

Woodmen Valley Fire Protection District

1150 W. Woodmen Road, Colorado Springs, CO 80919

719-522-9666

BOARD MEETING

Meeting Agenda

October 4, 2021

7:00 P.M

OFFICERS AND ADVISORS

- Kevin Bush, Chairman
- Steve Black, Vice Chairman (May 2020)
- Eric Barnes, Director and Treasurer (Next Election | May 2022)
- Doug May, Director and Business Affairs (May 2022)
- Justin Morrill, Director and Secretary (Next Election | May 2020)
- Barry Pleshek, Chief
- Lucinda Stancato, Fire Mitigation Officer
- Kevin Walker, District Manager

ORDER OF BUSINESS

- I. Opening Ceremony Time:
- II. Verification of Quorum:
- III. Minutes of Previous Board Meeting
- IV. Operations Reports
 1. *Treasurer's Report*
 - a. *Financials*
 - b. *Approve Expenditures*
 2. *Chief's Report*
 3. *Fire Mitigation / Medical Report*
- V. Old Business
 1. *Excluded Tax Properties – IN PROCESS*
 - a. *Colton Bluff Properties – Held public hearing 8/2*
 - b. *Dusty Hills Properties – Held public hearing 8/2*
 - c. *Remaining steps*
 2. *Neighborhood Address Signs – Eagle Scout Project – IN PROCESS*

3. *Website Management - NO PROGRESS*
 - a. *Problems with email blocking?*
 - b. *New Wordpress platform?*
 - c. *Train Justin as administrator*

4. *WSDM Interest in Purchasing Fire Station – ON HOLD FOR NOW*
 - a. *Interested Parties*
 - i. *Walker Special Districts*
 - ii. *Ron Madd (Maud)*
 - b. *Positives, negatives and issues*
 - i. *Returns asset to taxpayers in future refund*
 - ii. *Makes rebuilding WV Fire Dept nearly impossible*
 - iii. *WVFPD residents consider it responsible or irresponsible? Need to hold public forum, poll or ballot?*
 - iv. *Value of station if need to enter agreement with different agency (Manitou, Wescott, etc.)*
 - v. *Need to do open bid process?*
 - vi. *Can we sell in as-is condition and without rezoning?*
 - c. *Other uses for station (office lease, storage, etc.)*

5. *Furnace Replacement – IN PROCESS*
 - a. *Delayed due to questions about CO entering combustion chamber and air returns.*
 - b. *Affordable Plumbing declined to quote due to location in truck bay.*
 - c. *Sierra Mechanical got approval for sealed combustion unit – See revised quote.*

6. *Station Monitoring – NO PROGRESS*
 - a. *WiFi access via Nursing Center, Lucinda’s house, CenturyLink or cellular?*
 - b. *Simplisafe monitoring? Motion approving \$750 plus \$25 monthly at 6/7 Meeting*

7. *CSFD Use of Fire Station*
 - a. *Benefits*
 - i. *Strengthen relationship with CSFD*
 - ii. *Move wildland equipment closer to WVFPD*
 - b. *Issues*
 - i. *Limited liability for WVFPD*
 - ii. *WVFPD ability to terminate with notice*
 - iii. *Possible sale of building*
 - c. *SEE CONVERSATION WITH CHIEF DUBAY BELOW*

8. *El Paso County Wildfire/Egress recommendations for WVFPD*

9. _____
 - a. _____
 - b. _____

VI. *New Business*

1. *2021 Revised Budget Required?*
2. *2022 Proposed Budget Presentation*

3. 2021 WVFPD/CSFD Public Mitigation Meeting
 - a. Approve mailing
 - b. Agenda topics

