WILDFIRE CONFLAGRATION

Breaking the Chain of Fire

July 31 & August 1, 2024
IBHS Research Center
Richburg, SC

Day 1
9:00 a.m. – 4:30 p.m.

9:00 a.m. – 9:15 a.m. – Welcome and Introduction to IBHS & Site Safety Briefing

9:15 a.m. – 10:15 a.m. Classroom Session 1: History of Fire Conflagration and Lessons Learned from Post-Event Loss Studies

Description: This classroom session will explore the history of conflagrations in communities. This will include case study examples from the London Fire, Tubbs, Marshall, and Gatlinburg Fires, and feature the latest research insights from IBHS's deployment to Maui after the Lahaina fire. Attendees will learn about the factors that influence conflagration and the evolution that leads to this devastating result.

Learning Objectives:

- Understand the history of fire and conflagrations
- Explore conflagration across different geographies
- Understand the factors that drive conflagration and the importance of preparation

10:15 AM – 12:00 p.m. Lab Session 1: How Fire Propagates: Direct Flame Contact & Radiant Heat

Learning Objectives:

- Understand material properties, their limits and relative performance
- Systematic protection avoids "the weakest link" helping to break the pathway for fire
- Discover ways fire propagates

Lab A – Direct Flame and Radiant Heat

Description: This lab session will illustrate the impact of wind on flame behavior and how this can lead to the ignition of materials through radiant heat and direct flame contact.

11:00 a.m. – 11:15 a.m. BREAK BETWEEN LABS

Lab B – Radiant Heat

Description: This lab session will show IBHS's newest research capability in action! Through a demonstration of the cone calorimeter, attendees will observe the impact of radiant heat on building materials and explore test standards and methods used to understand material limits.

12:00 p.m. – 1:00 p.m. Lunch (*Provided)*

1:00 p.m. – 1:30 p.m. Lab Session 2: Embers and Connective Fuels

Description: This lab session will explore how embers and connective fuels contribute to the spread of fire through the built environment and the importance of fuel breaks in breaking the chain of ignition.

Learning Objectives:

- Understand the third ignition mechanism: embers
- Explore flame spread through connective fuels

1:30 – 2:30 p.m. Classroom Session 2: Breaking the Chain of Fire: Components of Wildfire Prepared Home & Burgeoning Work on Community

Description: This classroom session will outline the program and discuss the science behind its mitigation requirements. Presenters will provide insight on the adoption and implementation of the program across California, and layout the community-scale mitigation factors that can limit the spread of wildfire by breaking the chain of fuels which lead to conflagration.

Learning objectives:

- Learn why parcel level mitigations matter, where they make the biggest difference, and our growing confidence in them.
- Understand why parcel level mitigations are the building blocks for neighborhood resilience.
- Identify which mitigation actions receive the most pushback and why.
- Fire spreading through a community, what do we have to address?
- Lahaina detail case of connective fuels
- Structure spacing—full shed/ADU burn dataset results
- "One size doesn't fit all" approach to IBHS Wildfire Prepared Neighborhood

- Illustrate how parcel level designation and community level factors such as neighborhood spacing work in tandem to create neighborhoods that can live with fire.

Break 2:30–2:45 p.m.

2:45 – 3:45 p.m. Lab Session 3: Wildfire Prepared Home Components and Combustible Materials

Description: This lab session will explore building components and materials addressed in the Wildfire Prepared Home Standard. Additionally, we'll focus on materials that are considered "good" and "bad" as they apply to wildfire mitigation. There will be examples of such materials for attendees to interact with and see deployed in real structures at IBHS.

2:45 – 3:25pm (Divided Groups)

Lab A: "The Good" – Test Chamber

Lab B: "The Bad" – Test Chamber Apron

3:25 – 3:45pm (Combined Groups)

Lab C: Mitigation Education and Implementation Challenges – Observation Room

Description: This combined lab session will use the material discussions had in the previous labs to discuss challenges in understanding the program, mitigation retrofits, and other knowledge gaps experienced from our WFPH operations team. We'll also show the educational pieces IBHS produces to engage homeowners to guide them through the process and how insurers can help inform their policyholders as well.

3:45 – 4:15: Classroom Session 3: Discussion with Renaissance Re

Description: The classroom session will include a reinsurers perspective on wildfire risk and mitigation.

Learning Objectives:

- Identify how reinsurance view of risk and market dynamics factor into wildfire risk sharing.
- Learn how IBHS science influences vulnerability assessments and uncertainty.

4:15 – 4:30 p.m. Day 1 Wrap Up & Discussion

Day 1 Adjourns

August 1, 2024

9:00 A.M. – 12:00 P.M.

8:00 – 9:00 a.m. Breakfast (*Provided)*

9:00 – 9:30 a.m. Classroom Session 4: IBHS Modeling

Description: In this session, we will explore the necessity for various scales of models. We will delve into the mechanics of fire spread models, examining how they operate and their specific applications within the insurance industry. This discussion will highlight the importance of tailoring models to different scenarios to enhance their accuracy and utility.

9:30 – 10:30 a.m. Classroom Session 5: Wildfire Data Workshop

Description: In this session we will do breakout groups to discuss data needed to consider wildfire mitigation throughout the insurance process from ratemaking to sales. We'll discuss how communicating the risk needs to be aligned throughout the organization to effectively align towards the goal of mitigating disaster.

Discussion breakout topics:

- Need for data standardization and transparency in how risk is considered.
- How Wildland Urban Interface Codes could support data standards by wrapping multiple components into one factor as opposed to tracking them separately.

Break 10:30 – 10:45 a.m.

10:45 – 11:15 a.m. Classroom Session 6: Open Discussion on Data Commons & Needs

Description: In this session we will consider the pathways for scaling mitigation upwards to meet the growing risk of suburban conflagration in our wildland urban interface neighborhoods. This includes data needed to properly understand risk, mitigation actions, inspection, and monitoring.

Discussion Breakout Objectives:

- Understand the variables that drive neighborhood risk both from initial ignitions and halting a potential conflagration
- How does the industry handle these variables currently?
- What are the places where data needs to be improved? Whether in resolution, quality and/or availability?
- What is needed for the future to help scale wildfire mitigation activities to the neighborhood scale and ultimately to encompass entire communities?

11:15 – 11:45 a.m. Interview with Aon

Description: This classroom session will discuss how wildfire risk is modeled for risk transfer.

Learning Objectives:

- Learn how Aon factors IBHS science into modeling wildfire risk.
- Identify data points needed to manage the risk and reduce uncertainty.

11:45 a.m. – 12:00 p.m. Closing Remarks

Day 2 Adjourns

12:00 – 12:45 p.m. Optional IBHS Facility Tour