

Managing Risk in the Volunteer Fire Department, Part 2

LAST MONTH IN PART 1 OF THIS SERIES, I wrote about my emerging understanding of managing risk in the volunteer fire service and why it is so important. Risk is a part of our job, but it needs to be *calculated* risk. This month, I will continue to examine the process of managing and evaluating risk on the fireground as well as other positions that, when properly staffed, can help to reduce risk.

An Ongoing Evaluation

Are the strategies and assigned tactics working, or do they need reassessment? Can companies complete the task in support of the assigned tactics? Look, listen, and ask yourself, are they getting it? Is the situation improving? Are companies making progress and giving feedback, or are you “in the dark”? Determine if all companies are working under your plan or if they’re freelancing. Freelancing can kill and has killed firefighters!

Also consider the condition of the crews. Are they fatigued? Is the weather affecting them and their ability to do the job? Extreme heat or cold as well as rain or snow can affect an operation. Also consider if you have a rehab area in place and if crews are rotating through it.

Also consider the quality of the fire attack. Remember, the fire will only do one of two things: (1) shrink as you apply water to it or (2) get larger. If evaluation shows that the tactics are not working, reassess the problem and adjust your tactics. Constantly size up and evaluate the situation until all companies are dismissed. Not doing so is a complete breakdown and failure of your risk management system! Stay proactive. Following are 10 ways to stay proactive:

1. Remain calm, think clearly, and act decisively.
2. Remember, it takes guts, water, and common sense to put out the fire. You must have all three!

3. For every action, there will be a reaction. Ask yourself: Is the situation getting better or worse?
4. Know your limitations as well as the limitations of your personnel, resources, and water if you are in an area with a limited or no municipal water supply. Seek help if needed.
5. Be mindful of time during the incident. This is an important observation; prolonged burn time adds to the risk.
6. Remain focused on the overall incident. You are the incident commander (IC), not a company officer.
7. Always use the incident command system (ICS).

As an officer, you must understand risk management and how your actions and knowledge could be the difference between the life and death of a firefighter.

8. Use and maintain a personnel accountability system. There is no wiggle room here—people’s lives might depend on it.
9. Get more help to the scene before you need it. In other words, anticipate!
10. As the IC, keep things manageable and working for the benefit of all who are operating. Stay within the span of control—three to seven direct reports, with five being ideal. If needed, set up divisions, and delegate operations or other aspects of the operation—for example, water supply operations, fire suppression operations, and so on. One of the most important actions you can take for the safety of all operating is to appoint an incident safety officer (ISO).

When an incident involves trapped or missing civilians, do a survivability profile; use this skill when preparing to commit firefighters to a rescue. All too often, the life at risk has long perished, the building has been overwhelmed by fire, and you have too few resources on hand. To risk a crew of firefighters working in extreme fire conditions to save a long-expired civilian is questionable at best. Also, apply common sense. Ask yourself, what are the smoke and heat conditions? How much fire is there, and how long has it been burning? Also consider if the victim is in the room of origin that has been free burning.

When making these decisions, don’t apply emotion! Be honest and ask yourself if the person could still be alive and whether the firefighters available can enter and exit the situation alive. This is a matter of training and skills (remember all those drills where the attendance was disappointing?). Firefighters’ lives count on your making the correct decision.

The Indicators

Part of evaluating the overall operation includes certain warning signs and indicators that can assist the IC, the company officers, and the ISO. They are classified as “IC indicators,” “incident indicators,” and “personnel indicators.”

IC indicators. These following warning signs can indicate that the IC might lose or is losing control:

- The strategies and tactics selected do not meet the needs of the incident or, worse yet, the strategies were never identified; hence, there are no identified tactics to support the problem.
- Ineffective or “out of control” communications.
- There is no personnel accountability system in use. This includes a system that works with all mutual-aid companies.
- The span of control is greatly exceeded and the IC is overwhelmed.

- There is a lack of progress reports from the crews.
- The FIRE, not the IC, is in control of the incident.

