# DEPARTMENTS

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From the Director

First a little history: the Utah Fire and Rescue Academy (UFRA) and its funding source, the Fire Academy support account (herein referred to as “account”), was created by legislative action in 1993. The funds in this account are generated by a percentage of fire insurance premiums and are to be used for funding general operations of the Fire Marshal’s office and UFRA. Other than funding the Fire Marshal’s office, the law is very specific as to how UFRA will spend these monies allocated for firefighter training, certification, and firefighting props and facilities. Although UFRA resides within Utah Valley University, the State Fire Prevention Board (herein referred to as “Board”) with help from the State Fire Marshal’s office, is mandated with oversight responsibilities for the UFRA contract and the account.

Because this account fluctuates and typically increases over time, our state legislature has the ability to, at their discretion, remove funds for non-fire projects from the account. Even though this does not occur on a regular basis, it has occurred several times over the past 10 years.

Now to the point, several months ago, a Fire Chief requested a $300 thousand prop, which could be used as a basis, it has occurred several times over the past 10 years. The funds in this account are generated by a percentage of fire insurance premiums and are to be used for fire service related projects?

Based on recommendations of the Council, the Board directed UFRA to create a “menu” of options, which would benefit the Utah fire service. These options were to be presented to the Council, who would subsequently present their recommendations to the Board. To support the options of their choosing, the Board, if they so desired, could request additional funding from the legislature.

UFRA considered a wide range of fire service options that would benefit Utah firefighters. UFRA sought advice from Fire Chiefs, Utah Fire Officers, and UFRA Program Managers as to what the departments in their regions needed. After careful consideration, UFRA presented the following five options, listed below, to the Council (offering no opinion as to option priorities):

1. This project eliminates the initial testing fee ($20) for any department utilizing the state certification system. Additionally, the cost of certification ($20) will be waived for those firefighters who pass the exam on the first attempt. For the second and third attempts, the cost of testing will be $20 each. The one-time cost of certification will also remain $20 for the second and third attempts. So, to make it simple, on the first attempt, no cost. Pass on the second attempt, $40 ($20 for testing and $20 for certification). Pass on the third attempt, $60 ($20 for second attempt, $20 for third attempt, and $20 for certification). If departments have their own internal tester for written exams there will be no testing fee for the second and third written attempts. Obviously, the goal is to incentivize passing the first attempt. Currently, approximately 85-90 percent pass on the first attempt.

2. This project lowers the minimum student requirement from twelve to eight for departments serving populations of 10,000 or less. Considering the majority of Utah fire departments are volunteer, some departments find it difficult to assemble twelve students for a class either independently or regionally due to their smaller department size. Because of this, many departments are not able to receive the most basic firefighting training. By reducing the minimum class requirement to 8 students, UFRA believes that it can increase the number of departments certified at Firefighter I, Hazardous Materials Awareness, Hazardous Materials Operations, and hopefully other levels that were not previously available to smaller departments.

3. This project eliminates charges for state and local firefighters attending lower and upper NWCG courses (approximately 30 per year) offered by UFRA. In the past, our State has received “ready-reserve” training grants, from the Federal government, to pay for local and state firefighters to attend wildland training. However, this grant was not funded this year; thus a need has arisen to fund this important training.

4. This project provides for regional training sites to be strategically located throughout Utah. A regional training site would allow fire departments, within a specified geographical area, to have a fixed training location with the needed props and/or infrastructure for fire training throughout the year. Based on their needs, training history, and number of departments committed to using these training sites, regions would qualify for different levels and configurations of training resources. Training sites could range from a simple concrete pad and hydrant in which props could be delivered to (approximately $45 thousand), to a site which includes a large concrete and asphalt pad, fixed props, and a classroom (approximately $520 thousand). Each regional training facility would be scheduled by UFRA, maintained by the region and/or host department, and UFRA would provide instructors for core courses requested by the region. UFRA would require the donation of property for a regional training facility.

5. This project creates a long-term, comprehensive technical rescue-training program to support Utah’s efforts to formalize statewide Urban Search and Rescue response. There are three levels of response training that will be addressed: awareness training is designed for all fire departments, operations level training for departments who desire increased response capabilities, and technician training for the highest level of response. Initially, the concentration will be in the disciplines of rope, confined space, trench and excavation, structural collapse, machinery, and vehicle. As with hazardous materials training, technical rescue training will follow the National Fire Protection Associations 472 Standard format of a tiered system beginning with the awareness level and may include Operations and Technician, depending on the need.

The Council carefully considered all of these project options. They weighed the needs of Utah’s fire service from multiple perspectives. After much discussion, the Council voted to support these three options: eliminating initial certification fees, lowering class minimums, and funding NWCG training.

Council Chairman Ryan Eckhardt presented the Council’s recommendations to the Board. The Board supported this recommendation and voted to have the Fire Marshal’s office draft all necessary documents for further consideration from the State Public Safety Commissioner, the Governor’s budget office, and eventually the Legislature.

UFRA supports the Board’s decision; and has extraordinary support from the Board, Council, Fire Marshal’s Office, and State Legislature. Adding these options would further provide unprecedented training opportunities for the Utah fire service. If you have any questions give us a call. In the meantime, Stay Safe!

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. Connor has worked at the Utah Fire and Rescue Academy since 2005.
We are now preparing legislation to correct the “line-of-duty” disability and death definitions in the fire retirement that applies to all the fire service, whether you are career or volunteer. Chief Deputy Coy Porter, Marty Petersen, the Fire Retirement System Membership Council, and I met with the legal counsel for the Utah Retirement Systems; the retirement system is proposing that we add the terms “stenuous activity” and “required training” to the definitions. Currently, if you are fighting a fire and are disabled or killed, you will be covered under the retirement system. If you are on the training ground or taking a mandatory physical fitness test, and are disabled or killed, you are not covered under the current retirement system definition of “line-of-duty”. The retirement office has told us that we will have to legislate this and they will provide the legislature with the correct costs for these changes.

The Utah Fire Prevention Board directed the Fire Service Standards and Training Council in cooperation with the Utah Fire & Rescue Academy, to bring back to the Board three ways some of the excess Fire Academy Support Account monies could be spent in the betterment of the fire service. After accepting the Standards & Training Council’s recommendation, the Board, by motion, directed that the State Fire Marshal request from the legislature an on-going appropriation of $307 thousand to improve the Target Shooting Program. They are as follows: 1) to eliminate initial certification fees, 2) reduce class size down to a minimum of six students in communities with a population of under $10 thousand, and 3) eliminate charges for state firefighters to take NWCG courses. This next legislative session, the 2012 edition of the International Fire Code with amendments will be presented to the Legislature, to replace the currently used 2009 edition. Members of the Fire Marshals Association of Utah have spent untold hours researching the new edition of the Fire Code to make sure it meets the needs of our citizens by providing an atmosphere of fire and life safety.

There have been rumors of some potential changes by the legislature with regard to fireworks, sky lanterns, and obnoxious paper lanterns constructed of oiled rice paper on a bamboo frame, containing a small candle or fuel cell of waxy flammable material. When lit, the flame heats the air inside the lantern causing the lantern to rise into the air. They obtained huge popularity after the animated movie “Tangled”, and are a significant concern to the fire service. As of the writing of this article, we have had 22 fires caused from target shooting, with some of those fires causing significant damage. The Dump Fire near Saratoga Springs was caused from target shooting and took nearly $2 million to suppress. There has been significant interest in how a fire starts from shooting bullets at a dry hillside. The major problem comes from the use of the Bi-Metal Bullet or what is commonly referred to as steel jacketed bullets. They are constructed of a very thin copper jacket (.005 thick), steel jacket under the copper, and the core is lead. The standard issue bullet we are used to dealing with has a copper jacket and a lead center and uses a brass shell. The majority of these steel jacketed bullets are manufactured in Russia under various names, but the most prominent is Wolf. Chief Deputy Coy Porter and I watched a demonstration of the discharge of steel jacketed bullets; even in daylight hours you can see the sparks from the steel hitting a hard object as the bullet strikes. The ammunition is easily obtained and cheap. The bullet casing is made of steel rather than brass and is made for one shot each. They are not reloadable and they do not obturate in the American made gun-firing chamber like a brass case does. This allows gas to go past the shell, sometimes causing the empty shell to be glued in the gun chamber, becoming almost impossible to extract. Many involved in the shooting industry believe that the key to success in this matter is educating the public to better understand what they are shooting and where to shoot it. Many feel the public has no idea that these steel jacketed bullets will cause a fire if incorrectly used.

I have come to the conclusion that this life is ever challenging; and we, as the fire service need to be vigilant in our duties, also, ever changing our attitudes and goals. Life seems to be on such a fast track these last few years, with bigger and more complicated challenges than ever. We cannot float with every whim and concern, yet we cannot be too rigid in this ever-changing society we live in. With new technology evolving faster than we can change the codes to fix, we now have greater challenges than ever before. Please be careful in all you do, and may you be safe as you protect and serve the citizens of our great state. Best regards.

Brent R. Halladay’s career in the fire service began in December 1971 as a firefighter for the Provo City Fire Department. Halladay later joined the Orem City Fire Department in March 1974 as the Fire Inspector and was promoted to Orem City Fire Marshal in 1977. Halladay joined the Utah State Fire Marshal’s Office in August 1981 as a Fire/Arson Investigator, and then saw several promotions, which include Chief Fire/Arson Investigator in 1987, Chief Deputy State Fire Marshal in March 1990, a position he held with three State Fire Marshals until his promotion to Utah State Fire Marshal on April 4, 2011.
**Message from Utah State Fire Chiefs Association**

Greetings from the Utah State Fire Chiefs Association. What a summer it has been for wild-land fires, with unprecedented weather conditions. Restrictions on open fires and wide-spread wildfire restrictions throughout the state kept fire prevention and firefighters very busy. It appeared to be a good portion of the public recognized the dangerous fire conditions and did not purchase fireworks. They chose to watch commercial displays in lieu of risking the fire danger. There were discussions with local jurisdictions about how state and federal officials could ban fireworks under their jurisdictional authority while local jurisdictions were limited to just restrictions identified in high risk areas. This issue could be a discussion point in future fire legislative efforts.

On another note, I would like to clarify a message regarding Insurance Services Office (ISO) rating, from my previous UFRA Straight Tip article (July – September 2012 / Volume 13, Issue 3; pg. 6-7). Recently, at the International Association of Chiefs Conference, Butch Cobb clarified that the new rating schedule is still going through ISO approval procedures. Once completed, the new standards are approved, another review in the near future would collect only the new data to complete an updated review. For now, it is a wait and see scenario.

