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# UFRA *Straight Tip*

Utah Fire and Rescue Academy Magazine



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# Emergency Apparatus Driving Simulator (EADS)



Simulation training is rapidly becoming the benchmark in advanced technology training. The Utah Fire & Rescue Academy Emergency Apparatus Driving Simulator (EADS) program creates real-world experiences that allow drivers to perfect their skills by employing a variety of challenging scenarios and emergency situations. Students will learn a wide range of skills, from basic vehicle operations to more advanced scenario-based driver training. During simulation, drivers will encounter realistic driving situations, including changing weather, day and night driving, various road conditions, emergency procedures, and traffic conflicts.

The EADS is comprised of two driving simulators housed within a 53' mobile classroom; this allows departments across Utah to access this valuable training. Driver training should be considered a vital part of any department's training program. EADS is designed to provide or enhance emergency driver training programs. Stop by and visit the EADS during Winter Fire School in St. George, Utah, January 2015.

Stay Safe...

*photography by Candice Rich*

# FROM THE DIRECTOR



A few pieces of information that I thought you may find interesting:

## **Budget**

The 2014 legislative session provided needed funding for UFRA. With support from the Fire Prevention Board, the Standards and

Training Council, and the State Fire Marshal's Office, UFRA received both one-time and ongoing money. The one-time money will be used to replace a semi truck and tilt-deck trailer, purchase a mobile air compressor, and purchase one of two Emergency Apparatus Driving Simulators (EADS). The State Fire Marshal picked up the "tab" on the second EADS...thanks Coy. The ongoing money to our budget will help pay for adjustments to salaries, cost increases for health care benefits, and the operation of the two EADS.

## **Company Officer Inspection Course**

A new core course is being developed for company officers needing or wanting fire inspection training and certification. Most career company officers have supervisory roles in their departments' business fire inspection program, and as a result some officer candidates have been required to certify as Fire Inspector I in order to be eligible for promotion. UFRA has received feedback from students and instructors that

the current Fire Inspector I course is too in-depth for company officers and a new course is needed that specifically addresses the needs of company officers. Company Officer Inspector is being developed as a blended course, which as you know has both an on-line and a traditional classroom component. Hopefully, if embraced by Utah fire chiefs, this blended course will save students time in the classroom while preparing them for promotion, save department's budgets by reducing overtime, and preserve the sanity of our instructors. Look for pilot testing in the fall of 2015.

## **Training Prop Update**

The first of two Emergency Apparatus Driving Simulator (EADS) props should have arrived at UFRA by August 1, 2014. Final assembly will then take place followed by the finishing touches of the curriculum and the train-the-trainer. Pilot courses should take place in October and November with the official roll out being at Winter Fire School 2015. Talk with your program managers for more information about the course. The second EADS should go into service during late spring of 2015.

The new fire investigator prop has been completed and the curriculum updated. The course will be pilot tested this summer and ready for delivery in the fall of 2014. The burn options in the prop have been expanded and will give the instructors more flexibility in the types of burns they can present to students.

## **Command Training Center (CTC)**

### **— Volunteer Tactics**

Look for a new tactics course specifically targeting volunteer fire departments working with limited resources. This will be an adaptation of CTC-Phase I and will provide a more realistic tactical training experience for smaller departments. Expect pilot testing in the summer of 2015.

## **Command Training Center — MAYDAY**

Can your worst day at work also be your best day at work? It can if you're ready! No doubt, the event that creates more sleepless nights for command officers is a MAYDAY. We've all seen the nightmare videos,



# UFRA *Straight Tip*

## DEPARTMENTS

heard the nightmare audio, and thanked the good lord that it was not us managing the incident. Although we spend countless hours training our firefighters on how to perform a MAYDAY rescue, when's the last time your department provided realistic training for the folks that will manage it? A new CTC course under development will allow departments to exercise their MAYDAY policy at the strategic level and prepare command officers for an event we hope will never occur. Firefighters should be encouraging their fire chiefs to provide this training for command officers. The life those officers save by changing their worst day at work into their best day may be yours!

### New Strategic Plan

One last thing is the creation of a new Strategic Plan for UFRA. The current plan expires in 2015, and the new plan will go through 2021. As we begin the process of creating the plan, many of our "stakeholders" will be asked to assist in creating the vision of UFRA's future. If any of our *Straight Tip* readers have ideas regarding this plan, please pass those ideas on to your department's program manager. Thanks and stay safe.

Hugh



**Hugh Connor** was hired by the Orem Fire Department in 1979 where he worked for 27 years. He served as a Firefighter/Paramedic, Engineer, Lieutenant, Captain, and Battalion Chief. Hugh has worked at the Utah Fire and Rescue Academy since 2005.

- 2 - 6 THE COMMAND POST
- 12 VIEW FROM THE HILL
- 13 BATTALION CHIEF
- 16 SCIENCE ON SCENE
- 22 DEPARTMENT IN FOCUS
- 33 CLIMBING THE LADDER
- 34 BACK TO BASICS
- 44 ACADEMICS

ARE YOU READY? .....	7
FIRE OFFICER COMMAND REFRESHER ...	10
FIRE TACTICS .....	14
A TALE OF TWO FIRES .....	18
TECH RESCUE .....	26
COMMANDERS IN TURNOUT GEAR.....	30
THE IMPORTANCE OF FEEDBACK .....	38
LEADERSHIP .....	42

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# FROM THE STATE FIRE MARSHAL

At the recent National Association of State Fire Marshals Conference, I spent some time with representatives of the Insurance Services Office (ISO). Though you may or may not have heard of ISO, it is a three-letter acronym that many fire chiefs don't want to hear. For many, many years, ISO has sent out representatives to review the effectiveness and efficiency of the fire service in a given municipality and/or geographic area. ISO mainly looks at three areas of service: water supply, dispatch, and the fire department. Based upon their site visit and review of all pertinent records, ISO would assign to the municipality and/or region a ranking between one and ten. Insurance providers would then decide how premiums and insurance rates would be charged based on the ISO rating, known as the Public Protection Classification (PPC). The new PPC rating schedule became effective on 01 July 2014, so it is very new and some insurance ratings may change by the end of the year based on any updated review by ISO representatives.

For those of you who are also protecting unincorporated areas, ISO has developed a "Split Classification." If, for example, your municipal rating was a 4 and the more rural areas surrounding your city/town had a rating of 9',

the more rural area would have had a rating of 4/9. The first number is the class that applies to properties within 5 street miles of the responding fire station and within 1,000 feet of a creditable water supply. The second number is the class that applies to properties within 5 street miles of a fire station but beyond 1,000 feet of a creditable water supply. The new classification rating would now be 4/4X.

They have also introduced a new water class, that of 10W. This classification is property specific. Typically this classification will include properties that are less than 7 miles from a fire station but still within 1,000 feet of a creditable water supply.

What are the benefits of the revised split class designations? To the fire service, the revised designations identify enhanced fire suppression capabilities used throughout the fire protection area. To the community, the new classes reward a community's fire suppression efforts by showing a more reflective designation. To the individual property owner, the revisions offer the potential for decreased property insurance premiums.

ISO has also been putting together a final report for each community that has a review completed under the new rating system. It is titled "Community Fire Service Performance Review – Structural Fire Protection." This report contains an executive summary and over 20 data figures that compare communities with similar demographics. It also indicates specific areas of review that can be tagged with any of the following: strong performance; trending negative; room for improvement; average performance; etc. If your department would like more information about



ISO's new PPC system or information about your rating, please contact ISO at 1-800-444-4554 or email them at [PPC-Cust-Serv@iso.com](mailto:PPC-Cust-Serv@iso.com).

Thanks for all you do to protect your community and the citizens of our great state.

Coy

**Coy D. Porter** retired from Provo Fire & Rescue after 30 years of service; he then worked for almost four years as the Assistant Director of Training at UFRA. Porter enjoys his association with the firefighters of Utah in his position as State Fire Marshal.

## MESSAGE FROM THE EDITOR

by Candice Rich

Though it is sad to see Andrea Hossley step down from her position with the Utah Fire and Rescue Academy, I am honored to step in to ensure that the *Straight Tip* magazine continues on.

A little bit about me: I have been an employee of the Utah Fire and Rescue Academy for more than three years and have worked with Andrea on the *Straight Tip* Editorial Committee throughout that entire time. Working with this magazine for the past few years has given me the opportunity to learn a great deal about the fire service industry, and I eagerly look forward to learning much more as I take on this new role within UFRA.

Thank you all for your dedicated interest and commitment! It is because of each and every one of you that *Straight Tip* has been and will continue to be a success.

# UFRA *Straight Tip*

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### **Disclaimer:**

The opinions expressed in the *UFRA Straight Tip* are those of the authors and may not be construed as those of the staff or management of the *UFRA Straight Tip*, Utah Fire & Rescue Academy, or Utah Valley University.

### **On the Cover:**

Photography by Phil Ah You, taken at UFRA's 2013 Winter Fire School.

# Message from Utah State Fire Chiefs Association

## *It's about Family Camaraderie*



The fire service is constantly changing. Change is inevitable in any profession; it's how we embrace the change that makes a difference. There are few professions in which people depend so heavily on one another, both physically

and emotionally. We rely on each other even when we are not in an emergency situation. Many of our closest friends are those we work with; we are always there for each other, and we never forget the experiences we have shared. Recently our department family endured an untimely death of one of our captains, Andy Walkingshaw. It devastated our organization, all who knew him, and those who he affected. The outpouring of love and support from the fire service

was incredible, almost overwhelming; the calls of support didn't stop. The family received the same outpouring. The service was amazing; the support, attendance, and professionalism of the fire service family were impressive to say the least.

It is that caring, support, dependability, acceptance, and love for one another that creates this brotherhood/sisterhood. As with the effort required in a marriage, friendship, or family, it is important that we make the effort to keep this firefighter family intact. We must accept each other for who and what we are; we are not all the same nor should we be. It is irritating when I hear how things aren't the same as they used to be—how people are more distant now and into their own lives. As mentioned earlier, change is inevitable. We should accept it and embrace it. We must see past how we think things should be and support what they are.

The fire service is a great profession, no matter what our involvement, our position, or our hours (full time, part time, or volunteer); it is a service that defines us, even long after we are gone. Be proud of this camaraderie. Always work to make it what we want it to be: a family that we share worldwide.

**Gil Rodriguez** has worked for Murray City Fire Department for 30 years. Rodriguez is originally from Los Angeles, California. He attended college at Southern Utah University, and upon graduation he moved back to Los Angeles, where he taught for three years. He moved to the Salt Lake area in 1981, where he taught for three years at South High School before getting hired by Murray City Fire Department in 1984.





# ARE YOU READY?

*photography by Russell Young*

## Vehicle Extrication Training and Experience

Due to the increase in the number of vehicles traveling the roadways, vehicle extrication has become one of the most frequent types of rescue performed by firefighters.

Many extrication incidents firefighters respond to require simple, straightforward techniques such as forcing a door open; however, other incidents can be more challenging and can significantly test a firefighter's skill and knowledge.

When firefighters possess the skills received through quality training and employ solid teamwork, even the most difficult extrication can be completed safely and efficiently.

Vehicle incidents that involve major damage and complicated entrapments are very challenging and may require a

combination of several techniques, procedures, and skills and a variety of tools to free the vehicle occupants. Since every incident will be different and every entrapment unique, firefighters must be able to adapt to and overcome each specific challenge.