Incident indicators. These warning signs include the following:

- Prolonged burn time.
- Extensive structural damage.
- The flow path has not been identified, there is a lack of coordinated venting, and convection is spreading the fire throughout the building.
- The floors are sagging, walls are bulging, and there is interior burn-through or collapse.
- Lightweight construction is compromised.
- There is excessive water in the building.
- Multiple floors are involved and not under control.
- Initial staff is overwhelmed by the incident.
- Structural components are compromised.

Personnel indicators. These warning signs include the following:

- A lack of training is apparent. The on-scene members are incapable of achieving the tactics that are achievable.
- There is not enough help, the members are fatigued, and they have to keep going.
- Weather has affected the crews.
- Companies are not maintaining crew integrity.

A competent IC must always be vigilant and watchful for these warning signs—even his own shortcomings—and be capable of anticipating what will go wrong if the conditions are not corrected.

The ISO

To help in the reduction of risk, assign a highly competent ISO. Unfortunately, this position has been used as a “semi-retirement” position; a “get him out of the way” position; or, worse yet, an “I don’t know what else to do with him” position. Those days are long over, and you must understand the position and why it is important.

An ISO is very different from a traditional safety officer. We have come to think of

safety officers as people running around telling firefighters to fix their gear, put their eye protection down, stop running, and so on. In contrast, the ISO assists the IC in managing the incident’s risks. He is a key component in the ICS.

On the fireground, an ISO must always be thinking, “What are the companies that are operating doing, and what should be happening?” This is a position of anticipation and authority. A competent ISO realizes that his position is proactive and that, by anticipating actions and expected results, he will assist keeping our life safety the number-one priority on the fireground. The ISO needs to know and understand NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications*, as well as be well-versed in the knowledge that makes an ISO different from a health and safety officer. Being certified as an ISO will help you increase your understanding of the job. At a minimum, the ISO must possess knowledge equal to if not greater than the IC.

The ISO has many responsibilities; first and foremost is to identify and analyze incident safety issues and work with the IC to set priorities. In other words, assess the risk. Knowing how to do this makes you a valuable consultant to the IC. Your job is not to tell the IC how to do his job or that he is doing a bad job. A competent ISO constantly interacts with the IC (face to face is preferable) with relevant information. To do this, the ISO must conduct his own 360° recon, if possible. The building “talks” to us, and we must listen to what it says.

The aspects of the ISO’s job follows:

- Operational safety. You’re not a “gear cop.” Chin straps, gloves, and the proper wearing of gear is the responsibility of the company officer.
- Conduct an independent size-up with anticipation. Remember, size-up is ongoing, so it must be constantly assessed.
- Ensure rehab is established and used. Your job is not to run rehab; the IC will assign the supervisor. (In many localities, rehab is set up automatically and operated by emergency medical services.)



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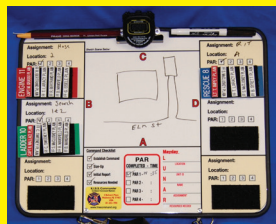
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- Ensure that a rapid intervention team (RIT) is in place.
- Watch out for fireground hazards, and advise the IC if any are discovered.
- Don't get caught up with the "small stuff." Focus on operational safety with anticipation.

To achieve each of these things, the ISO must know the IC's plan, which companies are committed, and those companies' tactical assignments. The use of a command board greatly assists in sharing this information. The ISO also needs to know building construction, how the fire will spread, and how the building might collapse. He must watch the building for stability, the smoke and fire situation, and the firefighters operating; these things will tell him a lot. Also, listen to the radio; it reveals a lot!

The ISO must be able to anticipate situations based on the tactics used. If what is expected is not happening, something bad could be about to happen; this is the type of advice and counsel the IC wants. The ISO must be a well-trained and experienced firefighter. The job is a key component of the ICS and an important partner to the IC.