I was recently touched by a sentimental story, which involved a fortunate firefighter who was hired under the SAFER grant program, allowing him a full time firefighter position. As he worked through the first three years of his career, he was performing well, learning a lot, and was generally liked by all those who worked with him. During his fourth year, he developed kidney disease, which resulted in having to perform dialysis on himself during the course of his work shift.

When this new medical condition was presented to his health occupation physician, he felt strongly that this firefighter’s career would be over. Not only could this condition endanger the firefighter’s health but potentially cause an inability to perform for his community members and fellow firefighters. The firefighter’s nephrologist disagreed that this condition should prevent his patient from continuing as a firefighter. From reviewing NFPA health standards, it was clear this type of condition for a candidate/ouija prevent entering the firefighter ranks, but does not adequately address this issue for incumbents as to what physicians should recommend to departments. Fortunately, in this case, after review and consultation between the two mentioned physicians and with conditional blood value monitoring in place, a “reasonable accommodation” was put in place to allow this firefighter to remain as such. The long-term solution would be a kidney transplant, as his condition would only worsen over time.

The conditions for a transplant included stringent behavior requirements, waiting time, tissue match, and, of course, some luck. The minimum wait time could be two years. The along came a “firefighter’s hero” in the form of an individual who planned to donate a kidney to someone he knew that was in need of his third kidney donation. This hero went through rigorous testing and blood work and finally received word he was unable to donate to his long-term friend. The donor and spouse discussed his next move and jointly decided he would still donate his kidney. Meanwhile, the firefighter was notified that there might be a donor and the transplant could happen within a couple of weeks. Knowing that this could happen suddenly, he had worked a lot of trades in anticipation of this quick notification. He enlisted his station officer to act as his “trade agent” helping to line up coverage while he prepared for surgery.

The surgery took place on a Friday, and was successful. The donated kidney was producing urines before they closed the firefighter up, which is somewhat atypical. Within a few days he was out of ICU and the donor hero was recovering nicely. Nine days later this firefighter’s station officer and crew prepared a dinner for the firefighter’s family and the donor and his family. It was great to talk with the donor over dinner. He said, “I may not be able to do a lot financially for someone, but maybe this event can really help someone.’ That was an understatement! The donor additionally stated that he wanted to help get the word out of just how important it is to consider doing what he has done for others. This donor is an extremely special person, he is still concerned for others after such a selfless act. He is truly inspirational and a true hero for one firefighter who doesn’t miss his dialysis equipment. The firefighter simply cannot express his gratitude to this donor through words. I have been told that donors typically don’t meet recipients. However, in this case, both parties wanted to meet. As it turns out, the donor, who lives in a state just north of here, has a brother who works as a firefighter in Utah. Must be in the firefighter’s blood. Helping others brings great satisfaction to not only firefighters, but to firefighters’ heroes as well! Sometimes a firefighter needs a hero and thank goodness there are some special people out there who can come to the rescue!

Be smart, professional, and stay safe!

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**Social Media Meets UFRA**

by Andrea Hovsley

Connecting through social media has become a norm and primary tool for folks who desire to keep in touch with friends, acquire news, and utilize entertainment. Businesses and educational institutions have recently jumped on this bandwagon as well, and UFRA is no exception. We, at UFRA, have discovered the amazing benefits social media can provide, by getting important time-sensitive information out to our customers.

UFRA’s mission is “to educate, train, validate, and support the fire and emergency services at the highest quality level possible.” This mission is reflected in all of our print and online media. The UFRA Straight Tip magazine plays a vital role in presenting timely and thorough training lessons, updates within the fire service, and thought provoking information.

The UFRA website (www.uva.edu/ufra) is, in essence, a self-guided tour through UFRA providing individual pages specific to one’s interest within the fire service.

UFRA Yahoo Groups was UFRA’s first social media outlet and proved to be quite effective in getting time sensitive information out to our customers. In addition to Yahoo Groups, we now have a UFRA group via LinkedIn and Facebook. We are also entertaining the idea of joining those in the world of Twitter. By using these social media outlets we can create closer connections with our customers and more readily share each other’s information.

So much of what UFRA does, in the area of communication, is dependent upon your feedback. Please join us on the web or send me an email at Andrea.hovsley@uvu.edu to let us know what information is beneficial to you and what your primary choice of communication is.

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Mike Mathieu is the Ogden City Fire Chief. He started his career with Weber County Fire, then Weber Fire District, and has been with Ogden City for the last 26 years. Mathieu has worked as a firefighter, paramedic, driver-engineer, lieutenant, captain, medical chief, deputy chief, and chief.
Wet or Dry?

Many years ago we were stretching a dry hose line into a fire at the downtown Salt Lake Hilton Hotel (500 South 200 West). The stretch was long and involved going through several doors. The fire involved the low-rise non-fire-sprinklered portion of the evacuated hotel. The incendiary fire had been started on a cleaning cart in the hallway. The fire had rapidly extended and with all the plastics burning, the smoke was thick, black, and boiling.

We completed the stretch and called for water. In fact, we needed the water very quickly. Fire was rolling over our heads in the smoke, and the carpet was supporting what looked like a grass fire coming toward us. We waited and waited, and no water. We were making multiple calls on the radio, for the line to be loaded. We did not realize that one of the double doors we came through had closed over the line. When the water came through the hose it wedged the door closed, and effectively stopped our water. Needless to say, we were in a bit of a pinch.

Fortunately it was a set of double doors. We were able to open one door and then yank the line out from under the other door and get water flowing to the nozzle. I don’t mind telling you it was “sweaty pits time” for a few minutes. The fact is we messed up. We were fortunate that we could resolve the problem before we were overrun…it was close! So what went wrong?

We over-committed with a dry line. We should have loaded the line before we started down the hall toward the fire. This simple action would have prevented the line from jamming under a door, as was our situation. This is especially true with hose stretches into dwellings, because the nozzle advance from the point of entry is usually short. If a line has to be made-up and the stretch is particularly long or difficult, the line can remain dry up to a point. However, the line should be loaded before committing to the fire area and fire attack.

Would you wait until you were under attack to load bullets into your gun? I don’t think so. How is this any different? Get the nozzle to the point of entry for attack, load it in a safe zone, check that you have adequate pressure and flow (not just bleeding air out of the line), make your READY (as seen below) checks, and then go after it. This improves your safety and effectiveness while also preventing complications as you advance.

Keep training, look at all the options and potential. And above all, engage your brains and plan it out before you commit!

R - Is your radio on, and on the correct channel?
E - Do you have your equipment (tools & PPE)?
A - Are you on air and do you have adequate air?
D - Do you know the assignment and plan?
Y - Yes, you may proceed with caution.

Stephen H. Higgs began his fire service career in 1977 with the Salt Lake City Fire Department. Higgs served as a firefighter/paramedic, lieutenant, captain, battalion chief, and deputy chief over fire operations. In 2000, after 23 years with Salt Lake City, he accepted the position of fire chief with Midvale City Fire Department. On July 1st, 2011, Midvale Fire merged with the Unified Fire Authority of Greater Salt Lake (UFA); Higgs now serves as an assistant chief with the UFA.

Unified Fire Authority (UFA)

UFA had an extremely competitive group vying for the position of Captain during July. Among the group of 21 firefighters testing for this promotion, there was a range from 7 to 20 years of service with the department. Congratulations to all the following for their promotion as Captain: Matt Call (UFA instructor), Travis Hobbs (UFA instructor), Dan DeVoogd, Matt Rhoades (UFA instructor), Jon Wilde (UFA instructor), Dustin Dinkel, and Scott Hancock.

Roy City Fire Department

Jason Poulsen has been hired as the Fire Chief at Roy City Fire Department. Previously, he was the Fire Chief at Clinton City Fire Department. Poulsen started his career as a volunteer firefighter for Riverdale Fire Department in 1995, followed by Ogden City and Roy City. He was hired full time by Roy Fire Department in 2000 and graduated from paramedic school in 2005. Poulsen was promoted to Captain in 2010 and completed his Fire Science Degree at Utah Valley University. This fall he plans to graduate with his bachelor’s degree in Emergency Management Services.

Park City Fire Service District

Patrick Harwood was promoted from Captain to Battalion Chief on July 1, 2012. He has been full time with Park City Fire District since 1997. Harwood served as a Paramedic for his first nine years and was then promoted to Captain.

Syracuse Fire Department

Jo Hamblin was promoted to Deputy Fire Chief of Syracuse Fire Department on July 14, 2012. Hamblin has 16 years experience in the fire service, including 12 years as a Captain with Syracuse.
The day I came on the job, in the mid 80’s, I was shocked to see guys who were not just out of shape, but significantly overweight. I had just completed the fire academy and was in fantastic condition… it wouldn’t last long.

We all remember the day we took our physical agility test. For many it was the fittest point of our lives and others the last truly fit moment of their careers. Face it, we do not fight fire every day, strenuous rescue operations are infrequent or more than once a week, and the toughest thing we do at the station is figure out how to slide through the days training.

So it’s really no surprise that 70 percent or more of the fire service is obese, and 60 percent of all Line of Duty Deaths are heart attack related. While many are attributed to toxins inhaled or absorbed during mop up operations, far too many are guys dropping dead as they get to the door and their hearts just can’t handle the stress of fire ground operations anymore.

We are firefighters, not bankers or corporate executives, our job demands fitness.

Fire doesn’t back off because you are 48 instead of 25. There is no Union steward to negotiate terms with the fire department. It’s your job. It was needed, but I embraced it. I agreed it was punishment and others think for a minute that it was a chore? Why do we not get our collective butts in the gym and was proud of accomplishing what so many volunteer guys never would. I was a career firefighter and I was going to be the example to follow. Incredibly, a year later I was 205 pounds, smoking two packs of unfiltered Camel’s.

I left the fire service in 2002 to own a business (in the fitness industry) and after three years was trying to get back in the fire service. This time it was a bigger challenge, I was nearly 40, not as fit as I had been in 1987 and had to work much harder to keep my weight in check.

Thankfully, I was offered a job at Navel Air Station Corpus Christi Fire and Emergency Services in the fall of 2007 and felt like a rustier version of my 20 year old self. Loved the training, took every class available, and worked out…mostly. Then I fell into the South Texas lifestyle of eating poorly (it’s almost a sport there) and going to my room for two hour naps after big lunches. Needless to say it didn’t take long to start putting on the pounds.

One of the biggest issues we discussed was if a fitness program could be mandatory, and if mandatory, could it all be voluntary? Is there more safety liability to my crew, and this was unacceptable to me. All YOU volunteered for this responsibility. And it is a responsibility that includes not just the ability to read a building, or open a roof, but to be physically capable of doing your job.

