

TABLE OF CONTENTS

[TABLE OF CONTENTS](#)

[Screening](#)

[Introduction & Informed Consent](#)

[Prescribed Burn Acceptability & Policy Opinions](#)

[Perceptions of Rx Burning Risks & Benefits](#)

[Past Experience, Actions & Behaviors](#)

[Personal Characteristics - Health](#)

[Climate Perception Questions](#)

[Individual Attitudes, Beliefs, and Worldviews](#)

[Personal Characteristics - Demographics](#)

[Final Open Response](#)

Screening

1. What is your age in years?
 - a. Under 18 [skip to end of survey if selected]
 - b. 18-29
 - c. 30-49
 - d. 50-64
 - e. 65-79
 - f. 80+
2. Do you currently live in Colorado (United States of America)?
 - a. No [skip to end of survey if selected]
 - b. Yes
3. What county do you live in within Colorado? [select county from list]
4. What is your zip code? [text response]

Introduction & Informed Consent

Thank you for participating in this survey. The University of Colorado's Institutional Review Board (IRB) requires an informed consent process for all research studies to ensure research participants are fully aware of the details and any potential risks of a study. Please closely review the following information and mark the response that indicates whether or not you consent to participating in this study. This consent form can also be sent to you via email or mailed to you at your request.

Study Title: Risk-Risk Tradeoffs and Prescribed Burning Decisions
Principal Investigator: Katherine Dickinson, PhD
COMIRB No: 22-1171

You are being asked to participate in this research study because you live in Colorado. This study, funded by the National Science Foundation and conducted by researchers at University of Colorado Boulder and Colorado School of Public Health, is designed to collect detailed statewide data on residents' opinions and factors affecting their support or opposition for the practice of prescribed burning for wildfire mitigation in Colorado.

If you consent to join the study, you will complete one 15-20 minute survey.

This survey is being administered through the survey firm Qualtrics, and compensation will be determined through their panel survey protocols.

There are risks of discomfort, slight inconveniences and possible loss of confidentiality in completing research surveys. Every effort will be made to protect your privacy and confidentiality by de-identifying any results from the survey. Your name will not be connected to any results that we report. All data will be stored on secure servers and only accessible by the authorized research personnel.

The survey asks questions about experiences with wildfire and prescribed fire. Some people may find thinking about fire-related topics or recalling past fire-related experiences to be distressing. Many people who have had distressing fire-related experiences have found participating in research to be a positive experience.

The information collected in this survey will facilitate better understanding about the opinions and experiences of Colorado residents related to prescribed burning and wildfire. As such, it is

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado Statewide Survey Instrument

important that we hear from a wide range of Colorado residents with diverse prescribed burning and wildfire experiences. Possible benefits of participating include the opportunity to express your thoughts and experiences related to prescribed burning and wildfire. The information you share will help our research team and others learn about the opinions and experiences of residents throughout the state related to prescribed burning and wildfire. This may help inform future planning and/or policy.

You have a choice about being in this study. You do not have to be in this study if you do not want to be.

The data we collect will be used for this study but may also be important for future research. Your responses may be used for future research or distributed to other researchers for future study without additional consent once information that identifies you is removed from the responses.

If you have questions, you can contact Katie Dickinson, Ph.D at **(720) 505-3958** or katherine.dickinson@cuanschutz.edu. You can call or email to ask questions at any time. More information about this study, including the team collecting this information and our overall goals, can be found at our website: <https://www.rxburn-risktradeoffs.com/>

You may have questions about your rights as someone in this study. If you have questions, you can call COMIRB (the responsible Institutional Review Board) at (303) 724-1055.

- ☐ I have reviewed the above informed consent and **agree to participate** in this research study.
- ☐ I have reviewed the above informed consent and **do not agree to participate** in this research study. (*SKIP to end*)

Prescribed Burn Acceptability & Policy Opinions

Throughout this survey, we're going to ask about your experiences and opinions surrounding **wildfire** and **prescribed burning/prescribed fire**. *Please read the following background information carefully before answering the survey questions.*

Definitions:

By **wildfire**, we mean an unplanned fire that spreads through forests, brush, or grasslands and may also spread through and burn human-made structures.

