

Public Attitudes Toward Wildfire: A Survey of Homeowners in Central Oregon

*****Results*****



**Oregon Policy Analysis Laboratory (OPAL)
School of Public Policy
Oregon State University
Corvallis, Oregon**

Methods

This research is based on a case study in Deschutes County, Oregon. Deschutes County is located in the heart of Central Oregon, between the towering Cascade Mountain Range to the west and the high desert plateau to the east (Deschutes County, 2021). This county encompasses an area of 3,055 square miles and has a population of 181,307 in 2020 (U.S. census estimate). The county is well known for its scenic beauty and is now experiencing the most rapid population growth of any county in Oregon.

During Spring and Summer 2021, the OSU Oregon Policy Analysis Laboratory (OPAL) conducted a random sample survey of WUI homeowners in Deschutes County, Oregon. The random sample was generated from county tax lot data, and the survey design followed Dillman's Tailored Design Method (2007). The survey was implemented using a mixed-methods (mail and online) approach, with respondents choosing their preferred response method. Two waves of mail surveys (initial contact and reminder) were sent to 1,500 households, including a URL with a link to a Qualtrics survey. Participation in the household survey was wholly voluntary. Respondents consented by either following a link to complete the survey online or completing the mail survey and returning it in a postage pre-paid envelope. In total, 458 surveys were returned for a 30.5% response rate.

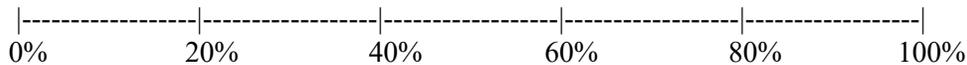
Section 1

In this first section of the survey we ask some general questions about interests in, activities relating to, and knowledge of wildfire issues in Central Oregon.

1. **Wildfire** may also create concerns for some people. Please indicate how concerned you are about the following possible effects of wildfire in Central Oregon.

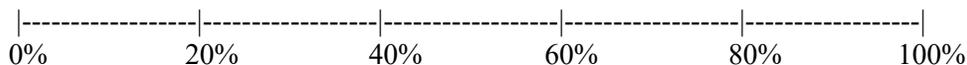
	Not a concern	Slight concern	Moderate concern	Great concern
Damage to your private property	18.1%	26.0%	23.1%	32.8%
Lost or diminished recreational opportunities	9.0%	19.3%	37.4%	34.3%
Loss of wildlife and fish habitat	4.0%	14.6%	32.7%	48.8%
Uncontrolled and high severity wildfires	4.8%	10.1%	26.4%	58.7%
Economic loss of useable timber on public land	9.7%	21.3%	29.7%	39.3%
Overall reduced scenic quality	8.8%	17.1%	17.1%	39.7%
Increased levels of smoke	7.4%	17.0%	17.0%	43.4%

2. Considering the forests immediately around your home, **what is the chance of wildfire** of any severity in the next 5 years? Place a mark (X) between 0% and 100% or mark “don’t know.”



Mean Score: 58.05
Standard Deviation: 32.08

3. If a wildfire were to occur in the forests immediately around your home, what is the chance it would damage your property or home? Place a mark (X) between 0% and 100% or mark “don’t know.”



Mean Score: 32.51
Standard Deviation: 29.33

These questions ask about specific practices resource managers use to reduce flammable fuels and the risk of wildfire in public forests and rangelands. The terms used are:

- **Prescribed fire:** also called controlled burning, this practice involves intentionally setting ground fires to reduce forest fuels like grass, brush, and small trees.
- **Monitoring and managing wildfire:** formerly called “let burn,” this practice involves managing some wildfires by monitoring them and allowing them to burn in a way that achieves ecological objectives without undue risk of loss to property and life. This is in contrast to a wildfire that is automatically suppressed.
- **Thinning:** using chainsaws or other machinery to reduce the number of small trees where they are so dense they increase the risk of wildfires.