At the third floor landing, I was sucking air like we were fighting heavy fire and I felt the first touch of panic. I was almost positive the second dummy was behind the burn bin and was way over there, but stuffed in a small space, which meant we were going to have to work just to free it and would still have two flights of stairs to go down before this would be over.

While I managed to keep it together getting the dummy free, as we got to the landing I was fighting the urge to rip my mask off, and my heart rate was well over 190. All I could think was “I can’t do this anymore”. I was now a liability to my crew, and this was unacceptable to me. All the work to get back on the job and I had thrown it away on laziness, breakfast burritos, and XBOX.

We got down, I didn’t quit, and it took me 30 minutes to get it together before starting on some serious soul searching. Should I switch to prevention and finish my career without ever touching a rig, or get in the gym, take baby steps, and look up in a year healthier and an asset again.

Since you are reading this, I obviously took the fitness route and managed to finish my career healthy and alive.

So what is the point of this article?

It’s simple, we have volunteered to be the ones who are the last best hope in other’s time of crisis. We were not forced to do this job, and it doesn’t matter if you are a career firefighter in Chicago or a volunteer in Aledo. YOU volunteered for this responsibility. And it is a responsibility that includes not just the ability to read a building, or open a roof, but to be physically capable of doing your job.

There should not be a debate over maintaining fitness, or if it is part of your appraisal. Your fitness is as big a piece of the equation as your FFII certification. All the knowledge and experience in the world is not going to save you when your heart fails because you did not put as much attention into your fitness program as you do your CE’s for EMS.

Allen Wahlström recently retired after a 20 year career with the Federal Fire Service, having worked in ARFF, wildland, and traditional municipal settings. He is currently working to build his Firefighters Cycling program nationally to get firefighters healthy through cycling and strength training. There are chapters in Dallas, Seattle, Atlanta, Tampa, Columbus, New Jersey, Washington D.C., and Copenhagen, Denmark. If you are interested in forming a chapter in your area, contact him at awahlstrom@firefighterscycling.com.
As firefighters, we are taught to figure out solutions to extremely difficult problems, but what happens when we, the firefighters, become the problem? One of the most challenging situations is when a firefighter becomes lost, trapped, or injured in a fire. We are taught, early on in our careers, to call a Mayday if we find ourselves in any of these situations. Unfortunately, a stigma has become attached to calling a Mayday in today’s fire service. Firefighters might not want to call a Mayday due to one’s concern for not wanting to appear scared, weak, or incompetent at one’s job. This has to change. We need to change our way of thinking to “Mayday before Macho”.

This past summer, Captain Jeff Jones of the Sandy City Fire Department created a training program to address such a problem. Sandy Fire is now teaching its firefighters to not be afraid to call a Mayday in situations that may require Rapid Intervention Team (RIT) activation. Each member of this department has been through the program, which includes a review of Mayday protocol (situations firefighters should be calling a Mayday in) and a Mayday evolution.

All combat firefighters were led through a modified version of the entry-level physical agility test. In addition, several training props were set up to simulate a floor collapse, entanglement, and roof collapse. The firefighters were required to call Mayday via radio to a simulated incident command. All of the evolution was done on air, and in full structural PPE. The mental aspect of the evolution was to identify why firefighters fail or delay calling a Mayday, while also identifying Mayday decision-making parameters.

The intention of this training is to change the humiliation of calling a Mayday. As firefighters, we are a particularly “macho” group. We are macho by nature. Citizens call US to fix problems for THEM. Some firefighters seem to feel that calling a Mayday could interfere with one’s duty or give the illusion that we made a mistake, but this is not the case. Maydays are crucial. This is why it is taught in Firefighter I curricula. Having the understanding and confidence to call a Mayday when your life or your partner’s life depends on it, is one of the main points behind this training.

Of course, the first priority must always be to keep high situational awareness and exercise practices to prevent trouble but when all else fails, Mayday training provides a useful and critical skill set. The skills learned in this training have given tools to Sandy firefighters to build confidence in calling a Mayday. The “Mayday before macho” mentality is a revolutionary way of thinking and could ultimately change the negative fire service perception on calling a Mayday.

Zach Robinson has been with Sandy City fire for six years. He has held the ranks of Firefighter/Paramedic and is currently a Paramedic/Engineer. Robinson is also a second year Master of Public Administration student at the University of Utah, with expected completion in summer 2013.
RETIREMENTS:

On August 18, 2012, after five years with Provo City Fire, Chief Blair Camp has retired. Camp began his career with the Murray Fire Department, then took the position of Fire Marshall at University of Utah Hospital, ending his 33 year career in Provo.

Gary Bulloch retired from his position as Fire Chief of Brian Head Fire Department on June 29, 2012 and has since been appointed the Public Safety Director for Brian Head.

Janet Herron retired from the State Fire Marshal’s Office (SFMO), after 25 years, on August 31, 2012. Through-out her 23 years at the SFMO, Herron managed the Utah Fire Incident Reporting System (UFIRS) as well as various other responsibilities. Some of those responsibilities included public education, the Juvenile Firesetter program, and more recently the fire department roster, and the SFMO website.

Herron also served on the Board of Directors and several committees for the National Fire Information Council (NFIC), and worked closely with the U.S. Fire Administration (USFA) in the data analysis of Utah’s fire data.

Ron Whiting has retired from being Fire Chief of Mapleton Fire Department. Whiting served as a volunteer fire fighter for 16 years and then as Chief for the last two years. Whiting will continue his work as a Project Manager and Assistant Fire Marshal for Utah Valley University.

Dr. Keith Hooker, age 73, a 40 year veteran ER Doc, globetrotting adventurer, and teacher extraordinaire died of cancer on June 4, 2012. Hooker was a driving force toward improving EMS in Utah County and throughout the world. He was a Medical Advisor for the UVU Paramedic Program, Provo FD, Utah County Search & Rescue, and Sundance Ski Patrol. Hooker photographed provided by Walker Sanderson Funeral Home.

Aaron Beasley, UHP Trooper and Assistant Fire Chief of the Corinne VFD died in the line of duty on June 30, 2012, while rescuing two hikers from Mount Olympus when he fell from a cliff as he was trying to retrieve his medical bag. Beasley was acting in his capacity as Flight Technical Officer for the UHP Aero Bureau when the accident occurred.

James Ruion (Jim) Judd died on August 17, 2012 in a motorcycle crash. Judd began his fire service career in 1977 with the Ogden Fire Department, and rose through the ranks to the position of Battalion Chief and Union Local President. In 1985, he was elected President of the Professional Fire Fighters of Utah. He served Ogden for 20 years and after retiring went to work for UFRA as an instructor and Outreach Program Manager. Judd served at UFRA until the death of Ed Mayne, when he stepped into the position of AFL-CIO President.

DEATHS:

Mark Fry died Thursday, August 23, 2012 from cancer. He was a member of the South Summit Fire District for 29 years and served as chief for 18 years. During his fire service career he served as President of the Utah State Firemen’s Association. Fry was currently serving as the South Summit Fire District Commissioner.

Kevin Smith, with the Cedar City Fire Department, died August 16, 2012 at the age of 27. Smith was a graduate of the 2012 Cedar City Recruit program, previous to which he had been a volunteer with the department. A memorial fund has been established at State Bank of Southern Utah in the name of Kevin Smith, for those wanting to assist his wife and their three young children.

Chesont Madsen was killed in an industrial accident August 22, 2012. He was a volunteer firefighter with the Fountain Green Fire Department for five years and was actively involved with the sheriff’s office. Madsen was also a volunteer member of the San-pete County search and rescue team for 15 years, for two of those years he was a commander of the team. Madsen photograph provided by the Pyramids at http://www.heraldextra.com/sanpete-county/.

Made possible through the Federal Assistance to Firefighters Grant (AFG) and SAFER Recruitment and Retention Grant (which covered NFPA1582 physicals, immunizations, Certifications, Wages and Full Structural PPE), the Cedar City Fire Department (CCFD) has been able to recruit, train, and graduate the largest class of Volunteer’s in CCFD’s history.

Cedar City’s Recruit Class of 2012

by Russell Brownson

It all began with 43 applicants, an oral interview, physical agility test, and a written exam; and had you asked, none of the prospective recruits had any idea of the journey for which they were about to embark. In the end, 21 of the original 43 made it all the way through.

Made possible through the Federal Assistance to Firefighters Grant (AFG) and SAFER Recruitment and Retention Grant (which covered NFPA1582 physicals, immunizations, Certifications, Wages and Full Structural PPE), the Cedar City Fire Department (CCFD) has been able to recruit, train, and graduate the largest class of Volunteer’s in CCFD’s history.

After 14 months, this past August the CCFD “Rookie” Class of 2012 completed the initial training and certification program led by CCFD Recruit Academy Staff while utilizing services from the Utah Fire and Rescue Academy (UFRA), State of Utah, Forestry, Fire, & State Lands, and active members of the CCFD. As a result of this training, all 21 firefighters have completed their Firefighter I, Firefighter II, Hazmat Awareness, Hazmat Operations, Wildland Firefighter I and Wildland Firefighter II, and certifications.

October - December 2012

Are Incidents of Arson Increasing?

In the most general terms of arson, the willful and malicious burning of property. Utah states state, “the person by means of fire or explosives unlawfully and intentionally damages any property with intention of defrauding an insurer or the property of another” (Utah Code 76-6-101. Arson).

Arson has been problematic worldwide for numerous years. According to the National Fire Protection Association (NFPA), intentionally set fires are the third leading cause of home fires. The motivations for intentionally setting a fire normally fall into six categories; profit, vandalism (criminal mischief), excitement, revenge, crime concealment, and extremism.

The evaluation of data needs to be taken as a whole, not in part. If the fictional town Anywhere, USA had three fires, and they were all arson, then this town would have experienced a 300 percent increase in arson. Not all fire agencies file incident reports and some may report the cause incorrectly. In 2010, the NFPA estimated there were 27,500 intentionally set structure fires in the United States and an estimated 14,000 intentionally set vehicle fires. The NFPA data states intentionally set structure fires increased 3.8 percent over 2009, and intentionally set vehicle fires decreased 6.7 percent.

Uniform Crime Report statistics from the FBI report a 14.6 percent decrease in arson in 2010, and an 8.6 percent decrease in arson in the first six months of 2011. It has been suggested that during difficult economic times the incidents of arson will increase. There are some people who seek to resolve their difficulties by intentionally destroying their property, then filing an insurance claim for relief. This has happened and will continue to happen, irrespective of the economic times. National statistics do not show a link between the incidence of arson and the economy.

