ANATOMY OF AN URBAN ATTACK PUMPER

When it's time to go to battle, the tactical design of an urban attack pumper maximizes performance navigating to and on the fireground.

WALDORF VOLUNTEER FIRE DEPT.
CHARLES COUNTY, MD

PIERCE ENFORCER PUMPER DELIVERED NOVEMBER 2019
JOB # 33701
28’ 11” OAL / 9’ 6” OAH
ENFORCER 60” CAB
SEATING FOR 6
500 GALLON TANK
NY STYLE LOW HOSEBED
HALE QMAX 1500 GPM
DIESEL ENGINE 1850 LB/hyphen.case
44,000 lb. GVWR
22” EXTENDED FRONT BUMPER
6 KW HARRISON GENERATOR
WHELEN LED EMERGENCY & SCENE LIGHTING

1 SHORT OVERALL LENGTH (28’ 11”)
Short overall length allows for better and faster placement while positioning to attack at the scene. The 60” Enforcer cab and 129” short pumper body met Waldorf’s specs while providing seating for six.

2 REDUCED STEP HEIGHT (20” from ground)
Minimizing the step from the cab to the ground, reduces body stress and chance for injury while exiting gear ed up. The reduced height was achieved through consideration of frame rail size (10.25”) and front suspension type (Dana, D-2000F).

3 LOWERED CROSSLAYS (64” ground to bed)
Low crosslays allow for rapid fire attack by making it easier to reach and deploy without having to use side steps. The pump panel, plumbing and pumphouse were specifically designed to achieve the lowest position for the primary attack lines, approximately 9” lower than standard.

4 ERGONOMIC PUMP PANEL
The narrower the pumphouse, the shorter the wheelbase. Methodically placed controls in this tighter space makes it easier for the operator while manual push-pull controls simplifies operation.

5 SHORT WHEELBASE (167.5”)
A shorter wheelbase combined w/ a short overall length improves the ability to maneuver through and around obstacles and allows for more optimal placement on the fireground.

6 LOW REAR HOSEBED (5’ 4”)
The lower height allows 400’ of attack line to be deployed efficiently while helping reduce firefighter injuries. Requirements helping to determine hosebed height include compartment space, water and hose requirements. Tank sizes for low hosebed pumper typically range from 900 to 1500.

7 FRONT & SIDE INTAKES (Front shown)
Having multiple intakes provides the greatest flexibility for positioning at the scene – taking full advantage of the pumpers’ maneuverability.

READY TO ATTACK SPECIFIC CHALLENGES FACED WITH YOUR CURRENT PUMPER CONFIGURATION?
CONTACT YOUR LOCAL PIERCE REPRESENTATIVE AT ATLANTIC TO GET THE CONVERSATION STARTED.

WE’D LIKE TO THANK WALDORF VOLUNTEER FIRE DEPARTMENT FOR THE OPPORTUNITY TO BUILD THEIR FIRST PIERCE!

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Winter 2020
When I was a little girl, my grandmother’s best friend had cancer. Everyone whispered the word “cancer.” It was as if you might get it yourself if you said it out loud. Fast forward to today and our professional football players devote a whole month to wearing pink for breast cancer. It is ordinary and normal unlike 40 years ago when there was tabo to speak the word.

But when it comes to mental health, especially in certain professions, there is still a stigma about mental illness no one talks about. Recently, University of Phoenix released its third annual first responder’s survey finding more than half of first responders (57 percent) feel that there could be repercussions on the job for seeking professional counseling. This represents a 10 percent increase over research conducted in 2018 where 47 percent felt there were repercussions.

The alarming results show despite our efforts in the media and the mental health field to normalize mental health, many first responders face workplace barriers that could prevent them from seeking professional counseling. First responders are often seen as heroes to their community, and rightly so, as they put their lives on the line serving others. But the label hero comes with its own set of pressures as heroes never complain or show weakness. Our heroes come from a culture where you keep quiet and just deal with it and traumatic situations are just part of the job. Unfortunately, keeping quiet almost always takes a toll on mental health and wellbeing. We need to provide a safe space where first responders can discuss mental health confidentially and without judgment or repercussions.

The survey suggests that many first responders do not feel that work is a safe place to discuss mental health. Among the 57 percent who feel there are repercussions for seeking counseling, 48 percent feel they would receive different treatment from supervisors and 35 percent think they would be perceived as weak by colleagues/peers.

The good news is that talking about mental health encourages change. One of the statistics that remained positive and consistent in our survey is that first responders are encouraged to seek counseling when others share their experience.

The survey found that first responders may be more open to getting help if those around them are willing to discuss mental health. If a leader in their organization spoke about their own experience, 71 percent say they would be encouraged to seek professional counseling. Peers have an even greater influence, with 83 percent of first responders saying if a close colleague, friend or family member spoke up, they would be encouraged to seek help for themselves.

That means all of us must continue to push the conversation to normalize mental health. Just as every person knows someone that has had cancer, everyone knows someone that is dealing with a mental illness. A healthy first responder is better equipped to respond to an emergency and to be healthy means both physical and mental health.

The survey found that first responders are not afraid to share their stories and making it safe for them to share their stories.

Dr. Samantha Dutton
Associate Dean and the Director of the Social Work Program in the College of Social and Behavioral Sciences, with University of Phoenix. She created the Bachelor of Science Social Work program which is currently in the accreditation process.

Previous to this she held positions of Deputy Commander of Medical Operations at Mike O’Callaghan Military Medical Center as well as the Medical Squadron at Joint Base Lewis-McChord. She also commanded the Mental Health Clinic at Nellis Air Force Base, Nevada. Her military experience spans 27 years with increasing levels of leadership. She has been the recipient of numerous Air Force level awards and was deployed in support of Operation Iraqi Freedom and Operation Enduring Freedom where she was the lone mental health practitioner for 2500 personnel.
First Responders Feel There Are Repercussions for Seeking Help

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#FDIC2020
Decon is the hazardous materials equivalent of catching the hydrant on a structure fire. Everyone wants to be on the nozzle, but if no one is securing the water supply not much is going to get done on a structure fire. On a hazardous materials response, the entry teams cannot be deployed into the Hot Zone until the decon corridor has been established and staffed. The supervision of the decon corridor and all things pertaining to decon are the responsibility of the Decon Officer.

The Decon Officer must know the four main categories of decon. They are emergency decon, gross decon, technical decon and mass decon. Emergency decon is used in potentially life-threatening situations, regardless of whether a formal decontamination corridor has been established. Emergency decon is used when an operator in the Hot Zone suffers a medical emergency while wearing chemical PPE and must be removed as soon as possible so that medical intervention can take place. Simply stated, if one of our members suffers cardiac arrest while wearing Level A, we don’t have the time to run that person through the formal decon corridor. It may take five to 10 minutes to completely decon someone and get them out of the suit. If brain tissue starts to die after four to six minutes without oxygen, you can see why emergency decon is the method of choice here. If the victim is one of our own, we douse them with water to get as much contamination off of them or even possible. We then remove the PPE from them and get them the treatment that they need. If the victim is a civilian, we remove contaminated clothing and douse the victim with water. In either event, formal decon may be instituted once the medical emergency has been treated. Gross decon and technical decon are both used in the decon corridor that is established within the Warm Zone. In some literature you may see the entire decon corridor referred to as "technical decon." Gross decon is usually done in the first pool in the decon corridor. This station is simply a rough wash to remove most of the contamination from the operator or victim. Technical decon is performed in the second pool in the decon corridor where much closer attention is paid to removing contamination. Technical decon pays special attention to the major joints of the body where contamination may hide in the folds of the suit. These joints include the elbows, armpits, knees and crotch. Technical decon also applies to areas of the body that see the most contamination such as the hands and the bottoms of the feet. Any areas of the suit that contain large folds where contamination may hide are also addressed here.

Mass decon is the type of decon that no one wants to think about, but we must be ready to implement. Technical decon is used for our entry teams and a few contaminated victims. Mass decon is used during mass casualty incidents where we may have to decon dozens, hundreds or even thousands of victims that have been exposed to a chemical. This would more than likely be a terrorism scenario where a large group of people was targeted in a shopping mall, sporting event, etc. During mass decon, we utilize a corridor built with our apparatus and run the victims through the corridor under a continuous shower of water. There is no right or wrong answer as to how to build your corridor. It all depends on your apparatus fleet. The possibilities are endless with some combinations including two engines, four engines, two ladders and two ladders, etc.

Now that we have discussed the four categories of decon, the biggest question is a rather simple one. Do we use a "wet" decon or a "dry" decon? Wet decon is the most common and our standby. Water is cheap, effective, readily available and relatively stable. The only thing that water cannot and must not be used on is Class 4.3 Flammable Solids and other materials that are water reactive. On incidents where we are dealing with water reactive chemicals or radioactive materials, a dry decon must be used. Dry decon is used on radioactive materials because water spray may spread the radioactive particles outside of the decon corridor. Water will also not dilute a radioactive material like it will dilute other hazardous materials.

The layout of the decon corridor will vary from team to team based on the needs of the incident and the chemical or chemicals involved. The Decon Officer will decide how many people will staff the corridor and how the corridor will be built. Most corridors will include a tool drop, a gross decon pool, one or two technical decon pools and an undressing station where the team member will have their PPE removed or where the victim will have their clothing removed before they are transferred to EMS for triage, treatment and transport.

We have talked about the categories of decon, wet and dry decon and the decon corridor. The last thing a Decon Officer needs to know is what method of decon to use. This could be much more involved than a simple shower and removal of PPE as there are 10 different methods of decon.

Absorption

Absorption is where a spongy material is mixed with a liquid hazardous material. The contaminated mixture is then collected for disposal with the rest of the hazardous waste generated during the response. It is used to decontaminate equipment and property. It is most effective only on flat surfaces but is less effective on areas that have void spaces or other nooks and crannies where contamination may hide. If you’ve ever cleaned up a spill at your house with a paper towel, you’ve already practiced absorption.

Adsorption sounds a lot like absorption, but it is completely different. Adsorption is where the contaminant adheres to the
surface of an added material such as sand or activated carbon or charcoal. Adsorption is used when a hazardous waste contains adsorbed materials. Activated charcoal is administered as sand or activated carbon or charcoal. Adsorption is used when a contaminant soluble in water? Will the contaminant spread to a larger area? How much will the water used increase the hazardous waste generated? All these questions must be answered by the Decon Officer.

Disinfection
Disinfection is a term that we don’t usually associate with hazardous materials response, but it is another method of decon. Commercial disinfectants are available that destroy disease-carrying microorganisms. They are packaged with a detailed brochure that describes the limitations and capabilities of the product. Disinfection is used at facilities that may have biological hazards such as research labs, hospitals, clinics, mortuaries, medical waste disposal facilities, blood banks and universities.

Disposal
Disposal is a two-step process for items that cannot be properly decontaminated or are considered disposable. The contaminated item is removed and isolated, then packaged and transported to an approved facility. Disposed disposable coveralls and other PPE items should be collected, bagged, and tagged for proper disposal. Disposed tools and other equipment should be placed in bags, barrels, or buckets and tagged for proper disposal. Please keep in mind that these materials are considered hazardous waste and must be disposed of as such. They must not be thrown away with the normal trash.

Solidification
Solidification is a chemical process that turns a hazardous liquid into a solid. It makes the material easier to handle and does not change its inherent chemical properties.

Emulsification
Emulsification is a process that changes the chemical properties of a hazardous material. It neutralizes the material and reduces its harmful effects. Federal, state, and local regulations may apply to the use of emulsification products. There are some limitations to using emulsification. The contaminant still requires proper disposal. The chemicals used in emulsification may be harmful to civilians, emergency responders or clean-up contractors. Time is required to determine which chemicals can be used and to determine their availability.

Vapor Dispersion
Vapor dispersion is the process of separating and diminishing harmful vapors. Water is commonly used but mechanical or natural ventilation can also be used as methods to disperse vapors. The process of ventilating a structure during and after a fire is an excellent example here. Use extreme caution here as a rapid introduction of a large volume of air can create dynamic and harmful results.

Removal
Removal is used specifically for dealing with contaminated soil where the toxic materials cannot be rendered harmless and on-site treatment poses high risk. In most cases, it will be more economical to remove and dispose of the contaminated soil as opposed to treating it on site. Removal reduces clean-up time and limits exposure risk to civilians, emergency responders and clean-up contractors.

Vacuuming
Vacuuming is the process used during a dry decon. It is very effective in the removal of dusts, particles and some liquids by sucking them into a container. Filtering systems on the vacuum devices prevents recirculation of contaminated material. (This is a concern when dealing with radioactive materials.) HEPA vacuum cleaners are used to remove contaminants that are 0.5 microns or larger.

Decon is a HazMat Operations level skill. The Decon Officer will usually be either an officer on the HazMat Team or one of the senior technicians or specialists. The Decon Officer will guide you through setting up the corridor, making sure you have the right personal protective equipment and make sure that you accomplish your mission safely in order that you and those that you decon go home safely.

Until next time, make sure that everyone goes home well.

Mark Schmitt is a Captain/HazMat Specialist for the Greensboro Fire Department assigned to the Foam/ARFF Task Force and a veteran of 25 years in the fire service. The majority of his career has been spent in Special Operations. He holds a Master of Public Administration in Emergency Management and is a graduate of the National Fire Academy’s Executive Fire Officer Program. He has taught numerous hazardous materials courses for the Greensboro Fire Department, local community colleges and the North Carolina Office of the State Fire Marshal in addition to serving as a contract instructor with the National Fire Academy.
Let’s Talk HazMat Opportunities

Derek Mickler is a Captain/HazMat Advanced Specialist with the Wilmington Fire Department and North Carolina Regional Response Team 2. He has served as the Secretary, Eastern Director, Vice-President, President, and past President of the North Carolina Association of HazMat Responders. He is an active member with the Personal Protective Equipment Advisory Committee and holds a Bachelor’s degree in Fire and Emergency Services and is a 20-year veteran in the fire service.

