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Living With Wildfire in Chalk Creek, Chaffee County, Colorado: 2019 Data Report

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EXECUTIVE SUMMARY

Wildfire affects many types of communities and is a particular concern for communities in the wildland urban interface (WUI), such as Chalk Creek in Chaffee County. The core intent of this project was to provide evidence to support Colorado State Forest Service (CSFS) Salida Field Office's wildfire mitigation and education program. This report analyzes existing wildfire risk data collected in late 2017 through 2019 and pairs it with social data collected in the summer of 2019, in order to better understand Chalk Creek residents' knowledge, experiences, and perceptions about wildfire risk. This greater understanding will help CSFS focus its programs and outreach and ultimately promote increased mitigation and reduced wildfire risk in Chalk Creek.

The results of the wildfire risk assessment, covering 431 private residential properties in Chalk Creek, suggests that 99% face high, very high, or extreme risk of wildfire. Similarly, within the 201 properties of Chalk Creek residents who returned and completed the survey, 99% were characterized as facing high, very high, or extreme risk of wildfire.

Results from the household survey suggest that survey respondents were aware of, and concerned about, the wildfire threat to their community. Despite low levels of direct experience with wildfire, respondents reported taking action to reduce risk, talking with neighbors about wildfire, and having at least some neighbors who are likewise taking action. Most respondents agreed or strongly agreed that their property is at risk of wildfire and most did *not* agree that firefighters should put their lives at risk to protect their home. Importantly, few agreed or strongly agreed that local firefighters have sufficient resources to protect homes or keep wildfires from spreading—indicating an understanding of local fiscal constraints.

Residents reported high levels of wildfire-related property maintenance activities. These activities included reducing vegetation on the property (92%) and clearing roof and gutters of leaves and pine needles (75%). Almost half (48%) have taken action to make their home more fire resistant. The majority of respondents indicated acceptance of wildfire risk mitigation activities on public lands including removing trees and other vegetation, burning piles of vegetation, and managing naturally ignited fires. Slightly less than a majority indicated acceptance of conducting prescribed fires.

What Is WiRē?

The Wildfire Research Center (WiRē[1] Center) works with wildfire practitioners seeking to create communities that are adapted to wildfire, through an evidenced-based approach. Historically, immediate threats and wildfire suppression have garnered much attention and resources. While these efforts remain critical, getting in front of the problem by promoting pathways to fire adaptation is of paramount importance. Fire adaptation is about living with wildfire. It's about creating safe and resilient communities that mitigate wildfire risk on their property before a fire, as well as supporting an effective response when fires threaten a community. It is also about allowing fire on the landscape when it is safe to do so.

Over the last decade, a team of researchers and practitioners, referred to as the WiRē Team, has developed and successfully implemented a systematic data collection and integration

[1] Pronounced Wy-REE.

approach (the WiRē approach) that informs local wildfire risk education efforts and allows for monitoring of community adaptation over time.

The mission of the WiRē Center is to work in partnership with wildfire risk mitigation programs to implement the WiRē approach and to support community efforts to tailor wildfire risk education programs to the local context and allocate scarce resources more effectively. Specifically, the WiRē Center provides hands-on, personalized expertise and support to wildfire practitioners, community organizations, and other local leaders living and working in the wildland-urban interface (WUI). We collect and analyze locally relevant wildfire risk and social science data to enhance the effectiveness of local wildfire risk mitigation efforts.

Individual WiRē Team members maintain a connection with the WiRē Center by participating on the Center's Advisory Committee or as a member of the Board of Directors. In this capacity, the WiRē Team provides technical and strategic guidance to the WiRē Center, ensuring the WiRē approach is implemented with exceptional quality and scientific integrity.

The WiRē Approach

Currently, the core of the WiRē approach includes two central data collection efforts:

1. A property-level WiRē Rapid Wildfire Risk Assessment (hereafter, WiRē RA) based on attributes related to building materials, vegetation near the home, background fuels, and topography, as well as access to the property. The WiRē RA includes an overall risk rating for the property. It is an indicator of the relative risk of the private property within the community rather than an absolute measure of risk.

2. Social surveys of the residents of the assessed properties, which represent residents' notions of wildfire risk, risk mitigation behaviors, including evacuation planning, and barriers and incentives to mitigate wildfire risk on private properties.

The WiRē approach aims to empower the voice of wildfire practitioner partners. These partners both participate in the data collection process and share the results with their communities. Experience has demonstrated that sharing results with the community provides a common platform for constructive discussion about adapting to wildfire. During these discussions, wildfire practitioner partners can draw from data that reflects the entire community, not just the vocal few. To support these discussions and other partner goals, the WiRē Center summarizes local data and provides wildfire practitioner partners with the tools to act on research results. For some partners with a regional reach, the WiRē Center also works with partners to expand the WiRē approach into new communities.

At a broader scale, the WiRē Center manages, compiles, and analyzes data collected across communities to provide insights across space and time with respect to wildfire risk on private land and the characteristics, knowledge, and experience of the people who live on those properties. These data are an important contribution to the state of knowledge regarding private land and wildfire risk. In collaboration with the WiRē Team, the WiRē Center will advance understandings of effective pathways to community wildfire adaptation.

PROJECT AREA

What Does the Community Look Like?

The community of Chalk Creek, located in Chaffee County, Colorado, was identified as a priority area in the Chaffee County Community Wildfire Protection Plan (CWPP). See figure 1. The community of Chalk Creek encompasses several distinct neighborhoods that lie within the Chalk Creek drainage in central Chaffee County. These neighborhoods include St. Elmo, Alpine, the Milne Subdivision, Jo Love Ranch, Silver Cliff, Eagle's Roost, Deer Valley, Princeton Shadows, Chalk Creek Estates, Rancho Antero Estates, Mt. Princeton Hot Springs, and Mt. Princeton Estates. A moderately sized vacation resort, Mt. Princeton Hot Springs lies in the middle of the drainage. This resort along with various outdoor recreation opportunities draw significant tourism into Chalk Creek. County Road 162 is the main transportation corridor running through the drainage. This road sees heavy traffic, especially during summer months, as it is utilized to access the expanse of USDA Forest Service land that surrounds Chalk Creek.

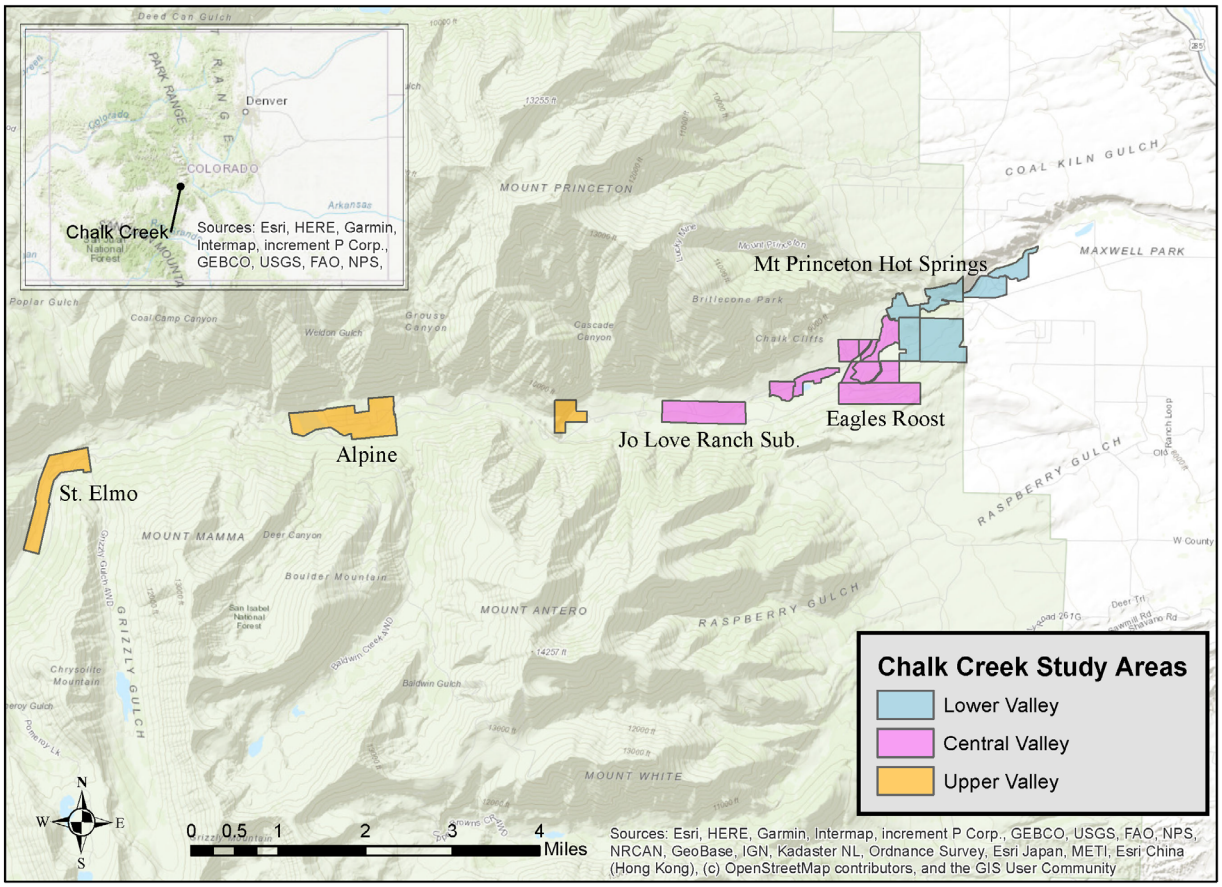

Figure 1—Map of community areas included in Chalk Creek, Chaffee County, CO.

The Chalk Creek drainage is a narrow valley, and subsequently, the topography associated with many of the parcels within the community is characterized as having steep slopes between 20% to 45%. The neighborhoods at the bottom of the drainage sit at about 8,000 feet of elevation and about 10,000 feet near the top of the drainage. Several neighborhoods within the community, especially at higher elevations, have only one way in or out and are isolated from major transportation corridors. These geographic concerns will create extended response times and difficult evacuation routes in a wildfire event.

The wildfire risk that exists in Chalk Creek due to the geography of the region is compounded by the forest conditions of the area. Several forest types are found in the Chalk Creek drainage, ranging from pinyon-juniper at low elevations, transitioning into ponderosa pine and mixed conifer, and ultimately spruce-fir forests at the top of the valley. Throughout these forest types an undesirably high stand density remains constant. Additionally, many of the high elevation spruce-fir stands have been heavily affected by spruce beetle infestations, resulting in high mortality rates. These forest health concerns combined with prolonged drought conditions have set the stage for potential high intensity wildfire events in Chalk Creek.

WiRē Partner: Colorado State Forest Service, Salida Field Office

The Colorado State Forest Service is the forestry outreach agency of the Warner College of Natural Resources at Colorado State University. The CSFS Salida Field Office serves Chaffee and Lake counties by providing various forestry services and outreach on private and state lands. Of particular concern for the Salida Field Office is facilitating the creation of fire adapted communities in the WUI. The Salida Field Office engages in several programmatic initiatives toward this effort.

The Salida Field Office's homeowner wildfire education and mitigation program is designed to assess and map the wildfire risk associated with Chaffee County's wildland-urban interface (WUI). Included in the program are free home site visits available to WUI residents for information regarding the risk to their property or home and options for reducing said risk. Additionally, in certain instances, a cost share is available for the creation of defensible space around WUI homes. The Salida Field Office also works with WUI communities to coordinate the implementation of larger scale cross boundary fuels treatments. These include but are not limited to roadside thinning for enhancement of ingress/egress safety and the creation of fuel breaks to reduce potential wildfire activity. Finally, the Salida Field Office participates in a collaborative effort among several organizations to facilitate a community slash removal program, Chaffee Chips. This program provides free slash removal or chipping to several WUI communities on a yearly rotating basis.

Much of the work that the Salida Field Office completes is directly tied to the planning efforts of Envision Chaffee County, a team of leaders from various backgrounds that seeks to provide strategic solutions to the growth of the region. The major driving force associated with Envision Chaffee County that guides the actions of the CSFS Salida Field Office is the 2020 Chaffee County CWPP. This plan intends to substantially alter how forests are managed in Chaffee County. One of the most powerful tools included in the plan is a Fuels Treatment Priority Map that provides guidance toward specific locations within Chaffee County where projects will have the most impact. The Salida Field Office seeks to implement projects in the highest priority treatment areas according to the 2020 CWPP.

METHODS

What Did We Do?

In this project, CSFS and the WiRē Team identified the community of Chalk Creek to include in a household survey data collection effort to better understand wildfire risk and the residents whose decisions and actions shape the community landscape.

As CSFS had completed the rapid risk assessments prior to the launch of the WiRē effort, the first project-related contact with Chalk Creek residents was the survey mailing on 16 May 2019. The cover letter included with the survey informed residents that CSFS had conducted risk assessments in Chalk Creek and asked residents to complete the enclosed survey as a follow-up to the risk assessment. Please see Appendix A for correspondence materials.

Rapid Wildfire Risk Assessments

CSFS developed a property-level rapid wildfire risk assessment based on 12 attributes. For details on the CSFS rapid risk assessment, including definitions for each assessment category, please see Appendix B. All 431 properties in Chalk Creek were assessed based on those 12 attributes. However, for comparison to the household survey data, only 10 of the 12 attributes are considered, because only 10 of those attributes appear on the survey. The attributes "water source" and "other" are not included in the results summarized in this report. The subset of 10 attributes is equivalent to the WiRē RA described above. In this report, we refer to the CSFS RA with 10 of the 12 attributes as the CSFS modified RA. See Appendix C for a comparison of the full, 12-attribute risk assessment, the CSFS modified RA, and the household survey responses, for each attribute.

CSFS rapid risk assessments were conducted by Salida Field Office staff with several decades of combined experience in the field. All parcel level assessments are conducted on the property being assessed unless access is blocked by a gated driveway or heavily posted with no trespassing signage. In these instances, the assessment includes a combination of variables observable from the road and information obtained through county assessor records and remote sensing technology. While environmental and situational variables may occasionally impact the rapid assessment data collection process, the Salida Field Office is confident that the rapid assessments collected for this project provide an accurate representation of wildfire risk to the parcels in Chalk Creek.

Household Survey

In order to understand Chalk Creek residents' attitudes toward wildfire risk mitigation, CSFS partnered with WiRē to collect household survey data and then paired the social dimensions of wildfire and related decisionmaking with the observed conditions in the CSFS modified RA dataset for Chalk Creek.

Household survey data were collected using a modified Dillman approach[2] that includes an initial letter of invitation announcing the data collection effort; a survey packet containing a cover letter, a household survey, and a postage-paid and addressed return envelope; a reminder/thank you postcard mailed to the entire mailing list; and a second survey packet with an updated cover letter, mailed only to nonrespondents (see Appendix A). See table 1.

Table 1—Timing of household survey.

Mailing	Date sent
Initial letter	May 16, 2019
First survey package	June 6, 2019
Postcard	July 2, 2019
Second survey package	July 25 and 26, 2019

The first survey packet was mailed to 410 respondents.[3] A follow-up reminder postcard and a second survey packet were each mailed as returned surveys waned. The overall effort resulted in a 50% response rate with 204 completed surveys. The completed surveys were paired with the CSFS modified RA data for the same properties to create a paired dataset (n = 204), which provides the foundation for the results presented below.[4] As an important side note, the first graph below includes data from the nonpaired dataset, to contextualize the smaller, paired dataset used thereafter.

[2] For details, see Dillman, Don A. 2000. Internet and mail surveys: the tailored design method, 2000. New York: John Wiley. 480 p.

[3] The difference between the number of surveys mailed to homeowners (410) and the total number of rapid assessments (431) is explained by (1) some of the mail was returned by the U.S. Postal Service as undeliverable and (2) some homeowners own multiple properties, and we sent only one survey per homeowner.

[4] Any differences between the numbers reported here and the Household Survey Codebook (Appendix D) should be minor and the result of rounding. Any other minor differences reflect the fact that the Codebook reports on all the households that responded to the survey and this report focuses on those paired with the CSFS modified RA data set.

RESULTS

Community Risk

Of the CSFS modified RA ratings for all the 431 property risk assessments conducted in Chalk Creek, none were characterized as low risk, 18% as moderate risk, 29% as high risk, 50% as very high risk, and 2% as extreme risk.

In figure 2, the distribution of risk ratings for all 431 properties is compared to the distribution of risk ratings for properties in the smaller, paired dataset (i.e., properties with survey data). These two groups have a similar distribution.

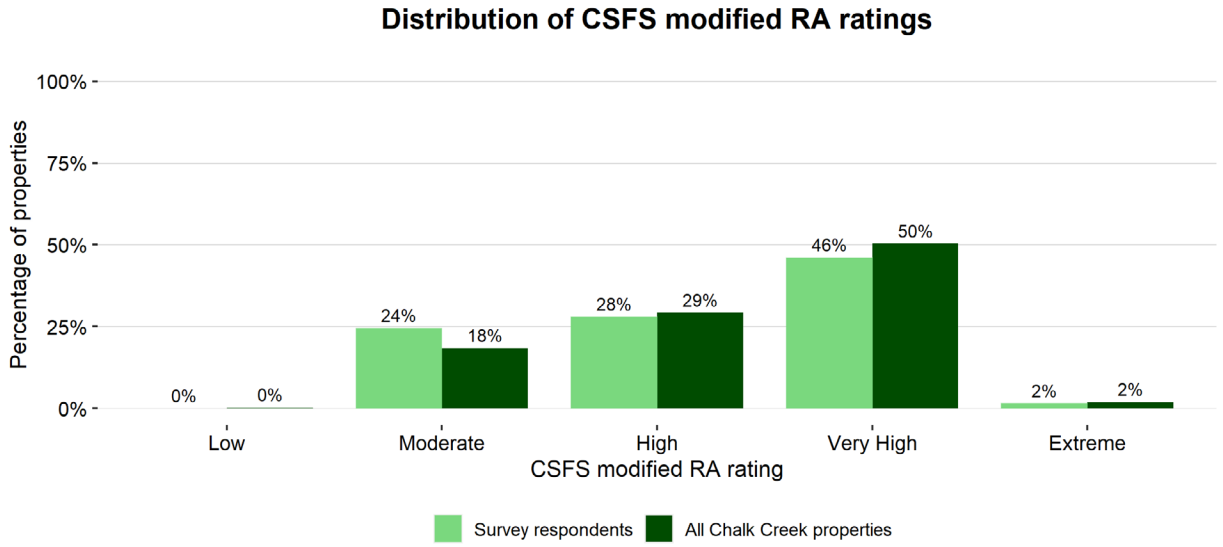

Figure 2—Distribution of CSFS modified RA ratings for survey respondents (n = 204), and all Chalk Creek properties, including survey respondents and those that either did not respond to or did not receive the survey (n = 431).

CSFS Modified RA Attributes: Observed vs. Self-Assessment by Survey Respondents

A series of individual attributes, such as roof type and evacuation capacity, comprise the overall, property-level CSFS modified RA rating. Below, the scores for each attribute are presented. Household survey respondents also assessed their property for each attribute; those responses are paired with the CSFS modified RA rating.

Access

During a wildfire, the ability for emergency responders to safely locate and access a property, as well as the ability for residents to evacuate, is critical. During a wildfire, evacuation routes could be blocked, limiting a resident's ability to move to a safe area.

Address Visible

When firefighters receive notice that a house is in immediate danger from wildfire, every second spent finding the property is crucial. Easy identification of a property's address can speed up the process. In Chalk Creek, properties were evaluated based on whether the address was posted at the driveway entrance and thus visible from the road, and whether the address was reflective and thus visible during heavy smoke or in low light.

Less than half (36%) of property addresses were both posted at the driveway and reflective, and nearly half (49%) were posted but not reflective. Compared to CSFS evaluation, more survey respondents (41%) thought they had a posted and reflective address, and fewer thought their address was posted but not reflective (39%). See figure 3.

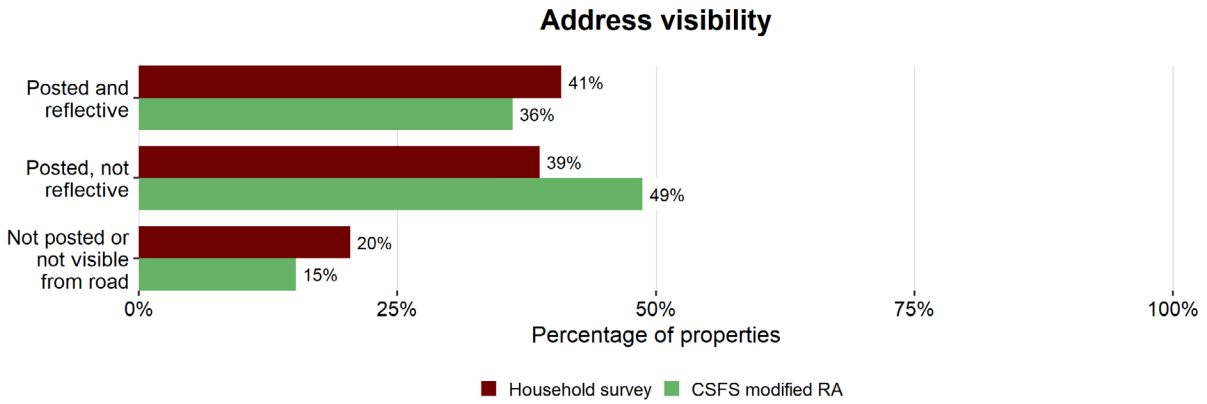

Figure 3—Visibility of property address. Comparison of household survey and CSFS modified RA estimates. N = 192 respondents to this survey question.

