

Fireground Risk Management Through Effective Decision Making

- I. Dynamic Risk
 - a. Risk: Measure of probability & severity of adverse effects that may result from an exposure
 - b. Risk Management: Process of minimizing detrimental effects through planning & directing assets

- II. Risk Management Plan
 - a. We will risk our lives to protect savable lives
 - b. We may risk our lives to protect savable property
 - c. We will not risk our lives to save what is already lost

- III. Why Risk Management?
 - a. Reduce injury & LODD
 - b. Legal
 - c. Ethical & moral
 - d. Morale
 - e. It's your job

- IV. Risk Management – Why So Difficult?
 - a. Value
 - b. Experience
 - c. Time
 - d. Culture
 - e. Attitude
 - f. Impressionable

- V. Decision Making: Stress Reaction
 - a. Intuitive judgment becomes primary tool in decision making
 - b. Rational judgment becomes secondary
 - c. Learned behaviors may dominate
 - d. Attention becomes focused, less “big-picture”
 - e. Revert to behaviors that are comfortable, habitual, or routine

- VI. Recognition Primed Decision Making
 - a. Mental card file
 - b. Instantaneous response
 - c. “Typical” solutions
 - d. Act on first “recognition”
 - e. Quickly size-up the situation
 - f. Recognized “typical” ways to react
 - g. Focus on relevant information
 - h. Form expectations

- i. Play the movie forward
 - j. Detect unusual problems or observations
 - k. Make the decision

- VII. Situational Awareness
 - a. Three Levels
 - 1. Perception. What's going on?
 - 2. Processing. What does it mean?
 - 3. Predicting. Where is it going?
 - 4.

- VIII. The "New" Fireground

- IX. Dynamic Risk Management Process
 - a. Evaluate
 - b. Select tactics
 - c. Assess
 - d. Introduce additional controls
 - e. Re-assess

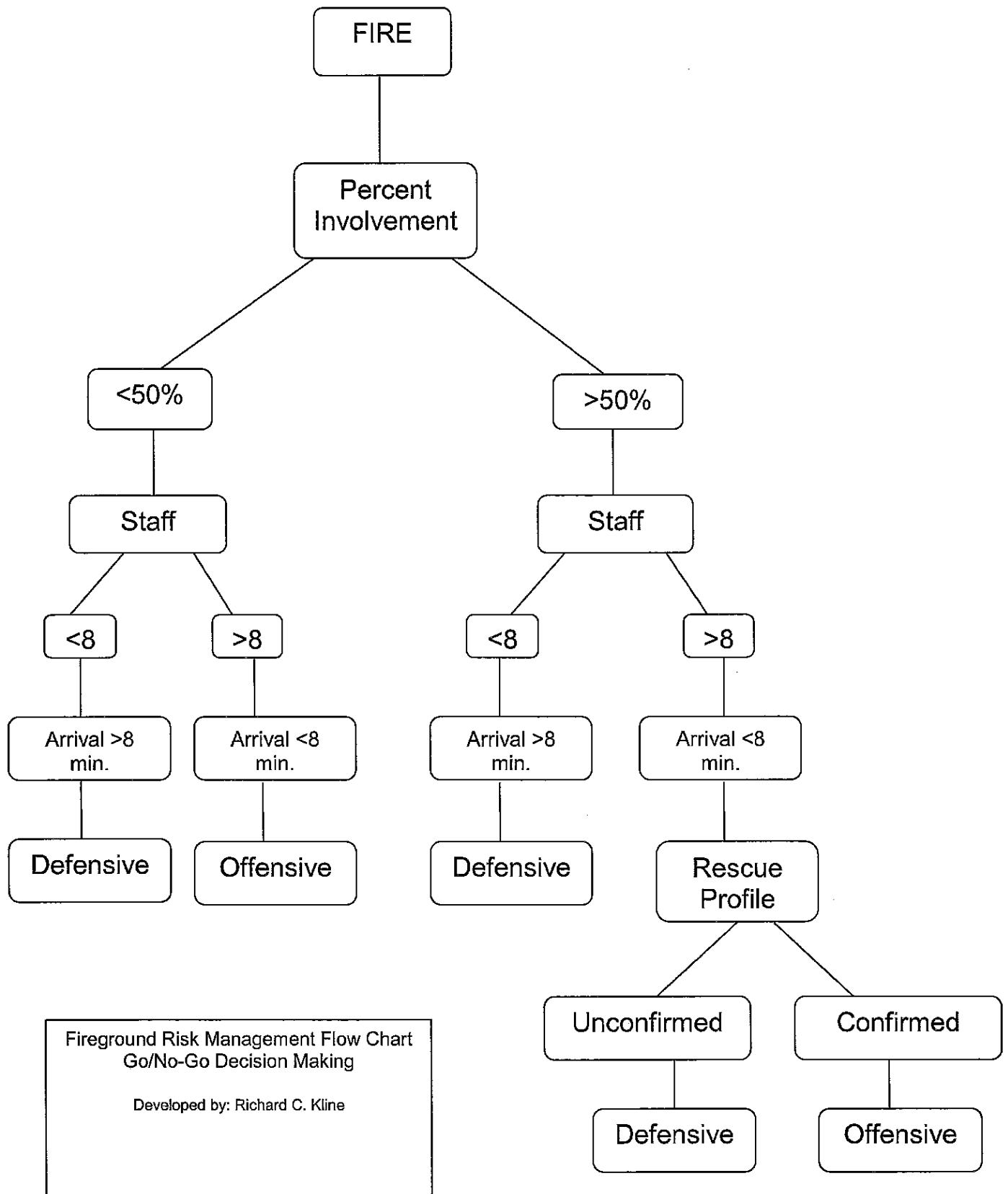
- X. Implement "Countermeasures"