This DHS-FEMA funded location offers education in areas of both Incident Management and response to direct HazMat Incidents to enhance the capabilities of emergency responders and local officials to prepare for respond to, and recover from catastrophic events resulting from natural events, man-made accidents or terrorist attacks. The main four divisions include Emergency Services Training Institute, Infrastructure Training and Safety Institute, Knowledge Engineering and Institute for Law Enforcement and Protective Services Excellence. The programs include management of Chemical, Biological, Nuclear and Explosive (CBRNE) events among other direct HazMat training courses.

Center for Domestic Preparedness

Auburn, Alabama

This specific level training is based around chemical ordinance, biological and radiological areas. The realistic training at this facility is the only one in the nation that offers training in the safe handling of toxic chemical agents and biological materials like sarin, VX, anthrax and ricin. With over 17 separate disciplines onsite, there is an opportunity for a vast absorption of HazMat advanced knowledge.

The advanced programs offered by the Dept of Homeland Security and FEMA are designed to give the student complete realistic hands-on application that truly makes the specialty of Hazardous Materials come to life. In addition to the federally funded consortium programs, there are many local training opportunities for association members. These opportunities include Transcaer training, Taming the Tiger with Anhydrous Ammonia (statewide), multiple HazMat operation level tactics training, and the Nutrient Plant In Aurora, North Carolina, and various instructional classes held at our regular North Carolina Association of HazMat Responder meetings. The face of the first responder is constantly changing along with the many hazards in the field. By taking proactive steps with your education, you will possess the specialized tools needed to be more effective in your response and be prepared to manage and mitigate advanced hazardous situations. Check out NCHazMAT.com for additional information about local training opportunities and/or visit one of our quarterly North Carolina Association of HazMat Responders during the year.

Derek Mickler is a Captain/HazMat Advanced Specialist with the Wilmington Fire Department and North Carolina Regional Response Team 2. He has served as the Secretary, Eastern Director, Vice-President, President, and past President of the North Carolina Association of HazMat Responders. He is an active member with the Personal Protective Equipment Advisory Committee and holds a Bachelor’s degree in Fire and Emergency Services and is a 20-year veteran in the fire service.

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When Hazmat and Technical Rescue Collide: Air Monitoring in the Technical Rescue World

Glenn Clapp

The Occupational Safety and Health Administration (OSHA) stipulates the requirement for air monitoring in permit-required confined space entries in 29 CFR 1910.146, which is the OSHA Standard pertaining to permit-required confined spaces. OSHA defines a confined space as "a space in which employees can bodily enter and perform work and that is not designed for continuous employee occupancy." Permit-required spaces are a subset of confined spaces that contain a hazard or possible hazard. As such, permit-required confined spaces represent an environment that is highly dangerous for those entering to perform work and for those performing rescues of personnel in such locations.

OSHA Standard 29 CFR 1910.146(d)(5) requires that all permit-required confined spaces be tested prior to entry to determine if acceptable entry conditions exist. In locations such as sewers that form a continuous system, pre-entry monitoring shall be performed to the greatest extent possible prior to entry and then shall be performed continuously in the areas in which personnel are present. Interestingly enough, the Standard states that in situations in which the atmosphere can be tested prior to entry, monitoring shall be performed "as necessary" during all entry operations.

That statement highlights the need for trained, competent air monitoring personnel to determine what "as necessary" is defined as. OSHA also requires that the atmosphere in permit-required confined spaces be tested for oxygen concentration first, then flammability, then toxicity. Any authorized entrants or their representatives are also provided the opportunity to observe air monitoring operations; and have the ability to request re-evaluation of the space and access to the results of the air monitoring.

Air monitoring is also an integral portion of entering permit-required confined spaces under the “alternative procedures” stipulated in 29 CFR 1910.146(c)(5)(ii). These procedures allow for entry into permit-required confined spaces in which the only hazard is an actual or potentially hazardous atmosphere in which continuous forced air ventilation renders the atmosphere safe.

In such situations, the Standard requires that the atmosphere shall be monitored prior to entry with a “calibrated, direct-reading instrument” for oxygen concentration, flammability and toxicity. The atmosphere shall also be “periodically” tested to ensure the safety of the atmosphere and the efficacy of the ventilation. A permit-required confined space may also be reclassified as a non-permit required space per 29 CFR 1910.146(c)(7) if it can be shown that no actual or potential atmospheric hazards exist and that all other hazards can be eliminated without entering the space.

As can be surmised, air monitoring is an integral part of this process. One may then ask what our levels of concern are for our air monitoring activities in permit-required confined spaces. OSHA defines a “hazardous atmosphere” in 29 CFR 1910.146 as an atmosphere containing “in excess of 10 percent of its lower flammable (or explosive) limit(LFL/LEL) of airborne combustible dust that meets or exceeds its lower flammable limit (approximated as obscuring vision to five feet or less), oxygen concentrations below 19.5 percent or above 25.5 percent, or concentrations in excess of the OSHA Permissible Exposure Limits (PELs) for a substance.

In reality, we may set our levels of concern at even more stringent levels if the atmosphere warrants it. The levels of concern are stipulated in the entry permit. For instance, we may set our level of concern for toxicity at the NIOSH Recommended Exposure Limit (REL) for a substance, or substances, as the RELs are normally more stringent (lower in concentration) than the PELs.

The “usual suspects” for toxic gases or vapors in permit-required confined spaces are hydrogen sulfide and carbon monoxide. Hydrogen sulfide is commonly known as "rotten egg gas" and results from the decomposition of organic material. It is both toxic and flammable. Carbon monoxide may also be present due to the occurrence of incomplete combustion and can even result from nearby apparatus or powered equipment exhaust. Due to this fact, most four gas meters used for permit-required confined space air monitoring are set up with sensors detecting oxygen concentration, flammability, concentration of hydrogen sulfide, and concentration of carbon monoxide.

Many misunderstandings of 29 CFR 1910.146 exist amongst emergency responders. One common theme is that emergency responders hold to the belief that since Part 1910 of 29 CFR pertains to general industry, it does not apply to emergency operations. In actuality, it does as our very lives depend on compliance with the Standard and our organizations can be cited and fined for non-compliance. A second misconception that is prevalent within the general industry community is that confined space permits have to be approved for failure by another entity, similar to building permits when constructing or renovating a structure. Confined space permits are not required to be approved by anyone other than the Entry Supervisor and actually serve as a form of checklist that "keeps us honest" by documenting our actions and stating the acceptable entry conditions. It also benefits emergency responders to know that OSHA has also promulgated a Permit-Required Confined Space Standard for the construction industry in 29 CFR 1926.1204. Air monitoring in the construction setting is required on a continuous (or periodic under certain situations) basis.

Another area in which the realms of hazardous materials response and technical rescue operations collide in the area of air monitoring is that of trench rescue and recovery. OSHA defines a trench in 29 CFR 1926, Subpart P as "a narrow excavation made below the surface of the ground, with the depth being greater than the width and the width at the bottom of the trench not exceeding 15 feet." OSHA states that where any hazardous atmosphere or oxygen deficiency exists — or could possibly exist — air monitoring shall be performed prior to the entrance of personnel into the trench in which the depth of the excavation is greater than four feet deep. A difference between 29 CFR 1910.146 and 29 CFR 1926 Subpart P exists in the air monitoring levels of concern. While OSHA states that the level of concern for flammability in permit-required confined spaces is greater than ten percent of the LFL/LEL, in trench environments the level of concern is stipulated as greater than twenty percent of the LFL/LEL.

As stated earlier in our discussion, organizations with both a hazmat team and technical rescue team can benefit greatly from cross-training in both areas. If at least a couple of hazmat technicians can be dispatched to perform air monitoring at confined space and/or trench incidents, all can benefit from the knowledge possessed by the hazmat personnel in the areas of air monitoring and the equipment used for monitoring. Oftentimes, at least a small number of personnel on technical rescue teams will have had hazmat technician certification and experience prior to transferring to the technical rescue side of things and can serve as valuable force multipliers for air monitoring.

As can be witnessed above, the worlds of hazardous materials and technical rescue can and do collide in the realm of air monitoring at confined space and trench rescue/recovery incidents. With an appropriate understanding of the pertinent OSHA requirements and air monitoring procedures, we can ensure the safety of our personnel and possible victims, and the success of our operations.

As always, stay safe out there and be sure to visit the North Carolina Association of Hazardous Materials Responders website at www.nchazmat.com.

Glenn Clapp is a past president of the North Carolina Association of Hazardous Materials Responders and has over 22 years of fire service and emergency management experience. He is currently an Improvement Specialist with the Industry Expansion Solutions Division of North Carolina State University and is a volunteer firefighter with the Fatswine Fire Department. He is also a Technician-Level Hazmat Instructor, an Executive Fire Officer, a Certified Hazardous Materials Manager and a Certified Fire Protection Specialist.

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Winter • 2020 9
Managing the **Beast** Within While Protecting Your Family

The old adage of “you can pick your friends but you can’t pick your relatives” comes to mind when thinking about our public safety community. I believe that we can all prove this saying wrong in that by picking your friends in the public safety community you are indeed picking your family. With that in mind, let me describe why it is so important that we, as Emergency Response professionals, manage our mental and physical health not only for our sake but for the sake of our families.

In the 40 years that I have been in my career field, the term family has morphed into something completely different than it was in the beginning. I am not trying to paint a gloomy picture of our profession. However, we need to understand the reality of what we do and how it impacts not only ourselves, but our loved ones as well.

We all experience the work family and the home family. At the start of our career in Public Service and emergency response, our immediate home family tends to be very in tune with this new and exciting profession. The introduction of the work brothers and sisters and yes, even work aunts and uncles is intriguing leaving our spouses and children enamored with the excitement of the big trucks, lights and sirens and everything else in the amazing new world.

Initially the two families are blended into one big happy conglomerate and this honeymoon phase is great. The camaraderie, the laughter of social gatherings for the department/agency and everything glamorous and grand. Then it happens. Reality strikes and initiates the change that every one of us experiences. It may be that really bad call. It may be that really bad call. It may be the pressure of feeling that you need to respond to every call and put the family activities on hold “Again.” Or it may be the pressure of feeling that you need to be the best every second of the day. Whichever the case, this marks the beginning of the end of your career.

**see BEAST WITHIN page 12**
Managing the Beast Within While Protecting Your Family

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When talking about our jobs we understand that we are subjected to stress. That is just part of the job. We also must understand and accept that we are not the only ones that feel our stress.

Derivative stress is a huge factor in our home family dynamic and is defined as the long lasting emotional reactions originating from trauma that happened to another person. Even though the family members have not experienced the traumatic event personally, they begin to manifest stress symptoms as they observe and react to the stress we bring home.

Let’s think about that for a minute. It is a fact that the incidents that we see and experience in the field and try to shelter our family from impacts their emotions even though we don’t tell them about the call. The misconception is that we can hide our emotions. That we are made of steel and can attempt to deny that we are still human. The fact is that we are indeed human and so are our families.

When a responder experiences a traumatic event, he/she generally has a partner that they can (if they choose to) debrief that call with. For the rest of that shift, they have a resource that they can access to discuss the good, the bad and the ugly about that particular shift, they have a resource that they can go home. That stuff doesn’t necessarily mean their lunch box, and personal equipment. It means the unresolved baggage of that call. When they get home, they now must make a decision, do they talk to their family about what they experienced? Would their family truly understand the magnitude of that event that you are experiencing or will they look at you with glazed eyes and tolerate your explanation only to proceed to go shopping or expect you to snap out of it and start the grill so you can make dinner.

Our world is so different than that of other professions that one cannot adequately describe all of the outside dynamics that impact our daily existence so others can understand. If one happens to have a life partner that is in the same profession and can relate to the lifestyle that we lead, generally one of two things will happen. You will either have a greater chance of them empathizing with you and being able to help you process the event or they will expect you to be able to handle the stress and put it away because it is weak to accept that pain as being real. Either way, by sharing your day’s events, you have now created an environment of stress at home too. This will now diminish your ability to escape that event. Even though this may not be ideal, it is exactly what needs to happen.

Talking about the call is paramount to your healing and exactly what you need to do even though you also know that it comes with a price. Realistically, most of us choose to leave the call at work or in the back recesses of our memory and shelter our families from the trouble. Here is the problem. That call will leak out of you in ways that you have no control over. Now masking the issue becomes an unconscious effort. This is where many begin to hide the problem with alcohol, drugs, sex or isolation as you try to compensate for having feelings that “We just can’t talk about.” The downward spiral has begun and the derivative stress felt by your loved ones is exacerbated by the behaviors that we choose as crutches.

Your relationships start to crumble. Tension between you and your life partner begin to deteriorate and the kids start to notice the number of arguments increasing. Your willingness to participate in what you used to enjoy no longer exists. You are irritated very quickly and everything starts to get out of hand. It’s a snowball that just doesn’t seem to want to stop. But remember, it is snowing for your partner as well.

They are feeling the frustration, confusion, detachment, solitude, overwhelming sense of responsibility and even the feeling of being alone to manage this new complex issue with no idea of where to turn for resources to help. This problem also impacts the most innocent. Many children manage the emotional outpourings or isolationism by internalizing. If there is conflict in the family, many times their reaction is to accept responsibility for what is going on in their world. They must have caused that argument or they must have caused daddy or mommy to be mean or to not want to be around them. This feeling or belief often manifests with many other behaviors that impact the family dynamic negatively. This in turn causes additional stress on an already volatile situation.