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado Statewide Survey Instrument

By **prescribed burning** or **prescribed fire**, we mean fires that are ignited by professionals in a planned and managed way when they deem conditions appropriate to reduce fuels, reduce the risk and impacts of wildfires, and/or improve the health of forest ecosystems. These fires are meant to burn through forests, brush, or grasslands. These are also sometimes referred to as controlled fires, controlled burns, planned fires, or planned burns.

By **community**, we mean the people you live near and interact with regularly.

Wildfires and Prescribed Burning in Colorado:

Here in Colorado and across much of the United States, **wildfires** have become more frequent and larger, threatening residents' property, health and well-being, and natural ecosystems. Local communities, fire managers, policy makers, and other organizations across the state are considering different approaches to manage wildfire risks. Most experts agree that increasing **prescribed burning** is critical as part of a strategy to reduce wildfire risk.

While prescribed burning has many potential **benefits**, it also involves **risks** for communities living near prescribed burning sites. Different people may find prescribed burning more or less acceptable.

The following questions ask about your opinions about the acceptability of prescribed burning in Colorado.

1. Overall, how acceptable is conducting a prescribed burn ignited by trained and certified fire professionals in Colorado? (Completely unacceptable, Mostly unacceptable, Neither unacceptable nor acceptable, Mostly acceptable, Completely acceptable)

Prescribed burning is done on different types of land, including public lands owned by the federal government, public lands owned by the State of Colorado or local jurisdictions (like counties), or private lands.

2. How acceptable is conducting a prescribed fire ignited by trained and certified fire professionals on each of these types of land in Colorado? (matrix table: Completely acceptable, mostly acceptable, neither acceptable nor unacceptable, mostly unacceptable, completely unacceptable)
 - a. Federal public lands (national forests, national parks, Bureau of Land Management land, etc.)
 - b. State public lands (state forests, state parks, Colorado Parks & Wildlife land, etc.)
 - c. County and local public lands (county open space, city and local parks, etc.)

- d. Privately owned lands (ranches, resorts, private property, etc.)

The following questions ask how supportive you would be of policy actions that could be taken to expand prescribed burning in Colorado.

Professionals who manage forests and wildfires in Colorado have recommended that more prescribed burning is needed.

- 3. Would you support a **statewide** policy that would expand the use of prescribed burning conducted by trained and certified fire professionals **in Colorado**? (No, I wouldn't support this/ I could support this, but I want to know more or have other reservations/ Yes, I would support this policy/ I don't know)
- 4. Would you support a **local** policy that would expand the use of prescribed burning conducted by trained and certified fire professionals in **your local area**? (No, I wouldn't support this / I could support this, but I want to know more or have other reservations / Yes, I would support this policy/ I don't know/ Not applicable - prescribed burning does not happen in my local area)

Perceptions of Rx Burning Risks & Benefits

This section will ask about different **benefits** and **risks** that you think may be related to prescribed burning.

- 5. (Benefits of rx burning) How much do you agree or disagree with the following statements? *Mark one answer per row.* (Strongly Disagree, Somewhat Disagree, Neither Agree nor Disagree, Somewhat Agree, Strongly Agree, Don't Know)
 - a. Fire is an important part of Colorado's natural landscape.
 - b. Prescribed burning can reduce the risk of wildfire reaching my property and/or community.
 - c. Prescribed burning can help manage community smoke exposure because it is more predictable and controlled compared to unplanned wildfire.
 - d. Prescribed burning can improve the health of forests, grasslands, and/or other natural areas.
 - e. Prescribed burning can reduce potential negative wildfire impacts on watersheds (rivers, streams, lakes, groundwater, etc.).
 - f. Prescribed burning can protect or improve soil health.
- 6. (Risks of rx burning) If prescribed burning continues to be conducted in Colorado over the next five years, how likely do you think it is that the following will occur? *Mark one*

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado
Statewide Survey Instrument

answer per row. (Extremely likely, Somewhat likely, Neither likely nor unlikely, Somewhat unlikely, Extremely unlikely)