With vehicle technology changing daily, the need for an aggressive, comprehensive extrication training program within departments is imperative.

The natural influx of new and inexperienced firefighters entering the fire service requires every department to provide quality training by experienced instructors. For

*continued on next page*



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many of the recruits, experience working with extrication tools and equipment is minimal, usually limited to a short class during their basic fire academy. To be truly prepared, they will require formal training on the various types of tools, vehicle anatomy, scene safety, stabilization, extrication procedures, and crew management. In effective vehicle extrication situations, firefighters must have the ability to modify, adapt, change, or combine procedures. They must possess a broad knowledge base, skill, mechanical abilities, complete comprehension of extrication procedures, and a working knowledge of vehicle anatomy.

Without properly trained personnel, a set of expensive rescue tools on your apparatus are useless. Because of other department demands and training, most firefighters don't get the hands-on "tool time" that they need to be as profi-

cient as they should be. Company officers and department training officers must recognize the importance of getting a balance of classroom and hands-on extrication training for all members that are required to respond to extrication incidents.

Hands-on training is the best way to learn and practice skills (old and new) and ensure that your tools and equipment can complete the required operations. Practice extrication techniques and skills as often as possible. Set up simulated incidents: place a vehicle on top of another, place them on their sides and on their tops, use rescue dummies as victims, simulate a leaking fuel tank or a downed power line, practice in inclement weather. The goal is to keep the training realistic and interesting. Try performing a standard skill (remove a door, remove a B-post, remove a roof)



# GREEN RIVER REGIONAL FIRE SCHOOL

by Raleigh Bunch

with different tools than you normally use. I had a team complete a B-Post Blow Out using a reciprocating saw, pipe wrench, hallagan tool, and come-a-long.

The best time to find out that you forgot or have never done a certain skill or that a tool has a mechanical problem is during training, not on the emergency scene. Recurrent training, practice, and continuing education are the only way you can keep up with the constant changes in vehicle construction, extrication tool development, and the safety needs of the rescuers.

It is imperative that firefighters develop the mechanical knowledge, skills, and abilities that are necessary to adapt to the challenges and complexities of a vehicle crash involving trapped victims.

Train like you will perform; ensure you have the experience and skills to provide a safe, professional rescue. Your training and experience can make the difference in a life or death situation. . . So, are you ready?



**Russell Young** is a Captain and assistant Training Officer for the Orem Fire Division where he is responsible for extrication and ambulance driving operations. Young has 19 years of experience in fire and emergency medical service and is an instructor and certification tester for UFRA.



Green River hosted a regional fire school for Emery County that included members from Castle Dale, Cleveland, Huntington, Elmo, Orangeville, Feron, Emery, and Moab fire departments. The training included two days of live fire, search and rescue, and extrication.



# Fire Officer Command Refresher: Questions to Ask Yourself before Managing an Incident Part I

As a current or future fire officer, you may find yourself having to manage an incident, either as the first arriving apparatus officer or as the first arriving chief officer. By the time you find yourself in this situation, it is critical that you have spent countless hours preparing for any type of incident you may be faced with. Though nothing makes up for real experience, spending lots of time preparing and practicing can help.

Whether you are preparing for an upcoming promotional exam or just want to be the best fire officer you can be, it takes a lot of hard work and practice to be great fire officer—one who everyone looks up to, emulates, and respects.

*Asking critical questions in advance, in a comfortable setting without stress, allows you all the time in the world to properly research answers or come up with viable alternative answers to the questions.*

Take a look at any fire department, and it is rare if the majority of fire officers are dialed in and highly respected when it comes to managing incidents, especially those occasional significant and complex incidents that challenge the first arriving officer. I don't mean to be disrespectful; I'm just drawing from my repeated experience.

I continuously strive for respect and credibility through my actions and words, though I'm not perfect by any means. I know that it takes a lot of practice and preparation to be a great fire officer, which is why I feel it is important for a fire officer to be able to answer a number of critical questions prior to actual incidents. That incident that actually challenges you may be rare, but at least when it happens, proper preparation can increase your chances for success.

Asking critical questions in advance, in a comfortable setting without stress, allows you all the time in the world to properly research answers or come up with viable alternative answers to the questions.

Some of the more common questions I encourage current and future fire officers to have answered in advance include:

- Does my department have expectations (Standard Operating Guidelines/Procedures [SOGs/SOPs]) for every type of incident?
- Do I know my department's expectations (SOGs/SOPs) for every type of incident?
- Do I practice using my department's expectations for every type of incident? It's one thing to have SOGs or SOPs; it's another to practice with them to see if they actually work or if they need modification.
- Do I know my supervisor's expectations for every type of incident?
- Do my personnel know my expectations for every type of incident? Don't be one of those officers that just "wings it" or says, "Let's play it by ear; I like to call audibles." There is a reason sports teams have playbooks: to ensure everyone is on the same page.
- What Personal Protective Equipment (PPE) will I direct my personnel (in advance) to wear for different incidents? I realize that you

shouldn't necessarily have to direct personnel to wear specific PPE and that they should realize what is appropriate on their own. However, there are times when you may have to guide them in the right direction, especially when they are tired or they tell you they're not going to put on their turnouts or don their SCBA to investigate "just another routine commercial fire alarm sounding." As we have learned from history, routine can lead to complacency, which gets us in trouble.

- If we are out and about and we are dispatched to a response requiring PPE, do I direct the driver to stop so we can put on our gear or do we all do it at the incident? There are pros and cons of both, but I'm a fan of stopping in a safe position to get fully dressed before responding. Doing this ensures personnel don't get dressed while driving (meaning they're not wearing their seat belts) and don't get dressed upon arrival. If it is a serious situation, having to get dressed in a rush under stress can lead to delays, shortcuts, and errors.
- What apparatus are dispatched to every type of incident I may respond to (EMS responses, vehicle accidents, structure fire, wildland fires, haz mat, confined space, etc.)?
- How many personnel are on each of those apparatus? Knowing how many personnel can allow you to properly assign tasks, as well as know the limitations and capabilities of the apparatus.
- What types of resources do neighboring fire departments have to offer via automatic and/or mutual aid?
- If my neighboring fire departments don't have specialty apparatus for certain incidents, how do I go about requesting those resources? Don't assume your dispatchers know where to find every type of resource you may be requesting.
- How many personnel are on those neighboring resources? You may staff three on an apparatus, but if your neighbors staff two or one, it can change your assignments and expectations of what they can and cannot do.
- Do I know what every key is used for on the apparatus key ring? Better to figure it out in a calm environment as opposed to three in the morning in a stressful situation when all eyes are on you to find that key.

- Do I know what every radio frequency is used for?
- Do I know the advantages and disadvantages of each radio frequency? Some frequencies are stronger than others; better to find out while training as opposed to the real deal.
- Do I know how to fully operate each radio on board the apparatus?
- What is the process for requesting mutual aid, and how long does it take to activate? Depending on your dispatching capabilities, mutual aid could take five to ten minutes just to process, before those other wheels are rolling. It's always better to call early; you can always turn them around.

The next issue will contain additional suggestions to improve command presence.



**Steve Prziborowski** has over 20 years of fire service experience. He is currently serving as a deputy chief for the Santa Clara County (Los Gatos, CA) Fire Department, where he has served since 1995.

Since 1993, he has taught fire technology classes at the Chabot College Fire Technology Program (Hayward, CA). Steve is a former president of the Northern California Training Officers Association, was the 2008 Ed Bent, California Fire Instructor of the year, and is a state-certified chief officer and master instructor. He has earned a master's degree in emergency services administration and has completed the Executive Fire Officer Program at the National Fire Academy.

Steve is contributing editor to Firehouse.com and FireNuggets.com, is a regular speaker at fire departments and fire service events across the country, and has authored over 100 articles in all of the leading fire service publications.

Steve is the author of three books: "How to Excel at Fire Department Promotional Exams," "Reach for the Firefighter Badge! How to Master the Fire Department Entry-Level Testing Process," and "The Future Firefighter's Preparation Guide: Be the Best Firefighter Candidate You Can Be!"

# VIEW FROM THE HILL

## WILDLAND POLICY

During the 2014 legislative session, several discussions took place relating to wildfire policy. Utah Division of Forestry, Fire & State Lands legislative staff and a few key legislators discussed some needed changes, and it was decided that rather than pursue the policy changes during the 2014 session, all parties could collaborate in the coming year and come up with a refined set of legislation that would enable the State of Utah

to more safely and efficiently manage wildfire on a broad scale. The proposed changes include a broad spectrum of policy shifts that would redefine how wildfire suppression is paid for and how county and local government agreements are structured.

The changes would also introduce several new policies aimed at engaging the general public in prevention and mitigation efforts.

Here is an outline of the key goals:

- The State of Utah will assume wildland fire suppression costs on all lands other than federal, in order to lower the overall cost to counties and cities.
- Implement cooperative agreements for initial attack and local wildland firefighting capacity, with built-in incentives to maintain the capability and commitment by local governments to prepare for, and respond to, wildland fire.
- Provide individual state income tax incentives for hazardous fuel mitigation on private land and for firewise structure modifications.
- Formalize and implement Community Wildfire Protection Plans (CWPPs) through local legislative bodies.
- Adopt a state Wildland Urban Interface Code upheld by the state legislature and local government.

Efforts are now underway to gather input through the Utah League of Cities and Towns, the Utah Assn. of Counties, and other organizations to achieve consensus on specific policies and legislation to reach the goals.

**Jason Curry** is the PIO, Fire Investigator and Law Enforcement Officer for Utah Forestry, Fire & State Lands.

# Battalion Chief:

## When and How to Document

It's easy to list a few traits chief officers have in common: They worked hard at moving through the ranks and have earned their position. Inversely, one trait most chief officers lack is the innate desire to document important events and conversations. Part of the reason many don't document important moments early on in their tenure as chief is that they are unsure what is considered an important event. Sometimes seemingly innocuous conversation becomes valuable months or even years down the road.

The notes and documents you make on those you supervise will serve as a work history that has potential to help both the employee and the organization. Imagine you are the new supervisor for a group of captains. What would you like to know about the people you will now supervise? You may want to know of past expectations given to them. Maybe the previous supervisor made agreements to provide assistance in an area of the subordinate's development or work. Or maybe the subordinate had been instructed about a needed area of improvement. Too often in the fire service not much of a written record follows employees from supervisor to supervisor. Without a written record, opportunities for improvement and development are often lost and efforts are likely duplicated.

Chief officers should create a journal of sorts detailing information that may be needed in the future. Some items that should be documented, though this is far from an inclusive list, includes:

- Any conversation with a captain where a clear expectation was delivered.
- All verbal warnings or reprimands.
- Coaching or mentoring sessions. Appropriate personal notes should be documented.
- Employee performance notes. These may list areas of particular strengths and/or weaknesses.

Poor documentation can be as big a liability as no documentation at all. Be sure to document conversations with detail and clarity, and include any information that may be helpful in the future. When writing, be certain to remove all emotion or inflammatory verbiage. Avoid emotion-based terms like failure, amazing, wonderful, or inadequate. Stick to the facts. Judge your documentation by asking, is it clear, is it fair, and is the reasoning sound? Only write what you wouldn't second guess should the document end up in a more public arena. Read and reread your documentation and then email it to yourself. One way of digital safe keeping is to create subfolders in your email account using the employee's last name as the title. This makes an easy-to-retrieve format to manage these notes.