Ingress/Egress

Access to and from a property is determined by the available road system. Properties were evaluated based on having one or two (or more) roads in/out of the community. CSFS defines this type of road as one that allows a resident to exit the entire community of Chalk Creek, not just a road from their own home.

Ninety-one percent of properties in the paired dataset have just one road in or out of Chalk Creek; just 9% have multiple roads in or out. Notably, 44% of residents reported multiple roads in or out of their community, indicating that some residents believe there are more evacuation routes than there are. However, this disparity may be due to residents' inclusion of roads within the community (e.g., a secondary access road to the highway, a second road within their neighborhood), rather than just roads in or out of the entire community. See figure 4.

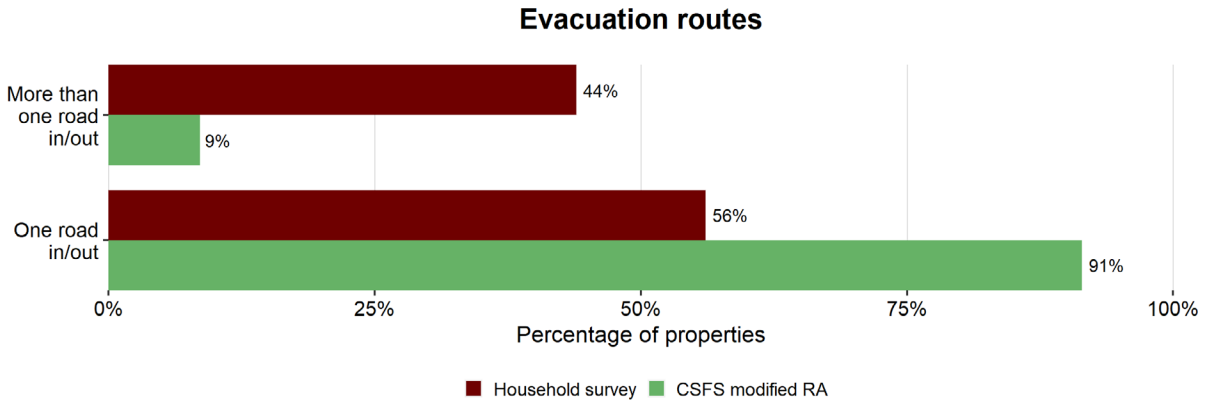

Figure 4—Number of evacuation routes in or out of Chalk Creek. Comparison of household survey and CSFS modified RA estimates. N = 198 respondents to this survey question.

Home Ignition Potential

The design of a structure and the building materials utilized in its construction play a significant role in the ignitability of a home in a wildfire event. With prolonged exposure to convective and radiant heat, even the most fire-resistant materials can fail.

Roof

Roof material has been shown to have a dramatic influence on the ignitability of a residence during a wildfire. Roof covering such as metal, tile, or asphalt composition shingles resist ignition to wildfire, while combustible materials such as wood shingles can catch on fire easily.

Nearly all (99%) of the roofs in the paired dataset were noncombustible. Nearly all respondents (98%) reported having a noncombustible roof. See figure 5.

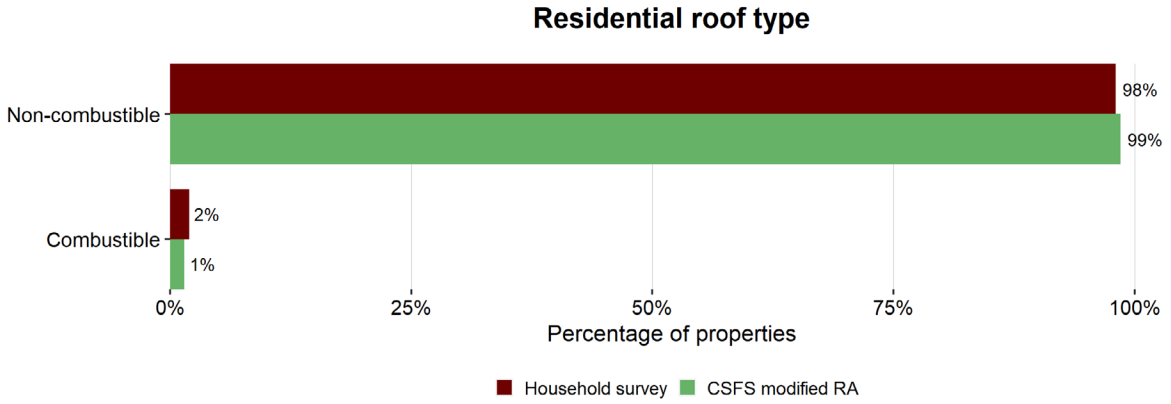

Figure 5—Combustibility of residential roof type. Comparison of household survey and CSFS modified RA estimates. N = 203 respondents to this survey question.

Siding

The design, materials, and construction of a structure's exterior walls have an impact on the ignitability of a home during a wildfire event. Wood siding that is unmaintained and has noticeable gaps is more receptive to trapping blowing embers than noncombustible materials like metal or stucco. Siding is categorized here as low risk or noncombustible (e.g., stucco, brick, stone), medium risk of combustion (log, heavy timbers, maintained wood), or high risk of combustion (vinyl, unmaintained wood, or other ember-receptive siding).

Across the paired dataset, the majority (79%) of homes had medium-risk siding. Slightly fewer respondents (75%) placed their siding into the medium risk category. Twelve percent of the homes were considered low risk or noncombustible according to the CSFS modified RA, and 18% of respondents thought their siding fell into that category. See figure 6.

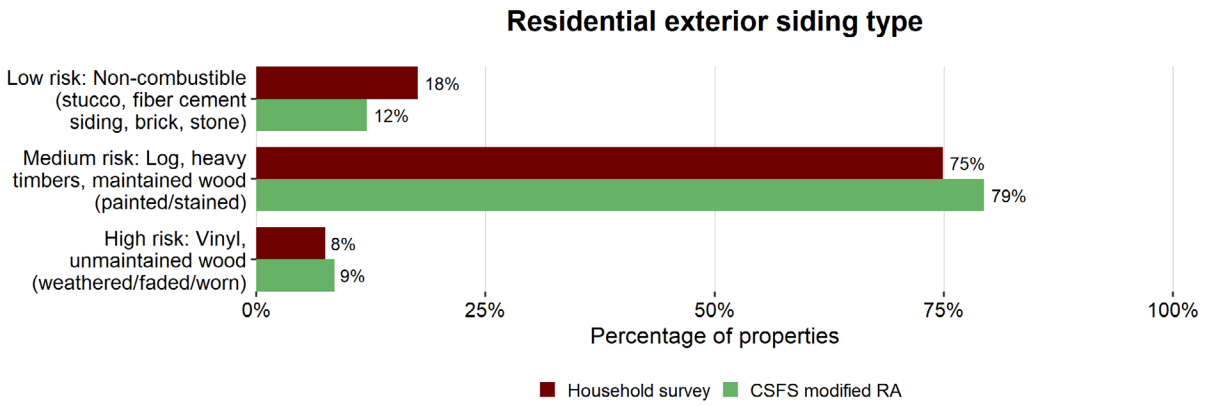

Figure 6—Residential exterior siding type, categorized by material into low-, medium-, and high-risk categories. Comparison of household survey and CSFS modified RA estimates. N = 199 respondents to this survey question.

Decking and Fencing

Building materials used for the construction of attachments to the structure (e.g., decks, fences) present a significant ignition vulnerability due to the expansive surfaces that are exposed to wind-driven embers, the ability for attachments to trap embers, as well as convective and radiant heat. The CSFS modified RA evaluated whether homes had either highly combustible attachments (e.g., wood), moderately combustible attachments (e.g., composite material), or either fire-resistant (e.g., concrete) or no combustible attachments. Survey respondents reported whether they had an attachment to their house, and whether that attachment was combustible. Due to a lack of information about attachment materials, as reported by the survey, an attachment reported as noncombustible is categorized as moderately combustible.

Across the paired dataset, the majority (80%) of homes had attachments made of highly combustible materials. Respondents reported slightly lower levels of combustible attachments. See figure 7.

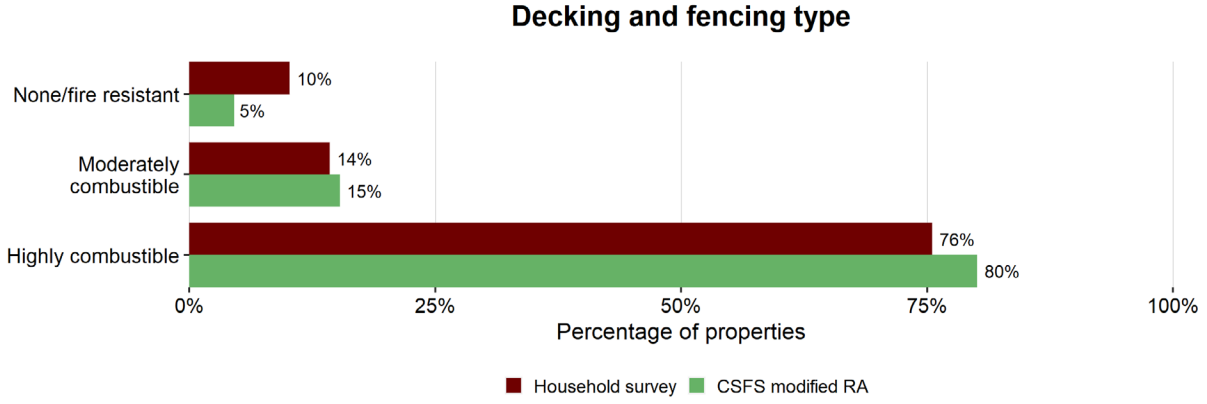

Figure 7—Residential attachments (e.g., deck or fence) categorized by combustion risk. Comparison of household survey and CSFS modified RA estimates. N = 197 respondents to this survey question.

Defensible Space

Vegetation and other combustible materials near or touching the home can play a large role in home ignitions, as they can catch fire and pass the flames or embers to the home.

Defensible Space

The quality of the defensible space around the home, in addition to the home's ignition potential, form the home ignition zone. Continuous fuels within the home ignition zone increase the home's risk for damage by wildfire. Flammable or abundant vegetation near the home may catch on fire and spread the fire to the home. To best prepare a home for wildfire, CSFS recommends at least 100 feet of defensible space.

The defensible space of most (98%) homes was less than 30 feet. However, only 40% of survey respondents reported this to be the case. This suggests that some residents believe their defensible space to be larger than it is. See figure 8.

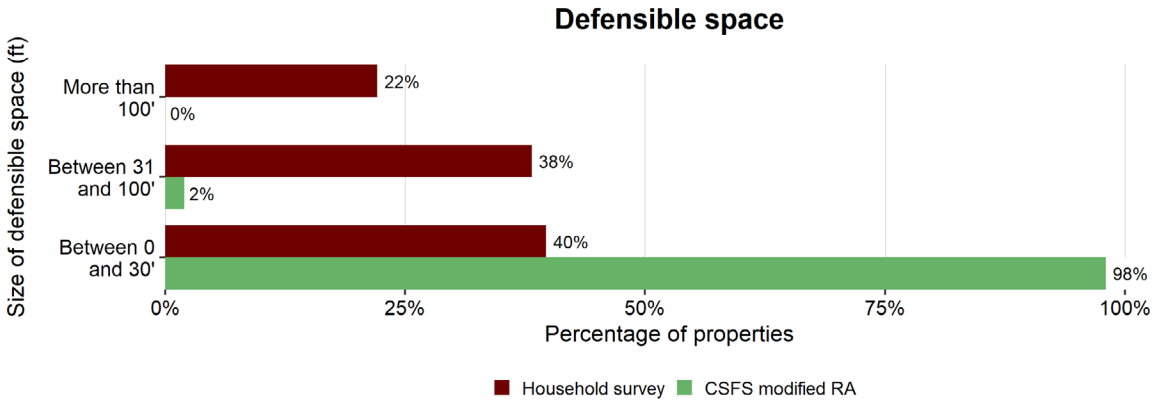

Figure 8—Defensible space, categorized by distance between the home and dense vegetation. Comparison of household survey and CSFS modified RA estimates. N = 199 respondents to this survey question.

Combustible Materials Other Than Vegetation Within 30 Feet

Beyond vegetation, other combustible materials within 30 feet of the home can also affect the quality of defensible space.

The nearest combustible materials, other than vegetation, were 30 feet or more from the home in the majority (76%) of properties in the paired data. However, only 50% of respondents reported that the nearest combustibles, other than vegetation, were at least 30 feet from their home. See figure 9.

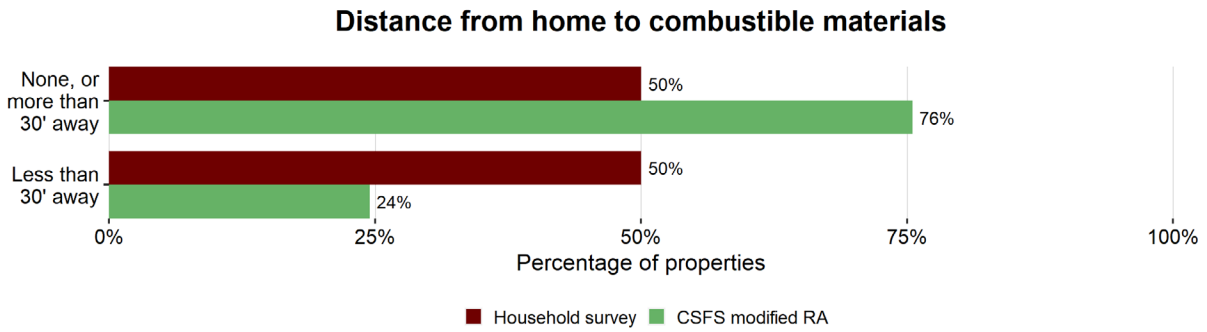

Figure 9—Distance from home to combustible materials other than vegetation. Comparison of household survey and CSFS modified RA estimates. N = 200 respondents to this survey question.

Background Conditions

Slope

The slope of the land on which a home is located can also affect its wildfire risk. Wildfire tends to burn more quickly when moving up a steeper slope. Furthermore, very steep slopes can limit firefighter access. Residents were asked to estimate the slope of their property, with the aid of a diagram printed on the survey to visually demonstrate different slopes. Most properties (93%) had a gentle slope; however, only 54% of respondents reported that their property had a gentle slope. See figure 10.

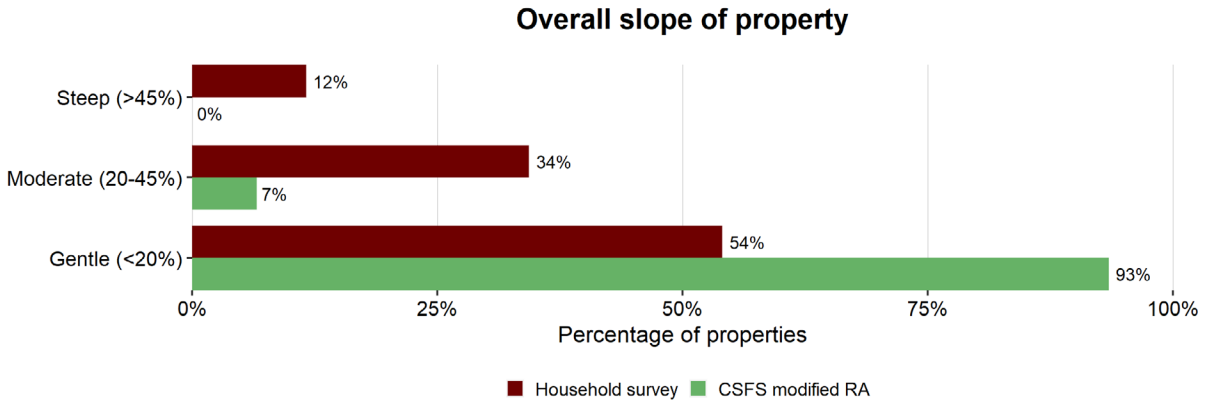

Figure 10—Overall slope of property. Comparison of household survey and CSFS modified RA estimates. N = 198 respondents to this survey question.

Density of Vegetation

High density vegetation near a home can increase wildfire risk to the home. Residents were asked to estimate whether the dominant vegetation on their property and properties immediately surrounding would best be described as “grasses,” “light brush and/or isolated trees (e.g., grass with some pinyon-juniper, isolated oak, and/or isolated conifers,” or “dense brush and/or dense trees (e.g., continuous pinyon-juniper, dense oak, and/or dense mixed conifers).” The CSFS modified RA scored properties based on whether that property and properties immediately surrounding had light, moderate, or heavy vegetative density.

Most (65%) properties had heavy vegetative density on their property or on surrounding properties. Fewer residents (29%) reported heavy vegetative density. Instead, most residents (65%) reported moderate vegetative density. See figure 11.

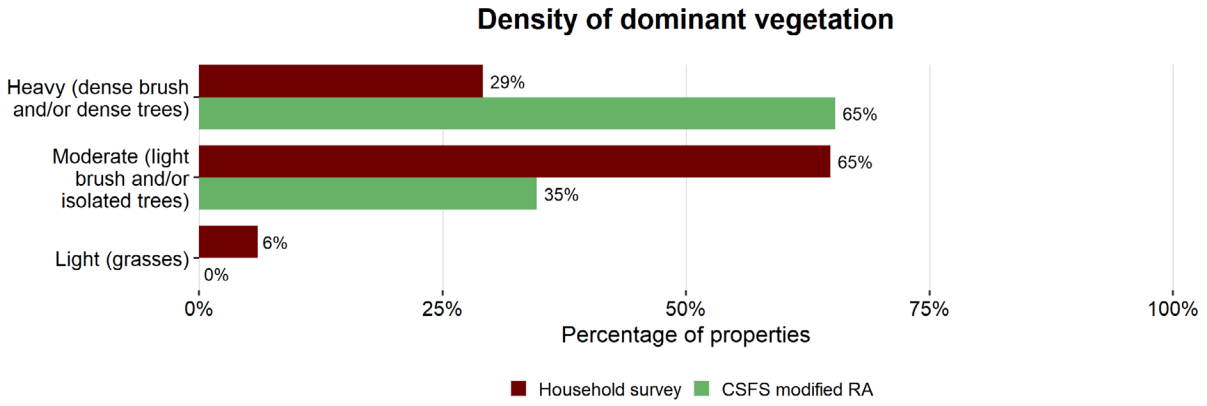

Figure 11—Density of vegetation. Comparison of household survey and CSFS modified RA estimates. N = 199 respondents to this survey question.

Overall Wildfire Risk

In order to better understand the perspective of Chalk Creek residents, household survey respondents were also asked to provide an overall assessment of their property's risk, after having self-assessed their property based on the attributes described above. The survey question provided a five-point scale: low, moderate, high, very high, or extreme risk. This scale matches the CSFS modified RA overall risk rating scale. Residents were more likely to rate their home's risk as low, moderate, or high risk than the CSFS modified RA, whereas the CSFS modified RA was more likely to rate homes as very high or extreme risk. See figure 12.

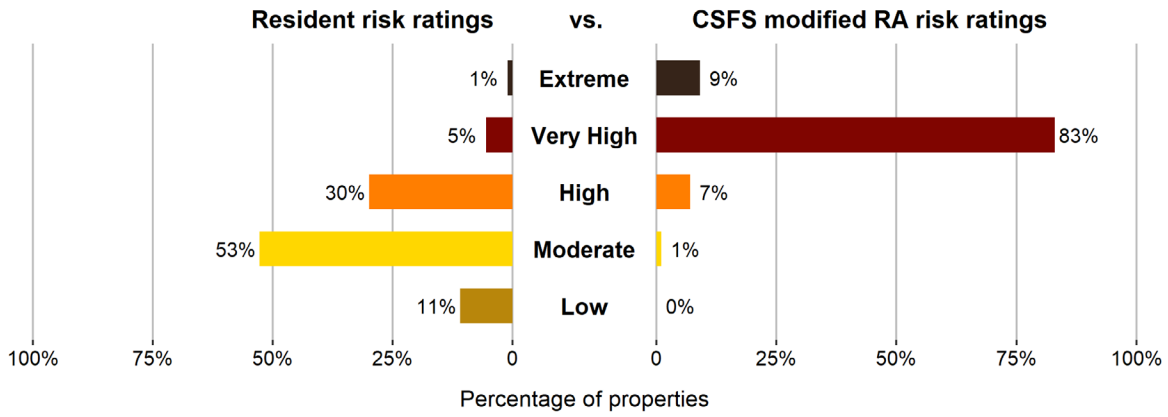

Figure 12—Distribution of overall risk rating for Chalk Creek homes. Comparison of household survey and CSFS modified RA estimates. N = 201 respondents to this survey question.

Social Dimensions of Wildfire in Chalk Creek—Household Survey Results

The respondents' homes were built as long ago as 1870 and as recently as 2018, with an average year built of 1979. Respondents moved into their home as long ago as 1915, with an average move-in date of 1996, more than 20 years ago.

Less than a third of respondents (20%) are full-time occupants (at least 10 months per year); most respondents (69%) occupy their Chalk Creek residence less than 6 months per year (see Appendix E for additional analyses of seasonal and full-time occupants). However, most residences (87%) are owner occupied. Some respondents (12%) are owners who rent out their residences out on a short-term basis, and very few (1%) are owners who rent out their residences on a long-term basis. None of the respondents were renters.