4. City Proposing Higher Taxes for Mitigation
 - a. See attached article

5. City Evacuation Model Insufficient?
 - a. See attached articles

6. _____
 - a. _____
 - b. _____

7. _____
 - a. _____
 - b. _____

VII. Upcoming Deadlines

	<i>Deadline</i>	<i>Action</i>	<i>Government Office</i>
✓	Jan 1	Current Map of District Boundaries	Div of Local Govt, County Assessor 32-1-306
	???	WVFPD Holiday Dinner	
✓	Jan 15 DEADLINE	Send notice including the name of district, biz address, phone, contact and name of chair	DLG, County Commissioners, County Assessor, County Treasurer, C&R
✓	Jan 15 DEADLINE	Publish yearly Special District Transparency Disclosure Statement per Senate Bill 09-87; BOD Names, Date of next Election (May ??, 2020), Mill levy and total property tax revenues, Board meeting info; District Contact Info	County Clerk, Public Loc, Mailer (opt), SDA Website, Website 32-1-809
✓	Jan 30	Post Notice of Regular BOD Meetings -- KEVINW VERIFY CLERK	WVFPD Public Locations, Website County Clerk and Recorder 26-6-402(2)(c)
✓	Jan 31	Certified Copy of Adopted Budget and copies of Resolutions to Adopt, Set Levies & Appropriate Funds	Div of Local Govt 29-1-113(1)
✓	Feb 1	File notice with DLG of any intergovernmental contracts, nature of contract and expiration dates	Div of Local Govt. 29-1-205
N/A	Jan 16 – Feb 20	Publish call for BOD Director Nominations one time (<90 days >75 days before election)	Secretary, Public Posting, Newspapers and County C&R
N/A	Feb 26	Request extension for Mail Ballot Plan	SOS Election Rule 12.3.5
N/A	Feb 26	File mail ballot plan for May election by Feb 26 or Mar 5 if filed extension	SOS Election Rule 12.3.5
✓	Feb 28	El Paso County Special Districts Annual Report and Disclosure Form	El Paso County Board of Comm specialdistrictnotices@elpasoco.com El Paso County Assessor El Paso County Treasurer
N/A	Feb 28	Self-Nomination Forms Due	Secretary and Designated Election Official 32-1-804.3(3)
N/A	Mar 2	Write-In Candidate Affidavit of Intent Due (64 th day before)	Designated Election Official CRS 1-4-1101(1) (2)

N/A	Mar 3	Cancel Election if no more Candidates than open BOD positions. Resolution recognizing cancellation and declaring candidates elected by acclamation (63 th day before)	DEO, Public Posting Places, Newspapers, County C&R, SOS, and DLG. Notify Winners and provide certificates, CRS 1-5-208(1.5)
N/A	Mar 1	File information report on District's nonrated public securities as of 12/31	Department of Local Affairs
N/A	Mar 24	Order Registration Records	From County Assessor
N/A	Mar 24	See remaining election requirements	1-13.5-1104(1)
N/A	Mar 6	Certification of Ballot, Select County or Mail Ballot	County Clerk & Recorder
N/A	Mar 6	Send list of nominated candidates and self-nomination or write-in forms	County Clerk & Recorder Secretary of State
N/A	Mar 11	Mail ballot plan on file at the principal office of the special district.	
N/A	Mar 20	Mail absentee ballots to eligible electors who have applied for and are designated as a "covered voter".	1-13.5-168 1-8.3-103(1)(d) 1-8.3-110(1)
N/A	Mar 24	Order Registration Records	From County Assessor
N/A	Mar 24	See remaining election requirements	1-13.5-1104(1)
N/A	Mar 6	Certification of Ballot, Select County or Mail Ballot	County Clerk & Recorder
N/A	Mar 6	Send list of nominated candidates and self-nomination or write-in forms	County Clerk & Recorder Secretary of State
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N/A	Mar 20	Mail absentee ballots to eligible electors who have applied for and are designated as a "covered voter".	1-13.5-168 1-8.3-103(1)(d) 1-8.3-110(1)
N/A	Mar 21	Earliest day for election judge training	
N/A	Mar 26	Last day to order voter registration and property owners list (40 days early)	
✓	Mar 31	File Application for Audit Exemption if less than \$500k	State Auditor 29-1-604(3)
N/A	Apr 15	Publish Notice of Election at least 10 days before election.	Newspaper, Public Posting, C&R 1-5-205
N/A	Apr 20	Appointment of Election Judges	
N/A	May 1 – Same for Excluded Props?	File Court Order of Inclusion with CR for new property to be included in tax levy	39-1-110(1.5) / 32-1-105
N/A	May 5	Regular Election 1 st Tue after 1 st Mon in May	BOD directors and TABOR issues in even years only 32-1-103(17)(21), 32-1-805(2)
✓	May 15 - ERIC	WVFPD (Volunteer) Exempt Organization Filing	
	June 2	Certificate of Election Results	Div of Local Govt 1-11-103(3)
✓	June 7 (BOD Mtg)	Election of Board Officers	
	June 7 DEADLINE	Swear in Elected Directors (Send full BOD list and proof of bond too) – Must be AFTER election and no more than 30 days later.	Division of Local Govt, 4 th Judicial Court 32-1-901/902
N/A	June 22	Notify C&R in writing if intend to participate in November election	CRS 1-7-116(5)
N/A	June 30 (Rcvd Exemption)	Auditor to submit audit report	Board of Directors 29-1-606(1)
N/A	July 1 – Same for Excluded Props?	Deadline to file court order of inclusion with C&R to enable district to levy tax on newly included property	Clerk and Recorder
N/A	July 30 (Rcvd Exemption)	Audit Report (Must be submitted within 30 days after received from auditor)	State Auditor (if not filed, county treasurer will withhold tax revenue!) 29-1-606(3)
✓	Aug 5 (BOD Mtg)	Appoint Budget Officer to prepare final budget (before Oct 15, can be non-BOD)	29-1-104

