



Envision Chaffee County Community Wildfire Survey - April 2019

Executive Summary

The Chaffee Wildfire Survey collected data from 1,035 participants; 7% of Chaffee County residents over 18 years old. The survey population was opportunistic but is representative of all parts of the county; rural versus municipal areas, full- and part-time residents and home ownership. However, the data under-represents younger residents (18-34) and over-represents higher income residents, likely because older, wealthier property owners are more concerned about the impacts of wildfire to them and therefore, were more willing to engage in the survey.

Survey respondents are highly aware of the risk of wildfire, with 80% indicating that a major fire is likely to happen in Chaffee County in the next five years. Yet wildfire preparedness lags awareness. Forty percent of residents do not have an evacuation plan, 44% are not confident they can easily get information in the event of a wildfire, and 46% have not registered for the Everbridge reverse 911 system. Further, more than half of residents are unclear who to contact to learn how to decrease the risk of wildfire to their home or property. If the survey demographic is biased toward “more engaged” residents, these preparedness percentages may be low compared to the full population.

Private landowner respondents have little sense of urgency to act to remove vegetation or to change the characteristics of their home to protect their residences from wildfire. Nearly 90% indicate they have already taken some action, and the majority feel that removing vegetation or changing the characteristic of their structure will have only a small to moderate impact on risk. However, the top factor residents indicate would encourage them to act was “information about what to do,” which is consistent with the lack of clarity about where to get such information noted above. This suggests an opportunity for education on why/how much private lands treatment matters and what fully effective treatment entails, in order to develop increased urgency for action (assuming additional work on private lands is generally warranted). Once that sense of need is established, the data suggest that support to do the work and to remove cleared vegetation, combined with ongoing encouragement, would increase execution.

Regarding new private land development, the survey data appear to indicate strong support for wildfire-related provisions in building codes.

On public lands, citizens perceive forest health to be fair, while professionals consider it to be poor. The advancing beetle kill epidemic, high forest density and fuel loads related to decades of fire suppression, and increasing drought/climate change are perceived by citizens as top threats to forest health. Survey responses also highlight very high concern about, and even animosity toward, growing recreation use by visitors to the county – cited as the second-highest threat to forest health (following insect infestations).

A strong majority of residents (80-86%) support land management activities to mitigate wildfire risks and about seven in ten think these activities are also beneficial to wildlife. For those expressing concerns about treatments, the top issues were: 1) lack of trust in public agencies to conduct the work cost-effectively and responsibly (without undue visual/environmental impacts), 2) concern that such efforts are too small to have meaningful impact, and 3) with regard to controlled burns, concerns about safety (losing control), impacts to air quality and the need for better notification. These challenges could be addressed through more transparent planning and prioritization of treatment activities, more effective communication around treatment activities (pre- and post-work), and education about how the safety and air quality impacts of controlled burns are managed.

County Ballot measure 1A, a sales tax increase passed in November 2018, provides funds to protect communities and water from severe wildfire and to enhance forest health and wildlife habitat. Consistent with community concerns about recreation use as a top threat to local forests, fire ban enforcement and education/enforcement of visitor behaviors ranked as the most important use of funds, followed by action to decrease risks on public lands. Funding action on private lands was seen as lower priority, although still important to very important.

The wildfire survey was intended to inform agency and community action to better manage wildfire risk. The results indicate opportunity to:

- Increase community wildfire preparedness;
- Help private landowners understand the value of/need for action to reduce risk to their homes, the work they need to do, and develop additional programs to support such actions;
- Update to building and land use codes to further address current wildfire risk; and
- Provide more transparent planning and prioritization of public and private land wildfire risk management activities, coupled with more effective communication about planned and completed work.

Leaders of county government and emergency management, local fire protection teams, and state and federal land and wildlife management agencies have and continue to work hard to protect the community from the risks of severe fire and to support forest health and fire resilience. We thank them for their service. Understanding that many factors have changed since the current Chaffee County Community Wildfire Protection Plan was completed a decade ago (population, recreation use, overall forest health), these leaders are working together to create a “Next Generation Wildfire Protection Plan.” This plan will include transparent prioritization of current needs and collaborative action shared by agencies and the community. The Community Wildfire Survey is a first step in this process, helping to transparently assess current conditions, perceptions and opportunities. As a next step, wildfire survey findings will be shared with the Community Wildfire Protection Plan leadership team and with community members, with the intent to develop shared priorities and actions.

Survey Demographics

The Chaffee Wildfire Survey collected data from 1,035 participants; 7% of Chaffee County residents over 18 years old. The survey sample was opportunistic, with information and an online link widely distributed through local media (radio, newspaper) and shared through the contact lists of local fire departments, emergency management, federal and state land

management agencies, major local employers (Heart of the Rockies Regional Medical Center, Monarch Mountain), homeowner associations and non-profit organizations (many of which connect to both residents and part-time homeowners). The survey was in the field for 22 days, from 11 February to 04 March, 2019.

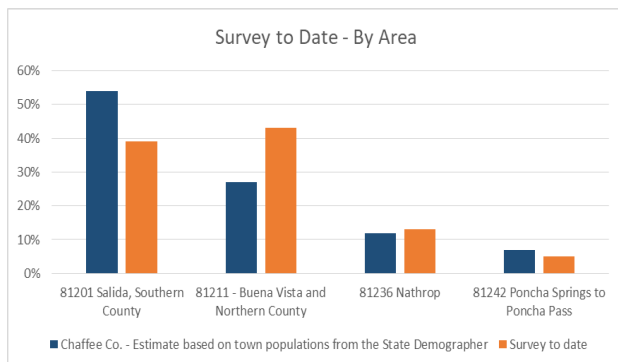


Figure 1

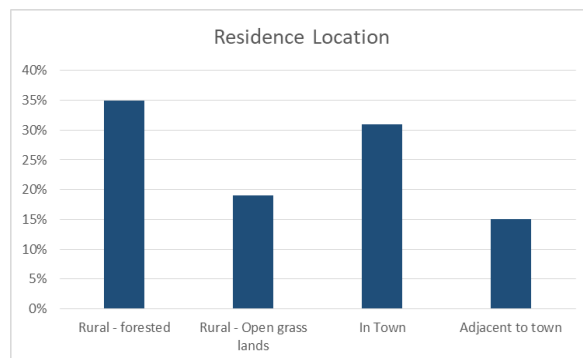


Figure 2

Survey demographics indicate a reasonably representative sample relative to homeownership, county-wide participation and location of residences in rural vs. municipal areas as follows:

- 84% of participants own their own home, compared to 77% of the county population.
- 81% of respondents are full-time residents; 5% live in Chaffee for 7 months a year or more, and 11% live here 6 months a year or less. If the 11% are considered “second homeowners” this compares reasonably well to 2014 census data that classified 7% of Chaffee County homes as secondary residences – especially considering likely growth in this segment since 2014.
- All zip codes are represented; however the Buena Vista code is over sampled (Figure 1).
- Roughly 50% of participants live in rural areas, which reflects the county distribution of 51% of residents living in the unincorporated areas (Figure 2).

The sample population also has some biases:

- Citizens aged 18 to 34 are under-represented (Figure 3).
- Citizens with lower incomes are strongly under-represented, while the highest incomes are strongly over-represented (Figure 4).

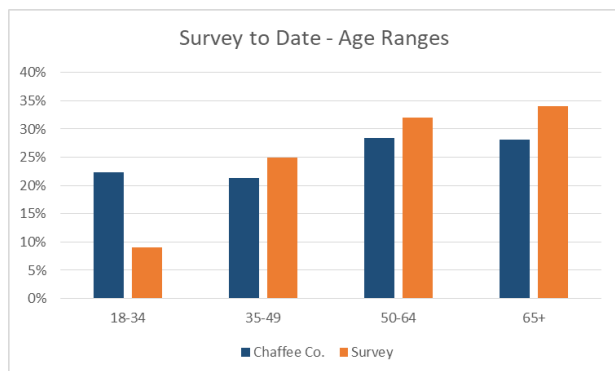


Figure 3

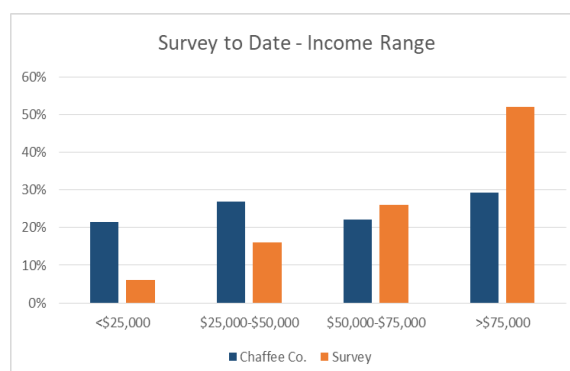


Figure 4

These trends are not surprising, given that those most concerned about wildfire (and therefore willing to engage in the survey) are likely to be older and wealthier residents who own property. This bias could result in over-estimation of engagement and ability to treat private lands.

Finally, 20% of respondents indicated that they were “professionals” with education or occupations related to health, emergency management, fire management or wildlife. This is generally consistent with 26% of residents holding bachelor or more advanced degrees.

Overall, the demographic data is reasonably representative and the biases are not seen as fatal flaws. Data from selected questions was assessed relative to the location of residents (rural vs. urban) and professional background. There remains opportunity for future analysis of data based on income, age and zip code.

Wildfire Risk Awareness

Chaffee County residents and homeowners are highly aware of wildfire risk. Roughly 80% of respondents believe a major wildfire in Chaffee County is very or extremely likely within the next 5 years [Question 4]. This opinion is shared fairly equally among all residential types. When considering if a major fire will occur near their residence, 85% of those living in rural forest areas indicate this is extremely to very likely, versus 34% of those living in town (Figure 5) [Question 5].

Responses also indicate that residents are highly aware of the potential for serious detrimental impacts to the community as a result of a large-scale wildfire. The overwhelming majority of respondents indicated it is “very” or “extremely” likely that a major fire would result in unhealthy air quality, threatened water supply, damaged river water/trout and impacts to local businesses. Rural residents generally thought it very to extremely likely that their property would be destroyed, with more urban residents indicating a lesser threat [Question 6].