More than half the respondents were male (65%) and the average respondent age was 67 years. The majority of respondents were retired (55%), while 37% were employed full-time and 7% were employed part-time. Most respondents were highly educated, with 81% having at least a college degree. More than two-thirds (69%) reported a household income over $75,000.

ORIGINS OF WILDFIRE PERCEPTIONS AND KNOWLEDGE

Communication About Wildfire

Current and Preferred Modes of Communication

Community programs undertake various outreach efforts to communicate wildfire risk information. We asked survey respondents by what modes they currently receive wildfire risk communications. At the time of the survey, the top two most frequent modes of wildfire risk communication were in-person interactions (49%) and community meetings (30%). See figure 13.

Since preferred modes of communications may vary by community, and some modes of communication may not have been available at the time of the survey, respondents were also asked by what modes would they prefer to receive wildfire communication. Seventy-two percent of respondents preferred email/e-newsletter, while 69% preferred to receive wildfire risk information via mailed newsletter. Other top modes of communication preference included in-person interactions (62%), community meetings (60%), and internet (nonsocial media; 49%). The least preferred mode of communication was social media (e.g., Facebook, Twitter; 23%). See figure 13.

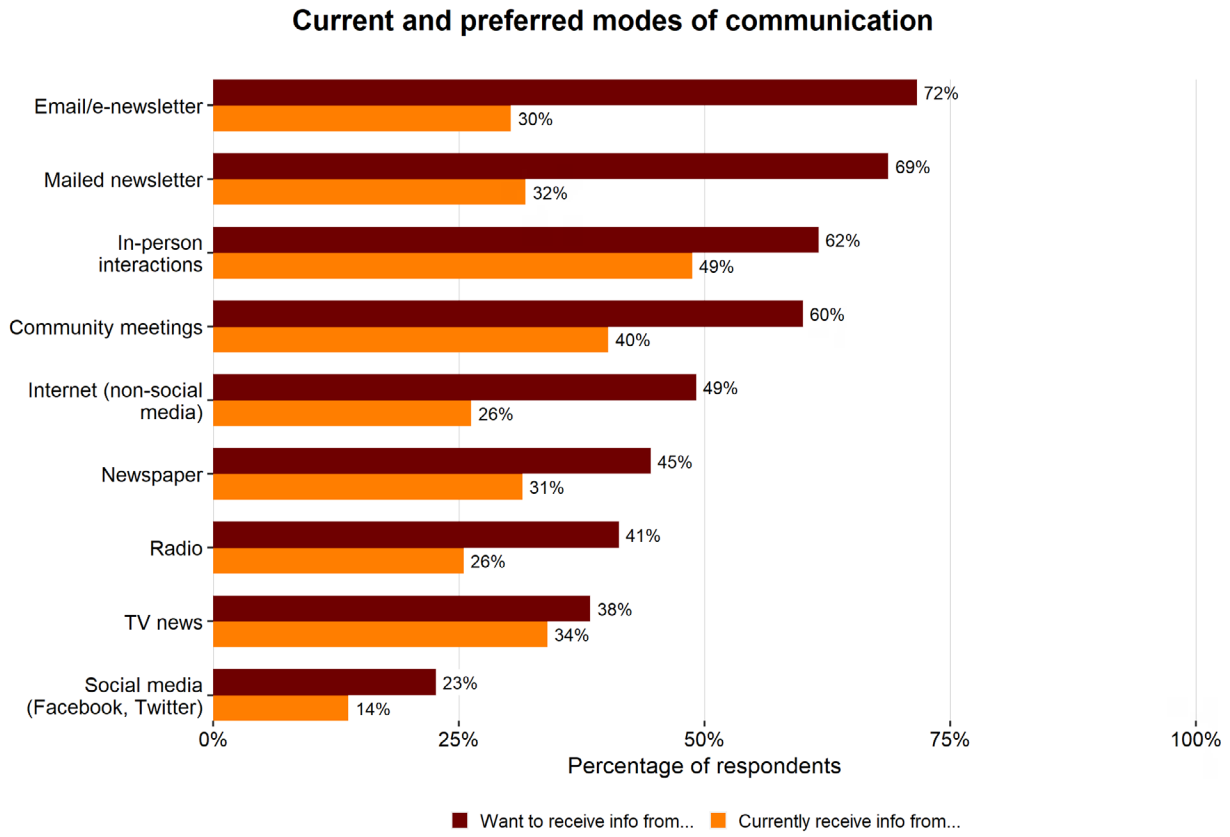

Figure 13—Comparison of used and preferred modes of communication about wildfire risk. Survey respondents were able to select multiple options. N = 195–199 respondents to current modes; n = 172–183 respondents to preferred modes.

Sources of Information and Reported Usefulness

Respondents were also asked to report what sources of information they have used for wildfire risk information and to evaluate the usefulness of those sources. The most used sources of information were the CSFS (81%) and a community group (62%). These two sources of wildfire risk information were also considered the most useful sources. CSFS was the most useful information source with 53% of respondents rating the wildfire information from CSFS as very or extremely useful. See figure 14.

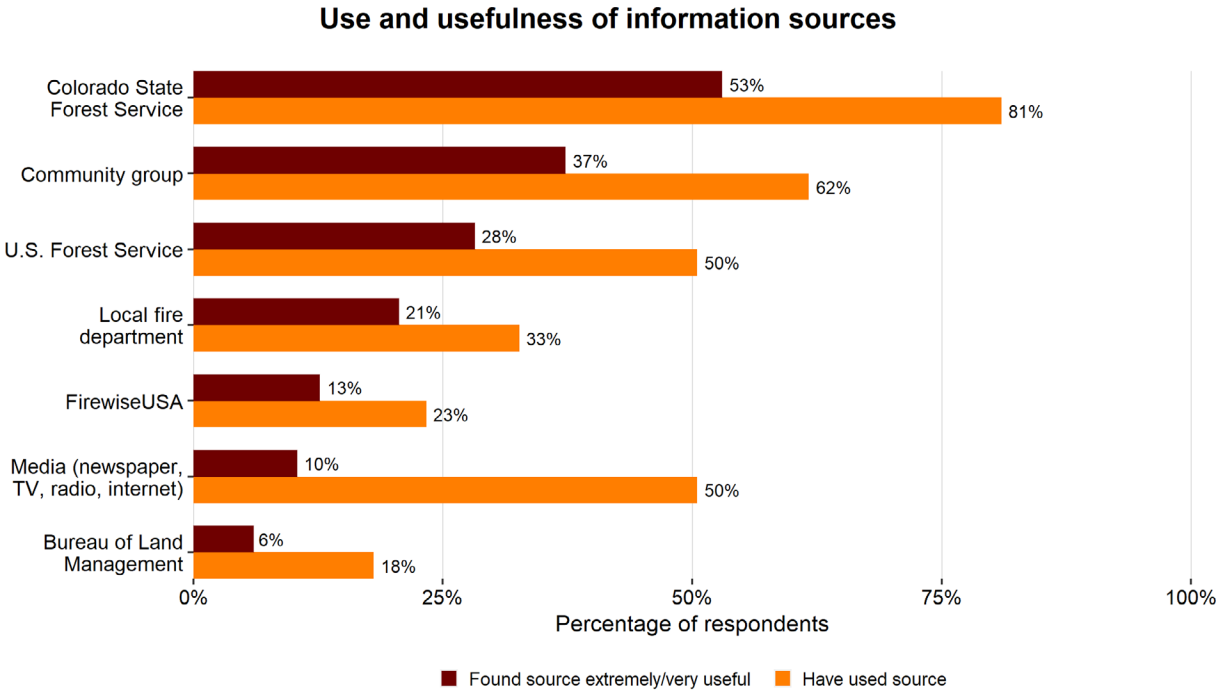

Figure 14—Comparison of most used and most useful sources of wildfire risk information. N = 199–201 respondents to these survey questions.

In addition to formal sources of information, residents also receive and provide information through interactions with their neighbors. Seventy-one percent of survey respondents reported talking with a neighbor about wildfire. See figure 15.

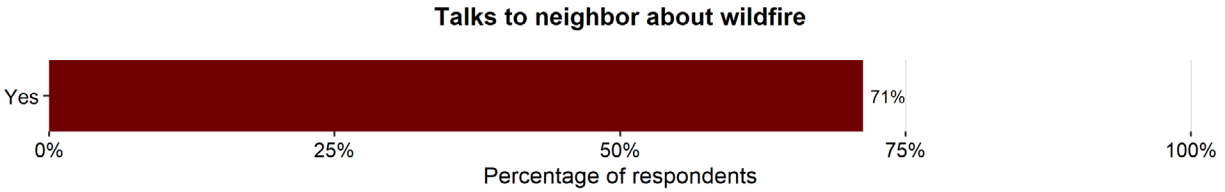

Figure 15—Percentage of respondents to this question who have talked to their neighbor about wildfire. N = 202 respondents to this survey question.

Through interactions or observations, 77% of respondents reported having neighbors who are taking action to address wildfire risk, and 55% reported having neighbors who are not taking action to address wildfire risk. See figure 16.

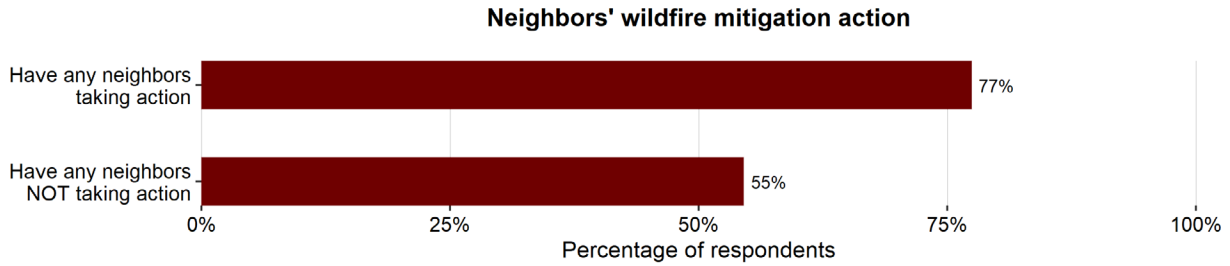

Figure 16—Neighbors who do or do not take wildfire mitigation action. N = 195–198 respondents to these two survey questions.

Considering just the neighbors reported to be taking mitigation action, respondents reported whether conditions on those properties increased, decreased, or had no effect on the likelihood of wildfire spreading to their own property. The majority (67%) of respondents thought the neighbors' property conditions (which had undergone mitigation) decreased the likelihood of wildfire spread. This understanding matches wildfire research on risk interdependency, which has found that wildfire spreads between neighboring properties; taking mitigation action on one property would reduce risk on neighboring properties. Few (5%) thought their neighbors' property conditions increased the likelihood of wildfire spreading to their own property, but nearly a third (28%) thought neighbors' property conditions had no effect on the likelihood of wildfire spread. See figure 17.

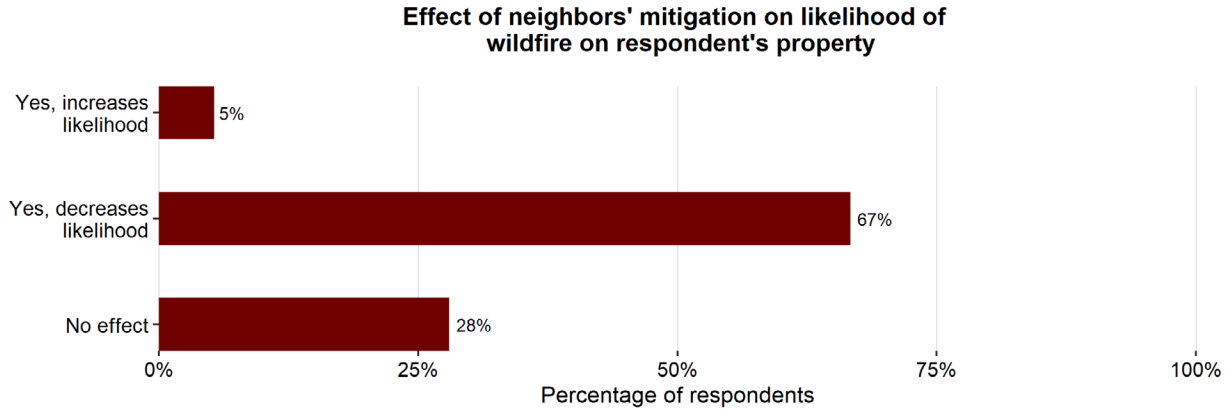

Figure 17—Effect of neighbors' mitigation on the likelihood of wildfire on the respondent's property. This graph only includes neighbors reported to be taking mitigation action—the upper category in figure 16. N = 150 respondents to these two survey questions.

Wildfire Experience

Overall, we see that survey respondents have had very little direct experience with wildfire. This likely reflects the history of limited wildfire directly within the Chalk Creek community. None of the respondents to this question have had fire damage, smoke damage, or a home destroyed by fire. Only 2% have evacuated due to a wildfire. See figure 18.

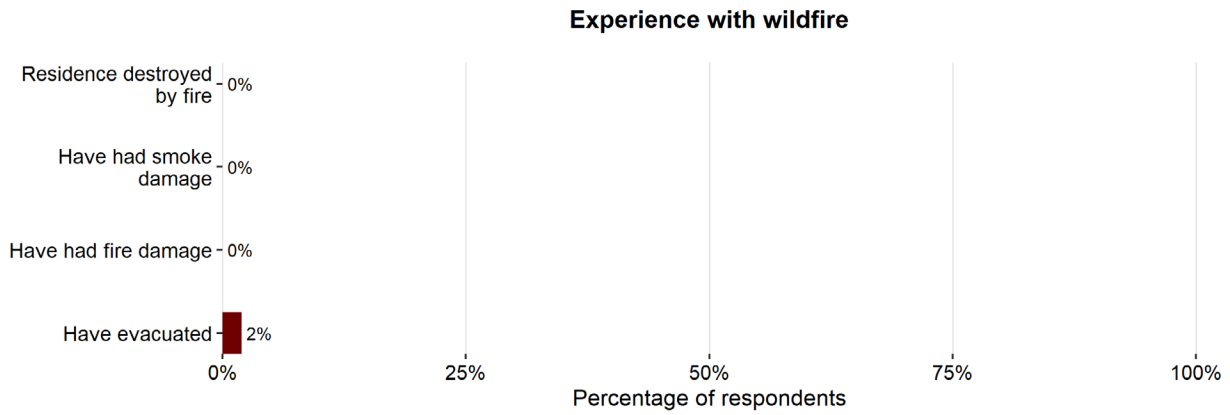

Figure 18—Experience with wildfire. N = 203 respondents to this survey question.

The survey also asked residents how close a wildfire has come to their home in the past. Twenty-seven percent of respondents reported experiencing wildfire within 10 miles of their home and 9% within 2 miles of their home. See figure 19.

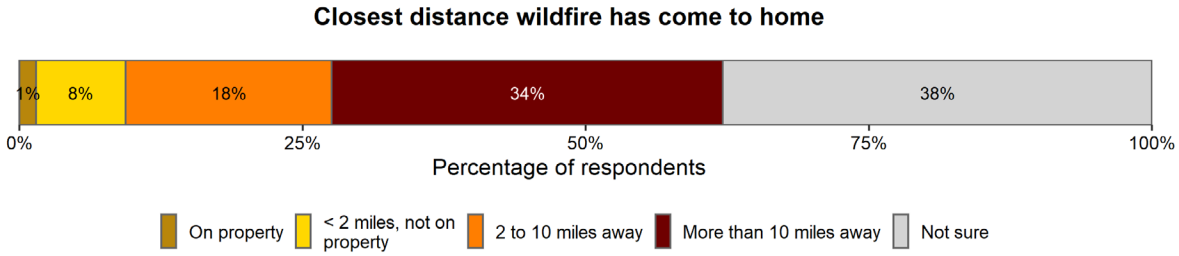

Figure 19—Closest distance wildfire has come to home. N = 203 respondents to this survey question.

Notions of Hazard and Response

Respondents were asked to what extent they agree or disagree with a series of wildfire attitude statements, on a scale from 0 to 10. Here, we report on the percentage of respondents who indicated that they agreed or strongly agreed (5 or higher on the scale) with the statements. Overall, there is strong consensus regarding several aspects of wildfire. First, we see that most respondents agreed or strongly agreed that wildfires should be put out if they threaten human life (97%) and property (85%). Second, 82% agreed that "Wildfires are a natural part of the balance of a healthy forest/ecosystem." Providing more context to that statement, 67% agreed that "During a wildfire, saving homes should be a priority over saving forests." See figure 20.

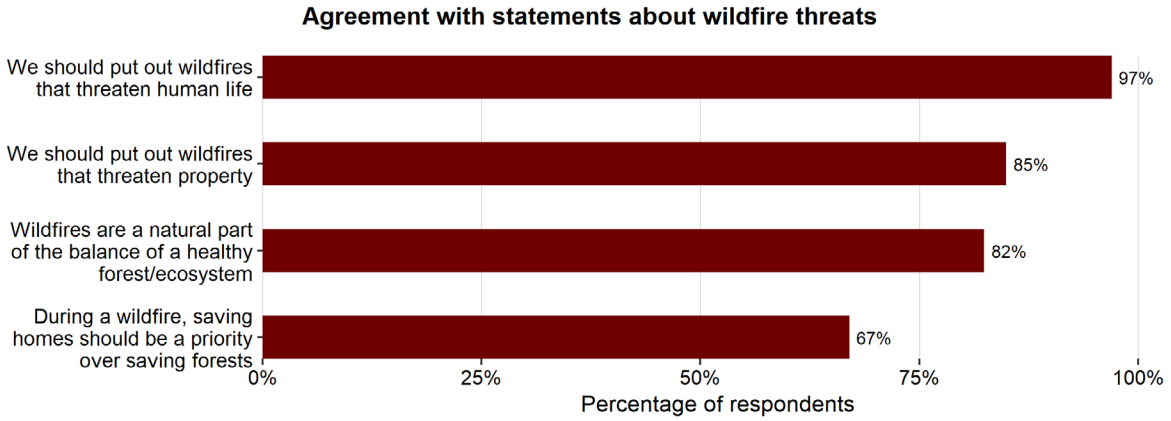

Figure 20—Agreement with statements about wildfire priorities. N = 199–200 respondents to each survey statement listed.

Despite limited direct wildfire experience among study respondents, 70% of respondents agreed or strongly agreed that "My property is at risk of wildfire." Just 24% of respondents agreed that "Wildfires threaten my community water supply." Few (2%) agreed that "Wildfire smoke caused me to consider moving out of the area." See figure 21.

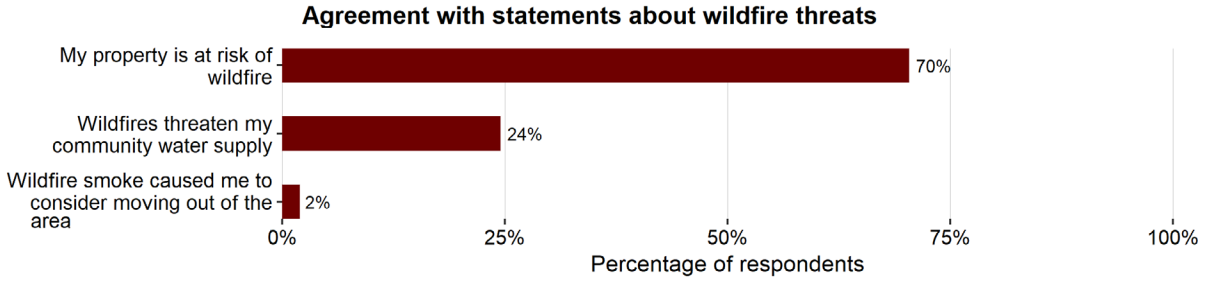

Figure 21—Agreement with statements about wildfire threats. N = 196–200 respondents to each survey statement listed.

Statements about managing wildfire impacts garnered less agreement overall. Thirty-five percent of respondents agreed that "With proper technology, we can control most wildfires," suggesting that most (65%) disagree that we can control most wildfires, given the proper technology. In contrast, 22% agreed that "My effort to reduce wildfire risk on my property is ineffective because of the heavy vegetation on my neighbors' properties," suggesting that most (88%) either believe their mitigation action is effective or at least is unaffected by neighbors' properties.

Importantly, only 9% or fewer agreed or strongly agreed with each of these four critical statements:

- "Homeowners' actions to reduce wildfire are not effective."
- "I live here for the trees and will not remove any of them to reduce wildfire risk."
- "Managing the wildfire danger is a government responsibility, not mine."
- "Firefighters should put their lives at risk to protect my home."

Furthermore, respondents appear to recognize the limited availability of wildfire suppression resources. Nine percent of respondents agreed that "Local firefighters will have sufficient resources to protect threatened homes" and 4% agreed that "Local firefighters will have sufficient resources to keep the wildfire from spreading." See figure 22.