During the past several months, the news media has reported fires as being accidental, human caused, and suspicious. There are those people who will interpret “human caused” and “suspicious” as being arson. Unfortunately, this would be an improper interpretation. Human caused simply means someone or their actions may have caused the fire, although it does not mean it was done intentionally or unlawfully. Suspicious by definition is tending to arouse suspicion. It could be expanded to say something is wrong, without proof or the slightest of evidence. Suspicious is merely the status of an investigation. It would be more appropriate to say the cause is under investigation or undetermined.

Unfortunately, fires will continue to occur. There is no data presently available to indicate that arson is on the rise.

Gary Hodson IAAI-CFI, has been a full time fire investigator since November 2006 and a IAAI-CFI since 2003. He began investigating fires in 1991. He is employed by Unified Investigations and Sciences and retired from the Provo Police Department. Hodson began his public safety career in 1972 in Southern California and has previously served with the Castle Dale Volunteer Fire Department. He has been an EMT since 1976.

SUPPORTING OUR VOLUNTEERS

Most Americans believe their tax dollars cover all of the expenses accrued by a fire and rescue department to keep the citizens safe and secure. The public believes that if they make a 911 call, professional rescuers will be there in minutes to make everything all right. Let’s play out a real situation and just for a moment take into account both sides of a horrible situation.

Scene One: You are in your house at 2 a.m. Your family is asleep and all is well, but then the smoke detector wakes you. You jump out of bed, run down the hall and discover your house on fire. You rush to get your family to safety and call 911. You are hoping that the firefighters arrive in time to save your home and belongings. Thankful that your family is out of harms way, you stand in the street and watch everything burn but you can’t understand why the fire department has not arrived yet.

Scene Two: Your department receives a 911 call for a house fire. The crew gear up, run out to the fire engine, and the truck will not start. After several failed attempts to start the engine, the crew loads everything they can into their personal vehicles, and rush to the scene to find shattered lives and a home burned to the ground.

How did this happen?

In the United States 70 percent of our fire and rescue personnel are volunteer. A primary concern for these volunteers is not job performance, but whether or not they can make it to a call due to old and possibly faulty equipment. Many rural area firefighters and volunteers spend his or her days off working on department vehicles and facilities. It is not unheard of for a volunteer to use money from his or her own pocket to put gas in a rescue vehicle. Another concern is volunteers in danger due to the inadequacy of the departments PPE.

Large cities with well funded fire and rescue departments tend to receive a steady supply of new equipment. Rural areas would love to acquire the old equipment of these well-funded departments, as it would be a vast improvement in comparison to what the rural volunteer departments are currently using. Some larger departments may simply have equipment storage, but simply do not have the time to check their inventory and/or connect with a department in need.

I’ve discovered in my findings that there is enough to go around. The real issue seems to be that people in general simply do not realize that there is a need for action. The next time you see a donation opportunity for a volunteer fire department, think about what your department might be able to provide them.

There is support for volunteer departments by means of grants, donated equipment, and funding. If you have a need, please let us know. If you have something to give, please do. Please feel free to contact me for more information (Editor’s note: In Utah you can contact steve.lutz@ufra.edu to donate used items or to request items).

Rachel Goodwin Juby resides in Alpharetta, Georgia. She specializes in providing American made fire and rescue products throughout the world. Goodwin Juby is a volunteer committed to providing underfunded fire and rescue departments with donated equipment, funding, and publicity through blogs, articles, social media contacts, and one-on-one communication throughout the industry. Feel free to contact Goodwin Juby by email at RA10LLC@att.net or visit her website at www.Emergency911Equipment.com.

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Letter to the Editor

July 17, 2012

I saw your post on [Linked In] "What advise would you give to a new recruit?" I went to your web site and looked at the [UFRA Straight Tip] quarterly publication. I just finished reading the article about hoarder fires [Lesson Learned: Fire in a Hoarder’s House, July – September 2012 / Vol. 13, Issue 3]; I have run several of these types of occupancies and have a few suggestions. The key points were good, but I would add several more.

The week before I retired I ran a hoarder home with a fire in the kitchen. We arrived, I talked to a neighbor and they informed me [that] the family of the involved structure was out of town. I could see the fire in the kitchen as I made my lap [around the structure]. My choice of entry was through the front door. We got about four feet into the structure and realized this was a hoarder.

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Hoarder homes can have unhealthy mold and be rodent infested. At times the only solution is to completely empty the contents, remove the mold and rodents. In a worst case scenario the home may be condemned and torn down.

Larry Jenkins started his 36 year fire career with Fairfax County Fire and Rescue Department, Washington D.C., as a volunteer in 1969; he then became full time in 1974, retiring as a captain in 2010. Some of Jenkins' vast experience includes his deployment to NOVA Task Force 1, assisting with Hurricane Katrina; lead instructor for numerous fire schools; helped author all of the firefighting operational manuals used by the Northern Virginia Fire Departments; and served on the IFSTA, technical writing committee for "Strategy and Tactics", 1st edition.

It is easy enough for firefighters to become disoriented in a normal structure, but in these structures you can easily get lost. You may have contents full on you and cover you so that your PASS alarm may not be heard. You will use more SCBA air just by maneuvering up or around these obstacles.

I-400 will be taught at Winter Fire School in St. George – Register with the Fire School Registration Process and fee’s. Contacts for Questions: Dan Cather (801) 863-7423, catherd@uvu.edu / Angie Menlove (801) 863-7704, menlovan@uvu.edu
We pride ourselves on our quick response time and providing excellent service. Our water truck “the big dog” is known for serving all of the surrounding counties. Our water truck worked on two fires during the 2012 wildfire season: the Twitchell fire and the Salt Creek fire. With the use of a different truck, Salina Fire Department assisted on the 2012 Wood Hollow fire as well.

We stay active in our community in many different ways, one example is by displaying fireworks for the Salina 4th of July rodeos and for the Redmond 24th of July celebrations. Salina Fire Department participates in many fundraisers throughout the year in an effort to support our Sub for Santa program; this is an event that our fire department especially loves to do every year. In addition, we sponsor a scholarship every year for one of our local high school seniors.

We, at the Salina Fire Department love to do what we do and enjoy serving the people and community of the North Sevier area. Our crew consists of 22 dedicated volunteers, with the majority being certified in FFI, FPII, hazmat awareness, and hazmat operations. In addition, over three-quarters of our volunteers are wildland I certified with current red cards. We also have one hazmat tech and one UFRA certified tester. One of our firefighters is a schoolteacher, who spends his summers traveling to fires across the nation; then upon his return teaches our department new techniques and better practices learned from his experiences.

Our department also protects one of Utah’s largest coal producing mines, the Sufco mine, which produces over 8 million tons of coal per year. Both Robinson Transport and Barney Trucking are very large trucking companies who are big supporters of us.
UFRA has invited two instructors from CMC to give a hands-on Rope Rescue class. Bruce Parker and Leroy Harbach are both employed by CMC, teaching classes across the U.S. and internationally. Both instructors have over twenty years of experience teaching these classes to public safety entities.

Mike Dugan and Mike Gagliano will be presenting a new class Leadership in Today’s Fire Service and How to Avoid Fire Injuries and Deaths. In addition, Captain Dugan will be bringing back a class from WFS 2008, Damn, That Was Close. Both of these classes are designed for all firefighters, regardless of rank. Mike Dugan is a captain and has over 25 years with FDNY. Mike Gagliano is a Captain with Seattle Fire Department, having over 24 years with Seattle and The United States Air Force.

Returning “New & Improved” Classes

Layton City Fire Chief Kevin Ward and Deputy Chief Paul Sullivan will be returning with their new and improved class, Smokin’ the Promotional Process. This is a class designed for anyone interested in promoting to any position, whether it is captain or chief officer.

Captain Russ Young from Orem City FD is teaching Agricultural Extrication, which was taught as a pilot class last year. It received great reviews, so he is back with additional information.

Pat Vega, Retired Assistant Fire Chief from Hill Air Force Base, with over 30 years experience on the base, and will be teaching Arson Investigation for First Responders.

Returning Classes

Among those instructors returning this year are: Mike Dugan and Mike Gagliano with their class This House Rocks. Their class had such great reviews last year, so we decided to bring it back for an encore performance. This class discusses leadership and building cohesive teams who are ready to get the job done no matter what the job may be. Strategic and Tactical Air Management for the Fireground class taught by Captain Gagliano is returning.

We are having Captain Merrill Bone return with his class, Large Animal Technical Rescue. If you have ever had to deal with any kind of large animal rescue or have the potential to deal with it, this training is invaluable.

Two more instructors returning from last year are Nichole Martin and Tal Ehlers. Nichole will be instructing about Social Media, which is extremely relevant and has the potential to make or break one’s career. All public safety agencies need to be familiar with social media. Tal Ehlers is presenting First Responder Emergency Preparation. Over the last few years disasters have hit virtually every part of this country and public safety departments have come to the conclusion that plans must be in place for making sure the families of first-responders are taken care of.

We are bringing back the Winter Fire School class staples, although we have changed the venue for a few of these classes. Dave Larson’s Pump Maintenance class will now be presented at the Washington City Shops. The live fire props will be at St. George Fire Department’s new Station 8. We will still have the Truck Operations, Auto-Extrication, and MCTC.

Steve Lutz will be returning to teach several classes, including Recruitment and Retention for Volunteers, Wildland Urban-Interface Code, and Grant Writing. Several wildland classes will be taught and the new sim-tables will be at WFS, to help illustrate the strategies and tactics. Kim Beck and crew will be teaching the class, Mayday. It is designed for firefighters of all levels and is the curriculum developed at the National Fire Academy in Emmitsburg, Maryland.
VIEW FROM THE HILL

As we move into the fall the 2013 Utah Legislative session looms with some very important legislation and budget items on the table:

1. Adoption of the 2012 International Fire Code (IFC): Every time new versions of the codes are developed, the Legislature must approve the codes before they can take effect in Utah. A lengthy process to coordinate all the codes - building, residential, fire, etc. - has already been completed.

2. “Line of Duty” definition (for FF death and/ or disability): The current law is overly restrictive and disallows coverage for numerous conditions, circumstances, and injuries, which can result from line of duty activities. The law also currently imposes a “waiting period” during which a new firefighter is not covered. Numerous discussions about how to get this antiquated law corrected have taken place and several legislators have stepped forward to help us get it done.

3. Appropriations from the Fire Authority restricted account: A budget request of $307 thousand has been forwarded by the Fire Prevention Board to DPS, for purposes of:
   a. Reducing UFRA field class size from a twelve to eight student minimum, in communities with less than 10,000 people.
   b. Elimination of initial fire service certification fees, if candidates pass practical and written tests on the first attempt.
   c. Funding for Wildland and National Wildfire Coordination Group (NWCG) Classes: The Federal “Ready Reserve” grant to State Forestry is a victim of spending cuts in Washington. If approved, state and local firefighters will receive subsidized NWCG classes. Ready Reserve also funded valuable classes such as the Wildland Engine Workshops and tuition for the annual Wildland Fire Academy.

