

# SPEAKING OF FIRE

FIRE PROTECTION PUBLICATIONS • OKLAHOMA STATE UNIVERSITY

A quarterly newsletter of Fire Protection Publications (Headquarters for IFSTA) Winter 2005-2006 Vol. 5 Number 4

## IFSTA Update

### Fire Detection and Suppression Systems

by Lynne Murnane

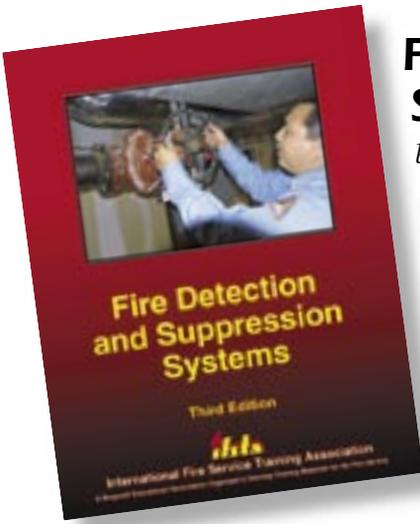
This third edition of **Fire Detection and Suppression Systems** (earlier editions were titled **Private Fire Protection and Detection**) is designed to provide up-to-date information on fire detection and suppression systems.

It is aimed at municipal firefighters, industrial fire protection personnel, and all others seeking additional information in this area. It contains information on automatic sprinkler systems, hose

standpipe systems, and fixed fire pump installations.

Portable fire extinguishers, fixed special agent extinguishing systems, and fire alarm and detection systems are addressed. Information on the design, operation, maintenance, and inspection of these systems and equipment is provided.

Fire detection and suppression systems are installed in a multitude of occupancies with an equal amount of personnel interested or responsible for them. These systems are installed to provide a means of notification to occupants or fire personnel and to initiate the earliest attempts to control or suppress the fire. These devices and equipment can be either manually operated or automatically operated. A key aspect of such devices and equipment is having *trained* personnel to rely on and to take appropriate action in the event of a fire emergency. **Fire Detection and Suppression Systems** is intended to be used as a teaching tool by fire service personnel as well as private industry.



Category	Level	Rating	Notes
Fire Detection	A	4	
Fire Suppression	B	4	
Fire Alarm	C	4	
Fire Standpipes	D	4	
Fire Pumps	K	4	



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## From the Director

### Val-i-date

#### To establish the soundness of; corroborate <sup>1</sup>

As a division of the College of Engineering, Architecture, and Technology at Oklahoma State University, we support the outreach mission of the university, a charge unique to land grant institutions. The other two “legs” of the land grant triangle that represent the mission of OSU as an academic institution are instruction and research. And in academic research, the concept and assurance of **validity** is paramount to the legitimacy of the findings of any study. So if you will allow me, in this issue let’s consider this column to be a “Research Design for Dummies” presentation (which makes me highly qualified) – information that may be new for some or a brief refresher for others (hang in there, there is a purpose to this overview later). In the meantime, grab a cup of coffee and log your time for the training officer.

There are certain “rules” or generally accepted standards that, if properly followed within the methodology of any study, establish the validity of research and consequently the legitimacy of the findings. Generally, there are two forms of validity – internal and external. Internal means that your research design adequately tests your hypothesis, or in simple terms, that you are truly measuring what you are purporting to measure. External relates to the degree to which your findings can be applied beyond the research setting (or sample) to the entire population. Within both there are a myriad of conditions, or “threats” to validity, that have to be accounted for in the research to ensure that the study is indeed valid.

Let’s look at a hypothetical example. A particular study might claim to establish a causal relationship between a firefighter’s educational level and his/her ability to score high on promotional exams. In other words, the hypothesis (the researcher’s assumption to be tested) is that the score a firefighter receives on a promotional exam will increase as the educational level of the firefighter increases (for you purists, we’ll discuss the null hypothesis later – worry about that for your professor, and while we’re here, stop putting off this week’s assignment!). A close examination of the validity of the design allows us to determine if all other possible variables (for example, individual training/certifications, test design, seniority points, IQ, individual mentoring, etc.) are accounted for (internal validity), and if the findings would be applicable to other fire departments beyond those in the study (external validity). Now while this example is oversimplified

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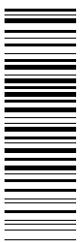


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(in fact it would most certainly cause my old methods professor to throw things at me), it serves the purpose to demonstrate the incredible detail that must be followed in order to best ensure that a study is valid. In the rigorous world of academic research, the lack of validity renders the findings questionable at best, and in reality they are seldom accepted by the academy (profession). And make no mistake, in the “real world,” including that of the fire service, validity is no less critical.

Now no doubt you are probably sitting at the station between runs and truck maintenance wondering what in the world this has to do with fire fighting. Well, nothing really more than just your safety and the ability to do your job! According to ISO 9000:2000, validation is defined as “Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled”.<sup>2</sup> Within our own profession, examples of organizations and formal processes - all aiming for validity - are all around you. The apparatus you ride on, the equipment you use, your protective clothing, all are (or should be!) designed and manufactured to meet NFPA technical standards. Likewise, most if not all of your certifications such as firefighter, fire officer, inspector, instructor, mechanic, etc. are based on training you received designed to be in compliance with NFPA professional qualifications standards. Similarly, most likely if you look at your certificates from those courses you will likely find a seal from either or both the ProBoard or IFSAC, indicating that those courses are accredited (another incredibly detailed program and a discussion for another day). Chief officers can receive designation through CFOD, there is a similar certification for safety officers, and even fire departments can receive accreditation through the Commission on Fire Accreditation International. The building and fire codes that you enforce, the OSHA and other health and safety guidelines that cover you, the higher educational degree programs that you and your peers are in, even the way that the pork chops in your oven were handled, all fall under processes that were designed to ensure validity of the use or application. These processes impact your career as a firefighter. As such, to ensure validity is to ultimately ensure your effectiveness and safety.

