

# Fire Conditions on Public Forests & Rangelands

## A Survey of Citizens in the Central Arizona Highlands: Yavapai County



### Summary Frequency Distributions January 2002

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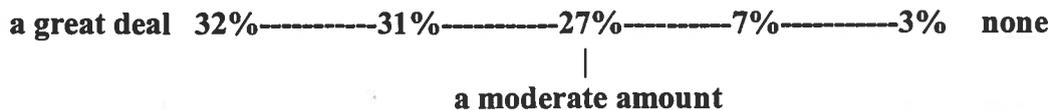
This preliminary report summarizes responses to a mail survey of citizens in Yavapai County in the central Arizona highlands. Overall, 367 citizens were contacted and 173 completed the questionnaire for a 47% response rate. This report is a summary of frequency distributions only. Some response categories have been collapsed for presentation purposes (e.g. *strongly agree* and *agree* responses were combined into a single category). A more detailed analysis will be forthcoming in the final project report.

**Please note: Research for this project is still in progress. Do not cite information contained within this report without permission of the authors.**



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1. Prior to this survey, how much had you thought about wildfires in forests, rangelands, or grasslands?



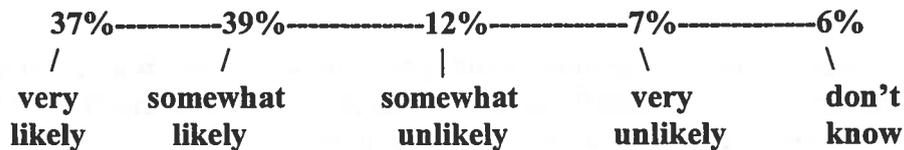
2. About how far is it from your home to a natural area where a wildfire might burn?

**mean = 3 miles** (This is excluding all descriptive answers such as "many" and all people that answered greater than 99 miles)

3. About how often do you spend time in a national forest or national park?



4. In your opinion, how would you rate the likelihood that a wildfire could break out in the forests, rangelands, or grasslands near your home in the next five years?



5. Public trust in natural resource agencies is essential to the success of fire protection programs. Please indicate your level of trust in these agencies to make good decisions *about wildfires and fire prevention*. If you feel you have no basis for judgment, please mark "no opinion."

	Level of Trust		
	moderate/full	none/limited	no opinion
▶ city government	40%	44%	16%
▶ county government	48%	37%	15%
▶ Arizona state government	49%	36%	15%
▶ Bureau of Land Management (BLM)	61%	24%	15%
▶ U.S. Forest Service	76%	17%	8%
▶ National Park Service	71%	18%	11%

6. We're interested in learning more about what Yavapai County residents know about wildfires. Please answer the following questions to the best of your ability by indicating whether you believe the answer is generally true, generally false, or that you are not sure.

	generally true	generally false	not sure
▶ Humans cause most of the wildfires in Arizona.	67%	21%	12%
▶ Fires kill a majority of animals in a burned area.	22%	50%	28%
▶ Fires kill a majority of large trees in a burned area.	49%	36%	15%
▶ The quality of water in streams and rivers is often badly degraded in the first year or two after a wildfire.	54%	12%	34%
▶ The quantity and timing of water flows in streams is often disrupted in the first year or two after a wildfire.	42%	21%	37%
▶ Many plants require occasional fires so that new seeds or seedlings can sprout.	84%	4%	12%
▶ Fires play an important role in controlling noxious weeds in Arizona's forests and rangelands.	59%	11%	30%

7. The next few questions ask for your opinions about specific practices that resource managers can use to change environmental conditions in forests and rangelands. Please read the following descriptions, then answer the questions about management practices.

