

West Region Wildfire Council Meeting Minutes 2/11/16

	Attendee	Attendee	Affiliation
	Last Name	First Name	
1	Angell	Don	Montrose County
2	Barth	Chris	USFS
3	Beckhardt	Dave	Log Hill Fire
4	Bennett	John	Telluride Fire
5	Cinnamon	Sophia	WRWC
6	Falk	Lilia	WRWC
7	Gomez	Jamie	WRWC
8	Lange	Damon	CSFS
9	Odom	Luke	DFPC
10	Oxford	Ross	NPS
11	Pankratz	Sam	CSFS
12	Robinson	Corey	USFS
13	Samulski	Rebecca	Firewise of SW Colorado
14	Shaver	JT	CSFS
15	Shelby	Austin	CSFS
16	Stahle	Alan	Ouray Fire
17	Trimarco	Bill	Firewise of SW Colorado
18	Wilson	Pamela	Firewise of SW Colorado

Introductions

Lilia Falk facilitated the meeting/ webinar and initiated a round of introductions.

Feature Presentation

“A Case Study of a Community Affected by the Waldo Fire – Event Timeline and Defensive Actions”
A high level overview presentation by Alexander Maranghides.

Mr. Maranghides started the presentation by noting the key partners to this research project, including the National Institute of Standards and Technology (NIST), USDA Forest Service, the Joint Fire Science Program and the hundreds of first responders involved in the Waldo Canyon Fire.

Maranghides went on to note that this presentation is meant as a high level overview of, and not a substitute to, NIST Technical Note 1910, which can be viewed online by clicking on the following link:

<http://nvlpubs.nist.gov/nistpubs/TechnicalNotes/NIST.TN.1910.pdf>

Maranghides explained that Waldo Canyon is the 3rd WUI fire investigated by NIST. Overall, some of the high level summarized findings of the 216 page report include:

- (1) Wildfires in the WUI are substantially different than wildland fires and urban/structure fires.
- (2) First responders were highly effective

(3) Exposures (fire & embers) drive WUI dynamics

Maranghides went on to provide a general timeline of the wildfire event constructed based upon over 4,500 district fire observations and/or defensive actions. The communities of Cedar Heights had zero homes destroyed by the wildfire while the Mountain Shadows community had approximately over 340 homes ignited or destroyed by the fire. Of those homes, approximately 95% were affected within a 6 hour time window. During the initial time period, a smoke plume was observed at ground level and there was less than 3' of visibility. Large embers were observed. With over 450 home ignitions, there was on average, 1 home ignited per minute.

Maranghides explained that one critical finding is that there does not appear to be, currently, adequate pre-fire response planning specifically for the WUI. During urban fires, seconds count. During WUI fires, minutes count. During Wildland fires, hours count. Currently, there is significant planning resources that have been devoted to urban and wildland fires, but WUI fires have not been sufficiently planned. NIST is currently working to develop, at the national level, the technical infrastructure for WUI response guidelines.

Exposures are best understood at multiple scales, including around a community, within a community and at the parcel level.

Unlike any other natural disaster, Maranghides pointed out, first responders have the ability to alter the impact of the WUI event, through the course of defensive actions. Defensive actions led to 75% extinguished structures and 79% containment of ignited structures. Suppression activities in low exposure environments can significantly reduce structure loss. High density structures dominate unsuccessful containment.

After a wildfire, rapid WUI post-fire assessments are critical in the recording of all damages and identifying construction vulnerabilities. There are no miracle homes, explained Maranghides.

Maranghides went on to highlight the impact that defensive actions had on the outcome of this wildfire event. Suppression activities in low exposure environments can significantly reduce structure loss. However, when structures were exposed to ignition and were in a high home density location, containment was significantly challenged.

With regards to defensible space, the limitation of the current definition of defensible played a role. For example, current defensible space definitions do not take in to account the defensibility of structure to structure spread. In addition, dangerous topographic features impact the defensibility of a home.

In general, the presenter outline three main considerations for addressing the WUI problem: (1) Exposure Mitigation – harden the target; (2) Exposure mitigation – fuel treatments; (3) Improve WUI specific resources – tactics and SOP's.

Q&A Period

Q1: What happened with Cedar Heights community?

A1: A number of factors played in to the fact that zero homes ignited in Cedar Heights. Perhaps one of the biggest factors was a significant fuel treatment.

Q2: What occurred with regards to changes to wildfire codes after this fire?

A2: Maranghides was not specifically familiar with post fire code changes.

Q3: With regards to home density, how much does each home need?

A3: With regards to this study, it is possible to identify failures while very difficult to identify successes. The short answer is that, the more space, the better. In addition, one cannot discount the contribution of embers in

home ignition. Maranghides then went on to detail an example from NIST Technical Note 1600 regarding an experimental example of fire interaction between two facades located six feet apart.

Q4: What do we know about wind velocities in Mtn. Shadows during the event?

A4: There was no direct measurement of windspeed within Mt. Shadows during the event, but gusts of 45 mph were measured in nearby locations. Based on anecdote, downdrafting was severe (45-60 mph).

Q5: What are your thoughts on “Stay and Defend”?

A5: Maranghides explained the disconnect between homeowners perceptions of impending risk and timescale and actual wildfire realities. He went on to describe a story of a homeowner that was asked to evacuate and the interaction between the first responder and the homeowner just minutes before the wildfire ripped through the area. He then discussed a tragedy involving 200 people that died in Australia. Maranghides is highly cautious and skeptical of the “stay and defend” concept.

Q6: You mentioned embers the size of fists. This does not seem to be typical of forest wildfire produced embers? Is it possible these embers came from the combustion of homes?

A6: No, our research showed that the embers came from the vegetation component.

Q7: Do your finding invalidate the Uniform Building Code (UBC)?

A7: No, our findings do not “invalidate” the UBC. That said, the UBC does not apply to WUI fires. Building codes are all about context. The UBC simply is not applicable for the type of fire event that we saw with the Waldo Canyon Fire.

Q8: Do you believe your study reinforces the notion of Fire Adapted Communities?

A8: Yes. If you look back at the history of fires and buildings, after some of our countries most devastating fires, we collectively pulled together fire protection engineers and academics to work on the problem. Over a 30-40 year period, building fire death was dramatically reduced. There are now over 1000 interior building standards related to fire. There are currently less than one handful of exterior building standards. We need to collectively address the WUI problem in a similar way that we addressed the building fire problem.

Q9: As the fire front approached the Mtn. Shadows community, was their discussion or any action taken to burn out the vegetated hillslope leading in to the community?

A9: There was discussion, but no action on that discussion.

Round Robin

Lilia explained that the WRWC is currently working on a large number of things include changes to the 2016 cost share program and community chipping program, developing outreach and education plans and working on the Ouray wildfire code revision.

Luke explained that all of the AOP's are completed and awaiting final signatures. He described updates with regards to helicopter and crew resources as well as open positions.

Commissioner Tisdale explained that he is submitting an application to be nominated to the Emergency Fire Fund Commission and is currently seeking letters of support. He also explained the SBEADMR Final EIS has been issued and that we are currently in the public comment period.

Dave asked about whether we need to address the issue of natural gas pipelines in the WUI? As an answer, it was offered, that propane is typically a larger concern because natural gas lines are nearly always subsurface while propane is sometimes above ground.