



WILDLAND FIRE TREND ANALYSIS: WILDLAND URBAN INTERFACE

The Lessons Learned Information Sharing (LLIS) program team conducted a trend analysis of 28 wildland fire after-action reports (AARs) published between 2008-2013. The goal of the analysis was to identify core capability gaps and trends among operational and community-oriented AARs so emergency managers can plan, train, and exercise against identified areas for improvement. The top three areas cited for improvement were Operational Communications, Public Information and Warning, and Evacuation (see Figure 1).

Wildland Urban Interface

The Wildland Urban Interface (WUI) is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Approximately 70,000 communities in the WUI are at risk from wildfire in the United States. Fires in the WUI are especially a concern in the western United States where drought and increased development in and around forests have amplified the hazard. WUI fires can quickly grow in both size and complexity, impacting multiple jurisdictions. Emergency managers can help mitigate the threat of WUI fires through whole community planning and involvement, utilizing interagency coordination, table top exercises, and community awareness campaigns prior to WUI fires.



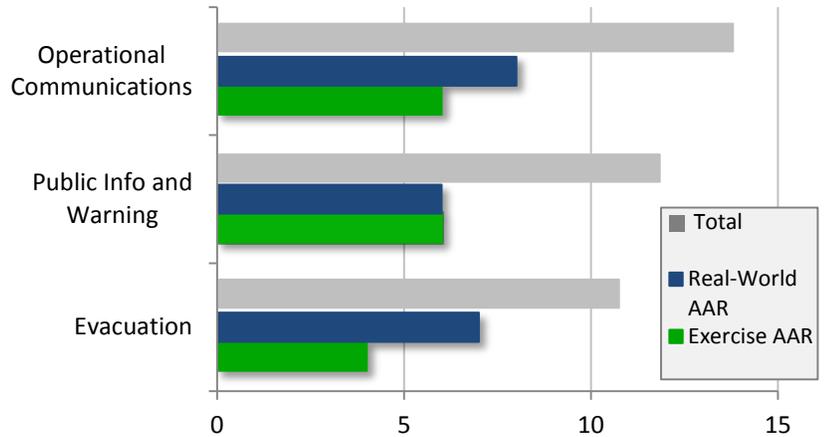
Concept from the USDA Wildlands, Wildfire, and People Report, January 2013

Wildland Urban Interface Mitigation and Preparation Efforts

Ignition Resistant Building Awareness Campaign	Builds awareness of structure fires in the WUI that occur due to windblown embers or firebrands that penetrate homes and/or ignite fuel on or around buildings.
Fuel Management Partnerships with Stakeholders	Educates citizens by leveraging existing social capital to create awareness about defensible space, firewise landscaping, and how to dispose of dry brush fuel.
Community Wildfire Protection Plan (CWPP)	Of the 70,000 communities at risk in the WUI, less than 15,000 have a CWPP. A CWPP helps assess risk, prioritize mitigation efforts, and increase community resilience.

(Sources: National Wildfire Coordinating Group (NWCG); Thomas Tidwell, Chief, U.S. Forest Service. Testimony to the US Senate, The Committee on Energy and Natural Resources., 4 June 2013)

Figure 1. Topic mentions across the analyzed 14 real world and 14 exercise AARs



Identified Themes and Trends



Operational Communication

As WUI events can typically occur at the intersection of public and private lands, interagency response includes interaction between federal, state, local, and tribal responders and private/public land managers. Emergency managers can help ensure situational awareness between responding agencies through established communication channels prior to an incident.



Public Information and Warning

Emergency managers, in coordination with response agencies, can help ensure communities have the most up-to-date, reliable, and accessible information. During an incident, communication tools such as social media, Reverse 911, and emergency notification systems can distribute information to the geographically dispersed homes in the WUI.



Critical Transportation (Evacuation)

Clearly defined evacuation plans, shelter locations, and shelter-in-place notifications are important to establish prior to a WUI wildfire. Proper evacuation planning can also help firefighters and responders move resources throughout the area more efficiently. Equipping residents with resources to design their own Family Evacuation Plan can also help the community prepare for WUI wildfires.

Recommendations from AARs

The following recommendations can help emergency managers close capability gaps identified in AARs:

Operational Communications *The capability to ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.*

Recommendations for Improvement

- Ensure a Communications Unit Leader is assigned, trained, and available to resolve communication problems during each operational period of the incident.
- Cellular service in the WUI can be sporadic and unreliable. Confirm the Incident Command Post is located in an area with sufficient cellular coverage as cell phones are utilized in lieu of radios by some agencies.
- Perform proper training on interoperable communications equipment before an incident through interagency planning and exercises.

Public Information and Warning *The capability to deliver coordinated, prompt, reliable, and actionable information to the whole community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard, as well as the actions being taken and the assistance being made available, as appropriate.*

Recommendations for Improvement

- Ensure Joint Information Center plans and locations are established and well known to ensure unified messaging among all response agencies.
- Provide Public Information Officer training to additional staff within agencies to help supplement staffing during extended incidents.
- Incorporate Access and Functional Needs services into communications plans by requesting appropriate translators, utilizing closed captioning, and working with whole community partners to meet the communications needs of all residents.

Critical Transportation (Evacuation) *The capability to prepare for, ensure communication of, and immediately execute the safe and effective sheltering in place of an at risk population (and companion animals), and/or the organized and managed evacuation of the at risk population (and companion animals) to areas of safe refuge in response to a potentially or actually dangerous environment. In addition, this capability involves the safe reentry of the population where feasible.*

Recommendations for Improvement

- Ensure evacuation boundaries are clear, using street and neighborhood names when possible.
- First responders could use mobile telecommunications to enhance situational awareness regarding evacuation boundaries.
- Exercise evacuation plans and traffic flow patterns with whole community partners to avoid dangerous contra flow situations.
- State and local emergency managers should develop protocols for integrating accessible transportation into evacuation plans for those with access and functional needs who may not have personal transportation.

Additional Resources

- ◆ [Wildfire, Wildlands, and People: Understanding and Preparing for Wildfire in the Wildland-Urban Interface](#)
- ◆ [Your Role in Fire-Adapted Communities, U.S. Fire Administration](#)
- ◆ [Ready, Set, Go!](#)
- ◆ [Ready.gov/wildfires](#)