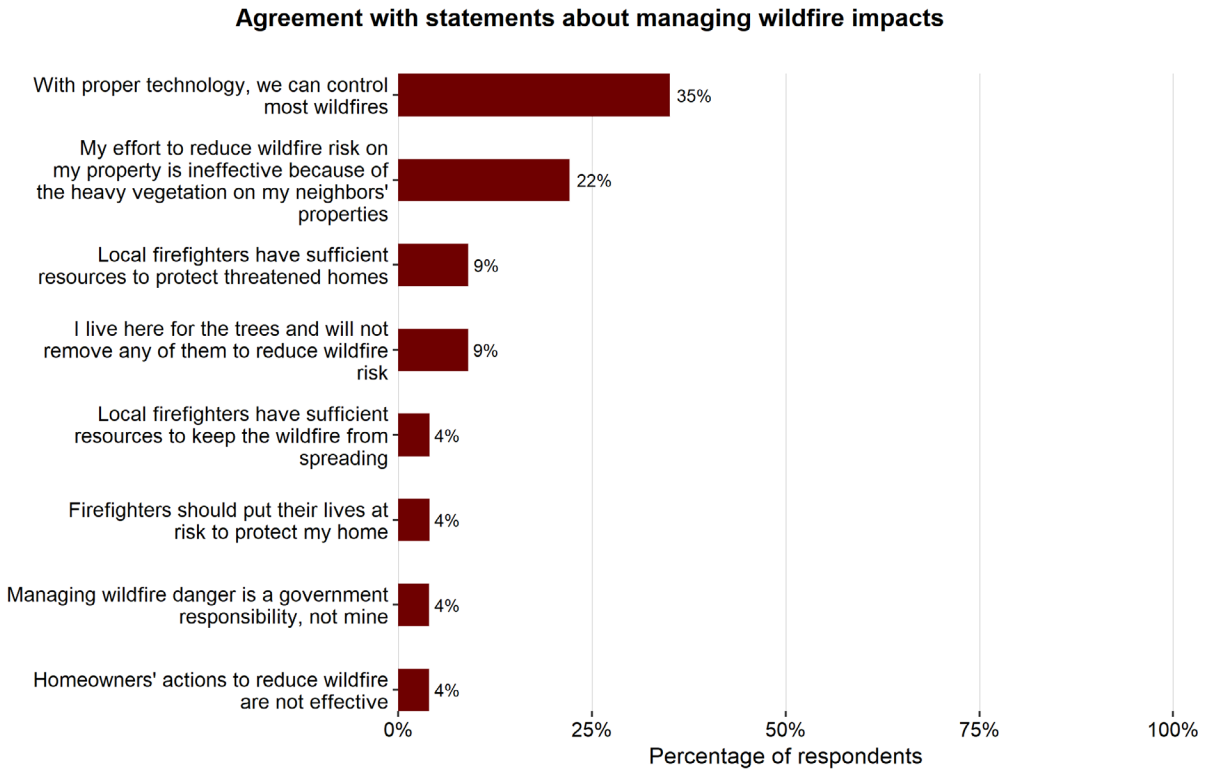

Figure 22—Agreement with statements about managing wildfire impacts. N = 197–200 respondents to each survey statement listed.

When asked to consider expectations about wildfire, only 14% of respondents thought it likely (> 50% chance) a wildfire would be on their property this year. However, 61% thought it likely (> 50% chance) that if there was a wildfire on their property, their Chalk Creek home would be destroyed or severely damaged. See figure 23.

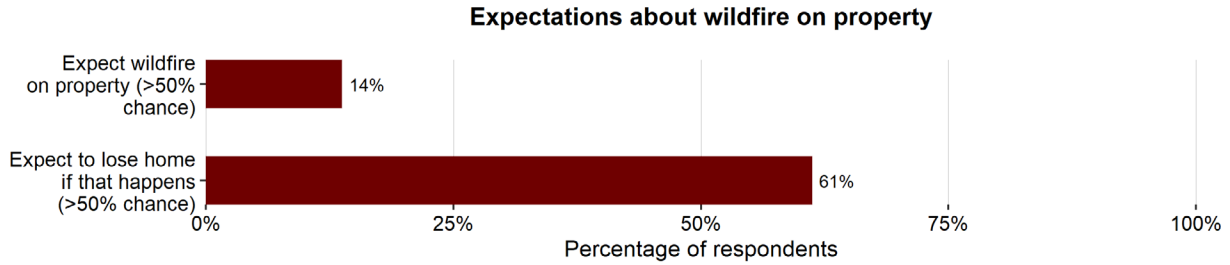

Figure 23—Expectations about wildfire on property, and chances of losing home in that case. N = 196 respondents to each survey question.

Respondents were asked, “If there is a wildfire on your Chalk Creek property, how likely do you think it is that the following would occur?” For each statement, respondents indicated likelihood on a scale from “not likely at all” to “extremely likely,” or “not applicable.” We report the percentage of respondents that thought the following outcomes were very or extremely likely, excluding those who responded “not applicable.” Regarding ignition of the home, some respondents thought it likely that direct flame (36%) or embers (31%) would ignite their home. Fewer (18%) thought nearby homes would ignite their home. See figure 24.

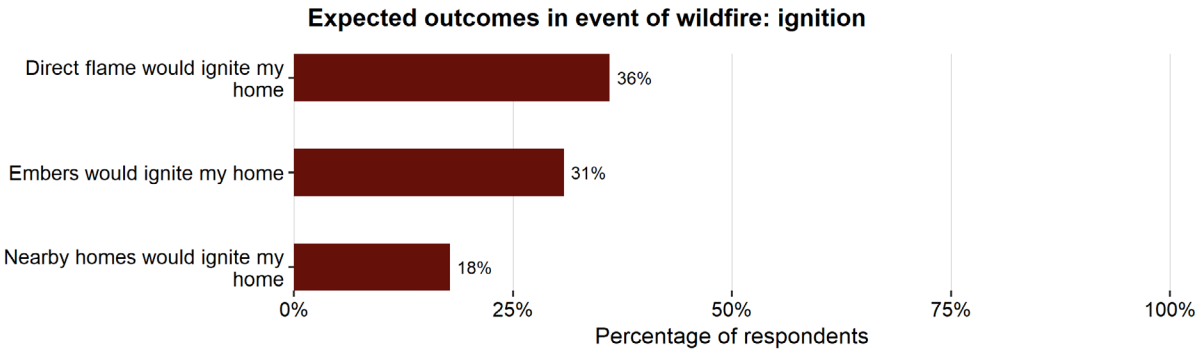

Figure 24—Percentage of respondents who think the above sources of home ignition are very or extremely likely, in the event of a wildfire on their property. N = 191–198 respondents to each statement listed.

The majority of respondents reported that, if there was a wildfire on their property, it was likely that their trees and landscape would burn (60%), their home would have smoke damage (56%), and some physical damage (51%). Forty-three percent of respondents thought they would lose money due to loss of business or income on their property. Only thirty-two percent thought their home would be destroyed, and a slightly greater number thought their neighbors’ homes would be damaged or destroyed (37%). See figure 25.

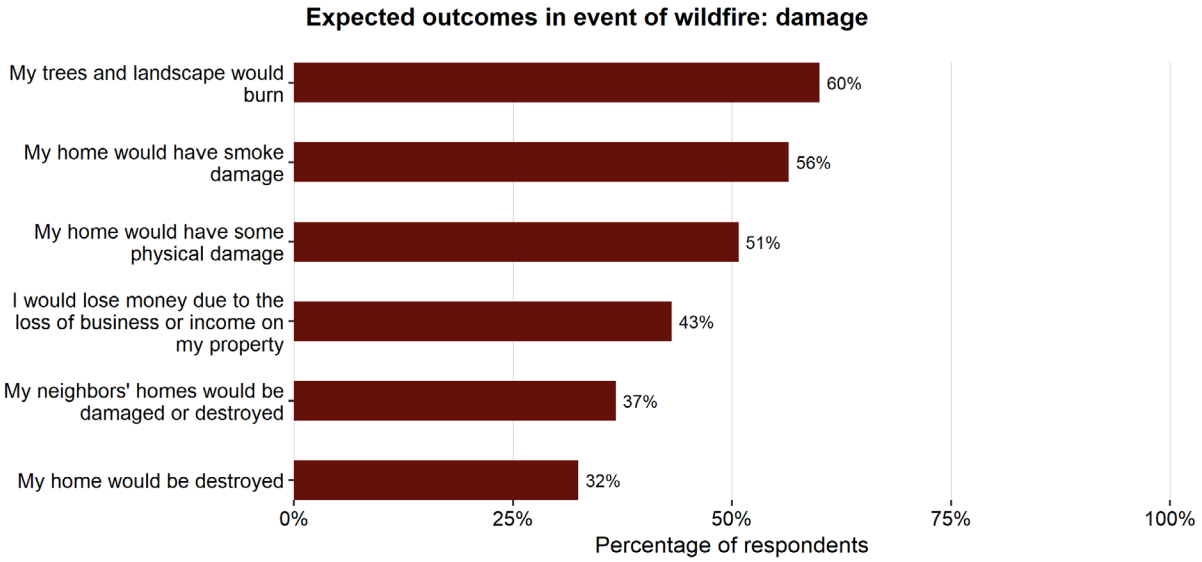

Figure 25—Percentage of respondents who think the above types of damage are very or extremely likely, in the event of a wildfire on their property. N = 102–197 respondents to each statement listed. Graph does not include survey respondents who did not respond to these questions.

In the event of a wildfire on their property, few respondents thought it very or extremely likely that the fire department would save their home (18%); they thought it almost as likely that they would put the fire out themselves (15%). See figure 26.

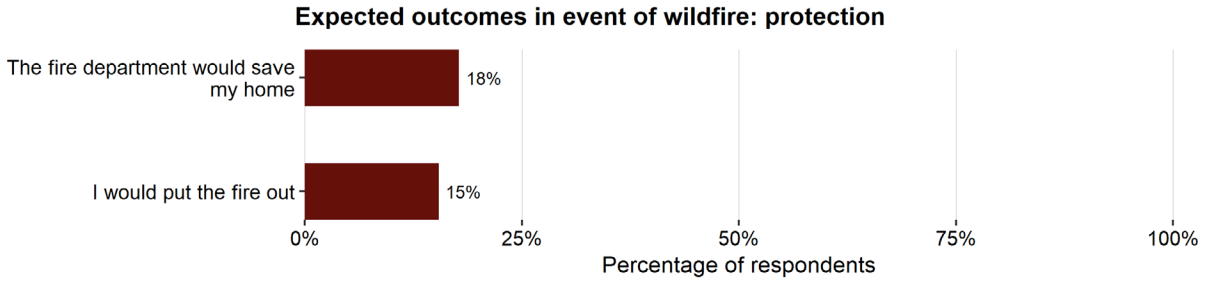

Figure 26—Percentage of respondents who think the above two statements about saving their home are very or extremely likely, in the event of a wildfire on their property. N = 188–197 respondents for each survey question.

What Are Respondents Doing About Wildfire?

Wildfire Preparedness

A critical component of being prepared for a wildfire is the development of an evacuation plan. Seventy-five percent of respondents reported having an evacuation plan for the people in their household. Fifty-two percent of respondents have pets on their property, and 69% of those respondents have a plan for those pets. Eleven percent of respondents have livestock on their property, and 27% of those respondents have a plan for that livestock. In terms of signing up for emergency notifications, only 18% of respondents reported signing up for Everbridge. Everbridge is Chaffee County's most comprehensive emergency notification system and is a method of informing residents of evacuation notices. See figure 27.

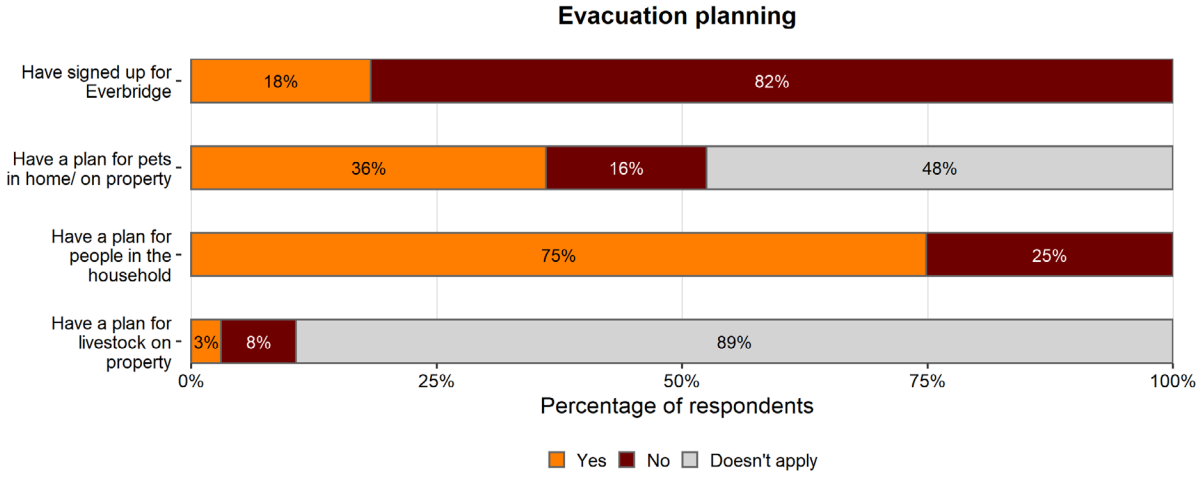

Figure 27—Percentage of respondents who have wildfire evacuation plans for the above categories. N = 197–203 respondents for each of the above categories.

Respondents also reported what type of information would help them develop an evacuation plan. Most respondents reported that knowing how they will be notified (74%), when to evacuate (65%), and safe evacuation routes (61%) would be helpful in developing their evacuation plan. Fewer respondents to this question (30%) asked for information about what to bring and what to leave behind, and only 14% said they did not need any additional information. See figure 28.

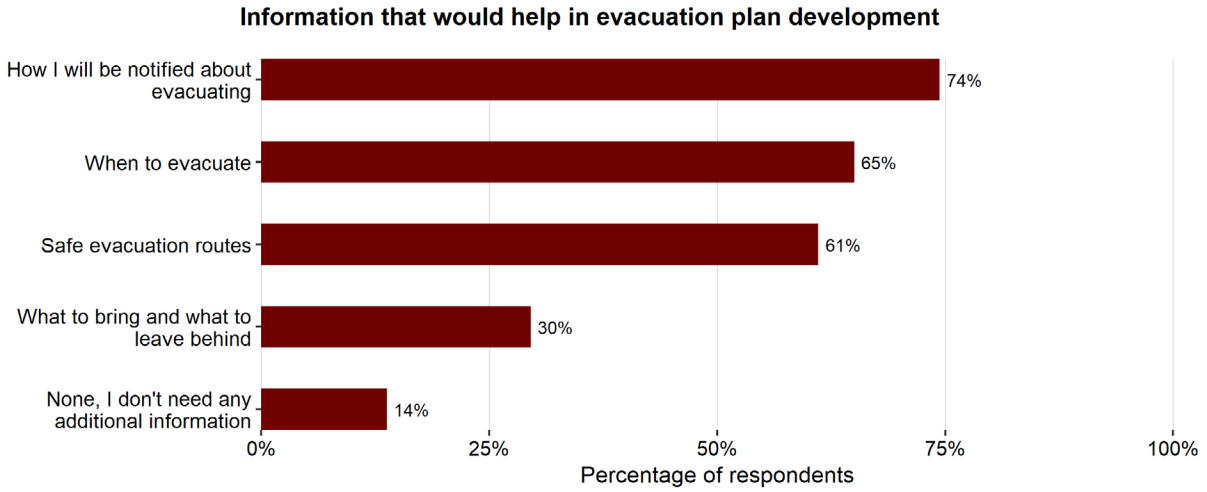

Figure 28—Information that would be helpful in evacuation plan development, according to respondents. N = 203 respondents to this question.

Mitigation

Respondents were also asked to report on their wildfire risk mitigation activity on their property or nearby. Most respondents reported they reduced vegetation on their property (92%), regularly cleared their roof and gutters (75%), and regularly mowed and raked around their home (63%). Nearly half (48%) reported they had made their home more fire resistant. It is not surprising to see such a high level of reported wildfire risk mitigation activities, as only 4% of respondents agreed/strongly agreed with the statement "Homeowners' actions to reduce wildfire risk are not effective." See figure 29.

Some residents (10%) also helped with wildfire risk mitigation on nearby public land. Thirty-five percent of respondents reported they had participated in a community wildfire activity, and 17% reported they had reduced vegetation on community property. Twenty-five percent reported they had helped neighbor(s) reduce vegetation. See figure 29.

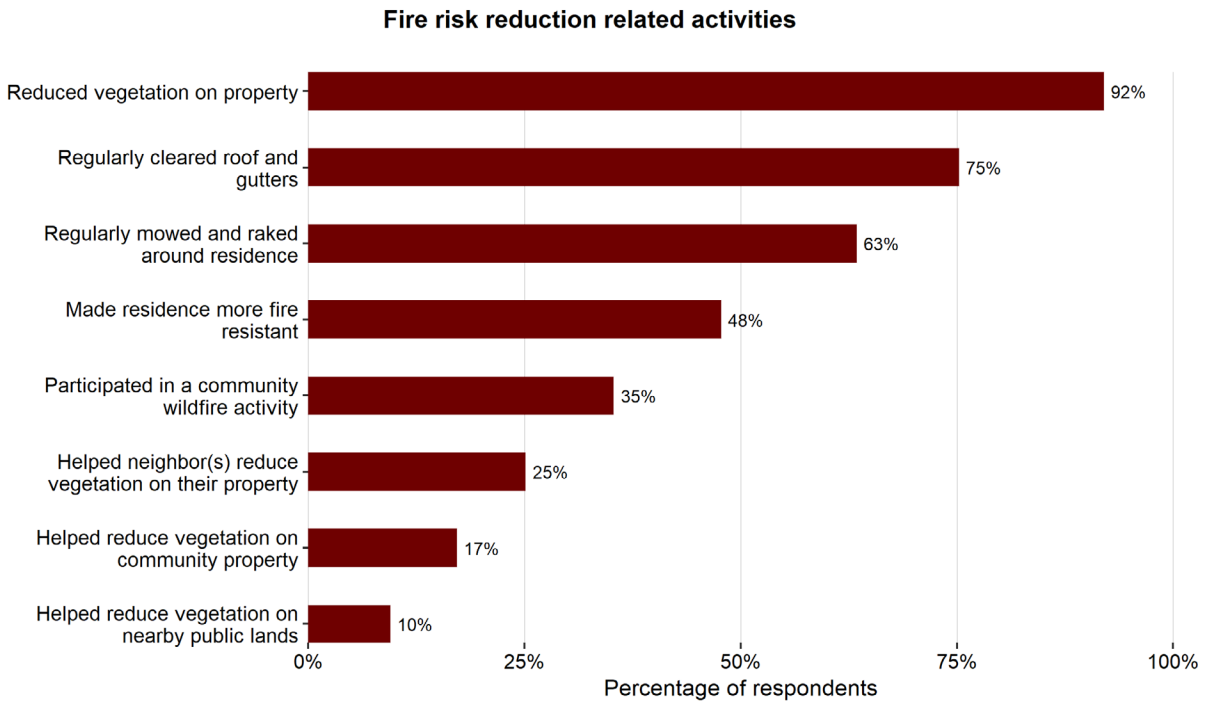

Figure 29—Percent of respondents who reported doing the above wildfire risk mitigation activities. N = 194–201 respondents to each of the activity statements.

There are a range of mitigation approaches for managing fuels on public lands. In order to undertake those activities, it is useful to understand how acceptable these activities are to nearby residents. We provide the percentage of respondents who reported that activities were very or extremely acceptable. Overall, there is very high support for each of the items queried. Seventy-seven percent of respondents reported that "Removing trees and reducing other vegetation" was acceptable. Sixty-one percent of respondents reported that "Burning piles of vegetation (slash piles)" was acceptable. Sixty-two percent reported that "Managing a naturally ignited fire (such as lightning)" was acceptable and 49% reported that "Conducting a prescribed fire ignited by fire managers" was acceptable. See figure 30.

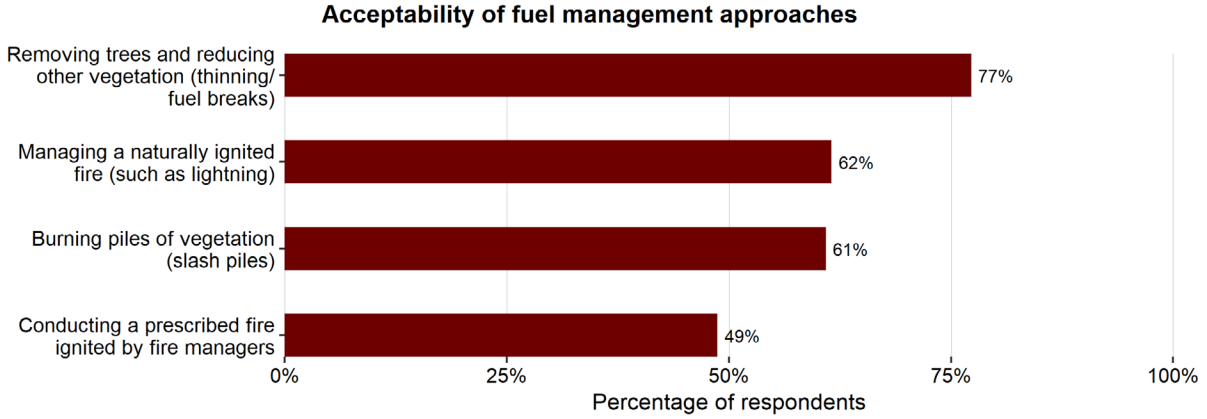

Figure 30—Percentage of respondents who found each of the above wildfire fuel management approaches very or extremely acceptable. N = 195–198 respondents for each statement.