The RIT

Always have a RIT staffed and ready to respond. Although a RIT is not actually a part of risk management, having one ready to respond could make a significant difference if things go bad. The RIT will allow you to be proactive in firefighter safety and survival. Some departments ignore the need for a RIT or its usefulness, but they are dead wrong. If your life were on the line, wouldn't you want a capable team available if you needed rescue?

If a RIT is a reality on your fireground, stop and assess its capabilities by asking the following three questions: (1) How confident are you of the firefighter survival and rescue training that your members have? (2) How confident are you that, if the need arises, they can make a credible, gallant effort to save the life of one of their own? (3) Would you, without hesitation, put your son's or daughter's life in their hands?

Next, look at your members' RIT capabilities by asking the following four

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questions: (1) What firefighter survival and rescue training did your department provide? (2) What are the survival skills that members have been taught, and what is the frequency of training? (3) How many members are trained in these skills? (4) What are the proper safety attitudes that have been instilled in the RIT?

The answers to these questions will assist you in preincident risk assessments and management. As a member of an organization that is much smaller than most urban departments, we typically respond with only a handful of firefighters (although the numbers vary by organization). On arrival, it is difficult to dedicate four members to the RIT; this is understandable to some degree. What is not understandable is when departments use the "lack of personnel" excuse to resist RIT training or even staff a RIT as soon as possible during the operation. Part of risk management is identifying and having the means to mitigate risk if it happens. A capable, staffed, and competent RIT is a useful tool if a firefighter is exposed to risk, gets in trouble, and must be rescued. Remember, if the member is in trouble, he has a limited air supply and needs help now.

Embrace different rapid intervention ideas for when you need a RIT. First, accept the fact that our small organizations cannot supply endless personnel; staffing is why we have mutual-aid agreements with surrounding towns and their fire departments. However, an agreement does not always mean quality or capable "help."

Rapid intervention needs consistency in the skill sets taught and in the training delivered. If every mutual-aid department has the same skill set and is dedicated to providing quality, capable (i.e., trained) help, then build RITs using members from different departments. Every member of every fire department who responds for mutual aid should be trained in the basics of RIT. If we cannot achieve this, then we are gambling that the risk of a member who gets in trouble and calls a Mayday will increase. Why? Because there will be no one on the fireground with the skills to help rescue the down firefighter. Rapid intervention

training is not a "do the skill, one and done" exercise; it needs to be ongoing. Keep those skills fresh, and the members staffing the crew need to be capable and high quality. Firefighters' lives depend on it!

Be proactive by calling a mutual-aid-dedicated RIT as an automatic add-on to every structure fire with an initial alarm. This may be different (i.e., a change) than the way you have always done it, but change in the fire service always brings resistance. Some resisted self-contained breathing apparatus, hoods, bunker pants, personal alert safety systems, and even motorized fire apparatus, but those who resisted were proven wrong.

As volunteers and on-call firefighters, we provide a critical service to our communities. We are under a moral and ethical obligation to our members to provide the training needed so that they are all capable, competent, and ready to save one of their own.

Not understanding risk management (or, worse yet, ignoring it) is like playing Russian Roulette with the lives of your firefighters. The ISO is a critical position that must be filled by a highly competent person. And having a capable and staffed RIT is not an option, especially when it is needed immediately. As an officer, you must understand risk management and how your actions and knowledge could be the difference between the life and death of a firefighter. ■

JOE NEDDER was an on-call firefighter in various departments for more than 36 years and has served in various ranks. He retired from the Uxbridge (MA) Fire Department in 2013. He has been involved in training for more than 27 years and instructed for the Massachusetts Firefighting Academy for 16 years and at FDIC from 2010 to 2018. Nedder has written for *Fire Engineering* and is the founder and lead instructor of Cross St. Associates, a fire service training company. He is also the author of *Rapid Intervention Crews* (Jones and Bartlett).

