

Colorado Wildfires 2002

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2004

QUICK RESPONSE RESEARCH REPORT #167



The views expressed in the report are those of the authors and not necessarily those of the Natural Hazards Center or the University of Colorado.

Introduction

More than 5,000 individuals were evacuated because of the catastrophic 2002 Colorado wildfires. Many of the individuals who were evacuated were kept from their homes for up to a month. Many homes were lost to the fire. This report addresses the actions people took and perceptions people had of the fire during the evacuation period. The questionnaire we used is provided at the end of this report.

The primary aims of this project were to determine:

- 1) The roles of new public and private sources of warning information for wildfire disasters in public response to warnings;
- 2) The importance of changing population demographic characteristics on types of warnings utilized and public responses enacted;
- 3) The utility of technological outlets for warnings and technological advances for spatial data use from Geographical Information Systems, (GIS);
- 4) The value of conventional wisdom for false alarms and warning lead-times on public perceptions of warnings; and
- 5) The predictive utility of social cognitive theory to help understand evacuation behavior and coping outcomes.

Methodology

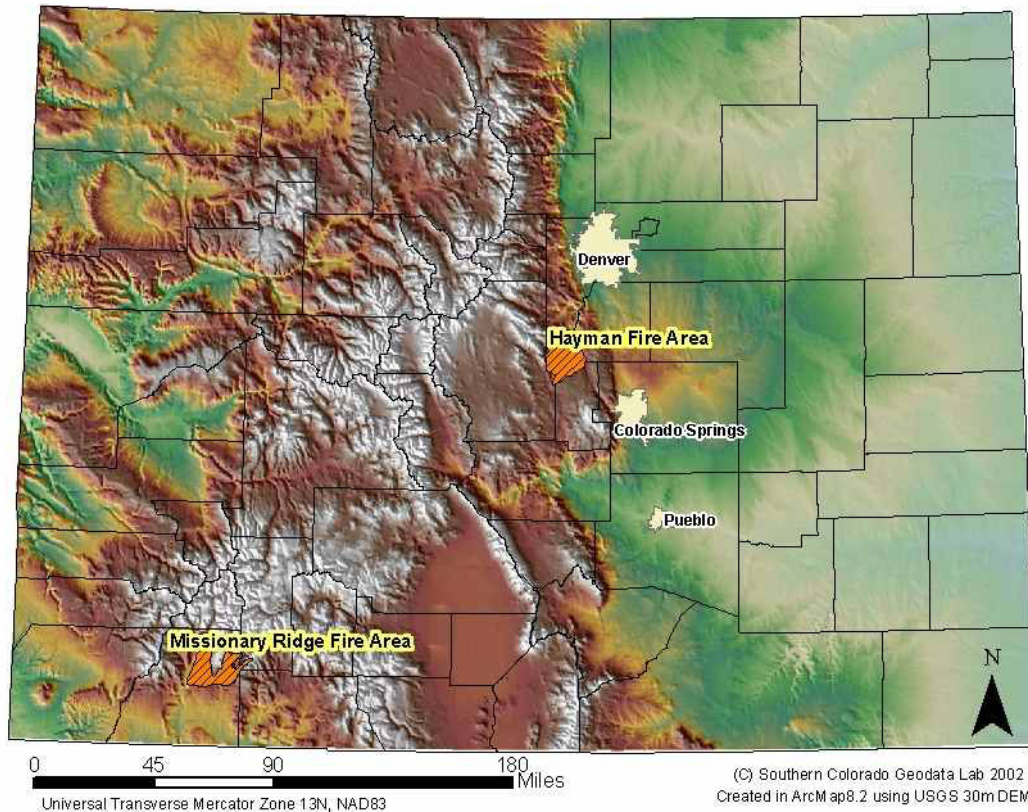
Study Area

The study area consisted of the regions affected by the two major Colorado wildfires of 2002, the “Hayman” fire and the “Missionary Ridge” fire, shown in Figure 1. The Hayman fire burned 138,577 acres thirty miles southwest of Denver; the Missionary Ridge fire burned 72,964 acres north and northeast of Durango, Colorado (USDA Forest Service, 2002). Most of the area of both these fires lies in National Forest.

Sample

The sample consisted of 109 individuals who were within an evacuation area during the fires. The average age of the people in the sample was 53; 59% were female. The median annual income was between \$55,000 and \$65,000. The majority of people surveyed were college graduates. As would be expected based on the demographics of rural Colorado, almost the entire sample was Caucasian (93%). Thus, virtually no information is available from this sample on minority populations. Sixty-two percent of the individuals in the sample reported being married. There was a wide range in the length of residency in a wildfire-prone area for people in the sample: from 3 months to 53 years. Time in present home ranged from less than 1 year to 45 years with a mean of 11 years. Of the sample, 82% reported owning their home. Only seven of the individuals who responded

Figure 1: Major Burn Areas in Colorado in 2002



indicated that their home had been destroyed by the fire. Thus, the majority of this sample experienced evacuation and were able to return to their homes. Approximately two thirds of the sample reported no damage to their home from the fire. In relation to proximity of the fire to the home, half of the sample indicated the fire was within one mile and the farthest distance reported was 8 miles. Only 6% of the sample indicated that they had received mental health counseling for problems related to the fire.