There may be legislation, which can help local and state officials, to regulate target shooting during high fire risk periods, and also to allow banning fireworks within cities and towns when the State Forester has banned fireworks in the unincorporated areas of the state.

The popular sky lanterns, often released at weddings or memorials, may be added to the list of items regulated by the State Fire Marshal or State Forester. Sky lanterns, also known as Kongming Lanterns or Chinese lanterns, are airborne paper lanterns best known as a tradition found in some Asian cultures. They are traditionally constructed from oiled rice paper on a bamboo frame and contain a small candle or fuel cell composed of a waxy flammable material. When lit, the flame heats the air inside the lantern, thus lowering its density causing the lantern to rise into the air. *

There may also be legislation regarding inter-state mutual aid and ambulance licensing issues.

As always, fostering the cooperation needed among all fire service organizations to get things done will be a major focus of the Joint Council. It is important to note the large amount of compromise needed, especially when different fire communities have differing priorities. It is also imperative for all firefighters and chiefs to learn about such issues and get involved in the political process. Ask your candidates about fire service issues and help these representatives understand what we need to adequately protect our communities and people. Follow the JCFSO at www.firecouncil.com/.


Steve Lutz has spent the last 37 years working in the fire service as a firefighter, fire chief, instructor, Public Safety Director, and currently as Assistant Director of the Utah Fire & Rescue Academy.

LITTLE FIRE ENGINE RECEIVES BIG REACTION

The 4th of July is always a big event in the City of Riverton. Riverton Days hosts a carnival, parade, nightly firework works, movies in the park, and a rodeo. People flock from all over the Salt Lake Valley to participate in the festivities, and fire safety is one of the hottest topics. There are always long lines to ride the roller coaster, get the best seat for the demolition derby, and buy some cotton candy, but the longest line at Riverton Days is the line to visit with Unified Fire Authority (UFA) and Engine 911 (E-911).

Built by Unified Fire Authority’s Jared Norton, through community donations and the expertise of Herriman City’s Public Works, Engine 911 is quickly becoming one of the community’s “gotta see” fixtures. E-911 is a one-half scale replica of Unified Fire’s Seagrave Engines. It is built on a Cushman golf cart chassis and is 100 percent electric. The engine has a working light bar, a 50 gallon water tank with a 50 gpm electric pump, a hose bed that doubles as a platform for dignitaries or UFA’s mascot during parades, and seating for five. Because of its narrow stance and all electric drive train, E-911 can also be pulled into school gymnasiums for fire safety assemblies.

The goal of E-911 is to draw a crowd. Kids can visit E-911 and become a firefighter with an apparatus that fits him or her. Children can spray the hose and take the wheel as an engineer. The fun draws kids in, but UFA firefighters treat their visits as an opportunity to teach fire and life safety concepts to children and adults. Adults learn who UFA is, what services we provide, and how to make their families safe at home. Children learn how to be firefighters by preventing fires at home, and preparing for a fire by practicing escape plans. Teaching safety concepts when the opportunity presents itself has been proven to save lives and property, and E-911 creates many of those opportunities. Due to its popularity, Paramedic Norton has already begun planning a “Little Tiller”, which will resemble Tower 126 in Midvale.

E-911 is one of many ways in which Unified Fire Authority creatively engages the public. By seeking innovative strategies for public education, UFA has been able to create a “buzz” around fire safety, making it a fun and interactive topic. UFA has also identified ways to reduce costs associated with outreach and event staffing. If your department is interested in seeing or discussing the little fire engine or any of UFA’s programs, email communityassistance@ufa-slco.org, and a public educator will contact you.

Jared Norton with Engine 911

Ben Sharer has been with Unified Fire Authority for ten years. He currently works as an engineer and a public educator. Sharer has received an associate’s degree from UVU and attended the UVU’s Recruit Candidate Academy as a member of the 7th class.

Engine 911 is an interactive, fun, and educational topic. UFA has identified how to make the little fire engine “a buzz” around fire safety.

photography by Rick Egan
I-S-O, WHAT YOU NEED TO KNOW

Most of us know that some citizens view fire departments as over funded, over staffed, and in some ways too capable and too expensive. A large part of citizens, who have not directly needed their fire department’s life and property saving skills, ask why are emergency services so needed? The most glaringly obvious answer is, we are an insurance policy in case they do need to dial 911. Aside from the obvious, the average property owner benefits in more ways than one from a well equipped, well staffed, and well trained fire organization. Fire departments can save the citizens money in many ways, one of which is by having a positive impact on property insurance premiums. These premiums are based on what many refer to as an ISO or Insurance Services Office rating; with a great rating, the local fire department can be the best deal in town.

A quick review of how ISO works: ISO is headquartered in New Jersey and among other services assigns individual communities a PPC (Public Protection Classification) ranging from 1 to 10. A Class 1 rating generally represents superior fire protection, while a Class 10 rating indicates the area’s fire suppression program does not meet ISO’s minimum criteria. Keep in mind, a department’s rating is not just based on what the firefighters, engines, and trucks can do but also factors in things like one’s community water supply and communication abilities.

We asked a local insurance agent to put together a comparison of what effect a lesser ISO rating would have on the Park City citizen’s homeowner and business insurance premiums. These premiums are based on what many refer to as an ISO or Insurance Services Office rating; with a great rating, the local fire department can be the best deal in town.

Without getting into too much depth about Park City’s fire district levy, suffice it to say the increase in premiums cited in the above two examples are roughly what a resident would pay in Park City’s local annual fire district tax. Most taxpayers are unaware of the savings they receive due to the funding of their local fire department. A little bit of education goes a long way, towards insuring present and future funding for fire departments. It must be noted that insurance savings from jurisdiction to jurisdiction does vary greatly; but the fact remains they receive due to the funding of their local fire department.

example 1 - 25-year-old single-family residence with a value of $300 thousand and a $1 thousand deductible. With an ISO classification of 2, 3, 4 or 5 the annual premium is $686. With an ISO classification of 9 the annual premium would be $982, which is an additional $296 per year. That’s a whopping 43 percent increase in premium!

example 2 - Structure type and details: Commercial/Leased/Mercantile built in 1990 with sprinkler protection throughout and a value of $1 million with a $1 thousand deductible. With an ISO classification of 2, 3 or 4 the annual premium is $3,203. With an ISO classification of 9 the annual premium would be $4,341, which is an additional $1,138 per year. That’s a 35 percent increase!

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The topic of diabetes in the fire service has been discussed for several years now. However, this discussion was often based on outdated knowledge about treatments. Significant changes in diabetes research lately prompt reexamination of the question, “Can a diabetic handle employment in the fire service?”

For a long time, the diagnosis of diabetes was accompanied with heavy personal and professional sacrifices and restrictions. One’s entire life had to be rearranged to meet the treatment of this autoimmune disease, and to minimize potential secondary failures in the long term. However, the times of treating patients with animal insulin are long gone. The pharmaceutical industry has developed several treatments, which have significantly improved life with this illness. There is now artificial insulin and also the use of insulin pumps, which measure blood sugar in intervals and then inject insulin when appropriate. The pumps function as an artificial pancreas, which help diabetic patients live a normal life with few personal restrictions.

Diabetes has long been a no-go criterion for many jobs; examples include the aviation industry and also fire service. In a lot of countries, like Germany, diabetics are still considered not healthy enough to meet fire service requirements and are automatically rejected. But shouldn’t we reconsider the overall health requirements in times where diabetes is no longer a hard to control disease? It is also important to consider the fact that the fire service itself has changed. Main duties have shifted from fighting fires to other emergencies, such as car accidents and medical runs. This changing role supports the necessity to reevaluate general entry requirements and should be taken into account when thinking about diabetics in the fire service. In the fire service, it is important to be healthy enough to remain calm and focused in times of stress and emergencies. Diabetes poses a potential risk of hyperglycemia, as well as the short-term more dangerous, hypoglycemia. With hyperglycemia the patient injects too much insulin, often due to a lack of training or experience, causing one’s blood sugar level to decrease to an unusually low level. This causes ravenous appetite, a rising heartbeat, and blood sugar level to decrease to an unusually low level. This is one way to indicate how well a patient is adjusted to the special circumstances of being a diabetic.

There are many diabetics in the fire service around the world. Firefighters using insulin pumps that include sensors report few problems. However, individual evaluations are necessary to examine potential diabetic candidates in the fire service. Nevertheless, due to new diabetic treatments, a general exclusion of diabetics in fire service (as it is the normal procedure in many countries) deserves reconsideration.

Recommended links:
http://news.bbc.co.uk/2/hi/uk_news/3850051.stm

Matthias Boeig is a volunteer firefighter in Germany. He was diagnosed as a diabetic type 1 in 2006 and started working as a volunteer firefighter in 2008. He has blood sugar tests every three months and has received extensive training on diabetes and its effects. Feel free to contact Boeig via email at matth.boeig@t-online.de.
WE NEED TO CREATE AN ENTREPRENEURIAL ENVIRONMENT

In this article, we will discuss the major challenge facing today’s fire service leaders: the budget. By leaders, we include all officers from the first line supervisor to the Fire Chief, as well as Union and Association leaders.

In our 40 years experience, this current budgetary challenge is the worst we have ever seen. Departments around the country are laying-off firefighters, reducing operational staffing levels, browning out areas of protection, and closing stations due to budget cuts. Additionally, some departments are eliminating staff positions, reducing or slashing training budgets, and providing limited funding for many other operational expenses. It seems that while the City leaders are intent on creating this so called savings, they seldom see the big picture in regards to decreased service levels and the immediate safety impacts on the citizens we are sworn to protect.

All leaders can take a couple of options to help solve these budgetary challenges:

1. Do nothing. Lay low and try to weather the storm. Wait for better economic times.
2. Take a more pro-active approach. Develop an entrepreneurial environment. Begin thinking “outside of the box”.

The “do nothing” approach has seldom worked out to the Fire Service’s advantage. Usually, the solutions put forward come from statisticians, politicians, and pundits. These people have never felt the passion we have for solving life-threatening problems, whether it’s dealing with a seriously ill or injured patient, or the sense of purpose we have when we roll up to a fire hoping that no one is trapped inside a burning building. All they see are dollar signs and headlines. Unfortunately, the headlines they always miss are the ones that describe delayed responses and tragedies that could have been avoided. And in the end, who has to answer for these delays... it’s usually the emergency service provider, not the decision makers.