When considering the most important things to protect in the case of a wildfire (or “Values at Risk”) the community prioritized human life, and especially firefighter lives. This was followed by drinking water, infrastructure, homes and endangered species as the second tier. Recreation and views generally fell into a third-priority tier (see Figure 6, next page) [Question 11].

This ranking of priorities is generally consistent with the views and policy of local government, land management and fire protection leaders provided in an independent ranking. These leaders also included Post Fire Flood Control on a “tier 2” priority level with homes and infrastructure.

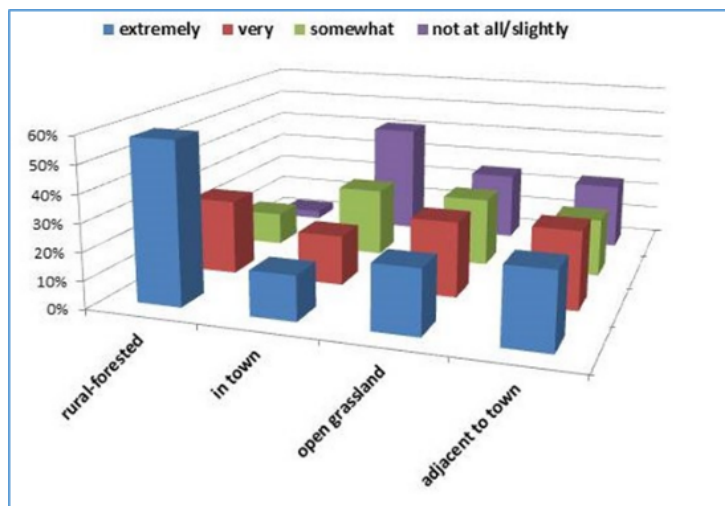


Figure 5 – Concern about wildfire near your residence

Wildfire Preparedness

Wildfire preparedness lags awareness. While 80% of residents believe a major fire is likely, only:

- 60% indicated that they currently have an evacuation plan “for people in their homes,”
- 55% have provisions for “important documents and medications,”
- 38% have provisions for “children home alone,” and
- 35% have provisions for “pets or large livestock” [Question 7].

Percentages for all categories were higher for respondents in the rural-forested and rural-grassland categories (Figure 7), but there is opportunity for improvement in this area.

When considering communications in the event of a local wildfire, 66% of respondents are confident that they “can easily receive information” and 64% have signed up for the County’s reverse 911 service [Questions 9 and 10].

Question 11: Survey responses indicating relative degrees of importance for protection from wildfire and aftermath.

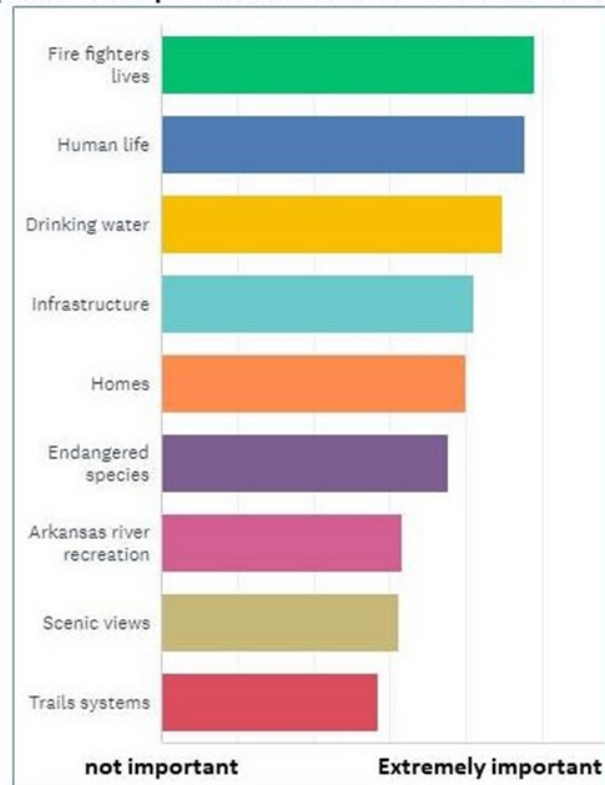


Figure 6

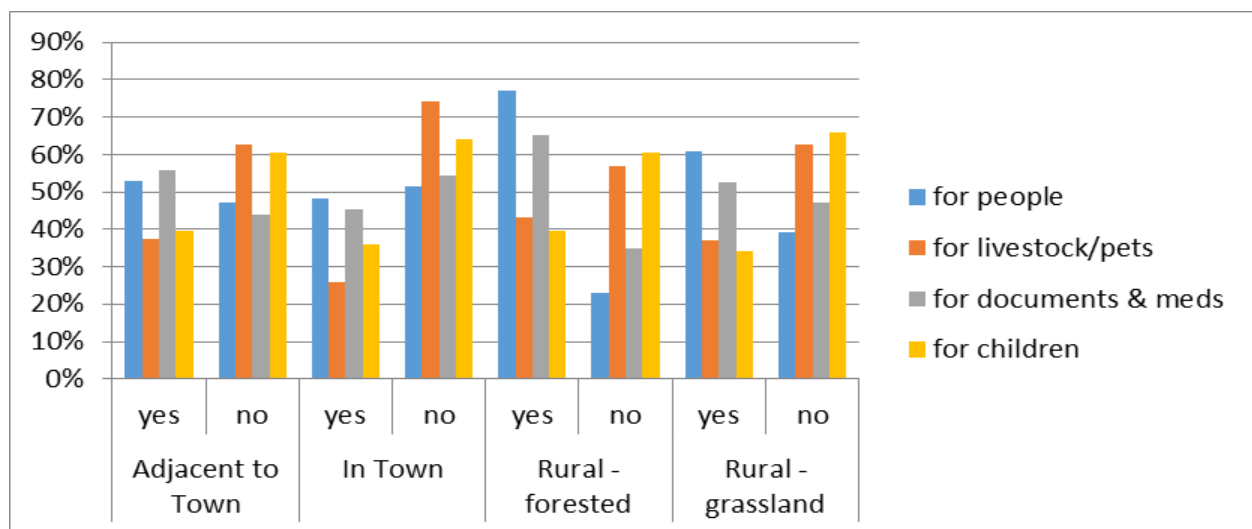


Figure 7

to moderate contributors (Figure 9). This could suggest opportunity for education on why or how much these factors matter. The ratings could also be related to the belief that property owners have already addressed the risk on their own lands.

When asked to indicate what they have done to decrease wildfire risk on their property, almost 90% of respondents indicate some action as follows [Question 19]:

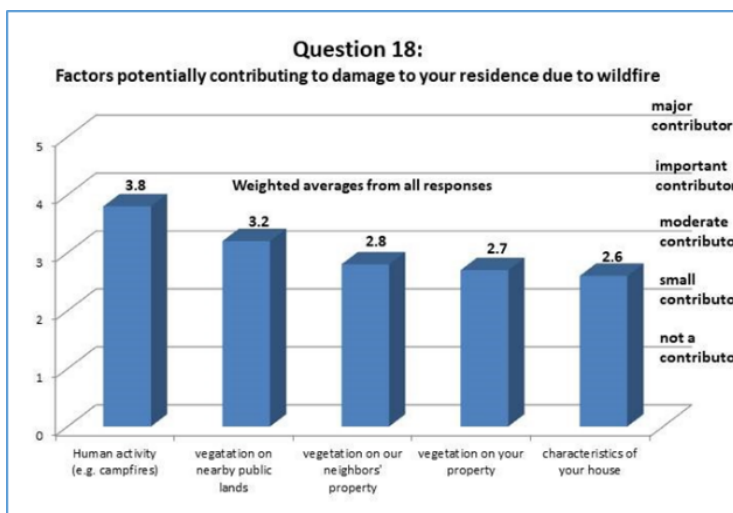


Figure 9

Cleared weeds, brush, trees	88%
Disposed of vegetation	82%
Mowed dead grass, moved wood	80%
Made residence more fire-resistant	53%
Provided input to community wildfire plan	31%
Helped neighbor clear vegetation	28%

This apparent level of effort and awareness is encouraging, although responses based on self-reporting can be misleading and information is not available on the quality/quantity of the work or the time since it was completed. This data may also be influenced by under-representation of lower income and younger residents, who may be less likely to treat. The data suggest opportunity around collaborative community wildfire risk management planning and around helping people who have treated help their neighbors to do so as well.

When asked what would encourage them to do more fire-related treatments, the top response was a need for information on what to do (Figure 10). This is consistent with data discussed above, showing that about half of the community is unsure who to contact to get this type of information. This is a clear area of opportunity. Support in removing cleared vegetation also ranked as

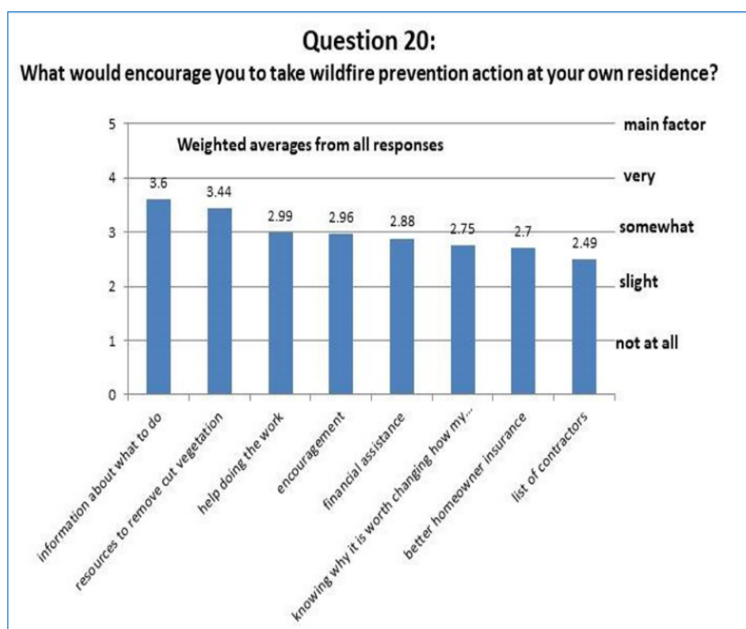


Figure 10

very important for a majority of respondents and at least moderate support was indicated for all options. The need for financial assistance may be underestimated by the survey's relatively wealthy population.

