

## **Wildland Urban Interface (WUI) Firefighting**

Structure protection is inherently dangerous because it involves indirect firefighting.

**Do not** commit to stay and protect a structure unless a safety zone for firefighters and equipment has been identified at the structure during sizeup and triage. Move to the nearest safety zone, let the fire front pass, and return as soon as conditions allow.

### **Fire Behavior Prediction**

- Base all actions on current and expected fire behavior – do this first!
- An estimate must be made of the approaching fire intensity in order to determine if there is an adequate safety zone and time available before the fire arrives.
- Due to the dynamic nature of fire behavior, intensity estimates are difficult to make with absolute certainty. It is imperative that firefighters consider the worst case and build contingency actions into their plan to compensate for the unexpected.

## **Structure Sizeup**

### **Site Considerations**

- Adequate safety zone based on fire behavior prediction.
- Adequate lookout and communication capability.
- Adequate defensible space based on surrounding wildland vegetation.
- Avoid narrow canyon bottoms, mid-slope with fire below, and narrow ridges near chimneys and saddles.

### **Tactical Challenges and Hazards**

*Firefighters with a safety zone can safely defend structures with some challenges.*

- Narrow roads, unknown bridge limits, and septic tank locations.
- Ornamental plants and combustible debris within 30 feet of structure.
- Wooden siding and/or wooden roof materials.
- Open vents, eaves, decks, and other ember traps.
- Fuel tanks and hazardous materials.
- Powerlines or underground utilities.
- Limited water sources.
- Prevailing sense of urgency.
- Property owners remaining on site or evacuations.
- Smoke byproducts often laced with chemical compounds not found in wildland fires.

## **Structure Triage**

### **Defensible – Prep and Hold**

Determining Factor: Safety zone present.

Sizeup: Structure has some tactical challenges.

Tactics: Firefighters needed on site to implement structure protection tactics during fire front contact.

### **Defensible – Standalone**

Determining Factor: Safety zone present.

Sizeup: Structure has very few tactical challenges.

Tactics: Firefighters may not need to be directly assigned to protect structure as it is not likely to ignite during initial fire front contact. However, no structure in the path of a wildfire is completely without need of protection. Patrol following the passage of the fire front will be needed to protect the structure.

## **Non-Defensible – Prep and Leave**

Determining Factor: NO safety zone present.

Sizeup: Structure has some tactical challenges.

Tactics: Firefighters not able to commit to stay and protect structure. If time allows, rapid mitigation measures may be performed. Set trigger point for safe retreat. *Remember, pre-incident preparation is the responsibility of the homeowner.* Patrol following the passage of the fire front will be needed to protect the structure.

## **Non-Defensible – Rescue Drive-By**

Determining Factor: NO safety zone present.

Sizeup: Structure has significant tactical challenges.

Tactics: Firefighters not able to commit to stay and protect structure. If time allows, check to ensure that people are not present in the threatened structure (especially children, elderly, and those with disabilities). Set trigger point for safe retreat. Patrol following the passage of the fire front will be needed to protect the structure.

## **Structure Protection Tactics**

### **Rapid Mitigation Measures**

- Remove small combustibles immediately next to structure.
- Close windows and doors, including garage (leave unlocked).
- Clean area around fuel tank and shut off tank.
- Charge garden hoses.
- Apply Class A foam, or gel retardants if available.

### **Equipment and Water Use**

- Mark entrance to indicate a staffed location if it is not obvious.
- Charge hose lines.
- Long hose lays are not recommended.
- Keep 100 gallons of water in reserve.
- Identify a backup water source.
- Identify powerlines for aerial resources.
- Never rely on water for firefighter safety.

### **Patrol Following the Fire Front**

- Many structures do not burn until after the fire front has passed.
- Be aware of the structural collapse zone when structures are exposed to fire.
- Move to closest safety zone and let fire front go through.
- Return as soon as conditions allow safe access to structures.
- Secondary ignition is usually due to residual spot fires or creeping ground fire.
- Take suppression actions within your capability.
- Call for assistance if needed.