Now, go grab another cup and check the pork chops, because its time for our final quiz. We’ve looked at the concept of validation and its application within the fire service, so address these questions:

1. What constitutes validity in training materials?
2. Why is it important that the information in your training materials is validated?
3. What process is followed in your own training materials to ensure that the information presented is proper, effective and most importantly safe (i.e. internally valid)?
- 4a. If they are validated: Who oversees the process to ensure that is up-to-date and followed, and that the materials that are developed are appropriate for the fire service as a whole (i.e. external validity)?
- 4b. If they aren’t validated: How safe do you feel?

Want a hint to help with your answers? Go grab one of the “red books” on the shelf on the other side of the room (I mean THE red books, not just a red cover look-alike – if you don’t have one, answer 4b.). See the logo that says “IFSTA?” Bingo! There’s your answer!

*The International Fire Service Training Association (IFSTA) was established in 1934. The mission of IFSTA is to identify areas of need for training materials and foster the development and validation of training materials for the fire service and related areas. IFSTA is an association of fire service personnel who are dedicated to upgrading fire fighting techniques and safety through training.*<sup>3</sup>

Every year, literally hundreds of your peers from all types and sizes of fire service and related organizations from around the world spend countless hours of their own time, supported by their own resources, involved in the most detailed, organized, and intensive process for validating training materials. Even the way these committee participants are selected is designed to support the validity of the process by best ensuring that a true, representative sample of the service is selected (remember external validity?). Want to know another interesting fact about the level of detail in selection used to best ensure validity? Even the committee that is selected to review applications and determine who is selected to serve on working committees is selected through a process that supports the validity of the process! On the surface, this may appear to be going overboard, but this process was designed, and IFSTA guards it closely, because they know how

truly critical it is to the fire service. Now for some of you, this is not new information, but it is worth revisiting. For others, it’s no big deal to you in the whole scheme of things. But I can assure you, it should be a big deal to not only you but to *all* of us because *your* life and indeed the lives of those you serve depend on it!

We’ve talked before about how we at FPP and IFSTA guard and hold in such regard our work, the validation process, and the final products you use. Now you know why! You see why we say there is only one *Essentials*, because there is and it is IFSTA! You see why we say the only “red books” are IFSTA, because they are and they are IFSTA! OSU and countless thousands of other fire service professionals over the years have committed to a detailed, time consuming, and indeed costly system to best ensure the validity of your training materials. The goal is simple: making you better at what you do for your community and keeping you safe while you do it. We don’t do it because it’s easy or as a marketing ploy, we do it because *it’s the right thing to do!* That is our mission, and that’s the mission of OSU. And it is through OSU’s credibility and expertise, in partnership with the dedication and oversight of IFTSA, that the materials you get from us are indeed valid.

And this marks the end of today’s training session. Thanks for hanging in there with me! Maybe now you have a better understanding and appreciation for the importance of validation in all that you do, including in the training materials you select and use. You may also better understand our passion for IFSTA and the validation process, and why we jealously guard the integrity of the process, and indeed all that represents that effort including “Essentials” and “red books.” While we’re discussing it, why don’t you apply for an IFSTA committee and become a part of the validation process? We would be proud to have you just as we are proud to serve you. Be safe!

<sup>1</sup> The American Heritage Dictionary of the English Language (4<sup>th</sup> Ed.)

<sup>2</sup> International Organization for Standardization at [www.iso.org](http://www.iso.org)

<sup>3</sup> International Fire Service Training Association at [www.ifsta.org/html/overview.htm](http://www.ifsta.org/html/overview.htm)

Chris Neal, Director

*Chris Neal*

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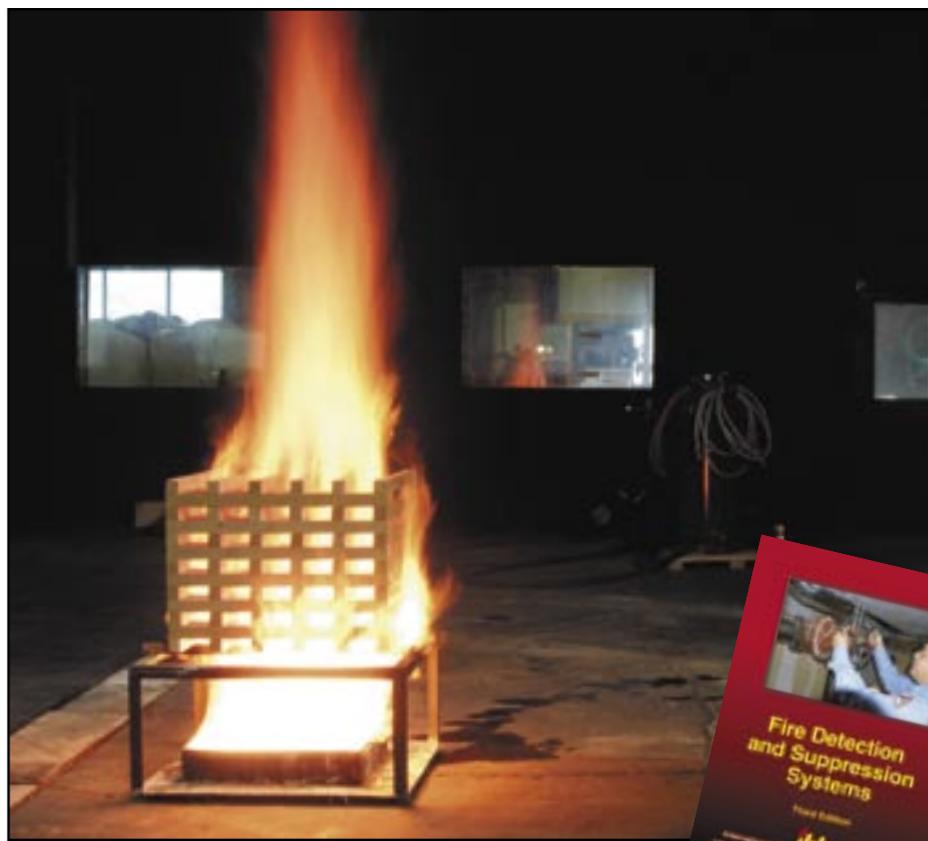
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## Fire Detection and Suppression



