PROJECT SUMMARY

Occupant Evacuation Behavior in Wildland Fires: Gap Analysis

29 July 2019

Background: For structure fires, we have a great deal of information concerning occupant pre-movement delays and behaviors prior to beginning evacuation, both in terms of types of behaviors and elapsed time for these delays, but we do not have similar information for people facing wildland fire evacuations. We have been able to construct building evacuation models that account for the range of behaviors that building occupants may engage in before they begin evacuation and have collected data concerning the likelihood and duration of the resulting delays. In mass evacuations in the event of wildland fires, we do not have similar data on how people become aware of fires, how they decide on the need to evacuate their homes, the reasons that occupants may delay their evacuation, who is likely to delay evacuation and how long those delays tend to be.

Research Goal: This project will compile all available information on occupant evacuation in wildland fires with a gap analysis to identify the areas where data needs to be collected in order to construct valid models of occupant decision making and evacuation in wildland fires.

Project Tasks: This project is comprised of the following tasks:
- Task 1: Literature Review/Information Collection. This will consist of a review of the available information on occupant behavior in wildfire evacuations. Clarify and confirm any available information on:
    - Occupant pre-movement delays and behaviors prior to the beginning of evacuation in a wildland fire event. Focus should be on types of behaviors and elapsed time for delays.
    - How people become aware of fires
    - How people decide on the need to evacuate their homes
    - Reasons for delays in occupant evacuation (in terms of who and how long)
- Task 2: Provide Insights. Analyze the literature and information collected to provide insights on the current landscape of occupant evacuation in wildfire incidents.
- Task 3: Knowledge Gaps. Present the knowledge gaps and identify the missing data on occupant evacuation during wildfire incidents that are required for further analysis and modelling.
- Task 4: Final Report. Develop a final report to document the above tasks.

Implementation: This research program will be conducted under the auspices of the Research Foundation in accordance with Foundation Policies and will be guided by a Project Technical Panel who will provide input to the project, recommend contractor selection, review periodic reports of progress and research results, and review the final project report.

Schedule: The final report will be available by the end of 2019.

About us:

About the Fire Protection Research Foundation
The Fire Protection Research Foundation plans, manages, and communicates research on a broad range of fire safety issues in collaboration with scientists and laboratories around the world. The Foundation is an affiliate of NFPA.

About the National Fire Protection Association (NFPA)
Founded in 1896, NFPA is a global, nonprofit organization devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. The association delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy; and by partnering with others who share an interest in furthering the NFPA mission. All NFPA codes and standards can be viewed online for free. NFPA's membership totals more than 65,000 individuals around the world.