- a. Prescribed burning will damage water, soil, or ecosystem quality.
 - b. My household will be exposed to prescribed burn smoke.
 - c. My household will experience negative physical health effects from prescribed burn smoke.
 - d. My household will experience negative mental health effects (such as stress, anxiety, depression) from prescribed burn smoke.
 - e. My household will experience mental health effects from prescribed burn factors not related to the smoke (for example, fears about escaped fire).
 - f. A prescribed burn will spread or escape outside planned boundaries and become an uncontrolled wildfire.
7. (Risks of escaped rx fire) If a prescribed burn spreads outside planned boundaries, how likely do you think it is that the following will occur? *Mark one answer per row.* (Extremely unlikely, Somewhat unlikely, Neither likely nor unlikely, Somewhat likely, Extremely likely)
 - Private and/or community property and infrastructure will be damaged.
 - My home and/or personal property will be damaged.
 - My household's safety will be threatened.
 - Water, soil, or ecosystem quality will be damaged.
 - The escaped fire will pose a similar overall threat as a wildfire.
8. (Tradeoffs and related comparisons) How much do you agree or disagree with the following statements? *Mark one answer per row.* (Strongly Disagree, Somewhat Disagree, Neither Agree nor Disagree, Somewhat Agree, Strongly Agree)
 - a. The potential benefits of prescribed burning are greater than the potential risks.
 - b. Overall, I am more concerned with potential risks associated with *wildfire* than potential risks associated with *prescribed burning*.
 - c. I trust trained and certified fire professionals to use prescribed burning safely.
 - d. Fire professionals and planners do a good job communicating why they are conducting prescribed burning.
 - e. I would like to know more about prescribed burning.
9. Please add any comments if you would like to clarify or elaborate on your responses to any of the questions so far (optional). (open response)

Past Experience, Actions & Behaviors

The next set of questions will help us learn a little more about your past experiences with wildfire, prescribed burning, and related topics.

10. How many years have you lived in Colorado? (Less than a year, 1-4 years, 5-9 years, 10-19 years, 20+ years)
11. How many years have you lived in your current county? (Less than a year, 1-4 years, 5-9 years, 10-19 years, 20+ years)
12. How many years have you lived in your current residence? (Less than a year, 1-4 years, 5-9 years, 10-19 years, 20+ years)

[If "10+ years" on #10, skip #13-14.]

13. Before you lived in Colorado, did you live in an area prone to wildfire?
 - a. No
 - b. Yes
 - c. I don't know
14. Before you lived in Colorado, was prescribed burning conducted nearby your home or community (that you were aware of)?
 - a. No
 - b. Yes
 - c. I don't know
15. Were you familiar with prescribed burning before taking this survey? (Yes, No, Not sure)
16. **In the past five years**, has there been a prescribed burn near your **current or former** home that you were aware of? (Yes, No, Not Sure)

[If "No" or "Not sure" on #18 – SKIP #17.]

17. **In the past five years**, what is the closest distance (as a crow flies) a prescribed burn has been conducted near your property?
 - a. Less than 2 miles away
 - b. 2-10 miles away
 - c. 11-20 miles away
 - d. More than 20 miles away
 - e. Not sure
18. Have you had any of the following wildfire experiences? *Please check all that apply.*
 - a. I have evacuated my home due to a wildfire
 - b. My home/property was damaged due to a wildfire
 - c. I experienced negative health (physical, mental, or other) effects due to wildfire or wildfire smoke

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado
Statewide Survey Instrument

- d. My community has been affected by wildfire
- e. Other
- f. None of these

19. Have you done any of the following wildfire-related mitigation activities at your **current home**? *Please check all that apply.*

- a. Removed vegetation near my home using non-fire methods (ex. Cutting)
- b. Used fire on my property to reduce vegetation (ex. Slash pile burning)
- c. Made my home more fire resistant (ex. Replaced roofing, siding, added hardscaping)
- d. Made updates to my home to reduce smoke coming into my home (ex. Installed or improved air ventilation system, weatherized home)
- e. Took steps to reduce smoke exposure in my home (ex. Purchased a portable air purifier or cleaner)
- f. Other (enter)
- g. None of these
- h. Not applicable

20. **In the past five years**, have you noticed smoke near your home from the following sources? (yes, no, not sure)

- a. Smoke from wildfires
- b. Smoke from prescribed burns
- c. Smoke from other sources (for example, trash, barbecue, or agricultural burning)
- d. Smoke from unknown sources

[If "Yes" to "Smoke from wildfires" is NOT selected on #20 – SKIP #21 & #23.]