4. What is your opinion of using the following practices to reduce flammable fuels and the risk of high severity wildfire on public lands (e.g., National Forests)?

	Totally unacceptable	Somewhat unacceptable	Neutral	Somewhat acceptable	Totally acceptable	Don't know
Prescribed fire:						
-- around neighborhoods	16.7%	16.5%	13.4%	26.7%	25.3%	1.3%
-- in remote forest areas	5.8%	7.1%	6.2%	20.8%	59.5%	0.7%
Monitoring and managing wildfire:						
-- around neighborhoods	25.3%	20.7%	13.9%	15.6%	23.8%	0.7%
-- in remote forest areas	6.0%	8.6%	8.2%	24.9%	51.4%	0.9%
Thinning:						
-- around neighborhoods	4.2%	3.1%	5.5%	13.8%	73.0%	0.4%
-- in remote forest areas	4.4%	3.5%	7.9%	13.8%	69.9%	0.4%

5. The use of **prescribed fire** and **monitoring and management wildfire** may create concerns for some people. Please indicate how concerned you are about the following possible effects for both prescribed fire and monitoring and managing wildfire in Central Oregon.

	Prescribed Fire				Monitoring and Managing Wildfire			
	Not a concern	Slight concern	Moderate concern	Great concern	Not a concern	Slight concern	Moderate concern	Great concern
Damage to private property	14.8%	30.8%	34.6%	19.8%	8.3%	25.9%	34.4%	31.5%
Lost or diminished recreational opportunities	22.1%	30.5%	30.7%	16.8%	13.3%	26.5%	32.4%	27.9%
Loss of wildlife and fish habitat	12.6%	29.7%	33.9%	23.7%	7.2%	23.6%	34.8%	34.4%
Risk of fire getting out of control	3.1%	18.8%	38.6%	39.5%	2.9%	14.4%	31.2%	51.5%
Economic loss of useable timber	21.0%	28.3%	26.9%	23.8%	13.2%	27.1%	28.4%	31.3%
Reduced scenic quality	15.5%	30.7%	34.4%	19.4%	12.6%	25.3%	33.4%	28.7%
Increased levels of smoke	9.7%	23.5%	35.2%	31.6%	8.1%	22.0%	31.8%	38.1%

6. What is your opinion about **smoke from prescribed fire** and **smoke from monitoring and managing wildfire**? Please indicate your agreement with the following statements.

	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
Smoke is not a concern of mine	30.0%	26.4%	16.1%	19.7%	7.8%
Smoke levels are a concern, but I think they are managed acceptably	10.9%	19.1%	27.0%	31.1%	11.8%
Smoke is acceptable if it results in healthier forests	9.4%	12.8%	17.5%	35.0%	25.3%
I worry about the effects on my personal or family health	14.0%	11.5%	26.6%	28.2%	19.7%
I worry about the effects of smoke on public health	12.4%	13.1%	31.6%	31.8%	11.1%

7. Within the **last five years**, have any of the following occurred on your property or nearby **public or private lands**? (circle one response for each item)

A wildfire occurred...	Yes	No	Don't Know
on my property	2.4%	97.0%	0.5%
in my neighborhood	13.8%	84.4%	1.8%
just outside my neighborhood	28.3%	65.8%	5.9%
lands within several miles of me	56.4%	30.6%	13.0%
on lands within my watershed	54.0%	23.3%	22.8%

A controlled burn or prescribed fire occurred...	Yes	No	Don't Know
on my property	2.1%	95.4%	2.5%
in my neighborhood	3.7%	91.1%	5.3%
just outside my neighborhood	18.8%	71.0%	10.2%
lands within several miles of me	61.1%	24.7%	14.2%
on lands within my watershed	49.1%	19.3%	31.6%