Depending on the age of the child they may start acting out with negative behavior to seek attention, they may begin wetting the bed again or their school performance may suffer. There are many other scenarios that could manifest from this family dynamic disruption. Which is all the more reason that we as responders, come to grips with the notion that we are important and need to use Universal Mental Health Precautions to manage the everyday stress that we encounter.

So I want to make this very clear. This situation is NOT your fault. You didn’t choose to be impacted by this trauma and to be left alone to deal with it. However, one would argue that it is your responsibility to make the decision to manage it. There are resources at your disposal that will offer the opportunity to learn how to manage this beast. Your career is one that you have worked long and hard for but so is your family. Keep in mind that you can find another career, but your family is one of a kind. Often times we get lost behind the badge and forget that we were a person before we became a public servant. Find that person.
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Several years ago, I had the privilege to spend a weekend learning from Chief Alan Brunacini when he came to the South Piedmont Community College to teach. I even had a larger privilege of spending some one on one time with him and trying to absorb everything I could from him. There was one topic that we discussed that has always stuck with me. Workers do not quit their jobs, they quit their bosses! I remember thinking about this topic and my time in the volunteer fire/EMS service, as a career firefighter/paramedic, and in my current career in Emergency Management. Why does a worker quit? As we spoke, all I could think about was the times I was unhappy in my job and how often it was my immediate supervisor that either made my job awesome or how they made things miserable.

This led me to start a process where I am constantly asking myself a question in regard to my staff. “Am I the kind of boss that I would want?” Invariably the answer is going to be yes and no. There are always areas where we could improve and be better, but I hope the majority of the answer is yes. So, what makes a good supervisor? Well let’s take a look at several points that I have gleaned through my years of experience — and I am sure you can add more to this as well.

**Engaged**

It is important that we are engaged with our staff. A supervisor does have tasks that will take them away from being engaged all the time, but it is vital we are engaged overall with our staff. What does being engaged look like? Being engaged looks like:

- Knowing the basics about our firefighter’s family like their children’s names
- Not watching the firefighters train but training with them
- Cooking, eating, and cleaning up for meals
- Paying attention to the needs and concerns that the firefighters bring to you

Our staff need to know how important they are but if you barely know who they are, what they do, and such, then we are failing them personally and in our profession.

A great example of being engaged can be seen through a great friend of mine, Deputy Chief Steve Prziborowski of the Santa Clara County Fire Department (CA). Chief P (as we call him) is known to often go to a station within his department once every few weeks, sit down and eat lunch with the crew, and maybe hop on the truck for a short while. He attempts to be actively engaged with the members of his department.

**Trust**

Trust is so important to our service. As a supervisor and leader, our crews need to know they can trust us. This is going to strengthen the bond we have. The staff member needs to know that it is OK to tell us they do not know something, they made a mistake, or that they have troubles at home that may impact their work. Too many times in this day and age supervisors will ridicule and criticize these staff members for this honesty. However, what is best for the organization? A staff member who will admit mistakes, try to learn from them and better themselves for the organization or a staff member who makes mistakes and tries to sweep it under the rug? As a supervisor, I would much prefer the staff member who will come and talk to me.

Now here comes the hard part of trust. It goes both ways. We like to think we are superheroes and can handle anything. As supervisors we need to be able to tell our crews that we do not know something or that we made mistakes. If we trust and appreciate them for their honesty, in most cases the firefighters will reciprocate that feeling. However, I am sure you have had a supervisor in your career that would never admit an error even though everyone knew it perfectly. This does more damage than we know in many cases.

The trust we give and get will only make our bond stronger and the services we provide better.

**Empowerment**

Delegation is the process of allowing a lower level staff member to make a decision based on their abilities, authorities and capabilities. By delegating you empower the staff member and increase their buy in to the system and organization. I have always said that we should delegate decisions to the lowest level possible for this purpose. This not only empowers the staff and increases their buy in but also provides real world experience and training in decision making as we build them up for potential future promotions.

This has been an issue for me in the past. I want to know that I am making a difference in the organization that I am a part of. The supervisors that saw this found ways for me to be empowered and I excelled. For example, one time I was hired when a county just started a county EMS agency. As time went on and my supervisor saw my passion and need to be empowered to help, he asked me to take over the scheduling for the stations that we ran. Had he not seen that passion and provided me an outlet, I would not have succeeded as much.

Are You the Kind of Boss You Would Want to Have?

**Feature**

David Hesselmeyer

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In emergency services there is a complex amount of skills. Often times the belief is that you have to be competent at every skill there is in the business. That is as far from the truth as you can get. Being competent doesn’t mean that a leader knows how to do everything; rather that they know what to do and how to get it done. While many leaders are not often selected for their competence alone, competence is something different from character or leadership competence and should not be confused.

While a leader does not have to possess and be competent at every skill that they may lead, but must be competent in many, demonstrating them periodically. The leader does not have to be competent in every skill but must be competent in the skills of identifying the talent around them who have those skills, engaging them and trusting them as a significant part of the leadership team. In this article we are focusing on leadership competence.

Competent Listener

Good leaders have to be competent listeners. In order to be a competent listener, a person must be able to listen with literal comprehension. Specifically, the competent listener should be able to exhibit the following competencies by demonstrating the abilities discussed in this section.

We can develop and improve our listening competence by enhancing each stage of the listening process as a leader. To improve listening at the receiving stage, the leader must be prepared to listen to understand — not listening to answer. Leaders must discern between intentional messages and noise. Often times we get focused in and create dialogue on non-important items or noise. Often times we get focused in and create dialogue on non-important items or noise.

Paraphrasing — not listening to answer. Leaders must be prepared to listen to understand the words being spoken but also to the context can influence conversation meaning.

Competent listeners utilize the differences in voice tones, speech rates and other paralinguistic cues that influence meaning to help determine the true message. It is important to truly listen not only to the words being spoken but also to the totality of the communication, which truly creates the true concept of what is being communicated.

Competent Motivator

Being a good leader in emergency services requires more than being a high performer yourself. You must also be able to motivate others to achieve their greatest potential by empowering them and holding them accountable for their responsibilities.

So where do we start with motivation? Simple — Start with Yourself. If you are not motivated how can you expect others to become motivated around you? You can start the process by doing a self-assessment. Here are some questions you should be asking yourself and answering them honestly as you inter-inspect. What is your level of motivation currently? What actions can you take to raise it? Is there room for improvement in your leadership?

Note, if you’re not engaged with today’s fire service and your organization, it is going to be difficult to get other people engaged, especially those you are leading. If you find that you’re struggling with motivation, you need to identify why and correct it.

Working on the wrong types of projects, not having the necessary resources to do the work, or being bored with the usual routine are all common contributors to low engagement levels. When you can pinpoint the cause for your lack of motivation, you will be better able to find the appropriate solutions.

It’s hard to get others motivated about something that does not instill a “greater than self” sense of purpose or inspire them to do better or more. While not everything in emergency services will be exciting, as a leader, you have to find ways to get people excited about the mundane routine, non-exciting responses and tasks that have to be performed and get them to understand the value it brings to the success of the organization.

It is critical that you share your vision with your team and explain in detail why a particular task or project is important.

**Leadership**

The 7 Qualities Fire Service Leaders Must Possess

**Being Competent**

(Doug Cline)

During this series we will be examining the seven qualities that are necessary for a leader to be successful in leading the organization and the team. Part two will focus on being competent.

**Competent: have suitable or sufficient skill, knowledge, experience, etc. for some purpose; properly qualified.** (Dictionary.com)

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ICS/IMS Command Staff — Keeping the IC Sane!

When we train on the Incident Management/Incident Command System (ICS/IMS), we often discuss the roles of the general staff — operations, planning, logistics, and finance/administration. However, we spend much less time discussing the importance of the ICS Command Staff. On a complex incident, the IC will be overwhelmed by the amount of information that must be processed in a time compressed environment. Unfortunately, the IC must make timely decisions that have the potential to bring catastrophic consequences. The command staff can take a number of burdens off the IC and keep the IC sane.

The command staff is made up of the public information officer the liaison officer and the safety officer. Each of these positions can also have assistants or deputy positions that help execute their roles throughout the incident. Some would argue that the command staff positions are superfluous positions that are unnecessary. Let’s examine a scenario to see if you would want these positions available if you were the IC.

You have arrived at this scenario incident and assumed command from the first arriving units. The scenario is this: A southbound freight train has collided head-on with a northbound passenger train on a bridge over a river that separates your jurisdiction from a neighboring county’s jurisdiction. There are two passenger cars and three freight cars in the water below the bridge. The consist suggests that the freight cars in the water are high pressure cars transporting Ethylene Oxide — a flammable, toxic, and corrosive liquefied gas. It is estimated that there are 35 civilians missing between the two passenger cars and 120 people total on the train.

So, our first step is to determine in what jurisdiction this incident has occurred. Given that the river is not in one jurisdiction or the other, it would be wise to get someone from our neighboring jurisdiction together with us and agree to prosecute the incident collectively. By assigning resources collaboratively, we can ensure that there is no duplication of effort and we maximize the utility of each resource to save lives, protect property and stabilize the incident. After all, that is why ICS/IMS was developed. In that tradition, we (a representative from our neighboring jurisdiction and you as the IC) agree that we will need a large hazardous materials response, water rescue assets, a large contingent of ambulances — for the people on the train that are injured and not in the water. You also agree that some local public protection actions must occur immediately to evacuate civilians in the immediate vicinity of the incident and to keep others away.

Finally, we are going to have to perform some high speed/low drag operations involving the potential for plugging and patching, underwater search and

Competent

Cont’d from page 15

Refer to organizational mission, vision and values that connect the work to them to help people keep the big picture in mind.

Competent Team Builder

Team building consists of many separate, but closely related skills in one core competency. These include the leader’s ability to increase mutual trust between the leader and the individuals as well as the leader and the entire organization. The leader must encourage and engage cooperation, coordination, and identification with the mission, vision and values of the organization. In emergency services everything we do is wrapped around the team concept. It is paramount that the interpersonal dynamics and group dynamics of the team are good.

If you refer back to the listening section we will see that it is critical to encourage information sharing/communications among individuals. This information must be on a multi-dimensional level between all members of the team. Knowledge is power but only if it is shared. By sharing, it opens up opportunities to get personnel further engaged by including others in processes and decisions.

Competent leaders are able to perform all of the above tasks, helping create teams that work well together and meet both short-term and strategic goals of the organization they serve.

Douglas Cline is Chief of the Training and Professional Development Division with Horry County Fire Rescue. He is the Executive Editor for The Fire Officer and Executive Director for the Command Institute in Washington D.C. A 36 year fire and emergency services veteran, Cline is a well-known international speaker, Cline is a highly published author of articles, blogs and textbooks for both fire and EMS. As a chief officer, Cline is a distinguished authority of officer development and has traveled internationally delivering distinguished programs on leadership and officer development. He also has a diverse line of training videos on leadership, rapid intervention team training, vehicle fires, hose line management, and emergency vehicle operations and fireground safety and survival.
recovery, decontamination, high/low angle rescue, and advanced life support treatment and transportation. How are you going to do all that stuff? Simple, you will appoint members of the general staff. Your operations section chief will begin developing strategies and tactics, your planning section chief will initiate an Incident Action Plan, and your logistics section chief will begin ordering resources through mutual aid and state assistance compacts to assist in performing all of the things you want to do. Members of the command staff become just as important as the general staff early in the incident.

First, let’s consider the public information officer. They are going to be dealing with the media and press releases. A colleague of mine once said that the fire service is the only occupation where our operational success is inversely proportionate to the perception of our operational success. What does that mean? When we crawl down a dark hallway and knock down a fire while holding it to room and contents, it may not even make the newspaper. The inverse is if we fail to hold the fire to a room and contents and it spreads to other rooms, the entire building, and then adjacent buildings. Although we failed, there will be lots of press present and performing “live from the scene” break-ins to your regular television programming. Our scenario incident will likely have everyone from the local newspaper to Fox News and CNN present. As the IC, you probably do not have time to drive to the media staging area and hold a press conference, therefore you will appoint a public information officer. Their job will be to take the information you want distributed and give it to the media so that the public stays properly informed. They can also answer the media’s questions and provide ongoing updates as to operations, life safety concerns and changes to evacuations and sheltering orders. The public information officer takes an immense load off of the incident commander so that you can focus on the incident operations and ensure that everyone, including the responders, are safe.

Speaking of safety, let’s examine the role of the safety officer. This person’s job is to ensure that every task that is being performed on the scene is being done safely. We have often heard that the safety officer has the authority to override the incident commander’s orders. While this is true, it should probably never happen. The safety officer is another set of eyes to help guide you in operating. For example, if you decide that you are not going to have a crew in structural fire PPE attempt to stop the ethylene oxide leak, the safety officer can point out that research materials indicate that Level A HazMat protection is the appropriate PPE for such a task. You may not have had a chance to read research materials on ethylene oxide, but the safety officer is there to make sure that if you have not, you’re not making a decision that could put responders’ lives in danger. In lieu of overriding your order, the safety officer should be pointing out that in order to better protect the crew that will be attempting to stop the leak, they need a different level of PPE and an assortment of air monitors. This call is bad, but you do not want to make it worse by having firefighters (or any other responders) getting hurt or killed. The safety officer is there to make sure that doesn’t happen.

