

Initiative

3

Focus greater attention on the integration of risk management with incident management at all levels, including strategic, tactical and planning responsibilities.

Executive Summary

This initiative incorporates a range of components that relate to our ability to safely conduct emergency operations in a high-risk environment. As was noted in the Firefighter Life Safety Summit *Initial Report* (2004): “There is no question that firefighters are expected to work in environments that are inherently dangerous, however most risks and most of the specific dangers are well known. The most common cause of firefighter deaths are widely recognized, along with the situations where they are most likely to occur. We have to recognize and manage the risks that apply to each situation. The essence of professionalism in the fire service is the ability to function safely and effectively within that dangerous environment. We will never be able to eliminate all of the risks, but we can be very well prepared to face most of them.” The 3rd Initiative asks us to function safely in high-risk environments through the implementation of risk management controls wherever they can help reduce injuries and line-of-duty deaths.

Introduction

Too many lives are lost in situations where the risks were not justified. The fire service understands risks, yet the same accidents, injuries and fatalities keep happening. Incidents must be managed with a constant awareness and balance between risks and desired outcomes. High risk is only acceptable when there is a real possibility of saving a life. Fire command must carefully measure and control risks to save valuable property that can be saved. It is not an acceptable risk to attempt to save lives or properties that are already lost. The fire service should remember that if something bad happens it miscalculated, and that we should never use “that’s the way it’s always been done” to ever except a line-of-duty injury or death.

Recommendation #1: *The willingness of firefighters to risk their own lives to save others must never be used as an excuse to take unnecessary risks—a risk management approach to incident management will help control this.*

Fire service members at all levels, from chief to firefighter, need to discuss this issue and seriously develop further strategies that will dramatically reduce firefighter injuries and fatalities. Today's fire officers need to be more educated than ever. The lives and well being of the firefighters under their command depend on their knowledge. We all know how complex firefighting has become. A firefighter today is involved in hazmat operations, trench and high-angle rescue, and EMS, as well as complex modern structural firefighting, just to name a few. Now add terrorism to the mix, and firefighters have a myriad of skills and information to remember and use for immediate decision-making. Knowing all this, can we afford to have commanders who don't have the most current knowledge about these subjects at their fingertips? Should we continue to have leaders who might have been elected or appointed to their positions based on popularity? We need leaders who make an all-out effort to get as much information as they can in such areas as risk analysis, building construction, fire behavior, and incident management and accountability systems, among others. We need leaders who can objectively evaluate change and are willing to promote and implement that change if it's beneficial to their departments, even if the idea might not be very popular.

Recommendation #2: *Among other skills, fire chiefs and other command officers need to be selected or promoted for their knowledge base about known risks to firefighters, and their willingness to take a leadership role to champion risk management systems within their departments.*

One tool that commanders need to be extremely knowledgeable about is risk analysis, which identifies the risks and hazards in a given community. It benefits all the stakeholders in that community, including firefighters, fire officers and citizens, as well as local and appointed leaders. Risk analysis helps make communities safer, increases firefighter safety, reduces liability and allows more efficient use of resources.

Recommendation # 3: *Many of the skills needed to conduct a risk analysis are common-sense, yet coaching or getting advice from risk management experts could help a department in this task. Risk management courses are also taught in many college curriculums. The United States Fire Administration offers Advanced Safety Operations and Management. This 6-day course focuses on applying the risk management model to health and safety aspects of emergency services operations, including program management, day-to-day operations, and incident safety. Content areas include firefighter and emergency services fatality and injury problem; the risk management process; safety responsibilities of department members; regulations, standards, and policies affecting emergency services safety; and appropriate documentation and record keeping pertaining to*

firefighter and emergency services health and safety (USFA, 2006-2007).