Finally, the current impact of insurance providers in encouraging wildfire risk reduction is small [Question 21], as follows:

- 22% of respondents have received information on reducing wildfire risk from their insurer,
- 6% have had policies cancelled due to wildfire risk,
- 19% have been charged a higher premium due to wildfire risk, and
- 7% have been offered a discount to decrease wildfire risk.

The data suggest opportunities for partnerships with insurance providers to influence risk reduction.

Overall, respondents do not express a sense of urgency in taking action to remove vegetation on their property or changing the characteristics of their home to protect their residences from wildfire. Nearly 90% indicate they have already taken some action, and may feel that they have completed the needed work. This is interesting, considering over half of respondents are unclear where to get information about how to decrease their risk, and that the top factor residents indicate would encourage action was “information about what to do.” This suggests an opportunity for education in why private land treatment matters and what it entails, followed by support to treat and to remove vegetation, coupled with ongoing encouragement.

Land Use and Building Codes

Many communities have worked to address wildfire risk, especially in the wildland urban interface, by modifying building or land use codes. For instance, Douglas County adopted provisions of National Fire Protection Association Code 1144, “Standard for Reducing Structure Ignition Hazards from Wildland Fire” into its Uniform Building Code 24 years ago (1994). However, prior to the Hayman Fire (2002), Teller County did not have regulations related to reducing wildland-urban fire risks. The county added such regulations in 2007 (Section 6.5, “Wildfire Hazard Areas”).

Survey participants were asked how strongly they agree with three statements regarding building codes [Question 22]. Responses are presented in the table below. The results appear to indicate strong support for wildfire-related provisions in building codes. The strong

Question	Agree, Strongly Agree	Disagree, Strongly Disagree
Building codes that require such things as fire-resistant roofs decrease community wildfire risk	75%	8%
I support building codes that encourage safe access for firefighters	90%	3%
I support additional building codes that should make new developments more wildfire resistant	81%	7%

prioritization of protecting fire fighter lives also suggests support for changes to code to support that intent.

Perceptions of Forest Health

The survey explored citizens' perceptions of forest health (poor), threats to forest health (beetles, people) and support for treatment activities (strong), with the intent to understand the needs for public education and outreach.

In general, citizens perceive the forest to be in fair to poor health, while management professionals consider forest health to be poor. The words used to describe forest health are different between these groups (Figure 11, below), and suggest a communication gap.



Figure 11. Word clouds showing responses to the question, “How would you characterize the health of Chaffee County Forests?” from general community members (left) versus professionals engaged in forest, wildfire or wildlife management.

There is high awareness of both the advancing beetle kill epidemic and of the growing issue of high fuel densities and the challenges related to decades of aggressive fire management. The survey results suggest general understanding of the key issues, that appear to support the need for management activities.

The other clear outcome is a strong sense of concern about the growing impacts of outdoor recreation use. Humans, tourism, irresponsible recreation and growing tourism are seen as the second-biggest threat to local forests, with hundreds of comments in this area. Beyond that, the tone of comments indicates a strong sense of animosity towards tourists and visitors (see Appendix A for details). This emphasizes the importance of the in-progress Envision Recreation in Balance program. Top forest health threats are perceived as:

- Beetle kill / insect infestation / disease (30%);
- Human activity (visitors, tourists, recreational impacts) (21%);
- High forest density, fuel loads and insufficient thinning and fire (19%); and
- Drought and climate change (19%).

Building on a good public understanding of the threats, the survey indicates strong public support for common fire-related land management activities. The percentages below reflect the degree to which respondents found the following land management activities “acceptable” or better [Question 14].

Tree, brush removal	86%
Burn piles	80%
Controlled burns	82%
Allow natural fire to burn	50%

Regarding the lower level of acceptance of letting natural fires burn, an additional 40 percentage points of respondents found the approach “somewhat acceptable.” Additional insights may be provided by the responses to Question 15 below.

Consistently, 84% of respondents indicated that they do not have concerns about land management agencies cutting and removing trees or brush on public lands [Question 15]. Of those who did have concerns, 50 submitted additional comments. This data indicates that key issues creating concern include:

- Lack of trust in public agencies (ability of agencies to conduct activities responsibly, cost-effectively and with public input).
- Concerns that such efforts are too small to have much impact or that decision makers’ knowledge of what’s best may not be correct.
- Potential detrimental environmental effects (visual impacts, impacts to wildlife).

Many of these concerns could be addressed through transparent, collaborative wildfire protection planning, such as the in-progress Chaffee County Next Generation Community Wildfire Protection Plan.

Regarding controlled burns, 76% of respondents indicate that they do not have concerns [Question 16]. For the remaining 24%, key issues include:

- Losing control of the burn,
- Resulting adverse impacts to air quality, and
- The need for better notification.

Finally, the majority of respondents perceive that treatment activities like those above are beneficial to wildlife as follows [Question 17]:

- Controlled burns help wildlife – 73% (agree + strongly agree); and
- Removing trees helps wildlife – 65% (agree + strongly agree).

Overall, the community has a good understanding of forest health challenges. There is strong support for treatment activities and the opportunity to further strengthen support through: 1) transparent treatment planning and prioritization, 2) increased communication about treatment

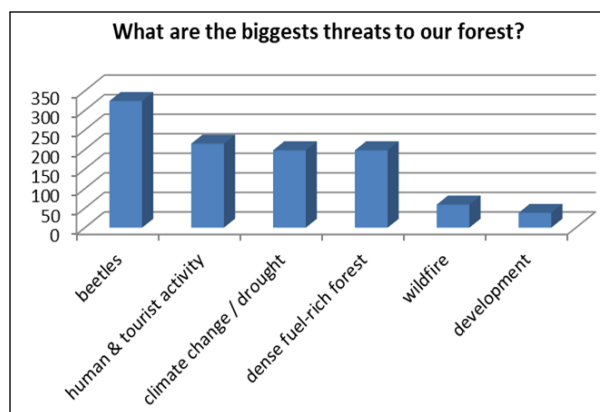


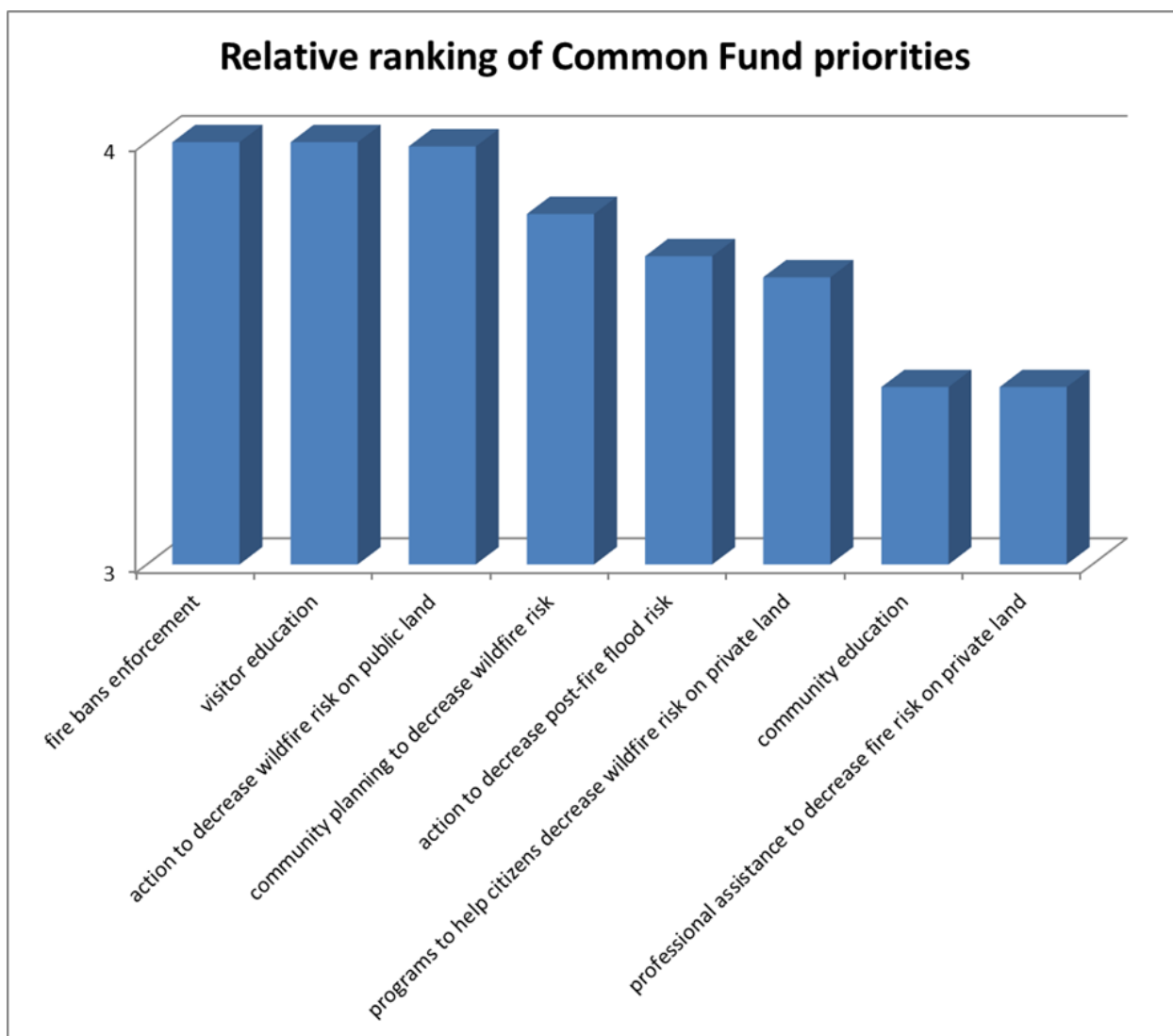
Figure 12. Perceived threats to forest health.

activities (pre and post), 3) demonstrations of well-managed projects, 4) education about the safety and air quality controls for prescribed burns, and 5) better notification around controlled burn activities.

