



# U.S. Forest Service Fire Operations Risk Management Information Briefing Paper



Date: August 1, 2008

**Topic:** Falling Operations and Hazard Trees

**Background:** In the 5-day period from July 25 through July 29 this year, the Forest Service experienced a number of falling or hazard tree accidents in three separate geographic areas. The results of these accidents were one fatality and three firefighters sent to the hospital, one of whom will experience a lengthy recovery time. The firefighters involved worked for three different federal agencies and one was a contract faller. Of the agency employees, one was a member of an engine crew, one was a member of a rappel crew, and one was a hotshot. Historically, falling trees, snags, and rocks account for over 8 percent of Federal wildland firefighter fatalities (*Wildland Firefighter Fatalities in the United States, 1990-2006, MTDC, 2007*).

The recent cluster of falling and hazard tree accidents within such a short period of time has magnified the concern about this recognized threat to firefighter safety. Near misses have occurred during this same time period; undoubtedly they outnumber the reported accidents. A number of the accidents and near misses that have occurred have been associated with “B” falling operations. Some accidents and near misses in both 2007 and 2008 have involved “chain reaction” events; others might have been avoided if personnel were outside an established secure felling area (generally, 2-½ tree lengths away from the faller) or if fallers had promptly used an escape route as soon as tree lift began.

**Key Points:** Safe practices for tree falling and for working in areas with hazard trees can be found in many locations.

- Forest Service employees should consult the Health and Safety Code Handbook, FSH 7609.11, Chapter 22.48 (see attached). Separation distances and securing the cutting area are the responsibility of everyone taking part in the operation.
- The Wildland Fire Lessons Learned Center’s *Scratchline* publications (see attached).
- The Hazard Tree Safety web site at <http://www.nwcg.gov/teams/shwt/httf/> provides a comprehensive resource of hazard tree safety and training information.

## Recommendations:

1. Ensure wide dissemination of this message and attachments - push information to initial attack bases and incident command posts.
2. Take action to review hazard tree risk management principles and safe felling procedures.
3. Brief all personnel and establish secure felling areas prior to tree felling.
4. Promote use of LCES and situational awareness around hazard trees and felling, but recognize that intrinsic risk management principles must also be applied to avoid hazard tree accidents that experience demonstrates can happen quickly.
5. Emphasize thorough size-up and secure felling area prior to working in proximity of hazard trees.
6. Continuously supervise and monitor felling operations to make certain that assignments match the qualification and skill level of sawyers.