Evacuation experience

Individuals were asked about their pre-evacuation experience and the actual evacuation process. Thirty-seven percent were not put on evacuation standby at all, while the remainder of the sample was told to be ready to evacuate. Slightly over 20% of the sample was on evacuation standby for only 1 day before being evacuated. Just fewer than 30% of the individuals were on standby for 2 days and up to one week. Almost 4% were on standby for over 16 days. For the actual time evacuated the sample varied significantly. Table 1 depicts the evacuation time for the sample. Over half of the sample was evacuated for more than a week and a half, and almost 10% were still displaced at the time of the study.

Table 1: Evacuation Experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Evacuated for 24 hours	3	2.8	2.9	2.9
Evacuated for 2-4 days	7	6.4	6.8	9.7
Evacuated for 5 days to 1 week	27	24.8	26.2	35.9
Evacuated for a week and a half	13	11.9	12.6	48.5
Evacuated for 2 weeks	24	22.0	23.3	71.8
Evacuated for 2.5 weeks	11	10.1	10.7	82.5
Evacuated for 3 weeks	4	3.7	3.9	86.4
Evacuated for 3.5 weeks	4	3.7	3.9	90.3
Still evacuated	10	9.2	9.7	100.0
Total	103	94.5	100.0	

Procedure

On June 28, 2002, the research director and six research assistants entered the field to disperse questionnaires to individuals who were evacuated. A table was set up at a local grocery store in Woodland Park, Colorado, from early morning to early evening. Ninety-eight questionnaires were distributed on the first day. A local coffee house was identified during this time as an informal briefing area for individuals who had lost their homes. Several questionnaires were left at this establishment and researchers attended two community briefings given by local law enforcement officials and the Forest Service where 68 more questionnaires were distributed. A table was staffed at the local grocery store for the remainder of this week, and 104 more questionnaires were handed out to individuals identified as evacuees. A research assistant also attended a Forest Service briefing in nearby Conifer, Colorado, and distributed forty questionnaires. Finally, the research director and a research assistant attended a Forest Service briefing on reclamation at the Deckers Community Center in Deckers, Colorado, where an additional forty questionnaires were distributed.

At the same time the Missionary Ridge Fire near Durango was increasing in severity and the sample expanded to include more geographic diversity. Fifty-five questionnaires were distributed in the Missionary Ridge area over a two-day period. Addresses for individuals who lost their homes in the Missionary Ridge Fire were published in the local paper in Durango; and were used to mail additional questionnaires. Unfortunately, most were returned as non-deliverable due to the destruction of the homes.

A total 453 questionnaires were handed out or mailed to evacuees from the Hayman and Missionary Ridge Fires. A total of 109 were completed representing a 24% response rate for the survey.

Results

Issue One

The role of new public and private sources of warning information for wildfire disasters in public response to warnings.

Supporting earlier findings from Dow and Cutter (1998), most respondents used a combination of sources for information on the fires from a variety of sources. Over 75% used more than one source for their information on the fire, primarily television, phone, newspaper, and the Internet. Over 50% used three or more sources of information and slightly over 35% used four or more sources for their information. Fifteen percent used five or more sources of information on the fire. Respondents used official and unofficial sources. For information specifically referring to the evacuation there was less variability in the sources utilized. Approximately 76% used only one source, with 50% of these using the telephone. Slightly more than 15% used the television for their evacuation information. Only 7% of the sample utilized cell phones for information. This could be due to the difficulty of good reception in rural mountainous locations.

Issue Two

The importance of changing population demographic characteristics on types of warnings utilized and public responses enacted.

Survey participants with a longer time of residency believed that their property would be safer ($M_o = 2.43$) than newer residents ($M_n = 2.00$) ($p = .014$). Gender played a role in responses to two questions in the survey. Males reported that it was significantly less difficult to leave their home because of their love for the forest ($M_m = 2.43$) compared to females ($M_f = 2.85$) ($p = .054$) (3 = pretty hard). Females also indicated significantly greater trust in governmental warnings/evacuations in relation to fire hazards ($M_m = 2.67$ vs. $M_f = 3.06$), ($p = .033$).

Issue Three

The utility of technological outlets for warnings and technological advances for spatial data use from Geographic Information Systems (GIS).