Community Priorities for Common Ground Funds

County Ballot measure 1A, a sales tax passed in November 2018, provides funds to protect communities and water from severe wildfire and to enhance forest health and wildlife habitat.

Survey respondents were asked to rank the importance of a given list of potential priorities from “not important” to “extremely important.” Consistent with community concerns about recreation use as a top threat to local forests, fire ban enforcement and education/enforcement of visitor behaviors ranked highest. This is followed by actions to decrease risks on public lands, with funding to take action on private lands having the lowest priority. All of the proposed activities were rated, on average, as important to very important (level 3 to 4 on Figure 13, below).



Recommendations and Next Steps

Building on the work of agencies, fire departments, local government and citizens efforts to date, the survey data suggest opportunity for ongoing work to meet the Community Wildfire Protection Plan Goals as follows:

1. **Increase community wildfire preparedness.**
2. **Continue to decrease risks on private lands**, including helping landowners understand the value of/need for action to reduce risk to their homes and the work they need to do along with developing additional programs to support such actions.
3. **Update building and land use codes** to address current conditions and fully recognize firefighter safety as the top priority.
4. **Further increase strong community support for public land treatment work**, including transparent planning and prioritization of wildfire risk management activities on public and private land, coupled with more effective communication about planned and completed work.
5. **Address the challenges related to rapidly growing recreational use**, including aspects related to fire safety. Note: this work ties in closely with the in-progress Envision Recreation in Balance program.
6. **Communicate more effectively - together.** The number of topics for which the public may benefit from additional education and outreach suggests the need for long-term, collaborative and coordinated public engagement work including the community, agencies, local government, fire departments, etc. There may also be benefit in partnerships with realtors, insurance companies and local media. Such work could build on existing programs and efforts, adding new ideas and approaches, short educational videos featuring local projects, Envision-style community action planning, community events, community awards for action, coordinated activities with annual wildfire day/week, etc.

In terms of next steps, the opinions above are those of the authors and need to be vetted, prioritized and then acted upon by both the CWPP Leadership and their teams and by the community. This work will begin with the CWPP Leadership team in a scheduled meeting on 15 April and will continue with the community at large and with the Envision Healthy Forest Action Team beginning in May and June 2019.

Our thanks to the many professionals who are working to manage forest health and community wildfire resilience, and are willing to engage together to learn and build on those efforts with new ideas and approaches. Thanks are also due to the 1,000+ community members who engaged in the survey. Chaffee County is a special place working to build a shared vision of the future - together.

Prepared by: Bill Goosmann, Brad Leach, Kim Marquis and Cindy Williams.

Appendix A - Raw Survey Data and Analysis by Question

Question 1: Do you own or rent your Chaffee County residence?

- 84% of respondents own and occupy
- 9% are renters
- 4% are landowners
- 2% own but rent out

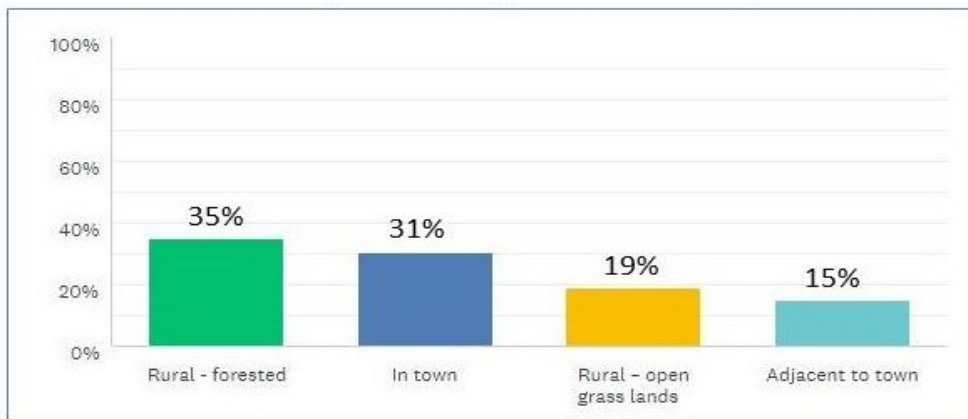
Question 2: How many months do you live at your Chaffee County residence?

The data shows that:

- 84% of respondents indicated full-time residence (12 months)
- 5% of respondents indicate they live here for more than half of the year (7 to 11 months), and
- 11% indicate they live here for 6 months a year or less.

This compares to 2014 Chaffee county census data showing 93% of residences reported as primary, versus 7% reported as second homes. If we consider respondents living in Chaffee County for 6 months a year or less as potential second home owners, and consider likely growth since 2014 in second home owners, this population is reasonably representative.

Question 3: How would you describe your Chaffee County residence (property)?



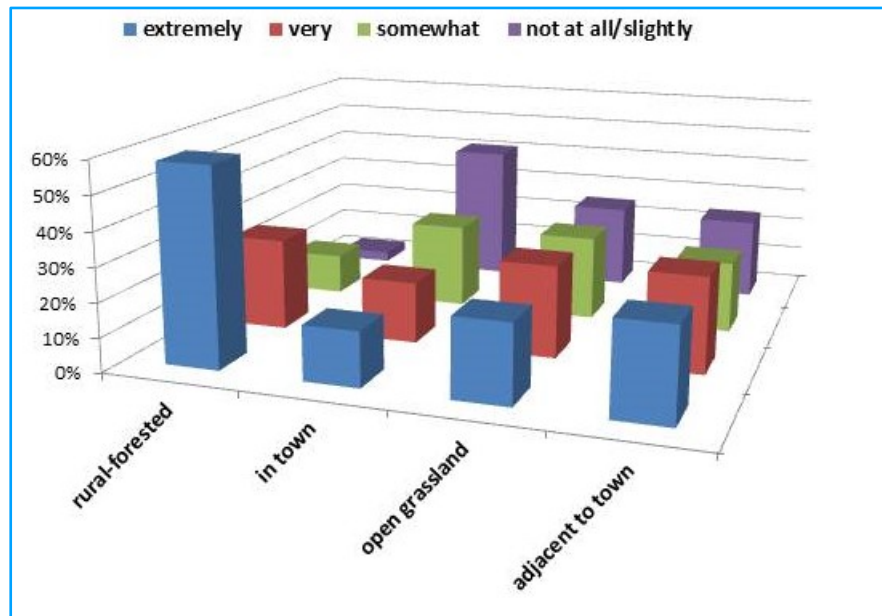
Question 4: How concerned are you about wildfire near your residence?

This was an open-ended question using a sliding scale of “not at all” to “extremely.” Subdividing the scale into four ratings of “not at all, to slightly concerned,” “somewhat concerned,” “very concerned,” and “extremely concerned” yields the following:

“extremely”	34%
“very”	24%
“not at all to slightly”	22%

“somewhat” 20%

Looking at the responses according to residence location (question 3) reveals the following:



Rural-forested:

“not at all to slightly” 3%
“somewhat” 12%
“very” 27%
“extremely” 58%

In town:

“not at all to slightly” 41%
“somewhat” 25%
“very” 18%
“extremely” 16%

Open grassland:

“not at all to slightly” 25%
“somewhat” 25%
“very” 27%
“extremely” 23%

Adjacent to town:

“not at all to slightly” 24%
“somewhat” 21%

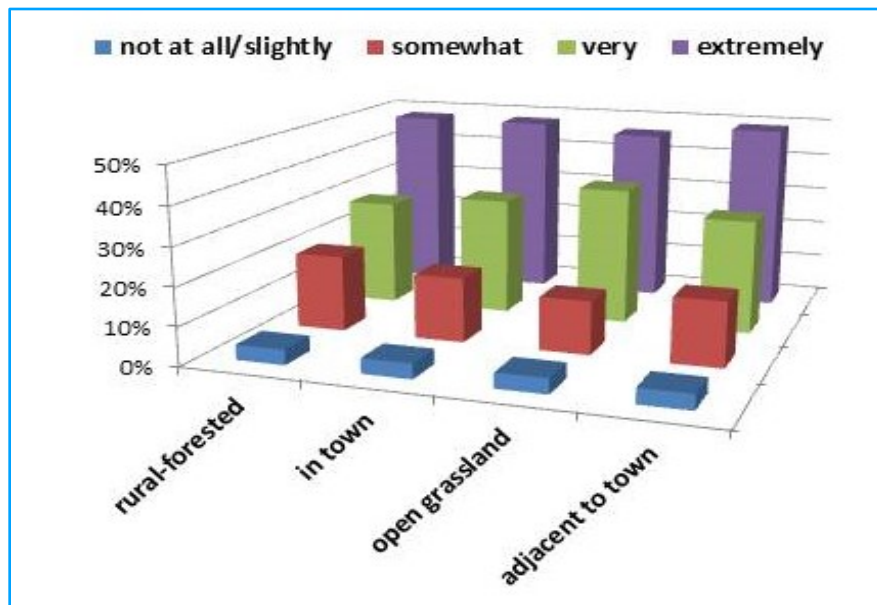
“very”	28%
“extremely”	27%

Question 5: How likely is it that a major wildfire will occur in Chaffee County in the next 5 years?