As upper level management, chiefs are put in an arena where documentation may be scrutinized. Be sure to support your documentation with clear evidence void of subjective opinions. The fire service has learned much about proper documentation, but lots of room for improvement remains. Too frequently a battalion chief receives a new assignment overseeing an entirely new group of individuals. If an employee record is not passed on to the new chief, much—if not all—of the newly supervised group's work history is lost. You owe it to yourself and to the new supervising chief to create and maintain this work history so the new supervising chief can hit the ground running.



**Paul Hewitt** began his career as an Orem City reserve firefighter in 1987. After 20 years with the Salt Lake City Fire Department he served as a Fire Chief in Arizona before

his 2011 appointment to Fire Chief of the Park City Fire District.

# FIRE TACTICS – FIGHTING FIRES IN ATTACHED GARAGES

At the Utah Fire and Rescue Academy Command Training Center (CTC), instructors acknowledge that the course will primarily be centered on strategy; tactics will only be discussed when it involves firefighter safety or a direct action that could be detrimental to the fireground operation. One tactical scenario that we as instructors discuss involves fighting fires in attached garages.

As fighting fires in attached garages is a very common structure fire problem, it is imperative that fire departments prepare, train, and even develop a standard operating guideline for such scenarios. Here are a few tactical considerations when faced with an attached garage fire:

*Garages are typically the store-room for many people. Along with the potential vehicle fire hazards, you may deal with a large amount of very hazardous materials. Expect stored fuels, pesticides, insecticides, and potential heavy fire load.*

## Know Where the Fire is

The arriving company officer will need to determine if the fire only involves the garage area and its contents. A technique to verify this would be to observe the smoke conditions combined with a 360-degree walk around. A forward-thinking company officer will probably get a good view of the Alpha, Bravo, and Delta sides of a house as the team pulls on scene past the structure, leaving room for the first arriving truck company (AKA “big tool box”). All

that would be required to finish the observations is a quick look to the Charlie side to get a good read on the structure.

A garage fire that has already extended into the living area of the house or into the attic space will require a different set of tactical considerations. In this article we will focus on a fire that is contained in the garage and the “built in” protection afforded by the building codes (such as a solid core door and 1/2" sheetrock for the 20 minute rating or 5/8" of sheetrock separating habitable space above the garage). One must understand that there is potential for rapid attic extension if any attic access in the garage has been compromised through modification, such as a pull down ladder.

## Begin the Fire Attack with a “Two Line” Approach

As the fire attack begins, one must think of this as a fire with an exposure potential. The first attack line must be placed into the garage area, either through an outside man door or window or by breaching the roll-up (or slab) door. There are various techniques for breaching, and I would recommend specific hands-on training related to those techniques. Make sure your attack line has sufficient GPM to overcome the BTUs. This may entail a 2 1/2" hoseline or at least 1 3/4", depending on the amount of fire. I personally have had great success using a deck gun on a heavily involved garage fire without extension into the living area. This tactic gives plenty of GPM for a quick knockdown... as long as you follow my rule of thumb: “Fire showing? Lay a supply line!” The second hoseline must be in place as soon as possible to protect the man door and prohibit ex-



*photography  
courtesy of  
Layton Fire  
Department*

## Thank you, Smiths Detection!

The Utah Fire and Rescue Academy recently completed a comprehensive update of the Hazardous Materials Technician (HM Tech) curriculum. The revised curriculum ensures continued compliance with NFPA 472, 2013 edition.

The update also included a significant investment in new equipment. Students attending the HM Tech program will now be trained using the most current technologies in monitoring and detection.

We want to extend a sincere thank you and our appreciation to Andy Saks and his team at Smiths Detection for their generous donation of a HazMatID 360. The addition of this equipment will provide our students with invaluable hands-on training using FT-IR (Fourier-transform infrared) technology that was otherwise cost prohibitive, for more info see <http://www.smithsdetection.com/technologies/fourier-transform-infrared-spectroscopy.html>. The commitment of Smiths Detection to ensure responders are trained to the highest level provides a direct benefit to UFRA, our students, first responders, and the public.

Thanks again, Smiths Detection!



photography and article by Ryan Peterson

tension. If there is any concern that the fire has involved the attic space, it is imperative to pull ceiling to check the attic. I like the idea of poking an inspection hole at the end of a hallway leading to the garage space. I can then work my way with my hoseline toward the garage man door and check a second time with an inspection poke just outside the door. The poke will provide minimal damage, and crews should consider the early use of a salvage cover just under the inspection area.

### Pressurize and Protect the Man Door

As mentioned above, the second line inside is crucial and takes advantage of positive pressure ventilation to keep any smoke that may seep around the doorframe from entering the living area.

### Remember the Myriad of Contents You are Dealing with (fire load)

Garages are typically the storeroom for many people. Along with the potential vehicle fire hazards, you may deal with a large amount of very hazardous materials. Expect stored fuels, pesticides, insecticides, and potential heavy fire load.



**Kevin Ward** is a 37-year fire service veteran, having been the fire chief for Layton City since 2004. Prior to this appointment, Chief Ward progressed through the ranks from

firefighter/paramedic to battalion chief with the Chandler Fire Department in Arizona. He holds several NWCG qualifications, such as ICT3 and Structure Protection Specialist, and is an instructor for the Utah Fire & Rescue Academy. Chief Ward has been an instructor for UFRA's Command Training Center since its inception.

# SCIENCE ON SCENE: SMOKE ALARM EVOLUTION

Since the theme of this year's Fire Prevention Week is *Working Smoke Alarms Save Lives: Test Yours Every Month*, we'll look at some science and technology surrounding them.

The first smoke detector was created by Swiss physicist Walter Jaeger by accident in the late 1930s. He was trying to develop an ionization detector for poison gas.<sup>1</sup> When his test failed, he lit a cigarette next to his apparatus and the detector registered a drop in voltage. From this unlikely beginning, modern smoke alarms evolved. It wasn't until 1971 that the first commercially available ionization smoke alarm for home use went on the market for \$125. During the next 5 years technological advancements, including solid-state circuitry, helped reduce the cost, size, and increase the reliability of units, and in 1976, building codes began to require smoke alarm installation in new residences. By 1980, half of all American homes had at least one alarm. By 1984, estimates showed more than 75 percent had the life-saving devices.<sup>2</sup>

Sadly, people kept dying in home fires and too many fatal fire scenes were found with alarms that had either dead batteries or batteries that had been removed. The invention

of affordable lithium battery alarms in 1995 helped the dead battery situation; nevertheless, false alarms because of burning toast or other non-hazardous situations still resulted in disconnections.<sup>3</sup>

Another problem that cost lives has been the insidious effects of carbon monoxide from fire or defective gas heaters and appliances. Recent code changes require the installation of CO detectors in homes. This has been great for safety but has resulted in numerous calls to fire departments for CO alarms that are not really emergencies.

The evolution of alarms from ionization to photoelectric to carbon monoxide has undoubtedly been the most important life safety progressions in the history of fire protection and has paralleled the computer revolution. It should come as no big surprise that two former Apple computer engineers and their company Nest Labs have invented the next big thing: a smart detector that does more than just make a big noise.

The \$99 Nest Protect smoke & CO alarm features a multicolored light ring which is color coded to indicate different operations, such as yellow to indicate an early warning or red if an alarm is sounding. The ring also has a motion detector, which turns it white briefly when someone passes under to provide illumination. The Nest Protect is voice enabled and warns of an alarm before it actually verbally alarms. It is also able to communicate with the Nest Thermostat to provide the Auto-Away feature information or that someone is present in the house, as well as to shut off the furnace in the event of a fire or carbon monoxide.<sup>4</sup>



photography by Steve Lutz

A great feature is that, via Wi-Fi, the Nest Protect connects with other Nest Protects. It also signals your Android or iOS device to let you know there's a problem wherever you are. It also communicates with LIFX smart led lights to flash red in case of fire to light your way to safety and let responders and people outside the home know that there's a problem. The device constantly self tests and sends real-time status to your mobile device.

First Alert is another example of a company that has both smoke and CO alarms that interconnect and can communicate with you remotely. They require separate interfaces to do so.

Apple's Steve Jobs had a vision of devices connecting many aspects of your life, including you, your home, your vehicle, your computers, and your stuff to have all of them working together for convenience, efficiency, and safety. His legacy lives on. Through it, even more lives can be saved with a new generation of smart detectors and alarms.

- 
- <sup>1</sup> "Fact Sheet on Smoke Detectors." United States Nuclear Regulatory Commission. 4 September 2013. <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/smoke-detectors.html>
  - <sup>2</sup> "Smoke Detectors." [http://en.wikipedia.org/wiki/Smoke\\_detector](http://en.wikipedia.org/wiki/Smoke_detector)
  - <sup>3</sup> "Smoke Detectors." [http://en.wikipedia.org/wiki/Smoke\\_detector](http://en.wikipedia.org/wiki/Smoke_detector)
  - <sup>4</sup> "Nest Labs." [http://en.wikipedia.org/wiki/Nest\\_Labs](http://en.wikipedia.org/wiki/Nest_Labs)



**Steve Lutz** has spent the last 38 years working in the fire service as a firefighter, fire chief, instructor, Public Safety Director and currently as an Assistant Director at the Utah Fire & Rescue Academy.

# New Process for Administering Written Examinations

by Lori Howes

In July the Certification Office began piloting a new, innovative way to prepare written examinations for candidates. After a positive evaluation period, the process will be fully implemented by September 1<sup>st</sup>.

The process is as follows: When a candidate arrives at the scheduled exam, the certification tester will hand the candidate a pre-assembled packet containing a written exam, scantron, and scratch paper. The front of the packet will have the candidate's name. The back of the packet will be sealed with a "to be opened by candidate only" seal. When instructed by the certification tester, the candidate will open the packet and proceed as directed. I believe this process will be easier for our certification testers and the candidates and will further ensure test security and the integrity of the testing process.

A few procedural items to note:

- The candidate listed on the packet is the only person authorized to open the packet.
- When the candidate has finished the exam, he or she will put all the documents back in the provided envelope, seal it closed, and return the envelope to the tester.
- A candidate showing up to take an exam that was not on the submitted roster and does not have a packet will not be allowed to test. Candidates will not be allowed to use another candidate's packet, even if there is a "no show."
- Departments will need to ensure they have submitted a complete and accurate roster of all candidates taking the exam. This list must arrive in the certification office no later than 10 days prior to the exam.

If you have any questions, comments, concerns, or even suggestions to share about the new process, please contact Lori Howes at [lhowes@uvu.edu](mailto:lhowes@uvu.edu) or by phone at (801) 863-7752.

# A Tale of Two Fires

For some time now I have been advocating a “big water-fast” tactic for fires in light-weight apartment complex structures that result from an external or balcony ignition. Many of us protect these structures in our response area. Let me describe what I am talking about: These structures can have six to thirty-six apartment units in them. Stairwell breezeways are common, as well as partially enclosed stairways and totally open, self-supported exterior stairs. These structures range from two to four stories in height. Often the first floor sits four feet below grade, especially if the building has three occupied floors. Most often the structure is covered with a wood truss gable or hip roof, creating a common combustible attic void above the top floor. Each apartment has a small exterior balcony. Many of these structures are lightweight wood frame and have been constructed since the early 1970s.