The manual reflects the recommendations of many agencies recognized by the vast majority of fire protection professionals to be the minimum standard. These agencies include the National Fire Protection Association (NFPA); Underwriters Laboratories; Factory Mutual, and other credible resources.

This manual is divided into seven chapters:

- Portable Extinguishers
- Detection and Signaling Systems
- Introduction to Water Supply
- Fire Pumps
- Standpipe and Hose Systems
- Sprinkler Systems
- Special Extinguishing Systems

Also included is a glossary at the end of the text and appendices that are designed to help the reader further understand testing, fire fighting, or administrative procedures related to fire detection equipment and systems.

### IFSTA Learning Objectives

Learning objectives have been developed for this manual. They are found at the beginning of each chapter and may be used by the readers to guide their study of the subjects addressed in those chapters.

### NFPA Standards

This manual addresses certain objectives related to these topics contained in the following National Fire Protection Association standards. An appendix at the end details the specific standards and the pages on which the information is included.

### FESHE Objectives

Portions of this manual address the objectives found in the National Fire Academy's Fire and Emergency Services Higher Education (FESHE) Fire Science Curriculum, *Fire Protection Systems* course. References to these objectives can be found at the beginning of the chapter in which they are discussed.

The most common of all fire protection devices is the portable fire extinguisher. Portable fire extinguishers are widely considered to be the most basic and first-line defense tool against an incipient fire emergency. Fire prevention and suppression personnel, as well as maintenance personnel, should have an intimate knowledge of the characteristics of the fuel burning and the application of the proper extinguishing agent. This manual covers the selection of the appropriate portable fire extinguisher for a given hazard, including the new Class K designation for commercial cooking equipment.

Fire detection and signaling systems are used to alert building occupants and/or organized fire protection units, and are also used to activate fire protection system components. Detection systems use some type of device that is sensitive to one or more products of combustion. These systems are especially important in isolated and/or high life hazard facilities where automatic sprinkler protection is not provided. With more emphasis being placed on early detection and standards requiring detectors to be installed in dwellings, it is becoming increasingly necessary for all fire service professionals to become well-versed in these devices and the various products of combustion that activate them.

Water Supply is a new chapter added to this manual. It is written with fire protection systems in mind, not water supply as it relates to fire apparatus. Both automatic sprinkler systems and standpipe systems are dependent on adequate supplies of water to be effective. An adequate supply of water is one that is sufficient in both volume and pressure. Chapter 3 discusses the principles of water pressure, water distribution, and waterflow analysis. Its content may be useful to fire suppression and prevention personnel, fire service instructors, and building representatives or owners.

Industrial fire pumps and their various applications are discussed in Chapter 4, addressing the three primary types of pumps and their use as either booster pumps or fire pumps. The chapter further covers pump drivers (the motor or engine), pump controllers (the control panel), and the many components and accessories commonly found in the field. A fire inspector, college instructor, or building official will find useful information on the subject of testing, inspection, and maintenance of industrial fire pumps as well as water supply requirements.

Although they cannot take the place of automatic sprinkler systems, standpipe and hose systems are designed to provide a quick and convenient means for operating fire streams on all levels of building construction. Depending on the type installed, the standpipe system may be used by firefighters, by building occupants, or by both. The chapter on standpipe systems will prepare the fire professional to recognize the state of readiness of the system as well as provide a basic understanding of the piping and fixtures involved.

Considered by many to be the premium line of defense against fires, automatic sprinkler systems in their basic form have been used for over 100 years. Their origins date back to the days of the large industrial mills in the northeastern United States during the Industrial Revolution. Chapter 6 of this manual discusses all common automatic sprinkler systems as well as recent innovations and recommendations to the systems.

Special-agent fixed-extinguishing systems are used in those situations where automatic water sprinkler systems are not desirable. In these instances, protection must still be provided safely and effectively. This can be accomplished by the use of carbon dioxide (CO<sub>2</sub>), halogenated agents or Halon substitutes, or dry-chemical fixed systems. This manual covers the applications of the most common special extinguishing agents and the advantages of their use.

Fire service professionals will find that the information in this manual will help to bring about a better understanding of fire detection and suppression system installations. Those personnel involved with fire protection management, safety, and maintenance should also be better able to understand the concern of the public fire services for proper maintenance of this equipment.

**The Fire Detection and Suppression Systems manual is \$42.00 (Item #36552).**

There is also a *Fire Detection and Suppression Systems Instructor Disc* that meets the objectives for the FESHE model curriculum outcomes for *Fire Protection Systems*. All of the files will be customizable to allow instructors to add their own information.

The disc has a user-friendly interface that allows instructors to select from a menu to select the appropriate component. Included for each chapter are:

- PowerPoint® Presentations
- Instructor Outlines
- Review Questions and Answers
- Test Questions and Answers



All of the files are customizable to allow instructors to add their own information.