Recommendation # 4: *The USFA's website contains research papers and project descriptions dealing with risk analysis, such as Risk Management Practices in the Fire Service: A Guide to Help Fire and Emergency Services Departments Understand the Concepts of Risk Management and Practices (USFA, 1996) and many other subject-specific risk topics (start by visiting <http://www.usfa.dhs.gov/nfa/resident/2week/index.shtm> and search under risk prevention and risk management).*

Along with a community risk analysis should come a scene-specific risk analysis. Every fire officer must determine how far he or she is willing to go in committing personnel and deciding what type of attack is needed. The West Manchester Township Fire & Emergency Service (York, PA) uses a simple system to make these decisions called the *Fire Officers' Quick Attack Guide*. It's an easy mathematical calculation that can be done on-scene quickly and effectively, and if used it has a great potential to save firefighters' lives. The process is composed of six steps:

- Conduct an incident size-up.
- Identify and prioritize incident problems.
- Select a strategic mode: offensive, marginal, rescue or defensive.
- Develop an incident action plan.
- Communicate the mode and IAP to incoming companies.
- Evaluate the effectiveness of the IAP.

For example, a fire officer can assess an incident on a scale from one to five for concerns like rescue possibility and savable property (high to low), fire stage (early to advanced) and firefighter risk (low to high). If the incident has a total risk rating of four to nine, an offensive interior strategy is a good option; a rating of 10-14 requires a marginal rescue; and a 15-20 rating warrants a defensive exterior strategy.

Fire Officers Quick Action Guide

Conduct an Incident Size Up

↓

Identify and Prioritize Incident Problems

↓

Select a Strategic Mode (Offensive / Marginal Rescue / Defensive)

↓

Develop an Incident Action Plan(s)

↓

Communicate the Mode and IAP to incoming Companies

↓

Evaluate the Effectiveness of the IAP

Incident: _____

High Low

Rescue

Probability

1 2 3 4 5

Early Adv

Fire Stage 1 2 3 4 5

High Low

Savable Property 1 2 3 4 5

Low High

Firefighter Risk 1 2 3 4 5

Incident Strategy Offensive

Interior

(4-9)

Marginal

Rescue

(10-14)

Defensive

Exterior

(15-20)

Another key element in a fire officer's education is the knowledge of building construction. Architecture and engineering principles have changed vastly in the last few years — just think of the evolution of trusses. A fire officer needs to be well versed in new and old building construction and how the mechanics of stress and heat affect that construction.

How can an officer get this information without going to school for an engineering degree? He or she must reach out to the community for help. All too often we're the ones giving help, so we don't know how to ask for it. For years fire departments have hidden behind their doors in a safe sanctuary. It's time to open those doors and seek help from the community. It's not a sign of failure or weakness.

Work with the local building department when looking at plans for new construction. Don't just look at these plans for code compliance; ask questions concerning the construction of the building and how it would react to heat and stress. Work with local architects and engineers, tour your town during your risk analysis, and ask questions about existing buildings. The answers to these questions must be written down and incorporated in your risk analysis and preplan process.

Recommendation # 5: *An integrated risk management plan for a fire department must take into account its community's risk profile. Establish coalitions within the community among elected officials, building code*

representatives, municipal planning agencies and others so as to obtain support for firefighter risk reduction. Include representatives from the various interest groups in the risk analysis process and share results.

It goes without saying that knowledge of fire behavior is essential. Flashover is occurring more quickly because of the nature of the materials that are burning. With new products coming onto American markets everyday, it's imperative that we be aware new hazards associated with them prior to committing our human resources. All officers need an absolute knowledge of the incident management system, reinforced by knowledge of NFPA 1710 *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* and NFPA 1720 *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments*. More importantly, additional mastery of the principles of unified command is essential. More and more emphasis has been placed on unified command by the federal government as a result of Sept. 11.

The issue of unified command has taken a giant leap forward with the introduction of the National Incident Management System (NIMS) which was released by the Department of Homeland Security in March of 2004. NIMS will enable responders at "all jurisdictional levels and across all disciplines to work together more effectively and efficiently." Beginning in FY 2006, federal funding for state, local and tribal preparedness grants will be tied to compliance with the NIMS. All federal, state, local, tribal, private sector and non-governmental personnel with a direct role in emergency management and response must be NIMS and ICS trained (for more information on NIMS, visit <http://www.nimsonline.com>).

Recommendation #6: *Seek NIMS training and certification immediately for your incident commanders and others with emergency management duties. In the meantime, departments are encouraged to adopt NIMS principles into their risk management measures.*

Interagency cooperation is fast becoming the accepted practice with most types of emergencies or disasters. Fire and police departments and federal agencies must learn not only to work together but to work well together. This requires the education of all those in command. Only good, honest communications along with realistic tabletop exercises and drills can provide this education.