There are two common types of fire behavior we experience based on the location of the ignition. If the ignition occurs inside the apartment, the fire is most often contained to the unit of origin. (This is true if we are notified in time and arrive and get water on the fire before it breaks out of the apartment.) The other common location is an external ignition on apartment balconies. These external fires spread very quickly, actually explosively, and involve multiple apartments. Let me use real-life examples to illustrate my point. The examples I will use in this article are based on two fires that occurred in the same apartment complex:

In the **first fire**, the occupants of a second-floor apartment (in a three-story apartment building) had been staining some wood furniture. They were running short on time and were in a hurry to finish the project. Once done they threw the stain-soaked rags they had been using into the laundry room and left the apartment. At some point the rags ignited (internal ignition). The fire spread to a laundry basket and other combustibles in the room. The door to the laundry room was open, allowing smoke and flame to flow into the apartment. The fire progressed across the ceiling into the living room and down the hall toward the kitchen and bedrooms. Draperies in the front room ignited and dropped onto furniture. Plastic fixtures began to melt and drip onto the floor and furnishings. The fire continued to develop and spread. The thermal layer was dropping ever lower. Ventilation for the fire was becoming limited.

Other occupants in the building noticed the smoke and reported the fire. Crews arrived to light smoke filling the stairwell and no visible flame. The 1¾ inch hose line was stretched to the apartment door, and the door was forced. The crew was confronted with high heat and dense smoke. The nozzle was advanced into the apartment and darkened



photography by Stephen Higgs

down the visible fire. The apartment was vented, and a primary search conducted. Overhaul was started to check for extension.

Firefighters verified that the exposed apartments were evacuated and checked for extension. A back-up hose line was stretched in the event it was needed. The exposed apartments were also pressurized with blowers.

The laundry room was gutted out, and the living room and kitchen were heavily damaged from the fire. The hallway paint was blistered and the thermal demarcation line was a couple of feet above the floor. The bathroom and bedrooms

had significant heat and smoke damage. However, there was no extension beyond the apartment of origin. The windows had stayed intact, not allowing flame to continue outside. This was really a textbook fire that required an aggressive interior attack to control and extinguish. Damage was estimated at \$200,000. Occupants in the adjoining apartments were able to quickly re-occupy their units.

The **second fire** started on a second-floor balcony (external ignition). The apartment occupants had been smoking on their balcony in the evening. Early in the morning, while the occupants were sleeping, loud popping noises woke up a male occupant, and he noticed a glow through the

blinds. He stepped to the window and was shocked to see the balcony fully engulfed in flames. He quickly awakened two other occupants. As they were fleeing, the sliding glass door leading to the balcony shattered and flames began to extend into the apartment. The flames had also traveled vertically to the third-floor balcony, and the sliding glass door to that apartment was failing, allowing the fire to spread into the third-floor apartment. Flames had already burned through the roof soffit and were now extending into the truss void.



*Continued on next page*



*Continued from previous page*

*photography by Stephen Higgs*

As the occupants entered the stairway outside of the apartment, they encountered smoke and flames spreading into the stairwell. The occupants of the second-floor apartment told investigators, “We barely made it out. The fire was moving so quickly, and we could hardly breathe.” Initial arriving firefighters were confronted with a large, fast-spreading exterior fire front. Flames had taken both the second- and third-floor balconies and extended into both apartments as the glass sliders failed. The flames in the attic void were already burning through the roof deck above the apartments. The flames had also spread horizontally involving the stairwell, making it impossible for second- and third-floor occupants from the adjoining apartments to exit. These occupants were on their balconies requiring rescue using ladders. The fast-moving fire front was also threatening their exterior balcony positions.

Faced with these conditions, the firefighters stretched an exterior 2½ inch hose line with solid stream nozzle and placed the nozzle in alignment with the stairwell. With the line loaded, they directed the water into the stairwell. While this action was underway, ground ladders were placed to access the balconies, and occupants were rescued. A second 2½ inch hose line with solid stream nozzle was stretched and positioned in alignment with the involved apartment balconies. This fire stream was first directed

into the second-floor apartment, then raised to the third floor, and then directed into the roof void through the soffit and ceiling of the third-floor apartment. The actions of these two hose streams blunted the vertical and horizontal spread of the fire front and knocked down the majority of fire showing. Flames were still active in the attic void. Firefighters extended 1¾ inch hose lines into the third-floor exposed apartments on both sides of the stairwell and adjacent backing apartments. These firefighters conducted a primary search and then began to pull ceiling in order to extinguish the fire in the attic void. Firefighters were also entering the second-floor exposed apartments to complete primary searches and check for extension. Firefighters were sent to the roof to complete defensive ventilation to limit the horizontal spread of fire in the attic void. These efforts proved successful, and the fire damage was limited to the initial involved apartments with extensive fire and smoke damage to several of the exposed units. The first-floor apartments suffered primarily water damage.

The initial 2½ inch nozzle placement stopped the horizontal and vertical spread of the fire in the stairwell and kept the fire out of the apartments on the opposite side of the stairwell. The 1¾ inch line taken to the third-floor exposed apartment (adjoining the involved units) was able to control and extinguish the fire extending in the attic void. The

second 2½ inch line placement extinguished the majority of fire in both of the involved units. Firefighters utilizing 1¾ inch hose lines were able to enter these units and complete extinguishment and overhaul.

The cause of the fire was ruled to be smoking materials on the balcony. Damage was estimated at over one million dollars.

What difference resulted from the external ignition? How did the fire behavior affect the tactics used to control and extinguish the fire? The first fire was extinguished with a single 1¾ inch hose line and first alarm resources. The second fire required six hose lines and three alarms with special call units. Do you understand the potential of an external ignition? Are you ready to modify your tactics when on arrival you are faced with a rapidly spreading exterior and interior fire? What will be required to get ahead of the fire?

Initially using exterior 2½ inch hose equipped with solid stream nozzles is required to blunt the rapid fire spread, protect exposed occupants and apartments, and knock the fire down to size, buying precious time to affect rescues and get firefighters into positions ahead of the fire to cut it off. Using a 1¾ inch hose with control nozzles will not be effective. These lines do not pack the punch (gallons per minute) and reach required.

What size of solid-stream nozzle should be utilized? The most effective flows will be generated from 1⅝ or 1¾ inch nozzles. These tips provide flows of 250 to 325 gallons-per-minute (GPM) respectively. These flows are achieved at 50 psi nozzle pressure. The effective reach of these streams is 50 feet. These flows and reach are not attainable from control nozzles and/or small diameter lines. If the nozzles are pumped at higher pressures the GPM and effective reach will increase. If, for example, nozzle pressures are increased, the 1⅝ inch tip can flow 300 GPM or more depending on staffing and circumstance. The 1¾ inch tip will flow up to 400 GPM. These lines can be placed and operated by one or two firefighters and remain very mobile, especially when compared to utilizing supposed light-weight blitz monitors.

This initial action frees other firefighters to conduct search and rescue and extend hose lines into exposed units

and cut off the spread of the fire. It frees firefighters to get to the roof and complete ventilation openings to limit the horizontal spread in the attic void. This tactic buys precious time. If the fire is allowed to burn while interior lines are stretched, it will be too little, too late.

This “big water—fast” tactic is not unique to this type of apartment fire. This tactic can be effective at a number of fires where we are confronted with a large volume of fire. I have seen successful use of this tactic at numerous apartment fires. I have also witnessed the devastating results of not using the “big water—fast” tactic. Without this tactic, we lose more real estate, risk lives, burn roofs off, and are generally not as effective as we should be.

Try it out and see for yourself. Train on this tactic before you are confronted with the need. If you are prepared, it will all fall into place for you!



**Stephen H. Higgs** serves as an assistant chief with the UFA. Higgs holds degrees in building construction and fire science, has completed Executive Fire Officer Course work at the NFA and is a graduate of the Senior Executives in State and Local Government, Harvard University, John F. Kennedy School of Government. He is a FEMA certified emergency manager as well as an adjunct instructor for UFRA.





## DEPARTMENT IN FOCUS

# BRIGHAM CITY FIRE DEPARTMENT

by Maggie Nawyn

### Services, Territory, and Training

Brigham City Fire Department (BCFD) is located in Box Elder County, Northwest Utah. BCFD and ambulances serve Brigham City's 18,149 residents and also offer mutual aid to every town in Box Elder County and parts of Cache County. Our department offers structural fire suppression, ambulance services, urban interface/countywide wildland, and tech rescue. Our tech rescue certifications include high angle rope rescue, confined space/trench rescue, and structure collapse. Our firefighters have trained all over the United States with notable people such as Mike Ulibarri and John O'Connell.

### History

Brigham City Volunteer Fire Department was established on June 2, 1892, with Heber C. Boden as fire chief.

Boden was in charge of two companies: Hook and Ladder Company and Hose Company. Each company was comprised of men who were trained in the company's associated specialty. The Hose Company had a two-wheeled hose cart, which was pulled using man power. The Hook and Ladder Company needed a dedicated set of horses but didn't have any horses to pull their large load of firefighting equipment. Therefore, when the fire bell rang out from city hall, the volunteer members would rush to respond from their homes or businesses, and along the way any members who were fortunate enough to pass a set of horses would have to commandeer them to assist with transporting the necessary equipment.

### Fleet

In 1918 the city purchased its first engine: a 1917 American LaFrance chemical engine, with a soda/acid tank to build water pressure rapidly. This

engine, after many hours of tedious work, has been refurbished with gold leaf and chrome by the Firemen's Association and is in excellent parade condition. Brigham City has always kept its department's equipment in optimum working order. BCFD's current fleet includes:

- 1938 Engine, American LaFrance (owned by the Firemen's Association)
- 1948 Engine, Mack Model 85 (owned by the Firemen's Association)
- 1963 Engine, Mack (owned by the Firemen's Association)
- 1980 Ladder/Engine, Pierce Tele-Squirt—"Squirt" 50 and 1000 gpm waterous pump
- 1993 Pierce Dash Engine—top mid-mount controls and 1500 gpm waterous pump
- 1996 Pierce Saber Engine, quick response rescue—750 gpm waterous pump





- 2002 Pierce Dash Engine—top mid-mounted controls and 2000 gpm waterous pump
- 2007 Pierce Arrow XT Engine/Ladder—100 ft platform and 2000 gpm waterous pump
- 2009 Mobile Command Unit, “The White Whale”
- 2010 Royal Cargo, 21ft twin axle 7000 lbs GVWR trailer housing, structure collapse & USAR equipment
- 2010, Battalion chief’s first response pickup
- 2013, Ford Custom Designed Brush Truck—550 chassis, 300 g tank, and pumps 90 gpm at 120 psi
- 2014, Ford Custom Designed Rescue/Truck—550 chassis

### Progression

In 1986 our ambulance division was formed. Up until 2012, the fire and ambulance divisions had remained separate from one another. However, today we have 65 dual certified part-



time personnel who remain dedicated to staffing 5 ambulances, which cover over 2,600 calls per year while also covering 425 fire calls a year.