**The Instructor Disc is \$50.00 (Item #36565).**

Lynne Murnane is a Senior Editor at Fire Protection Publications. 

# Fire Officer Coaching

By Riley Harvill, Ed.D.

The following story stems from a real incident. The names have been changed. This brief story illustrates but one type of incident requiring the skills of a coach, the kinds of skills found in the new book: *Fire Officer Coaching* by Fire Protection Publications.

The driver of the fuel truck fell asleep for a mere second; his head had barely nodded, but that's all it took to veer into the opposing lane of traffic. Eight thousand gallons of gasoline and five tons of truck slammed into three oncoming cars that ignited an explosion spewing burning sheets of fuel and metal across rush hour traffic. The ensuing inferno shot thick plumes of black smoke high in the air. Panicked drivers nearest the truck came to a screaming stop, threw their transmissions into reverse and crashed into the cars behind them. Horrified onlookers reported seeing two men bolt from their stranded vehicles, their jackets thrown over their heads as a protection from the rain of fire.

Some distance back, Pete Books jammed his foot on the brake pedal in response to the crash. Like any other day he had been listening to sports radio and snaking his way along on his way to work when it happened. He saw the orange and red fireball and caught a glimpse of a man running with his clothes on fire before two other men smothered the fire with makeshift blankets. The violence of the scene sent chills up Books' spine.

Although he was a full two hundred meters from the wreck there was no mistaking that several passengers were trapped in their burning cars. Books attempted to see through the curtain of smoke that rose like a dark specter from the wreckage but could glimpse no movement.

My God, he thought. They don't stand a chance.

Most of the motorists, who were a safe distance from the accident, flung open their doors, dialed 911, and stood goose-necking at the crash, but not Books. He bolted toward the wreckage, juking and hurdling cars the way he had as a halfback some twenty-five years ago all the while keeping his eyes fixed on the scene. One of the smaller cars was already imperceptible as a result of the inferno and the "head-on" with the big diesel. The wall of smoke became darker and thicker as it rose from under the ugly hoods and filled the air with the acrid smell of burning oil and rubber. The diesel fire sounded like the dull roar of a jet engine on ascent, although Books barely noticed. Spreading pools of oil and antifreeze formed little ponds that reflected the wreckage and billowing smoke. He didn't see those either. He was focused on one thing: getting people out alive. No doors were opening and no one was emerging.

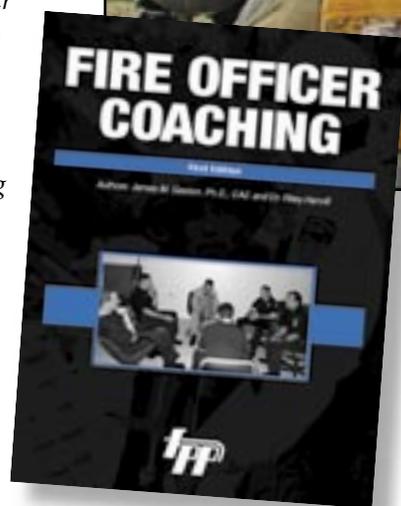
Sprinting as fast as his muscular frame could carry him, Books shot past a dozen people. "Everybody back!" he screamed. He saw what they didn't: gushing diesel from the opposite side fuel tank. But before he could shout his warning again, it ignited and all hell broke loose. The heat was immediate and unbearable and the gawkers tore from the scene. Books instinctively turned his back, dropped to his knees, and covered his face as flames spread up and over the truck. Within seconds, the entire pile-up was fully involved and no one short of God could have saved anyone inside the vehicles. Books was going to pay the price too if he didn't gain some distance from the inferno, but his instincts were hard-wired and not easily changed.

Got to save the driver, he thought. The other side! Get to the other side of the truck. Perhaps the heat is less there. Gotta move!

But one glance toward the cab told a horrible story. The truck driver was trapped inside the cab from jammed doors. His last visible act was to push against the window with his hands as the inside was engulfed. It was no use.



Photo courtesy Micah Hudlet



"No!" screamed Books as he rolled away from the heat. At fifty feet from the cherry-red and orange flames the temperature was over 1,000 degrees. Only when he was sufficiently out of the range of the heat did he turn to face the other vehicles and take inventory of the aftermath. The violence of the crash rendered the first impact car unrecognizable through the flames. Immediately behind it was a late-model Jaguar. It too was ablaze. But his attention fixed on the last of the three cars and his mind began to race because behind the Jaguar was a black Camry, completely destroyed, and with no visible sign of life. It too was completely engulfed.

Not only that, it was his car.

He stared in horror as his brain fought against the reality of the familiar license plate. He could only bury his face in his hands and cry as the distant mournful sound of an oncoming siren pierced the air.

Pete Books was a newly promoted fire officer and his family perished in that car. His grief was unimaginable.

In the weeks following the tragedy, Pete could barely drag himself to work. His depression was intolerable. Luckily Pete had a lot of friends within the department who helped him through it. But the incident impeded his ability to manage and supervise the firefighter/EMTs on his shift. He had difficulty making quick decisions and left the shift to tend to itself with little discipline, little direction, and even less leadership during emergencies.

When I got the call to help Pete through coaching, I knew that I had a tremendous responsibility on my hands. By all accounts, Pete was a great person and well-respected prior to the incident. Since then his reputation had taken a plunge and, after eighteen months, his shift personnel had serious doubts about his ability. The training chief received weekly complaints that included conflict within the shift as a division had cropped up within the shift between those who supported Pete and those who wished he could be ousted.