This question had the same sliding-scale format as question 4. Converting to four ratings of “not at all to slightly likely,” “somewhat likely,” “very likely,” and “extremely likely” yields the following:

“extremely”	48%
“very”	31%
“somewhat”	18%
“not at all to slightly”	3%

Looking at the responses according to residence location (question 3) reveals the following:



Rural-forested:

“not at all to slightly”	4%
“somewhat”	20%
“very”	28%
“extremely”	48%

In town:

“not at all to slightly”	4%
“somewhat”	17%
“very”	31%
“extremely”	48%

Open grassland:

“not at all to slightly”	4%
“somewhat”	14%
“very”	36%
“extremely”	46%

Adjacent to town:

“not at all to slightly”	4%
“somewhat”	17%
“very”	30%
“extremely”	49%

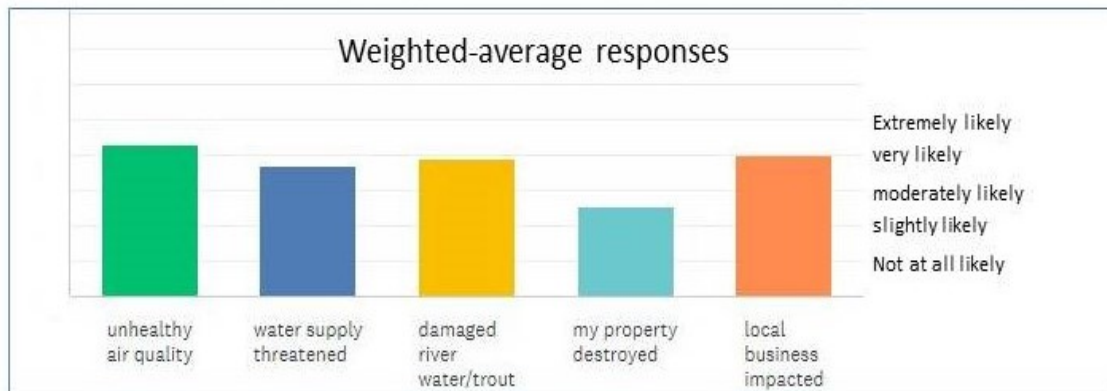
Chaffee County citizens’ concern about the likelihood of a major wildfire in the county does not appear to be dependent on what type of residence they live in.

Overall, about 80% of respondents believe the chance of a major wildfire to be very or extremely likely within the next 5 years, but only 58% are very or extremely concerned about a fire near their residence, with a strong dependence on where their residence is located.

Additionally, Question 24 of the survey asks if respondents’ education or occupation is related to forest health, wildlife health, emergency management or fire management. The survey responses to Question 5 were sorted according to the responses to that question. Using the scale of “no chance” = 0, to “100% certain” = 100, the average response of people not educated or employed in those fields was “73,” which, surprisingly, was exactly the same (73) as the average for the 165 respondents whose occupation or education was in the fields of forest health, wildlife health, emergency management, or fire management.

Question 6: If there were a wildfire in Chaffee County, on the scale of the Hayden Pass or Weston Pass fires, how likely do you think it is that the following would occur?

Responses to this question indicate that Chaffee County residents are aware of the potential for serious detrimental impacts to the community as a result of a large-scale wildfire. With the exception of “my property destroyed,” the overwhelming majority of responses selected “very likely” or “extremely likely” for all the outcomes listed. Residents who live in town were the most likely to select lower-level risk responses for the “my property destroyed” option.

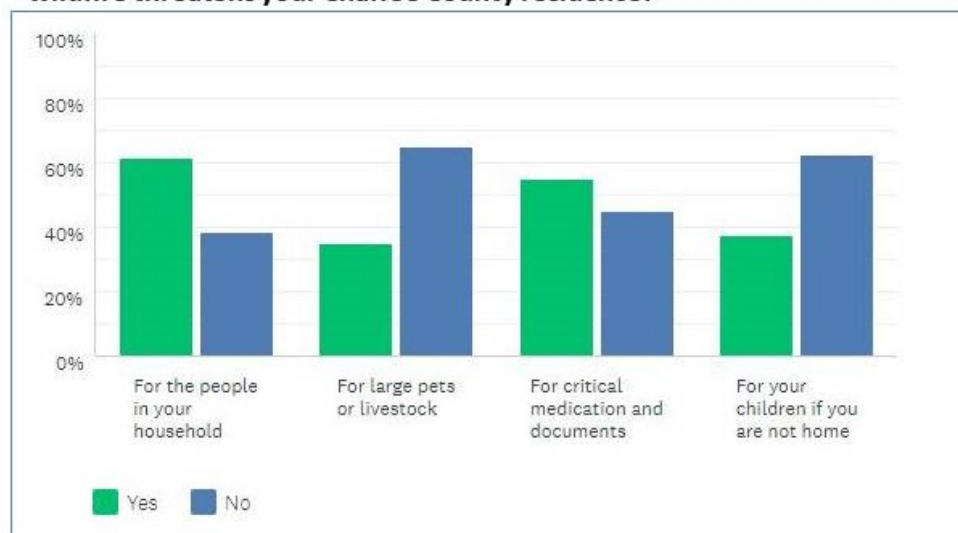


Question 6

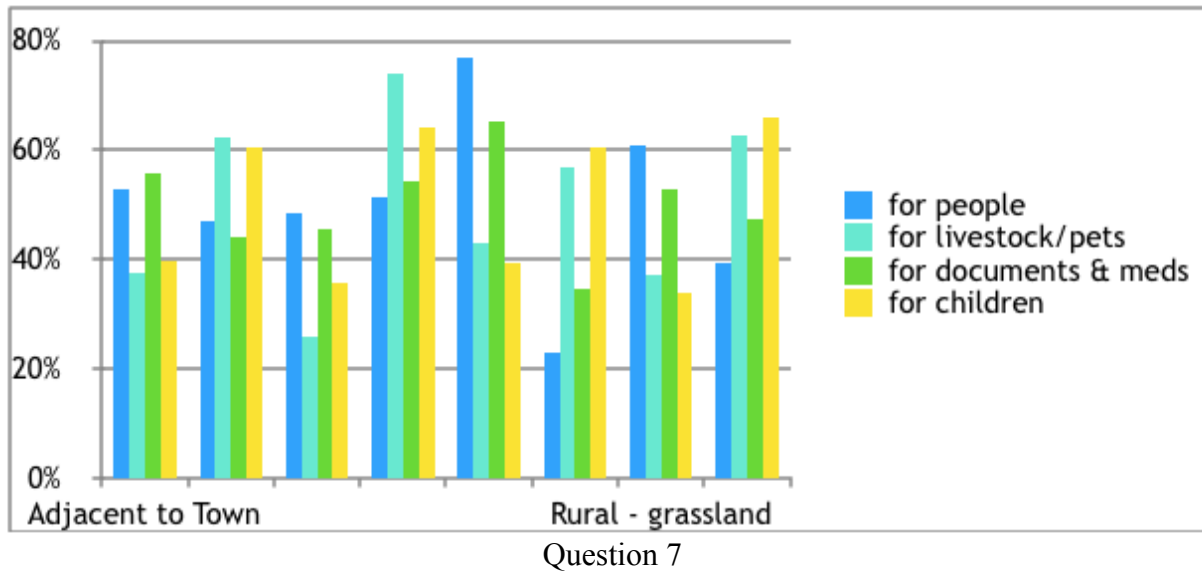
Question 7: Do you currently have an evacuation plan in the event a wildfire threatens your Chaffee County residence?

Results from Question 5 showed that about 80% of survey participants believe the chance of a major wildfire here in the next five years is very or extremely likely. And yet just 60% of respondents indicated they currently have an evacuation plan for people in their homes, and their important documents and medications. The results were worse for pets/livestock, and children at home alone.

Question 7: Do you currently have an evacuation plan in the event a wildfire threatens your Chaffee County residence?



A closer look at the response data based on residence or property location (Question 3) indicates that people who have their residence or property in rural areas (forested “WUI” or open grassland) show a higher level of evacuation preparedness (next page).



Question 8: Who would you contact to learn how to decrease wildfire risk to your home or property?

This was an open-ended question with a blank comments box and no pre-set answer suggestions. Data were sorted into categories. Responses are captured in the table below. It is apparent that citizens are not at all clear where to go to get information. The most common answer was some form of “I don’t know” (18%), from “??” to “I could google it” to 95 responses with 52 different answers. There is general awareness of fire departments (24%) and the USFS, CSFS or “Forest Service” (23%) as potential sources of information. Word cloud of Question 8 responses, where the size of the word indicates the frequency of response. “FD” represents fire departments in general and IDK indicates some form of “I don’t know” response.



Table summarizing Question 8 results. Who would you contact to decrease fire risk to your home?

Source	Number	Percent**
All "don't know"	193	18%
I Don't Know (IDK)	82	8%
Google it (also IDK)	16	1%
Other ideas with <5 responses (also IDK)*	95	9%
General Fire Dept	145	14%
CSFS	92	9%
Chaffee County Fire Dept	83	8%
USFS	83	8%
Forest Service or similar	64	6%
Insurance Company	23	2%
Neighbor/Friend	23	2%
County of Chaffee	20	2%
NA/Treatment Completed	17	2%
HOA	16	1%
BLM	15	1%
SPD	15	1%
BVFD	14	1%
Self/own knowledge	14	1%
CSU Extension Office	12	1%
Office of Emergency Mgt	10	1%
CPW	10	1%
Sherriff/Police	9	1%
Terra Firma	8	1%
Fire Camp	5	0%
Arborist	5	0%
* includes over 50 ideas such as: GARNA, AHRA, NRCS, Red Cross, State, USFWS, State, Town, City code enforcer, DFPC, GOVT, HRRMC, landscaper, some company etc.		Of 1,069 responses

Question 9: How confident are you that you can easily receive information in the event of a local wildfire?

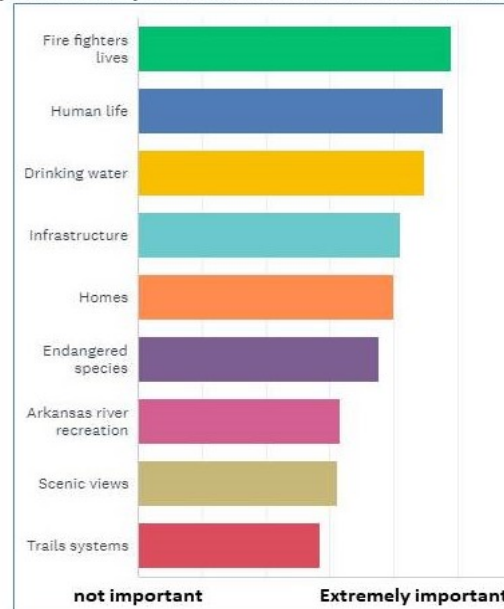
This question could be answered on a sliding scale from 0 to 100%. The average response was 66% confidence.