- **Prescribed fire** – Also called controlled burning, this practice can involve 1) letting a naturally caused fire burn under close and careful watch; or 2) intentionally setting fires in ways that can be controlled to produce desired conditions and protect against undesired results.
- **Mechanical vegetation removal** – Managers can use chainsaws, mowers, or other specialized machines to reduce the number of shrubs and small trees where they are so numerous that they increase the risk and size of wildfires.
- **Grazing** – In some cases, domestic animals can be placed in areas where they graze on plants before they dry out in summer, thus reducing the amount of flammable vegetation later on.
- **Restoration planting** – Planting native, fire-adapted, or less flammable species that can slow the spread of wildfires.

For each of the following questions, choose the answer that best matches your opinion.

a. In my opinion, intentionally setting **prescribed fires** on public forests and rangelands is:

- ▶ a legitimate tool that resource managers should be able to use whenever they see fit. 46%
- ▶ something that should be done only infrequently, in carefully selected areas. 46%
- ▶ a practice that should not be considered because it creates too many negative impacts. 3%
- ▶ an unnecessary practice. 2%
- ▶ I know too little to make a judgment about this topic. 4%

b. In my opinion, **mechanical vegetation removal** on public forests and rangelands is:

- ▶ a legitimate tool that resource managers should be able to use whenever they see fit. 62%
- ▶ something that should be done only infrequently, in carefully selected areas. 27%
- ▶ a practice that should not be considered because it creates too many negative impacts. 3%
- ▶ an unnecessary practice. 1%
- ▶ I know too little to make a judgment about this topic. 7%

c. In my opinion, **grazing** on public forests and rangelands to reduce wildland fuels is:

- ▶ a legitimate tool that resource managers should be able to use whenever they see fit. 71%
- ▶ something that should be done only infrequently, in carefully selected areas. 15%
- ▶ a practice that should not be considered because it creates too many negative impacts. 5%
- ▶ an unnecessary practice. 2%
- ▶ I know too little to make a judgment about this topic. 7%

d. In my opinion, **restoration planting** to prevent wildfires on public forests and rangelands is:

- ▶ a legitimate tool that resource managers should be able to use whenever they see fit. 83%
- ▶ something that should be done only infrequently, in carefully selected areas. 7%
- ▶ a practice that should not be considered because it creates too many negative impacts. 1%
- ▶ an unnecessary practice. 1%
- ▶ I know too little to make a judgment about this topic. 7%

8. Not everyone agrees about the impacts and effectiveness of fuels management practices. We'd like to know what *you* believe about the practices described on the previous page. For each of the following statements, please circle the number that best reflects your belief about the accuracy of the statement. You are not being judged on right or wrong answers – we are interested in your opinion. If you feel you do not know enough to give an opinion, circle “don't know” for that statement.

	<b>agree/ strongly agree</b>	<b>disagree/ strongly disagree</b>	<b>don't know</b>
Prescribed fire has little overall effect on the intensity or frequency of wildfires.	22%	66%	12%
Prescribed fire effectively reduces amounts of fuel in most natural areas.	81%	9%	10%
Prescribed fire stimulates the growth of native plants eaten by wildlife.	69%	8%	23%
Prescribed fire reduces the amount of useful minerals and nutrients in the soil.	13%	64%	23%
Mechanical vegetation removal is an effective way to reduce the intensity and frequency of wildfires.	73%	11%	16%
Mechanical vegetation removal often leaves behind unacceptable amounts of fuel in natural areas.	20%	42%	38%
Mechanical vegetation removal stimulates the growth of native plants eaten by wildlife.	53%	16%	31%
Livestock grazing has little overall effect on the intensity or frequency of wildfires.	36%	49%	15%
Livestock grazing stimulates the growth of native plants used by wildlife.	44%	26%	30%
Restoration planting is an effective way to reduce the intensity and frequency of wildfires.	61%	11%	28%
Restoration planting cannot re-create a natural area, only create a different kind of artificial one.	26%	43%	31%

9. To further help natural resource managers make decisions, please tell us how you feel about the following by circling the number that best matches your agreement with each statement.

