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The InfoGram

Volume 14 – Issue 8

February 20, 2014

Identifying Building Exposure Risk in Wildfires

The National Institute of Standards and Technology (NIST) and the U.S. Forest Service (USFS) jointly published a study based on the 2007 Witch Fire in California, which destroyed over 1,600 structures, burned 200,000 acres, and cost nearly \$2 billion in property damage. The study [looks at the effectiveness of defensive actions taken by homeowners and first responders based on the WUI Hazard Scale](#).

They found that within the housing development studied:

- The majority of defensive strategies were effective;
- The effectiveness correlated to the fire and ember exposure;
- Damage to structures with high WUI Hazard Scale risk was more prevalent;
- Ultimately, defensive measures were more than twice as effective in saving low-exposure areas as opposed to high-risk areas.

The lead author states "data show that it's probably best to fight fires in low-exposure areas because there's a greater chance that they can be suppressed and with less danger to the crews...it may be better to sacrifice structures in high-exposure areas than risk the loss of firefighter lives in unwinnable situations."

The study also discusses how building practices and building codes and standards can be improved through use of the [WUI Hazard Scale](#).

(Source: [NIST](#))

9-1-1 Outages Cause for Alarm, Better Planning

According to survey results recently released in Urgent Communications, [70 percent of PSAPs in the United States reported outages in 2013](#), a small increase from 2012 numbers. Outages were longer than an hour in 28 percent of the cases, indicating a significant number of calls dropped or never received.

The survey also showed 1 in 5 PSAPs don't have a backup location for their facility in the event something like a natural disaster makes the primary site unusable. This is especially concerning, as it shows a lack of progress despite the [push for backup plans and process](#) after 9-1-1 outages during the 2012 derecho.

The Federal Communications Commission (FCC) made several recommendations in the [2013 report regarding the derecho's destruction](#), including having reliable

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backup power, 9-1-1 circuit auditing, and monitor/control link diversity. The FCC believes these upgrades will limit future outages.

It is also important to focus on physical emergency management, business continuity, and disaster planning for the facility. This should include evacuation or shelter-in-place planning and drills, data backup, and identification of a secondary location the PSAP can operate out of in the event it becomes necessary.

(Source: [Urgent Communications](#))

Test Results on Bio Decontamination Methods

After the anthrax attacks in 2001, the Environmental Protection Agency (EPA) was given the task of [developing the standards, protocols, and capabilities to respond to a biological attack](#). In coordination with other agencies, the EPA recently released a comprehensive study of decontamination practices for buildings and residences.

[Testing until now was lab-based](#) and done on a much smaller scale. This is the first large-scale room and building testing to determine best practices when dealing with decontamination. A 2-floor mockup of office and living spaces acted as the lab, with normal furnishings one would find in such spaces. They tested a variety of techniques and products to find what worked best and under which conditions.

The testing exercises also gave agencies the opportunity to train hundreds of people on sample collection techniques. This gave the agencies experience in quickly and effectively training people to respond to a potential large event.

The first phase of this research was conducted to test and assess public health and law enforcement response to release of *Bacillus anthracis* (“anthrax”) in modern buildings. Results are detailed in the [Bio-response Operational Testing and Evaluation \(BOTE\) Project report](#). The report is large and extensive and contains all the test data, sampling methods, analysis methods, and a cost analysis of the tests.

(Source: [EPA](#))

Training for Rare Events: Snow in the South

Winter storms rolling through the south in the past month serve as a good reminder that we must still [prepare our communities for disasters that are uncommon](#) to our regions. Atlanta [fared better during their second winter storm](#), learning lessons from the first storm in January; however, some neighboring states did not.

Unfortunately, when faced with the problem of training or preparing for uncommon events, it is difficult to gain experience without the event actually taking place. One good example is safe driving in the snow, as shown by the numerous photos of major roads turned into parking lots and [masses of people abandoning their cars](#).

Even more dangerous is [driving fire and rescue apparatus in the snow and ice](#). Training officers in the south may need to get creative to ensure fire personnel get the necessary skill. Find a large paved area like an airport or parking lot and send personnel to practice there while the snow is still lying. Another option is to find a fire department in the north and try to arrange a training swap.

(Source: [Fire Engineering](#))

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