### Losses

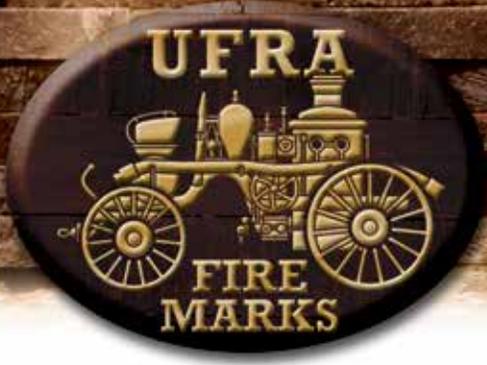
In relatively recent times we have lost two historic buildings to arson: the Bott Monument (2008) and the Merrill and Pett Planing Mill (2008). Earlier this year we lost seven apartment units in the Twin Pines Apartments, which was former known as the Twin Pines Motel.

Our most recent fire was the Historic Baron Woolen Mills. This historic site was rebuilt in the early 1900s by one of BCFD’s own past firefighters, Duke Baron.

### The Firehouse

In 2001 our current station was built. It is said to be the largest station in the four state area, housing six drive-through fire apparatus bays and three drive-through ambulance bays.





# FIRE MARKS

## RETIREMENTS:



After 34 years of service, **Kevin Bowman** has decided to hang up his helmet and put away his bunker gear. Bow-

man joined the South Salt Lake Fire Department in March of 1980 as a volunteer firefighter and later that year was hired on full time with the department. He worked up through the ranks and in 2000 was appointed to the Deputy Fire Chief's office. A farewell message from Kevin: "Thank you to every one of you for your overwhelming support throughout the years. I will forever be grateful."



After serving as a volunteer firefighter with Springville Fire and Rescue for 25 years, **Mike Ewing** is retiring.

Ewing got his start with the volunteer fire department of Springville in autumn of 1998. Throughout his 25 years of service with the department, Ewing had the opportunity to serve in a variety of roles. He began his volunteer career as a training officer, where he oversaw planning and organization of departmental trainings. He was then promoted to safety officer, assistant fire chief, and most recently assumed the role of a captain for the department.



After 34 years of service, **Layne Pace** has retired from the Orem City Fire Department. Pace was awarded the Orem

Utah Firefighter of the Year award in 2003, the Red Cross Heroes award in 2011, and the Utah Fire Caucus Firefighter of the Year award in 2011. Pace is a veteran of foreign wars and the founder and president of The Afghan Orphan Project. Additionally, with his service in the National Guard, Pace has completed multiple deployments to the Middle East.



After 43 years of service in the fire industry, **Stan Robins** has retired from the State Fire Marshal's Office (SFMO). Through-

out Robins' fire career he served in many capacities, ending his service with Roy Fire Department as chief by moving on to the SFMO. While at the SFMO, he specialized as a public fire prevention educator and later moved on to be an arson dog handler and trainer. Robins' arson dog for the past seven years, Cindy, will be joining him in retirement.

## DEATHS:



On June 29, 2014, Murray City Fire lost a department veteran. Captain **Andy Walkingshaw**, 43,

passed away while snorkeling at Shark's Cove in Hawaii.

Walkingshaw was born and raised in Utah and became involved with the Murray City Fire Department early on in his life. In addition to Murray City Fire, Walkingshaw also served part time with the Lone Peak Fire Department and thirteen years with the South Davis Community Hospital as a paramedic.



At the age of 55, **Julie Woods** passed away on June 13, 2014. Woods was a highly admired and inspirational fire captain for the

New Harmony Fire Department. She was certified to fight both wildland and structure fires. During her time in the emergency services industry, Woods had the opportunity to serve in many capacities. Before retiring due to medical conditions, she was a New Harmony fire captain, Iron County Ambulance EMT, and Washington County Emergency Preparedness team member.



**Glenae Turley** passed away on August 18, 2014. As a paramedic / firefighter for nearly two decades, Turley

served many communities in a variety of capacities. During her career as an emergency responder, she worked for West Jordan, South Jordan, AirMed, and Murray City. Turley was also licensed as a registered nurse. She merited much recognition and many awards for her accomplishments throughout her time as an emergency responder.

## Milestones - Pine Valley Emergency Responders Turn 80



Left to Right: **Layne Frei** has served 17 years with the Pine Valley Fire Department. This is his retirement job. Prior to retirement he was a bank examiner in Nevada.

**Gerald Schiefer** has served 12 years with the Pine Valley Fire Department. This is also his retirement job. Prior to his service with Pine Valley, he was director of Navy Labs in Washington, DC.

**Hugh Johnson** is a retired firefighter and is on the Pine Valley CERT.

At 80 years old, all three men continue to serve their community.

*photography by Marge Shakespeare*

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# TECH RESCUE: SHORING OPERATIONS

Originally published by Fire Engineering on 04/18/2013

During a shoring operation, firefighters have one main goal: to safely transfer the target load from point A to point B. We are of course there to make the structure safe to enter for victim rescue, however if we don't capture and shore the load correctly, we're jeopardizing not only the victims inside the structure but the rescuers entering the structure. Like any rescue discipline, "good enough" is not an option here.

Let's examine a few different shoring systems used in these operations, how they work, and the engineering behind the design.

The whole concept behind shoring a load is to capture or hold the load in place; we don't want to move the load because we don't know the stability of the structure. Remember that every movement has an equal and opposite movement. If I were to lift the slab in figure 1 from point A, I would apply an opposite load force on point B. The problem is that the load force we're now applying to point B is being transferred to whatever is underneath it, and whatever is underneath it has loads on the top of it. This creates a domino effect. A good rule of thumb is to think twice and move once. Mentally picture the load moving based on the actions you're performing. This can save you from making a rather large and possibly fatal mistake if you're dealing with a trapped victim.

As you read through this article you should pick up on something all these shoring systems have in common.

I like to call the **double-T shore** (see photo 1 to the right) the big brother of the T Spot shore. It's



Double-T shore (photo 1)

superior to the T Spot because it can handle twice the load and it is a permanent shoring system. The T Spot can only be used as a temporary system and would clearly need to be replaced by a permanent system.

The double-T is comprised of the header, soleplate, and two uprights. The header (top portion) collects the load. The uprights transfer the load into the soleplate (bottom). The soleplate transfers the load into the ground, and the job is complete. Other components of the system are four gusset plates (two top and two middle). The job of the top gusset plates is to form secure connections between the header and the uprights. The middle gusset plate forms a secure connection between the two uprights. The gusset plates also serve another role; they help to resist lateral forces on the shoring system and help to prevent the system from racking. When driven together, the wedges located between the uprights and sole plate will secure the shore in place and give it the stability needed to provide a solid path for the load to travel.

The **three-post vertical shore** (see photo 2 to the right) is also referred to as the dead shore. Looking at the shoring system model you should notice the structural components it's comprised of are the same as the double-T shore. Going across the center of the vertical shore is a 2x6 mid-point brace. The job of this brace is to provide the vertical shore with lateral stability. The "x"--created by 2x6 lumber--is known as a cross brace. The cross brace resists any lateral or torsional forces applied to the shoring system.



Three-post vertical shore (photo 2)

Everything counts when it comes to the construction, including the amount of nails you use and what type. For instance, when nailing a plywood gusset plate, to dimensional lumber use 8d). When nailing dimensional to dimensional such as a 2x6 brace to a 4x4 upright, use 16d. A 12x12 gusset gets an 8 and 5 nail pattern. A half gusset, 6x12, will receive a 4 and 4 nail pattern. Why? Nails have shear strengths and substantial load testing shows these numbers and patterns are what is required to create the shore's strength.

Now let's talk about what's called a raker shore. Don't get thrown by what it looks like, it's operating the same way as the double-T and three-post vertical shore. The only differences are the load it's catching and how it's doing the job.

The components of the raker are:

- The wall plate
- Sole plate
- Raker
- Cleats
- Wedges
- Thrust block.

The raker is used to support a wall that is leaning outward. It can be used for other jobs, but let's focus on supporting a wall. The first portion of the shore to see the load is the wall plate. Next comes the raker (the angled 4x4). The point at which you want to begin supporting the wall is called the capture point; that's where the raker would begin on the wall. The 2x4 wedges located between the bottom cleat and where the raker meets the sole plate provide an upward force when driven together, snugging the raker and overall system in place. So the captured load now hits the raker and travels down into the sole plate. Once it hits the sole plate, two things happen:

1. The load force travels into the ground and
2. The load force continues to travel through the sole plate and is somewhat terminated once it hits the 24" 2x4 cleat.

The remaining initial load force hits the thrust block and is forced into the ground. Lastly, you can see two 2x6 mid-point braces. They resist the compressive force the raker

is experiencing. They tie the raker to the wall and sole plate, which prevents the compressive load from causing the raker to fail.

When we construct shoring systems, we adhere to something called the length and dimension (LD) Formula. We work with two numbers, 25 on the low end and 50 on the high end. Here's an example of how it works: Take the dimension of the lumber being used (in this example we'll use a 4x4, the actual dimension of which is 3.5 inches). Take 3.5 and multiply by 50, then take that number and divide by 12 and you will get the max height that lumber can hold a load or a force.



45 degree raker (photo 3)



60 degree raker (photo 4)

The point where the raker hits the sole plate is like the "perfect storm." You have load force hitting it from the raker, load force traveling through it from the wall plate, and the forces traveling past it striking the cleat and thrust block. The captured load force is continually moving around the raker shore, making a continuous loop. You may think that finding the exact length needed for the raker is difficult but it's really not. Here's the math below with examples.

45 Deg Raker. 8-foot Capture Point x 17 = 136-inch length for the raker (see photo 3 above)

60 Deg Raker. 8-foot Capture Point x 14 = 112-inch length for the raker (see photo 4 above)

*Continued on next page*

Continued from previous page

Lastly, let's look at **hydraulic struts** (see photo 5 to the right).

The nice aspect of these is they can be set up fast, creating a safe haven to construct a wood shoring system. They are also useful if your operation



Hydraulic struts (photo 5)

requires a "quick grab," i.e. the victim is in sight and it's not going to be a prolonged operation. In the pictured hydraulic shores, the bottom portion is the actual hydraulic unit and a rod stored on the strut is inserted into it and used to operate the strut. The struts themselves can be configured into several different sizes by changing the outer sleeve. With different bases you can insert headers and sole plates or capture loads by connecting directly to the joists. Consider this another method in your toolbox to complete a shoring mission.

By now you should see that the basic principle of collecting a load is a universal foundation that all shoring systems are based on. Important points to remember when building these systems are:

1. Always ensure the shoring system is plumb. It needs to be plumb to transfer the captured load properly and straight into the ground.
2. Never ignore the construction standards when building these systems.
3. Always size-up your operation and determine where and what type of shoring system is needed based on victim location.
4. Remember, for every action there is an equal and opposite reaction. This means that what you move is going to apply a load to another part or component of the structure. Take time to visualize what you're going to do prior to doing it.

Like any other discipline, training is the key to perfection. We're in this business to save lives and when

lives are at stake, stress levels are extremely high. If your skills are not 100 percent, you become a liability. Read, train and ask questions--these are three important keys to creating and maintaining your knowledge base.