[If "Yes" "Smoke from prescribed burns" is NOT selected on #20 – SKIP #22, #24-25, #27-30.]

21. **In the past five years**, how often have you noticed any **wildfire** smoke near your home (estimate is fine)?

- a. Never
- b. 1-2 times
- c. 3-5 times
- d. 6-10 times
- e. More than 10 times

22. **In the past five years**, how often have you noticed smoke from a prescribed burn near your home (estimate is fine)?

- a. Never

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado
Statewide Survey Instrument

- b. 1-2 times
 - c. 3-5 times
 - d. 6-10 times
 - e. More than 10 times
 - f. Not sure
23. **Generally**, when you notice **wildfire** smoke at or near your home, do you do any of the following? *Please check all that apply.*
- a. Close windows
 - b. Stay indoors
 - c. Temporarily leave or avoid areas affected by smoke
 - d. Avoid or limit regular outdoor activities
 - e. Run HVAC (air conditioning, evaporative cooling, etc.) in your home when you otherwise wouldn't
 - f. Use an air purifier or air cleaner
 - g. Wear a mask or face covering
 - h. Use additional medication (such as for asthma, allergies, headaches, or other health symptoms)
 - i. Other (enter)
 - j. None of these
24. **Generally**, when you notice smoke from a **prescribed burn** at or near your **home**, do you do any of the following? *Please check all that apply.*
- a. Close windows
 - b. Stay indoors
 - c. Temporarily leave or avoid areas affected by smoke
 - d. Avoid or limit regular outdoor activities
 - e. Run HVAC (air conditioning, evaporative cooling, etc.) in your home when you otherwise wouldn't
 - f. Use an air purifier or air cleaner
 - g. Wear a mask or face covering
 - h. Use additional medication (such as for asthma, allergies, headaches, or other health symptoms)
 - i. Other (enter)
 - j. None of these
25. Have you experienced negative health (physical, mental, or other) effects due to smoke from a prescribed burn? (No/Not sure/Yes)

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado
Statewide Survey Instrument

26. Have you had any other experiences with prescribed burning that you'd like to share (optional)? (open response)

Please think about **the last time** a prescribed fire was conducted near your home.

27. **The last time** a prescribed burn was conducted near your home, were you notified in advance about the prescribed burn? (No/Yes/Not sure)

[If "No" or "Not sure" on #29, skip #30-32.]

28. What information were you given about the prescribed burn? *Check all that apply.*

- a. Where the burn was happening
- b. Who was conducting the burn (federal agency, state agency, private implementers, etc.)
- c. When the burn was happening (start and duration)
- d. Why the burn was being conducted
- e. Information about possible health impacts or other risks related to the burn
Information about recommended actions to protect yourself from potential health impacts or other risks related to the burn
- f. Other (enter)
- g. None of these

29. Who did you receive information about the prescribed burn from? *Check all that apply.*

- a. Local government (such as city council, mayor, and associated staff/departments)
- b. Local/county public health department
- c. State public health department (Colorado Department of Public Health & Environment)
- d. Local fire department or district
- e. State agency (ex. Colorado Department of Natural Resources, Colorado State Forest Service, Colorado Division of Fire Prevention & Control (DFPC))
- f. Federal agency (ex. US Forest Service, Bureau of Land Management, National Park Service)
- g. Local prescribed burn association (PBA)
- h. Private organization or non-profit (such as The Nature Conservancy or Ember Alliance)
- i. Friends or neighbors
- j. Other (open response)
- k. Not Sure