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Managing Risk in the Volunteer Fire Department, Part 1

RISK MANAGEMENT IS ONE OF THE most important yet frequently ignored “Foundation Stones of Knowledge” we must understand in our volunteer careers. How often have you seen firefighters taking risks that are not necessary? Firefighting is a risky and dangerous job, but it should be a *calculated* risk! As volunteers, we put a lot on the line every time we enter a burning building. If anything goes wrong and you die, what would happen to your family? Does your community have an insurance policy that would give death or survivor benefits consistent with what you earn in your full-time job? For most of us, the answer is no. Our families and survivors may have to depend on the generosity of the community.

I am not suggesting that we become so frightened that we hesitate to do our job, but we should calculate the risks we take based on solid information. You must compare the conditions you observe—and the risks they present—to the capabilities of the responding firefighters or those standing before you at the time. Do their capabilities match the immediate needs of the size-up? Are YOU truly prepared and ready?

Identifying Risk

As firefighters, risk is a part of our job. A competent incident commander (IC) should control the amount of risk to which the members operating at the scene are exposed. An IC (and company officer) must manage these risks while understanding the consequences of certain predictable acts that are a routine part of the job. For example, ordering horizontal ventilation *after* a company makes entry into the flow path in a pre-flashover condition could cause a flashover that overwhelms or kills the crew. Another would be assigning a company a tactic (such as fire attack) that it is incapable of achieving.

As you evaluate and identify risks, you will have to make decisions based

on facts. You are required to make decisions; it’s your job, and you cannot avoid it. Your decisions will drive your strategies and tactics. Remember, first you think; then you plan; and, finally, you act. The strategies are based on the problem before you. Your tactics are based on what you must do to solve (stop) it. Identify the hazards!

The decisions you make must be achievable, communicated, and understood; otherwise, most likely, the fire, not you, will be in control! Your decisions matter and affect the safety and lives of the firefighters operating on the scene.

The IC’s Risk Management Profile

Let’s look at risk management from the perspectives of the IC and the company officer. Some of the terms we hear regarding risk are “risk/benefit analysis,” “risk management,” “situational awareness,” and “survivability profile.” Each of these is different, but they are all components of risk management.

Risk/benefit analysis. Is the risk worth the benefit or the gain? We have been taught to “risk a lot to save a lot and risk a little to save a little.” Do you and your officers have the knowledge and capabilities to make this type of critical decision? “Risk a lot to save a lot” involves saving a life, whereas “risk a little to save a little” means the victim is dead. Also, “risk a little to save property not worth saving” indicates the property burning is beyond saving. So, do not risk your own life! These rules help you achieve calculated minimal risk and good, safe practices.

Risk management. This is clearly spelled out in numerous National Fire Protection Association (NFPA) standards including NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications*; and NFPA 1561, *Standard on*

Emergency Service Incident Management System and Command Safety. Within these various standards you will find statements such as, “Activities that pose a significant risk to members shall be limited to situations when there is a potential to save endangered lives” [NFPA 1500 8.3.2 (1), 2007 edition] and “Activities that are routinely employed to protect property shall be recognized as inherent risks to the safety of the members, and actions shall be taken to reduce or avoid these risks.” [NFPA 1500 8.3.2 (2), 2007 edition]

The NFPA goes on to state, “No risk to the safety of members shall be acceptable when there is no possibility to save lives or property” [NFPA 1500 8.3.2 (3), 2007 edition] and “In situations where risk to fire department members is excessive, activities shall be limited to defensive operations.” [NFPA 1500 8.3.2 (4), 2007 edition] As you read these words, think about what they mean. We should not be taking foolish risks to save a body or, worse, a building.

Risk management is a tool used in both preincident planning and on scene to evaluate and reduce firefighters’ exposure to injury, loss, or death.

Components of a Risk Management System

To better understand risk management and have a system that uses it, break it down into the following four steps:

1. Situational awareness (this step is ongoing and a part of a good size-up).
2. What are the dangers and risks, and how do they affect us?
3. How do you control or eliminate the dangers and risks identified, and how can you reduce the risk to the firefighters?
4. Ongoing evaluation of what is happening.