Of survey respondents who had access to *maps of the fire location*, the Internet was cited as the most common source of this information (over 41%). Other map sources cited included: bulletin boards posted around town, community meetings, evacuation centers, local officials, forest service, friends and neighbors, and the Red Cross Shelter. Almost half of the survey participants were not completely satisfied with their access to information. When survey participants were asked if they “had access to all the information about the fire that they required,” 22% reported “not at all” and 24% specified “a little bit.” When asked what other information would have been helpful, three major needs appeared consistently in the responses:

- 1) The need for more accurate and consistent reporting: Many respondents reported receiving conflicting information from television, newspaper, and local officials as to where the fire was and what actions they should take.

- 2) More frequent updates: Requests were made for hourly or several times daily updates on exact location of the fire, wind speed and direction and specific fire control reports for particular streets and neighborhoods. A radio station specifically for the fire reporting was also requested.
- 3) Detailed maps showing exact locations of fire in relation to people's homes: A commonly mentioned need was for detailed information about the location of the fire. Respondents wanted maps showing the fire boundary and its daily movement and requested maps that were detailed and accurate enough to show the fire in relation to specific streets and houses. Frequent responses included the desire for a map "showing my home and location of the fire in relation to it" and "maps on TV, newspapers and Internet are not detailed enough."

Mapping technologies such as real-time GIS (Geographic Information Systems), GPS (Global Positioning Systems) and satellite imagery are already being used extensively by government agencies charged with dealing with fires. Websites such as "GeoMac" (<http://www.geomac.gov>) exist to provide the public access to current and detailed interactive maps produced with these technologies. The Internet, being a visual, interactive, distributed, and easily updated medium is well suited for disseminating this type of information. Unfortunately, one of the difficulties noted in this study is that once evacuated, many residents lost their *connection* to this medium. However, wireless Internet is becoming increasingly prevalent, thus the Internet is becoming "portable." Therefore, the public's need for accurate, updated, and detailed maps will more easily be met through the Internet, and the Internet's importance as a communication medium in short-fused events will likely increase.

Issue Four

The value of conventional wisdom about false alarms and warning lead-times on public perceptions of warnings.

In relation to false alarms, only 18% of the sample had been previously evacuated for a wildfire that did not end up directly affecting their home. Of those who indicated that they had previously experienced a "false alarm," 68% indicated that this experience had "not at all" influenced their decision to evacuate this time. Only 15% suggested that this previous "false alarm" experience influenced their decision this time either "pretty much or very much." The lessons learned by people who did not suffer major damage but who were evacuated appear to be helpful for future evacuations.

Issue Five

The predictive utility of social cognitive theory to help understand evacuation behavior and coping outcomes.

Coping self-efficacy (perceived capability for taking appropriate actions) for evacuating and dealing with post-disaster recovery was investigated in relation to reported evacuation behaviors, environmental factors, and post-disaster psychological outcomes. Coping self-efficacy for evacuation during the fire was found to correlate negatively with the amount of time reported for evacuation ($r = -.34, p = .001$). Thus, those with greater perceived efficacy for evacuating had a shorter reported time to actually evacuate. Coping self-efficacy for evacuating was also found to be a significant predictor of post-

traumatic stress symptoms experienced after the fire even after controlling for amount of lost resources suffered in the fire and how close the fire came to their home. Greater self-efficacy for evacuating directly corresponded with lower psychological trauma response experienced after the fire.

One quarter of the respondents reported that their belongings slowed down their evacuation response time. Many respondents reported they had to evacuate on very short notice. Very few of the respondents reported taking fire-proofing measures before the evacuation such as thinning trees, disposing of trash and debris to create a defensible space, changing roof type, or clearing the gutters.

Problems Reported

- 1) The inter-jurisdictional problems presented by wildfires were illustrated in this study. Residents reported receiving conflicting information from different government agencies, such as firefighters, law enforcement, and Forest Service.
- 2) Maps on television and in the newspapers showed inaccurate or imprecise locations of subdivisions making it difficult to know where the fire was headed.
- 3) After the evacuations, many residents lost their access to television but more notably to the Internet. Thus, several respondents felt cut off from information after they left their homes. The information was still available but their access to the information was gone.

Respondent Suggestions

Comments made by respondents offered lessons for local officials and for other residents who live in fire prone zones. When asked what advice they would offer to others who might be told to evacuate their homes, practical suggestions included keeping a video of personal property, keeping important papers and photos together, and packing in advance. One resident filled the bathtub with water before evacuating and was able to water the plants on short visits to the house when there was no power or water. Another suggested that before evacuation, the refrigerator should be emptied to avoid a potential mess later. Many respondents repeated advice to keep valuables together and ready to go. Also noted was the usefulness of knowing how to reach neighbors to compare information and to help each other. A comment repeated several times was to be prepared in advance with important papers organized and ready to evacuate by car. Thinking in advance of “non-replaceable” items reduces stress. One respondent urged people to inform firefighters when evacuating a home so they do not unnecessarily spend valuable time searching for inhabitants.