Barriers and Incentives

Survey respondents were asked, "Do any of the following prevent you from taking action to reduce the wildfire risk on your Chalk Creek property?" Physical difficulty was the top reason respondents reported for not conducting mitigation; nearly half (48%) reported this was a barrier. Respondents also reported the following as barriers: time it takes to complete the work (42%), lack of specific information or options for slash removal (32%), not wanting to change the way their property looks (32%), financial expense/cost (31%), lack of specific information on how to reduce wildfire risk (30%), and lack of effectiveness of risk reduction actions (18%). Only 3% of respondents reported homeowner's association restrictions on cutting trees as a barrier to doing mitigation work, and only 3% reported not being the owner of the property as a barrier. As a side note, fewer respondents (around 10 fewer) responded to the statements about lack of effectiveness of mitigation action and not being the owner of the property. See figure 31.

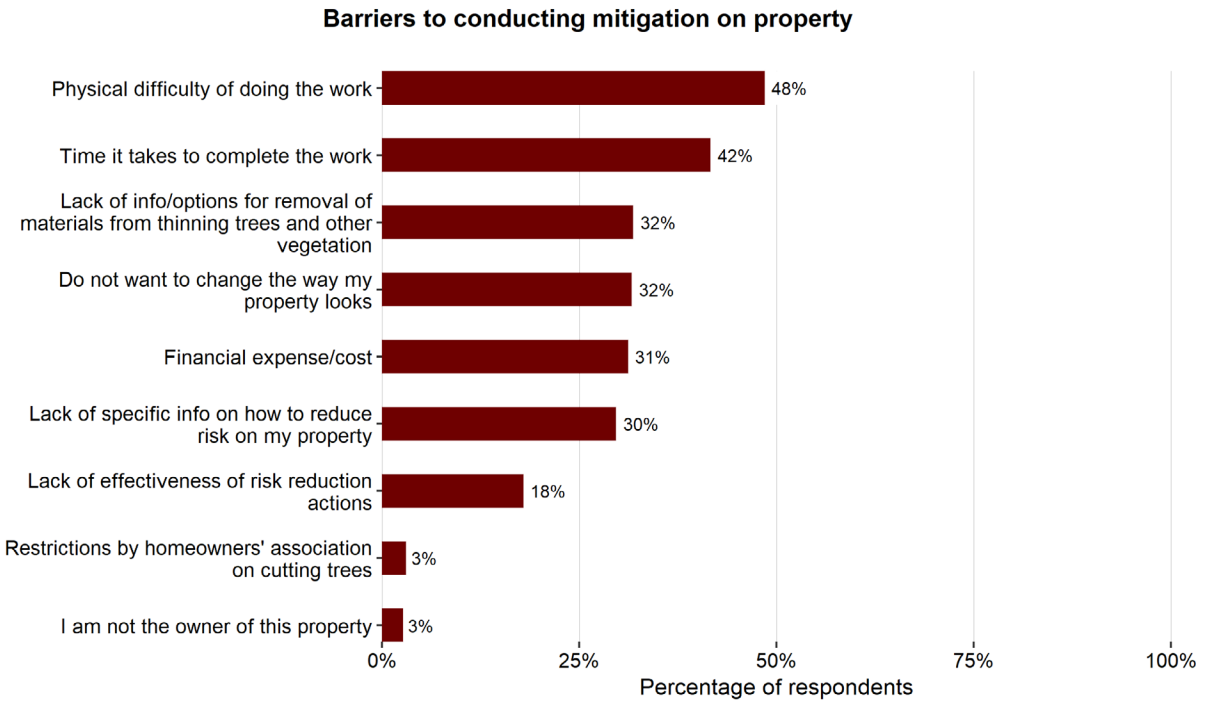

Figure 31—Barriers to conducting wildfire mitigation activities on property. N = 188–202 respondents for each listed barrier.

When asked what would encourage respondents to reduce wildfire risk on their property, most respondents selected all four listed options. The top incentive was help doing the work (75%), followed by specific information about what needs to be done (71%). Both a list of recommended contractors and financial assistance were selected as incentives by 61% of respondents. See figure 32.

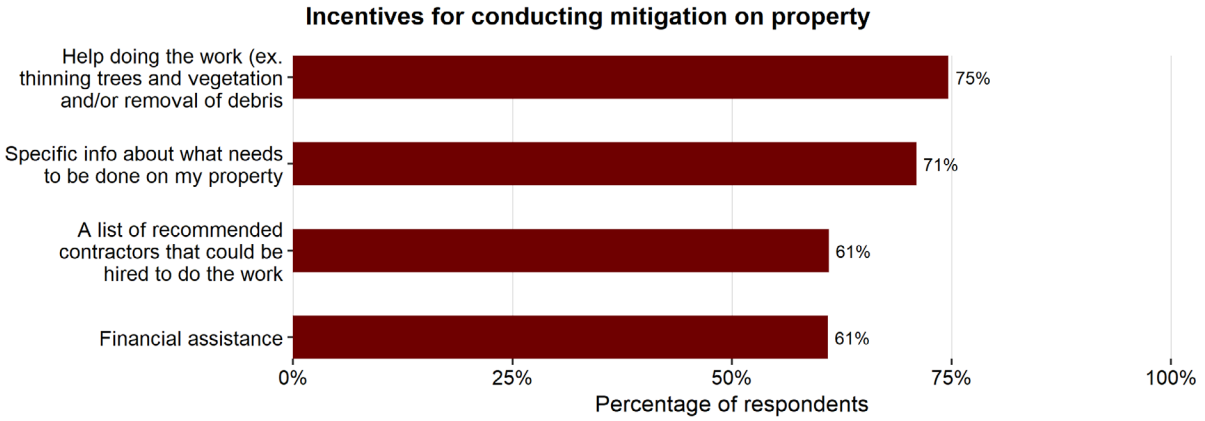

Figure 32—Barriers to conducting wildfire mitigation activities on property. N = 188–202 respondents for each listed barrier.

The potential role of insurance providers to incentivize wildfire risk mitigation activities among policy holders is often touted as an important complement to local wildfire risk mitigation efforts. Only 30% of respondents reported that their insurance company had provided information on reducing risk of wildfire, and 26% of respondents reported that they pay a higher premium due to wildfire risk. Nine percent had had an insurance company cancel or refuse to renew a policy due to wildfire risk. A similar portion (7%) indicated they had received an incentive by way of a discount because they had reduced wildfire risk on their property. See figure 33.

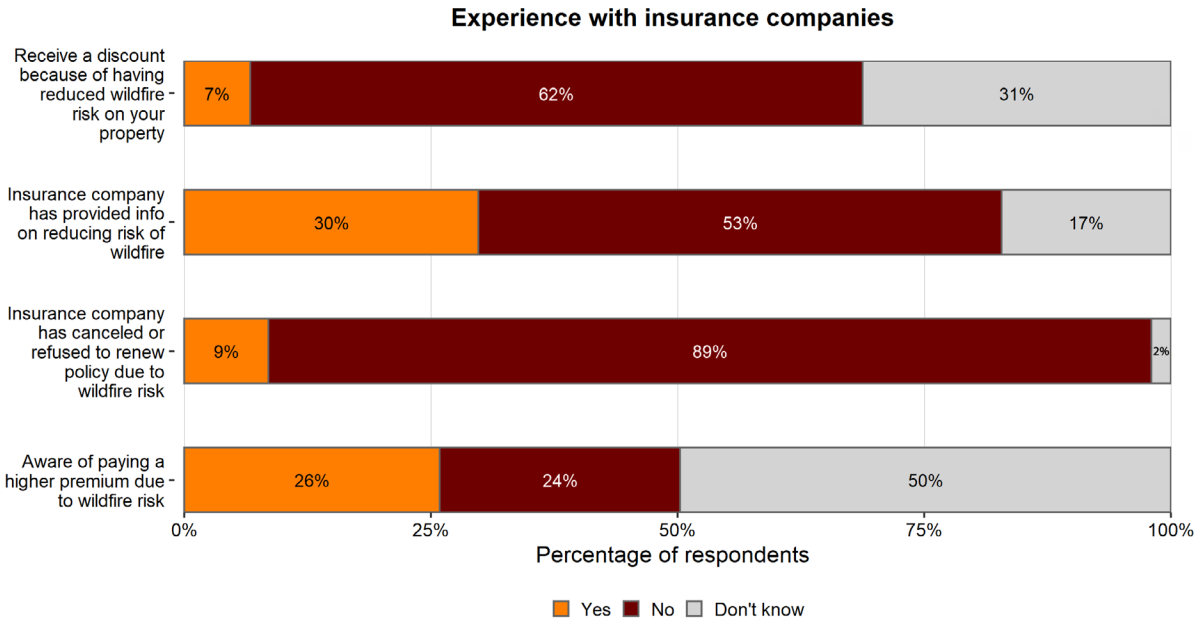

Figure 33—Experience with insurance companies. N = 195–199 respondents to each statement.

CONCLUSIONS

There is a mismatch between CSFS's rapid risk assessments and resident's own assessments of their Chalk Creek properties' risk (fig. 11; Appendices C and F). Most residents rated their property as high or moderate risk. However, CSFS rated most properties as very high risk. This mismatch is of concern because CSFS administers their programs based on their risk assessments while residents make wildfire mitigation decisions based on how they view their property risk. Many CSFS programs rely on resident participation; however, some of the residents whose participation would be most beneficial to community wildfire risk may not participate due to underestimation of their property's risk. Closing the risk assessment gap will align programmatic and resident perspectives.

Chalk Creek study respondents are concerned about preparing for wildfire; however, there remain opportunities for wildfire risk mitigation, increased engagement and participation in community programs, and programmatic growth. While most respondents (75%) report having an evacuation plan for the people in their household, less than a quarter have signed up for Everbridge (18%), and most respondents (86%) asked for more information to develop their evacuation plan, indicating that there is an opportunity for substantial growth in evacuation planning outreach.

Survey respondents' responses indicate that they prioritize protecting human life and property from wildfire but also recognize that wildfires are part of a healthy forest and ecosystem. Consistent with low levels of wildfire experience, only 14% of respondents think that there was a greater than 50% chance of a wildfire on their property in 2019. More than half (61%), however, think that if a wildfire starts or spreads to their property that there is a 50% or greater chance that they will lose their home.

Respondents indicated that they receive wildfire information primarily from the CSFS and community groups, with more respondents indicating that the information from CSFS was useful or very useful than from any other source. Given this connection between CSFS and Chalk Creek residents, CSFS and WiRē collaborated on an infographic-style outreach pamphlet that answers respondents' key questions about wildfire risk mitigation and encourages further action (Appendix F). Information selected for the pamphlet was based on survey responses. The pamphlet was mailed to residents in January 2021.

Appendix A: Correspondence Materials

COLORADO STATE FOREST SERVICE
COLORADO STATE UNIVERSITY

Salida District
7980 West Highway 50
Salida, CO 81201-9858
719-539-2579

May 30, 2019

Dear Chalk Creek Resident,

We have recently seen the devastating effects of wildfire in our State and those nearby. It is our goal to be proactive in confronting wildfire before another disaster occurs. Due to numerous factors, the Chalk Creek drainage has been identified by local, county, state, and federal agencies as a high-risk area for wildfire. Therefore, the Colorado State Forest Service and our partners are working to help homeowners understand and reduce their risk from wildfire.

Wildfire Risk Assessment
As part of our effort to better understand local wildfire risk, the Colorado State Forest Service has conducted wildfire risk assessments to determine how residents in the Chalk Creek area can be better prepared in the event of a wildfire. As a follow up to the risk assessment, we are asking residents of Chalk Creek to complete a survey.

Living with Wildfire in Chalk Creek in 2019 Survey
To create the most effective programs possible, we need to understand what residents know about wildfire, their experiences with wildfire, as well as the characteristics of their properties. Your participation in this survey is voluntary, but the information you provide will help emergency responders better prepare for future fires as well as improve our outreach and education efforts. We realize your time is valuable and appreciate you taking the time to fill out the survey. You should be receiving your survey within the next two weeks.

If you have any questions about this survey or you are interested in a more in-depth and free wildfire risk analysis of your home and property, please feel free to call J.T. Shaver at 719-539-2579 or email at j.t.shaver@colostate.edu.

Thank you for participating.
Sincerely,

Robert Bertram
Fire Chief
Chaffee County Fire Protection District

J.T. Shaver
Forester
Colorado State Forest Service

CHAFFEE COUNTY FIRE RESCUE est. 1976

HAFFEE OUNTY OLORADO

CHAFFEE COUNTY LAW ENFORCEMENT · FIRE · SAR · EMS · HAZMAT · OFFICE OF EMERGENCY MANAGEMENT

S.A.F.P.D.
SOUTH ARKANSAS FIRE PROTECTION DISTRICT

COLORADO STATE FOREST SERVICE
COLORADO STATE UNIVERSITY

Salida District 7980
West Highway 50
Salida, CO 81201-9858
719-539-2579

S.A.F.P.D.
South Arkansas Fire Protection District

June 19, 2019

Dear Chalk Creek Resident,

Thank you for your participation in the “Living with Wildfire in Chaffee County in 2019” survey. We value your opinions. The information you provide is very important for the development of programs to reduce the risk of losses due to catastrophic wildfire. If you have not had a chance to complete and mail the survey, please do so today.

If you have recently returned the survey, thank you!

Robert Bertram
Fire Chief
Chaffee County Fire Protection District

J.T. Shaver
Forester
Colorado State Forest Service

COLORADO STATE FOREST SERVICE
COLORADO STATE UNIVERSITY

Salida District 7980
West Highway 50
Salida, CO 81201-9858

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COLORADO STATE FOREST SERVICE
COLORADO STATE UNIVERSITY

Salida District
7980 West Highway 50
Salida, CO 81201-9858
719-539-2579

July 19, 2019

Dear Chalk Creek Resident,

We recently requested your participation in an important survey about Chalk Creek and wildfire. Many residents have completed and returned the survey to us. However, we would like to hear from you so we can consider your opinions. If you have already returned the survey, thank you for your participation. If you have not yet responded, please complete and return the enclosed survey.

The Colorado State Forest Service needs your help to develop more effective community wildfire programs. It is our goal to proactively confront wildfire preparedness issues before the smoke is in the air. The "Living with Wildfire in Chalk Creek in 2019" survey is intended to take roughly 20 minutes. We understand that your time is valuable and appreciate your contribution to building resilient communities.

When you return the survey, your name will be deleted from the mailing list and never connected to your answers in any way. After completing the survey, please fold it and put it in the postage paid return envelope.

If you have any questions about this survey, please feel free to call J.T. Shaver at 719-539-2579 or email at j.t.shaver@colostate.edu.

Thank you for participating.
Sincerely,

Robert Bertram
Fire Chief
Chaffee County Fire Protection District

J.T. Shaver
Forester
Colorado State Forest Service

WiRēID label

Living with Wildfire in Chalk Creek in 2019

Colorado State Forest Service
Salida District
7980 West Highway 50
Salida, CO 81201

Section 1: In this first section of the survey, we ask about your residence in Chalk Creek. Please answer the following questions with respect to your ***Chalk Creek residence***.

When choosing a response, please fill in the circle completely. Correct: ● Incorrect: ⊘ ⊗ ◐ ◔

1.1. Do you own or rent your Chalk Creek residence? (*Fill in one circle*)

- ○ Own and occupy
- ○ Own and rent out short term
- ○ Own and rent out long term
- ○ I am a renter

1.2. How many months per year do you live at your Chalk Creek residence? (*Fill in the blank*)

_____ Number of months

1.3. In what year did you move to your Chalk Creek residence? (*Fill in the blank*)

_____ Year moved in to your Chalk Creek residence

1.4. In what year was your Chalk Creek residence originally built? (*Fill in the blank*)

_____ Year Chalk Creek residence was built

1.5. How aware of wildfire risk were you when you bought or decided to rent your Chalk Creek residence? (*Fill in one circle*)

- ○ Very aware
- ○ Somewhat aware
- ○ Not aware
- ○ Don't remember

Section 2: In this section, we ask about your experience, if any, with wildfire at your Chalk Creek residence.

2.1. What is the closest distance (as a crow flies) a wildfire has come to your Chalk Creek property? (*Fill in one circle*)

- ○ There has been a wildfire on my property
- ○ Less than 2 miles away but not on my property
- ○ 2 to 10 miles away
- ○ More than 10 miles away
- ○ Not sure

2.2. Has your Chalk Creek residence ever had smoke or fire damage from a wildfire? (*Fill in one circle per row*)

	No	Yes
My Chalk Creek residence has had smoke damage	○	○
My Chalk Creek residence has had wildfire damage	○	○
My Chalk Creek residence was destroyed by a wildfire	○	○

2.3. Do you currently have an evacuation plan in the event a wildfire threatens your Chalk Creek residence? (*Fill in one circle per row*)

	No	Yes	Not applicable
For the people in my household	○	○	○
For the pets in my household and on my property	○	○	○
For livestock on my property	○	○	○

2.4. What information would help you develop or further develop your evacuation plan? (*Fill in all that apply*)

- ○ How I will be notified about evacuating
- ○ When to evacuate
- ○ Safe evacuation routes
- ○ What to bring and what to leave behind
- ○ None, I don't need any additional information

2.5. Have you signed up for the Everbridge emergency notification service that calls residents to evacuate or prepare to evacuate in the event of a wildfire? (*Fill in one circle*)

- ○ No
- ○ Yes

2.6. Have you ever evacuated from your Chalk Creek residence due to a wildfire or threat of a wildfire? (*Fill in one circle*)

- ○ No
- ○ Yes

2.7. Please tell us about your experiences with your homeowners insurance for your Chalk Creek residence. (*Fill in one circle per row*)

	No	Yes	Don't know
Has your current or a previous homeowners insurance company ever provided information on reducing the risk of wildfire?	○	○	○
Did an insurance company ever cancel or refuse to renew your homeowners insurance because of the risk of wildfire?	○	○	○
Do you pay a higher premium for your homeowners insurance due to wildfire risk?	○	○	○
Do you receive a discount on your homeowners insurance premium because you have reduced wildfire risk on your property?	○	○	○

Section 3: In this section, we ask about the characteristics of your Chalk Creek residence and the area near your Chalk Creek residence.

3.1. What type of roof does your Chalk Creek residence have? (*Fill in one circle*)

- ○ Non-combustible (tile, metal, or asphalt shingles)
- ○ Combustible (wood shake shingles)

3.2. Does your Chalk Creek residence have any of the following exterior siding materials? (*Fill in all that apply*)

- ○ Non-combustible (stucco, fiber cement siding, brick, stone)
- ○ Log, heavy timbers, maintained wood (painted/stained)
- ○ Vinyl, unmaintained wood (weathered/faded/worn)

3.3. Does your Chalk Creek residence have a deck or fence attached to the structure? (*Fill in one circle*)

- ○ No
- ○ Yes → Is the deck or fence made of combustible materials? (*Fill in one circle per row*)
  - ○ No
  - ○ Yes

3.4. Is the house number of your Chalk Creek residence posted at the end of your driveway? (*Fill in one circle*)

○ No

○ Yes → Answer the following two questions (*Fill in one circle per row*)

	No	Yes
Is the posted number visible from the road?	○	○
Is the posted number reflective?	○	○

3.5. What is the **closest** distance from your Chalk Creek residence to overgrown, dense, or unmaintained vegetation? (*Fill in one circle*)

○ Less than 10 feet

○ 10 – 30 feet

○ 31 – 100 feet

○ More than 100 feet

3.6. What is the **closest** distance from your Chalk Creek residence to combustible items other than vegetation such as lumber, firewood, a propane tank, hay bales, or other materials that could easily ignite? (*Fill in one circle*)

○ Less than 10 feet

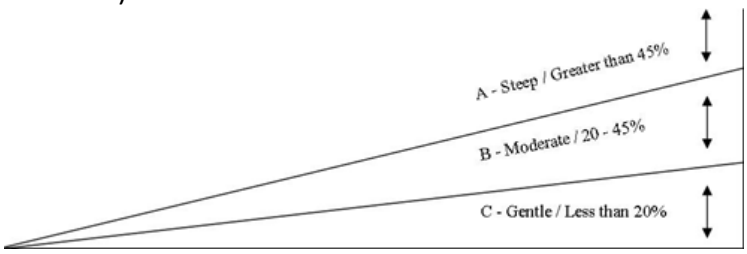
○ 10 – 30 feet

○ More than 30 feet

○ I do not have any combustible items

3.7. The “slope” or "grade" of a property refers to the steepness of the land. A large property may have steep, moderate, and gentle slopes. How would you describe the **overall** slope of your Chalk Creek residence? (*Fill in one circle*)

- ○ Steep – Greater than 45%
- ○ Moderate – 20-45%
- ○ Gentle – Less than 20%



3.8. If the road you use to access your Chalk Creek residence was blocked due to a wildfire, is there another road you could use to get out of your community? (*Fill in one circle*)

- ○ No
- ○ Yes

3.9. Which of the following best describes the **dominant** vegetation on your Chalk Creek property and those properties immediately surrounding you? (*Fill in one circle*)

- ○ Grasses
- ○ Light brush and/or isolated trees (ex. grass with some pinion-juniper, isolated oak, and/or isolated conifers)
- ○ Dense brush and/or dense trees (ex. continuous pinion-juniper, dense oak, and/or dense mixed conifers)

3.10. Homes are assessed for overall wildfire risk based on the items asked about in questions 3.1 – 3.9 above. What do you think is your Chalk Creek residence’s **current** overall wildfire risk rating? (*Fill in one circle*)

- ○ Low Risk
- ○ Moderate risk
- ○ High risk
- ○ Very high risk
- ○ Extreme risk

Section 4: The questions in this section focus on your wildfire risk reduction activities within your community and your perceptions of wildfire risk.