30. How did you receive information about the prescribed burn? *Check all that apply.*

- a. Phone call
- b. Email
- c. Text message

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado Statewide Survey Instrument

- d. In-person conversation
- e. Social media (Facebook, Twitter, Instagram, etc.)
- f. Local news (television, radio, newspaper, or online news)
- g. AirNow.gov, Watch Duty, or other air quality/fire monitoring website
- h. Road sign or other physical marker
- i. Online forum (such as Nextdoor or Neighbor App)
- j. Other (open response)

Personal Characteristics - Health

Now we would like to ask some questions about your overall health, since this may influence how people are affected by wildfires and smoke.

- 31. In general, how would you describe your overall physical health? (Poor, Fair, Good, Very Good, Excellent, Don't Know/Not Sure)
- 32. In general, how would you describe your overall mental health? (Poor, Fair, Good, Very Good, Excellent, Don't Know/Not Sure)
- 33. Have you been diagnosed by a healthcare provider with any of the following conditions?
(Check all that apply)
 - a. Asthma
 - b. Chronic Obstructive Pulmonary Disease (COPD)
 - c. Emphysema
 - d. Chronic bronchitis
 - e. Other respiratory (lung) disease (specify below)
 - f. Hypertension (high blood pressure)
 - g. Hypotension (low blood pressure)
 - h. Heart disease or other heart condition (specify below)
 - i. Type II diabetes
 - j. Metabolic syndrome
 - k. Obesity
 - l. Allergies or other conditions related to the upper respiratory tract, eyes, and ears (specify below)
 - m. Depression, anxiety, PTSD, or other mental health condition
 - n. Other chronic condition (enter)
 - o. None of these
- 34. Do you currently smoke or vape, or have you smoked or vaped in the past?
 - a. No, I've never smoked or vaped

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado
Statewide Survey Instrument

- b. Yes, I used to smoke or vape
 - c. Yes, I currently smoke or vape
35. During times of year when wildfires occur (mainly summer and fall), how often do you check sources of air quality information for your local area? (When I notice air quality might be poor, Multiple times per day, Daily, Multiple times per week, Weekly, Monthly, Less than once a month). *Check all that apply.*

Climate Perception Questions

Next, we'd like to know more about how you view overall changes in the environment and in the weather and climate where you live. These questions will ask about your experiences with different environmental and climate-related factors, including air quality, water quality, drought, heat, insects, and wildfires. **For the following questions, please think about the area in Colorado where you live most of the time.**

36. **Compared to five years ago, do you feel that the overall AIR QUALITY has...** (*Gotten better, Stayed the same, Gotten worse, I'm not sure*)
37. **Compared to five years ago, do you feel that the ANNUAL PRECIPITATION (rain/snow fall) has...** (*Increased, Stayed the same, Decreased, I'm not sure*)
38. **Compared to five years ago, do you feel that the AVERAGE TEMPERATURE has...** (*Increased, Stayed the same, Decreased, I'm not sure*)
39. **Compared to five years ago, do you feel that the presence of MOSQUITOES has...** (*Increased, Stayed the same, Decreased, I'm not sure*)
40. **Compared to five years ago, do you feel that DROUGHT occurs...** (*More often, The same, Less often, I'm not sure*)
41. **Compared to five years ago, do you feel that HEAT WAVES occur...** (*More often, The same, Less often, I'm not sure*)
42. **Compared to five years ago, do you feel that WILDFIRES occur...** (*More often, The same, Less often, I'm not sure*)
43. **Thinking about your community, how concerned are you about the following? (Not at all concerned to Extremely concerned)**
- a. Air quality (due to wildfires)
 - b. Air quality (due to vehicle traffic)
 - c. Air quality (due to dust)
 - d. Flooding
 - e. Drought
 - f. Heat waves
 - g. Insect presence (mosquitoes/ticks)
 - h. Water quality (bacteria/viruses)

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado
Statewide Survey Instrument

- i. Water quality (chemical-based contaminants)
 - j. Wildfires
44. Please tell us how much you agree or disagree with the statement “Environmental and climate-related factors will affect my health over the next 5 years”. (*Strongly Disagree, Somewhat Disagree, Neither/nor, Somewhat Agree, Strongly Agree*)

Individual Attitudes, Beliefs, and Worldviews

The next questions have been used in many research studies to understand differences in the way people see the world and approach problems that they face.