Summary of Findings/Conclusion

1. Supporting earlier findings from Dow and Cutter (1998), most of our respondents (N=104) used a combination of information on the fires from a variety of sources. Over 75% used more than one source for their information on the fire.
2. Survey participants with a longer time of residency believed that their property would be safer than newer residents. Females reported that it was significantly

- harder to leave their home because of love for the forest. Females also indicated significantly greater trust in governmental warnings and evacuations in relation to fire hazards.
3. Roughly half the respondents believed they had enough information and the other half reported there was not enough. The information that participants most needed was accurate, detailed, and up-to-date maps of the fire's exact location in relation to homes. The Internet was an important source for this kind of information, though some evacuees lost access to this medium upon leaving their homes.
 4. Officials have often worried that false alarms reduce willingness to take protective action in later warnings. We asked if our respondents had previous experiences with false alarms. Most reported previous experience with false alarms had little effect on their decision whether or not to evacuate this time, and earlier lessons learned may have even helped them in the evacuation process.
 5. Higher coping self-efficacy (CSE) for evacuating was correlated negatively with the amount of time reported for evacuation. CSE for evacuating was also found to be a significant predictor of posttraumatic stress symptoms experienced after the fire even after controlling for amount of lost resources suffered in the fire and how close the fire came to their home. Social cognitive theory may provide a useful framework for studying the warning process.

Future Studies

These preliminary studies provide support for a more comprehensive investigation of these areas across a variety of short-fused disasters. The detailed results are available for officials to review for their own planning purposes. The respondents affected by the 2002 Colorado wildfire are wealthier and more educated than the average Americans. The questionnaire can be used again to compare how different populations respond. It would be interesting to follow up in these subdivisions to see if there are a greater than average number of property sales following the fire. Another study might examine how the length of lead-time for evacuations affects perceptions and mental health.

REFERENCES

Dow, K. and S. L. Cutter. 1998. "Crying Wolf: Repeat Responses to Hurricane Evacuation Orders." *Coastal Management* 26:237-252.

Finney, M.A., R. Bartlette, L. Bradshaw, K. Close, P. Gleason, P. Langowski, C.W. Mchugh, E. Martinson, P. N. Omi, W. Shepperd, K. Zeller. 2002. Interim Hayman Fire Case Study Analysis: Report on Fire Behavior, Fuel Treatments, and Fire Suppression http://www.fs.fed.us/rm/hayman_fire/text/02finney/02finney.html

GeoMac Wildland Fire Support. Geospatial Multi-Agency Coordination. Accessed 2002, 2003. <http://www.geomac.gov/>

Hayman Fire Case Study Analysis: Executive Summary Rocky Mountain Research Station USDA Forest Service Fort Collins, Colorado
http://www.fs.fed.us/rm/hayman_fire/text/01exe_summ/01exe_summ.html

Summary of the Hayman Fire, Colorado June 8 - July 2, 2002, Wilderness Society Denver. http://www.wilderness.org/Library/Documents/WildfireSummary_Hayman.cfm
USDA Forest Service. 2002, BAER (Burned Area Emergency Rehabilitation Reports) Missionary Ridge Fire Colorado http://www.fs.fed.us/r2/sanjuan/bulletin_board/MR.htm

Please fill out the following information:

____ 1. Date filled out Address of Home: _____

____ 2. Age Name of Subdivision: _____

____ 3. Ethnic group: (1) Caucasian (2) African American (3) Hispanic
(4) Asian (5) Native American (6) Other

____ 4. Gender: (1) Male (2) Female

____ 5. Marital Status:
(1) Never married & not now living with a partner
(2) Married and living together
(3) Married but living apart
(4) Married, but previously divorced
(5) Living with a partner
(6) Widowed
(7) Divorced

____ 6. What is the level of education you have completed?
(1) Some high school (4) College graduate
(2) High school graduate (5) Graduate school or further
(3) Some college

____ 7. Total household income expected this year.
(1) Under \$5,000 (6) \$55,000 to 65,000
(2) \$5,000 to 15,000 (7) \$65,000 to 75,000
(3) \$15,000 to 25,000 (8) \$75,000 to 85,000
(4) \$25,000 to 35,000 (9) \$85,000 to 95,000
(5) \$35,000 to 45,000 (10) \$95,000 to 105,000
(11) Greater than \$105,000

____ 8. How many **years** have you lived in your home?

____ 9. Do you own your home?
(1) yes (2) no

____ 10. Have you received any counseling for problems related to the fire?
(1) yes (2) no

If yes please describe:

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

HBQ

- _____ 1.) How long have you lived in a wildfire prone area?
- _____ 2.) Did your home burn due to the fire (please write 1 for yes, 2 for no).
- _____ 3.) Estimated damage (in \$\$) to your home due to the fire?
- _____ 4.) Estimated value of your home before fire (in \$\$)?
- _____ 5.) If your home was not burned in the fire, please indicate how close the fire came to your house (for example 20 miles from my house). 0 Miles = my house burned down.
- _____ 6.) Please write the number of the item that most describes your pre-evacuation experience with the fire.
- 1.) Was not put on evacuation alert standby at all.
 - 2.) Was on evacuation alert standby for 1 day.
 - 3.) Was on evacuation alert standby for 2-4 days.
 - 4.) Was on evacuation alert standby for 5-7 days.
 - 5.) Was on evacuation alert standby for 8-10 days.
 - 6.) Was on evacuation alert standby for 11-13 days.
 - 7.) Was on evacuation alert standby for 14-16 days.
 - 8.) Was on evacuation alert standby for more than 16 days.
- _____ 7.) Please write the number of the item below that most describes your evacuation experience with the fire.
- 1.) Was evacuated for 24 hours.
 - 2.) Was evacuated for 2-4 days.
 - 3.) Was evacuated for 5 days to 1 week.
 - 4.) Was evacuated for a week and half.
 - 5.) Was evacuated for 2 weeks.
 - 6.) Was evacuated for 2 and a half weeks.
 - 7.) Was evacuated for 3 weeks.
 - 8.) Was evacuated for 3 and a half weeks.
 - 9.) I am still evacuated.
- 8.) If you had pets/livestock, what did you do with them while evacuated? (please circle all that apply).
- 1.) Kennel
 - 2.) Friends/Relatives
 - 3.) Took with us
 - 4.) Left Behind
 - 5.) Fostered Out
 - 6.) Set free
 - 7.) Other (please describe) _____

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

9.) What things slowed you down from evacuating more quickly (please circle all that apply)?

- 1.) Pets
- 2.) Children
- 3.) Traffic
- 4.) Transportation problems
- 5.) Personal belongings
- 6.) Not hearing about the evacuation right away
- 7.) The fire itself
- 8.) Other (please describe) _____

____ 10.) Have you been evacuated before due to a wildfire (please write 1 = Yes, 2 = No)?

____ 11.) How long ago were you evacuated (years)?

____ 12.) Have you been formally evacuated before from your home due to some disaster other than a wildfire? (Please write 1 = Yes, 2 = no).

____ 13.) How long ago were you evacuated from a disaster other than a fire (years)?

14.) **If Yes to #12**, did this previous experience with evacuations help you to evacuate this time (circle the appropriate number)?

1	2	3	4	
Not at all	A little bit	Pretty Much	Very Much	How

____ 15.) Have you been evacuated before due to wildfire that ended up being no real threat to your home? (1 =Yes ; 2 = No)

16.) **If Yes**, Did this delay your decision to evacuate this time (circle the appropriate number)?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

17.) Did you believe you were totally capable to do what was necessary to keep your family safe in the case of a wildfire evacuation?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

18.) Did the evacuation notification cause you to believe that the fire was extremely severe and would likely overtake your home?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

19.) How much damage did your home and the area around your home have?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

20.) How educated were you about wildfires and evacuations before this incident?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

21.) Circle the following sources of information you have utilized to learn about wildfire safety?

- 1.) Internet
- 2.) Television
- 3.) Radio
- 4.) Newspaper
- 5.) Friends
- 6.) Books
- 7.) Government Agency (e.g., Forest Service)
- 8.) Other (please describe) _____

22.) If you received information on what to do to protect yourself in the case of a wildfire did this education help you in this situation?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

23.) Were you prepared to be evacuated in the case of a wildfire **before** you were given the evacuation notice?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

24.) How severe did you perceive the fire to be when you were evacuated?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

25.) It was extremely difficult for me to leave my home during the evacuation because of my love for my home.

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

26.) It was extremely difficult for me to leave my home during the evacuation because of my love for the forest around my home.

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

27.) It was extremely difficult for me to leave my home during the evacuation because of my pets (if you do not have pets please do not answer this item).

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

28.) Were you afraid of looting while you were evacuated?

1	2	3	4
Not at all	A little bit	Pretty Much	Very Much

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

29.) How strongly did you believe that you would be safe if you evacuated?

- | | | | |
|-------------------|---------------------|--------------------|------------------|
| 1 | 2 | 3 | 4 |
| Not at all | A little bit | Pretty Much | Very Much |

30.) How strongly did you believe that your property would be safe?

- | | | | |
|-------------------|---------------------|--------------------|------------------|
| 1 | 2 | 3 | 4 |
| Not at all | A little bit | Pretty Much | Very Much |

31.) How capable did you think you were to get out during the evacuation?

- | | | | |
|-------------------|---------------------|--------------------|------------------|
| 1 | 2 | 3 | 4 |
| Not at all | A little bit | Pretty Much | Very Much |

32.) How much do you trust government warnings/evacuations in relation to fire hazards?