A tree insect infestation or tree disease outbreak occurred...	Yes	No	Don't Know
on my property	14.2%	75.7%	10.1%
in my neighborhood	18.3%	62.1%	19.6%
just outside my neighborhood	19.5%	51.4%	29.1%
lands within several miles of me	42.0%	21.6%	36.4%
on lands within my watershed	41.2%	12.9%	45.9%

Invasive plant species became established...	Yes	No	Don't Know
on my property	21.5%	68.5%	10.0%
in my neighborhood	44.6%	32.1%	23.3%
just outside my neighborhood	49.3%	14.9%	35.8%
lands within several miles of me	54.3%	6.8%	39.0%
on lands within my watershed	48.3%	6.5%	45.2%

8. "Firewise" activities include planting fire-resistant landscape plants, using non-flammable construction materials, pruning branches within 85 feet of your house, reducing the density of trees within 100 feet of the residence, as well as other activities to reduce fire risk near a home. Within the last five years, have you completed any "firewise" activities in the immediate vicinity of the residence?

38.2% Yes

61.8% No

9. Now we would like to ask some more detailed questions about firewise activities and other actions for mitigating wildfire risk. Please indicate if you have participated in any of these activities or not in the last 5 years by circling the responses “yes” or “no.”

<i>General planning:</i>	Percent Participating
Prepare an evacuation plan in case of wildfire	37.9%
Consider weather reports (e.g. moisture conditions) when planning recreational activities that involve fire (e.g., campfires, fireworks)	61.6%
<i>Community activities:</i>	
Attend community-based meetings related to wildfire	16.2%
Obtain information from a land management, community group or firefighting agency on how to prepare for wildfire	37.1%
<i>Property protection activities:</i>	
Plant fire-resistant plants	27.5%
Plant trees and shrubs at least 15 feet apart	30.3%
Prune the branches of trees within 85 feet of your home	52.4%
Reduce the density of trees within 100 feet of your home	44.1%
<i>Home protection activities:</i>	
Clean roof surfaces/gutters and surrounding vegetation to avoid accumulation of needles, leaves and dead plants	69.7%
Stack firewood/lumber at least 30 feet from the home	45.7%
Use nonflammable building materials such as tile, slate, stone, etc.	46.8%

10. Who do you receive information from, talk with, or seek advice from about actions on your property for reducing fire risk, or making changes to your home to improve fire safety? For each person/group listed below, indicate if/how you interact with this person. Use the blank spaces to add others we may have missed. If you need more space, please use the end of the survey. One example has been completed for you.

Person/Group	Do you talk with or seek advice or receive assistance from this person/group?	
	No	Yes
Family member	57.2%	42.8%
Neighbor	65.1%	34.9%
Neighborhood association	64.2%	35.8%
Local fire department	49.9%	50.1%
Local fire awareness group (e.g., Project Wildfire, etc.)	68.4%	31.6%
Local collaborative group (e.g., Deschutes Collaborative Forest Project)	87.0%	13.0%
City or county government	76.9%	23.1%
University extension agent	91.9%	8.1%
Oregon Department of Forestry	71.5%	28.5%
Bureau of Land Management	90.4%	9.6%
The Nature Conservancy	87.1%	12.9%
U.S. Forest Service	68.0%	32.0%

Section 2

This section of the survey concerns relationships between individuals and society in general.

Question: “Please indicate your level of agreement or disagreement for the following statements concerning the role of individuals in society” [1=Strongly Disagree to 7=Strongly Agree].

