Workshop identifies research priorities to mitigate fires in the wildland-urban interface

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The Witch fire, the largest of the fires that occurred during the 2007 California firestorm, burned 80,124 hectares and destroyed 1125 residential structures. Credit: NIST

Over 46 million residential structures in the United States are in areas at risk of wildfires. A new publication from the National Institute of Standards and Technology (NIST) identifies a set of research needs aimed at preventing or managing this growing threat to about 70,000 communities located in the so-called wildland-urban interface (WUI).

Identified by experts at a 2012 workshop organized by NIST, the top

three recommended topics warranting sustained research efforts focus on:

- "hardening" buildings, so that they resist ignition—by flames, embers and heat;
- developing standards and tests of building performance that improve the "survivability" of structures exposed to WUI fires; and
- improving the understanding of "how vegetation, topography, climate and construction cause structure ignition and spread of fires."

On average, WUI fires destroy 3,000 buildings annually. They accounted for six of the 10 most costly fires in the United States over the last 100 years. Five of these fires occurred in California, where the incidence of wildfires currently is up 47 percent this year over last.

The workshop provided a forum for wildland-urban interface fire experts to discuss challenges, identify research needs, and establish research priorities to improve the fire resistance of WUI communities. NIST will incorporate the identified research needs into its WUI-related efforts, which concentrate on developing measurement-related knowledge and tools that underpin actions to make communities more resistant to WUI fires.

In addition to distilling research priorities, the new report, *Wildland-Urban Interface Fire Research Needs*, contains eight overview presentations on the WUI fire problem by stakeholders from industry, research and standards organizations, the fire service and state government. To download the 117-page report, go to: www.nist.gov/manuscript-public … ch.cfm?pub_id=913016.

More information: Pellegrino, J., Bryner, N. and Johnsson, E.

Wildland-Urban Interface Fire Research Needs—Workshop Summary Report (NIST Special Publication 1150). May 2013.

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