- | | | | |
|-------------------|---------------------|--------------------|------------------|
| 1 | 2 | 3 | 4 |
| Not at all | A little bit | Pretty Much | Very Much |

33.) Please describe exactly what you were told by emergency personnel when you were evacuated?

34.) How did you get information about the **fire** (please circle as many as apply to you):

- | | | | |
|-------------|---------------|------------------|---------------|
| 1. Pager | 3. Radio | 5. Newspaper | 7. Cell Phone |
| 2. Internet | 4. Television | 6. Regular Phone | |

35.) How did you get information about the **evacuation** (please circle as many as apply to you):

- | | | | |
|-------------|---------------|------------------|---------------|
| 1. Pager | 3. Radio | 5. Newspaper | 7. Cell Phone |
| 2. Internet | 4. Television | 6. Regular Phone | |

36.) When you were evacuated what made you take the evacuation seriously?

37.) What percentage of your neighbors evacuated? (Please circle appropriate percentage).

-
- | | | | | | | | | | | |
|--------|-----|-----|-----|-----|------------|-----|-----|-----|-----|-------------|
| 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| No One | | | | | About Half | | | | | All of Them |

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

38.) How much time did emergency personnel give you to leave your home? (Circle appropriate number).

- 1.) Less than 15 minutes
- 2.) 15-30 minutes
- 3.) 30-45 minutes
- 4.) 45-1 hour
- 5.) 1 hour- 2 hours
- 6.) 2 hours-4 hours
- 7.) Greater than 4 hours

39.) How long did it actually take you to leave your home? (Circle appropriate number).

- 1.) Less than 15 minutes
- 2.) 15-30 minutes
- 3.) 30-45 minutes
- 4.) 45-1 hour
- 5.) 1 hour- 2 hours
- 6.) 2 hours-4 hours
- 7.) Greater than 4 hours

40.) Which of the following fire proofing measures had you done prior to the evacuation (please circle as many as apply to you):?

- 1.) Thinned trees and brush from defensible space around home (30-100 foot zone)
- 2.) Disposed trash and debris from defensible space
- 3.) Removed trees growing through porch
- 4.) Cleared roof and gutters of leaves and debris
- 5.) Removed branches overhanging chimney and roof
- 6.) Cleared a 10 foot area around propane tank
- 7.) Stacked firewood at least 100 feet away and uphill from your home
- 8.) Put noncombustible roof on your house

_____ 41.) Did you have access to maps of the fire's location? (1 = Yes, 2 = No)

_____ 42.) If so where did you find these? (please circle as many as apply to you):

- 1.) Newspaper,
- 2.) Television,
- 3.) Internet,
- 4.) Fire Department
- 5.) Other sources (please list) _____

43.) Do you feel you had access to all the information about the fire you required?

- | | | | |
|-------------------|---------------------|--------------------|------------------|
| 1 | 2 | 3 | 4 |
| Not at all | A little bit | Pretty Much | Very Much |

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

44.) If you didn't have access to all the information what other information would have been helpful? (please list)

45.) What would keep you from evacuating your home in the future if another fire were to threaten your area?

46.) If you did not evacuate this time, even though you were told to evacuate, please indicate why you didn't leave?

47.) If you were going to give advice to people in the future who are told to evacuate their homes what would you tell them to do to be ready?

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

LOSS OF RESOURCES

The next few items are all resources- things that make people's lives easier and more enjoyable. For everything please rate how much of a loss you are CURRENTLY experiencing, compared to the way it was before the fire. If you've replaced an item, that may mean you presently are experiencing "no loss" for that item. However, if you had to replace a lost item with something you don't *like* as much, you *may* still be experiencing some loss of the original one. If so, indicate how much. If you did not have the item prior to the fire, then you *didn't* lose it as a result of the fire and you should therefore answer "0" for "no loss".

- 0 = no loss
 1 = a little bit of loss
 2 = a moderate amount of loss
 3 = quite a bit of loss
 4 = extreme amount of loss

- ____ 1. Car
 ____ 2. Furniture
 ____ 3. Time enough for sleep
 ____ 4. Sentimental possessions (photos, etc.)
 ____ 5. Clothing
 ____ 6. Feeling valuable to other people
 ____ 7. Family stability
 ____ 8. "Free time"
 ____ 9. Pets
 ____ 10. Plants/trees around your home
 ____ 11. A feeling of intimacy with one or more family members
 ____ 12. A feeling of intimacy with one or more friends
 ____ 13. The feeling that you're accomplishing your goals in life
 ____ 14. Time with your loved ones
 ____ 15. Tools needed for work
 ____ 16. Adequate food
 ____ 17. The sense of a daily routine
 ____ 18. Necessary appliances for home
 ____ 19. The residence you live in
 ____ 20. Things needed for your children
 ____ 21. Stable employment
 ____ 22. Ability to organize tasks
 ____ 23. Time to do your work
 ____ 24. Money for "extras"
 ____ 25. Understanding from your boss
 ____ 26. Savings, or "emergency money"
 ____ 27. Support from co-workers
 ____ 28. Adequate income
 ____ 29. The chance to get more training or education
 ____ 30. Financial credit
 ____ 31. Feeling of being independent
 ____ 32. Companionship with others

