



Fire Protection Training

Procedures Handbook 4300

FIREFIGHTER SAFETY

TOPIC: Common Denominators of Fire Fatalities

TIME FRAME: 30 Minutes

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will list and describe the common denominators of fire behavior on fatal and near-miss wildland fires

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Chalkboard and chalk
- Appropriate visual aids
- Audio visual equipment

REFERENCES:

- Wildland Firefighting, Clayton, Day, and McFadden, Chapter 12

PREPARATION: Analysis of firefighter deaths and close calls over the past 70 years has revealed many common factors. By understanding the basic fire behavior characteristics that produced these situations you may identify a similar occurrence and avoid being overrun.



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COMMON DENOMINATORS OF FIRE
FATALITIES

PRESENTATION	APPLICATION
<p>I. WILSON-SORENSEN STUDY (1926-1974)</p> <ul style="list-style-type: none"> A. Most Incidents Occurred on Relatively Small Fires or Isolated Sections of Large Fires. B. Unexpected or Unpredicted Winds Were Often Given as the Major Cause of "Erratic Behavior". C. Most of the Fires Were Innocent in Appearance (in some cases the mop-up stage) Prior to the Flare-up or Blow-up. D. Flare-ups Occurred in Deceptively Light Fuels. E. Fires Ran Uphill in Chimneys, Gullies, or on Steep Slopes. F. Suppression Tools Can Adversely Modify Fire Behavior (helicopter and air tanker vortices have been known to cause flare-ups). G. There Are No Fire Behavior Situations. Our Inability to Predict Fire Behavior Causes Us to Fall Back on the Term "Erratic". <p>II. USFS STUDY (1926-1976) ANALYZING CAUSE OF DEATHS AND NEAR MISSES ON WILDLAND FIRES</p> <ul style="list-style-type: none"> A. Fire Ran Upslope.....29.0% B. Sudden Wind Shift.....20.8% C. Head Made Fast Run.....13.6% D. Fire Spotted Across Line9.6% 	<p>Ask students how they think most deaths and near misses occur on wildland fires.</p> <p>Emphasize the first four</p>

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PRESENTATION	APPLICATION
E. Fire Ran Downslope6.4%	Study based on 125 wildland fires accounting for 236 fatalities and 66 near miss situations
F. Concentrated Fuel Flare-up4.8%	
G. Gusty Cumulus Clouds Overhead4.0%	
H. Aircraft Turbulence0.8%	
I. Equipment Failure.....0.8%	
J. Other (heart attack, electrocution, etc.)9.6%	

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SUMMARY:

Because history does have the tendency to repeat itself, it is important to understand the common denominators of fire behavior on fatal and near-miss wildfires. By following the 10 Standard Firefighting Orders and 13 Situations that Shout "Watch Out" you may avoid being counted in a future fatality study.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).