My job was to give Pete support and direction and build some specific skills that he could rely on even as his sadness ebbed and flowed. Coaching with Pete presented both the usual as well as the unusual challenges. By *usual* I mean that Pete was not performing very well. He needed to get better at supervising and leading people. This is similar for all of us at one time or another. For whatever reason—be it lack of knowledge or personality style differences, or a horrible incident like Pete's—we don't perform up to par. The coach must step in to be a mentor, a friend, a teacher, a supporter, a sort of mountain guide. The coach is sometimes easy-going and sometimes presses hard.

Coaching is both an opportunity and a risk. It is largely a teaching process. In this day and age it is both an obligation and a responsibility of leadership. Through coaching (in some ways similar to mentoring), the wisdom and experience of one person is passed to another. And coaching is not about fire fighting skills. It includes passing on and discussing principles, traditions, shared values, quality, and lessons learned. Coaching provides a framework to bring about an improvement in the way an individual or group performs in ways often outside fire fighting.

When I first met with Pete I had only one initial goal: to establish a relationship built on trust, nothing more. I asked him questions about his family and mostly listened. I offered him no advice unless he asked for it and he didn't ask for it much.

Only after establishing a good relationship with Pete did I ask him to set *stretch goals*. And only then did I ask him to take a personal style assessment so I could get a more accurate read on the strengths and challenges inherent to his style. I gave him homework assignments and helped him experience success in his leadership of his shift. I even *shadow coached* him by literally following him around and watching and listening to his interactions with his shift personnel. He became more assertive and started using the same skills on his shift personnel that I was using with him. He listened and rewarded his people and began to set specific goals for improving their work performance. Within four months the complaints had diminished and his people were supportive of his leadership.

Coaching is perhaps the most powerful method by which we can shape the future. The term has become a buzzword, often carelessly shot into the air along with a dust cloud of other jargon from the unofficial, unwritten dictionary of those who consider themselves the cutting edge of modern fire leadership and management. But real coaching, properly understood, is much more than just another clipping from last week's Dilbert cartoon. Without an in-depth study of coaching, the capacity of an individual to coach is limited to the horizons of their own experience. Thus, coaching is literally a time machine that allows us to have a profound influence many years beyond today's busy and ordinary activities. It is safe to say that, just as sure as you are a partner in the fire service *brotherhood and sisterhood*, coaching can make a significant difference in the lives of your "brothers" and "sisters" around you.

Coaching skills and the coaching process are important for anyone in a supervisory position. You don't have to have the label "coach" in order to use coaching skills. The main qualification is that the coach must possess some skill, knowledge, or ability beyond that of the client.

The primary non-academic qualification for coaches is the desire to see people break out of unproductive patterns, manage change, learn new skills, embrace new roles in response to change, and stretch into unfamiliar territory. As a coach, you are someone who does not ask your subordinates to do something you would not do. Rather, you are someone who consistently sets your own *stretch goals* and strives toward your own personal growth.

Through coaching an entire department gets "on the same page" and shares a common coaching language and approach to working together and solving problems, we see the following results:

- Leaders become more effective in their roles.
- More open and trusting relationships are formed.
- Interpersonal and organizational conflict is more quickly resolved.
- Teamwork and true collaboration become easier and expected.
- Learning is captured and shared across the team more willingly, thus reducing errors and cycle time.
- Creativity and innovation are unleashed and more energy is focused on solving customers' needs.
- Resistance to change is greatly reduced - more people actively support change initiatives because they are involved.
- Departmental values are revitalized and become meaningful.
- People receive the developmental time and attention they need in order to grow.
- The department becomes a better place to work and personnel consequently become more engaged in their work and in serving the mission of the department.
- People have more fun and turnover is reduced.

What is the value of these dynamics changing? Your department's bottom-line performance is directly improved and sustained through competitive advantage.

### What Are Examples Of The Kinds Of Challenges Coaches Face?

There are literally thousands of possible challenges coaches could face, in fact, as many challenges as there are people. Challenges can be those that require *remediation*, meaning that a behavior, action, or attitude has been designated as problematic and needs to be corrected, or *proactive*, meaning that the coaching is used to forestall a problem or build strength toward a targeted goal. Remedial coaching addresses inappropriate behavior, ineffective leadership, or recurring errors. Proactive coaching is often involved in preparing for leadership, learning a new position, preparing for a new product launch or leading an ad hoc team. Here are some additional examples:

- A person is promoted to a supervisory position yet has strictly a technical background, and must learn to manage people quickly.
- An older, experienced fire officer suddenly confronted with young firefighters just out of the academy, less than half the officer's age, must learn to supervise different generations of firefighters.
- Reorganization places a people-oriented, outgoing officer under the watchful scrutiny of a notoriously introverted and uptight chief. The officer must develop a relationship of mutual respect that will allow continued success.
- A driven, task-oriented officer gets feedback that her supervisory style is too harsh, cold, and aloof.

Firefighters are discouraged and quitting. How will she learn to lighten up and yet still get things done?

- A lateral move for a supervisor means getting acquainted with the idiosyncrasies and personalities of the staff. How can this be done and avoid delays in both personal and team effectiveness?
- A lieutenant's plate is full yet the battalion chief continues to give her more assignments. She must learn to delegate some of the tasks and oversee them to successful completion.
- The makeup of a department has changed due to retirements and new recruits. The supervisor must learn to manage conflict within generational differences.
- A veteran fire-fighter/EMT of twelve years has recently been promoted to lieutenant and now is in charge of former peers. His first performance evaluation was sub-par. His battalion chief said that his leadership skills are weak. A coach is brought in to help him create professional boundaries and exhibit stronger leadership.
- A lieutenant of a newly built substation is the consummate energetic leader. Typically, his energy is infectious around the station, but lately he has hit a snag as the municipality and department grows. He is frustrated that his staff doesn't share his enthusiasm and energetic spirit. "It's probably my own unrealistic expectations," he said. "But they wait around to be told what to do. We need a coach to come in and work with us."
- A chief of a large metropolitan department indicates that he has a battalion chief who is "a beast" when it comes to getting tasks accomplished. "That is his best quality," the chief says. "His weakness is that he is the same when it comes to interacting with people. I'm losing some awfully good employees and the turnover is costing a lot of money."

