

Just Leave the Line: An Editorial by Robert Mutch

On the Dude Fire in Arizona, 1990, 6 firefighters died in their fire shelters while trying to save homes.

On the Esperanza Fire in California, 2006, 5 Forest Service firefighters from Engine 57 died while trying to save the unoccupied Octagon House.

On the Yarnell Hill Fire in Arizona, 2013, 19 firefighters from the Granite Mountain Hotshots died in or near their fire shelters while trying to save homes.



I am still reeling from the most recent tragic calamity near Prescott, Arizona. It is hard to cope with the number 19—almost the entire Hotshot crew failed to go home from the fire! Someone associated with the Granite Mountain Hotshots said that when there is a fire Hotshots run to danger. A posting at the Wildfire Today website on July 5, 2013, said: "The fact is that firefighting is dangerous and deaths are unavoidable even if protocol is followed to the letter."

At the trial following the Esperanza Fire (as reported in John Maclean's book on the fire), a defense attorney asked a CalFire Battalion Chief if anyone should have been sent to a place like the Octagon House, which was marked by a red warning dot on a fire map, unoccupied, and was very difficult to defend?

"Yes," the Battalion Chief said. "Honestly, about every house out there could have been a red dot under those conditions. We still are going to send resources out to defend homes. There are a lot of homes we saved that day." (With hindsight one can ask, "but at what cost?")

These comments shed light on an unfortunate belief that is all too prevalent in some wildland firefighting circles. This longstanding belief equates wildland firefighting with war and acknowledges casualties and fatalities as inevitable. When people adopt this stance, their view that death is an inevitable outcome too often becomes a self-fulfilling prophecy. There is another and more reasonable option available for firefighters. Instead of running towards danger, it is okay to retreat from danger until conditions become more favorable for safe and successful fire suppression efforts. This scenario is predicated on the idea that everyone who goes to a fire deserves to go home after the fire, to go home to family and friends.

Firefighter safety really could be quite simple, if firefighters recognized conditions for very high to extreme fire behavior and "just left the line" until the situation moderated and it was safe to re-engage the fire. This approach presupposes that firefighters have all the indicators they need to signal the presence of unsafe situations. That should not be that hard to do with the Haines Index, Energy Release Component percentile levels, Red Flag Warnings, National Weather Service wind advisories, forecasted Santa Ana winds, thunderstorm cells in the vicinity, presence of raindrops as a precursor to a collapsing column, and 30-minute monitoring of wind, temperature, and relative humidity by crews on the line.

All levels of the organization should be monitoring these signals and make sure that everyone is on the same page--from top to bottom of the hierarchy. "Leaving the line" under conditions of very high to extreme fire behavior should be accepted at all levels as a viable strategy. A crew also should be willing to "just say no" to an ill-conceived assignment.

One can look at the forecast conditions for the Esperanza Fire that started at 0111 on October 26, 2006: steep slopes rising from 1100 feet to 4000 feet above the ignition point, preceding months of hot weather and drought, the world's most flammable vegetation, chaparral, along with Australia's eucalyptus, and a Santa Ana wind that arrived on schedule. Given those conditions, and considering fires like Cramer in Idaho and others, one needs to carefully assess a decision to insert firefighters above a fire spreading uphill towards them during severe fire behavior conditions.

I will not succumb to a tendency to say "Hell no, just don't go!" I will cite, instead, an experience from the Dude Fire Staff Ride (2002 Fire Management Today article titled "Why Don't We Just Leave the Fireline?"). I was scheduled to give the closing on the last morning of this Fire Behavior Conference, using 30-some slides to document various fire behavior issues. But the day before, at the last Staff Ride Stand, Dave LaTour presented a moving account about how it felt to be at the shelter deployment site while six people died around him. As he finished and I started down the trail, the first thought that crossed my mind is "why don't we just leave the line when conditions are aligned against us?" The next thought was "remove the slides before the next day's presentation." And the next morning I did something I had never done before or since: I told the audience that we had no time for any slides. We would not see a single slide because there were more important things to talk about.

We talked about leaving the fireline when the planets are aligned against us. And we thought about the six people who might still be with us, if we had placed more emphasis on human lives rather than on human homes. We mentioned that rain drops were felt by some on the fire just prior to the burnover, a precursor to a collapsing convection column and strong downdraft winds. Did anyone on the Yarnell Hill Fire experience those same telltale raindrops prior to the wind shift and high velocity winds? We must adopt the principles of a High Reliability Organization, always mindful of signals that might give everyone the opportunity to survive.

Do the math. Six firefighters plus 5 firefighters plus 19 firefighters equals 30 firefighters who did not return home from their fire assignments. In the journalism world #30 signifies end of message or end of story. How about putting an end to the practice of placing a higher priority on saving houses rather than on saving lives? Let's place the priority on safeguarding the sanctity of life as our modus operandi.

The Painted Rocks Fire District in the West Fork of the Bitterroot in Montana is having a resident and fire department potluck soon. A banner has been printed for the potluck heralding this message: PREPARE.....to Remember: Family and Firefighters. In other words, PREPARE your interface property so well that you provide both defensible space and survivable space for the welfare of family and firefighters.

At the 2005 Safety Summit in Missoula, Montana, the goal of Zero Defects was proposed—in other words, no injuries or fatalities during the conduct of our fire business. Such an undertaking leads us away from the un-mindful (mindless?) position that firefighting is dangerous, people will make mistakes, and bad things will sometimes happen. Under that premise we can simply say "I told you so!" when the bad event occurs. With a commitment to zero defects, when an injury or worse happens we are immediately placed on notice that an intolerable action has occurred that must be corrected. Or better yet we will become so much more mindful because we are anticipating the worst that we prevent the unwanted outcome from happening in the first place.

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Retired from a 38-year career in forest fire research and fire management with the U.S. Forest Service in 1994. Areas of special interest include forest fuel management, fire ecology, fire behavior prediction, wildland fire training, public and firefighter safety, wildland fire suppression, prescribed fire in wilderness management, fire safe strategies for the interface, and international assistance. Co-leader of a Forest Service pilot project in the 1970's that developed procedures and approval for allowing lightning fires to burn to sustain fire-adapted natural ecosystems in Wilderness. Since 1994 he has served as a fire management consultant with assignments in Brazil, Bulgaria, Ethiopia, India, Italy, and Mongolia for the United Nations and the World Bank, as well as domestic projects in the United States.

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