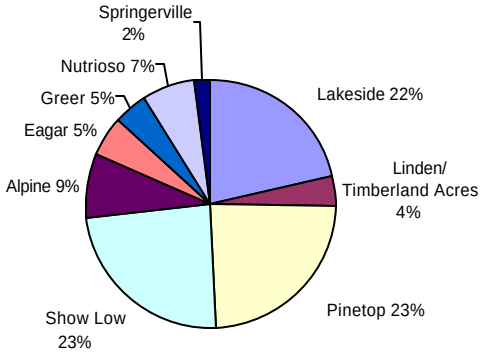
Study Results: White Mountain People, Forests and Fire

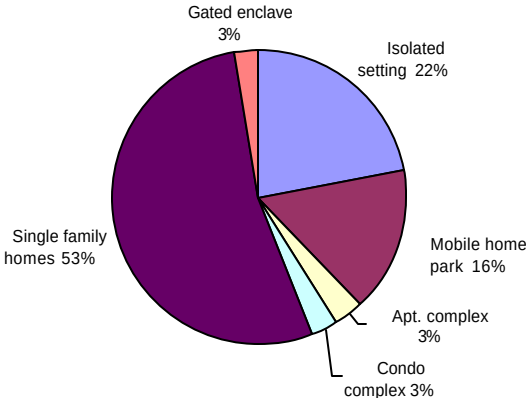
This flyer summarizes the conclusions and recommendations of a study of people, forests and fire in Arizona's White Mountains conducted between June 2004 and June 2006 by Tim Collins of Arizona State University. The study was designed to help land managers develop and implement community-supported forest management projects. To better understand forest management and fire hazard issues in the White Mountains, I surveyed local residents, and also conducted follow-up interviews and property wildfire hazard assessments for some survey respondents. I also immersed myself in forest issues by living in the White Mountains; by participating in forest management efforts involving the United States Forest Service, local governments, and White Mountain residents; and by developing an understanding of the region's history. The study focused on residents' *socio-economic characteristics, values of place, perceptions of wildfire hazard, knowledge of forest and fire ecology, acceptance of forest management approaches, perspectives on forest management and fire insurance institutions, preferences for home sites, implementation of property fire safety measures*, and *exposure to fire hazards*.

I surveyed 772 White Mountain households. Socio-economic characteristics are summarized in these 6 charts:

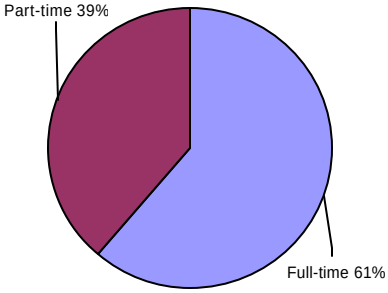
Community of Residence



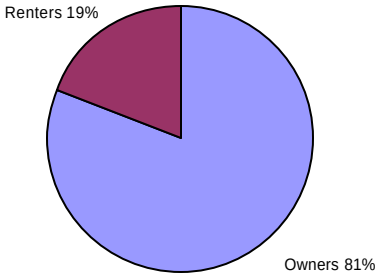
Residential Setting



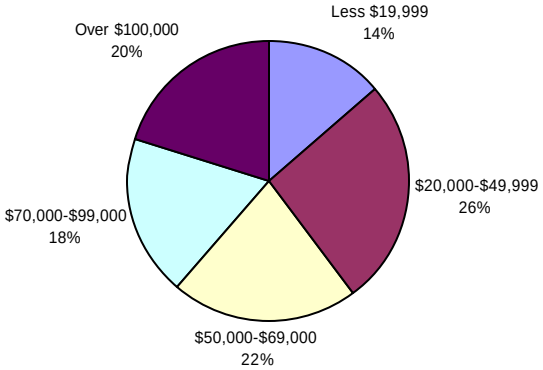
Residential Status



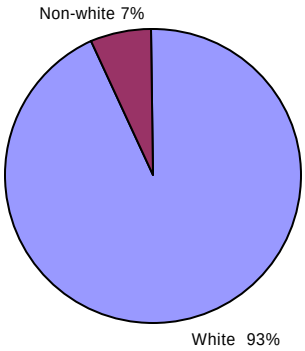
Owner/renter home occupancy



Household Income



Race/Ethnicity



Conclusions

- Residents primarily value the natural environment of the White Mountains, and they secondarily value social connections they have there. Cost and work are typically not important reasons why people live in the area. The majority (87%) of respondents indicated that their living in the area depended on healthy forests.