- XI. IAFC Rules of Engagement for Structural Firefighting
 - a. Obtain 360 degree size-up (IAFC #1)
 - b. Determine victim survival profile (IAFC #2)
 - c. Ensure adequate resources (IAFC #3)
 - d. Do not risk lives for what is already lost (IAFC #4)
 - e. Extend limited risk to protect savable property (IAFC #5)
 - f. Extend calculated risk to protect savable lives (IAFC #6)
 - g. Authorization to say no to unsafe practices (IAFC #7)
 - h. Maintain communications with your at-risk companies (IAFC #8)
 - i. Conduct continuous risk assessment (IAFC #9)
 - j. If progress is not being made, withdraw (IAFC #10)
 - k. Assign a rapid intervention team (IAFC #11)

- XII. Case Study: Crawl In, Fall Through Basement Fires
Montgomery County (MD) Significant Injury Event

- XIII. Barriers to Effective Fireground Decision Making
 - a. Staffing (under, over, unpredictable, experience, response delay)
 - b. Communications (missed, lack of progress report, misunderstood, incomplete)
 - c. Workload (multi-task, performing non command functions, span of control, complexity, forgetting)
 - d. Attention Management (distractions, interruptions, tunnel vision, task fixation, time distortion, vigilance, selective

- listening)
 - e. Physical/Mental Stress (overload, overwhelmed, excited, frustrated, loss of attention)
 - f. Human Factors (perception, culture, poor assumptions, ego)
- XIV. Incident Commanders
- a. Underestimate the speed of the event
 - b. Overestimate their abilities
 - c. Pressure for "heroic" actions
 - d. Focus on the wrong or too many inputs
 - e. Fail to "read" the building and smoke correctly
- XV. Frederick Avenue Lessons Learned
- a. Risk/Benefit (IAFC #3 & 6)
 - b. Fire Ground Operations (IAFC #5)
 - c. Crew Integrity (IAFC #3)
- XVI. Case Studies: Significant Event/Near-Miss – Loudoun County (VA)
And LODD Prince William County (MD)
- XVII. Fireground Risk Management Best Practice
- a. Staffing drives strategy & tactics
 - b. "Big picture"
 - c. When in Command, Command.
 - d. Communications from operating companies
 - e. Watch elapsed time
- XVIII. Commanders Tools
- a. Tactical work sheet
 - b. Fireground time-out
 - c. IC post event evaluation
 - d. Decision flow chart (training)



Risk Management Worksheet: Loudoun County (VA) Near-Miss

Using the following fireground risk analysis points, develop a risk management plan based upon these objectives.

- We will risk our lives to protect savable lives
- We may risk our lives to protect savable property
- We will not risk our lives to save what is already lost

Analysis Points

Building Construction: (type & size, structural condition, fire protection features, contents).

Fire Factors: (location & extent, estimated time of involvement, smoke conditions).

Occupants: (known or probable, survival assessment).

Resources: (available & responding, capabilities & limitations).