???	Aug 25	Assessor preliminary total assessed valuation of all taxable property	Board of Directors 39-5-128
✓	Sep 19	Thunderbird Picnic	Buhler House?
!!!	Oct 7 (BOD Mtg)	First Pass Budget to Board – Oct Mtg	Board of Directors
!!!	Oct 15	Deadline for Budget Officer to present Proposed 2020 Budget	Board of Directors 29-1-105
!!!	Oct 15 – KEVIN.W	Publish “Notice of Budget”, Make budget available for inspection in public place, Set and Publish public hearing date and time	County Clerk, Public Loc, Newspaper 29-1-106, 29-1-106(3)(b)
!!!	Oct 25: TB, PC Nov 1: WV	CSFD Slash Program Start	Per Ashley email 1/8/21
N/A	Nov ??	Special Election may be held 1 st Tue of odd years and 1 st Mon of even years	32-1-103(21), 32-1-805(2)
!!!	Nov 16 – Jan 15	Publish yearly Special District Transparency Disclosure Statement per Senate Bill 09-87	County Clerk, Public Loc, Mailer (opt), SDA Website, Website 32-1-809
!!!	Nov 28 (3-Day)	Notice of Public Budget Hearing	County Clerk, Public Loc, Newspaper 29-1-108(1)
	Dec 7 (BOD Mtg)	2019 Amended Budget (if needed) Public Hearing 6:30P (before Dec 15)	Public
	Dec 7 (BOD Mtg)	2020 Proposed Budget Public Hearing 6:45P (before Dec 15)	Public
N/A	Dec 7 (BOD Mtg)	Acknowledge Election Results, Change Mill Levy if Applicable and Revise Tentative Budget	Div of Local Govt
	Dec 7 (BOD Mtg)	Certificate of Election Results	Division of Local Govt
	Dec 7 (BOD Mtg)	Certification of Mill Levy and Adoption of Budget (before Dec 15)	Board of County Commissioners 29-1-108(2); Division of Local Govt 32-5-128(1)
	Dec 7 (BOD Mtg)	Resolution Appropriating Sums of Money - Before (by Dec 31 – Lose 10% of funds if not completed by Dec 31!)	WVFPD Board 29-1-108(4)
	Dec 7 (BOD Mtg)	Appoint Chief	WVFPD Board
	Dec 7 (BOD Mtg)	Establish 2020 BOD Meeting Dates and Pass Resolution Designating Notice Posting Place and Regular Meeting Dates and Times	WVFPD Board Posting Places 26-6-402(2)(c)
	Dec 10	Receive Revised Assessment	From County Clerk 39-1-111
	Dec 30 ~12/10	Check to CSFD for IGA	CSFD

VIII. Confirm Next Meeting Date

- December 6, 2021 7:00PM (after Public Budget Hearing)

IX. Adjournment

CSFD USING WVFPD FIREHOUSE FOR TRUCK STORAGE

Mr. Bush:

Thank you very much for your follow-up. I hope this email finds you and yours healthy and well.