45. Please indicate the extent to which you agree or disagree with the following statements about your community. *Mark one answer per row.* (Strongly Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree, Strongly Disagree)
- a. My community actively prepares for future disasters
 - b. My community can provide emergency services during a disaster
 - c. My community has services and programs to help people after a disaster
46. Please indicate the extent to which you agree or disagree with the following statements. *Mark one answer per row.* (Strongly Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree, Strongly Disagree)
- a. One should live one’s life independently of others
 - b. I usually sacrifice my self-interest for the benefit of my group
 - c. Government should do more to advance society’s goals even if it means limiting freedom of individuals
 - d. Government interferes too much in everyday lives
 - e. Discrimination against people of color is still a very serious problem in our society
 - f. Society would be better off if the distribution of wealth were more equal
 - g. Global climate change is a serious problem.

Personal Characteristics - Demographics

Next, we’ll ask you some questions about your household and personal characteristics. These questions can help us understand how different groups of people may be affected by wildfire and prescribed burning, and how these characteristics may shape people’s opinions.

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado
Statewide Survey Instrument

47. Which of the following age categories do people in your household fall in? (Check all that apply)
- a. Under 5 years old
 - b. Between 5-17 years old
 - c. Between 18-64 years old
 - d. 65+ years old
 - e. Prefer not to say
48. Do you own or rent your home? *Mark one answer.* (Own/Rent/Other(enter))
49. What is your gender? (Male/Female/Non-binary/Other (enter)/Prefer not to say)
50. Which one or more of the following would you say is your race/ethnicity? *Check all that apply.* (White/Black or African American/American Indian or Alaska Native/Asian/Native Hawaiian or Pacific Islander/Other (enter)/Prefer not to say)
51. Are you Hispanic or Latino/a/x? *Mark one answer.* (Yes/No)
52. What was your household pre-tax income in 2023? *Mark one answer.*
(\$0-24,999/\$25,000-49,999/\$50,000-74,999/\$75,000-99,999/\$100,000-199,999/More than \$200,000, Prefer not to say)
53. What is your highest degree or level of school completed? *Mark one answer.*
- a. High school degree, GED, or less
 - b. Technical school, trade or vocational training, or associate degree
 - c. Bachelor's degree
 - d. Master's, doctorate, or professional degree above bachelors
54. Are you currently married or living with a romantic partner? *Mark one answer.* (Yes/No)
55. Which of the following best describes your employment status today? *Mark one answer.*
- a. Employed part time (including self-employed)
 - b. Employed full time (including self-employed)
 - c. Homemaker
 - d. Unemployed, seeking employment
 - e. Unemployed, not seeking employment
 - f. Student
 - g. Retired
 - h. Unable to work
 - i. Other (enter)

[If "Employed part time" or "Employed full time" are NOT selected on #42, skip #43.]

56. Do you work mainly indoors, mainly outdoors, or a mix of both? *Mark one answer.*
(Mainly indoors/Mainly outdoors/ Mix of both)
57. How often do you visit Colorado's forests or wildland areas for recreation (hiking, biking, fishing, hunting, skiing, camping, etc.)? *Mark one answer.* (Never, Rarely, Monthly, Weekly, Daily)

Risk-Risk Tradeoffs and Prescribed Burning Decisions in Colorado
Statewide Survey Instrument

58. Where do you place yourself on the political ideology scale? *Mark one answer.* (Very conservative/ Somewhat conservative/Moderate/Somewhat liberal/Very liberal)
59. How important is organized religion in your life? *Mark one answer.* (Extremely important/Very important/Moderately important/Slightly important/Not at all important)

Final Open Response

60. What else would you like to share about wildfire or prescribed burning in Colorado (optional)? (open response)