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

- _____ 33. Feeling that your life has meaning or purpose
- _____ 34. Involvement with your church
- _____ 35. Your retirement security
- _____ 36. Help with tasks at home
- _____ 37. Loyalty of friends
- _____ 38. Help with child care
- _____ 39. Involvement in organizations or clubs
- _____ 40. Health of family member/ friend
- _____ 41. How much damage is covered by Insurance? (Use following scale)
 1 2 3 4 5 6 7
 None Some All

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

FIRE CSE

Think about important matters related to dealing with the fire. For each of the following situations, rate how **confident** you are that you can successfully deal with them. Because people differ from each other in the way they deal with certain situations, no specific answer is correct.

1	2	3	4	5	6	7
Not well at all		Not too well		Pretty well		Very well

Using the above scale, rate how well you feel you can handle each situation below **currently**, not as it was the day of the fire.

- _____ 1. Maintaining a sense of normality in my daily routine.
- _____ 2. Dealing with personal losses caused by the fire -- loss of connections to loved ones, loss of treasured belongings, etc.
- _____ 3. Maintaining intimacy and calm within my family – feeling close and avoiding conflict with loved ones.
- _____ 4. Dealing with all of the disruption caused by the fire.
- _____ 5. Managing my fears that another fire might come.
- _____ 6. Dealing with my feelings of loss due to the destruction of natural beauty (trees, plants, etc.).
- _____ 7. Maintaining financial security – obtaining financial resources to deal with the destruction caused by the fire.
- _____ 8. Dealing with the daily hassles resulting from the fire – getting around due to closed roads, clean drinking water, electricity, etc.)
- _____ 9. Dealing with my emotions since the fire – such as anger, anxiety, fear, depression, hopelessness.
- _____ 10. Dealing with the demands of cleaning up destruction caused by the fire (downed trees, mud, etc.).
- _____ 11. Dealing with smoke exposure.
- _____ 12. Finding adequate shelter for my family.
- _____ 13. Dealing with my anger at the individual responsible for this fire.
- _____ 14. Dealing with insurance companies.
- _____ 15. Getting information out to others about my situation (employers, friends, etc.).

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

BDI

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY. Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

1. 0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.

2. 0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel the future is hopeless and that things cannot improve.

3. 0 I do not feel like a failure.
1 I feel like I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel I am a complete failure as a person.

4. 0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.

5. 0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. 0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

8. 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.
9. 0 I don't cry any more than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.
10. 0 I am no more irritated by things than I ever am.
1 I am slightly more irritated now than usual.
2 I am quite annoyed or irritated a good deal of the time.
3 I feel irritated all the time now.
11. 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.
12. 0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make decisions at all anymore.
13. 0 I don't feel that I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.
14. 0 I can work about as well as before.
1 It takes an extra effort to get started at doing something.
2 I have to push myself very hard to do anything.
3 I can't do any work at all.
15. 0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.
16. 0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

17. 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.
18. 0 I haven't lost much weight, if any, lately.
1 I have lost more than five pounds.
2 I have lost more than ten pounds.
3 I have lost more than fifteen pounds.
19. 0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches and pains, or upset stomach, or constipation.
2 I am very worried about physical problems and its hard to think of much else.
3 I am so worried about my physical problems that I cannot think about anything else.
20. 0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

PDS

Part 1

Many people have lived through or witnessed a very stressful and traumatic event at some point in their lives. Below is a list of traumatic events. Put a check by ALL of the events that have happened to you or that you have witnessed.

1. _____ Serious accident, fire, or explosion (for example, an industrial, farm, car, plane, or boating accident).
 2. _____ Natural disaster (for example, tornado, hurricane, flood, or major earthquake).
 3. _____ Non-sexual assault by a family member or someone you know (for example, being mugged, physically attacked, shot, stabbed, or held at gunpoint).
 4. _____ Non-sexual assault by a stranger (for example, being mugged, physically attacked, shot, stabbed, or held at gunpoint).
 5. _____ Sexual assault by a family member or someone you know (for example, rape or attempted rape).
 6. _____ Sexual assault by a stranger (for example, rape or attempted rape).
 7. _____ Military combat or a war zone.
 8. _____ Sexual contact when you were younger than 18 with someone who was 5 or more years older than you (for example, contact with genitals, breasts).
 9. _____ Imprisonment (for example, prison inmate, prisoner of war, hostage).
 10. _____ Torture
 11. _____ Life-threatening illness
 12. _____ Other traumatic events
 13. _____ If you marked item 12, specify the traumatic event below.
-
-
-

Part 2

14. If you marked more than one traumatic event in Part 1, put a checkmark by the event that bothers you the most. If you marked only one traumatic event in Part 1, mark the same one below.