I appreciate the questions and you are right – they are absolutely valid concerns. Please feel free to reach out with any further questions as they arise. Here are the answers to the questions below

–

1. When I originally asked this question of our risk managers, they stated that we could store vehicles in the building as long as WVFPD maintained insurance on the building. I will reach out to my contact and verify that we can include in the amendment to the intergovernmental agreement (IGA) that the CSFD will be responsible for our own costs (unless there were some negligence) – but I'll sort that out. Obviously, we don't want to create a financial burden to the WVFPD.
2. The CSFD could remove the vehicles within 24 hours once you let us know. It would simply be a matter of sending personnel there to remove the vehicles.
3. We have discussed two different types of equipment. First, we discussed having the wildfire mitigation crew's dump truck and chipper stored at WVFPD. However, when we measured the size of the station we identified that the dump truck and chipper would not fit inside the station – even if they were put into two separate bays. Second, we discussed storing two "reserve" Type VI engines ("brush trucks") in your building. These brush trucks are a pick-up chassis with a 300 gallon tank and small pump and are fully equipped with wildfire suppression equipment. They would be moved to front-line service when one of the brush trucks in our stations was in need of repair and they would be used when we have a large incident and want to staff additional equipment. We anticipate that our personnel would access the vehicles at least once a week for preventative maintenance.
4. No, currently all of the CSFD's vehicles are stored in CSFD facilities.
5. Based on a review with the City Attorney's Office, we would need to write an amendment to the CSFD-WVFPD existing IGA that outlines the logistics of storing a CSFD vehicle in the WVFPD facility (for example, that we both agree to do so 😊), access to the building, insurance (see # 1. above), et cetera). I am happy to prepare a draft of the amendment if we choose to move forward with this opportunity.

I hope this helps. In the meantime, I will verify with our risk managers the answer to question 1. Please give me a shout with any additional questions/concerns.

Thank you and have a great day!

Respectfully,

Steve

Steven Dubay
Deputy Fire Chief

Mr. Bush:

Good day, Sir! I hope all is well.

In regards to question 1, outlined below in blue text is the information that I received back from the city's Risk Management team via our insurer yesterday evening (Monday, 8/9) –

For your Auto Physical Damage coverage, coverage will apply with a maximum limit of \$1M per vehicle and \$10M total incident. This will apply regardless if it is at one of your locations, on the road, or in an unnamed location (such is the case in this scenario). The exception to this are the two fire trucks with values over \$1M (values at \$1.24 & \$1.02M, respectively). For these vehicles, and new vehicles added with values over \$1M, they will be scheduled on the Property policy to provide coverage up to the reported values. We are currently working on getting the endorsements from the carriers reflecting this (no additional premium is due for these endorsements).

From a general Risk Management perspective, our recommendation would be to make sure that you never store more than \$10M in vehicles at one location, as that's our max limit. We would also agree with creating a MOU, or amendment to existing IGA, clarifying that damage caused by the building owner would fall under their policy (e.g. turning off the heat and pump freezes example). Would also recommend making sure the MOU clarifies that the 3rd party is not to utilize the vehicles for their own operations.

The two brush trucks in question (fully equipped) are worth about \$150,000 each so we would obviously be well below the \$1M per vehicle and \$10M at one location. Also, please note the second sentence of the second paragraph. We could not completely write out liability from WVFPD in an IGA or MOU if WVFPD were at fault.

I am comfortable with this information if you and the Board are as well. If this is of interest to you, I would be happy to begin writing an amendment to our existing IGA to reflect CSFD vehicle storage at the WVFPD station.

Thank you very much. Have a great day!

Respectfully,

Steve

Steven Dubay
Deputy Fire Chief

Colorado Springs wants \$20 million from taxpayers for fire mitigation

Colorado Springs voters will be asked at the Nov. 2 election to forfeit \$20 million in tax revenue collected in 2021 above limits imposed by the Taxpayer's Bill of Rights (TABOR) to create a fund for wildland fire mitigation.

