Arizona wildfire exposes authorities' lack of preparation

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4 July 2013

In the wake of the tragic deaths of 19 firefighters Sunday in Arizona, the wildfire, nicknamed Yarnell Hill, remains completely uncontrolled. As of Tuesday, it has continued to spread, burning nearly 8,400 acres. Arizona Governor Jan Brewer has placed the town of Yarnell in a state of emergency, evacuating it and a number of other neighboring communities. Nearly half of Yarnell's 500 residences have been incinerated.

The fire is believed to have been caused by a lightning storm last Friday, an occurrence which is attributed to the extremely hot and humid temperatures prevailing in the US southwest. On Sunday, several regions reported all-time high temperatures, with Death Valley in California reaching 129 degrees, a record in the United States. According to climate scientists, the decade spanning 2001-2010 possessed the hottest summer and spring seasons in Arizona ever recorded.

Similarly, many questions still remain as to why such highly-trained professionals as the Granite Mountain Hotshots could be caught off their guard by the wildfire, which they had been vigorously practiced in fighting. "Hotshot crews always assess the risks before going in…. [K]nowing Granite Mountain, they did that. They are as good a crew as is out there," said Dugger Hughes of the Southwest Coordination Center, which manages firefighting resources in the region. "They knew what they were getting into. It had to be pretty dramatic," he added.

The state of Arizona is mounting a ten-man investigation into the occurrence in an effort explain the background of the calamity, the single greatest tragedy involving fire responders in over 80 years.

Few officials on the ground or elsewhere have sought to connect the flames' spread to the lack of preparation for such happenings occurring. The town of Yarnell, which along with nearby Peeples Valley, has been evacuated and practically abandoned by authorities, has not had a "controlled burn," a precaution which reduces foliage in and around hazardous regions in over 45 years. As a consequence, it was recorded that the level of dried grass and chaparral scrub around the town had registered in the 97th percentile, meaning that the energy released by such dead fuels, should they become ignited, had been higher than any other time before.

"That reading should make the hairs on the back of any good fire manager's neck stand up," stated Rocky Barker, a western fire historian to the *ArizonaCentral.com* website.

Furthermore, the buildup of hazardous waste material is a product of budget cuts to fire prevention agencies tasked to combat and prevent such outbreaks. Fire prevention plans have gone over to sheer extinguishing in the past decades, as authorities lack the resources needed for preventive measures.

The National Interagency Fire Center, centered in Idaho, has received a nearly 5 percent cut to its firefighting staff as a result of last March's federal "sequester," agreed to by the Democratic administration of President Barack Obama in league with congressional Republicans. Similarly, the removal of hazardous materials which cause infernos in the hot months has been stripped down, with the National Forest Service (NFS) receiving less than $420 million in funding this year, down from over $500 million in 2012. In the coming few months President Obama plans on further cutting funds to the program, placing it at levels not seen since nearly a decade ago.

"The Forest Service is being treated as a firefighter of last resort," said David Pyne of the University of Arizona to the *New York Times*, this, he added "is not what the agency was set up for, and it's not financed

for it.”

Safety is increasingly jeopardized by populations living in close contact to such hazardous conditions, called the “wildland-urban interface.” In Colorado, one in four individuals live inside of a “red zone,” placing them in harm’s way for the outbreak of a wildfire. That state most recently experienced the most destructive fire in its history, burning nearly 500 homes and killing two. Since the 1990s, over two million homes have been built in such zones, and that number expected to rise in the coming years. (See “Worst wildfire in Colorado history destroys hundreds of homes, kills two”.)

The monsoon winds which worked to spread the Arizona fire were similarly an event induced by the record levels of heat. According to CLIMAS, the Climate Assessment Center, since 2001 lightning has been a factor in over 2,000 fires, burning nearly 277,000 acres.

The occurrence of such humid and hot temperatures serves to create low-pressure zones which act like conductors for thunderstorms. At times such instances can serve to help firefighters by dousing wildfires with precipitation; however, they also bring increased chances for lightning strikes and winds which serve to spread them. On Sunday, in the course of just an hour, winds had increased in the Yarnell area from 15-25 mph to over 30-47 mph, in addition to creating thermal gusts about 22,000 feet high, serving to spread burning embers across the region.

Similarly, wildfire seasons have lengthened by nearly two months in the past several decades, with flames burning nearly double the amount of acreage as in 1970.