Question 10: Have you signed up for the Chaffee County EverBridge System that contacts you with a reverse 911 call in case of an emergency? 60% of respondents have signed up for “reverse 911” notification from the county, while 40% have not.

Question 11: How would you characterize the importance of protecting the following from the impacts of wildfire or post-wildfire flood events?

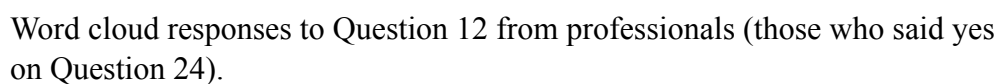
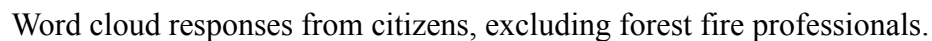
This question offered five response choices ranging from “not at all important,” to “extremely important.” For statistical purposes, the choices were given numerical values ranging from 1 to 5. The responses to this question indicate that all the listed choices are at least somewhat important for the community to protect in the event of wildfire and/or post fire flooding. Protecting human life (especially firefighters) ranked highest. Recreation assets ranked at the bottom of the list, but still averaged “3” or above which equates to “important.” About 10% of survey respondents indicated that scenic views and trail systems are “not at all important” to protect.

Question 11: Survey responses indicating relative degrees of importance for protection from wildfire and aftermath.



(continue to next page)

This was an open-format question with a comments box where respondents could type anything they wanted; there were no pre-set answer choices. In general, citizens see the forest health as “fair” while forest professionals tend to see it as “poor.”:

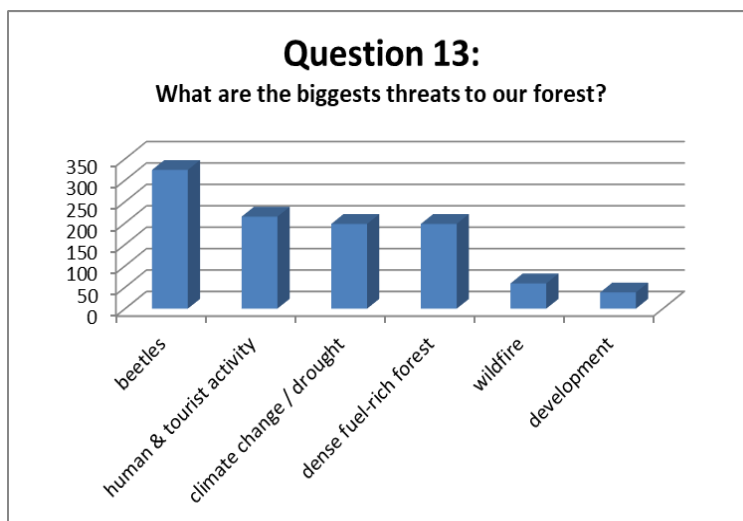


Question 13: What do you think is the greatest challenge to the health of Chaffee County forests?

This was also an open-format question with a comments box. Many respondents cited multiple threats. Although respondents were free to answer any way they saw fit, the vast majority of responses could be characterized into several common “bins” which allowed some basic analysis. Well over 1,000 individual responses were given, and the vast majority boiled down to one of the following:

Category	Number of responses
Beetle kill / insect infestation / disease:	324
Human activity overall	215
Human activity not specifically visitors/tourists:	165
Activities of visitors and tourists:	50
Dense forest with high fuel load, lack of thinning, etc:	198
Drought:	135
Climate change, unpredictable weather:	63
Natural wildfire (not campfire):	59
Development, sprawl:	38
Government policy, agency inaction, legal hurdles:	17

Further combining some of the similar and related categories yields the following chart:



Chaffee County residents and landowners are aware of the beetle epidemic that has resulted in significant areas of standing-dead trees, and that is reflected in the data. Some respondents who mentioned the beetles commented that the beetle kill in Chaffee County is better than other parts of the state. There is also strong awareness of high fuel loads, and the problems caused by

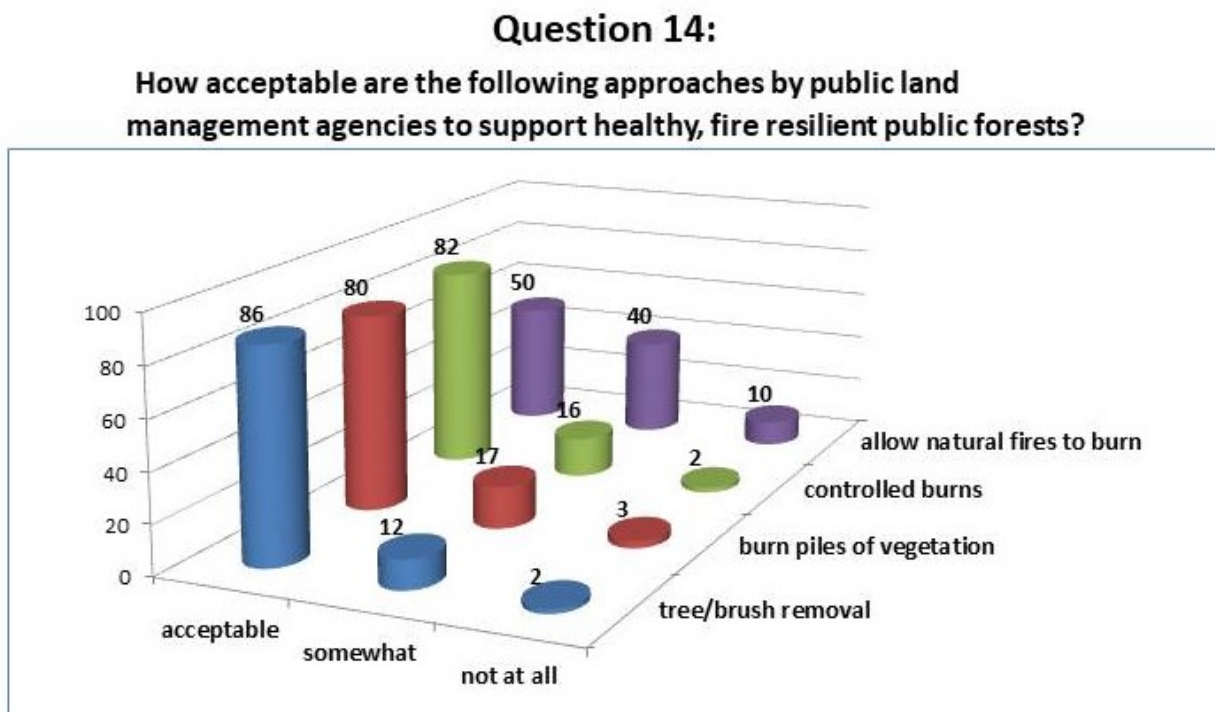
decades of aggressive fire management. **The survey results seem to indicate a relatively high degree of understanding of the issues, which would underpin support for management activities.** Only 59 responses (4% of total) specifically mentioned wildfire (other than man-made) as a big threat. It is possible that many respondents assumed that was obvious and, instead chose to mention the underlying *causes* of wildfire such as fuel loads, beetle kill, human carelessness, etc.

Another theme that stood out, especially in the written comments, **was a strong sense of animosity towards tourists and non-Chaffee County visitors.** Some of the language used was startlingly harsh. It may not represent a majority, but there is clearly an undercurrent of hostility towards our tourist visitors. Some examples of these comments are included in the table below for transparency.

Campers, hunters, forest users from out of the area who do not understand the extreme risk of fire on our public lands
visitors who do not know the safety rules. Unattended campfires and cigarettes, matches, etc...
Human encroachment and human carelessness
OHV's and general motorized misuse of public lands.
Careless human actions
Tourists / Tourism (many times)
Influx of more people
Human overuse and carelessness
Careless fire-makers
Recreational overuse and habitat disruption, watershed impact and pollution (from increased recreational usage and population/building boom).
Stupid people who don't/won't take care and use common sense.
recreation
Human destruction
Too many people
NONLOCALS
Disrespectful people
Motor bikes and others going off road.
Careless campers starting fires and leaving trash. Poachers.
Idiot, careless people (mostly tourists) that don't care cause they don't live here.
The public. Campfires, trash, overuse.
Ignorant humans
Visitors who don't understand wildfire dangers
Tourists leaving trash and not staying on trails.
Tourism, fires, drought
campers with campfires
The f'n idiots from Texas, Oklahoma, and Denver on 4-wheelers
Growth in outdoor recreation, especially campers on public lands and trail users (motorized even more than hikers)
impending suburban sprawl = environmental issues related to wildland urban interface growth
Public lack of understanding about campfires smoking etc. Overuse by ATVs and jeeps
Too many campers.
Public understanding and respect for the forests streams plants and animals. Over use/ abuse.
Some people want access and trails on every parcel of public land.
Improper use of public lands, i.e. squatters, illegal camping/dumping
People not doing their part to keep the areas as if no one has been there. Also 4 wheelers, most seem to have no respect!!
Careless/uneducated people doing stupid things in our forests.
Disrespectful recreational use
Campsites that were small see a wider impact as people stay longer periods of time. The site grows in circumference as the length increases. Campers act like it's their home and not like they are a guest of the forest like they should. Respect!
Tourists trashing it and lighting it on fire
The public living in the forests impacting the eco system and raising the risk of wild fire Also drought

Question 14: How acceptable to you are the following approaches by land management agencies to support healthy, fire-resilient forests?

This was a multiple-choice question designed to assess public support for four activities that land management agencies often employ as part of their fire prevention or fire resilience strategies. Respondents indicated their level of acceptability as either “not at all acceptable”, “somewhat acceptable”, or “acceptable.” The first three activities, which involve removing available fuels, all enjoy broad levels of acceptability according to the survey. The fourth choice, however, which is to allow natural fires on public lands to burn without firefighting activity, is much less acceptable. The following chart illustrates the results.



Question 15: Do you have concerns about land management agencies cutting and removing trees or brush on public lands?