4.1. Have you ever talked about wildfire issues with a neighbor? (*Fill in one circle*)

- ○ No
- ○ Yes

4.2. Do you have neighbors who ARE NOT taking action to address sources of wildfire risk on their properties (ex. Dense vegetation)? (*Fill in one circle*)

- ○ No
- ○ Yes → Do conditions on some or all of these properties increase the likelihood of wildfire spreading to your Chalk Creek property? (*Fill in one circle*)
  - ○ No
  - ○ Yes

4.3. Do you have neighbors who ARE taking action to address sources of wildfire risk on their properties (ex. Dense vegetation)? (*Fill in one circle*)

- ○ No
- ○ Yes → Do conditions on some or all of these properties change the likelihood of wildfire spreading to your Chalk Creek property? (*Fill in one circle*)
  - ○ No
  - ○ Yes, it decreases the likelihood of wildfire spreading to my property
  - ○ Yes, it increases the likelihood of wildfire spreading to my property

4.4. Have you done any of the following wildfire-related activities? (*Fill in one circle per row*)

	No	Yes
Reduced vegetation on my Chalk Creek property (ex. cleared/pruned weeds, brush, and trees)	○	○
Regularly cleared my roof and gutters of leaves and pine needles	○	○
Regularly mowed and raked around my Chalk Creek residence	○	○
Made my Chalk Creek residence more fire resistant (ex. replaced roofing, siding, added hardscaping)	○	○
Helped neighbor(s) reduce vegetation on their properties	○	○
Helped reduce vegetation on community property	○	○
Helped reduce vegetation on nearby public lands	○	○
Participated in a community wildfire activity (ex. meeting, chipper day, etc.)	○	○

4.5. In the event of a wildfire, how likely would the wildfire spread as follows? (*Fill in one circle per row*)

	Extremely likely	Very likely	Moderately likely	Slightly likely	Not at all likely
FROM nearby public/large undeveloped land TO:					
→ My neighborhood	○	○	○	○	○
→ My Chalk Creek property	○	○	○	○	○
FROM my neighborhood TO:					
→ Nearby public/large undeveloped land	○	○	○	○	○
→ My Chalk Creek property	○	○	○	○	○
FROM my Chalk Creek property TO:					
→ My neighborhood	○	○	○	○	○
→ Nearby public/large undeveloped lands	○	○	○	○	○

4.6. What do you think is the chance that a wildfire will be on your property this year? (*Fill in one circle*)

For sure										No chance
100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
○	○	○	○	○	○	○	○	○	○	○

4.7. If there is a wildfire on your property this year, what do you think is the chance that it will destroy or severely damage your Chalk Creek residence? (*Fill in one circle*)

For sure										No chance
100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
○	○	○	○	○	○	○	○	○	○	○

4.8. If there is a wildfire on your Chalk Creek property, how likely do you think it is that the following would occur? (*Fill in one circle per row*)

	Extremely likely	Very likely	Moderately likely	Slightly likely	Not at all likely	Not applicable
I would put the fire out.	○	○	○	○	○	○
The fire department would save my home.	○	○	○	○	○	○
My home would have smoke damage.	○	○	○	○	○	○
My home would have some physical damage.	○	○	○	○	○	○
My home would be destroyed.	○	○	○	○	○	○
I would lose money due to the loss of business or income on my property.	○	○	○	○	○	○
My trees and landscape would burn.	○	○	○	○	○	○
My neighbors' homes would be damaged or destroyed.	○	○	○	○	○	○
Direct flame would ignite my home.	○	○	○	○	○	○
Embers would ignite my home.	○	○	○	○	○	○
Nearby homes would ignite my home.	○	○	○	○	○	○

Section 5: In this section, we ask where you get information about wildfire and your thoughts about wildfire.

5.1. The following sources provide information about wildfire risk. If you have received it, how useful has this information been? (*Fill in one circle per row*)

	Extremely useful	Very useful	Moderately useful	Slightly useful	Not at all useful	Fill in this circle if you have **NOT** received information from this source
Local fire department	○	○	○	○	○	○
Community group (ex., homeowners association)	○	○	○	○	○	○
Firewise USA	○	○	○	○	○	○
Colorado State Forest Service	○	○	○	○	○	○
U.S. Forest Service	○	○	○	○	○	○
Bureau of Land Management	○	○	○	○	○	○
Media	○	○	○	○	○	○

5.2. We want to know more about how you receive information about wildfire risk reduction. Please answer both questions for each row. (*Fill in two circles per row*)

	Do you currently receive information about how to reduce wildfire risk on your property from…?		Would you like to receive information about how to reduce wildfire risk on your property from…?	
	No	Yes	No	Yes
Email/e-newsletter	○	○	○	○
Mailed newsletter	○	○	○	○
Community meetings	○	○	○	○
In-person interactions	○	○	○	○
Social media (Facebook, Twitter)	○	○	○	○
Internet (non-social media)	○	○	○	○
TV news	○	○	○	○
Newspaper	○	○	○	○
Radio	○	○	○	○

5.3. How acceptable are the following approaches to reducing wildfire risk on nearby public lands? (*Fill in one circle per row*)

	Extremely acceptable	Very acceptable	Moderately acceptable	Slightly acceptable	Not at all acceptable
Removing trees and reducing other vegetation (thinning/fuel breaks)	○	○	○	○	○
Burning piles of vegetation (slash piles)	○	○	○	○	○
Conducting a prescribed fire ignited by fire managers	○	○	○	○	○
Managing a naturally ignited fire (such as lightning)	○	○	○	○	○

5.4. How much do you agree or disagree with the following statements about wildfire? (*Fill in one circle per row*)

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
With proper technology, we can control most wildfires.	○	○	○	○	○
We should put out wildfires that threaten human life.	○	○	○	○	○
We should put out wildfires that threaten property.	○	○	○	○	○
During a wildfire, saving homes should be a priority over saving forests.	○	○	○	○	○
Wildfires are a natural part of the balance of a healthy forest/ecosystem.	○	○	○	○	○
I live here for the trees and will not remove any of them to reduce wildfire risk.	○	○	○	○	○
Managing the wildfire danger is a government responsibility, not mine.	○	○	○	○	○
Homeowners' actions to reduce wildfire are not effective.	○	○	○	○	○
My property is at risk of wildfire.	○	○	○	○	○
My effort to reduce wildfire risk on my property is ineffective because of the heavy vegetation on my neighbors' properties.	○	○	○	○	○
Local firefighters have sufficient resources to keep the wildfire from spreading.	○	○	○	○	○
Local firefighters have sufficient resources to protect threatened homes.	○	○	○	○	○
Firefighters should put their lives at risk to protect my home.	○	○	○	○	○
Wildfires threaten my community water supply.	○	○	○	○	○
Wildfire smoke caused me to consider moving out of the area.	○	○	○	○	○

Section 6: In this section, we would like to know about your willingness to reduce the risk of wildfire to your Chalk Creek property.

6.1. Do any of the following prevent you from taking action to reduce the wildfire risk on your Chalk Creek property? (*Fill in one circle per row*)

	No	Yes
Financial expense/ cost	○	○
Time it takes to do the work	○	○
Physical difficulty of doing the work	○	○
Lack of specific information on how to reduce wildfire risk on my property	○	○
Lack of effectiveness of risk reduction actions	○	○
Do not want to change the way my property looks	○	○
Lack of information about or options for removal of materials from thinning trees and other vegetation	○	○
Restrictions by homeowners' association on cutting trees	○	○
I am not the owner of this property	○	○

6.2. Would any of the following items encourage you to reduce the wildfire risk on your Chalk Creek property? (*Fill in one circle per row*)

	No	Yes
Financial assistance	○	○
Specific information about what needs to be done on my property	○	○
Help doing the work (ex. thinning trees and vegetation and/or removal of debris)	○	○
A list of recommended contractors that could be hired to do the work	○	○

Section 7: In this section, we ask about personal and household characteristics. Your name will never be connected to your answers in any way.

7.1. Do you view yourself as someone who is not at all willing to take risks or very willing to take risks? (*Fill in one circle*)

Very willing to take risks										Not at all willing to take risks
10	9	8	7	6	5	4	3	2	1	0
○	○	○	○	○	○	○	○	○	○	○

7.2. What is your age? (*Fill in the blank*)

_____ years old

7.3. Are you? (*Fill in one circle*)

○ Male

○ Female

7.4. What is the highest grade or year of school you completed? (*Fill in one circle*)

○ Less than high school

○ High school graduate

○ Some college or technical school

○ Technical or trade school

○ College graduate

○ Some graduate work

○ Advanced Degree (M.D., M.A., M.S., Ph.D., etc.)

7.5. Which of the following best describes your current employment situation? (*Fill in one circle*)

- ○ Employed full time (including self-employed)
- ○ Employed part time (including self-employed)
- ○ Unemployed or do not work outside of the home
- ○ Retired

7.6. Which of the following categories describes your annual household income? (*Fill in one circle*)

- ○ Less than $15,000
- ○ $15,000 - $24,999
- ○ $25,000 – $34,999
- ○ $35,000 - $49,999
- ○ $50,000 - $74,999
- ○ $75,000 - $99,999
- ○ $100,000 - $149,999
- ○ $150,000 - $199,999
- ○ More than $200,000

Thank you for your help. Please use the space below to write any additional comments.

Appendix B: Colorado State Forest Service Modified Rapid Assessment (CSFS Modified RA) and Community Wildfire Risk Evaluation Form Information

Community Wildfire Risk Evaluation Form

(For informational purposes only)

Date	

Evaluator	

Category	Observed Condition	Points
Address Visible	Posted and reflective	0
	Posted, NOT reflective	5
	Not visible from road, combustible	15
Access	Two or more roads in/out	0
	One road in/out	10
Slope	Less than 20%	0
	Between 20%-45%	20
	Greater than 45%	40
Density of Vegetation	Light	25
	Moderate	50
	Heavy	75
Defensible Space	Greater than 100'	0
	Between 30'-100'	50
	Between 10' -30'	75
	Less than 10'	100

Category	Observed Condition	Points
Roofing Material	Non-combustible	0
	Combustible (wood)	200
Building Exterior	Non-combustible (brick, stucco)	0
	Log, heavy timbers, maintained wood	20
	Weathered wood, vinyl	60
Other Combustibles	None, greater than 30' from structure	0
	Between 10'-30' from structure	10
	Less than 10' from structure	30
Decking and Fencing	None/Concrete	0
	Composite deck, fence attached	20
	Wood deck/fence attached	50
Water Source	Yes	0
	No	20
Other	None	0
	Low	10
	Medium	20
	High	30
Total Rating		

Overall Total Rating	Min	Max
Low	25	150
Moderate	151	225
High	226	250
Very High	251	349
Exteme	350	630

Do Not Assess — Property owner has chosen not to particpate in evaluation

Community Wildfire Risk Evaluation Form Information

The purpose of the risk evaluation is to identify the potential wildfire risk areas within a community based on topography, vegetation, and building materials. In addition other factors that impact fire response and evacuation are evaluated. This evaluation will provide an initial snapshot of a homeowner's wildfire risk compared to their neighbors within a community.

Community Wildfire Risk Evaluation Category Definitions:

- ***Address Visible:*** If you are standing on the street the address needs to be visible, reflective, and made of noncombustible material. Reflective material enhances visibility in the dark and/or under smoky conditions.
- ***Access***: Is there more than one point of entry/exit for evacuating the property?
- ***Slope***: What is the percent of slope where the house is located? When examining the slope, use the average slope of the lot. A structure located at the top of a slope is potentially more at risk than at the bottom of a slope.
- ***Density of Vegetation***: The density/continuity of the trees, shrubs, grasses and other flammable vegetation that within the Home Ignition Zone. The Home Ignition Zone is up to 100-200 feet from the home. Average for the property.
- ***Defensible* Space:** Defensible space is the area around a home or other structure that has been modified to reduce fire hazard. In this area, natural and manmade fuels are treated, cleared or reduced to slow the spread of wildfire.
- ***Roofing Material***
  - *Noncombustible:* Fiberglass asphalt shingles, metal, fiber-cement shingles, concrete, slate or clay tiles
  - *Combustible:* wood shake, asphalt shingles in disrepair
- ***Building Exterior***
  - *Noncombustible:* brick, stucco, fiber cement boards, stone
  - Log, heavy timber, maintained wood. Although combustible these materials burn very slowly.
  - Weathered wood (wood in need of maintenance). Vinyl is not combustible, but melts and exposes interior walls.
- ***Other Combustibles***: Firewood stored within 30 feet of the home, lumber, wood/plastic deck furniture, pillows,etc. Anything that would be receptive to ignition during an ember shower.
- ***Decking and Fencing*:** What is the combustibility of the decking/fencing attached to the structure? Noncombustible deck material is constructed out of concrete. Noncombustible fence material is chain link, concrete, stone, masonry. Composite decking/fencing will burn, but more slowly than other materials. Wood deck/fencing is the most combustible.
- ***Water Source***: Are there water sources on the property or in close proximity that are adequate for suppression resources to use (engines, tenders, helicopters). Examples: hydrants, cisterns, ponds. Water source is available in the summer.
- ***Other:*** Items that were not captured in the risk rating evaluation that may increase the wildfire risk. Ex. Dense vegetation along roads/driveways affecting evacuation routes.

Community Wildfire Risk Evaluation Overall Rating Description

Participating homeowners will be given an adjective rating based on the points assigned to the evaluation items and the community will be given an average rating. The ratings are low, moderate, high, very high, and extreme.

These ratings are primarily focused slope, vegetation, and building materials that affect the vulnerability of the structure to embers, direct flame contact, and other combustibles. The adjective rating is intended to provide the community and homeowners with an awareness of the potential wildfire risk within the community. Specific recommendations to reduce risks are included with a Home Ignition Zone evaluation conducted for individual properties.

Additional Terminology on the Map:

- ***Do Not Assess:*** The property owner has chosen not to participate in the Community Wildfire Risk Evaluation.
- ***Re-evaluated:*** The homeowner had an initial wildfire risk evaluation. Upon completion of a site visit the homeowner has completed work to reduce their wildfire risk. The home has been re-evaluated and given a new risk rating.

Appendix C: Comparison of Full CSFS Risk Assement, CSFS Modified RA, and Household Survey

In the comparisons below, the RA column uses the CSFS modified RA data, which is the 10-attribute RA that matches the household survey questions. The last section, "Overall risk score," provides a comparison between the CSFS modified RA and the larger, 12-attribute RA originally conducted by the CSFS (for more information, see Methods). In the top set of risk rating comparisons, RA refers to the 12-attribute RA; in the bottom set of risk rating comparisons, RA refers to the CSFS modified RA.

WiRē Assessment: Colorado State Forest Service Chalk Creek Rapid Assessment Compared to Household Survey Responses for Property Hazards

Summary of the wildfire mitigation specialist rapid assessments (RA) and comparison against household survey (HS) responses for the set of property risk elements included in the HS, and overall risk rating based on these elements*

Field descriptions and color key	Rapid assessment: responses for all rapid assessments	RA - HS subset: rapid assessments for parcels matched with household surveys	Household survey: survey responses for parcels with both an RA and a paired HS response

Category					
Access	**ADDRESS VISIBLE**				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=192)**	**HS (N=192)**
	Posted and reflective	0	34%	36%	41%
	Posted, NOT reflective	5	43%	48%	39%
	Not visible from road, combustible	15	23%	15%	20%
				Pearson chi2(2) =	4.1759 Pr = 0.124
	INGRESS/EGRESS				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=198)**	**HS (N=198)**
	Two or more roads in/out	0	9%	9%	44%
	One road in/out	10	91%	91%	56%
				Pearson chi2(1) =	63.8962 Pr = 0.000
Home Ignition Potential	**ROOF**				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=203)**	**HS (N=203)**
	Non-combustible (tile, metal, or asphalt shingles)	0	99%	99%	98%
	Combustible (wood shake shingles)	200	1%	1%	2%
				Pearson chi2(1) =	0.1454 Pr = 0.703
	SIDING				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=199)**	**HS (N=199)**
	Non-combustible (stucco, fiber cement siding, brick, stone)	0	11%	12%	18%
	Log, heavy timbers, maintained wood (painted/stained)	20	74%	79%	75%
	Vinyl, unmaintained wood (weathered/faded/worn)	60	16%	9%	8%
				Pearson chi2(2) =	2.4397 Pr = 0.295
	DECKING AND FENCING				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=197)**	**HS (N=197)**
	None/Concrete	0	7%	5%	10%
	Composite deck, fence attached	20	13%	15%	14%
	Wood deck/fence attached	50	81%	80%	76%
				Pearson chi2(2) =	4.5052 Pr = 0.105

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Summary of the wildfire mitigation specialist rapid assessments (RA) and comparison against household survey (HS) responses for the set of property risk elements included in the HS, and overall risk rating based on these elements*

Field descriptions and color key	Rapid assessment: responses for all rapid assessments	RA - HS subset: rapid assessments for parcels matched with household surveys	Household survey: survey responses for parcels with both an RA and a paired HS response

Category					
Defensible Space	**COMBUSTIBLE MATERIALS WITHIN 30FT**				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=200)**	**HS (N=200)**
	None, greater than 30' from structure	0	77%	76%	50%
	Between 10'-30' from structure	10	4%	5%	39%
	Less than 10' from structure	30	19%	20%	12%
				Pearson chi2(2) = 68.7173 Pr = 0.000	
	DEFENSIBLE SPACE				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=199)**	**HS (N=199)**
	Greater than 100'	0	0%	0%	22%
	Between 30'-100'	50	2%	2%	38%
	Between 10' -30'	75	25%	31%	35%
	Less than 10'	100	73%	67%	5%
				Pearson chi2(3) = 214.9712 Pr = 0.000	
Background Conditions	**SLOPE**				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=198)**	**HS (N=198)**
	Gentle (less than 20%)	0	94%	93%	54%
	Moderate (between 20% and 45%)	20	7%	7%	34%
	Steep (greater than 45%)	40	0%	0%	12%
				Pearson chi2(2) = 81.1813 Pr = 0.000	
	DENSITY OF VEGETATION				
	Value description	**Score**	**RA (N=431)**	**RA - HS subset (N=199)**	**HS (N=199)**
	Light (Grasses)	25	0%	0%	6%
	Moderate (Light brush and/or isolated trees)	50	34%	35%	65%
	Heavy (Dense brush and/or dense trees)	75	66%	65%	29%
				Pearson chi2(2) = 12.6246 Pr = 0.002	
Other	**WATER SOURCE (RA only)**				
	Value description	**Score**	**RA (N=431)**	**Not asked in survey**	
	Yes	0	99.8%		
	No	20	0.2%		
	OTHER (RA only)				
	Value description	**Score**	**RA (N=431)**	**Not asked in survey**	
	None	0	77%		
	Low	10	7%		
	Medium	20	11%		
	High	30	6%		

WiRē Assessment: Colorado State Forest Service Chalk Creek Rapid Assessment Compared to Household Survey Responses for Property Hazards

Summary of the wildfire mitigation specialist rapid assessments (RA) and comparison against household survey (HS) responses for the set of property risk elements included in the HS, and overall risk rating based on these elements*

Field descriptions and color key	Rapid assessment: responses for all rapid assessments	RA - HS subset: rapid assessments for parcels matched with household surveys	Household survey: survey responses for parcels with both an RA and a paired HS response

Category					
Overall risk score	**Overall risk rating using CSFS RA (based on 12 attributes)**				
	Value description	**Score**	**CSFS RA (N=431)**	**CSFS RA - HS subset (N=201)**	
	Low	25 - 150	0%	0%	
	Moderate	151 - 225	18%	24%	
	High	226 - 250	29%	28%	
	Very high	251 - 349	50%	47%	
	Extreme	350 - 630	2%	1%	
				Pearson chi2(4) = 109.7916	Pr = 0.000
	Overall risk rating using CSFS modified RA (10 attributes) compared to HS overall risk rating				
	Value description	**Score****	**CSFS modified RA (N=431)**	**CSFS modified RA - HS subset (N=201)**	**HS (N=201)**
	Low	25 - 100	0%	0%	11%
	Moderate	175 - 200	2%	1%	53%
	High	201 - 299	6%	7%	30%
	Very high	251 - 349	83%	83%	5%
	Extreme	300 - 580	10%	9%	1%
				Pearson chi2(4) = 79.3793	Pr = 0.000

*We provide a chi-2 statistic for each risk category. The chi-2 statistic tests the hypothesis that the attribute distributions from the household survey and the rapid assessment are the same. A p-value less than 0.05 suggests that this hypothesis should be rejected, i.e., that the distributions are not the same.

** Score ranges for each risk category were determined using the distribution of the CSFS RA, not CSFS Modified RA, and then scaled down to account for removing non-relevant attributes (i.e., water and other).

Appendix D: Chalk Creek Household Survey Codebook

Living with Wildfire in Chalk Creek in 2019

Prepared by The Wildfire Research Center for:
Colorado State Forest Service
Salida District
7980 West Highway 50
Salida, CO 81201

Entered survey responses: 204
n = number of observations
Blue numbers are percent responses (might not total to 100% due to rounding)
Red ALL CAPS are variable names

Please note: We encourage use of this survey instrument for applied, research, and/or publication purposes but request to be notified before any such use at: info@wildfireresearchcenter.org

Section 1: In this first section of the survey, we ask about your residence in Chalk Creek. Please answer the following questions with respect to your ***Chalk Creek residence***.