Moreover, the measure will ask permission to keep that \$20 million every year without seeking voter permission because the measure includes language that would reset the city's TABOR cap to absorb the \$20 million permanently.

While some money might be spent in other parts of the city, the clear target is the the city's Westside that abuts national forest lands, where the Waldo Canyon fire started in June 2012 and days later swept into the city, destroying 347 homes and killing two people.

The amount collected above the TABOR cap is expected to be more than \$20 million, Mayor John Suthers said, but any excess over \$20 million will be refunded by the city via utility bills. He did not provide a figure.

Suthers wants to use the money to set up a wildland fire mitigation fund, from which the city would spend no more than 5 percent per year to clear out brush that would lessen the impact of a wildfire.

That's \$1 million a year — two to three times the amount the Colorado Springs Fire Department now spends on fire mitigation and prevention, Suthers and Colorado Springs Fire Chief Chief Randy Royal said.

"It occurred to myself and others in administration, given the economic prosperity of Colorado Springs right now, we had an opportunity to reach that result without imposing a further tax on citizens, and that was through retention of TABOR revenues in an amount that would create a permanent wildfire mitigation fund..." Suthers said.

He also said he expects the TABOR excess to top \$20 million, but added, "We don't know the extent to which it does and won't know until December after the election."

A city spokesperson later told the *Indy* the city could collect \$30 million more than is allowed by TABOR, only \$20 million of which would be retained under the ballot measure.

Suthers stressed that mitigation efforts are "broad" and include evacuation planning. The measure also calls for the mayor to appoint a citizen advisory committee to work with firefighters to determine expenditures year to year.

The \$20 million, Suthers said, would be bolstered by one-time grants the city will seek.

"We think it's a great opportunity for our community and the safety of our citizens," Royal said. "It's not a one-time deal. We mitigate a neighborhood and five years later, we're having to do it again."

Councilors cheered the measure, voting unanimously to refer it to the ballot.

"I think this is great," Council President Pro Tem Richard Skorman said, noting the money can be used in other parts of the city too.

However, it's the Westside that's been problematic, with the vast majority of the 35,000 homes located in the Wildland Urban Interface (WUI) lining the city's western flank.

While Skorman opposed the ballot language limiting spending to 5 percent, Suthers said he wants people to know it's a long term fund and won't be spent in a couple of years.

"If it [the fund] does get lower, it would be ripe for an infusion of funds from a TABOR retention, which suggests the city will continually ask to keep TABOR excess funds — requests voters have consistently approved in the past," Suthers said.

When asked by Councilor Nancy Henjum to react to citizen sentiment that westsiders should pay for the mitigation of their neighborhoods, not the whole city, Suthers said, "The reality is that while fire dangers may be greater in the WUI, the fact is they exist throughout the city. When you have grassland fires that can imperil neighborhoods. We have pockets of lots of trees in the city itself. Palmer Park, Corral Bluffs. This is not something that's limited to the Front Range, and I think we ought to tell all our citizens we'll be engaging in mitigating efforts throughout the city to protect life and property."

Royal added that wildfires affect lots of people who might work in the at-risk areas, and Suthers asserted that property values and insurance rates all over the city might be tied to wildland fire risk on the Westside.

Suthers also noted the fund could be spent on properties outside the city's boundaries if it would be beneficial to the city.

Skorman estimated the Waldo Canyon fire had a \$2 billion impact due to property losses, as well as hits to businesses and the tourism industry.

"We're all affected by fire," he said, noting that a big fire like the Waldo Canyon fire caused lots of citizens to seek medical treatment due to poor air quality.

Suthers also noted that post-fire flooding puts pressure on the city's stormwater system, another reason to minimize the impact of wildland fire.

The city also is asking voters in November to double the Trails, Open Space and Parks sales tax, while shifting the percentages allotted for each — notably reducing spending on open space.

Lastly, the city has referred a measure to the ballot to abolish a Special Improvement Maintenance District and replace it with a General Improvement District in the Briargate area, which will be voted on by about 11,000 affected residents.