This was a simple “Yes / No” format question, with a box where respondents could post comments if desired. In general, the survey results indicate a high level of public support for cutting and brush/tree removal activities on public lands, as shown here:

“Yes” - 16% “No” - 84%

The comments, however, help illuminate some concerns and fears that do exist. About 50 respondents wrote comments in addition to the yes/no response, and several themes to their concerns emerged:

- Some comments reinforced general support for doing this activity
- Many comments expressed skepticism that this could be done on a scale that would prove effective – in other words they don’t want money spent on something that doesn’t do any good.

- Many comments raised “trust issues” – lack of trust in the agencies’ ability to conduct the activity responsibly and cost-effectively, and transparently (with public input).
- A large number of comments expressed concerns about the activities’ detrimental impacts on the environment, impacts to wildlife, and general “unsightly” impacts of heavy equipment in the forest. Concerns about “collateral damage” such as unsightly clear-cuts, new roads, slash piles not removed, loss of habitat trees, etc., were very common.
- A few comments expressed the desire to let commercial enterprise do the work so as to provide jobs and revenues. Other comments expressed the opposite concern; that the cutting would be done according to revenue needs instead of to help forest health.
- Another theme of concern was resistance to the idea that “man knows best.” Some comments suggest that man’s attempt to control nature never end well or are, at best, ineffective.

Question 16: Do you have concerns about land management agencies conducting controlled burns?

This was also a simple “Yes / No” format question, with box where respondents could post comments if desired. In general, the survey results indicate a high level of public support for controlled burn activities on public lands, but less support compared to cutting/thinning as shown here.

“Yes” - 24%

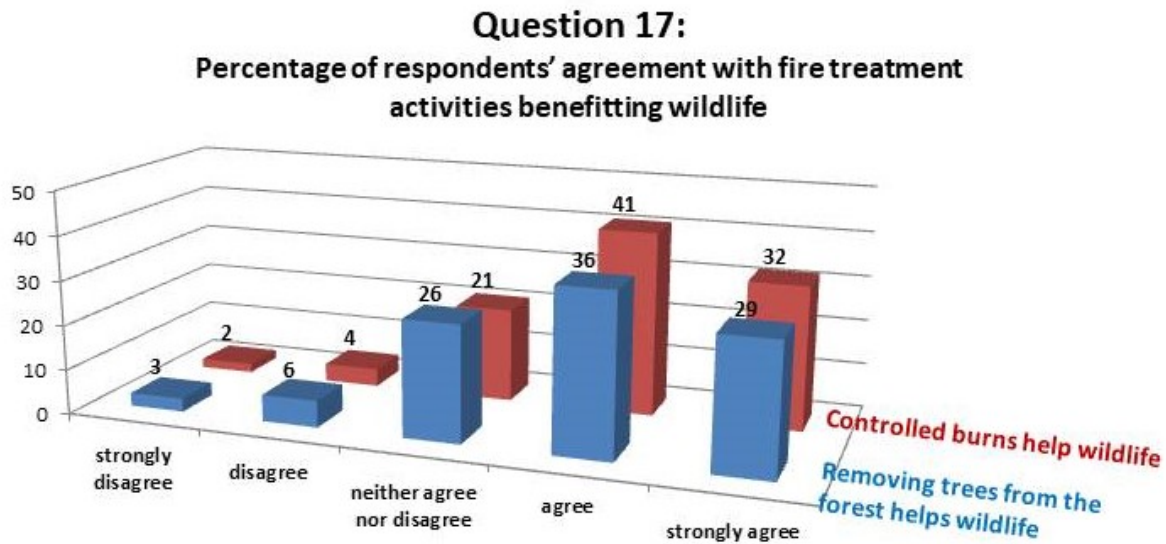
“No” - 76%

Like the previous question, 50 respondents wrote comments in addition to their yes/no answers. Concerns tended to fall into just three categories:

- Far and away the biggest concern cited was the danger of losing control of the burn, especially due to unpredictable winds. Several comments mentioned specific, well-publicized examples of highly destructive past wildfires that originated from controlled burns.
- Another comment theme concerned degraded air quality as a result of the burn.
- The third comment theme was about the need to better advance notice and publicity to the public.

Question 17: How much do you agree or disagree with the following statements about treatment activities?

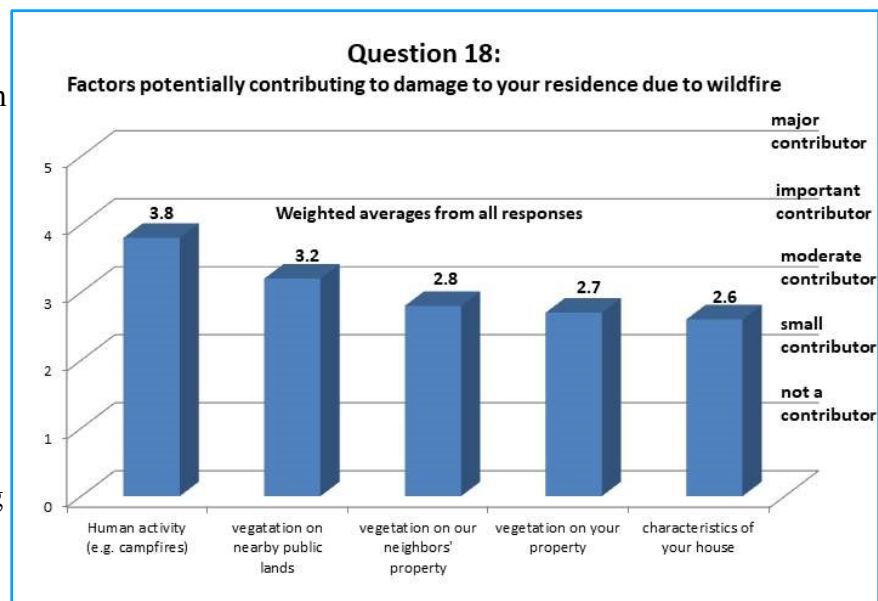
This question polled the publics’ opinion about wildfire treatment activities and wildlife. In general survey respondents seem to feel that forest treatment activities such as thinning and controlled burns are neutral-to-beneficial for wildlife as shown by the following chart (next page).



The next few questions were designed to assess public opinion about activities on private lands as related to wildfire risk.

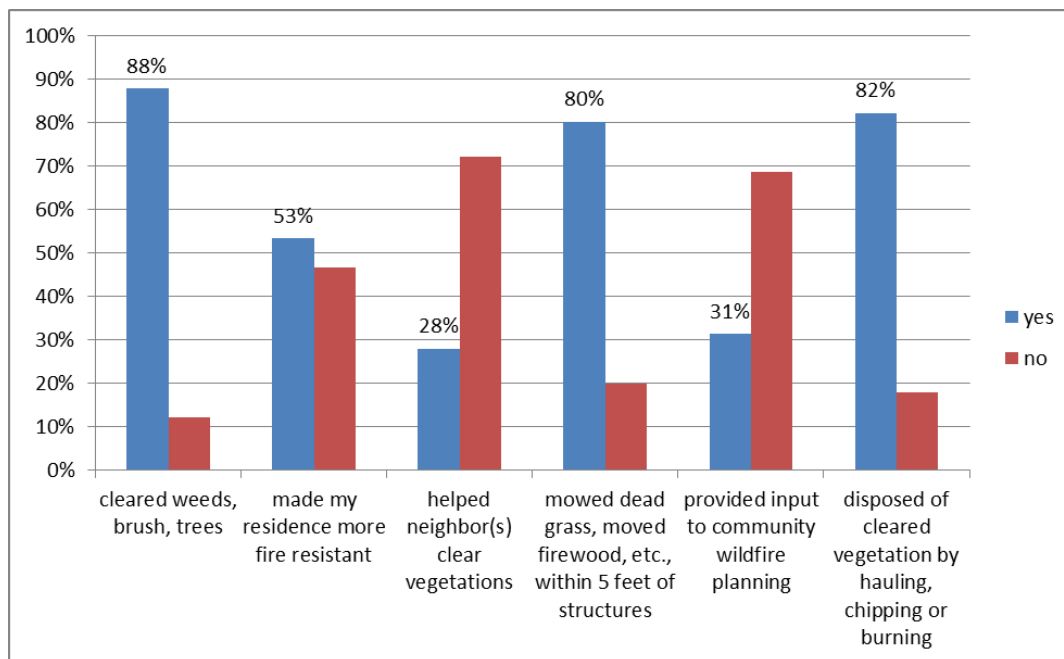
Question 18: In your opinion how much does each of the following factors contribute to the chance of a wildfire damaging your residence in the next 5 years?

Specifically concerning the risk of damage to residences as a result of wildfire, human activity emerged as the most concerning factor with an average of “important” contributor. Other choices concerning vegetation conditions all returned similar results (“moderate to important” contributor). Inherent characteristics of the residence such as roofing material, returned the lowest average, with a weight-averaged rating of “small to moderate” contributor. The following choices show the weighted average responses for the five potential contributing factors.



Question 19: Have you done any of the following to decrease wildfire risk on your primary Chaffee County residence?

