."

In sum, those with whom we spoke feel that fire is a constant in the region's natural history, that we have literally loved our forests to death through overly aggressive fire suppression, and that fire is inevitable in today's pine forests—with the ecological system out of balance and the exacerbating effects of climate change. Several persons questioned the economic sense of battling large, catastrophic wildfires that are virtually uncontrollable, recommending that active suppression be used on portions of fires that are controllable or threaten infrastructure. Funds are better spent on proactive fuels management. A number of interviewees maintained that homeowners in the WUI have a responsibility to make their properties defensible. "Fires need something to burn. They don't just magically get your house."

Other suggestions included giving managers and fire fighters amnesty for the often difficult decisions they have to make during wildfires, thereby encouraging "people with the most knowledge and experience...to critique what strategies and methods did and did not work." Several people discussed problems with media coverage that often focuses on widespread damage versus beneficial ecosystem renewal from the unique perspective of individuals who not only understood fire's benefits through their professional training, but also had the first-hand experience of the loss and suffering that a catastrophic wildfire can wreak upon families and communities. They maintained that unidimensional portrayals focusing on wildfire's destruction reinforce and perpetuate the stereotypic view commonly held among the public that fire is something to be fought as unconditional war... One participant, who is an author and a photographer, notes that words and images used by media are selected to fuel emotions of loss and helplessness in the face of nature's wrath. He would like to see land managers invite media personnel to document prescribed burns while they happen and ask them to return after six months to report on the new growth that follows in the process of post-fire recovery.

Fire and Fuels Management in the VCNP

The VCNP's forested boundaries are vulnerable to wildfires either originating on, or burning across, surrounding Forest Service and National Park Service lands. Many study participants advocated that the VCNP should be used as an area for experimentation with different fire fuels management techniques. Not only do the Preserve's forested volcanic domes, which are separated by broad grassland expanses, represent ecologically diverse tracts ideal for studying fire behavior under varying conditions, their characteristic isolation lessens the risk that a prescribed fire would escape. They also recommended that the VCNP conduct controlled studies to teach land managers and the public about how different methods of fire and fuels management enhance forest ecology, while simultaneously reducing wildfire risk.

The Valle Toledo in the VCNP after a 2005 prescribed burn. Credit: Dr. Robert Parmenter, VCNP Director, Science and Education.



As a group, our Phase I experts were highly aware of the importance of education, with various participants discussing the importance of education for both children and adults. One, who teaches fire ecology to middle school students, would like to see VCNP managers build a trail through different fire fuels reduction treatment blocks to help the public understand the beneficial role of fire in pine forest ecology. This demonstration would not only allow the collection of the quantitative information needed to compare the effectiveness of contrasting fire management treatments over time, but would also allow members of the public to experience for themselves the rapidity with which natural processes work to help forests recover following fire. Another participant suggested planning prescribed burns to include a direct educational component, so members of the public could view ongoing treatments as they are implemented from a safe location. Many of the people with whom we talked view the Preserve as a laboratory where researchers, fire managers, and the public can find solutions to management challenges, through controlled experimentation.

Interviewees strongly recommended the development of an active prescribed burning program for the VCNP, with specific prescriptions implemented to lessen the possibility of escaped burns. They also advocated the adoption of a combined program of mechanical thinning and prescribed burning. One individual hopes that the Preserve will be divided into zones in which fire will be allowed to burn and others in which it will be suppressed. She also recommended the use of a flexible decision matrix based on local vegetation and environmental conditions at the time a fire is actually burning. A Jemez Pueblo rancher and administrator would like to see prescribed burning and thinning for a healthier environment and to maintain the grasslands, which are important to his community's cultural identity. He used the eagle-shaped patch of grassland high on Redondo Peak's south slope that his Pueblo views as representing its tribal symbol to underscore his point of what would be lost if the grasslands became forested due to continuation of active fire suppression or if the forests that border and define the grasslands were destroyed by a catastrophic fire.

There was some debate concerning the use of thinning and mechanical mastication, which are both considered more expensive than prescribed burning. One respondent maintained that the thinned forest should not resemble a plantation, that mechanical mastication is expensive and unnatural, and that "fire has to be the main element." Another said the cost of thinning is justified if it protects infrastructure, such as a watershed or community. In general, however, most study participants supported the implementation of a combined program of burning and thinning to restore and maintain forest health in the VCNP.

Several participants mentioned smoke as a major challenge for prescribed burning programs. They feel that sufficient burning will not be accomplished because of people's sensitivities and perceptions concerning smoke. As a group, the people with whom we spoke readily acknowledged that there is a delicate balance of health issues and concerns related to smoke sensitivities that managers must address.

The individuals who have backgrounds both in forest ecology and New Mexico's culture history, offered an additional compelling observation about smoke being an integral part of the region's environment. They maintain, given the high frequency of fires that occurred throughout the Jemez Mountains before large-scale fire suppression policies were enacted, smoke would have been noticeable in the air throughout the Jemez Mountains during spring, summer and fall most years since time immemorial. As such, these participants believe that people today need to accept the necessity of smoke in the air and the presence of low-intensity fires next to communities to maintain the health of the land.

In conclusion, the participants in our study:

- Stressed the importance of healthy forested ecosystems and the role of fire in maintaining those ecosystems.
- Stressed the importance of educating both children and adults concerning the role of fire in forested ecosystems.
- Supported wildfire policies that allow fires to burn if life, property, and watersheds are not threatened.
- Supported forceful prescribed burning and thinning programs to reduce heavy fuel loads and maintain a healthy ecosystem.

Many advocated a redefined public education program to help people understand how different methods of fire and fuels management enhance forest ecology, as well as reduce wildfire risk. As a whole, they recommended an information campaign to help people understand that under today's conditions land managers cannot prevent forest fires, but only exert influence on how they burn. Finally, several individuals suggested with both seriousness and a little levity that a portrayal of Smokey Bear holding a

drip torch might be an effective teaching tool in a redefined public education program, as well as a potent symbol of land managers' commitments to develop and implement new approaches for fire and fuels management.

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For More Information:

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