Finally, we have the liaison officer. In the absence of this position, it is your responsibility (as IC) to meet with all of the arriving units that your logistics chief ordered for this incident. Since you are really overwhelmed, you may end up telling one of them that you do not have time to talk to them because you are really busy. Everyone that is arriving wants to help make the incident better. But if they feel like they are just sitting idle and no one even has time to talk to them, you might find that at the point where you need them to go to work, they are no longer at the scene. What is to keep them at the scene when they were called to help but have no direction? The answer is the liaison officer. Instead of telling them they don’t have time to talk to them, the Liaison Officer checks in, determines the number of personnel and resource types that they brought to the fight. Then they THANK THEM for coming and helping. If this incident is not in their jurisdiction, they don’t have to be there. The liaison officer takes the burden off of you to ensure that all of the additional forces requested feel like they are engaged — and appreciated. The liaison officer can also prioritize those who need to talk to the IC. At our scenario incident, those players include, but are not limited to, police/fire/and EMS from both jurisdictions, both the passenger and freight train companies, the Environmental Protection Agency, the Department of Health and Environmental Control, the National Transportation Safety Board, the U.S. Coast Guard, Department of Natural Resources, State and Federal Law Enforcement Agencies, etc. Do you want to meet with all of these agencies while you are trying to manage this incident? If not, appointing a liaison officer will help you tremendously.

As you can see, those that say the command staff are unnecessary positions are mistaken, particularly on a large and complex incident like our scenario. The public information officer prevents you from having to deal with the media, which is labor intensive. The safety officer ensures that your orders are providing the highest level of safety for those operating at the scene, giving you a second set of eyes on every task you are performing. The liaison officer helps to prioritize and engage the many resources and players that would be involved in a major incident such as this. As a result, especially on “big” incidents, you should consider appointing command staff positions early so that you as IC can keep your sanity. Be safe and do good!

Dr. David A. Greene has over 25 years of experience in the fire service and is currently the deputy chief with Colleton County (S.C.) Fire Rescue. He holds a PhD in Fire and Emergency Management Administration from Oklahoma State University and an MBA degree from the University of South Carolina. He is a certified Executive Fire Officer through the National Fire Academy, holds the Chief Fire Officer Designation from the Center for Public Safety Excellence, holds Member Grade in the Institution of Fire Engineers, is an adjunct instructor for the South Carolina Fire Academy and is a Nationally Registered Paramedic. He can be reached at dagreene@lowcountry.com.
Testing emergency plans for response agencies, governmental entities, businesses, and schools is a must to ensure that plans on paper actually work under emergency conditions. An untested emergency plan is only worth the paper it is printed on. Tabletop drills are a great way to look at “big picture” considerations, but there is nothing like conducting a full-scale exercise to test the nuts and bolts of an emergency plan.

Conducting exercises can be costly for those involved, both in terms of manpower and equipment. Grants can help to offset the costs, but the grant process can be cumbersome and the grants themselves might not cover the entire cost. Emergency managers and emergency response agencies might have to get creative to be able to conduct a full-scale exercise without breaking the bank. One out of the box solution is to partner with local colleges and universities.

What Colleges and Universities Can Offer
Schools have a variety of resources available to them that will enhance the realism of an exercise. There are a variety of majors at educational institutions that can offer value to an exercise while also providing “real world” experiences to their classes. Students can even be granted academic credit for participation in exercises. Below are a few examples of student groups who can add value by participating in a full-scale exercise:

Drama Students
Involving the drama/theater department of a college or university is a great way to add realism to any exercise. Students can be involved as actors who help simulate injury victims. This provides an immersive, interactive experience for first responders. Students can also be involved in applying make-up, moulage kits, etc. to make injuries seem more real and allow responders to test their skills in rescue, triage, and treatment.

Medical Students
Nursing, pharmacy, physician’s assistant, medical school, and other
Fire departments can use full-scale exercises for hazardous materials training.

Medical programs can be used to help write scenarios for injuries, coach actors and even assist with treatment. The medical programs benefit by teaching their students emergency medicine lessons in conjunction with the drill.

**Student Media**

Students from television, radio, print, and multi-media production classes are valuable role players to provide experience to emergency response agency public information officers and agency chiefs in managing the media in a controlled environment. Student media can report live from the scene of the emergency exercise, conduct interviews and even hold mock press conferences.

The value of role players cannot be overstated. Role players add realism, a sense of urgency and even stress to a full-scale exercise. Responders are immersed in a realistic situation and must perform under stress. Role-players provide interactive training and an immersive experience for first responders.

In addition to role players, colleges and universities can offer equipment that will help make exercises more realistic. For example, fog machines used in theater productions can be used to create realistic, but not harmful, “smoke” during exercises involving fire. Maintenance departments can control utilities to buildings — such as electricity to simulate power outages. Stage props, boxes and other materials can be used to create rubble to simulate a building collapse. Schools have resources at their disposal that can add a tremendous amount of realism to any full-scale exercise.

Colleges and universities offer another advantage in that they have a wide variety of buildings and areas in which an exercise can be held. For example, science buildings make a perfect venue to conduct simulated hazardous materials incidents. Dormitories are great settings to simulate fires. Auditoriums and stadiums make excellent backdrops for tornado exercises. Schools also make excellent settings for full-scale active shooter exercises.

**What Is Gained by Making it Real?**

One of the benefits of conducting a full-scale exercise is to identify strengths and weaknesses in departmental training programs. Exercises provide a more accurate picture for agencies on what works well, and where improvements can be made. Exercises involving multiple agencies and multiple role players create the realism needed to test training procedures in a controlled environment.

Preparedness measures are also tested during a full-scale exercise. By partnering with a college or university, both the school and the emergency response agencies are able to test their preparedness plans under live conditions. They are also able to test communications between the school, emergency response agencies and the office of emergency management.

Agencies and the school can utilize full-scale exercises to identify equipment needs. For instance, local fire responders can advocate for items such as Knox Boxes that allow them access to buildings on campus and throughout the city. Exercises can be written in a way to highlight a perceived deficiency so that the deficiency is either confirmed or negated during the scenario. It is always helpful for decision-makers, whether city officials, business CEOs, or school administrators, to witness a full-scale exercise firsthand to understand the importance of an equipment request.

**What are the Benefits of Partnering with Schools?**

Colleges and universities want to be an active participant and partner with the community in which they are located. In many cases, the college or university represents a large percentage of the population in a given town or city. The term “college town” emphasizes the importance that colleges and universities have in their communities. Many schools seek ways to add value to their city, and partnering with local response agencies to conduct full-scale emergency exercises is a great way to add value.

Schools benefit from hosting exercises in numerous ways. Often, media will cover the exercise, providing valuable marketing and public relations exposure for the college or university. Hosting exercises also ensures that first responders are more familiar with campus, then they might otherwise be. This familiarity leads to faster response times, better
Paramedics are NOT a Commodity

All agencies of all sizes, from mountains to the coast struggle with staffing at times. Recruitment can be difficult for everyone, as all branches of public safety and healthcare struggle with pay scales, work schedules and public opinion. Perhaps we should focus on things we have more control over, such as employee retention. Instead of asking why we cannot find enough qualified applicants perhaps we should instead ask ourselves why do employees leave faster than we can recruit new ones? There is a subset of EMS agencies that have more applicants than open positions and retention rates remain high. These agencies must be doing something vastly different from the others, as they continue to thrive during a time that is difficult for so many others.

Some agencies are visited by many EMS directors and talking to lots of medics. I have developed a paradigm on how to create a destination agency where people line up to apply and few want to leave. There are three main components to creating such a destination agency.

Create a Culture of family

One of my fellow emergency medicine physicians who is former military once told me, “If people feel like their organization cares about them then they will run through walls for it.” Perhaps it is to belong to a group that does something special. They want to be valued and they want a job that has value. Destination agencies that I have visited consistently use words like “we” and “family.” They treat everyone in the agency as an important part of the whole. They consistently give feedback to providers regarding why they do what they do. Destination agencies also treat providers like professionals by showing flexibility and understanding in how they treat and schedule their providers. They also never let providers forget that they are valued and have an important job. Management tries to be seen by employees, leading by example and ensuring they do not forget where they come from.

In contrast agencies with high turnover often make providers feel like a commodity or “just another cog in the wheel.” Providers may be judged by their numbers. Scheduling might be arbitrary and inflexible. There is often times a lack of understanding in why things are done as they are, and they have little say in possible ways of improving processes.

Develop Leaders Who Excel at Leadership

Leaders in EMS organizations must have skill in dealing with patients and managing people. For people to be effective leaders they must have appropriate training and mentorship. Just because someone is a good paramedic does not mean they will be a good supervisor. It’s not fair to either the person placed in the supervisory role or the people they are supervising if appropriate training and mentorship is not given. Without this training the supervisor will become frustrated, as will the people they are supervising. There are courses in leadership and management provided by the National Fire Academy, the National EMS Management Association (NEMSA), and other organizations often at low or no cost. They also want to have access to new and innovative ways of caring for their patients.

Part of performing at a high level requires solid medical oversight with good feedback to providers. Providers want to feel like they are being held to a high standard. Medical direction and oversight must focus on giving solid feedback in a positive manner. It’s very easy to simply blame the provider and label them a bad medic if there is a problem. This negative approach to performance improvement and medical oversight is counterproductive. It will not improve care and will alienate providers. The optimal method of medical direction involves thoughtfully looking at care concerns, finding the systems, cognitive, or skill issue at play and then addressing that issue in a positive and supportive way. We should never yell at, demean, or speak down to any of our providers. I firmly believe that every EMS provider went into EMS to help people. They want medical directors and supervisors who will help them achieve that goal.

In summary EMS should be a Destination Profession. Each EMS agency should strive to make itself a Destination Agency. Agencies cannot treat their providers like a commodity. EMS providers are professionals who carry out a very challenging job. Agencies must create a family like organization that people want to be a part of. Agencies must provide leadership training and mentorship to their supervisors. Providers must also be challenged to provide the highest level of care possible at the full scope of their abilities.

Dr. Winslow has worked at Baptist Hospital in Winston-Salem for the past 11 years. He was appointed as the Medical Director of the NC Office of EMS in 2011. This document contains all protocol, procedures, and policies for all EMS agencies in North Carolina.

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A Few Ideas to Cutting Stress

We are in that time of year for seasonal changes, temperature dips and spikes, decay/turnover and cold seasons, and of course, preparations for the EMS Symposium in Myrtle Beach the first week of March! As we all know, during the holidays both our work and social calendars kick into high gear. Our work became busier in anticipation of time off over the holidays, and there were more social events at work, with friends, and with family to celebrate the season. As a result, multiple studies (and your own lives) show that stress, anxiety and depression can increase. Here are a few ways you can manage your first responder mental health. For the attorneys, I need to tell you that none of what I’m about to suggest is legal or medical advice. Just some good suggestions on ways to cut down on stress.

Get Enough Sleep

Psychology Today and several other publications report that research shows sleep deprivation can severely impact your mood as well as your ability to perform your job. As much as I like research and evidence-based medicine, I don’t need a PhD (No offense, Remle) to tell me if I don’t get enough sleep, I’m no good to myself or the world. Many accidents involving emergency vehicles — especially ambulance drivers in South Carolina list ‘driver fatigue’ as a contributing or main factor; several of these accidents involve serious injury or death to patients, crew, or bystanders. Medical mistakes often occur in the field do to mental and physical exhaustion. Your physical and mental health will suffer and can deteriorate if you do not get enough sleep, so make sure to go to bed early every night to give yourself, your partner, your patients, and everyone else on the roads and under your care the best chance of having a good day.

Stick To Your Routine

Ever have one (or more) of those days where your routine is just whacked up from the time you get out of bed until you get home? Routines are important and without them, even a small portion of them, we can be really stressed out. The National Alliance of Mental Health recommends sticking to your routine as much as possible, even with the influx of invitations to social events and temptation of holiday overtime dancing like sugar plums in your head during the holidays. The more you stick to your routine, even if it’s just for one part of your day, the more you will feel in control and the less anxious you will get once outside evil forces like mandatory overtime start to disrupt it. Stick to your routine as much as possible, even just a couple of hours or half a day if you can. This way when you are called in to accept additional duties — or party invitations — your routine is still somewhat normalized.

Set a Budget and Then STICK TO IT

More arguments involve money in relationships than every other reason COMBINED. One of the easiest stressors to eliminate during this season is what you spend. We all are tempted to buy ‘just one more gift’ or take ‘one more small trip’ over the river and through the woods to Mee Maw’s house. It is important all year round to stick to our budgets. We as emergency responders are kinder at heart than most and we can find ourselves over-extending to help the family down the street, a co-worker, or even a complete stranger. It is imperative to set a budget and stick to it, you don’t need to over extend yourself by giving lots of gifts or even just a few expensive ones. There are plenty of ways to show love and gratitude to the world that will not break the bank. Volunteer at the homeless shelter, take a shut-in shopping, or make some cookies. These small gestures often times mean more than any gift you could bring home (unless maybe you went to Jared’s). Just make sure that trip is figured into your budget as well.

Don’t Rely On Drugs, Alcohol or Food

Hey out there in Emergency Response Land, raise your hand if you eat your feelings like I often do? You’re not alone. It is easy to take a pill, pour yourself a Jack and Coke, or grab a bag to your pantry and bury yourself in a box of HoHos or a bag of Doritos to help relieve the stress and anxiety you feel. There are much healthier ways to deal with the stress, but we as responders hardly ever take this road. It’s a new year, take a chance to make some changes in how we treat OURSELVES. Some of the more healthy outlets? Try anything outside. Maybe try some exercise, fresh air, meditation, talking to a peer counselor, spending time with loved ones. It’s paramount that you make time for yourself to decompress instead of relying on drugs, alcohol or food. In case you’re wondering, mine isn’t HoHos or Doritos; it’s chicken wings — many, many chicken wings.