So being pro-active, getting involved in creating solutions, is always the better choice. Every level of leadership has a stake and a responsibility to become part of this problem solving. The honest synergy of administration, rank, and file leadership can lead to ideas, which can solve problems without serious impacts. While we are used to people referring to entrepreneurs as inventors and heads of business, we too can be enterprising in solving problems. The “entrepreneurial environment” is where a person or a group identifies organizational challenges and brainstorms to create enterprising, and sometimes risky, solutions. This environment is where a group is willing to help launch a new venture or system, and except full responsibility for the outcome. We are not asking one to become a Bill Gates or Richard Branson. What we are suggesting is taking a hard look at the core responsibilities and determine if the operational system in use can be modified in a way that will not be detrimental to service levels. We might even need to re-invent what we do.

Yes, we are talking about “change”. Becoming more innovative, looking at new technologies, and developing new ways to increase efficiency while maintaining safety and productivity are worthwhile ideas. Entrepreneurs are catalysts for change, whether it is financial or procedural.

The fire service needs more people who are driven by an emotional desire to come up with new solutions for modulating the conditions, which have come about in these bad economic times. We need to study what we can do to provide more effective and efficient ways for servicing communities without compromising citizen safety.

Change is never easy in any field or important endeavor, and change in the fire service can be difficult due to traditions and history of serving the public. An organization can be true to the honorable traditions, which were established by those who came before us and still look for new ways to solve problems or reduce costs, especially when those “solutions” don’t impact response times and staffing levels do not suffer.

By looking hard at the situation at hand and attempting to solve the inevitable problems we can avoid the alternative, which is what we see happening now: deep cuts, reductions, and station closures by individuals who have a very limited understanding of the role which firefighters have in the community and the effect those “cost saving measures” will have on emergency operations and citizen safety.

So, put on your thinking caps… what could we do to help reduce costs and still provide the service levels that our citizens have always enjoyed and will continue to expect?

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.

Ettore Berardinelli Sr. began his 31 year career with the Santa Monica Fire Department in 1972. He served as a Firefighter, Paramedic, Engineer, Captain, Battalion Chief, and Deputy Chief during his first 25 years, and was promoted to Fire Chief in 1997. The holder of a lifetime teaching credential, he also taught Fire Technology courses at Santa Monica College over a 20 year span. Upon retirement from the fire department in 2003, Chief Berardinelli returned to his building construction and woodworking “roots”, and co-authors articles for various fire department publications with Paul Stein. (photo included)

“Firefighter of the Year” Nominations

Do you ever sit around the table and think, “Wow, he sure works his butt off” or “What would we do without her and all of the training and motivation she gives us” or even, “I would be dead right now if it wasn’t for him.” These are the types of thoughts that the Utah State Firemen’s Association wants the firefighters of Utah to act upon during the nomination period for “Firefighter of the Year”.

The annual nominations for “Firefighter of the Year” have fizzled to very few and sometimes none. There could be many reasons for this, such as humility; lack of motivation to nominate a fellow firefighter; or nominee hurt feelings from having previously not been the chosen one. It is time to recommit to nominating those who deserve to be recognized for their exceptional service or actions.

Please go to the Utah State Firemen’s Association website at http://www.fireassociation.com/, to find the nomination form for “Firefighter of the Year”. It is our hope to receive many strong candidate nominations, to make it a tough choice for who the recipient will be. And if your nominee is not chosen, don’t be upset; just submit his or her name again next year. We have so many talented, hard working, and exceptional firefighters, in the state of Utah, who deserve this recognition.

Look around your department and nominate the person who deserves this honor. If you have any questions or difficulty with the nomination process please contact any Association Officer or myself, and we will be happy to assist you in the process.
LESSON LEARNED: SIZING UP THE PRIVATE DWELLING BASEMENT FIRE

Properly identifying common basement fire indicators, such as obvious smoke conditions with high heat levels and no visible fire are critical factors for first-arriving companies at below grade fires in private dwellings. It is well understood that these types of incidents will challenge even the most experienced and well-trained departments. Fire suppression operations at fires of this nature call for the first-duke engine company to initiate immediate offensive fire suppression operations coupled with rapid, efficient primary search and ventilation practices. By following this type of model action plan on arrival; the Incident Commander (IC) is able to set a solid foundation for all subsequent fireground operations. More important is the fact that the IC needs to conduct a thorough three-hundred and sixty degree size-up of the building, prior to implementing his plan and placing companies in all the right places. While this is a critical component of the overall incident game plan, the individual firefighters must also recognize that the IC should be standing outside of the building for the entire fire. So we pose this question, “Who should really be conducting a thorough size-up of the structure?” The correct answer is: every firefighter and fire officer entering the hazard area. Conducting individual size-ups prior to entering the structure can potentially be a lifesaver. Remember, it is your brothers, sisters, and your very own life that you may be saving; by taking the time to gather information by reading the structure, fire conditions, and smoke conditions prior to entering such dangerous environments.

ELBOWS
The most familiar and frequently used size-up acronym is the 13-point size COAL WAS WEALTH: Construction, Occupancy, Apparatus/staffing, Life hazard, Water supply, Auxiliary appliances, Street conditions, Weather, Exposures, Area, Location/extent, Time, and Height. This memory aid provides a vast amount of information to the IC, playing a critical role in essential incident operations and the development of the overall strategic and tactical objectives.

A second, more task-oriented size-up, which focuses on several elements critical to effective interior fire suppression operations, follows the acronym BELOW: Building construction, Extent/location, Life hazard, Occupancy, and Water. This method of identifying the critical components of a tactical size-up has been around for many years. It is an excellent streetwise prompt that helps first-arriving firefighters and fire officers as they rapidly gather task-oriented information concerning the incident. However, it is our belief that one critical component is missing: smoke. The importance of being able to read what the smoke coming from a structure is signifying is an extremely important component of setting the tactical objectives required at any fire, especially basement fires. Since this critical information must be included in our first-duke company size-up, the authors have added the letter “S” for smoke and revised the acronym to read as ELBOWS: Extent/location, Life hazard, Building construction/intelligence, Occupancy, Water supply, and Smoke.

Extent and location. Rapidly determining the extent and location of fires in below grade areas is arguably the most critical piece of information that first-duke personnel require. Determining the location and fire extension probabilities allows the IC to develop his/her incident action plan (IAP), and the company officer is provided the critical information necessary for him/her to determine the method through which his/her company’s tactical objectives will be met. Fires originating in these areas are to be treated distinctly independent from a first- or second-floor fire. In essence, properly determining this component of size-up sets the foundation for all fire suppression operations that will follow.

Life hazard/safety. It is a well-documented fact that fires move rapidly throughout wood-frame buildings. The numerous voids, open stairwells, interior design, and furnishings within these structures all contribute to the swift and deadly movement of smoke and fire throughout an interior. Upon arrival, firefighters must be prepared to initiate rapid, aggressive primary searches in high-priority areas such as bedrooms, common egress paths, and hallways on all levels of a structure, under adverse conditions, and typically without the protection of a handline. Subsequent secondary searches of a building involve comprehensive examinations of all areas for potential victims and fire extension are also required.

Building construction. Building intelligence is a critical component of any fireground size-up. Determining a building’s construction type, size, and structural condition prior to making entry provides a clear picture of the hazards firefighters will face. The varying nature of the building components used to construct single-family dwellings creates an environment in which each type of construction behaves substantially different when exposed to the products of combustion. First-arriving firefighters must quickly gather and blend together several different pieces of critical information, building an effective tactical fire suppression toolbox for each separate method of construction.

As we know, the Type V classification for wood-frame buildings can be further broken down into several different categories, each with its own unique issues. Braced-frame, balloon-frame, platform-frame, and lightweight wood/truss construction all pose their own significant hazards during fire suppression activities. In addition, the construction industry has brought hybrid (wood/steel mix) and cold-formed steel construction techniques to the table; presenting yet another serious safety concern for responding personnel. It is critical for firefighters to know how these construction types react when attacked by fire.

Braced-frame construction uses a system of wooden posts and girts that are tied together at the four corners of the structure in a mortise-and-tenon style connection. The major problems with this type of construction will be the age of the structure, the viability of the connection point prior to and during the fire, collapse potential, and fire/smoke movement throughout the dwelling.

Continued on next page

photography by Chris Saraceno
Left: Note the dividing line of smoke and fresh air at the main entry of this dwelling. The air track drawing fresh air to the seat of the fire, while the heat and smoke are traveling across the ceiling level from the open interior basement stairs
Middle: Smoke coming from a structure may be misleading. Here it appears that the fire could be on Division 2 of this balloon-frame dwelling.
Balloon-frame construction allows for unimpeded fire and smoke travel throughout the structure. Although, window-walls may provide some form of vertical firestopping and bridging found within floor joist voids may provide some horizontal firestopping. A fire in these buildings will tax the resources of the most well-staffed and experienced fire department.

Platform-frame construction offers an enhanced form of fire prevention. These lightweight structural components. Recent studies conducted by Underwriters Laboratories (UL) and the Chicago Fire Department have documented the collapse of these building elements to be approximately six minutes. In many instances, this is just about the time firefighters would be making entry to the dwelling. Due to lack of any specific methods to identify these structures from the exterior, taking a proactive stance through effective pre-fire planning, district familiarization, and quality building size-ups are in all likelihood the ideal approach to adopt.

Occupancy. What occupies the space between the four walls and roof of a dwelling? Since we are unable to conduct fire inspections within private residences, firefighters must rely on the information already present. Obtaining information from all sides of this dwelling reveals a fire burning below grade that has the opportunity to spread vertically via the interior voids of the Balloon Frame dwelling.

Lightweight wood construction and pre-engineered lumber structural members present a significant problem for firefighters. The building components used during this construction process are designed for cost reduction, strength, and longevity, but not for fire protection or collapse prevention. The single most critical issue involving this construction method is the amount of time that the house has been burning. Knowledgeable member, if two lines have already been stretched through the front entrance, these additional lines should be stretched through a secondary access point, such as a window or another door.

Although stretching these smaller sized lines may be the "routine" for many departments, personnel must be prepared to deviate from the standard, should they arrive at a fire, which dictates the use of larger diameter handlines. There are too many instances when first-arriving companies ineffectively size-up the extent of fire in a building and immediately end up unable to deliver an effective amount of water, because they chose the wrong attack line size.

Smoke. When we arrive on scene and smoke is visible, we observe several important clues to what is going on inside the structure. By reading the smoke condition, firefighters may be able to quickly determine factors such as the stage of burning, location of the fire, the material burning, and forecast any possibility of future significant events such as flashover or back draft. Some key questions to ask on arrival are: Where is smoke issuing from? How fast or slow is it coming from the building? Is there smoke visible from any other areas, such as the chimney, basement windows, soffits, or other areas? What color is the smoke?