Today Pete Books is a battalion chief in a large suburban fire department. The other officers and chiefs say that he is an asset to the department and that his experiences have made him more compassionate and focused as a leader.

Riley Harvill is the founder of The HarBeck Company and The Leadership Institute for Fire Executives. Riley may be contacted at 214/363-6780.



The Fire Officer Coaching manual is \$45.00 (Item #36567)



## Why I Support the “Everyone Goes Home” Program and Firefighter Life Safety Initiatives (and Why You Should, Too)

By Bill Manning

In 2004, the **National Fallen Firefighters Foundation** kicked off its **Everyone goes**

**Home** program by assembling 200 fire service leaders and glitterati for an event called the Firefighter Life Safety Summit, with the purpose of developing a national plan for reducing firefighter line-of-duty deaths. I sensed, to my supreme annoyance, another “next big thing.” How would this love-in change anything? Didn’t we already have all the tools, all the lessons we could ever need? Hadn’t we already proven that prescriptive ivory tower strategies are no substitute for what must change at the local level and on the front lines, in hearts and minds? My skeptic meter was pinned in the red zone.

The last historic fire service gathering to have an impact on LODD reductions was the 1968 *America Burning* panel. However, since 1990, 99 firefighters on average have died each year in the line of duty (not including the 343 firefighters murdered on September 11, 2001). With 75 or more firefighter LODDs as of August 2005, sadly, it’s likely that this year won’t show a turnaround of any sort. Not only are we losing the equivalent of two firefighters a week: The majority of our losses, including heart attacks, are sustained while responding to fires, operating at fires, and returning from fires, which, when placed in the context of our overall declining number of fire incidents, means our death rates as a function of fire incidents are as high as they were in the late 1970s.

We’re on an LODD treadmill. Fifteen years of well-intentioned attempts to institutionalize firefighter safety through broad-based prescriptive measures have failed to push us past the 100-a-year threshold. It’s not inappropriate to parallel our situation with the aviation industry, whose leadership, several years back, realized that the world’s best regulations, standards, research, and technology weren’t preventing and, by themselves, couldn’t prevent aviation disasters. They came to the conclusion that performance- and attitude-based safety problems demand performance- and attitude-based safety solutions. At the core, it’s a people thing.

The first Firefighter Life Safety Summit produced nearly as many recommendations as there were participants. These were distilled into the **16 Life Safety Initiatives**. At face value, the Initiatives overall may appear to some as predictable, even banal. The Summit participants didn’t (and didn’t need to) reinvent the wheel. Moreover, the Initiatives should be subjected one-by-one to healthy discussion and debate; after all, they’re a jumping-off point and a guide, not the Word of God, as some might have it. Still, I’ve come to see the enormous potential of Everyone Goes Home. It’s the most promising nationally based safety program the fire service has rolled out in years, and fire departments and firefighters across America should embrace it and use it in ways that best fit local needs.

Here are 16 reasons why I support the **Everyone goes Home (EGH)** program and, as a whole, the **16 Life Safety Initiatives**:



Photo courtesy Rick Montemorra, Mesa Fire Department

1. *We need to change certain behaviors and attitudes*, and arrange our systems to support and evolve with these changes. Is there any doubt about the need?
2. *The mission is pure and simple*. The EGH name says it all.
3. *The vision is doable*. EGH takes its impetus from the United States Fire Administration’s goal of reducing LODDs by 25 percent in five years and by 50 percent in 10 years. Given the nature of our fatalities, that goal is not only thinkable but eminently doable.
4. *The NFFF is the right organization* to administer the program and lead the implementation effort. For one thing, it’s a natural fit for the NFFF, complementing and completing its mission. For another, NFFF is apolitical and fully representative, without fire service denomination. Its only agenda is to prevent firefighter LODDs, honor our fallen, and support LODD survivors.
5. *The entire representative and affiliated fire service community is behind EGH*. That’s powerful. When’s the last time the entire fire service got behind anything? If the FIRE Act is your answer, you’d be wrong—it was thirty-five years ago, with America Burning. Inviting representatives from virtually every corner of the fire service to forge the Firefighter Life Safety Summit plan was brilliant, forward-thinking salesmanship.
6. *It’s a campaign with the right message*. EGH is a national safety awareness campaign not unlike national public health campaigns such as anti-smoking, anti-drugs, and so forth. They work, so long as they project the right message, they’re financially sustainable, their message delivery is creative, and they’re supported by government and special interest sectors. EGH meets the four criteria. It’s a long-term, sustainable, “in your face” campaign, not a fad, phase, quick fix, or prescription, and that’s exciting.