- Residential setting is the strongest influence on property fire hazards. People living in isolated settings and mobile home parks face higher levels of fire hazard than those in single-family subdivisions.

- Part-time residents take fewer property fire safety measures and have more hazardous properties than full-time residents.

- Renters are less able to take property fire safety measures than home owning residents.

- Residents generally have accurate understandings of fire hazards and basic knowledge of forest and fire ecology. However, these qualities do not lead to less hazardous or more ecologically mindful behaviors.

- Respondents generally support the use of <u>forest thinning</u> (94% support it) and <u>prescribed burning</u> (92%), as well as the idea of <u>enforcing a fire safety/forest health ordinance</u> (83%).

- Residents tend to believe that their properties are safer from fire than their neighbors and to blame others for forest problems. This presents an obstacle in efforts to better manage community forests.

- Residents have neutral perceptions of the quality of forest management by the United States Forest Service, positive perceptions of the Bureau of Indian Affairs/White Mountain Apache Tribe, and negative perceptions of local government and private property owners.

- Residents view cost-sharing programs designed to assist them in taking property fire safety measures as a complement to fire hazard reduction, and fire fighting and fire insurance programs as substitutes for reducing property fire hazards.

- Most residents value forests, climate, shade and privacy. These values are found to conflict with the goal of reducing wildfire hazards. But many residents also value fire safety and low-cost, which are values that are compatible with the goal of reducing wildfire hazards.

- The most important influences on wildfire hazards in the White Mountains are created by residential development processes and households' choices of home sites rather than the number of fire safety measures households take once they are living in their homes.

- Working and long-time residents face lower property fire hazards than retired and recently-arriving households.

- Home renters, those with lower incomes, and more recently-arriving residents take fewer fire safety measures than home owners, those with higher incomes, and longer-term residents.

Recommendations

- Because residents highly value White Mountain forests, land managers should justify their efforts to reduce fire hazards in relation to the ultimate goal of improving and sustaining the health of White Mountain forests.

- Land managers should be aware that residents have high levels of support for the use of forest thinning and prescribed burning to manage White Mountain forests.

- Owners of mobile home parks should be made aware of the unsafe conditions that exist on their lands, which pose extreme hazards to the tenants and their possessions.

- Land managers should focus on the aesthetic, environmental, and economic benefits of fire safe landscapes in their public outreach programs to more closely connect peoples' values with the goals of forest health and fire safety.

- The unconditional availability of fire insurance and fire fighting programs will continue to deter many residents from taking fire safety measures.

- Well-designed cost-sharing programs and programs that offer other forms of assistance (such as free chipping and/or vegetation disposal) should be created in White Mountain communities, as they would encourage people to adopt fire safe practices.

- Hazard reduction programs should focus on providing assistance to the most vulnerable people. In the White Mountains, the most vulnerable people are those with low- or fixed-incomes, renters, and full-time residents.

- After the 2002 Rodeo-Chediski Fire, some fire insurance companies started requiring people to take fire safety measures on their properties. There is a danger in companies terminating insurance coverage if policyholders do not comply: people without access to the resources needed to take fire safety measures will lose the security of insurance and they will become more vulnerable.

- Fire insurance companies would encourage fire safety by lowering insurance payments for policyholders who take fire safety measures. Using this approach, insurance companies would provide financial incentives to their policyholders. And because insurance companies would receive fewer claims of fire damage from their policyholders over time, they would also increase their profits.

- Many wildfire experts are focusing on the lack of fire safety by households as a cause of fire hazards. But even if households took fire safety precautions, fire hazards would not be significantly reduced because the real estate market will continue to promote home building in hazardous environments.

- Efforts to reduce wildfire hazards should broaden focus from household fire safety to real estate and local government decisions that lead to hazardous home building. Incorporating fire safety during the home building process will be less complex and costly than current attempts to coordinate fire safety with large numbers of individual property owners.

- In the case of future home building, building codes should be created and enforced so that White Mountain communities grow with the goals of fire hazard reduction and sustainable forest management in mind.

Please contact the researcher with any questions or comments

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Thanks to all the people that participated in the project!