<i>Individualist Statements:</i>		Mean / s.d.
a.	Even if some people are at a disadvantage, it is best for society to let people succeed or fall on their own.	4.00 / 1.76
b.	Even the disadvantaged should have to make their own way in the world.	4.08 / 1.66
c.	We are all better off when we compete as individuals.	3.76 / 1.70
	Combined Individualist Index (n=450)	11.84 / 4.73
	Cronbach’s alpha	.915
<i>Hierarchical Statements:</i>		
d.	The best way to get ahead in life is to do what you are told to do.	2.99 / 1.60
e.	Our society is in trouble because we don’t obey those in authority.	3.01 / 1.49
f.	Society would be much better if we imposed strict and swift punishment on those who break the rules.	3.51 / 1.63
	Combined Hierarchical Index (n=450)	9.51 / 3.97
	Cronbach’s alpha	.790
<i>Egalitarian Statements:</i>		
g.	What our society needs is a fairness revolution to make the distribution of goods more equal.	3.45 / 1.67
h.	Society works best if power is shared equally.	3.44 / 1.65
i.	It is our responsibility to reduce the differences in income between the rich and poor.	3.52 / 1.79
	Combined Egalitarian Index (n=450)	10.40 / 4.75
	Cronbach’s alpha	.920
<i>Fatalist Statements:</i>		
j.	Most of the important things that take place in life happen by random chance.	3.67 / 1.66
k.	No matter how hard we try, the course of our lives is largely determined by forces outside our control.	3.10 / 1.54
l.	It would be pointless to make serious plans in such an uncertain world.	3.17 / 1.76
	Combined Fatalist Index (n=442)	10.00 / 3.89
	Cronbach’s alpha	.684

Section 4

The final section of the survey asks a few concluding questions to check to see if our survey is representative of all types of people.

12. Is the property this survey is addressed to your:

(98.2%) permanent residence or (1.8%) seasonal/vacation home?

13. How long have you lived in Central Oregon?

Average: 19.14 years

14. How long have you lived in this Central Oregon residence (permanently or seasonally)?

Average: 13.20 years

15. Do you (91.5%) own or (8.5%) rent this property? (check space that applies)



Skip to question 19.

a. In what year did you become the owner of home? Average: 1998

b. How did you acquire this home?

67.3% Purchased from a stranger

6.6% Purchased from a friend/acquaintance

2.9% Purchased from a family member or inherited

0.7% Received as a gift/inherited

22.4% Other

c. Which of the following factors (if any) influenced your decision to become a homeowner in Central Oregon? (check all that apply)

79.9% Natural amenities (mountains, desert, weather, etc.)

69.9% Recreation opportunities

35.4% Employment opportunities

23.0% Cost of land relative to elsewhere

4.4% For timber, agriculture, or ranching opportunities

11.0% Land investment opportunities

10.5% I've always lived here

4.2% Family landholding

26.9% To be near family

16. Is the neighboring property:

(86.1%) developed with a structure or (6.3%) undeveloped? Both (7.6%)

17. Does your homeowners' association or subdivision have rules about landscaping or building materials in your area to help protect against fires?

36.6% Yes
26.9% No
16.1% Don't Know
20.3% I don't live in a homeowners' association or subdivision.

18. How close is your home in Central Oregon to a wildland area (either forest or rangeland)?

11.0% Live within a wildland area	14.3% More than 300 yards but less than 1 mile
14.0% Adjacent to a wildland area	27.6% Between 1 and 3 miles
6.5% Between 100 and 300 yards	26.6% More than 3 miles

19. Were you evacuated (voluntary or mandatory) due to wildfire in the past five years?

96.5% no 3.5% yes

20. What is your age in years? Average: 58.01 years

21. Are you? 52.7% Male 47.3% Female 0.0% Other

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

0.0% Junior high or less	36.5% Associate's degree, technical school, or some college
1.1% Some high school	29.4% Bachelor's degree
12.7% High school or GED	20.3% Master's, doctoral, or professional degree

23. What is your annual household income before taxes? (select one)

5.4% Less than \$15,000	25.4% \$50,000 to \$74,999
7.7% \$15,000 to \$24,999	18.3% \$75,000 to \$99,999
20.7% \$25,000 to \$49,999	22.5% \$100,000 or more

24. Does anyone in your household suffer from a respiratory ailment? 25.6% yes 74.4% no

Thank you for your participation. If you have additional comments, please include them below.