7. *Its critical message is culture change*, which basically is the goal of any behavior-based campaign, the proven thinking being that people modify bad behaviors when the behaviors become culturally unacceptable. Of course, the words “culture change”-or worse, “tradition change,” as some would have it or read into it-give the willies to any defender of the proud firefighting tradition. Understandably so. Anyone claiming a need to change fire service tradition either had better bring some intellectual honesty to the process or seriously soul-search as to why they got into this business in the first place. Firefighters dying at emergencies is *not* a tradition (nor can it be, by definition), but the sad result of continual human



### CFSI Release

On April 6, 2006, the Congressional Fire Services Institute (CFSI) will host the 18<sup>th</sup> Annual National Fire and Emergency Services Dinner and Seminars at the Hilton Washington in Washington, DC. It is an extraordinary day of opportunities to engage Congressional leaders and Administration officials in discussions with fire service leaders about federal programs and legislation addressing the needs of first responders. On behalf of CFSI and the Congressional Fire Service Caucus, we invite you to attend and share in this unique experience. To register for the dinner and seminars or for more details, please visit the CFSI website at [www.cfsi.org](http://www.cfsi.org), or call the CFSI office at (202) 371-1277.

failures and bad behaviors before and/or during encounters with danger. Tradition isn't the reason firefighters drive recklessly or don't buckle up. It's not the reason for physical unfitnes for the job, or for poor training or under-resourcing or poor fireground management. However, a culture of carelessness and irresponsibility and ignorance is the LODD breeding ground, which leads to the assumption (mistaken for tradition) that the military concept of acceptable losses applies to the fire service, that it's all "just part of the job." It's the culture of irresponsibility, with all its manifestations, that must change to a culture of safety running in parallel with our fine fire traditions.

8. *Its critical "change tools" are personal responsibility and group accountability.* Without them, it's like having no oars to row the safety culture boat to shore. Can we honestly admit there's been an LODD where we didn't fail in our responsibility or accountability, at some level, top to bottom? Our near misses and tragic outcomes are replete with examples. It's time for our leadership to become responsible for and accountable to its membership, and time for the membership to lead by the same values, in return, from the bottom up.

9. *Line-of-duty injury reduction is inherent to the program.* A concerned chief asked, "Why are we spending so much time and effort on 100 dead brothers and sisters when we should be focusing on 10,000 seriously injured brothers and sisters who have to live through the pain of not only the injury, but not being on the job anymore?" Ah, grasshopper! The behaviors or failures that contribute to our LODDs and those that contribute to the vast majority of our line-of-duty injuries are one in the same. Reduce LODDs and we'll reduce our injuries, by extension.

10. *It doesn't change the rules of engagement.* And why should it? Effectiveness equals safety....Know what I mean?

11. *It doesn't add more rules.* At least, that doesn't appear to be the primary intent. We pretty much have all the "rule tools" we could ever need or want. What we need, and what EGH promotes, is to make rule enforcement part of the culture of responsibility and accountability.

12. *It asks for better risk management systems, education, and training.* The fire service must learn to better manage risks before, during, and after the incident. For a long time, the prevailing attitude has been to confine risk management concepts and applications to the offices of "safety geeks" who fail to grasp "the real fire service." Others have equated risk management with rules of engagement, falling far short of the intent and the mark. Still others see risk management as a brass-oriented substitute for a thinking, safety-conscious membership. Frankly, it's downright shameful that, in a business as hazardous as fire fighting, so many organizations have failed to embrace and integrate risk management concepts into organizational policies applied as a way of life throughout all aspects of the operation—from prevention to training to return to quarters and everything in between.

13. *It promotes a zero-tolerance philosophy.* Appropriately, EGH steals a page from corporate America's safety book: All injuries and deaths are preventable. And that's the right approach, if we're serious about changing. Ever hear a so-called professional instructor say, "We only had six training injuries (today, this month, this year—insert time period)"? I have. That attitude's unthinkable in the corporate emergency response world and it should be unthinkable in the American fire service. It doesn't mean we won't have injuries, but it means they're unacceptable to our way of thinking and our culture. Resigned acceptance is just as bad as a so-called cowboy mentality, and we just can't stand for it.

14. *It establishes a platform for interface and dialogue,* encouraging a shared approach to the problem. In this way, EGH is a "living, breathing" roadmap to success.

15. *It takes a holistic approach to the problem.* Many or most of our nationally based safety efforts are disjointed or unorganized, and they've been hit-or-miss. EGH combines multilevel solutions into a unified campaign approach. Most important, it promotes a holistic remedy, not just isolated treatments of symptoms.

16. *It's the right thing to do.* Ya gotta believe!

These 16 reasons turned this skeptic around. They're why I support **Everyone Goes Home** and why you should, too. Is EGH evolving? Yes. Does it need work? Maybe. Could we debate it? Definitely. But this program represents a long-range vision and a refreshing and promising approach to remedying what ails the fire service at its core, with its bottom line being something everyone can live with.

*Bill Manning is a principal of Anderson Manning Media Group, a communications company specializing in fire service events, publications, and audio-visual media. His 17 years of fire service experience include 15 years as editor in chief of Fire Engineering magazine and 10 years as conference director of the Fire Department Instructors Conference. Bill Manning is contracted by the NFFF to be the Communications Manager for the NFFF FLSI Program.*



## RS06: Call for Papers

### An Invitation...An Opportunity to Make a Difference

Research Symposium (RS06) will be held July 8, 2006, at the Renaissance Hotel in Tulsa, Oklahoma. This event is held each year on the Saturday before the beginning of the International Fire Service Training Association (IFSTA) Validation Conference.

The Research Symposium supports the refereed scholarly journal entitled *International*

*Fire Service Journal of Leadership and Management (IFSJLM)*. Oklahoma State University, the International Fire Service Training Association, and Fire Protection Publications publish the journal.

The theme of RS06 is: **Reducing Firefighter Line of Duty Deaths and Injuries (LODD & I)...The Role of Leadership and Management.** We invite individuals who would like to present research on this topic to submit no later than

February 1, 2006, a one-page paper proposal electronically to [englanr@okstate.edu](mailto:englanr@okstate.edu) or by regular mail to:

Dr. Robert England  
Department of Political Science  
Oklahoma State University, 531 Math Sciences  
Stillwater, Oklahoma 74078

The proposal should clearly specify the research thesis, scope, and methods.