	<b>agree/ strongly agree</b>	<b>uncertain</b>	<b>disagree/ strongly disagree</b>
Following nature's way is preferable to human intervention in ecosystems.	45%	24%	31%
All fires, regardless of origin, should be put out as soon as possible.	23%	21%	57%
Selectively thinning dead and dying trees is better than leaving them in the forest.	83%	12%	6%
Fire risks are so great in Arizona that managers need to use any means necessary to reduce them.	53%	18%	29%

10. We'd like to know what you think about the scenic impact of these practices. For each practice, please circle the number that best describes how acceptable you believe the likely impacts are.

	<b>-----Scenic Impacts-----</b>		
	<b>acceptable</b>	<b>neutral</b>	<b>unacceptable</b>
▶ prescribed fire	68%	14%	16%
▶ mechanical vegetation removal	66%	19%	13%
▶ livestock grazing	71%	15%	12%
▶ restoration planting	84%	9%	5%

11. The use of prescribed fire may create concerns for some people. Please indicate how concerned you are about the following possible effects in Yavapai County.

	<b>moderate concern/ great concern</b>	<b>not a concern/ slight concern</b>
▶ damage to private property	44%	56%
▶ effects on recreation opportunities	36%	64%
▶ loss of wildlife and fish habitat	44%	56%
▶ risk to human safety	42%	58%
▶ economic loss of useable timber	33%	67%
▶ reduced scenic quality	42%	58%
▶ increased levels of smoke	56%	44%
▶ deteriorated public water supply	45%	55%
▶ increased soil erosion	55%	45%

12. How much confidence do you have in federal agencies such as the U.S. Forest Service and Bureau of Land Management to use the following practices as part of a responsible and effective fuels management program for Yavapai County?

	moderate/full	none/limited	no opinion
▶ prescribed fire	70%	28%	2%
▶ mechanical vegetation removal	70%	28%	2%
▶ livestock grazing	62%	36%	2%
▶ restoration planting	72%	23%	5%

13. Often natural resource managers must decide how to make tradeoffs between different management approaches or goals. For each of the five pairs of statements below, please tell us what you would prefer managers to do by circling the number that best reflects your beliefs about the choice between the statement in Column A and the statement in Column B. If you truly feel you do not know enough to give an opinion, circle "don't know."

<u>Column A</u>	Prefer Col. A	Neutral	Prefer Col. B	<u>Column B</u>	Don't Know
Prescribed fire should be the preferred option when reducing wildland fuels.	35%	17%	38%	Mechanical removal should be the preferred option when reducing wildland fuels.	10%
Use prescribed fire in both wild <i>and</i> populated areas to reduce wildfire danger.	29%	24%	36%	Do not attempt to use prescribed fire in populated areas even if it means a higher risk of wildfires.	11%
Do not use fuels reduction practices in highly scenic locations.	22%	17%	50%	Use fuels reduction practices in highly scenic areas even if doing so temporarily hurts scenic beauty.	12%
Allow livestock grazing wherever it is likely to reduce fuel levels.	66%	11%	17%	Prohibit livestock grazing in recreation areas even when it can be used to reduce fuel levels.	7%
Try to restore native plants wherever they can be useful for reducing wildfire risks.	65%	12%	14%	Restore native plants only when doing so won't reduce an area's value for recreation or livestock.	9%

14. Did the events that took place at Los Alamos, New Mexico, in 2000 change your opinion about the use of prescribed fire in the forests and rangelands of Yavapai County?