The city will pay El Paso County about \$245,000 for election services.

Advocates unhappy with Colorado Springs' stance on evacuation modeling

Westside residents expected answers from a Colorado Springs City Council meeting Monday that would address their concerns about not knowing how long it could take to evacuate in a wildfire. Some residents left feeling the hard questions weren't posed.

Advocates for an evacuation analysis think the most important questions are simple: How long could it take to get out in a fire and how does the city plan for those times?

The city council didn't ask for answers to some of those key questions, said Bill Wysong, Mountain Shadows Community Association president. Residents are interested in those evacuation times because other communities have successfully modeled them and more people are moving into the westside, a trend that could make it harder to get out.

"They would not acknowledge evacuation clearance times, nor would they properly answer that building in the (wildland urban interface) is going to make some things more difficult," he said.

Mountain Shadows residents are specifically worried about 400 new proposed apartments on Garden of the Gods, a project set for its final rezoning vote Tuesday. But residents in the Broadmoor area and other neighborhoods are worried about the potential for a fire, particularly because 347 homes burned down during the Waldo Canyon fire.

Residents have asked emergency management officials to use free software specifically designed for modeling wildfire evacuations to estimate how long it could take to get out in a wildfire that has been successfully used elsewhere. Citizens have even started running the models themselves in lieu of the city's action.

Fire Chief Randy Royal told city council his staff had looked at the Fast Local Emergency Evacuation Times, or FLEET software, suggested by residents but doesn't plan to use it. Royal said computer modeling couldn't account for all the variables the city could see during a fire, such as wind. But he said he is confident in the city's existing plans.

"We do have a good history of being successful in our operations," he said.

The fire department plans to pursue a software called ZoneHaven, that it can use to manage a fire. The software could split the city into smaller evacuation zones to help residents get out in smaller groups and potentially avoid some congestion, and communicate evacuation orders through social media, said Fire Marshal Brett Lacey.

Residents interested in answers are not opposed to ZoneHaven, but it doesn't get to the heart of their concerns about long evacuation times, they said.

Resident John McLain used FLEET software with guidance from one of its developers and found that it could take about five hours and 20 minutes to evacuate Mountain Shadows, a time that could be unsafe if a fire is moving fast.

He would prefer the city use modeling ahead of time rather than rely on software to guide them in the moment.

"One is protective and one is reactive. ... One is chaos, one is organized," McLain said.

Resident Dana Duggan would also like to see the city plan ahead and determine how long it could take for residents to get out and potentially post the best exit routes for fleeing depending on the direction of the fire.

"There is just no excuse for not doing it," she said.

Lacey said the city staff had run a model with FLEET and found the software estimated it could take a little over five hours to evacuate Kissing Camels, a result he did not believe because the city evacuated the entire northwest side in a little under four hours.

He also noted that the exact time of evacuation doesn't matter so long as everyone gets out safely, he said. However residents have a responsibility to prepare to leave as soon as evacuation orders are called because of the fire risk.

"They should be concerned. They should be taking steps to protect themselves," he said.

Wildfire escape model in Colorado Springs denied by city staff

If another wildfire should spark in the western parts of Colorado Springs, some residents are asking how long it might take them to get out in an evacuation.

"We have built so deep into the (wildland urban interface) we have to ask: Have we made it inescapable?" said Walter Lawson, a Broadmoor area resident.

Residents are calling for a computer simulation of the city's evacuation plans similar to those done in other communities, in part, because the city may allow 400 new apartments along Garden of the Gods Road.

Residents are also generally concerned that more people have moved west of Interstate 25 since the Waldo Canyon fire in 2012 and that could make evacuation times longer.

During the Waldo Canyon fire some residents fleeing from Mountain Shadows and other neighborhoods feared the fire would kill them in their cars, as they have told City Council on several occasions during hearings over the Garden of the Gods apartments.

Colorado Springs City Council directed city staff in June to re-evaluate a traffic study and address safety concerns about evacuation raised by the neighbors. When asked how the staff planned to evaluate safety concerns as directed by council, the city staff told The Gazette it couldn't be done.