- _____ Accident
- _____ Disaster
- _____ Non-sexual assault/someone you know
- _____ Non-sexual assault/stranger
- _____ Sexual assault/someone you know
- _____ Sexual assault/stranger
- _____ Combat
- _____ Sexual contact under 18 with someone 5 or more years older
- _____ Imprisonment
- _____ Torture
- _____ Life-threatening illness
- _____ Other

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

In the space below, briefly describe the traumatic event you marked above. Use the back of this sheet if necessary.

15. How long ago did the traumatic event happen? (circle one)

1. Less than 1 month
2. 1 to 3 months
3. 3 to 6 months
4. 6 months to 3 years
5. 3 to 5 years
6. More than 5 years

For the following questions please answer them as they apply to you specifically relating to the fire

Circle Y for Yes or N for No.

During this traumatic event:

16. Y N Were you physically injured?
17. Y N Was someone else physically injured?
18. Y N Did you think that your life was in danger?
19. Y N Did you think that someone else's life was in danger?
20. Y N Did you feel helpless?
21. Y N Did you feel terrified?

Part 3

Below is a list of problems that people sometimes have after experiencing a traumatic event. Read each one carefully and circle the number (0 to 3) that best describes how often that problem has bothered you IN THE PAST MONTH. Rate each problem with respect to the fire.

- 0 Not at all or only one time**
1 Once a week or less/once in a while
2 2 to 4 times a week/half the time
3 5 or more times a week/almost always

22. 0 1 2 3 Having upsetting thoughts or images about the fire that came in your head when you didn't want them to.
23. 0 1 2 3 Having bad dreams or nightmares about the fire.
24. 0 1 2 3 Reliving the fire, acting or feeling as if it was happening again.
25. 0 1 2 3 Feeling emotionally upset when you were reminded of the fire (for example, feeling scared, angry, sad, or guilty, etc.).
26. 0 1 2 3 Experiencing physical reactions when you were reminded of the fire (for example, breaking out in a sweat, heart beating fast).

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

27. 0 1 2 3 Trying not to think about, talk about, or have feelings about the fire.
28. 0 1 2 3 Trying to avoid activities, people, or places that remind you of the fire.
29. 0 1 2 3 Not being able to remember an important part of the fire.
30. 0 1 2 3 Having much less interest, or participating much less often, in important activities.
31. 0 1 2 3 Feeling distant or cut off from people around you.
32. 0 1 2 3 Feeling emotionally numb (for example, being unable to cry or unable to have loving feelings).
33. 0 1 2 3 Feeling as if your future plans or hopes will not come true (for example, you will not have a career, marriage, children, or a long life).
34. 0 1 2 3 Having trouble falling or staying asleep.
35. 0 1 2 3 Feeling irritable or having fits of anger.
36. 0 1 2 3 Having trouble concentrating (for example, drifting in and out of conversations, losing track of a story on television, forgetting what you read).
37. 0 1 2 3 Being overly alert (for example, checking to see who is around you, being uncomfortable with your back to a door, etc.).
38. 0 1 2 3 Being jumpy or easily startled (for example, when someone walks up behind you).
39. 0 1 2 3 How long have you experienced the problems you reported above (circle ONE) 1 = less than 1 month, 2 = One to three months 3 = Six or more months.
40. 0 1 2 3 How long after the traumatic event did these problems begin (circle ONE) 1 = Less than 6 months 2 = Six or more months

Part 4

Indicate below if the problems you rated in Part 3 have interfered with any of the following areas of your life DURING THE PAST MONTH. Circle Y for Yes or N for No.

41. Y N Work
42. Y N Household chores and duties
43. Y N Relationships with friends
44. Y N Fun and leisure activities
45. Y N Schoolwork
46. Y N Relationships with your family
47. Y N Sex life
48. Y N General satisfaction with life
49. Y N Overall level of functioning in all areas of your life

Part # 1503

Wildfire Study

Date: _____

PLEASE NOTE: QUESTIONS ARE ON FRONT AND BACK OF EACH PAGE

If you would like to be considered for a follow-up study please complete the following information:

Yes, I would like to be considered for a follow-up study.

No, I do not want to be contacted again.

If you would like a summary of the results of our study please complete your address and check the appropriate response below:

Yes, please send me a summary

No, please do not send me a summary

Name: _____

Address: _____

Phone Numbers: _____ Cell Phone _____ Pager _____

Email Address: _____

THANK YOU!!!!

THANK YOU!!!!