See original article at the following link:

<http://www.fireengineering.com/articles/2013/04/tech-rescue--shoring-operations.html>



**Mike Donahue** has 17 years of fire service experience and has been a career firefighter in the city of Elizabeth, New Jersey, for the last 13 years, working out of Rescue Company 1 for the past 10 years. Mike teaches a Middlesex County College as an adjunct professor and acts as the Fire Service Program Coordinator. Mike is the owner of Progressive Rescue and can be reached at [progressiverescue@gmail.com](mailto:progressiverescue@gmail.com).

## WEBSITE NEWS

by Andrea Hossley

The UFRA website ([www.uvu.edu/ufra](http://www.uvu.edu/ufra)) is an ever-evolving project primarily based on our customers' needs and requests. Most recently, the Core Course Descriptions page (<http://www.uvu.edu/ufra/training/trainingcourses.html>) has been updated with brand new information. This page gives a description for each core course that UFRA offers to its customers. Additional links to updated syllabi and direct links to NFPA qualifications have been included for your convenience. Check out this page and give us your feedback.

All feedback can be directed to Candice Rich at [candice.rich@uvu.edu](mailto:candice.rich@uvu.edu)

# Updated Firefighter I and Firefighter II Certification Standards

by Lori Howes

On July 16<sup>th</sup> the Certification Council approved the new Firefighter I and Firefighter II certification standards. These levels meet all requirements of the National Fire Protection Association (NFPA) 1001 standard, 2013 edition. The updated standards are available by calling the Certification Office at 1-888-548-7816 or online at <http://www.uvu.edu/ufra/certification/standards.html>.

The new certification exams for both levels are referenced to the IFSTA, 6<sup>th</sup> edition, "Essentials of Firefighting." Departments may begin testing to the 6<sup>th</sup> edition beginning on August 1<sup>st</sup>. **The Certification Council has allowed a grace period for departments to continue testing to the 5<sup>th</sup> edition essentials manual until December 31, 2014.** This will allow departments who are currently training to the 5<sup>th</sup> edition to finish their classes and test to the correct manual. Any departments who are preparing for Firefighter I/II training should begin using the 6<sup>th</sup> edition. After December 31, 2014, all departments will be required to test to the 6<sup>th</sup> edition.

Departments requesting exams for Firefighter I or Firefighter II before December 31<sup>st</sup> should indicate whether they need the 5<sup>th</sup> or 6<sup>th</sup> edition exams.

The Certification Council would like to recognize and extend a voice of appreciation to the following fire service professionals for their work on the Firefighter I and Firefighter II certi-

fication standards. These individuals devoted many hours to reviewing the National Fire Protection Association (NFPA) standards, reviewing the certification test bank, and developing the skills for this standard. Thanks to all committee members for a job well done!

## Firefighter I

Jason Earl, Battalion Chief  
Orem Fire Department  
Certification Council Representative

Dave Youngberg, Captain  
North Davis Fire District

Jason Hester, Senior Firefighter  
South Jordan Fire Department

Matt Rhoades, Captain  
Unified Fire Authority

Russ Sneddon, Battalion Chief  
Orem Fire Department

Lee Monsen, Captain  
West Valley Fire Department

Ron Harris, Chief  
Tropic Fire Department

Lowell Sorensen, Fire Engineer  
Cedar City Fire Department

Jason Winn, Deputy Chief  
Cache County Fire District

Gary Kilgore, Program Manager  
Utah Fire & Rescue Academy

## Firefighter II

Jason Earl, Battalion Chief  
Orem Fire Department  
Certification Council Representative

Dave Youngberg, Captain  
North Davis Fire District

Matt Rhoades, Captain  
Unified Fire Authority

Russ Sneddon, Battalion Chief  
Orem Fire Department

Lee Monsen, Captain  
West Valley Fire Department

Gary Kilgore, Program Manager  
Utah Fire & Rescue Academy

## Picture ID Required for Certification Exams

As a reminder to all candidates taking certification exams: the Certification Office began requiring that picture ID be presented to the certification tester at all examinations as of March 2014. Please remember to bring your picture ID when you arrive to take an exam or you will not be allowed to take the exam. Please contact the Certification Office with questions: 1-888-548-7816.

# Commanders in Turnout Gear

I recently read with great interest a very long thread on Facebook about whether an incident commander should wear turnout gear at a fire scene. Since my focus and passion is improving first responder situational awareness, I would like to address this issue from that perspective.

The feedback on Facebook was, as expected, all over the place: some said the commander should be in turnout gear, some said the commander should not be in turnout gear, and some displayed the typical (and expected) disdain for management, saying the chiefs should just stay in their offices. Editorial comments lacking maturity aside, the question of whether an incident commander should wear turnout gear is one I field often during my Fifty Ways to Kill a First Responder program, so I thought I'd take the matter up here.

There are, essentially, two fundamental issues at hand:

1. Should the incident commander be close enough to the hazards to require turnout gear?
2. Should the incident commander set the example for others by wearing turnout gear?

## Command Location

The location of the commander and his or her proximity to the hazards should dictate the need for the structural firefighting protective ensemble. If the commander is going to be close enough to require gear for protection, then gear should be worn. That one seems simple.

But should the incident commander be that close to the action? That question perhaps gets more to the heart of

the issue. Speaking from the perspective of brain science and situational awareness, there are some fundamental things to know before this can be debated:

- By definition, an incident commander must be far enough back from the action to be able to see the big picture in order to develop and maintain situational awareness.
- The cognitive demands (i.e., brain capacity) needed to command an emergency incident with multiple companies working are enormous. In many instances, these demands use all the commander's brain capacity.
- A commander who is close to the action may feel compelled to become "hands-on," which can impact his or her ability to command. Being hands-on causes the commander to be task oriented, not big picture oriented. Being hands-on also requires some of the commander's limited cognitive capacity (brain power) to perform the hands-on task. This can diminish the commander's ability to process and comprehend important command-level information.
- Under stress, people become creatures of habit (see the earlier article entitled "Creatures of Habit"). If a commander has spent years serving as a hands-on firefighter (and let's hope he or she has), stress may compel him or her to perform hands-on activities. Being close to the action and being donned in the protective gear may be enough to facilitate hands-on action. It's a psychological thing.

## In the Seat or in the Street?

I also get asked an awful lot about whether the commander should be situated in a vehicle or outside a vehicle. This is a hotly debated topic. Those who command from inside a vehicle (I'll call them seat commanders) have a list of reasons why they prefer to be located there. Likewise, those who command from outside a vehicle (I'll call them street commanders) also have a list of reasons why they prefer to be in the street.

I am not the one to judge on where best to command from. First and foremost, I'd say command from where you are most comfortable—from the position that uses your command abilities and intuition to their fullest. I will, however, make some observations based on my research and interviews with experienced commanders.

### Seat Commander Advantages

1. The commander will be in a physical position that will likely reduce distractions and interruptions, which are significant barriers to situational awareness.
2. The commander will be exposed to less noise, which can improve the ability to hear radio traffic, improving situational awareness.
3. The commander will not be in a position to become hands-on, which improves the dedication of cognitive resources to the act of commanding, also improving situational awareness.
4. The commander is in an environment of controlled light and temperature. Diminished environmental comforts can impact situational awareness.
5. The commander is in an environment that improves access and use of technology, such as mobile data computers, command boards, and worksheets. Data management improves situational awareness.

### Street Commander Advantages

1. The commander is able to provide face-to-face instructions to scene personnel, which can reduce miscommunications and improve situational awareness.

*Many times when firefighters die in structure fires, the commander is performing hands-on activities and not commanding in a position to see the big picture.*

2. The commander is mobile and able to physically see more of the incident. Capturing more clues and cues can improve situational awareness.
3. The commander is in a physical position to use more senses to prompt intuition, which can improve situational awareness.
4. The commander is in a position to directly observe the physical stress and fatigue of personnel which can improve situational awareness.
5. The commander is in an environment of increased stress which, to some degree, can heighten awareness and improve performance.

### My Personal Experience

I have commanded from both positions (seat and street) and have experienced firsthand the advantages and disadvantages of each.

Early in my career I was a street commander and there was nothing anyone could have said to convince me otherwise. There was no way I was ever going to sit in a car during a structure fire. I would have been so out of my element that I would have gone crazy. My comfort was being in the action.

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However, as time passed, I was introduced slowly to the concept of being a seat commander and the advantages it provided to my effectiveness. I saw a marked improvement in my ability to hear my radio, reduce distractions, keep track of my personnel, and (very importantly) think ahead of the incident. As reluctant as I was at first, I developed a comfort toward and preference for being a seat commander.

Notwithstanding the occasional chiding I took from firefighters who thought sitting in the comfortable car while they were out in the elements was wimpy, I think they appreciated how my location directly impacted their safety.

### **Setting an Example**

If you are the incident commander, wear turnout gear at the right times and for the right reasons. This includes while working in an environment where your health and wellness might be adversely impacted if you were not in turnout gear.

Wearing turnout gear to set an example is not a good explanation for why an incident commander should don gear that can be hot and uncomfortable. Let a football coach be the example. The coach stays on the sidelines and coaches the team to success. The coach does not wear the uniform of the players. The coach does not need a helmet and shoulder pads to be effective. In fact, that gear might impede effectiveness.

Players who think that coaches set poor examples by not wearing gear are struggling with understanding the role of the coach. Similarly, responders and commanders who feel the commander must wear turnout gear to set a good example may be struggling to understand the role of the commander.

On a side note, many times when firefighters die in structure fires, the commander is performing hands-on activities and not commanding in a position to see the big picture.

## Discussion Questions

1. Does your commander wear turnout gear while commanding an incident? Why or why not?
2. Have you ever observed an incident commander being hands-on during an incident? What impact did it have on his or her effectiveness? Did it impact the safety of personnel?
3. What are some tips a department can use to help responders and commanders understand the importance of each role on an incident scene and the benefits for the commander to be out of the action and not in turnout gear?



**Richard B. Gasaway, PhD**, has served over 30 years in public safety, including 22 years as a chief officer. He holds bachelors, masters, and doctor of philosophy degrees and holds the Certified Speaking Professional from the National Speakers Association. Dr. Gasaway is the webmaster for Situational Awareness Matters! (SAMatters.com), and he hosts the SAMatters Radio podcast show (available in iTunes). He provides programs on firefighter safety and leadership to departments throughout the United States and Canada.



## *Climbing the Ladder*

## **PROMOTIONS**

### **Moab Valley Fire Protection District**



**Monte Curtis** has stepped down from his position as chief to be the part-time assistant chief again.



**Philip Mosher** will be stepping up to fill the position of full-time chief.

### **The Utah Division of Forestry, Fire & State Lands**



State Fire Management Officer (SFMO) **Tracy Dunford** has been promoted to deputy director.



**Matt Snider**, who was previously assigned to the Lone Peak Fire center as FMO, has been promoted to the state office's acting SFMO.



**Nate Barrons** has been assigned to the state office as the Governor's Catastrophic Wildfire Reduction Strategy Coordinator and Liaison to the National Cohesive Strategy working group.



# BACK TO BASICS: “RISK MANAGEMENT: WHY DO I CARE?”

“Risk Management is my chief’s problem, not mine,” says an officer who places the lives of his crew in immediate danger on an icy highway curve at night, with apparatus improperly placed to guard the scene and visibility PPE disregarded. Unfortunately, it happens every day in the fire service. For a glimpse into how quickly bad things can happen and how often the ending is tragic yet preventable, just read the “Secret List” on the Firefighter Close Calls website: <http://www.firefighterclosecalls.com>.