Define your risk assessment

Firefighter Safety Risk	High Success	Marginal Success	Low Success	Strategy (choose)
Low Risk	Offensive	Offensive	Offensive	
Moderate Risk	Offensive	Offensive	Defensive	
High Risk	Offensive (only with realistic survivability profile)	Defensive	Defensive	

Shade applicable IAFC Rules of Engagement that contributed to injury/LODD

IAFC #1	IAFC #2	IAFC #3	IAFC #4
IAFC #5	IAFC #6	IAFC #7	IAFC #8
IAFC #9	IAFC #10	IAFC #11	Other:

Risk Management Worksheet: Prince William County (MD) Line of Duty Death

Using the following fireground risk analysis points, develop a risk management plan based upon these objectives.

- We will risk our lives to protect savable lives
- We may risk our lives to protect savable property
- We will not risk our lives to save what is already lost

Analysis Points

Building Construction: (type & size, structural condition, fire protection features, contents).

Fire Factors: (location & extent, estimated time of involvement, smoke conditions).

Occupants: (known or probable, survival assessment).

Resources: (available and responding, capabilities and limitations).

Define your risk assessment

Firefighter Safety Risk	High Success	Marginal Success	Low Success	Strategy (Choose)
Low Risk	Offensive	Offensive	Offensive	
Moderate Risk	Offensive	Offensive	Defensive	
High Risk	Offensive (only with realistic survivability profile)	Defensive	Defensive	

Shade applicable IAFC Rules of Engagement that contributed to injury/LODD

IAFC #1	IAFC #2	IAFC #3	IAFC #4
IAFC #5	IAFC #6	IAFC #7	IAFC #8
IAFC #9	IAFC #10	IAFC #11	Other:



PLYMOUTH FIRE DEPARTMENT RISK MANAGEMENT

Fireground Risk Assessment

- A risk assessment shall be conducted at every incident, with the development of the action plan based upon the level of acceptable risk to firefighters.
- All members are responsible for their own safety and for the safety of personnel working with them.
- All members are responsible for continuously monitoring conditions.
- All members are responsible to report unsafe conditions.
- Any members are authorized to say “NO” to unsafe practices or conditions.
- All incident command staff are responsible for accepting, and appropriately acting upon, safety related information.
- All incident command staff are responsible to ensure timely and adequate communication with operating fire personnel.
- Safety assessment is continuous and must be part of on-going decision making.
- Un-safe practices shall not be permitted.
- Companies shall not operate in an unsupported fashion.

Rules of Engagement for Structural Firefighting

- No building is worth the life of a firefighter.
- All interior firefighting involves risk. Some level of risk is acceptable in a controlled and measured manner.
- What is the survival profile of any victims?
- We will risk nothing for lives and property that are already lost.
- We may risk little to save salvageable property while operating in a calculated manner.
- We may risk a lot to save salvageable lives while operating in a calculated manner.

Incident Management Assessment Tool

Date: _____ Location: _____

	5 Yes	1 No	N/A
1 There was one, clearly defined IC at all times during the Fire.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 A Command Team management style was utilized.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 The IC appointed Branches, Divisions, and Groups to effectively manage the event (span of control).	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 IC passed only when necessary and only after a briefing.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 IC (or a designee) completed a 360 degree size up of the incident.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 IC refrained from performing firefighting/tactical duties.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 IC remained far enough away at a stationary location that ensured a big picture view.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 IC developed and communicated an appropriate strategy.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 IC gave assignments to companies and coordinated fireground activities.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Accountability of personnel managed by a specific Division (location, crew size, actions).	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Incident communications were clear and concise.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Additional resources were called using a pre-established system of notification.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 Tactics were properly matched to the size of the fire (i.e., big fire = big water).	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Incident Management Assessment Tool

	Yes	No	N/A
14 IC maintained a broad perspective of the overall incident.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 IC was able to anticipate and predict fire behavior and growth.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 Radio traffic was disciplined and manageable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17 Someone was assigned to monitor every radio channel (talk group) in use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18 Communications from interior crews were heard the first time transmitted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19 There was adequate staffing to carry out the strategy safely and effectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20 As fire conditions changed, so did the strategy and tactics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21 Progress reports were clear, concise, accurate, timely and informative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22 There were no conflicting orders or conflicting tactics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23 Organizational culture did not influence the strategy, tactics, or operations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24 An Incident Safety Officer was assigned and performed duties appropriately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25 There was sufficient water (hand lines & supply lines) to accomplish the tactics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26 Firefighters were adequately trained to perform their assignments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27 Proper SOPs/SOGs were established, implemented, communicated and followed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>