When choosing a response, please fill in the circle completely. Correct: ● Incorrect: 

OCCTYPE (n=202)

1.1. Do you own or rent your Chalk Creek residence? (*Fill in one circle*)

- 87% Own and occupy
- 12% Own and rent out short term
- 1% Own and rent out long term
- 0% I am a renter

MONTHS (n=192)

1.2. How many months per year do you live at your Chalk Creek residence? (*Fill in the blank*)

AVERAGE = 5 months; 12 months = 19%

FULLTIME (n=193)

1.3. In what year did you move to your Chalk Creek residence? (*Fill in the blank*)

AVERAGE = 1996

YRBUILD (n=193)

1.4. In what year was your Chalk Creek residence originally built? (*Fill in the blank*)

AVERAGE = 1979

RISKAWAR (n=203)

1.5. How aware of wildfire risk were you when you bought or decided to rent your Chalk Creek residence? (*Fill in one circle*)

- 41% Very aware
- 40% Somewhat aware
- 15% Not aware
- 3% Don't remember

Section 2: In this section, we ask about your experience, if any, with wildfire at your Chalk Creek residence.

FIRE (n=203)

2.1. What is the closest distance (as a crow flies) a wildfire has come to your Chalk Creek property? (*Fill in one circle*)

- 1% There has been a wildfire on my property
- 8% Less than 2 miles away but not on my property
- 18% 2 to 10 miles away
- 34% More than 10 miles away
- 38% Not sure

2.2. Has your Chalk Creek residence ever had smoke or fire damage from a wildfire? (*Fill in one circle per row*)

		No	Yes
SMOKEDAM (n=203)	My Chalk Creek residence has had smoke damage	100%	0%
FIREDAM (n=199)	My Chalk Creek residence has had wildfire damage	100%	0%
DESTROY (n=199)	My Chalk Creek residence was destroyed by a wildfire	100%	0%

2.3. Do you currently have an evacuation plan in the event a wildfire threatens your Chalk Creek residence? (*Fill in one circle per row*)

		No	Yes	Not applicable
EVACPPL (n=203)	For people in my household	25%	70%	4%
EVACPETS (n=202)	For the pets in my household and on my property	16%	36%	48%
EVACLIVSTOC (n=197)	For livestock on my property	8%	3%	89%

2.4. What information would help you develop or further develop your evacuation plan? (*Fill in all that apply*)

- 74% How I will be notified about evacuating EVACHOW (n=203)
- 65% When to evacuate EVACWHEN (n=203)
- 61% Safe evacuation routes EVACROUTE (n=203)
- 30% What to bring and what to leave behind EVACWHAT (n=203)
- 14% None, I don't need any additional information EVACINFONO (n=203)

NOTIFICATION (n=197)

2.5. Have you signed up for the Everbridge emergency notification service that calls residents to evacuate or prepare to evacuate in the event of a wildfire? (*Fill in one circle*)

82% No

18% Yes

EVACUATED (n=203)

2.6. Have you ever evacuated from your Chalk Creek residence due to a wildfire or threat of a wildfire? (*Fill in one circle*)

98% No

2% Yes

2.7. Please tell us about your experiences with your homeowners insurance for your Chelan County residence. (*Fill in one circle per row*)

		No	Yes	Don't know
INSURE2 (n=198)	Has your current or a previous homeowners insurance company ever provided information on reducing the risk of wildfire?	53%	30%	17%
INSURE3 (n=199)	Did an insurance company ever cancel or refuse to renew your homeowners insurance because of the risk of wildfire?	89%	9%	2%
INSURE4 (n=197)	Do you pay a higher premium for your homeowners insurance due to wildfire risk?	24%	26%	50%
INSURE10 (n=195)	Do you receive a discount on your homeowners insurance premium because you have reduced wildfire risk on your property?	62%	7%	31%

Section 3: In this section, we ask about the characteristics of your Chalk Creek residence and the area near your Chalk Creek residence.

ROOFTYPE (n=203)

3.1. What type of roof does your Chalk Creek residence have? (*Fill in one circle*)

- 98% Non-combustible (tile, metal, or asphalt shingles)
- 2% Combustible (wood shake shingles)

SIDETYPE (n=199)

3.2. Does your Chalk Creek residence have any of the following exterior siding materials? (*Fill in all that apply*)

- 24% Non-combustible (stucco, fiber cement siding, brick, stone)
- 76% Log, heavy timbers, maintained wood (painted/stained)
- 8% Vinyl, unmaintained wood (weathered/faded/worn)

ATTACHMENT (n=202)

3.3. Does your Chalk Creek residence have a deck or fence attached to the structure?? (*Fill in one circle*)

- 10% No
- 90% Yes

ATTACHCOMB (n=177)

→ Is the deck or fence made of combustible materials? (*Fill in one circle*)

- 16% No
- 84% Yes

HOUSENUM (n=197)

3.4. Is the house number of your Chalk Creek residence posted at the end of your driveway? (*Fill in one circle*)

- 20% No
- 80% Yes

→ Answer the following two questions (*Fill in one circle per row*)

		No	Yes
HOUSENUMVIS (n=153)	Is the posted number visible from the road?	1%	99%
REFLECT (n=144)	Is the posted number reflective?	45%	55%

CLOSEVEG_CSFS (n=199)

3.5. What is the **closest** distance from your Chalk Creek residence to overgrown, dense, or unmaintained vegetation? (*Fill in one circle*)

5% Less than 10 feet

35% 10 – 30 feet

38% 31 – 100 feet

22% More than 100 feet

COMBUST_CSFS (n=200)

3.6. What is the **closest** distance from your Chalk Creek residence to combustible items other than vegetation such as lumber, firewood, a propane tank, hay bales, or other materials that could easily ignite? (*Fill in one circle*)

12% Less than 10 feet

38% 10 – 30 feet

36% More than 30 feet

14% I do not have any combustible items feet

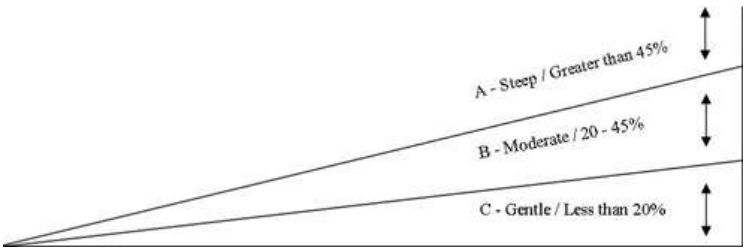
SLOPESVY (n=198)

3.7. The "slope" or "grade" of a property refers to the steepness of the land. A large property may have steep, moderate, and gentle slopes. How would you describe the **overall** slope of your Chalk Creek residence? (*Fill in one circle*)

12% Steep – Greater than 45%

34% Moderate – 20-45%

54% Gentle – Less than 20%



ROADS (n=198)

3.8. If the road you use to access your Chalk Creek residence was blocked due to a wildfire, is there another road you could use to get out of your community? (*Fill in one circle*)

56% No

44% Yes

ADJFUELS (n=199)

3.9. Which of the following best describes the **dominant** vegetation on your Chalk Creek property and those properties immediately surrounding you? (*Fill in one circle*)

6% Grasses

65% Light brush and/or isolated trees (ex. grass with some pinion-juniper, isolated oak, and/or isolated conifers)

29% Dense brush and/or dense trees (ex. continuous pinion-juniper, dense oak, and/or dense mixed conifers)

RISKRATE (n=201)

3.10. Homes are assessed for overall wildfire risk based on the items asked about in questions 3.1 – 3.9 above. What do you think is your Chalk Creek's residence's **current** overall wildfire risk rating? (*Fill in one circle*)

11% Low risk

53% Moderate risk

30% High risk

5% Very high risk

1% Extreme risk

Section 4: The questions in this section focus on your wildfire risk reduction activities within your community and your perceptions of wildfire risk.

TALKFIRE (n=202)

4.1. Have you ever talked about wildfire issues with a neighbor? (*Fill in one circle*)

29% No

71% Yes

SLACKER (n=198)

4.2. Do you have any neighbors who ARE NOT taking action to address sources of wildfire risk on their properties (ex. dense vegetation)? (*Fill in one circle*)

45% No

55% Yes

SLACKCOND (n=102)

→ Do conditions on some or all of these properties increase the likelihood of wildfire spreading to your Chalk Creek property? *(Fill in one circle)*

12% No

88% Yes

NACTION (n=195)

4.3. Do you have any neighbors who ARE taking action to address sources of wildfire risk on their properties (ex. dense vegetation)? (*Fill in one circle*)

23% No

77% Yes

NACTCOND (n=150)

→ Do conditions on some or all of these properties change the likelihood of wildfire spreading to your Chalk Creek property? *(Fill in one circle)*

28% No

67% Yes, it decreases the likelihood of wildfire spreading to my property

5% Yes, it increases the likelihood of wildfire spreading to my property

4.4. Have you done any of the following wildfire-related activities? (*Fill in one circle per row*)

		No	Yes
ACTIVITIES1 (n=200)	Reduced vegetation on my Chalk Creek property (ex. cleared/pruned weeds, brush, and trees)	8%	92%
ACTIVITIES7 (n=198)	Regularly cleared my roof and gutters of leaves and pine needles	25%	75%
ACTIVITIES8 (n=194)	Regularly mowed and raked around my Chalk Creek residence	37%	63%
ACTIVITIES2 (n=199)	Made my Chalk Creek residence more fire resistant (ex. replaced roofing, siding, added hardscaping)	52%	48%
ACTIVITIES3 (n=199)	Helped neighbor(s) reduce vegetation on their properties	75%	25%
ACTIVITIES4 (n=198)	Helped reduce vegetation on community property	83%	17%
ACTIVITIES5 (n=200)	Helped reduce vegetation on nearby public lands	90%	10%
ACTIVITIES6 (n=201)	Participated in a community wildfire activity (ex. meeting, chipper day, etc.)	65%	35%

4.5. In the event of a wildfire, how likely would the wildfire spread as follows? (*Fill in one circle per row*)

		Extremely likely	Very likely	Moderately likely	Slightly likely	Not at all likely
	FROM nearby public/large undeveloped land TO:					
FIRESPREAD1 (n=195)	-> My neighborhood	26%	39%	28%	7%	1%
FIRESPREAD2 (n=189)	-> My Chalk Creek property	21%	36%	32%	11%	1%
	FROM my neighborhood TO:					
FIRESPREAD3 (n=195)	-> Nearby public/large undeveloped land	20%	32%	28%	15%	5%
FIRESPREAD4 (n=188)	-> My Chalk Creek property	19%	36%	26%	14%	5%
	FROM my Chalk Creek property TO:					
FIRESPREAD5 (n=193)	-> My neighborhood	17%	30%	29%	20%	4%
FIRESPREAD6 (n=192)	-> Nearby public/large undeveloped land	17%	29%	26%	23%	6%

CHANCES1 (n=198)

4.6. What do you think is the chance that a wildfire will be on your property this year? (*Fill in one circle*)

For sure										No chance
100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
0%	0%	0%	1%	1%	12%	3%	13%	15%	47%	10%

CHANCES2 (n=197)

4.7. If there is a wildfire on your property this year, what do you think is the chance that it will destroy or severely damage your Chalk Creek residence? (*Fill in one circle*)

For sure										No chance
100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
7%	8%	11%	11%	3%	22%	4%	12%	12%	9%	3%

4.8. If there is a wildfire on your Chalk Creek property, how likely do you think it is that the following would occur? (*Fill in one circle per row*)

		Extremely likely	Very likely	Moderately likely	Slightly likely	Not at all likely	Not applicable
LACT1 (n=197)	I would put the fire out.	4%	11%	13%	32%	36%	5%
LACT2 (n=197)	The fire department would save my home.	2%	16%	30%	27%	25%	0%
LACT3 (n=193)	My home would have smoke damage.	16%	40%	27%	11%	5%	0%
LACT4 (n=197)	My home would have some physical damage.	14%	37%	32%	14%	4%	0%
LACT5 (n=196)	My home would be destroyed.	8%	24%	29%	27%	12%	1%
LACT6 (n=198)	I would lose money due to the loss of business or income on my property.	10%	12%	8%	9%	13%	48%
LACT7 (n=195)	My trees and landscape would burn.	19%	41%	24%	13%	3%	0%
LACT9 (n=197)	My neighbors' homes would be damaged or destroyed.	8%	28%	40%	16%	7%	1%
LACT12 (n=197)	Direct flame would ignite my home.	12%	24%	24%	28%	11%	0%
LACT13 (n=198)	Embers would ignite my home.	9%	22%	32%	23%	14%	0%
LACT14 (n=197)	Nearby homes would ignite my home.	4%	13%	22%	25%	32%	3%

Section 5: In this section, we ask where you get information about wildfire and your thoughts about wildfire.

5.1. The following sources provide information about wildfire risk. If you have received it, how useful has this information been? (*Fill in one circle per row*)

		Extremely useful	Very useful	Moderately useful	Slightly useful	Not at all useful	Have *NOT* received information from this source
SOURCEUSE1 (n=199)	Local fire department	5%	16%	7%	5%	1%	67%
SOURCEUSE2 (n=201)	Community group (ex., homeowners association)	11%	26%	17%	5%	2%	38%
SOURCEUSE5 (n=197)	Firewise USA	5%	8%	5%	3%	3%	77%
SOURCEUSE_CSFS (n=200)	Colorado State Forest Service	20%	34%	16%	10%	2%	19%
SOURCEUSE14 (n=202)	U.S. Forest Service	7%	21%	12%	8%	1%	50%
SOURCEUSE15 (n=199)	Bureau of Land Management	2%	5%	3%	5%	4%	82%
SOURCEUSE4 (n=202)	Media	3%	7%	17%	18%	4%	50%

5.2. We want to know more about how you receive information about wildfire risk reduction. Please answer both questions for each row. (*Fill in two circles per row*)

	Do you currently receive information about how to reduce wildfire risk on your property from...?	Yes	Would you like to receive information about how to reduce wildfire risk on your property from...?	Yes
Email/e-newsletter	RECEIVEINFO1 (n=198)	30%	WANTINFO1 (n=183)	72%
Mailed newsletter	RECEIVEINFO2 (n=195)	32%	WANTINFO2 (n=182)	69%
Community meetings	RECEIVEINFO3 (n=199)	40%	WANTINFO3 (n=175)	60%
In-person interactions	RECEIVEINFO4 (n=197)	49%	WANTINFO4 (n=177)	62%
Social media (Facebook, Twitter)	RECEIVEINFO5 (n=196)	14%	WANTINFO5 (n=172)	23%

	Do you currently receive information about how to reduce wildfire risk on your property from...?	Yes	Would you like to receive information about how to reduce wildfire risk on your property from...?	Yes
Internet (non-social media)	RECEIVEINFO6 (n=198)	26%	WANTINFO6 (n=177)	49%
TV news	RECEIVEINFO7 (n=197)	34%	WANTINFO7 (n=172)	38%
Newspaper	RECEIVEINFO8 (n=197)	31%	WANTINFO8 (n=173)	45%
Radio	RECEIVEINFO9 (n=196)	26%	WANTINFO9 (n=172)	41%

5.3. How acceptable to you are the following approaches to reducing wildfire risk on nearby public lands? (*Fill in one circle per row*)

		Extremely acceptable	Very acceptable	Moderately acceptable	Slightly acceptable	Not at all acceptable
ACCEPT1 (n=198)	Removing trees and reducing other vegetation (thinning/fuel breaks)	46%	31%	15%	7%	2%
ACCEPT2 (n=197)	Burning piles of vegetation (slash piles)	32%	29%	21%	9%	9%
ACCEPT3 (n=195)	Conducting a prescribed fire ignited by fire managers	25%	24%	28%	16%	8%
ACCEPT4 (n=195)	Managing a naturally ignited fire (such as lightning)	35%	27%	24%	10%	5%

5.4. How much do you agree or disagree with the following statements about wildfire? (*Fill in one circle per row*)

		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
STATE2 (n=197)	With proper technology, we can control most wildfires.	3%	32%	35%	25%	5%
STATE3 (n=199)	We should put out wildfires that threaten human life.	61%	36%	3%	0%	0%
STATE4 (n=199)	We should put out wildfires that threaten property.	34%	51%	14%	1%	1%
STATE5 (n=200)	During a wildfire, saving homes should be a priority over saving forests.	25%	42%	26%	6%	2%
STATE6 (n=199)	Wildfires are a natural part of the balance of a healthy forest/ecosystem.	36%	46%	15%	3%	0%

		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
STATE11 (n=200)	I live here for the trees and will not remove any of them to reduce wildfire risk.	2%	7%	17%	48%	26%
STATE13 (n=200)	Managing the wildfire danger is a government responsibility, not mine.	0%	4%	16%	47%	34%
STATE14 (n=200)	Homeowners' actions to reduce wildfire are not effective.	1%	3%	14%	52%	30%
STATE15 (n=199)	My property is at risk of wildfire.	16%	54%	20%	8%	2%
STATE17 (n=199)	My effort to reduce wildfire risk on my property is ineffective because of the heavy vegetation on my neighbors' properties.	3%	19%	35%	39%	4%
STATE19 (n=199)	Local firefighters have sufficient resources to keep the wildfire from spreading.	0%	4%	36%	45%	15%
STATE20 (n=199)	Local firefighters have sufficient resources to protect threatened homes.	1%	9%	44%	36%	11%
STATE21 (n=199)	Firefighters should put their lives at risk to protect my home.	2%	3%	11%	43%	43%
STATE22 (n=196)	Wildfires threaten my community water supply.	3%	21%	34%	34%	7%
STATE23 (n=200)	Wildfire smoke caused me to consider moving out of the area.	0%	2%	13%	53%	32%

Section 6: In this section, we would like to know about your willingness to reduce the risk of wildfire to your Chalk Creek property.

6.1. Do any of the following prevent you from taking action to reduce the wildfire risk on your Chalk Creek property? (*Fill in one circle per row*)

		No	Yes
FACTOR1 (n=202)	Financial expense/ cost	69%	31%
FACTOR2 (n=197)	Time it takes to do the work	58%	42%
FACTOR3 (n=198)	Physical difficulty of doing the work	52%	48%
FACTOR4 (n=199)	Lack of specific information on how to reduce wildfire risk on my property	70%	30%
FACTOR5 (n=190)	Lack of effectiveness of risk reduction actions	82%	18%
FACTOR6 (n=196)	Do not want to change the way my property looks	68%	32%
FACTOR7 (n=198)	Lack of information about or options for removal of materials from thinning trees and other vegetation	68%	32%
FACTOR9 (n=196)	Restrictions by homeowners' association on cutting trees	97%	3%
FACTOR10 (n=188)	I am not the owner of this property	97%	3%

6.2. Would any of the following items encourage you to reduce the wildfire risk on your Chalk Creek property? (*Fill in one circle per row*)

		No	Yes
INCENTV 1 (n=202)	Financial assistance	39%	61%
INCENTV 2 (n=200)	Specific information about what needs to be done on my property	29%	71%
INCENTV 3 (n=201)	Help doing the work (ex. thinning trees and vegetation and/or removal of debris)	25%	75%
INCENTV 4 (n=200)	A list of recommended contractors that could be hired to do the work	39%	61%

Section 7: In this section, we ask about personal and household characteristics. Your name will never be connected to your answers in any way.

RISKTAKE1 (n=199)

7.1. Do you view yourself as someone who is not at all willing to take risks or very willing to take risks? (*Fill in one circle*)

Very willing to take risks										Not at all willing to take risks
10	9	8	7	6	5	4	3	2	1	0
4%	3%	9%	18%	16%	29%	3%	10%	7%	0%	2%

AGE (n=197)

7.2. What is your age? (*Fill in the blank*)

AVERAGE = 67 years old

GENDER (n=193)

7.3. Are you? (*Fill in one circle*)

65% Male

35% Female

EDUC (n=196)

7.4. What is the highest grade or year of school you completed? (*Fill in one circle*)

1% Less than high school

4% High school graduate

12% Some college or technical school

3% Technical or trade school

33% College graduate

10% Some graduate work

38% Advanced Degree (M.D., M.A., M.S., Ph.D., etc.)

EMPLOY (n=198)

7.5. Which of the following best describes your current employment situation? (*Fill in one circle*)

37% Employed full time (including self-employed)

7% Employed part time (including self-employed)

2% Unemployed or do not work outside of the home

55% Retired

INCOME (n=165)

7.6. Which of the following categories describes your annual household income? (*Fill in one circle*)

1% Less than $15,000

1% $15,000 - $24,999

2% $25,000 – $34,999

9% $35,000 - $49,999

19% $50,000 - $74,999

17% $75,000 - $99,999

19% $100,000 - $149,999

12% $150,000 - $199,999

21% More than $200,000

Thank you for your help. Please use the space below to write any additional comments.

Appendix E: Comparison of Seasonal and Full-Time Residents

The Colorado State Forest Service (CSFS) expressed interest in how seasonal and full-time residents engage with CSFS education efforts. In this appendix, we provide a definition for seasonal resident, and then describe some of the key similarities and differences between seasonal and full-time residents.

There is no agreed upon definition of a "seasonal" resident. Figure E.1 shows the distribution of the number of months per year that survey respondents occupy their Chalk Creek home. The average length of residency is 5 months. The WiRē team and CSFS decided to define seasonal residents as residents living in Chalk Creek for less than 10 months per year. Based on this definition, 80 percent of Chalk Creek residents are seasonal.