Most importantly, Now is a Time to Set Aside Differences

Many of you know I lost my parents at an early age; my mom when I was 16, my dad when I was 23. The holidays are some of the hardest times of the year to be without them. I had many differences with my two sisters along the way, but it’s very important to realize one thing: family is family. You may be thinking, ‘but you don’t know my story.’ Believe me, I do understand. I get it sometimes there are irreconcilable differences, but if it’s at all possible, wouldn’t it be nice to be able to sit down with someone who may have wronged you in the past this month and talk through some stuff? Add one more old friend back to the fold, a relative back into your life. We can never have too many real friends and never can we afford to not have family. Imagine not carrying around the stress of a cross word or a silly action from 20 years ago anymore. The stress that can relieve is palpable and measurable. Because of the decisions and compromises that you make today, right now; you can set yourself and your families up for many fantastic memories of special occasions for the rest of your lives. Who doesn’t need that? I say it every time I send an email out to you all, and sometimes it may lose its luster and meaning, but every single time I type it or say it, it comes from my heart and the hearts of those in the Bureau of EMS and Trauma. PLEASE take care of yourselves, take care of your crews, and especially take good care of your patients. ‘And I heard him exclaim as he drove his ambulance out of sight, Merry Christmas to All and to everyone I just gave Ketamine, GOODNIGHT!’

Rob Wronski is the South Carolina Department of Health and Environmental Control (SC DHEC) Bureau Chief of EMS. He has served in many roles since becoming a firefighter paramedic in 1991, culminating with his selection as Chief of EMS for the state where he has served for nearly three years. He has held several executive positions including Assistant Chief of the St. Andrews Fire Department in Charleston, Medical Officer of the SC Platoon Fire Department, and a Deputy Commander in the Beach Park (IL) Fire Department. His experience includes working in fire-based EMS, including ALS and BLS first response as well as fire based and county based ALS transport.

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Finding Common Ground
Recruiting and Retaining EMS Personnel

Henry Lewis

Emergency Medical Service (EMS) delivery systems across our state are just as diverse as the amazing men and women that provide them. While we wrestle with high-level industry questions surrounding our identity as healthcare versus public safety one thing we all have in common is the need for a qualified workforce sufficient to the demands of respective call volumes. Public or private, fire or hospital based, air or ground; we all need well trained, public or private, fire or hospital based, air or ground; we all need well trained personnel, and that is the common ground that can bring us together.

As a general rule, EMS is a nomadic culture and employees tend to move through employment with several different agencies throughout their career. In some instances providers may move out of the EMS profession altogether as our research shows the average time an EMT or Paramedic in our state remains active in the field is around eight years. The South Carolina Department of Health and Environmental Control, Bureau of EMS (DHEC) along with the South Carolina EMS Association (SC EMSA) have published numerous research papers with supporting data to prove what we all anecdotally seem to know; as an industry, we are struggling to attract and retain new personnel. The questions then become why is this happening and what can we do to improve our position and image?

Be Ambassadors

The first answer is that we all need to be better ambassadors of our profession! EMS is our craft and we should all seek to not only improve ourselves but also empower those around us to do the same. Negativity breeds more negativity! We are not unlike many other professional industries with some of our concerns, however we need to portray ourselves in a positive light. As EMS providers, we must be advocates for system improvement through meaningful engagement and stop being victims. If the public perception of our workforce is that of unhappy, disgruntled employees it not only serves to erode public trust but also affects our ability to recruit and retain good providers.

Show Up

The second suggestion is to get involved. Change is determined by those who show up for the discussions. Be a proactive advocate of your profession. Complaining without offering suggested improvements will not help us correct our industry concerns. Choose a path that is driven to make positive changes and do something to improve the industry. You don’t have to be an administrator or executive level leader to affect positive change. We need to understand all perspectives to make informed decisions.

Finally, I would suggest that EMS is evolving. We are the youngest of the allied services and as such we are still finding our place in the healthcare versus public safety world. Truth be told, EMS may also have a place in the public health arena making it difficult to truly assign the profession in a single setting. Which may be a strength and something that we as a profession can capitalize on.

I say all this simply to spur conversation across our state that the role of the EMT — referring to all certification levels — will likely change in the coming years. Innovative changes in payer alignment and reimbursement have already begun a transition with novel programs such as community paramedic and mobile integrated healthcare. It is only logical to think these trends will extend into traditional EMS as well. These changes could likely impact our ability to recruit into the profession.

I have the opportunity to engage with EMS professionals across the nation as well as across our state and we all have our troubles. Surprisingly, or not depending on your personal view of things, the issues are almost always tied to workforce, recognition, call volume and financial constraints. The issues that face our state are not unique, but our approach to addressing them is. At a recent National EMS conference our state EMS association was recognized for the innovative work that we’re doing surrounding workforce and recruitment. While we still have a lot to do, and sometimes it can seem overwhelming, we should take time to reflect on the fact that our profession is at a crossroads and we have a unique opportunity to be part of these discussions on a national level and here in South Carolina.

The need for effective leadership and stewardship of our craft is needed now more than ever. I hope you’ll join me on December 12th (details on Facebook and our website) for our next association meeting or consider joining one of our subcommittees to help shape the future of EMS in our state. Take a stand and get involved, the future of our industry will be decided by those who show up for the discussions.

Henry Lewis has served in EMS in South Carolina for 18 years. Lewis is employed by Richland County Emergency Services as the Project Coordinator with responsibilities in EMS, logistics, oversight of the South Carolina’s only Mobile Integrated Healthcare Collaborative, and Emergency Management. His career began with the volunteer fire service in Fairfield County where he still serves as a volunteer today. Henry is former EMT and Fire Instructor, sits on numerous committees at the state and national level, and is serving his final year as the President of the South Carolina EMS Association. Contact: henry@scemsassociation.com.
Howdy Partner
Cont’d from page 19

communication between responders and the school, and better overall cooperation to resolve the crisis. Response agencies benefit from partnering with colleges and universities in numerous ways as well. Schools provide a multitude of role-players who provide an interactive, immersive experience for first responders. Better relationships are established with schools which helps not only in times of emergency, but also in the day-to-day interactions between the school and response agencies. Schools also offer a wide array of venues for responders to train in and hone their skills.

Helpful Tips
The following is a list of tips to help establish a partnership between schools and emergency response agencies when conducting full-scale exercises.

**Top Down Buy-In**
You must have a strong commitment from the chiefs of the various response agencies participating in the exercise as well as university administration. Without buy in from the top, the collaboration project will not be successful.

**Mutual Understanding**
Both the school and response agencies should work hard to understand what the other has to offer in not just conducting a drill, but in response to an actual emergency as well. Many times, people have preconceived notions that must be dispelled so that there are not unrealistic expectations as to what an agency or school can bring to the table.

**Meetings**
Make meetings meaningful so that no one feels that their time has been wasted. For instance, you might have one brainstorming session to determine the type and location of the exercise. Another meeting can be held to lay out the basics of the exercise plan and to seek input from those involved. It is important to meet within days of the exercise to discuss the final plan and conduct a walkthrough of the exercise site. A final debrief drill can be held to analyze what went right and what needs improvement from the exercise.

**Communication**
Make sure that communication lines between response agencies and the college or university are firmly established before the full-scale exercise commences. There should also be communication between the school and its student body to let them know the day that the exercise will occur. (Never conduct a “surprise” full-scale exercise).

**Start Small**
Don’t bite off more than you can chew for the first full-scale exercise conducted as a partnership between schools and response agencies. Do not overcomplicate the scenario. Aim for success, and don’t get hung up on failures.

**Summary**
Partnerships between colleges and universities and their local emergency response agencies to conduct full-scale exercises can be very beneficial to all parties involved. Many times, schools are willing to contribute role players, facilities, and materials to the exercise in exchange for the valuable academic experience that students gain by participating. Response agencies benefit from the realism that schools can provide. Partnership ensures that the entire community is served by well-prepared responders, and that the school is seen as a valuable contributor to the local community.

Kevin Davis has over 22 years’ experience in the security industry. He earned a B.A. from Harding University and a Juris Doctorate from the UALR William H. Bowen School of Law. He is Assistant Director of Public Safety at Harding University. Davis has written and participated in annual full-scale exercises at Harding University for the past 19 years. Working with local response agencies, Harding has simulated tornados, fires, earthquakes, active shooters, hazardous materials spills, etc.

Drill in Progress banner alerts the school community that a full-scale emergency exercise is occurring in the area.
The Transparency Principal, Stress Testing and Your Retirement

Dale R. Folwell, CPA

Transparency is truth. When I raised my hand as the 28th Treasurer for the State of North Carolina, I promised to bring transparency, instill this value as a culture in departmental operations, and take the responsibility of holding our staff, vendors, and partners accountable for clear, open, truthful information. After all, it’s your money.

Embracing and operating with transparency is simple, but not always easy. It means opening the doors and allowing everything to be exposed, including scars, failures and opportunities. In government, the transparency principle is extended to every staff member, vendor and partner. As keeper of the public purse, my first order of business, three years ago, was to work with our vendors and money managers to cut fees charged to you through the State Health Plan. We have cut $175 million with a projected savings of approximately $44 million over four years. North Carolina has been recognized for these efforts in local and national media.

Transparency led the charge in my negotiations with State Health Plan providers. It is no secret we fought a hard battle to push for clear pricing and to eliminate secret contracts for health care and medical services. We take pride in having been able to facilitate a discussion and raise awareness of the sustainability of the State Health Plan while promoting the need for quality, clear pricing, and accessibility of health care for our members who participate in the Plan. This was the first part of the battle; and we won.

The second phase fell to our providers and their acceptance of the need to eliminate secret contracts and provide accessible, high quality health care. Without major reform, the State Health Plan is at significant risk with approved four percent funding from the Governor and North Carolina General Assembly and an estimated seven to nine percent increase in medical and pharmaceutical costs.

As I said before, transparency can be a difficult value to embrace, especially for big business. All of the major hospitals have simply refused to consider being clear with pricing and services. They boycotted those who teach our children, protect our homes and businesses and perform the other core functions of government despite offering them almost a 100 percent profit. Secret contracts, veiled pricing and hidden agendas do not benefit anyone except those who are misleading consumers for profit.

We do not consume health care, it consumes us. We need to push the power to consumers so they can then shop for quality health care and drive the market instead of being controlled by it. I applaud the over 25,000 providers that understand the value and importance in clear pricing for health care and will be providing services to our members in 2020 as a Clear Pricing Project Provider.

Transparency is the key to building trusting relationships and this has allowed the Department of State Treasurer to better serve our members, increase efficiency and create value for the people of North Carolina in coordination with our vendors and partners.

I would encourage you to embrace the conversation about your future in the same way and apply the transparency principle to your retirement planning. Take a look at where you are, where you are headed and how you will get there. Savings and financial planners are not always clear about fees, expenses and investments. As you plan and start the discussion, asking for transparency can go a long way. It is a foundation of consumerism, allowing you to have the information you need to make the choices that benefit your unique situation. One of our main goals in serving our members is to assist you in navigating the road to and through retirement. Our Member Services team is available by phone, in person, or by virtual appointment and you can use our online calculators and resources 24 hours a day, 7 days a week. Planning for retirement is a battle to push for clear pricing and to negotiate with State Health Plan and their acceptance of the need to maintain our recognized Plan success and keep this momentum going in order to show that we perform well in the analysis of downturns in the market, taxes and spending patterns would give you a more comprehensive view as you prepare for a pension and/or supplemental retirement plan, vested status, the market in general, rising health care costs and longevity. A retirement stress test is simply an analysis of your future, taking into account your pension, Social Security and personal savings. How much will you have coming in each year and what are your expenses? Do you have enough? Considerations of downturns in the market, taxes and spending patterns would give you a more comprehensive view as you prepare for retirement. How much variability can you take in the future in order to have the retirement you want?

North Carolina was fortunate this past year to be selected by The Pew Charitable Trusts to participate in a formalized study: Public Pension Stress Testing. I am proud that we were selected as an example of a Pension that is doing things right. I attribute this to the strong oversight and guidance by the Board of Trustees and the diligence of staff and partners.

In the study, Pew applied a variety of scenarios to test the future outcome of our Pension when there is a decrease in member participation and funding of the Plan, recession possibilities and level, no-change scenarios. They found that even in these downside scenarios, North Carolina’s Pension Plan remains fully funded for many years down the road. That is not to say we do not have work to do, but it does show that we perform well in the analyses due to strong funding policy and funding levels through the General Assembly and Employer Contribution Rates. We have to keep this momentum going in order to maintain our recognized Plan success and fulfill our obligations in the future.

We support legislation currently being considered to require a stress test every two and one-half years. This will analyze the environments and fluctuations we may not even be aware of today, allowing for adjustments and corrections if needed.

Similar to being a first responder, it never hurts to be prepared and it all comes back to transparency. If planning for your retirement seems like a scary proposition, it is always better to see things as they are, navigate the road ahead and adjust as you can.

You do this every day for the communities where you work and live. Transition that thought process and apply it to your retirement planning. I thank you for all you do for North Carolina, the security you bring, help you provide and the courage you carry with you each day.

For Pension Plan and Supplemental Retirement Plan (401K), 457 Plans and 403(b) Program information, tools and resources, visit www.myNCRetirement.com.
Recruiting and Training the Many Generations

Mark Rivero

Public Safety faces and addresses numerous issues regarding change in the workforce on a continual basis. In the sixties there was racial tensions that lead to riots across various communities throughout the United States. Today, the umbrella of public safety encompasses so many emergencies that it’s almost unpredictable of what to expect as a first responder. Expectations on the public side is and always will be to “fix my problem;” however, the expectation of “your emergency may not necessarily be my emergency” can be a common reaction of the first responder. Not saying that this is a proper response, but in looking at generations in the workforce of public safety, that may be the way one was trained or exposed to during post-probationary status. In looking at the potential of five generations of people that can potentially be working for a department, one can be surprised of the responder’s expectations and life experiences of the personnel on the job.