Will a Risk Management Plan really help? Even if it doesn’t seem that one will, NFPA 1500 4.2 nevertheless requires all organized fire departments to have one in writing, and crew members must be trained on it. In fact the NFPA 1500 committee mentions that it is “one of the most important topics” any fire department can discuss; having a plan

is “simple” and “critical to ensuring firefighter safety” (NFPA 1500, 2013). Now ask yourself the following three questions: Where is your department’s Risk Management Plan? What does it say? Has it been revised in the last three years, as required?

According to the NFPA, a Risk Management Plan must cover risks associated with these eight categories: 1) administration; 2) facilities; 3) training; 4) vehicle operations, both emergency and non-emergency; 5) PPE; 6) operations at emergency incidents; 7) operations at non-emergency incidents; and 8) other related activities (NFPA 1500 4.2.2).

The plan must include components for risk identification, both actual and potential hazards. It must include a risk evaluation procedure that will help identify the likelihood

UVU Firefighter Recruit Class learns about risk assessment by observing fire behavior.

and severity of hazards and establish priorities for action, based on the frequency and impact on the community. A plan must also identify risk control techniques for mitigating a hazard and implementing the best solutions. Finally, the plan must be monitored and evaluated to track its effectiveness. Sound complicated? In Appendix D of the Standard, NFPA has provided a template for such a plan. Departments merely need to fill in the blanks with community-specific information.

Of course, as the apex of any plan, we should all consider Chief Brunnacini's basic concepts for firefighter risk: "Risk a lot to save savable lives," "Risk a little, in a calculated manner, to save savable property," and "Risk nothing to save that which is already lost." The IFSTA Essentials of Firefighting 6<sup>th</sup> Edition lists behaviors that will help instill a "safety-first" mindset (pg. 63). If every firefighter in the nation would adhere to this simple list, how many lives might be saved starting today?

- Think!
- Drive defensively
- Driver slower, rather than faster
- Stop if you can't see at intersections
- Don't run for a moving rig
- Always wear your seatbelt
- Wear full PPE and SCBA
- Don't ever breathe smoke
- Attack with a sensible level of aggression
- Always work under command; never freelance
- Keep the crew intact
- Maintain communication with command
- Always have an escape route (hoseline/lifeline)
- Never go beyond your air supply
- Use big enough and long enough hoses for the task

- Evaluate the hazard; know the risk you're taking
- Follow fireground procedures; know and be a part of the plan
- Vent early and vent often
- Provide lights for the work area
- If it's heavy, get help
- Always watch your fireground position
- Look and listen for signs of collapse
- Rehab fatigued companies; assist stressed companies
- Pay attention at all times
- Everybody takes care of everybody else

I would also add one more to this important list, and that is:

- Know and understand your risk management plan, and train on it!



**Andy Byrnes** retired after 21 years of service as a Special Operations Battalion Chief from the Orem Fire Department. He was also in Law Enforcement for 18 years and a certified Paramedic for 16

years. He is currently an Assistant Professor and the Coordinator for the RCA program at UVU. He is an experienced Emergency Services Instructor; working for local, state, and national Fire/EMS and Law Enforcement organizations. He has reviewed and contributed to several textbooks related to Hazardous Materials/WMD response and he is a frequent course reviewer and subject matter expert in the areas of Hazmat and Firefighting Leadership and Management. Byrnes is a graduate of the National Fire Academy's Executive Fire Officer Program. He holds an Associate degree in Fire Science, a Bachelors degree in Public Emergency Services Management, and a Master's Degree in Instructional Technology from Utah State University.

# FIRE/EMS OPPORTUNITIES INCREASE WITH NEW PROGRAMS AT UVU

Each year we see changes in the field of emergency services, as rescue workers are tasked to care for an ever-changing patient population under unique circumstances. With opportunities to improve our care, better protect ourselves, and focus on improving a fundamental task of basic life support, Utah Valley University's Emergency Services Department is pleased to introduce 3 new courses (for credit and/or certification) in Fall 2014.

The first is the Critical Care Emergency Medical Transport Program (CCEMTP) developed by the University of Maryland Baltimore County (UMBC). This course is expected to be as difficult as it is rewarding and features lead instructor Josh Forsyth, paramedic RN.

CCEMTP<sup>SM</sup> was designed in response to the growing need for qualified specialists in the area of critical care inter-facility transfer. It helps to prepare paramedics and nurses to serve with competence and confidence in meeting the needs of critical care patients undergoing inter-facility transports. While traditional paramedic education programs teach essential skills and provide a knowledge base for the management of patients in the pre-hospital setting, these training programs frequently do not teach the skills and knowledge necessary to manage critical patients between hospitals, specialty referral centers, and extended care facilities. The CCEMTP<sup>SM</sup> program will assist the clinician in developing the necessary skills and knowledge to manage critical patients during a high-risk transfer. Essentially, CCEMTP<sup>SM</sup> is "post graduate education" for the paramedic or nurse to provide a higher level of care in inter-facility transport within ground, air or fixed wing environments. The new curriculum focuses on advanced level knowledge and assumes that participants come in with a working knowledge of Chemistry, Pharmacodynamics, along with Anatomy & Physiology. The curriculum is truly one that creates a Specialty Care Transport Provider and has been not only 100% peer reviewed by leaders in the industry, but also 100% physician reviewed"  
(<http://ehs.umbc.edu/CE/CCEMT-P/>).

The second course to be offered at UVU will be the Difficult Airway Course: EMS section and the Fundamentals of Airway Management<sup>TM</sup>. This is an exciting look at the

basic skill of airway management with a hands-on approach to rethinking the challenges faced in the field. With lead instructor Jason Cook, flight paramedic and current faculty for the airway site ([theairwaysite.com](http://theairwaysite.com)), this no nonsense approach to critical decision-making skills will be enjoyable and provide a calculated approach to effective airway management.

The course covers:

- Evidence-based assessment and management of the airway
- High and low fidelity simulated patient encounters
- "Unique EMS Cases" in diverse environments
- Endotracheal intubation under different protocols
- Adult and pediatric airway management
- Airway 'Core Content' and 'Scope of Practice' psychomotor skill sets"
- Prediction of the Difficult Airway
- Video Laryngoscopy
- Medication-assisted Intubation (including RSI and RSA)
- Pediatric intubation
- Endotracheal tube introducers (bougie)
- Cricothyrotomy
- Extraglottic devices

([http://www.theairwaysite.com/pages/page\\_content/Airway\\_Ems\\_More.aspx](http://www.theairwaysite.com/pages/page_content/Airway_Ems_More.aspx))

The last course, Law Enforcement/First Responder - Tactical Combat Casualty Care (LEFR -TCCC), has been presented and tentatively approved for addition to the Peace Officer Standards & Training curriculum. The course offers real world training with evidence-based changes to emergency treatment in secured and unsecured scenes. With lead John McCombs, detective SWAT paramedic, an emphasis is placed on effective scene control and life-saving techniques.

LEFR-TCC is offered through NAEMT's PHTLS program. This new course was developed in collaboration with the Denver Health Department EMS Education and the

Denver Police Department Metro/SWAT unit, and NAEMT's Pre-Hospital Trauma Life Support (PHTLS) Committee. It teaches first responders (police, law enforcement officers, firefighters, and other first responders) the basic medical care interventions that will help save an injured responder's life until EMS practitioners can safely enter a tactical scene.

Upon completion of the course participants will:

- Understand the rationale for immediate steps for hemorrhage control (including external hemorrhage control, direct pressure and wound packing, early use of tourniquet for severe hemorrhage, internal hemorrhage control by rapid evacuation, and transportation to major hospital/trauma center.
- Demonstrate the appropriate application of a tourniquet to the arm and leg.
- Describe the progressive strategy for controlling hemorrhage.
- Describe appropriate airway control techniques and devices.
- Demonstrate the correct application of a topical hemostatic dressing (combat gauze).
- Recognize the tactically relevant indicators of shock" (<http://www.naemt.org/education/LEFR-TCC/WhatIsLEFRTCC.aspx>).

For additional information, please contact Bonnie Lamb from Utah Valley University at (801) 863-7793.



**Steve Allred** has been with the UVU Paramedic Program since the beginning in 1999, and recently became the program's director in 2014. His career as a firefighter began with Orem City as a reserve, then full time in 1988 until retirement in 2009. He continues to work with Lone Peak Fire District, as a paramedic, to stay in touch with the job. Steve has an MEd from Utah State University, a BS from UVU in emergency services, an AAS in emergency care and rescue from Weber State, and an AAS and AS from UVU in related fields.

# NEW FEATURES OF FIRE GRANTS

During the recent Assistance to Firefighters Grant Seminars, FEMA Region 8 representative Ted Young announced that AFG will open for applications in October. Several changes in the process should entice departments to apply, especially if you've been turned down in the past or have received a grant and felt overwhelmed by reporting requirements. Make sure that you only apply for items that are a HIGH priority to the AFG program. This year you can apply for the newly formed "Micro Grant" limited to \$25,000 federal share and receive additional consideration in the scoring process. Also if you have been rejected for previous grants, you get additional consideration, which can make a big difference.

There is also concern in Congress that declining applications show that there is not a need for grants to fire departments. The grant program may be discontinued in 2016 if applications don't pick up and if fire officials don't let their Federal representatives know the importance of grants to their communities.

For more information contact Ted Young, at [Ted.Young@fema.dhs.gov](mailto:Ted.Young@fema.dhs.gov).

# WHAT GOLF CAN TEACH THE FIRE SERVICE

## *The* Importance of Feedback *Part 1*



I have an awesome golf swing; sometimes I'll go in the backyard and just practice the swing. I practice because the mechanics of a golf swing can be quite complex. According to a 2005 article by the *British Journal of Sports Medicine*, electromyographic studies of the golf swing focus on 17 total muscle groups that comprise the golf swing—it's complex and must be practiced.<sup>1</sup> So without hitting any balls, I go in the backyard (or anywhere I can find room to swing without breaking the furniture!) and just practice the swing—and it's awesome! A thing of beauty, really (just ask me). I approach the imaginary ball with my feet spaced properly apart, posture excellent, grip set, takeaway

focused with good coil; at the top I unwind to the finish, pulling the club through the imaginary ball.

I then hit the golf course and tee up a real ball, and here is where the weirdness happens—the ball almost consistently disagrees with me! I tee up again; nope, still goes in some weird direction, spinning wherever it feels like going—stupid ball! So, what is the point? Golf balls are stupid. If a golf ball were smart, it would simply understand how awesome my golf swing is and act accordingly.



photography by Paul Sullivan

Okay, truth be told, my golf swing stinks. Doesn't matter how many times I move my 17 muscles and swing with supposed precision, the ball doesn't lie; it always tells me the truth. Doesn't make me feel any better though—I still hate and curse the stupid ball.

Now, what's the real point here? The point is the importance of feedback. The fact is, the one distinct advantage golfers have that firefighters don't, is the ball. The ball never lies—it tells you how good, or not good, you are. It does so without prejudice, remorse, trepidation, or hesitation.