If the proposal is accepted, the expectation is that a 15- to 30-page original (not previously presented or published) paper will be prepared for the symposium. In the morning session, up to 8 paper presenters will have approximately **20-30 minutes** to summarize their research to panel members. After lunch a panel of experts will offer comments on the research in relation to the national effort currently underway to reduce firefighter line of duty deaths and injuries.

Following the research symposium, all papers will be posted on the *IFSJLM* website. In addition, all papers will be submitted for peer review and a symposium issue of the *International Fire Service Journal of Leadership and Management* will be devoted to the topic.

No registration fee is required to attend the research event, but all costs associated with attending RS06 are the responsibility of the attendee. A continental breakfast and lunch will be provided for panel participants.

For further information visit us on the web at [www.ifsjlm.org](http://www.ifsjlm.org) or call Bob England at 405-744-9665.

# Florida Law Adopts NFPA 1403 for All Live-Fire Training

Motivated by the deaths of three firefighters in two separate live-fire training incidents, the Florida State Fire Marshal's office successfully gained legislative support for a bill designed to mandate safe live-fire training. On June 1, 2005, Governor Jeb Bush signed HB 69 into law as the Lt. John Mickel and Dallas Begg Act, effective January 1, 2007. The act is named for two Ocala County firefighters who died in a training incident in 2002.

The Mickel/Begg Act mandates that NFPA 1403, *Standard on Live Fire Training Evolutions* (2002), must be complied with at all live-fire exercises. Live-fire facilities must meet NFPA 1403 requirements before any live-fire training. Live-fire training must occur at state-certified training centers (including burn buildings and props) that are compliant with NFPA 1403 and NFPA 1402, *Guide to Building Fire Service Training Centers* (2002). Acquired structures must also be NFPA 1403 compliant. Additional requirements include using thermal imaging, ensuring prop maintenance and safety, using Class A burn props, establishing a rapid intervention team (RIT) during training, ensuring the ability for fast prop venting, and ensuring NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program* (2002), compliance.

Beginning January 1, 2007, a certified live-fire instructor must be present at all live-fire training events. A 40-hour certification program for live-fire instructor (Level I instructor prerequisite) will begin in July 2005. To certify, instructors must pass a pretest by 80 percent and a final posttest by 100 percent (mastery). Unfortunately, this Act does not apply to industrial fire brigade training (NFPA 600, *Standard on Industrial Fire Brigades*, 2005). Virginia also has begun a NFPA 1403 compliance-training program for instructors.

For additional information on the process used to initiate the legislation, contact Elias "Buck" Tomlinson, Instructor, State Fire Marshal, Bureau of Fire Standards and Training, at 352.369.2845. For information on the certification program, contact Jeremy Donovan, Director, or George Mullins, Program Manager, Central Florida Fire Academy, at 407.855.3281. Information on the two training incidents may be found on the Centers for Disease Control (National Institute for Occupational Safety and Health [NIOSH]) web site under Mickel/Begg and Port Everglades (Wayne Mitchell).

The enactment of this law is an example of how the fire service can influence the legislative process for the improvement of firefighter safety. It should be a model for other states, provinces, or local authorities as a means for preventing unnecessary fatalities and injuries.



## Safety Alert

### Safety Alert: Reinforced Wallboard

By Carl Goodson

Empirical tests conducted by Firefighter/Paramedic Sean Murphy and other members of the Roberts Park (IL) Fire Protection District produced some dramatic results. National Gypsum donated the reinforced wallboard for these tests but did not participate in the testing. While the wallboard reinforced with 10 mil Lexan® was found to be relatively easy to breach with ordinary forcible entry tools, that with 80 mil backing was extremely difficult to breach with hand tools. Striking tools such as sledge hammers were completely ineffective in breaching Hi-Impact® 8000 wallboard. Cutting tools, such as the pickhead axe and the Halligan, were far more effective. Even so, the firefighters in these tests required dozens of blows to the Hi-Impact® 8000 to create a hole large enough for a firefighter to crawl through. If firefighters have to breach a wall covered in reinforced wallboard to escape a life-threatening fire situation, the implications are obvious.

This is where "The Ol' Professor's" advice comes in. The best way for firefighters to prepare themselves to deal with these breach-resistant walls is to know that they are there and take the most effective tools with them when they go inside. Since finished reinforced wallboard looks exactly like any other wallboard, it must be identified before it is finished. This can be accomplished in two ways. First, when reinforced wallboard is specified in construction plans, the plans examiner should notify the fire department having jurisdiction. Secondly, firefighters should not rely totally on notification by the plans examiners and should conduct pre-incident familiarization inspections of all buildings under construction in their area of responsibility. In addition, the existence of reinforced wallboard should be prominently noted on any pre-incident plan for that particular building or occupancy.

According to David Drummond of National Gypsum, reinforced wallboard costs more than twenty times as much as conventional gypsum wallboard. This fact will tend to limit the installation of these materials to occupancies where there is a greater than average need for security and damage prevention, such as hallways and other public access areas in the types of facilities mentioned earlier.

So, the words of "The Ol' Professor" are as true as ever, "The building is your enemy – know your enemy."

**Note:** Free copies of the reports and a videotape of the testing conducted by the Roberts Park (IL) Fire Protection District can be obtained from [ffmurf792@aol.com](mailto:ffmurf792@aol.com)

### FPP On The Road\*

**Fire Rescue East**  
Jacksonville, FL  
January 27-28, 2006

**Firehouse World**  
San Diego, CA  
February 21-23, 2006

**Texas Fire Chief and Educators Conference**  
Austin, TX  
March 15-16, 2006

**Congressional Fire Service Institute Dinner**  
Washington D.C.  
April 6, 2006

**FDIC**  
Indianapolis, IN  
April 27-29, 2006

\*Please note that show dates may be subject to change.