



Memorandum No. 15-005

Date: 18 May 2015

TO: NWCG Executive Board Members

FROM: Dan Smith, Chair, NWCG Executive Board *Dan Smith*

SUBJECT: NWCG Safety Zone Standards and Associated Research

Please share and discuss the following with Agency Administrators, firefighters, fire managers in your agency, and Incident Management Teams within your Geographic Area. This memorandum supersedes NWCG Memo No. 15-004.

Research related to establishing a more accurate safety zone<sup>1</sup> size calculation methodology is underway at the Missoula Fire Sciences Laboratory. Preliminary results have been shared in various venues in an effort to stimulate thought and generate input. The current calculation method outlined in the Incident Response Pocket Guide (IRPG) is effective for fires on flat ground with no wind. At this time, the critical piece of information indicated by this research is that slope, wind, and heavy fuels dictate separation greater than four times the maximum continuous flame height. When research results are finalized, NWCG guidance on safety zone size will be updated as necessary. Until then, existing guidance remains valid with adjustments for the effect of slope, wind, and heavy fuels.

Most critically, we cannot overemphasize the importance of good judgment in the application of any guidance, including that of effective escape routes and safety zone size determination. As stated on pages 7 and 8 of the 2014 IRPG, "Separation distance between the firefighter and the flames should be at least four times the maximum continuous flame height. . . Safety zones downwind or upslope from the fire may require larger separation distances." When applying guidance such as this, we cannot go wrong by calculating conservatively and, when in doubt, erring on the side of caution.

The application of current or future guidance on safety zones doesn't solely lie with our firefighters. Agency Administrators, Fire Managers and IMTs need to be involved in strategic discussions in regards to safety zones, escape routes, values at risk, etc. prior to inserting firefighters on any portion of a fire.

Information regarding the ongoing research on safety zones can be found at <http://www.firelab.org/project/firefighter-safety-zones>. Questions or input regarding the research should be directed to Dr. Bret Butler, [bwbutler@fs.fed.us](mailto:bwbutler@fs.fed.us). Questions about safety zone training or guidance should be directed to NWCG Operations Branch Coordinator, Tim Blake at [tim\\_blake@blm.gov](mailto:tim_blake@blm.gov).

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<sup>1</sup> The National Wildfire Coordinating Group (NWCG) defines a safety zone as an area cleared of flammable materials used for escape in the event the line is outflanked or in case a spot fire causes fuels outside the control line to render the line unsafe.

cc: NWCG Staff; Ted Mason, Chair, Risk Management Committee