Council President Tom Strand said he has also heard from city staff that completing an evacuation model can't be done and he is planning to ask the city staff to explain their position publicly.

"I will request a work session to know exactly why it can't be done," he said.

Fire Marshal Brett Lacey said models cannot capture all of a fire's potential behavior because changes in wind, weather and other factors make them so unpredictable.

"In a wildfire it's so dynamic you can't do a reasonable model," he said.

A model could give residents a false sense of security, he said, adding that knowing the potential times of evacuation might not be particularly useful.

"There is good out of modeling and bad out of modeling. ... I feel like our plans are robust enough," he said, noting that while it was scary, everyone who evacuated during Waldo Canyon got out, even if they were stuck in traffic for hours.

Yet, evacuation models are used around the country. The simulations evaluate emergency evacuation plans before they become necessary and help identify problems with plans, said Mike Robinson, research associate professor at Old Dominion University.

"I am flabbergasted when they say they can't be done," said Robinson, a modeling expert.

Robinson consulted on wildfire evacuation studies for California communities with a private company and found many assumed their evacuation plans could work without modeling them in real life or using a computer simulation.

Some think a simulation is just an animation of what the simulator thinks will happen, he said. But, in fact, validated simulations use the same algorithms employed in transportation engineering. He said one city emergency manager discovered how badly his evacuation plan could fail using a simulation.

To be effective, evacuation simulations need to be run many times to account for as many variables as possible, such as roads becoming one-way only to get more people out and unexpected road closures.

Ideally, Colorado Springs could model how fires are likely to behave based on prevailing winds and the locations of fire fuels, such as heavily wooded areas, and then use that to model to inform and evaluate traffic evacuations, Robinson said.

"Believing that all will go well because plans can work is short-sighted. I don't know of any evacuations that go as planned. Vehicles break down, drivers don't show up, trees fall across the road, smoke drastically reduces visibility (and safe speeds)," he wrote in an email.

Robinson's work in California showed him that many small towns could not afford to do the evacuation simulations they needed, and so he started working with his team on modifying the existing free online software to make it easier for communities to model evacuations from flash floods and wildfire. The existing software calculates evacuation times that were within 15% of real world times, he said. It can also identify intersections that would experience delays

The updated free software, known as Fast Local Emergency Evacuation Times, or FLEET, is expected to be completed by spring, although it is already available for use. Robinson's office provides training via teleconference on the software as it is now, he said. No one profits from the software, which is paid for by the Department of Homeland Security, the U.S. Army Corps of Engineers and the Virginia Department of Emergency Management.

Other options for modeling evacuations exist and can provide more detail, although they require more training and can be expensive, he said.

Dana Duggan, a westside resident, said the city should want its evacuation traffic modeling to be updated using the most cutting edge tools.

"To me it's stunning that the last full scale traffic evacuation modeling simulation is 11 years old," she said.

The Pikes Peak Area Council of Governments completed the last traffic study that analyzed road capacity from different districts of the city, but did not report clearance evacuation times, which is the time it would take to get out of an area and the critical metric, she said.

Fire danger around Colorado Springs in 2021 higher than average year

In Colorado Springs, the fire danger in the summer of 2021 is higher than it would be in an average year even though the community is not currently in a drought, Fire Marshal Brett Lacey said.

The tall green grasses that flourished after a wet spring will likely pose a risk as they go dormant or die and dry out during the predicted hot and dry summer, he said.

When the grass catches fire they can produce flame lengths, up to triple the height of their own height, he said.

Above-average temperatures and scant rain could replicate conditions similar to those seen in 2012, when the **Waldo Canyon fire** burned more than 18,000 acres, 347 homes and killed two people in western Colorado Springs.

"The indications are still pretty strong that we will get there," Lacey said.

Statewide, three consecutive years largely without monsoons, record-low soil moistures in the fall and below average winter snowpack have set the stage for the giant smoke plumes rising over Colorado.

"It's sad, sad when anything burns," said Bob Nock, owner of Eagle River Anglers, who's been watching the Sylvan fire blaze through thousands of acres this week about 16 miles south of Eagle in thick partially beetle-killed forest.