

Survival zones for wildland firefighters

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ISSUE

When avoidance tactics have failed and firefighters are unable to make it to their safety zones, what is the minimum area in which a firefighter survive when entrapped by a wildfire?

Survival zones are openings where a firefighter would take refuge as a last resort. It will certainly be uncomfortable—a firefighter will feel the heat and have difficulty breathing—but it will potentially be survivable. A safety zone, in contrast, is an area where people and equipment take refuge knowing they are safe from fire and radiation. A survival zone is smaller than a safety zone.

OBJECTIVES

Determine the approximate size of a survival zone based on the height of the surrounding fuel type and the slope.

Methods

1. Create openings and record opening size, surrounding fuels, and slope.
2. Create an experimental fire and let it run over the openings.
3. Collect radiation data from predetermined locations within the opening.
4. Model survival zones using known physical relationships for forest fuels.

Participating Members and Collaborators

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