A key to the smoke component of ELBOWS is having the competence to rapidly read and understand what the smoke indicators are saying. Smoke coming from a second-floor floor of a balloon frame dwelling may simply appear to have originated from a fire located on that floor; when, in fact, the point of origin is more likely than in the basement. Heat and smoke will rapidly travel via open interior stairways as well as vertical voids of a wood frame private dwelling to the upper floors, making it appear as though the fire is actually on that level.

Dave Dodson’s “The Art of Reading Smoke”2 has taught us to recognize four specific variables when reading smoke conditions. Dodson singles out the volume, velocity, density, and color of the smoke as critical indicators of exactly what is going on inside a structure. Volume indicates pressure, which is the driving force of smoke. When a room or area of fire can no longer contain the pressure generated, smoke will be forced out of that area and into other interior and exterior areas of the structure. Therefore, when we see a heavier volume concentrated within a room or area of fire can no longer contain the pressure generated, smoke will be forced out of that area and into other interior and exterior areas of the structure. Therefore, when we see a heavier volume concentrated within a room or area of fire can no longer contain the pressure generated, smoke will be forced out of that area and into other interior and exterior areas of the structure. Therefore, when we see a heavier volume concentrated within a room or area of fire can no longer contain the pressure generated, smoke will be forced out of that area and into other interior and exterior areas of the structure. Therefore, when we see a heavier volume concentrated within a room or area of fire can no longer contain the pressure generated, smoke will be forced out of that area and into other interior and exterior areas of the structure. Therefore, when we see a heavier volume concentrated within a room or area of fire can no longer contain the pressure generated, smoke will be forced out of that area and into other interior and exterior areas of the structure. Therefore, when we see a heavier volume concentrated within a room or area of fire can no longer contain the pressure generated, smoke will be forced out of that area and into other interior and exterior areas of the structure. Therefore, when we see a heavier volume concentrated within a room or area of fire can no longer contain the pressure generated, smoke will be forced out of that area and into other interior and exterior areas of the structure.
However, lighter, slower moving smoke with less volume and velocity will typically indicate a deep-seated fire, or a fire that is farther from that point of ventilation or entry. This is typically a high probability signal that a basement or below grade fire is present.

The color and density of smoke may also indicate fire location and stage of the fire. A brownish/yellow colored smoke usually indicates the structure itself is involved, and that the fire is desperately searching for fresh air. The same can be said for smoke that is seen being sucked back into the building or is pulsating in and out of the structure. In these instances, the potential for back draft is extremely high. Dark turbulent smoke being driven out of the structure under intense pressure is a good indicator that flashover or vent point ignition is imminent. Although nothing is going to be an exact science in such a dynamic fire environment, the visual smoke clues present on arrival from all sides of the structure will provide a vast amount of incident critical information concerning what exactly is going on inside the building.

Fire suppression operations involving basements and below grade areas of private dwellings are among the most hazardous incidents that firefighters will confront. The presence of heat and smoke on the first or upper floors of a dwelling, smoke from baseboards, discoloration, smoke stains, and smoke from a chimney coupled with a lack of visible fire are excellent indicators of basement fires. First-arriving companies must conduct rapid exceptional size-up that take into account basic information gathered from arriving companies. In these instances, the potential for back draft is extremely high. Dark turbulent smoke being driven out of the structure under intense pressure is a good indicator that flashover or vent point ignition is imminent. Although nothing is going to be an exact science in such a dynamic fire environment, the visual smoke clues present on arrival from all sides of the structure will provide a vast amount of incident critical information concerning what exactly is going on inside the building.

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References


John J. Lewis joined the volunteer fire service in 1978 and began his career as a firefighter/EMT in 1985; he recently retired as a Ladder Company Lieutenant with the Passaic (NJ) Fire Department. Lewis is an instructor at the Bergen County (NJ) Fire Academy and NJ Division of Fire Safety through Kean University in Union, NJ. He is a member of the NJ State Firefighter Health and Safety Advisory Committee. Lewis has NJ certifications as a fire inspector/fire official, a level 2 fire instructor, Haz-Mat, Confined Space, IMS instructor, and fire investigator. John is a founding partner of “Jersey Guys” Fire Service Training LLC, and has also developed and presented educational programs for various fire conferences and schools across the country, including the New York State Fire Chiefs Association annual conference.

Robert Moran, MA, CPM, CFO, is Fire Chief of the Brewster (MA) Fire Department. He retired in January of 2011, after a 26 year career with the City of Englewood (NJ) Fire Department, where he served as Chief of Department from 1998 until his retirement. Chief Moran holds a bachelors degree in Fire Science from New Jersey City University, a masters degree in Administrative Science from Fairleigh Dickinson University, National Certification as an instructor and Chief Fire Protection Officer (CFO) Designation from the National Protection and Safety Excellence and the Massachusetts Fire Service Commission. He is a Certified Level II Fire instructor, Haz Mat Technician, Fire Inspector, and Fire Official. During his career in New Jersey Chief Moran served as a Safety Officer on the New Jersey Urban Search and Rescue Task Force 1, the Bergen County Arson Squad, and a 29 year member and former Chief of the Leonia Volunteer Fire Department. Moran is an instructor at the Barnstable County (MA) Fire Academy, a Task Force Leader of the Barnstable County Technical Rescue Team, an adjunct instructor for Kean University and the New Jersey Division of Fire Safety, and a founding partner of “Jersey Guys” Fire Service Training LLC. He has developed and presented educational programs for various fire conferences and schools across the country, including the New York State Fire Chiefs Association annual conference.

SOLAR ENERGY COMES TO CEDAR CITY FD

The Cedar City Fire Department has partnered with Rocky Mountain Power and Blue Sky Community Project Funding Program to be a part of a continuous effort to cut costs while reducing our carbon footprint without compromising service to the community. This program is designed to help cover the capital costs associated with installing qualifying new renewable energy systems within the Rocky Mountain Power service area. As a result, the Cedar City Fire Department received funding ($88,888) allowing us to outfit Station No. 1 with a Solar Energy System.

Solar Unlimited Energy & Homes, Inc., a Cedar City alternative energy company, installed the Net-Metering Photovoltaic (PV) System in February 2012 and had it operational by April 2012. The community has already begun benefiting from the system, by allowing us to supply some of our own power. In addition, excess generated electricity is sold back (Net-Metering) to the grid, which helps cover operational costs.

This Net-Metering Photovoltaic (PV) System is located on the rooftop of Cedar City Fire Departments Station 1, and is highly visible from the street, which benefits both partners. We expect to see an overall reduction of around 25 percent in utility costs. Cedar City Fire Departments Station No. 3 is also outfitted with a solar powered system.

There are two ways to view the amount of energy this system is saving, one way is via a monitor in the training room of Station No. 1 or one can visit this Cedar City website link: http://ut-cedarcity.citysplus.com/index.aspx?NID=48, then click on the CCFD Solar Power link listed under Station #1.

Anyone who is interested in this program can obtain more information by visiting http://www.rockymountainpower.net/res/bsre.html.

Russel Brunson began his career as a volunteer firefighter in 1992, with Cedar City Fire Department, and became full-time in November 2008. He currently works as the B-shift supervisor and enjoys working with all of the staff and firefighters at CCFD. Brunson is a second-generation firefighter and was able to serve with his dad, Ken Brunson, before he took honorary status as a volunteer firefighter in 1998.
HYBRID VEHICLE EXTRICATION, Part 1
GOING GREEN, DON’T CUT ORANGE

With fuel prices maintaining record highs, the trend for new vehicle purchases continues toward energy efficient (green) forms of transportation. The development, availability, and sale of hybrid vehicles are growing daily. As the number of hybrid vehicles on highways increases, an increase of vehicular accidents involving hybrids will certainly occur. It is imperative that emergency services personnel become familiar with these vehicles and the associated hazards present when responding to accidents involving hybrid vehicles.

Most hybrid vehicles combine an internal combustion gasoline engine with an electric motor. The electric motor is energized by a high-voltage battery pack. The gasoline engine and the electric motor work either separately or together to provide power to the drive wheels of the vehicle.

A hybrid vehicle’s gasoline engine is similar to the one used in most non-hybrid cars. The difference is the engine in a hybrid is smaller and uses advanced technologies to reduce emissions and increase efficiency. The electric motor in a hybrid car has advanced electronics, which allow it to act as a motor as well as a generator. For example, when it needs to, it can draw energy from the batteries to accelerate the car. As a generator, it can slow the car down and return energy to the batteries.

The batteries in a hybrid vehicle are the energy storage device for the electric motor. Hybrid vehicle makers use a high-voltage nickel-metal hydride (Ni-MH) battery pack. One style of battery pack is comprised of individual battery modules containing 228 1.2-V cells. Each cell is encased in a plastic chamber with all the plastic modules mounted inside a large metal container. This battery pack weighs approximately 110 pounds. The other type of battery pack design consists of 120 individual Ni-MH cells, the same size and shape as standard D cell flashlight batteries. These cells are grouped together in sealed packages of six cells each, positioned end-to-end. Each cell has a thick metal casing, which forms its outer surface.

The high-voltage battery pack is different from a typical vehicle battery and can produce an output rating in excess of 330 volts. Some manufacturers use power converters to increase the operating system voltage to 650 volts AC. Contact with these high-voltage systems during extrication or other emergency operations can result in serious injury or death.

On most hybrid vehicles the high-voltage wires and cables are orange, covered with orange plastic shielding or orange tape. Never handle, open, or cut any orange wiring, orange components, or orange shielding. The high-voltage, produced by the battery pack in the trunk, is routed to and from the electric motor through a thick multi-wire harness. The wiring harness runs below the floor of the car, about one foot in from the driver’s side of the vehicle. If the owner of the vehicle has had the vehicle undercoated, the spray-on application may cover the orange wiring harness. Look for logos, emblems, stickers, and body features that identify the vehicle as a hybrid.

Hybrid vehicles have been designed with many safety features for rescue protection. These features help provide safe access to the vehicle under various conditions. However, when approaching a high-voltage vehicle in a fire, rescue or recovery situation, always assume the vehicle’s high-voltage system is active.

One unique feature found with hybrid vehicles is that the gasoline engine will shut off when the vehicle stops (such as being involved in an accident). If the accelerator pedal is depressed, the silent electric motor instantly starts and powers the drive wheels. This silent engine is very dangerous for on-scene rescue teams. It is important for emergency personnel to be aware that with a hybrid vehicle, a silent car is no guarantee the car is safe. Hybrid vehicles can use their electric motors to move silently at speeds up to 25 mph. Emergency personnel should approach the vehicle from the sides and never in the potential path of travel. Chocking the wheels, applying the parking brake, removing the key, disconnecting the 12-volt battery, and placing the transmission in either the neutral or park position is critical for safety, when working in and around a hybrid vehicle. As the title implies, if you’re dealing with green, don’t cut the orange…

Stay safe…Captain Young

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.