In the United States, approximately 76 percent of all fire departments are volunteer. That equates to the potential of a chief working an incident may have a crew that is 40 years younger or of three different generations. Does the chief really understand the newer generations and does the younger generation have the same expectations of the chief? A company officer that is part of the Baby Boomers generation may see expectations as cut and dry whereas the generation identified as the Millennials may feel that those same expectations are overwhelming. It could be common for a company officer with 25 plus years on the job to have a relative working alongside of them that is in the early part of their career. With the potential of multiple generations, now one could conceivably be a fire chief with a son or daughter as a company officer who also has a son or daughter all within the same department.

Along with multiple generations working in the workforce, there is also the need to address the issues or opportunities that go along with each generation and what each generation typically experiences in their social identities.

Baby Boomers

The Baby Boomers (1946-1964) are a group that, in terms of jobs, usually stay within an organization from start of employment until retirement from that same organization 30 plus years later. Their resume will actually fit on a two-page paper that at one time was appropriate for promotions and other department advancement opportunities.

Generation X

Generation X (1965 - 1980) may feel trapped by the chaotic and undisciplined manner in which future generations work. GenX-ers tend to have a somewhat longer resume as technology was beginning to move at a quicker pace than before and employment was beginning to broaden one’s experiences.

Generation Y and Z

Generation Y (1981 – 1994) “Millennials” and Generation Z (1995 - 2000) are today being known as the “multi-taskers” because of the advancement and continual changes in technology. With previous generations, information was a time challenging event. With Generation Y and Z, information is instant!

There have been experiments with students in public schools where an instructor provided a rotary phone and gave the students a time frame to figure it out and the results were amazing. It took over four minutes for the students to actually figure it out. Employment applications requiring a resume for Generation Y and Z will typically provide three to four pages of employment history with averages of six to nine months. Reason for the vast changes is directly related to the technology advancements.

Generation Alpha

The newest generation is Generation Alpha, (2000 – 2015). This generation will be the most advanced generation ever. They are also expected to be the longest living generation ever. This generation will have the expectation and influence of all members of a family or see things as total inclusion for purchasing power on all levels.

Looking at the arena of Public Safety, where are we as leaders going to be able to not only recruit and hire for today’s police, fire and EMS, but how are we going to make the jobs attractive for members of each generation as well as training the new and the old? We can and will be able to recruit and hire but, looking at today’s environment and political disparities, what type of potential employee are we looking at. Will it be difficult to find that star employee who can pass a drug test and background investigation? Another question that will need attention is that of understanding what it means to be a

see GENERATIONS page 54
The time has come for even those of us in the warmer climates to start seeing some occasional cold and ice. The next couple of months brings in calls that we don’t see very often, or for years at a time. Coming from New York it was normal to get lakes, ponds and other bodies of water to freeze over, attracting many kids with their ice skates, sleds and winter toys. Now living in the mid-east, we often see those barely frozen bodies of water attracting those kids who think they can go out and play, leading to often disastrous results. We need to be prepared to handle those ice/water rescue calls and understand our limitations in regards to our departments experience and equipment.

As we have talked about in my other articles we need to treat ice rescues as any other specialized event and start by looking at our department, training and equipment.

Awareness Level Response

This is the minimum level of response that our department should be operating at. So this includes the normal policies and procedures for any specialized event. Every department must be able to answer the following questions and have policies and procedures to:

- Recognize the hazard
- Assess the hazard
- Identify the resources needed to operate around the hazard
- Implement the appropriate response to the hazard
- Implement the proper site control and scene management
- Make the appropriate risk/benefit analysis (Rescue vs. Recovery)

The most important aspect for the Awareness level responder is to stop the event from progressing. We can’t always change the results of the primary event, but we can prevent any additional complications. This is where the Risk/Benefit becomes so important. As supervisors we do not want to place any more people or firefighters in harm’s way than we have to, especially if there is nothing to gain. A recovery is a recovery and there is no excuse to losing or harming a firefighter while making one. If your department does not have the resources to conduct an ice rescue than you should stay in the cold zone and have the plan in place to how you will handle the rest of the event — mutual aid, police unit, etc.

Operations Level Response

At this level your department has taken on additional responsibilities and can operate in the warm zone. Departments that operate at the operations level must have policies and procedures for the following:

- Recognizing the unique hazards related to an ice rescue
- Identify water and ice characteristics
- Operation of surface support equipment used in water and ice rescues
- Recognizing and treating a victim’s hypothermia
- Safe entry of ice divers into an ice hole, if you have ice divers

Any trained personnel should be able to identify an ice rescue incident. At the operations level you should be able to go a step beyond that and understand all the associated risks that can occur and how to avoid them. This includes supporting the rescue for the technician level providers that will be actively making their way to the victim. Identifying thin ice, depth of the water and any additional hazards such as currents or entanglements.

Gaining access and pre-placing ice/water rescue equipment can allow rescuers faster access to the victim.
Having ladders ready, throw rings, PFDs or inflatable boats can all help to assist the rescue and quite often allow the victim to self-rescue.

Many departments have created their own devices with a hoseline, some caps and an air hose. This allows them to inflate the hoseline to become a large floating boom to send out to a victim. Treating a hypothermia victim should be standard practice as almost every agency already has some type of EMS response already in place. Ice divers are a specialized group and a topic for a different article.

**Technician Level Response**

As technician level responders, you are the ones that are entering the hot zone to affect the rescue. As Ice Rescue Technicians you will have to meet everything at the awareness and operations level as well as the following Technician requirements:

- **Self-Rescue Techniques unique to ice rescue**
- **Reach, throw, row, go techniques specific to ice**
- **Use of watercraft, specialty craft and equipment specific to ice rescue**

Self-rescue techniques for ice rescue could mean a number of different skills depending on the situation. This may include something like kick, crawl and roll. This is a technique that allows you to self-extricate from an ice hole by kicking (swim technique) and then spreading yourself out and rolling onto stronger ice. Reach, throw, row, go — we are all familiar with and for ice rescue the system remains the same, with the goal of always spreading out your weight as much as possible.

Using watercraft, and specialty equipment will just depend on the resources available to you. Pre-planning can go a long way to knowing what watercraft are available locally and how to access them in an emergency. Military options such as Coast Guard helicopters, divers and other watercraft can often offer assistance if notified early on.

Ice rescues don’t occur all that often, but when they do, you must be able to respond and mitigate the situation quickly. Most victims that fall through the ice have about 10 minutes before their limbs become useless and they will no longer be able to self-extricate. Having a preplan to an ice rescue will also help to get interagency cooperation. From initial response, to technician level responders, to the emergency department all working together can help any rescue to have a successful outcome.

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In the rescue service, like any other profession, there comes a time when older rescuers — those who have seen it all and who have been around the block more than a few times — may wonder what is to become of them as their department progresses and things change. Departmental response protocols change, call types and volumes change most likely, new members join the department, rescue techniques and equipment change — and then sometimes for the old rescuers the inevitable happens: who am I anymore, and what can I provide or contribute to the department now that so many things have changed?

Older, experienced rescuers I have spoken with this past year seem to convey that they feel they cannot contribute to their department like they used to. Men and women who have been in the rescue service for 20, 30, 40 or more years sometimes find it harder to participate in the training and on calls like they used to. Guess how I know this? December 2019 will be 46 years in volunteer rescue.

These older rescuers, sometimes known as the “old F.A.R.T.s” (fire and rescue techs) are beginning to wear out. The mind is still willing to jump right in, that is, to be the first rescuer over the side of the cliff or waterfall, or the first rescuer into the river or floodwater, or to be the first to grab the gear to rig for a high-level rescue, or to be in the first SAR team into the wood — yet the body just doesn’t seem to work like it used to for some reason. Hmmm — imagine that. Senior rescuers’ bodies are wearing out! Our bodies change; they get older, joints get weaker, things hurt more than they used to. Hell, I have things that hurt now that I didn’t even know I had!

But take heart! The old guys are the ones who formed departments, worked very hard, long hours keeping them up and running administratively and financially, who trained long hours well before there were ever any rescue standards for training and certifications, and who, like in our department’s early days, sometimes worked all night on repairing rescue equipment so it would be ready for the next rescue and then went to their regular jobs the following morning. They did this because it had to be done. There were no big budgets like today, where agencies can have equipment worked on by vendor/contractors, and many volunteer rescue squads were NOT supported by tax revenues, like fire taxes do today. We held auctions twice a year and bake sales just to have enough money to operate on. Members took money out of their own pockets to buy equipment or purchase parts to repair trucks. It was a different time 40 years ago. How many fire departments had old or surplused fuel oil delivery trucks converted into tankers, or retired service delivery vans converted into first-out rescue vehicles? My department did; we had an old bread delivery van we rebuilt from the inside out and made it into a really efficient first-out rescue truck for vehicle accidents and extrications. Damn that truck would run, and we used it for years on many vehicle rescues! We didn’t know to think any different, we were grateful to get decent trucks we could convert into rescue service and we were proud of them. It’s just the way things were back then.

So why do I write an article now that is not the usual technical or “how to” article? Because the older F.A.R.T.s are the ones who can pass on years of experience and knowledge to younger volunteers. Knowledge, skills, abilities (KSAs) and experience are the backbone of the rescue
service. As I have said many times in the past, you don’t know where you are going unless you know where you have been or where you are now. For you older rescuers, who may unfortunately have to be slowing down a bit now because you have worn yourselves out physically. Remember this you have knowledge, skills, abilities (KSAs) and the experience that the younger generation of rescuers doesn’t. Does that mean that we just ride out into the pasture as forgotten “has beens”? I hope not! We have a moral rescue responsibility to make sure new and younger rescuers get the types of KSAs that we have, so that they can gain experience through what we have learned (often the hard way) and who will continue to pass the “rescue torch” on for generations. No one can ever take away all that we have learned over our careers, volunteer or paid. And while technology has given our departments newer and safer rescue methodologies, physics, along with common sense, still must be understood and prevail in rescue work today.

Training officers should see to it that older rescue skills are a part of today’s “modern training.” While I teach the now-standard TR Rescue curricula, I still always find time to show the younger generation how to use a porta-power to pop open jammed doors during extrication, or how to safely use a vehicle winch to pull seats back to gain more room to extricate a crash victim, or how to construct a timber tripod with mechanical advantage to perform heavy lifting. These “old ways” of doing things still work, and I show these and other things to younger rescuers to provide them with “rescue tools in the toolbox,” which ultimately become alternative methods of rescue when needed. This is what the older rescuers can contribute.

Finally, older rescuers who have “been there and done that” many times need to assure that the newer generation has the right mindset to be a rescuer. I have long been known for saying things the way they really are, and it’s this: to be a rescuer in service to others is to devote the tremendous time and energy required to be safe, knowledgeable and effective. It means long hours of dedicated training, hard work, selfless service, often time away from family, and to never give up. Someone’s life is dependent upon you. Perhaps this is why volunteerism and retaining members in rescue agencies in this country today is becoming so difficult. To become a rescuer takes years; it isn’t acquired overnight or by taking a few rescue courses. It just doesn’t work this way. Older rescuers should help guide and encourage younger rescuers along their journey. There is really no other way to do it. It can’t be done any other way.

So, for the “old F.A.R.T.s, it’s OK to slow down, especially when the mind is willing, but the body isn’t. Mitigate those feelings by doing the things mentioned above. Trust me on this: by doing so, you will still be making more of an impact than you think.

Until next time, be safe!

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Shopping for Higher Education

Richard Carroll

If you have spent this past holiday season shopping for higher education, you are not alone. It would be perfectly understandable if you found it easier to determine the best deal on toilet paper at the grocery store. You would have probably heard Fire Science, Public Safety, Emergency and Disaster Preparedness, EM and FESHE. What’s the difference and what is the best route? Well, good news! This article should help you make a more informed decision.

Fire and Emergency Services Higher Education (FESHE)

To begin, let’s unpack FESHE. It stands for Fire and Emergency Services Higher Education. In the early 2000s, several leaders in the field of fire service higher education from across the country gathered at the National Fire Academy and hammered out a Professional Development Model (see illustration). The goal was to promote the fire service as a true profession rather than the stigma of “strong backs and weak minds.” As you can see, an Associate’s degree should prepare you for entry level to company officer. A Bachelor’s degree should be pursued for those that aspire for middle management — i.e. Battalion/Division Chiefs. That of course leaves the executive leadership positions with the Master’s degree level and beyond. Of course along with the pursuit of higher education, one should also work toward mastering their skills as a firefighter as well as pursuing higher level professional certifications as noted in the illustration.

Along with the Professional Development Model, the group also identified six courses and their specific outcomes to serve as a model curriculum for Associate’s degree level schools nationwide. This also had an impact on book publishers; they now had a guide for the content needed for the higher education for firefighters. Soon after the initial FESHE meetings, committees were formed to establish core curriculum for Bachelor’s, Master’s, and even Doctoral levels as well. FESHE has adopted seven courses as the core curriculum for Bachelor’s degree programs. A process was developed for institutions to become FESHE recognized and to award students that complete the “core” courses credit on their National Fire Academy (NFA) Transcript. It is fairly simple for a college to gain FESHE recognition. First, the college submits a syllabus for each class where the core course learning outcomes are included. Then the state training director signs off that the school indeed follows that syllabus. That’s it.