## **Feedback**

Honest feedback is no less important for us firefighters. Fact is, learning requires feedback; we in the fire service tend to (not always) work in a bubble. We allow tradition, routine, egos, and past successes (fire went out, we went home) to dictate future actions—whether or not these are aligned with best practices. When NIOSH investigates line-of-duty deaths, they often find that “the way we've always done it” is heavily steeped within the culture.

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These reports, without directly making this declaration, tell us that the fire service has not really found many new ways of killing firefighters. When NIOSH (and other similar organizations) investigate firefighter death and injuries, they compare fireground actions to standards and then provide recommendations to not only explain what went wrong but assist the department in getting back on the right track. This is feedback—tough to hear and, sadly, too late to change a bad outcome.

### Aren't We Already Doing This?

Isn't feedback something we already do? Well, yes and no. If we were to poll most fire service organizations and ask them this simple question, "How good are you?" what would you imagine the average answer would be? I would imagine most of us are proud of the job we do (and often, with good reason) and may even believe we are doing at least a good to great job. And maybe we are—but how do we know?

In Charleston, SC, this was the issue, which, for all intents and purposes, led to the Sofa Super Store disaster in 2007. If you've had a chance to attend a presentation by Chief Timothy Sendelbach, who is editor-in-chief of *FireRescue* magazine and who has prepared a great post-mortem presentation on this fire, or at least read articles written on the Sofa Super Store fire, you will find a culture blind to its mistakes and a chief who truly believed his fire department was as good as a department could be.

In a personal interview with Chief Sendelbach, I asked him about the Charleston chief's position on his and his department's actions that fateful day. This is Chief Sendelbach's response: "The actual question asked by multiple media sources was, 'If you had to do it over again, would you do anything differently?' His repeated response (as was the same for the former chief in Hackensack): 'No!'" As evident from this quote, both the Charleston chief and the former Hackensack chief (Hackensack is a well-known LODD, where five firefighters died in a bow strung truss building in 1988) show an attitude that says, "We are awesome! We know what we're doing and don't need anyone telling us different!"

Now, before anyone gets upset, I'm not suggesting that any of us have the attitudes or issues these departments had at the time of these events; however, I am asking us to check any attitude we may have that may lead us to believe

we cannot be better than we are (or that we cannot make mistakes, when we make them).

This is actually stated better by J. Gordon Routley, City of Charleston Post-Incident Assessment and Review Team Leader: "There's a real danger in thinking that we're perfect, that we have it all done. To be professional, we must go back and reexamine and ask ourselves if we're doing all the right stuff. You can be 80 percent right or 95 percent right and still have things go wrong. We have to make every effort to be consistent, to understand the kind of situations we might face, to plan for them and practice. I think that's the real key. Even if we think we've got it licked and we're ready for anything, let's go back and check."<sup>2</sup>

This takes feedback; no, more than that—it takes a feedback culture! A feedback culture is not easy—it requires listening, not just talking, and it requires setting egos aside for the greater good. And, like my golf swing, it requires keeping your eye on the ball and acknowledging what it has to tell you. In part 2, we'll discuss how to build a feedback culture by developing the "golf ball."

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### References

- <sup>1</sup> McHardy, A. & Pollard, H. (2005). "Muscle activity during the golf swing." *British Journal of Sports Medicine* 39 (11): 799–804. Retrieved online from <http://bjsm.bmj.com/content/39/11/799.full>.
- <sup>2</sup> Pieper, S. (Feb. 2008). "Applying Lessons Learned from Charleston & Other LODDs." Retrieved online from <http://www.firefighter-nation.com/article/features-0/applying-lessons-learned-charleston-other-lodds>.

**Paul Sullivan** has been in the fire service and EMS for 34 years. In 2007, Paul retired at the rank of battalion chief from the Chandler, AZ, Fire Department to take a position as deputy chief with the Weber Fire District. He holds an associate degree in fire science and a bachelor's in public safety administration, and is currently pursuing a master's in public administration.



# WFS WINTER FIRE SCHOOL 2015



**January 9<sup>th</sup> & 10<sup>th</sup>**  
Dixie Convention Center  
St. George, Utah

\$40 Registration Fee

Registration opens November 3<sup>rd</sup> @ 0800

Visit our website for more details and the complete list of classes

<http://www.uvu.edu/ufra/training/winterfireschool.html>



# Congrats!

## You Are the New Boss

In my last article I identified some of the challenges new bosses have to deal with, and I discussed some of the issues I had as a new and very young captain. Now I would like to discuss how important it is for new supervisors to be aware of and abide by the department's policies and procedures. I will also discuss professional behavior, past and future.

I'll bet that most of you studied your department's policy and procedure (PP) or standard operating guideline (SOG) manual prior to the exam process. Supervisors must align their activities with the PP's and SOG's. Remember, these guidelines set expectations of standard behavior and guide the department members in the department's efforts to provide organizational control and quality customer service. SOG's enforce a more structured organization and help make the organization more professional. Also, written guidelines reduce freelancing and encourage members to behave in a rewarding manner.

I recall when I was a battalion chief, every once in a while a captain (not familiar with my MO) would call me and ask if his crew could conduct an activity he was concerned about doing (if you know what I mean). I would reply, "You are the person in charge. I'm not going to tell you what you should do or not do. I suggest that you review the SOG's and read the department's mission statement, goals, and objectives. If what you want to do is in line with them, go forward; if not, you should rethink what you want to do." I would also remind the officer that we are expected to conduct ourselves in a way that will not discredit themselves or the department. Officers and their teams are charged to conduct their duties in a manner to ensure public confidence in the integrity of the department.

Let's move on to discussing professional behavior, past and future. We all are aware of the premise that success as a supervisor depends on conducting yourself in a professional manner at all times while on duty. Your success depends on your ability to project and maintain a professional image that is backed up by competence, confidence, and

commitment. Unfortunately, it took me several years after becoming a supervisor to learn and implement my knowledge of how behavior and professionalism affect success.

As a new supervisor, I had difficulties succeeding because I was a product of my environment. My captains at the time were part of or influenced by what Tom Brokaw coined "the greatest generation": people who grew up during the deprivation of The Great Depression and then went to fight in World War II. They were proud, loyal, frugal, and demanding. When they said "jump," you said "how high." It was their way or the highway. You wouldn't think about asking "why" when they gave direction or an order. Also, you would never think about sitting in the captain's chair or going into the battalion chief's office unless you were cleaning or—heaven forbid—told to go to their offices. At that time, the fire department was definitely a paramilitary organization.

Well, that was the attitude and behavior I assumed when I got promoted. It worked fine for a while, and then that supervisory style didn't work any longer. No one was happy to work for a dictating autocrat who was still wet behind the ears. I was dogmatic as hell and realized my success as a supervisor required a new supervisory style.

To improve, I attended several training sessions on effective supervision. That is where I met two of my mentors: Chiefs Alan Brunacini and Ronny J. Coleman. They took me under their wings and shared with me the way to become an effective and well-respected leader. Here are some of the concepts they taught me that helped me succeed as a supervisor:

Your behavior toward your team members directly affects their performance, productivity, morale, and loyalty. Supervisors who are respected by their team members are able to get the best performance from their crew and achieve the best results.

# Now What?

## Part II

Your behavior toward other officers directly affects your effectiveness, the success of your department, and your future in the organization. Supervisors who get along with colleagues and are admired by their peers have the best opportunity for recognition and advancement.

Your behavior toward your boss and others in top management affects your career and your opportunities in the department. Supervisors who project a professional image are generally those who succeed and move up in management.

And lastly, your behavior toward customers and others outside the organization affects your success and, in turn, the success of the department. To these people, you represent the organization. If they have confidence in you and respect for your professionalism, they will maintain a positive relationship with the organization.



**Paul Stein** retired as Chief Officer from California's Santa Monica Fire Department. After retirement he served as Interim Fire Chief for the Lakeside Fire Department in California. He holds an A.S. Degree in Fire

Technology and a B.A. Degree in Management. Chief Stein is a Master Instructor for the California Department of Education.



The 30<sup>th</sup> Annual Training Seminar of the Utah Chapter, International Association of Arson Investigators will be held February 22 to 25, 2015, at the Rainbow Hotel Casino in West Wendover, NV.

Training will include a NFPA 921 and 1033 update as well as live burns. The registration fee is \$280.00, which includes yearly Chapter dues. Watch our website [utahiaai.com](http://utahiaai.com) for updates.

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(JANUARY 5 TO APRIL 30)

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ESFF 1000 Introduction to Emergency Services

ESFF 1360 Basic Firefighter Internship

ESFF 250A Firefighter RCA I

ESFF 250B Firefighter RCA II

ESFF 281R Emergency Services Internship

ESEC 1140 Emergency Medical Tech Basic

ESEC 3060 Emergency Med Tech Advanced

ESEC 3110 Paramedic I

ESEC 3120 Paramedic I Lab

ESEC 3130 Paramedic II

ESEC 3140 Paramedic III

ESEC 4110 Paramedic IV

ESEC 4120 Paramedic Clinical Concepts

### ESFF/ESFO ONLINE CLASSES

ESFF 1000 Introduction to Emergency Services

ESFF 1120 FES Safety and Survival

ESFF 2100 The Desire to Serve

ESFO 1100 Fire Behavior and Combustion

ESFO 1110 Fire Prevention

ESFO 2050 Fire Protection Detect Systems

ESFO 2080 Build Construct Fire Services

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ESMG 489R Special Topics in EM: ES Conference

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ESMG 3150 Public Program Administration

ESMG 3200 Health and Safety Program Management

ESMG 3250 Managing Emergency Medical Services

ESMG 3300 Master Planning for Public ES

ESMG 3350 Analytical Research Approaches to Public ES

ESMG 3600 Psychology of Emergency Services

ESMG 4150 Humanitarian Services and Disaster Relief

ESMG 4200 Disaster Response and the Public

ESMG 4400 Legal Considerations for the ES

ESMG 445G Human Factors in Emergency Management

ESMG 4500 Customer Service and Marketing for the ES

ESMG 4550 Principles of Disaster and Emergency Mgmt

ESMG 4600 Public Administration and Emergency Mgmt

ESMG 4650 Emergency Services Capstone

ESMG 481R Emergency Services Internship

ESMG 489R Special Topics in Emergency Services

ESMG 491R Topics in Cardiology and Medical Trends

## ESMG ONLINE CLASSES *Continued*

ESMG 492R Topics in Trauma and Pharmacology

ESMG 493R Topics in Medical Litigation

## ESWF FACE TO FACE CLASSES

ESWF 1400 Wildland Firefighting Fundamentals

ESWF 2340 S234 Ignition Operations

ESWF 3000 S300 IC Extended Attack

ESWF 3300 S330 Task Force Strike Team Leader

ESWF 3360 S336 Tactical Decision Making in Wildland Fire

ESWF 3390 S339 Division or Group Supervisor

ESWF 4390 S390 Intro to Wildland Fire Behavior Calc

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On-the-job internships are available for all RCA graduates.

Application deadlines: June 1<sup>st</sup> for Fall Semester and October 1<sup>st</sup> for Spring Semester.

## PARAMEDIC

By Application Only. For more information visit [http://www.uvu.edu/esa/academics/paramedic\\_emt.html](http://www.uvu.edu/esa/academics/paramedic_emt.html) or call 801-863-7700 or 888-548-7816.

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