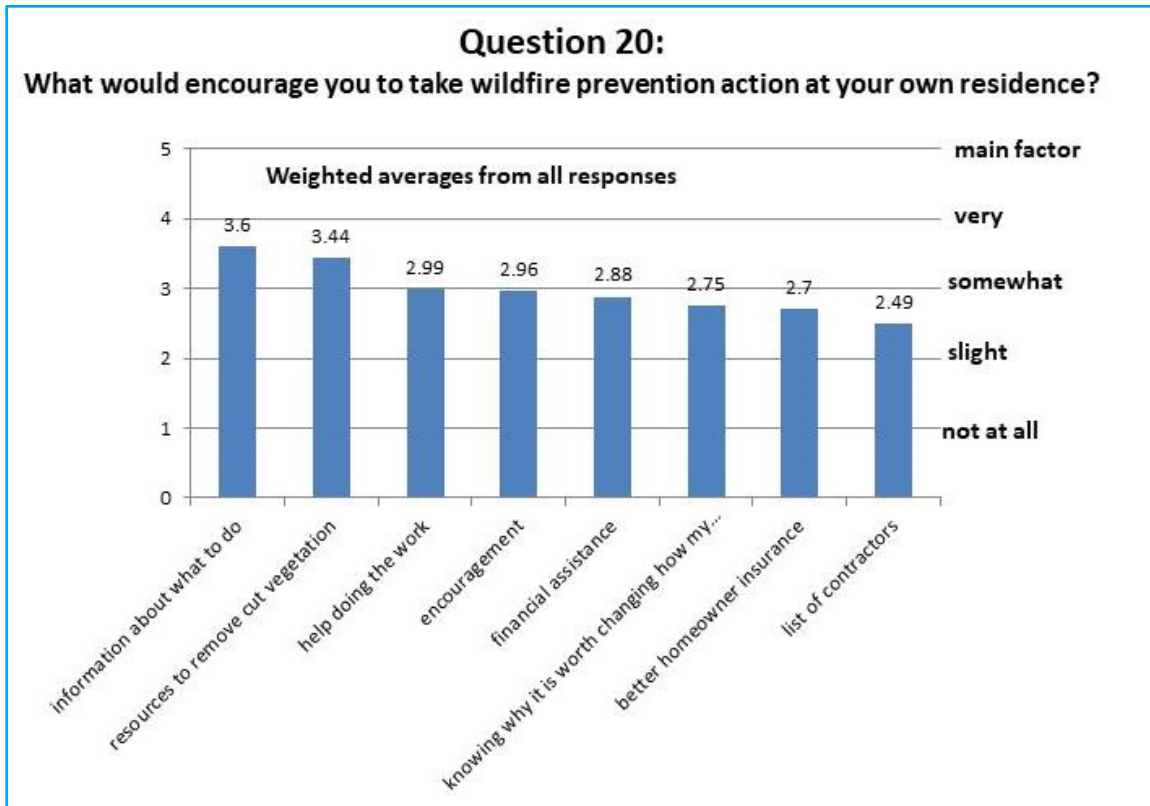
Around 15-20% of respondents selected “not applicable” to these questions asking what actions they had taken to reduce wildfire risk at their residence. Many of these were likely folks who live in the middle of town and don’t worry too much about wildfire affecting their residence, and/or people who own vacant land only with no structures. Filtering out the “not applicable” responses yields the following results:



People are actively trying to reduce the amount of fuel around their structures, as shown by the >80% “Yes” responses to those questions. Only slightly better than half of respondents have tried to make their residence itself more fire resistant, and a low number of people appear to have engaged in collaborative “community cooperative” efforts to reduce wildfire risk.

Question 20: How much would any of the following encourage you to take action to reduce wildfire risk on your residence?

For this question, respondents were given a list of possible “incentives” to performing work to reduce wildfire risk at their own residence. Response options ranged from “not at all” to “main factor.” Converting those response options to ranked numbers, and then calculating a weighted average response for potential “incentive” allowed the popularity of the incentives to be ranked as shown in the following chart. Information about what sort of work to do was the top-ranked response, and having a list of recommended contractors was the lowest-ranked. However, the survey data indicates that all of the potential incentives have merit.



Question 21: Please tell us about your experiences with your homeowners insurance for your Chaffee County residence. Has your insurance company ever:

Homeowner's insurance does not appear to have much, if any, linkage to wildfire risk in the county. Respondents noted very minimal negative (cancelled policies or higher premiums), or positive (providing information or offering better rates) wildfire risk impacts to their homeowner insurance policies.

Question 22: How strongly do you agree with the following statements regarding building codes?

"Building codes that require such things as fire-resistant roofs decrease community fire risk."

agree or strongly agree: 75%

disagree or strongly disagree: 8%

"I support building codes that encourage safe access for firefighters."

agree or strongly agree: 90%

disagree or strongly disagree: 3%

"I support additional building codes to make new developments more wildfire resistant."

agree or strongly agree: 81%

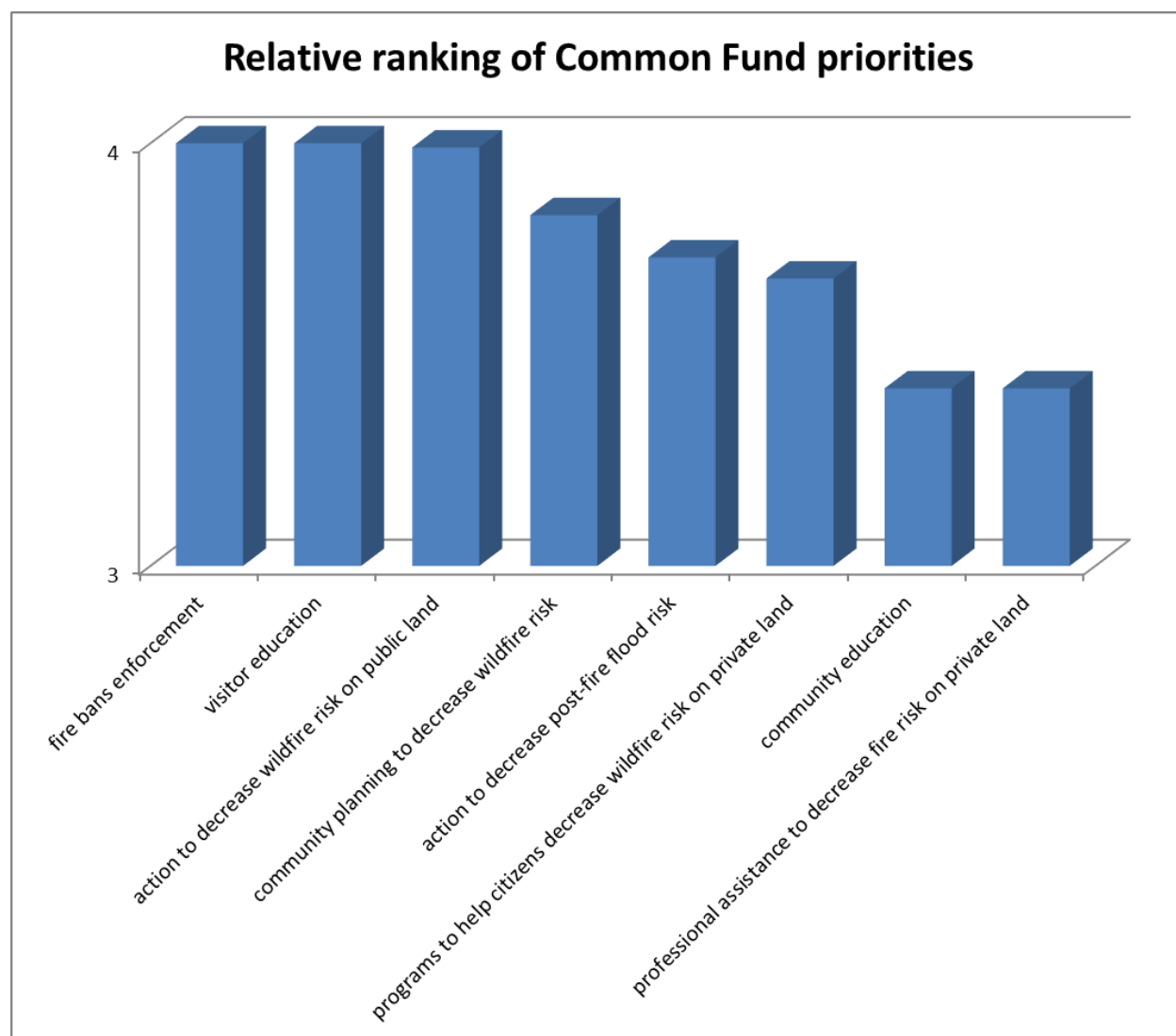
disagree or strongly disagree: 7%

These results indicate generally very strong support for making sure Chaffee County building codes are aligned with current best practices for wildfire resiliency.

Question 23: How important are the following potential uses of 1A tax funds to you?

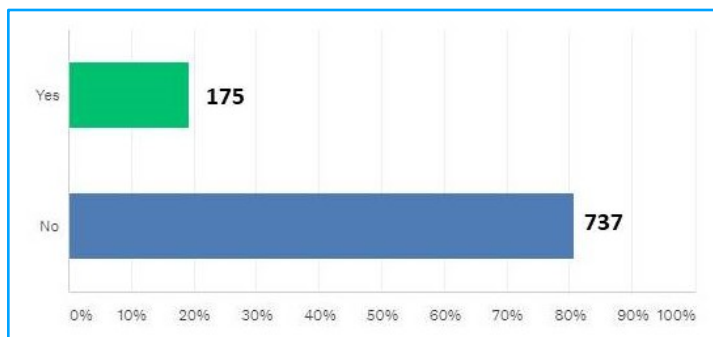
County ballot measure 1A, a sales tax passed in November 2018, provides funds to protect communities and water from severe wildfire and to enhance forest health and wildlife habitat. This question gathers information on how citizens prioritize the application of those funds. Participants were asked to rank the importance of a given list of potential priorities from “not important” to “extremely important”. These rankings were converted to a numerical scale, and a weighted averages of the responses were calculated. All eight of the surveyed allocation options rated between 3.5 and 4.5 which equates to “important” to “very important.” Relative rankings are shown in the graph below.

Consistent with community concerns about recreation use as a top threat to local forests, fire ban enforcement and education/enforcement of visitor behaviors ranked highest. This is followed by actions to decrease risks on public lands, with funding to take action on private lands generally ranked lower.



The final survey questions were designed to collect demographic data.

Question 24: Is your education or occupation related to forest health, wildlife health, emergency management, or fire management?



Some of the other questions in the survey were filtered by the two populations identified here; the forest health “professionals” and the general population.

Question 25: What is your household income?

< \$25,000	6%
\$25,000 – \$49,999	16%
\$50,000 - \$74,999	26%
\$75,000 or more	52%

Question 26: How old are you?

Under 18	<1%
18-35	9%
36-50	25%
51-65	32%
65 or over	34%

Question 27: What is your zip code?

81201 Salida and surrounding areas	39%
81211 Buena Vista and surrounding areas	43%
81227 Monarch	<1%
81228 Granite	<1%
81236 St Elmo, Nathrop	13%
81242 Poncha Springs	3%
Other	2%