Both NFPA 1710 & 1720 also emphasize the need for a good accountability system, but no accountability system is good unless someone has the knowledge to use it correctly. The user must also have a commitment to and belief in the principles of the system.

The final educational obligation that today's fire officer has is to impart this knowledge to those under his or her authority. The more knowledge an officer can give to the people in their command, the safer they will be. Education truly is the key to firefighter safety. The more education firefighters and officers have, less often will the flags at the National Fallen Firefighters Memorial be at halfmast.

Applying Risk Management

Education in the area of risk analysis for the fire service is beginning to appear more and more often. For example the IAFC Health and Safety Committee developed a document entitled *The Ten Rules of Engagement for Structural Fire Fighting and the Acceptability of Risk*. The Ten Rules include:

Acceptability of Risk

1. No building or property is worth the life of a firefighter
2. All interior fire fighting involves inherent risk
3. Some risk is acceptable, in a measured and controlled manner
4. No level of risk is acceptable where there is no potential to save lives or savable property
5. Firefighters shall not be committed to interior offensive fire fighting operations in abandoned or derelict buildings

Risk Assessment

6. All feasible measures shall be taken to limit or avoid risks through risk assessment by a qualified officer
 7. It is the responsibility of the Incident Commander to evaluate the level of risk in every situation
 8. Risk assessment is a continuous process for the entire duration of each incident
 9. If conditions change and risk increases, change strategy and tactics.
 10. No building or property is worth the life of a firefighter
- In *The Ten Rules of Engagement*, there is a graphic which every fire department should make available to within all training on the incident management and command.

(IAFC, *The 10 Rules of Engagement*)

Low Risk

**Initiate offensive operations,
Continue to monitor risk factors.
Initiate offensive operations
Continue to monitor risk factors.
Initiate offensive operations,
Continue to monitor risk factors.**

Medium Risk

Initiate offensive operations,
Continue to monitor risks.
Employ all available risk control options.
Initiate offensive operations,
Continue to monitor risks.
Be prepared to go defensive if risk increases.
Do not initiate offensive operations.
Reduce risks to firefighters and actively pursue risk control operations.

High Risk

Operations only with confirmation of realistic potential to save endangered lives.
Do not initiate offensive operations that will put firefighters at risk for injury or fatality.
Initiate defensive operations only.

Risk Assessment/Rules of Engagement

Recommendation # 7: The 10 Rules of Engagement for Structural Fire Fighting and the Acceptability of Risk provides an excellent starting point for discussing risk management in your fire department. It can be downloaded at <http://iafc.org/associations/4685/files/rules.pdf>

Recommendation # 8: Study model "Rules of Engagement" from other fire departments to see how such a plan could be implemented into your risk management plan. The Fulton County (GA) Rules of Engagement SOP is available at <http://everyonegoeshome.com/resources/fultonroe.pdf>

Incident Management

Many of the same principles of risk identification and analysis can be used to identify risks in all fire department settings—from station quarters, to driver/operator behavior, to fireground management. But, incident management encompasses more than risk management. There are strategic, tactical and planning responsibilities. A good incident manager is a safe incident manager who has the skills of both risk and incident management, and employs them both with safety in mind. Command dysfunction can bring disastrous results. Chief I. David Daniels has identified six major command dysfunction symptoms. Each of the symptoms he has identified were based on data gathered from LODD scenarios. They include:

- Inadequate risk assessment
- Lack of responder discipline
- Inappropriate or lack of utilization of an Incident Management System
- Ineffective incident commanders
- Lack of accountability
- Ineffective communications

Chief Daniels states that “The challenge for fire chiefs is to begin to address command related issues as a ‘systematic’ issue rather than a tactical one. When the command system fails, too often there is blame placed on a particular incident commander, command officer or firefighter, when the reality is that the system is what generally fails.” He concludes by noting: “The time to address the command system is now, before the ‘brain drain’ in the American fire service takes a significant portion of the experience from those who will lead our industry into the next generation.”