- ▶ No, the Los Alamos fire did not affect my opinion about using prescribed fire. 56%
- ▶ Yes, the Los Alamos fire made me *less likely* to support the use of prescribed fire. 35%
- ▶ Yes, the Los Alamos fire made me *more likely* to support the use of prescribed fire. 9%

15. Some people worry about prescribed fire reaching their property, or a place that they care about. How concerned would you be if a prescribed fire was:

	<b>moderate concern/ great concern</b>	<b>not a concern/ slight concern</b>
▶ anywhere in the U.S.?	29%	71%
▶ within 100 miles of you?	27%	73%
▶ where you can see the smoke?	41%	59%
▶ within 10 miles of your community or property?	54%	46%
▶ one mile from your community or property?	71%	29%
▶ adjacent to your property?	85%	15%

16. For some people, reducing fuels by mechanical vegetation removal may be a concern. How concerned would you be if a mechanical vegetation removal project was:

	<b>moderate concern/ great concern</b>	<b>not a concern/ slight concern</b>
▶ anywhere in the U.S.?	17%	83%
▶ within 100 miles of you?	16%	84%
▶ where you can see the affected site?	28%	72%
▶ within 10 miles of your community or property?	28%	72%
▶ one mile from your community or property?	36%	64%
▶ adjacent to your property?	46%	54%

17. Which of the following items reflect your opinion about smoke from prescribed fire?

	<b>agree</b>
▶ Smoke from prescribed fire has never been an issue with me.	35%
▶ Smoke from prescribed fire is a necessary inconvenience.	48%
▶ Smoke levels from prescribed fire are a concern, but I think they are managed acceptably.	46%
▶ I worry about the effects of smoke from prescribed fire on public health.	33%
▶ I worry about the effects of smoke from prescribed fire on travel safety.	22%
▶ Because of the smoke, prescribed fire isn't worth it.	6%

18. Even though prescribed fires are planned in order to minimize smoke, some smoke is usually unavoidable. We would like to know how much smoke is acceptable to you, and what is the amount of time that you can tolerate at each level. For each statement, please place an X in the box that best matches your level of tolerance for that level of smoke intensity.

**Acceptable length of time**

<b>Visibility</b>	<b>Acceptable length of time</b>					
	<b>Not Acceptable</b>	<b>A Few Hours</b>	<b>One Day</b>	<b>Three Days</b>	<b>One Week</b>	<b>More than One Week</b>
a. Smoke plumes visible in the distance, but no decrease in visual quality near my residence or workplace.	3%	9%	9%	23%	18%	37%
b. Light haze visible on the horizon and some decrease in visual quality, but not enough to affect my activities.	5%	5%	15%	26%	18%	31%
c. Smoke is apparent near my residence or workplace and visual quality has decreased so some activities are affected.	13%	19%	21%	23%	19%	5%
d. High levels of smoke have caused poor visual quality that affects my ability to do many activities.	35%	21%	23%	7%	9%	5%

**Odor/Breathability**

a. Smoke plumes are visible in the distance, but I cannot smell smoke when I breathe.	4%	8%	11%	17%	19%	40%
b. Occasionally I can smell smoke, but it doesn't affect me otherwise.	8%	13%	17%	17%	18%	27%
c. I notice the smoke slightly when I breathe.	18%	19%	20%	17%	16%	11%
d. Smoke is highly noticeable each time I breathe, even indoors.	54%	14%	18%	6%	5%	2%





26. How long have you lived in the community where you now live?

**mean = 15 years**

27. How long have you lived in Arizona?

**mean = 25 years**

28. Which of the following best describes the community where you live now?

**3% urban area**  
**10% suburban area**  
**59% small town**  
**28% rural area**

29. Which of the following best describes the community in which you grew up?

**20% urban area**  
**22% suburban area**  
**40% small town**  
**18% rural area**

30. Gender

**33% female**  
**67% male**

31. Age

**mean = 60 years**

32. What is the highest level of education you have completed?

<b>6% some high school</b>	<b>12% bachelor's degree</b>
<b>16% high school graduate</b>	<b>6% some graduate school</b>
<b>45% some college</b>	<b>15% completed graduate degree</b>

33. Do you, or does anyone in your household, suffer from a respiratory ailment?

**75% no**  
**25% yes**