Situational awareness. Situational awareness is observing what is happening and what is changing and asking how those changes affect the plan and



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safety of the members operating. Every IC and company officer should observe the overall situation constantly when operating at an emergency scene. In addition, the company officer and every firefighter are expected to maintain a continual awareness of their company's assignment, the progress or lack thereof the company is experiencing, and the overall environmental situation in which they are operating. Current conditions will always change: They get better or they get worse! The company depends on the IC and its officer to observe the conditions and trusts that they have the skills and knowledge to understand what is happening around them. The ability to maintain situational awareness has saved countless firefighter lives.

The IC and the company officer must know and observe relevant information to keep the company safe; this includes understanding fire behavior and smoke. Observe the type of building construction and the occupancy of the structure. Observe what is going on around you, and ask the following questions:

- What are the fire conditions and the phase of the fire, and how and where is the fire spreading?
- What does the smoke tell you?
- Are the occupants in danger? If so, what is their likely condition, and where are they located within the structure?
- What is the communications situation? Is everyone on one frequency and able to talk to each other?
- Are you using the incident command system (ICS); making tactical decisions; and, if needed, assigning divisions, groups, and operational tasks?
- Is a rapid intervention team (RIT) assigned and on scene?
- What mode of attack are you using—offensive, defensive, or transitional? Is it effective and working?
- Are you trained to manage the incident, or is it beyond your capabilities? Lives depend on it!

The IC also needs to evaluate the personnel and equipment. He should know the current on-scene staffing level and if more help is needed and what equipment is needed and what is currently on scene. Review the on-scene personnel, and consider their level of training and if they are qualified and capable to do what is needed. Poor training is exposed quickly!

The Dangers and the Risks

Assess the danger and risks as part of your size-up, which should include a full 360° recon of the building, if possible; this will help avoid "surprises." Check how the building is constructed, if it is prone to rapid fire spread or collapse, its contents and fuel load, and if there are any occupancy hazards. A great example of this would be a hoarding situation. Do you know if it has lightweight construction such as trusses or wood I-beams; if so, how will the fire affect the building's structural integrity? Also, look at the smoke—what is it telling you? Do you understand the meaning of the smoke's volume, velocity, density, and color? Smoke is a key, ongoing observation from the brief initial report until extinguishment and overhaul are completed.



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to a safe and well-organized fireground. Consider the level of fireground experience and knowledge you possess to assist you in mitigating the dangers present.

These questions and answers are very important, so don't fool yourself or allow complacency to set in. Complacency has killed and injured many a firefighter!

Ensure your personnel are protected. Protecting your people means limiting or avoiding risk. Some ways to do this include the following:

- When initiating an interior attack, use the correct line size and nozzle configuration and ensure that you are flowing adequate gpm.
- Identify the flow path.
- The IC must coordinate and assign venting.
- Know whether your members are working under light-weight construction.

When you assign a company a task, you are—in essence—assigning risk. Make sure that the company can handle this assignment. The company must have a strong leader (the company officer), and the crew must be capable of handling the assignment. If it is not, transfer the assignment (risk) to a stronger, more capable company.

Make sure a competent, well-trained RIT is on scene. If it is en route, it is not there! Putting inept, unqualified people on a RIT to “meet” a standard is foolhardy and dangerous; if things go wrong, this could result in the loss of a firefighter's life.

If the structure is a high-hazard building, such as one made of lightweight construction, monitor the time the building has been burning, how long the lightweight structural members have been exposed to fire, and how long the crew has been in the building. Don't put crews under or on lightweight construction that is not protected or has been exposed to fire. If you must vent a truss roof, keep the company on an aerial device, not on the roof, when cutting the vent hole.

Know your construction and how the building might collapse, and keep the operation out of the collapse zone. If you have a high-hazard situation and no civilian life is endangered, stay out. Target and mark buildings that firefighters should never enter. ■

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