Now, here’s the rub (well, rubs, because there’s more than one). Some colleges advertise they are FESHE accredited. Such an animal does not exist. Accreditation and recognition are two different things. (See my article in the Fall 2019 edition for a breakdown on accreditation). This practice contributes to further confusion for perspective students. Next, the process for getting courses in a student’s transcript is more difficult than getting the recognition. For each of the six courses in the FESHE Associate’s model, the student must complete and sign the NFA “short form” and submit to their institution. The institution then signs off on them and submits them to the NFA. The difficulty here is getting a group of 20 plus students to turn in a piece of paper that has no implication on the completion of their course work in a timely manner.

I can tell you, this is as difficult as keeping cops from parking in front of the hydrant at a working house fire. Third, being FESHE recognized lost some of its luster when they started allowing colleges that are viewed as “degree mills” to carry the distinction. That is a whole other story though. Finally, getting a degree course listed on a student’s NFA transcript doesn’t really serve as an advantage for the student. The colleges’ transcript is what carries the weight.

Now, don’t get me wrong. I have had the privilege to participate in FESHE conferences/meetings and have met many of the folks that laid this important ground work. They have done a yeoman’s job that has benefited the fire service as a whole. You, as a perspective student, just need to understand that a FESHE recognized program does not mean that it is superior, nor does the lack of recognition deem a program to be void of quality. In fact, FESHE is at a transition...
point and its future is unclear. So you should review the course requirements of whatever program you are interested in and see if the courses match up and/or the books used are FESHE titles.

Fire Protection Technology/Fire Science

Now that you have an understanding of FESHE, you can filter through some of the programs to determine what degree you want to pursue. I wish I could report that this is the easy part, but it can be a little confusing as well. The Associate’s fire service degree commissioned by the North Carolina Community College System (NCCCS) is officially called Fire Protection Technology; although some refer to it as a Fire Science degree. Of the 58 North Carolina Community Colleges, 24 of them offer an Associate’s degree in Fire Protection Technology. You will find that these programs have the same core courses. The NCCCS publishes curriculum standards for every program offered by every college. Even though each college has flexibility to offer what their community needs, these curriculum standards have some specifications that must be followed. In that standard, you will find what they call core courses. Every college that offers a program must include the core in the program of study for Fire Protection Technology; the core consists of six classes, but they are not the same six classes recommended by FESHE.

Emergency Management

The NCCCS lists 15 colleges that offer Associate’s degrees in Emergency Management (EM). This program of study has some similar content as Fire Protection Technology, but is focused more directly on the specific field of Emergency Management and the associated disciplines of Mitigation, Preparedness, Response and Recovery. In fact, one of the Fire Protection Technology courses are required in the core of the EM curriculum standard. Because some of these courses are interchangeable, some students have posed the question to me about getting a second degree. If you take most Fire Protection Technology Degrees, you would only need another six classes to complete the requirements for an Associate’s Degree in EM. While this seems attractive, two plus two doesn’t equal four in this case. If I were going to put forth time and money for another semester or two of study, I would make it a chunk toward a Bachelor’s degree. I have never seen a promotional process where two two-year degrees in emergency services would be beneficial. Even if you wanted to move into the field of EM, why not take your two-year and transfer it to a four-year EM degree? That is most certainly an option. If you had an Associate’s degree in EM, and wanted to pursue a two-year in Fire Protection Technology, my advice would still be the same.

Public Safety Administration

The newest program in the field of emergency services offered by the NCCCS is Public Safety Administration (PSA). This degree has been pitched by several colleges over the past few years. It finally landed about a year ago and four colleges now offer this degree. The origin of this degree comes out of the corrections division of law enforcement. This degree offers a lot of substitutions between the three disciplines in the core. This is significant because the core is usually very specific. While these substitutions have similar content, this could cause a lot of confusion for students that are planning their higher education path. Once you have completed the core, you choose one of four tracks: Correction Services, Emergency and Fire Management Services, Law Enforcement Services or Security and Loss Prevention Services. It seems that our Emergency Medical Services friends have avoided becoming involved in this blended program. In conversations with my counterparts at other colleges about this program, it seems the consensus is that the PSA program will further muddy the waters and pull students away from Fire Protection and EM programs.

What It All Means

So, with all of these programs, how do you proceed from here? Well, it’s simple. If your local college offers all three of these programs, pick the one that will benefit you the most in the next five years. You can look to the senior leadership of your department to give you guidance, because they are the ones that will be doing the promoting. Or, choose the program of study that interests you the most, because just finishing the degree is the most important piece. Then, transfer that into a four-year program. Western Carolina University, University of North Carolina-Pembroke, and Fayetteville State University are state institutions that have four-year programs that will help pave the way for a successful career in emergency services. Of course, many of you will take the path of least resistance and seek out to maximize your professional certifications. Well, that will take just as long to lay out as this did, so we will examine what the NCCCS is doing on that front in the next issue.

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Earn Your EMS Degree Online

Columbia Southern University offers completely online degrees for EMS professionals who are interested in taking the next step in their emergency medical services career. CSU’s coursework covers relevant topics within the emergency medical services industry including community relations; EMS communications, risk management, public safety and more.

Justin Arnone
B.S. Emergency Medical Services
CSU Graduate
It’s December 2012 and Americans are reeling from the tragic events of the Sandy Hook mass shooting. Politicians and leaders at state and local levels are feeling the pressure of well over a decade of active shooter events that have left emergency services un-equipped to handle such incidents. In response to the pressure, the American College of Surgeons is tasked with bringing together national leaders from the government, emergency medical services, law enforcement and the military. This would become known as the Hartford Consensus. Promptly in 2013 the Hartford consensus released the first ever call to action for emergency services and law enforcement to re-evaluate response planning and medical treatment considerations for these types of incidents. Fast forward seven years and emergency services and law enforcement have made a course correction that can only be adequately described as exceptional. In this article we will discuss the many improvements related to industry standards as well as how to develop a program that best fits your emergency services organization.

Now it is 2020 and emergency responders have made un-precedented progress in re-defining how we respond to and mitigate hostile events. While this success is deserving of some well-earned praise for creating new national standards and practices, let us not lose our resolve to adapt, mold and implement these practices to our individual agencies. One of the challenges we face today is that we went from a time of having no direction on how to deal with these complex issues, to today, where the information and resources are significant but often contradictory and overwhelming. It is my hope that this article can provide some direction on where to go when developing or even refining your current policies and response procedures.

To start this process, you should first appreciate the massive complexity and undertaking creating a multi-agency, multi-jurisdiction response plan will be. In my own region, we have been implementing and revising our regional response procedures and training since before the Hartford Consensus existed. We must appreciate that all the tactical knowledge and understanding in the world will be of little use without sound relationships between regional partners in fire, EMS and law enforcement.

The big players in the game of response have all come out with their recommendations or training programs: The Federal Emergency Management Agency (FEMA), National Fire Protection Association (NFPA) and The National Association of Emergency Medical Technicians (NAEMT). When building a hostile event response plan, it is useful to first dissect the critical four components: national reference standards, strategic level procedures, and medical and tactical level operations.

**National Reference Standards**

NFPA 3000 has created a national standard regarding numerous components of responding to and training for what they title as an ASHER (Active Shooter/Hostile Event Response) This article will discuss a few of these important standards, you can view the full standard for free or purchase a printable version on the NFPA web site.

The first notable standard is a requirement for minimum personal protective equipment (PPE). Many programs have failed before they ever got started due to a lack of understanding and commitment to provider safety. Administrations putting response protocols in place without purchasing appropriate PPE is a sure recipe for failure. If you don’t expect your firefighters to fight fire without turnouts, don’t expect your responders to respond to a hostile event without appropriate PPE. NFPA has delineated the appropriate PPE as a level IIIA ballistic vest, with helmets being optional. Level IIIA is the national standard for law enforcement patrol vests.

The next important standard they have set, is the clear identification of control zones. These consist of hot, warm and cold zones. The hot zone is designated as an area with a known hazard or direct and immediate life hazard. The warm zone is an area with a potential hazard or indirect threat to life. The cold zone is an area with little or no known threat. The last standard we will discuss is the recommendation for care standards. NFPA as well as the FEMA programs denote the Tactical Emergency Casualty Care (TECC) programs as the standard for hostile incidents. NFPA 3000 is a robust standard that can be incremental in developing an agency response plan.
This standard is well worth reviewing to maximize your hostile event program.

**Strategic Planning**

FEMA’s PER 335 course “Critical Decision Making for Complex Coordinated Attacks,” is a comprehensive course covering strategic level decision making and incident management. This training takes you well beyond the single active shooter incident, into the complexities of sophisticated multiple coordinated attacks similar to the tragic events in Paris in 2015. This course is offered in two- and three-day durations with different instructors around the country. These courses are designed to put multi-agency players into one room and develop their ability to manage a unified command as well as complex incidents.

**Medical Treatment and Equipment**

The medical treatment component of your response planning may be the easiest step forward for your organization. With every national program recommending TECC as the gold standard, there is little challenge to finding the right resources. With that being said, medical training and equipment is frequently underappreciated and overlooked. While fire and EMS are really good at treating one or two gunshot victims with five responders to every patient, we are not as good at treating 20 patients with two responders, with limited gear, in a hostile environment. The good news is NAEMT has solved the training component of this problem for your agency.

The NAEMT Tactical Emergency Casualty Care (TECC) curriculum was derived from its big brother Tactical Combat Casualty Care (TCCC). TCCC was created by Navy Seal and medical doctor Frank Butler in the mid 1990s. Dr. Butler created an extensive program that identified the causes of preventable death on the battlefield that could be mitigated with minimal training and equipment. NAEMT adopted the TCCC program and subsequently created the civilian version TECC. This is a two-day course and will benefit your organization as much in day-to-day operations as it will help your responders understand the nuances of medicine in a hostile environment.

The second component of the medical portion is equipment selection. Bulky cardiac kits and airway bags are of little use in austere multi-casualty incidents. The TECC program identifies the equipment you will need in hostile events; you just need to decide in what manner and quantities your agency will want to carry them. To put it simply, you need a small variety of gear in a large quantity that can be quickly accessed while treating and moving.

**Tactical Operations and Training**

Unfortunately, this is where the list of referenced standards and programs comes to a screeching halt. While all of the above references touch on rescue task force (RTF) operations, they do little more than give you generic concepts. This is in part because of the diversity in your local resources, as well as the variances in the potential scope of an incident in your area. What will be profoundly successful in Seattle, Washington, may be of little use in rural Iowa. The most important concept in the tactical and strategic realm is understanding that the sooner EMS can treat patients, the more successful the incident will be. What this means is that once the threat has been mitigated or diminished, the law enforcement mission must rapidly shift to a mission of life saving. This consists of putting fire, law enforcement and EMS supervisors in one command post. Once this is accomplished, law enforcement should immediately start dedicating resources to get fire and EMS responders safely inside the warm zone to begin treatment.

To identify what tactical operations will work best for your size organization, start with the three following recommendations:

1) Research what other organizations are doing tactically, and compare that with your area and resources.
2) Initiate conversations with your law enforcement partners and start discussions on what resources they have, and what their commitment to supporting treatment and rescue operations will be.
3) Reach out to the national instructors who have been implementing programs and get their recommendations or solicit their services.

As many of us know, building a new program in fire and EMS can be daunting by itself. Add in a topic that is new to fire and ems, then make it multi-agency, and daunting seems to be an understatement. Just remember these programs are built one area at a time with the end goal of producing something that is comprehensive and adaptive to a large number of incidents. Hopefully this article will be helpful in directing you towards some resources to start building your program, or fill in some holes in your current program. The subsequent articles in this four-part series will better address the specifics of medical treatment and rescue task force operations.

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System Overview

Special inspections were first mandated in the North Carolina Building Code in 2012/IBC 2009. These requirements were listed, along with others, as any building that is considered “essential facility.” The listed projects would require an outside inspection, in addition to the county or local jurisdiction inspections. Table 1604.5 in Risk Category II references down to Risk Category IV that lists specifically “Fire, rescue, ambulance, police stations, and emergency vehicle garages.” The main goal of these inspections is to continue the group effort on quality and craftsmanship, but also to extend the degree of checks for the owner as a project is being built.

Inspection items include pre-engineered building components, concrete, masonry, soils, sprayed fire-resistant materials, and any special cases as determined by the building official, architect, or engineer of record. These hired special inspections are to be documented throughout the project.

Roles and Responsibilities

The most important concept to understand with the role of special Inspections is that the inspection agency must be hired and paid by the owner. At this time of contract, the chosen Design-Build general contractor has eliminated themselves from any partiality and removed the potential conflict of interest as problems arise. There are many state registered firms that are qualified to perform these required inspections. A great source of information can also be received from neighboring stations that recently built, or by sending out an RFQ (Request for Qualification) for your station to consider multiple agencies based off their credentials and references.

Special inspection contracts are typically paid on an hourly rate since the inspector has minimal control of the speed of the project and the continual need of their service. The special inspection agency is not hired to control the quality of work put in place by the contractor; this responsibility still lies on the owner, however, hiring a reputable Design-Build general contractor will ensure your construction experience will be as flawless as possible.

Inspections and Their Findings

These inspections are primarily involved with the building structure, but also may address fire protection, electrical systems and mechanical systems. Along with these inspections and the others listed earlier, daily detailed reports shall be given to the owner for their records. Some jurisdictions (i.e. County Inspections) also like to keep record of these inspections, in addition to their records taken on site.

It is common practice for the general contractor, Architect of Record (AOR), and Engineer of Record (EOR) to obtain copies of the reports as well.

It is routine that the Special Inspector is called out to perform in a few major project events:

1. Proof rolling and preparation of the subgrade soils. One of the first and arguably the most important, is the time the inspector is on site because without an approved and stable base, there is a greater chance of structure failure.