Certification Council Changes

by Lori Howes

The Certification Council is the governing body of the firefighter certification system. They establish uniform minimum standards for firefighter certification and ensure quality and consistency. Council members serve three year terms and are devoted to making the Utah certification system one of the finest in the nation.

The Utah Fire and Rescue Academy would like to thank the following individuals for their dedicated service on the Utah Fire Service Certification Council.

Resigned:
Jeff Peterson, Chief
Logan Fire Department

Re-appointed:
Scott Spencer, Chief
Payson Fire Department
Kevin Bowman, Deputy Chief
South Salt Lake Fire Department
Merlin Spandlove, Deputy Chief
Hurricane Fire & Rescue

Newly Appointed:
Rod Hammer, Chief
Cache County Fire District

Bye-bye…Captain Young
If you have any sort of commercial construction growth in your jurisdiction, you are almost certainly bound to encounter the fairly new technology of flexible sprinkler pipe. Flex pipe is sold under various brand names such as Aqua Flex, Viking, Easy Flex, Flex Head, and Metra Flex, to name a few. Flexible sprinkler drops are becoming extremely popular with fire sprinkler contractors, due to their alleged extreme ease of installation. Many contractors say it reduces the installation time of a fire sprinkler job by up to 75 percent. Some sprinkler fitters who I have spoken with explain if they work hard and fast they can complete a job in one-tenth of the time it would normally take. This, however, it is not the need for accuracy, diligence, and thoroughness as a fire inspector comes into play.

In any line of work, when we work at a high rate of speed, the potential for mistakes or oversight is greater. If a sprinkler contractor is installing this type of pipe for the first time, or has employees who are not explicitly following the manufacturer's installation guide, the probability of a serious installation error occurring is quite high. I have personally inspected a job where 20 percent of the flex heads on one floor were installed incorrectly. Incorrect installation of flexible sprinkler piping can result in the serious reduction of the available water flow and water pressure to a sprinkler head, which can result in an area (or even an entire room), having little or no fire sprinkler protection.

Here is a list detailing what to look for as a fire inspector when conducting an above ceiling installation inspection of a flexible pipe sprinkler system:

1. Familiarize yourself with the product prior to the inspection. Nearly every one of the major manufacturer's previously mentioned has a website at which you can download free materials such as owner's manuals, installation guides, product catalogs, cut sheets, and product specifications. Take the time (and printer paper) and download the installation guides for each brand. In those guides you'll find vital information in relation to installation techniques and tolerances. Flexible sprinkler pipe has requirements on the maximum number of bends per drop, the location of such bends, and the shape of such bends. All those details can be found in the downloadable installation manuals. It is important to check the sprinkler contractor’s workmanship against these guides to ensure a quality installation.

2. Realize there is a difference between ‘braided’ and ‘unbraided’ flex line. Almost every manufacturer of flex pipe makes both braided (a basket weave or snakeskin type pattern) or unbraided (a ribbed or corrugated look) products. Generally speaking, the braided pipe is more durable, has a higher-pressure rating, and is much more difficult to kink or pinch. The unbraided pipe is generally slightly cheaper, less durable, tested to slightly lower pressures, and can kink easily. The advantage, however, is that it requires a much smaller bend radius (See below item No. 3).

3. Understand the term ‘Bend Radius’. Dig out your old high school geometry book and relearn how to measure a bend radius. Bend Radius is the minimum radius a pipe can be bent without kinking it, damaging it, or shortening its life. Bend radius is measured on the inside curvature; measuring from the inside edge of the hose or pipe to the centerline of the bend. The smaller the bend radius, the greater the flexibility of the material. Imagine trying to bend a hollow length of copper pipe without kinking it, compared to bending a cooked piece of spaghetti. Obviously, the spaghetti would have an extremely small bend radius. Bend radius plays a crucial role in the successful installation and operation of any flexible pipe sprinkler system. The required minimum bend radius can vary significantly based on make, model, and installation type. For instance; the minimum bend radius for a Viking Unbraided Flexible Sprinkler Drop is 4 inches. In comparison, the minimum bend radius for a Viking Braided Flexible Sprinkler Drop is 12 inches. These measurements are a major difference in installation between the two and should not be overlooked by the prudent inspector. A bend radius calculation tool can be purchased from most major sprinkler manufacturers for a nominal fee, or you can simply make a cardboard template to accomplish the same task.

4. You must inspect the entire layout of the flexible pipe system before it is covered up. This may seem obvious when it comes to inspecting flex pipe. Simply looking at a sampling of the above ceiling installation in one or two rooms of an entire building will not suffice. Experience has shown that you may not find a pinched line in several consecutive rooms then suddenly discover four or even six sprinkler drops at the end of a hallway. Why? Hard to say. Perhaps different laborers from the sprinkler company worked on different sections of the building during a given week. Maybe one room or section of the building was completed towards the end of the day or a long workweek when everyone was tired and ready to go home, when the workmanship of the last several heads could have suffered. Regardless, the point is to do a thorough inspection. It is going to take time, but the safety of the building occupants will rely upon your painstaking effort.

5. There are differences in the requirements for a Factory Mutual listing compared to an Underwriters Laboratories listing. Typically, if you are inspecting an institutional or government building (such as a school, hospital, jail, nursing home, etc.), the spec book for the construction documents will have a detail requiring the fire sprinkler system to meet either a UL or FM listing. In every case, FM is much more restrictive on the bend radius required to earn their listing. For instance, a braided FlexHead brand system requires a minimum 3 inch bend radius to meet UL guidelines, and a minimum 7 inch bend radius to meet FM. Viking, on the other hand, does not have a UL listed braided system. The VKPB9H system requires a minimum 12 inch bend radius to meet their approval. Clear as mud? All the more reason to print out installation manuals and specification guides to take with you while conducting a fire inspection.

6. There are limits as to what type of sprinkler head can be installed on a flexible line. Each manufacturer of flexible sprinkler drops has established a maximum K-factor for sprinkler heads to be attached to their product. It varies by manufacturer, but generally most one-half inch outlets allow for maximum K factor of 5.6 (although Viking has a certain model, which allows for a K factor of up to 8.0), and most three-fourth inches outlets allow for a K factor of up to 14.0. These con-

7. Every flexible sprinkler line has to be attached to a ceiling with the appropriate hardware. Once the flex-

All these facts, figures, diagrams, details, and tolerances may seem imposing at first. Don’t be intimidated; it’s not rocket science. As with most fire inspections, if it doesn’t pass the eyeball test, it is probably not right. Your training, experience, and knowledge will be valuable tools during inspection. Does it look like that flexible drop is pinched a bit tight? It probably is. You think that head seems to be mounted a little loose in the ceiling grid? You’re probably right. Take your time and use all the reference materials available to you, and should be able to conduct a thorough and competent flexible sprinkler pipe system inspection, which will provide safety to the building’s occupants and even your fellow firefighters for many years to come.

Todd Hohbein has been employed with the State of Utah Fire Marshal’s Office since 2000 as an inspector and fire investigator. Todd was previously with the Nebraska State Fire Marshal’s Office from 1997-2000. Todd lives in LaVerkin, and his jurisdiction as a fire marshal includes Washington, Iron, Beaver, and Kane counties.
Robert “Jake” Jacobsen was a pioneer in the Utah fire service. He was in the first group of Salt Lake County FD Paramedics in the 1970’s; flew for Life Flight; founded the Utah Chapter of the International Association of Arson Investigators (IAAI) and served as the president; and built a premier fire investigation company, Burn Pattern Analysis (BPA). As important and impressive as this resume sounds, it only hints at his impact on the field of fire and arson investigation. Mike Andrew (SLCFD) who worked with Jake at BPA remembers Jake best as a tough boss and a steadfast friend, who urged him towards excellence as an investigator: “He taught me to document every investigation as if it were going to court. Jake was opinionated and not shy about calling someone out if their investigation left room for doubt about what caused a fire. If the evidence didn’t support the hypothesis, he was going to dig until he found out the truth.” Jake’s stubbornness was a recurrent theme throughout his life, it made him friends as well as some adversaries.

Jake began his career as a volunteer firefighter and then was hired on with Salt Lake County in 1968. When EMS became the “next big thing” to hit the fire service, in the 1970’s, there was no Paramedic training program in Utah. Jake went to California with a cohort of firefighters who became the first paramedics. Over his career, he sought new challenges and found his true calling in fire investigation; he quickly gained a reputation as tenacious and thorough. Like many firefighters from that era, he wound up with bad effects from breathing smoke and chemicals. Due to severe asthma, which made Jake feel unable to perform to the standard he needed to meet, he chose to leave the department.

The decision to leave the fire department allowed him to move in another direction, and Jake never looked back. About a year later he started his investigation business. Andrew said, “Once Jake made up his mind, he had no limits. He lived life at 100 miles an hour. He was always pushing, always late, sometimes gruff, but surprisingly kind hearted. Whatever you thought about him to begin with, he earned your respect. He was always an honest businessman, who looked out for his client.” Jake’s widow, Marian, relates a story about when a house burned down and all that was left of the building was a pile of debris in a basement, he kept digging until he found a child’s toy, a Creepy Crawler bug maker that had overheated and caused the fire, most likely because a flammable material was being baked. Jake was never satisfied to shrug his shoulders and settle for a lame “Uhh, must of been electrical,” explanation. His quest for perfection made him a mentor to many investigators and a tormentor to people who sought to hide the origin of a fire.

According to Marian, Jake had an amazing ability to explain the science of fire cause and origin to lay people, especially jurors. This skill made him an unimpeachable expert witness. It also made him a man who was on a mission to learn as much as possible and pass his knowledge on.

The willingness Jake had to share knowledge included consulting with at least one crime novelist, Cindy Christiansen, who dedicated a book to him, “I met Jake only once, but I dedicated Love on Laird Avenue (aka, Household Repairs) to him. As an author, I wanted to come up with a unique way to blow up a house. I called my local fire department and was met with great concern about wanting to blow up a house. The fire chief said it would be against regulations for him to give me that kind of information, but that he knew someone who could help me. That led me to Jake at Burn Pattern Analysis.

I remember Jake laughing about the situation when I called. He happily agreed to meet with me for an interview. He had the most wonderful ideas for my book. I enjoyed talking with him so much that I didn’t want the interview to end. The world truly lost one of the good guys. He was indeed your basic hero.”

Steve Lutz has spent the last thirty-seven years working in the fire service as a firefighter, fire chief, instructor, Public Safety Director and currently as Assistant Director of the Utah Fire & Rescue Academy.
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