

Causal and Contributing Factors

The human elements are critical factors in the evaluation of this investigation. A risky decision or a series of risky decisions appear to have contributed to this dangerous situation from which there was no room for error.

Causal Factors are any behavior, omission, or deficiency that if corrected, eliminated, or avoided probably would have prevented the fatality.

Causal Factor 1.

There was a loss of situational awareness concerning the dangers associated with potential fire behavior and fire environment while in a complex wildland urban interface situation.

(Findings #12, #16, #18, #19,#20, #21,#22,#23, #25, #26, #32, and #33)

Causal Factor 2.

The decision by command officers and engine supervisors to attempt structure protection at the head of a rapidly developing fire either underestimated, accepted, and/or misjudged the risk to firefighter safety.

(Findings #9, #10,#11, # 16, #17, #18, #19, #20, #22, #24, and #26)

Contributing Factors are any behavior, omission, or deficiency that sets the stage for an accident, or increases the severity of injuries.

Contributing Factor 1.

Organizational culture - The public (social and political) and firefighting communities expect and tolerate firefighters accepting a notably higher risk for structure protection on wildland fires, than when other resources/values are threatened by wildfire.

(Findings #8 and #9)

Contributing Factor 2.

Fire environment - Santa Ana winds came into alignment with the “unnamed creek drainage” and the inversion was penetrated by the thermal uplifting from a fire run which contributed to extreme fire behavior and area ignition.

(Findings #15, #19, #20, and #21)

Contributing Factor 3.

Fire environment - The fire burned in rugged terrain and the burnover occurred in the upper end of a steep drainage with fuel loads at seasonal low fuel moisture levels.

(Findings #18, #22, and #23)

Contributing Factor 4.

Fire environment – The terrain and road system limited access to Type III or smaller fire engines.

(Findings #14 and #24)

Contributing Factor 5.

Span of control – The five Forest Service fire engines and March Air Force Base 10 fire engine were not supervised by a strike team/task force leader. This contributed to increased complexity and span of control.

(Findings #8, and #12)

Contributing Factor 6.

Communications – The five Forest Service engines used a Forest Service tactical radio frequency not assigned to the fire for tactical discussions. Effective communication controls were not in effect prior to the incident.

(Findings #32, #33, and #34)

Contributing Factor 7.

Leader’s intent – Communications between Branch II and Engine 57 Captain at the Octagon House were not clear or understood.

(Finding #15)

Contributing Factor 8.

A contingency map developed in 2002 for the area that identified structure location/defensibility and Mountain Area Safety Taskforce Interface Protection Plan information was not used for strategic or tactical risk assessments or plans.

(Finding #10)