Recommendation #9: *Training on the risk management plan at all levels of the department will be mandatory if a successful Risk Management Plan is to be integrated into a fire or emergency services department. Company officers must be trained to supervise operations and incident commanders must be trained to manage incidents according to standard principles and practices. Firefighters must be prepared to function competently in a wide range of situations, including critical events that can involve unanticipated dangers and immediate risks to their own survival.*

Conclusion

Risk management is not a luxury that a department can choose to do or not do. Rather, the identification of risks that could result in the injury or death of a firefighter is a fire department “right to know” issue. Our firefighters have the right to know what is an acceptable risk and what they might be risking with unsafe behaviors, or a hesitancy to speak up to stop an unsafe practice. Only by knowing what high priority risk is, however, will they be able to do so. If the fire service is to reduce the unacceptable number of firefighter line-of-duty deaths it is imperative that the 3rd Firefighter Life Safety Initiative be taken seriously.

Recommendations

Recommendation #1: The willingness of firefighters to risk their own lives to save others must never be used as an excuse to take unnecessary risks—a risk management approach to incident management will help control this.

Recommendation #2: Among other skills, fire chiefs and other command officers need to be selected or promoted for their knowledge base about known risks to firefighters, and their willingness to take a leadership role to champion risk management systems within their departments.

Recommendation # 3: Many of the skills need to conduct a risk analysis are common-sense, yet coaching or getting advice from risk management experts could help a department in this task. Risk management courses are also taught in many college curriculums. The USFA offers a course; Advanced Safety

Operations and Management (see references).

Recommendation # 4: The USFA's website contains research papers and project descriptions dealing with risk analysis, such as Risk Management Practices in the Fire Service: A Guide to Help Fire and Emergency Services Departments Understand the Concepts of Risk Management and Practices (USFA, 1996) and many other subject-specific risk topics (start by visiting <http://www.usfa.dhs.gov/nfa/resident/2week/index.shtm> and search under risk prevention and risk management).

Recommendation # 5: An integrated risk management plan for a fire department must take into account its community's risk profile. Establish coalitions within the community among elected officials, building code representatives, municipal planning agencies and others so as to obtain support for firefighter risk reduction. Include representative from the various interest groups in the risk analysis process and share results.

Recommendation #6: Seek NIMS training and certification immediately for your incident commanders and others with emergency management duties. In the meantime, departments are encouraged to adopt NIMS principles into their risk management measures.

Recommendation # 7: The 10 Rules of Engagement for Structural Fire Fighting and the Acceptability of Risk provides an excellent starting point for discussing risk management in your fire department. It can be downloaded at <http://iafc.org/associations/4685/files/rules.pdf>

Recommendation # 8: Study model "Rules of Engagement" from other fire departments to see how such a plan could be implemented into your risk management plan. The Fulton County (GA) Rules of Engagement SOP is available at <http://everyonegoeshome.com/resources/fultonroe.pdf>

Recommendation #9: Training on the risk management plan at all levels of the department will be mandatory if a successful Risk Management Plan is to be integrated into a fire or emergency services department. Company officers must be trained to supervise operations and incident commanders must be trained to manage incidents according to standard principles and practices. Firefighters must be prepared to function competently in a wide range of situations, including critical events that can involve unanticipated dangers and immediate risks to their own survival.

References

Department of Homeland Security, *National Incident Management System*, 2004 available at <http://www.nimsonline.com/docs/NIMS-90-web.pdf>
National Fallen Firefighters Foundation, Firefighter Life Safety Summit *Initial Report*, 2004, www.everyonegoeshome.com (7-9).

International Association of Fire Chiefs, The 10 Rules of Engagement for Structural Fire Fighting and the Acceptability of Risk (August 2001),

<http://iafc.org/associations/4685/files/rules.pdf>

United States Fire Administration, USFA Training Course Catalog, 2006-2007, Advanced Safety Operations and Management, course N822.

United States Fire Administration, Risk Management Practices in the Fire Service, FA 166/1996. May be found at

<http://www.usfa.dhs.gov/downloads/pdf/publications/fa-166.pdf>

United States Fire Administration, Risk Management Planning for Hazardous materials: What it Means for Fire Service Planning, Special Technical Report, USFA-TR-124, Jan 2003. May be found at

<http://www.usfa.dhs.gov/downloads/pdf/publications/tr-124.pdf>