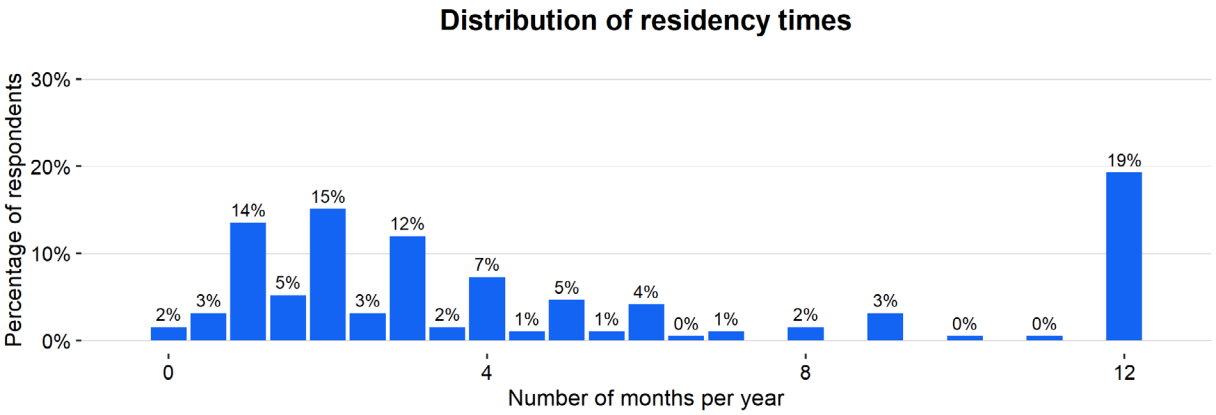


Figure E.1—Distribution of respondent residency times. N=192 respondents to this survey question.

Similarities

Most of the responses to the survey questions are similar for seasonal and full-time residents. For example, CSFS information about wildfire risk reaches both seasonal (80%) and full-time residents (85%). In addition, seasonal and full-time residents have similar CSFS modified RA overall risk ratings. Furthermore, we did not find any statistical differences between seasonal and full-time residents when examining the attributes that comprise the overall risk ratings.

Differences

Preparation

Eighty-five percent of the full-time residents have undertaken some action to prepare for evacuation, compared to 67 percent of seasonal residents. See figure E.2.

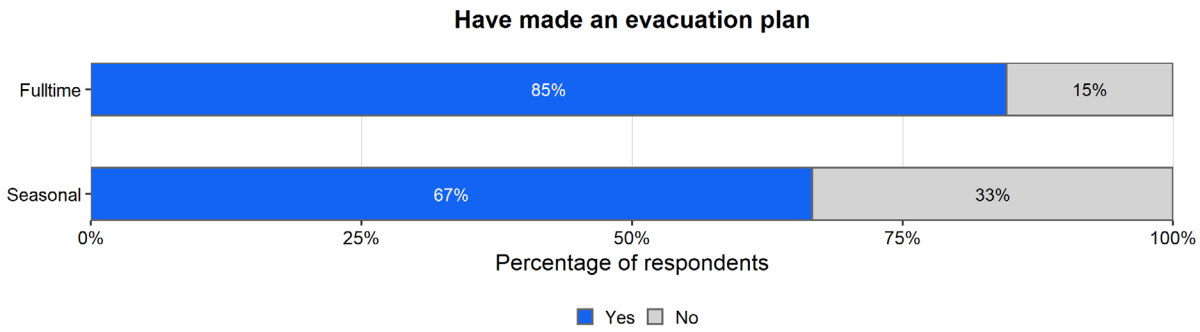


Figure E.2—Percentage of respondents who have made an evacuation plan. Comparison of seasonal and full-time residents. Statistically significant, p-value = 0.029, using Pearson chi-squared test.

When asked about what information would help them develop an evacuation plan (Question 2.4 in Appendix D), 51 percent of full-time residents indicated they would like information on what to bring and what to leave behind, compared to 26 percent of seasonal residents. See figure E.3.

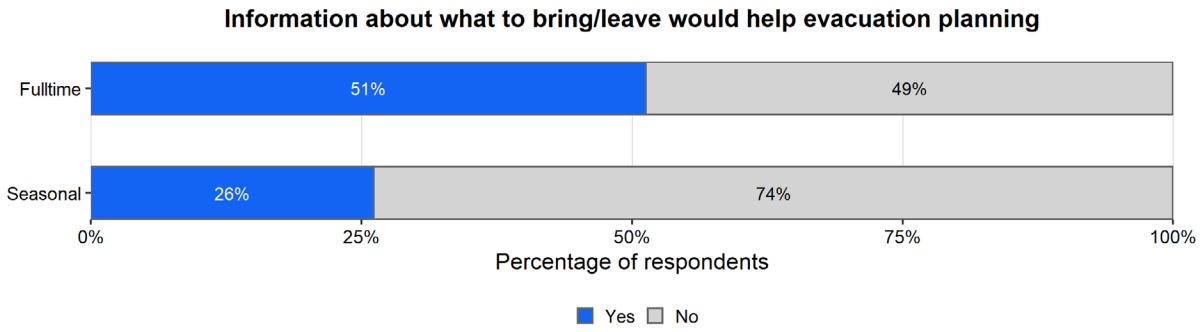


Figure E.3—Percentage of respondents who responded that information about what to bring/leave during an evacuation would help with their evacuation planning. Comparison of seasonal and full-time residents. Statistically significant, p-value = 0.002, using Pearson chi-squared test.

A final, notable difference between seasonal and full-time residents is the sign-up rate for Everbridge emergency notification service. Forty-one percent of the full-time resident reported signing up, compared to 12 percent of seasonal residents. See figure E.4.

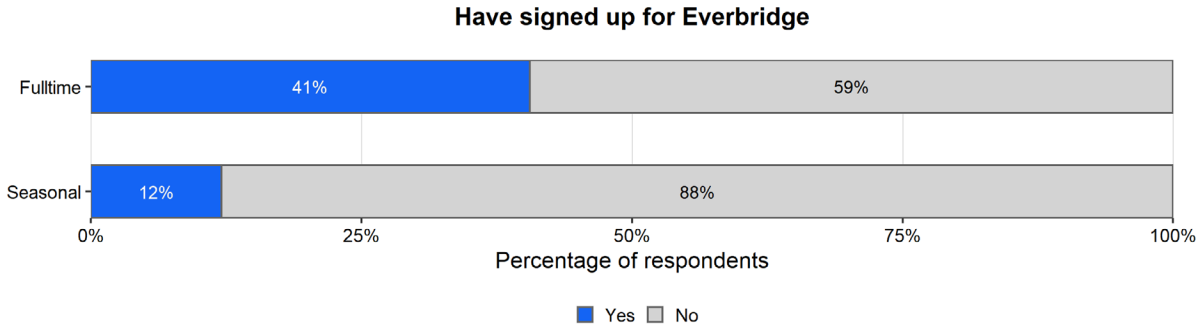


Figure E.4—Percentage of respondents who have signed up for Everbridge, the emergency notification system. Comparison of seasonal and full-time residents. Statistically significant, p-value = 0.002, using Pearson chi-squared test.

Programmatic Engagement

Survey respondents were asked to indicate how they would like to receive wildfire mitigation information; some of these preferences vary between full-time and seasonal residents. While a majority of both full-time and seasonal residents expressed a preference for receiving wildfire risk mitigatiofn information in-person (62%; see fig. 12), significantly more full-time residents (82%) expressed this preference compared to seasonal residents (57%). See figure E.5.

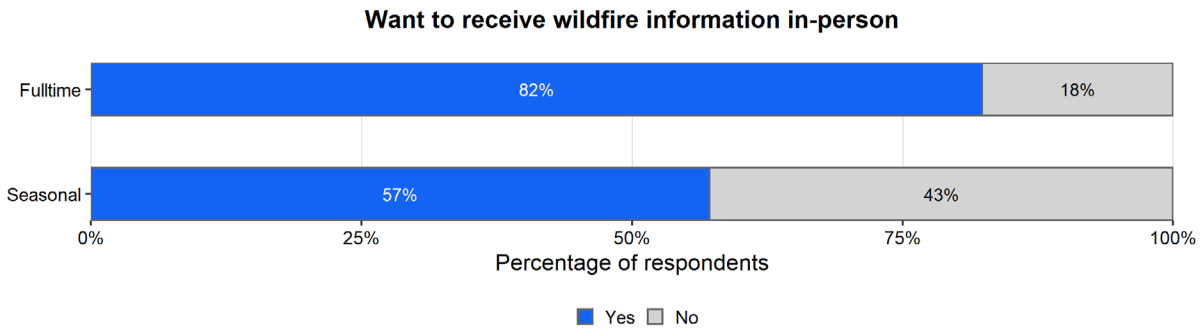


Figure E.5—Percentage of respondents who indicated that they would like to receive wildfire mitigation information via in-person interactions. Comparison of seasonal and full-time residents. Statistically significant, p-value = 0.004, using Pearson chi-squared test.

Likewise, while only 45 percent of all respondents would like to receive information from the newspaper, more full-time residents prefer the newspaper (63%) than seasonal residents (39%). See figure E.6.

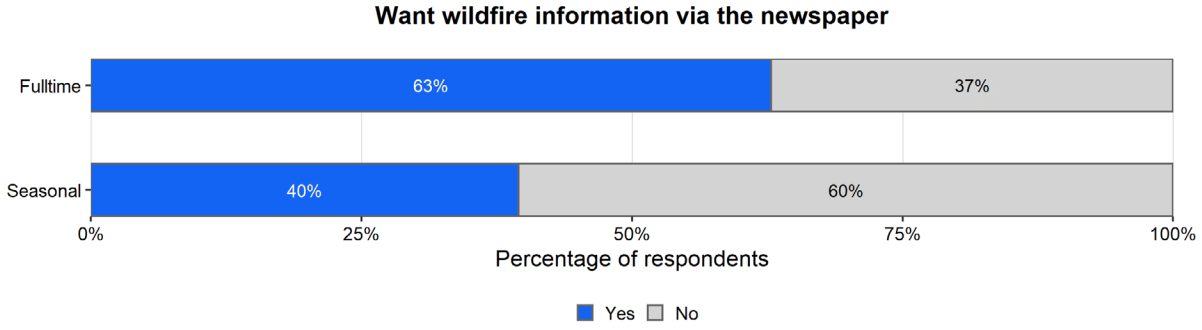


Figure E.6—Percentage of respondents who indicated that they would like to receive wildfire mitigation information via the newspaper. Comparison of seasonal and full-time residents. Statistically significant, p-value = 0.014, using Pearson chi-squared test.

However, more seasonal residents (28%) would like to receive wildfire risk mitigation information via social media compared full-time residents (6%); overall, 23 percent of respondents reported a preference for this mode of communication. See figure E.7. These results suggest that outreach targeted at either full-time or seasonal residents may benefit from consideration of the specific modes of communication preferred by that group.

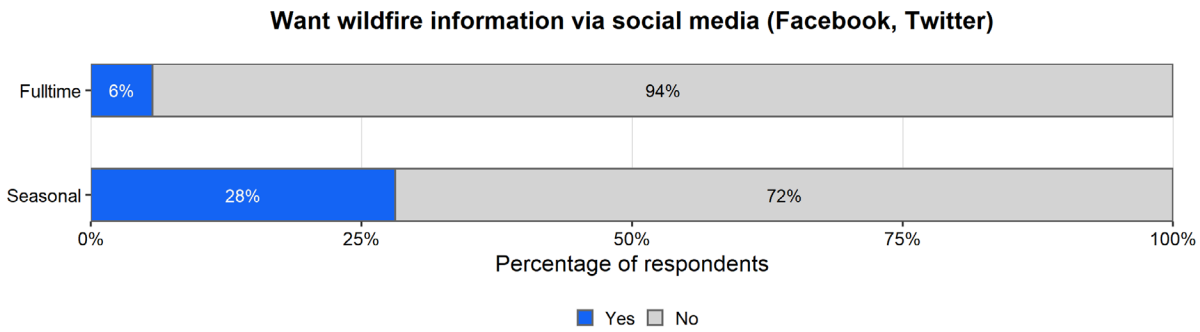


Figure E.7—Percentage of respondents who indicated that they would like to receive wildfire mitigation information via social media (Facebook, Twitter). Comparison of seasonal and full-time residents. Statistically significant, p-value = 0.005, using Pearson chi-squared test.

In-person interactions are one of the key tools used by CSFS to support residents' mitigation efforts. Significantly more full-time residents (68%) compared to seasonal residents (43%) reported they had received wildfire risk information in-person. See figure E.8. The smaller number of seasonal residents who received information in-person may account for the finding that more seasonal residents (35%) compared to full-time residents (11%) report a lack of specific information on how to reduce wildfire risk on their properties as a factor preventing them from taking action. See figure E.9.

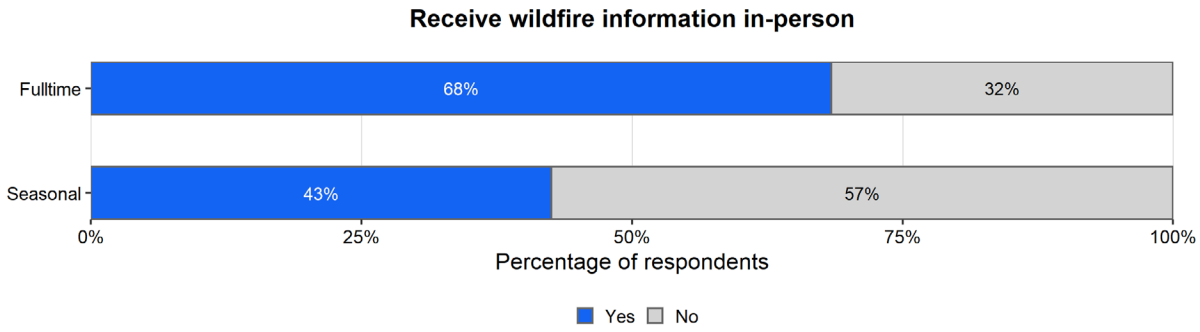


Figure E.8—Percentage of respondents who indicated that they currently receive wildfire risk information in-person. Comparison of seasonal and full-time residents. Statistically significant, p-value = 0.004, using Pearson chi-squared test.

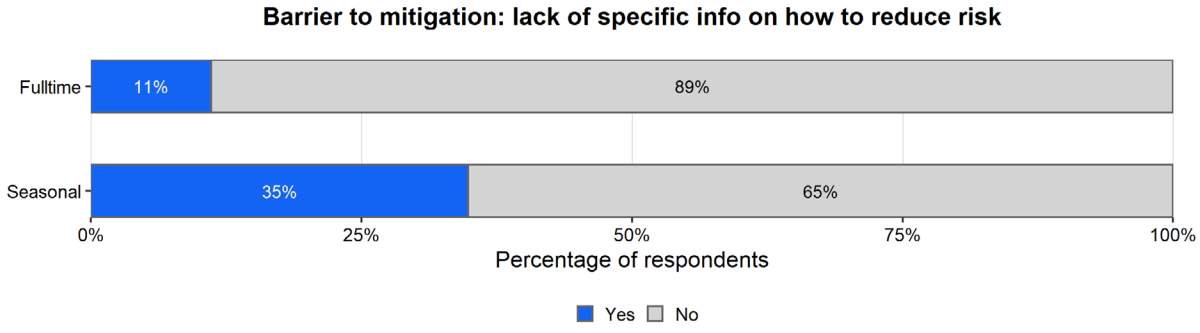
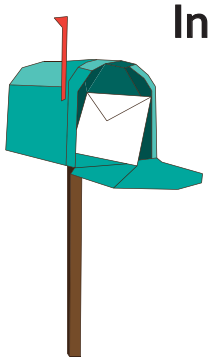


Figure E.9—Percentage of respondents who indicated that lack of specific information on how to reduce risk is a barrier to mitigation. Comparison of seasonal and full-time residents. Statistically significant, p-value = 0.005, using Pearson chi-squared test.

Appendix F: Infographic-Style Outreach Pamphlet

The distribution of professional risk ratings in the outreach pamphlet below reflects the CSFS RA ratings, not the CSFS modified RA ratings (see Appendix C).

In 2019, we sent you a survey on wildfire risk.



Who responded?

20% full-time residents of Chalk Creek

80% seasonal residents (less than 10 mo/yr) of Chalk Creek

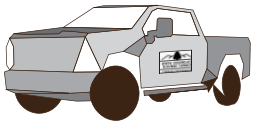
Who are we?

- Colorado State Forest Service (CSFS) Salida Field Office
- Your source for forestry and wildfire education
- 80% of survey respondents got wildfire risk information from CSFS
- 54% found CSFS information very or extremely useful (on average 20% for other organizations)

If you have any questions, please contact us!

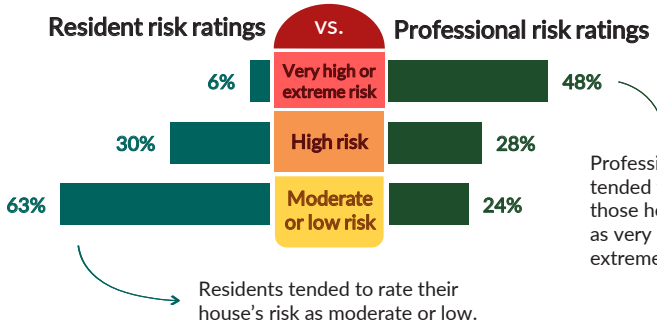
719-539-2579
CSFS_Salida @mail.colostate.edu

We also sent professionals to assess your wildfire risk.



We found a mismatch.

Your home's wildfire risk may be higher than you think.



Residents (left side) rate wildfire risk lower than wildfire professionals (right side), for the same set of houses.

(Each risk rating is relative to the rest of the community, not to the rest of Colorado or the US overall.)

We've made a lot of progress, but there's more work to be done.

Here are some solutions to the survey's top six barriers to mitigation:

	Barriers	Solutions
1	It's physically difficult	**Chaffee Chips** cuts the work in half. You cut the limbs & trees, we haul it off & chip it.
2	It takes time	Chaffee Chips can save time. CSFS can also make you a personalized to-do list so that you can plan it all out.
3	It will change the way my property looks	We can help you find a compromise between wildfire safety and visual impact. You may find you like the changes!
4	Unaware of vegetation removal options	Chaffee County Fire has several **large, low-cost dump trailers** available for hauling off slash that results from mitigation efforts. Or, **take slash directly to the landfill**.
5	It's expensive	Check out our **50/50 cost share** for vegetation removal, as well as the low-cost dump trailers mentioned in #4.
6	Don't know how to reduce wildfire risk	Call CSFS for a **free site visit to your house**. We can go in-depth, marking specific trees for removal, recommending actions for the home itself, etc.

Flip this page over to learn how to take action →

Chaffee Chips: https://envisionchaffeecounty.org/chaffee-chips/
Dump trailers: https://www.chaffeecountyfire.org/mitigation-trailer
Cost share info or site visit: Call CSFS at 719-539-2579
More info on CSFS: https://csfs.colostate.edu/salida/sa-wildfire-mitigation-education/

Do you have an evacuation plan?

Seasonal residents are less likely than full-time residents to have an evacuation plan, according to the survey. If you know a seasonal resident, consider asking them if they have an evacuation plan.

Here are some answers to your top questions about evacuation:

How I will be notified about evacuation?

1. The Sheriff's office will contact you.
2. Sign up for **Everbridge** to get emergency notifications: http://chaffeesheriff.org/communication/everbridge/

Note: the Chaffee County emergency notification system occasionally changes. It used to be called "Code Red." Please make sure you're still signed up!

When do I evacuate?

This depends on the wildfire. Please contact Richard Atkins, Chaffee County Emergency Manager, with questions: 719-207-2730

What are the safe evacuation routes?

When a wildfire happens, Cty Rd 162, leading to US Hwy 285, will likely be the only safe evacuation route. Make sure you're ready to evacuate quickly, just in case Cty Rd 162 is threatened by wildfire.

What do I bring and what do I leave behind?

Visit the Ready, Set, Go! website for tips on planning, emergency supplies, and family communication: https://www.wildlandfirersg.org/ s/are-you-wildfire-ready?language=en_US

Have you talked to your neighbors about wildfire mitigation yet?

Folks who talk to their neighbors about wildfire are more likely to take mitigation action, according to the survey. That means your voice matters!

Your risk is connected to your neighbor's—if their house catches on fire, it's more likely yours will. Work with your neighbors to reduce risk!

How safe is your house?

82% of respondents said they want information on how to reduce wildfire risk on their property.

Check off the mitigation actions you've accomplished this month:

- ☐ Moved wood piles 30 feet from the home
- ☐ Mowed weeds/grasses to a height of 6 inches or less, in a 30-foot radius around all structures
- ☐ Created a fuel-free boundary immediately surrounding the home and any other structures (about 5 feet). Often this simply means pulling weeds or raking pine needles away, to get down to bare mineral soil.
- ☐ Cleaned gutters of flammable debris
- ☐ Removed debris from under decks
- ☐ Removed miscellaneous combustibles from around the home (e.g., leftover construction materials)
- ☐ Maintained paint/stain on wood decks and wood sided homes
- ☐ Made a schedule for when to repeat these tasks
- ☐ Set up a CSFS home site visit (call us at 719-539-2579) for a personalized to-do list
- ☐ Talked with my neighbor about wildfire mitigation activities