2. Concrete pouring of any type — including foundations and slabs. The main objective during these trips is to observe the placing methods used by the contractor and to obtain cylinders for testing to ensure proper strength in the concrete material. The test cylinders are taken to a testing lab facility where vertical pressure is applied, which is the test protocol for concrete strength.

3. Masonry grout testing. Like the
testing done for concrete; masonry grout testing is performed every four feet to eight feet in vertical height, depending on your Structural Engineer’s requirements. These testing cylinders are obtained at the time the grout is placed in the CMU and tested after the appropriate time has passed to check performance of the material.

4. Pre-engineered building and structural components. During the process of the pre-engineered building erection, the special inspector will make periodic trips to site to access the progress and review any abnormal issues with the building components. With the completion of the erection, the owner should be confident their building structure including bolt connections, screw patterns and welded connections are properly completed.

**System Wrap-up**

Special inspections are part of our construction industry today and is now engrained in the construction of any EMS, fire or rescue station, therefore every fire chief, building committee, and station project authority needs to take into consideration these additional funds needed for their project. So now that we all have accepted the fact these additional inspections are required, the magic question is, “What do these inspections cost?” Of course, there are many objectives to consider when answering that question. For example; size of your project, location of your project, and the inspection agency you hire to perform the work. In reference to my experience, Special Inspections cost approximately $1.50 per square foot of your building size. If this line item is listed within your project total, along with your direct Design-Build proposal and indirect furnishings cost, you will be ready to start your project on the right foot with the proper allocation of funds.

Goosie Kennedy is a Project Manager for D. R. Reynolds Company, Inc., a Design-Build General Contractor.
Avoid Duplication of Spaces to Control Your Construction Costs

The cost of construction, like almost everything, seems to go up every year. Rarely during my 30-year career have I witnessed any expense associated with a building project decrease. When expenses do decrease, they usually accompany serious economic problems, and they usually don’t stay lower for long. Ever-rising costs are powerful motivators for taking every action to reduce your construction costs. One critical step in controlling your construction costs is to not duplicate the activities or spaces needed in your new or renovated facility.

Let’s start by looking at a real scenario. Not long ago, we were hired by a fire department to design a new headquarters facility. The city had previously employed a designer to provide space programming for budgeting purposes. Their first program resulted in a proposed facility of approximately 30,000 square feet and included several duplicated spaces — simply because the designer did not have extensive experience in how a fire station functions. After we revisited the program, we were able to reduce the facility size to approximately 28,000 square feet, without sacrificing any station functionality. Now 2,000 square feet doesn’t sound like a lot compared to the total size of the building, but 2,000 square feet times a construction cost of $350/sf is $700,000!

Keep in mind that the purpose of this discussion is to encourage thought on how to reduce space from your planned facility. Some of the spaces discussed may very well need to be duplicated in

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A strategically located station kitchen that also opens into the training room.

Adding some perimeter work stations to a Conference Room can provide for more office space and a Library.

The Station House

Ken Newell
Conference rooms are another space that you may consider minimizing duplications. In most stations, small conference rooms are used less than once every week. If you have sized your training/conference room for the maximum occupancy, consider incorporating a de-mountable wall that allows you to section off a small portion of the room for daily conferences. Then you can open the de-mountable wall when you need to accommodate a larger gathering. There are several areas in the typical station that can be used for meetings such as training rooms, conference rooms, dining rooms, dayrooms, etc. Keep these areas and their frequency of use in mind to make sure that you don’t duplicate conference facilities.

Departments often need to provide a library to house continuing education, training and reference materials for the firefighters use. Very few stations have enough residents to warrant a separate, dedicated room for a library. The library can be combined with a conference room, or even the training room. If the training room is to be occasionally used for community events, the library can be a large storage closet adjacent to the training room that is locked when community events are taking place. If your station has a full-time receptionist, consider yourself lucky. For those of you who will not have this position consider combining the radio/report/watch room into one space with a pass window to the lobby. This space is likely to be occupied much of the day, thus providing personnel to “receive” any visitors.

These are just a few ideas to consider when you are attempting to minimize the needed space for your new or renovated station. By all means, build as much space as you can possibly afford when you finally get the opportunity. You’ll never be able to build future space any cheaper than now. But once you start calculating how much every square foot of space is going to cost, you’ll likely find it necessary to cut back. Eliminating duplicated spaces should be the first step in reducing the budget.

Since 1988, Ken Newell, AIA, LEED AP BD+C, has earned a national reputation for the programming and design of Public Safety Facilities that are functional, practical and budget-conscious. He has been directly involved in the planning and design of over 300 fire stations, EMS stations and Public Safety Training Facility projects designed by Stewart-Cooper-Newell Architects. Since 2000, Ken has become one of the most in-demand presenters at national Public Safety design conferences. His unique ability to deliver high-quality and educational presentations, on very practical topics, has earned him top ratings from audiences across the country.
Revisiting ‘Green Building’ for Fire Stations
The what, why and how of sustainable building design and construction

“Green building” is not a new concept, but sustainability in construction has evolved over the past decade. Green building aims to reduce or eliminate adverse effects and create positive impacts on the climate and natural environment during all phases of the building’s construction, as well as in its ongoing operation. As the construction industry strives to preserve valuable natural resources and improve the quality of life for those who occupy the building, green construction practices are increasingly important.

While there are many ways to define green building, most experts today agree that these underlying principles apply:

• Site development that results in minimal disturbance to the surrounding ecosystem
• Materials sourcing that has little to no environmental impact
• Efficiencies that reduce operating costs and CO2 emissions
• Indoor environment that promotes health and well-being for building occupants

The U.S. Green Building Council (USGBC), provides a concise framework to help building owners and operators identify and implement practical and measurable green building design, construction, operations and maintenance approaches. The USGBC goes a step further by offering Leadership in Energy and Environmental Design (LEED) certification that delivers numerous advantages.

So, why consider green building for your fire station construction or renovation?

Environmental Stewardship
According to the International Energy Agency (IEA), buildings and building construction combined “are responsible for 36 percent of global final energy consumption and nearly 40 percent of total direct and indirect CO2 emissions.” Considering this level of impact on the environment, it’s easy to make a case for adopting more eco-friendly construction and facility operational practices.

Public and private sectors alike are embracing sustainability as a societal imperative, and green building is an important step. Fire stations, community buildings and town halls that rely on unchecked consumption and unlimited resources are a thing of the past and over time will be replaced with better models that can serve communities well into the future.

A primary goal of green building is to reduce the environmental impact of the construction process. This includes waste reduction achieved through eco-conscious site selection, accurate materials procurement, recycling unused materials, preserving natural spaces and wildlife habitats, soil erosion reduction and minimizing water and energy consumption.

But green building is about more than just saving the environment. Multiple studies have shown that new green buildings and green retrofits reduce facility operating costs, result in shorter payback periods and increase asset value. When thinking about fire station sustainability, there are benefits for the building owner — the department or municipality — as well as for the firefighters who work there and the community at large.

A LEED Gold Case Study: Durham Station #17
The new Durham Fire and EMS Station #17, a LEED-certified facility built by Bobbitt Design Build, was completed in 2019. The 11,430-square-foot station fulfills the City of Durham’s requirements for an environmentally responsible building and achieved Gold-level certification by the U.S. Green Building Council.

The City of Durham worked closely with Bobbitt on this high-profile public design-build project to achieve eco-friendly standards and incorporate additional high-performance green building measures, including solar panel installation.

The single-story, four-bay station serves as a municipal home for both fire and EMS functions. The design accommodates separate operational differences between EMS and the fire department and includes provisions for specific staff and community needs: specialized storage and equipment accommodations; building access; and semi-private, public and shared spaces.

Cost Savings for the Department
There is evidence in recent years to see the GREEN BUILDING on page 52.
ACROSS
1. A fireline trench is a trench on the downhill side of fire burning on steep slopes that is supposed to be built deep enough to catch rolling firebrands that could otherwise start fire below the fireline.

3. CAFS; Compressed ___ Foam System is the generic term used to describe foam systems consisting of an air source/compressor, a water pump, and foam solution.

4. Prescribed burning under a forest canopy is denoted as an ____ burning; this fire consumes surface fuels but not the overstory canopy.

6. The Radiant Heat ____ is the amount of heat flowing through a given area in a given time, usually expressed as calories/square centimeter/second.

7. Wildland Fire Situation Analysis (abbr)

11. Any cargo carried beneath a helicopter and attached by a lead line and swivel is called a sling ____.

12. A ____ burn is a thermal trauma that may be a superficial, partial thickness or full thickness burn.

13. Skills performed by an EMS practitioner or service on scene/site ALS; Advanced ____ Support or BLS Basic ____ Support

16. Task Force Leader (abbr)

18. The Very High Frequency Amplitude Modulation commonly referred to as the “ ____ or VHF” band ranges from 118 MHz to 136 MHz is only authorized for use by aviation and controlled by the FAA.

20. The ____ of the fire determines a course of action for suppression and is called scene size-up.

21. A depression or pass in a ridgeline is known as a ____.

22. A narrow finger or band of fuel that connects two or more patches or areas of wildland fuel is known as a ____.

23. An offender who intentionally sets fires.

DOWN
1. BACM; Best Available ____ Measures.

2. The back step of a wildland or structural fire engine is referred to as the ____.

5. Service Branch Director (abbr)

8. An emergency ____ is a person employed as an emergency worker on a forest or wildland fire which threatens damage to property under public management and are hired for the duration of the emergency only.

9. The individual responsible for identifying and securing a wildfire’s origin and determining the probable cause and documenting causal factors in a case report is the wildland fire ____.

10. Preburning of fuels adjacent to a control line before igniting a prescribed burn, usually done in heavy fuels adjacent to a control line during periods of low fire danger to reduce heat on holding crews and lessen chances for spotting across control line ____.

14. ____ suppression is achieved by creating a seal with foam which prevents a release of flammable vapors from fuel.

15. The elapsed time from receipt of notification by the personnel charged with initiating suppression action to the departure of the first attack unit is the ____ time.

17. Oversees logistical support and management of helibase and helispot operations and temporary fixed-wing base(s) and reports to the Air Operations Branch Director ASGS; Air Support ____ Supervisor.

19. Inclusive term applied to equipment designed to ignite wildland fuels from an aircraft, AID; Aerial ____ Device

21. CISD; Critical Incident ____ Debriefing is the process in which teams of professional and peer counselors provide emotional and psychological support to incident personnel involved in a critical incident.

Caroline M. Schloss is a current member of the Knotts Island Volunteer Fire Dept., Currituck County Fire/EMS, Virginia Beach CERT VA., Currituck County CERT, National Association of Search and Rescue, Project Lifesaver VA.

Answers on Page 52
Drones Enhance Firefighter and Responder Safety

As the fire service responds to all hazards, drones improve situational awareness for structure fires, wildland fires, hazmat-CBRNE incidents, technical rescue, floods, tornados, hurricanes, volcanic eruptions, mass casualty incidents, transportation incidents and large mass gathering events.

At structure fires, the thermal image view from a drone can identify location of firefighters operating on the fireground and/or monitor firefighters operating on the roof of the structure. The thermal image view can see hazards through smoke that would have otherwise been impossible to be seen. A thermal imager also can identify specific heat signatures that will indicate fire spread in the building and point out potential dangers of structural integrity which provides invaluable information that could keep a firefighter safe from fire conditions that would have been previously unknown. A drone flying overhead is able to monitor and see things that cannot be seen from the ground.

There have been numerous reports that drones have had a remarkable impact on wildland operations. Visual optics have identified that a predicted direction of spread was incorrect which allowed incident commanders to redirect resources accordingly. This course correction directly impacts the safety of firefighters. Drone thermal image view allows commanders to see through smoke for more accurate situational awareness. The thermal imaging also helps to locate hot spots for effective overhaul operations.

During a hazardous materials response, a drone equipped with hazmat monitor can be used to detect and identify the hazardous substance, assess and mitigate the problem more quickly. In some situations, it has been reported that drone use has reduced the prep and entry time by an hour.

The use of drone thermal image technology also can determine the volume of a liquid in a container, identify the areas affected from a spill, and even see a dangerous plume from a pressurized vessel that might otherwise be invisible to the naked eye. This plume may be dangerous to responders or moving into a community. Having this knowledge enables firefighters to take appropriate action, reposition and evacuate people as necessary. Drones are also used for incidents involving radioactive materials that allow for safe remote monitoring of radiation levels and eliminating immediate need for direct responder exposure. In Hawaii, drones were used to monitor the presence of toxic sulfur dioxide (SO2) from volcanic activity. Drones flew through an area that detected the presence of SO2 and evacuated those in harm’s way. Without this tool, many people may have been injured or killed, including responders.

Now drones provide a bird’s eye view during a cliff rescue which allows the monitoring of a very tenuous situation and to observe the progress of the rescue. If the rescuer needs assistance, the situation can be handled more quickly to assist the rescuer.

Floods from severe storms and hurricanes create extremely dangerous swift water rescue situations. Drones can provide quick information to locate persons in need and drop a flotation device. In many cases, this prevents a rescuer from having to put themselves in danger. Drones also help to provide information with access to those in need as well as status of roads.

Earthquakes, hurricanes and tornados create unstable collapse situations. Drones can fly above to assess the overall situation, locate people in immediate danger, create 3D models and can also fly into void spaces that would be too dangerous for responders. A thermal flyover may locate a person from above as well as possible release of hazardous gas by seeing a plume that is invisible to the naked eye.

Rough terrains pose unique and dangerous situations for rescuers searching for lost persons. Often, these dangerous areas can be evaluated by drone (visual optic or thermal) eliminating the need for a rescuer to traverse these areas. It is also done much faster. At night and in extremely cold weather, a thermal view can locate a lost person and direct rescuers to the person in need as well as identify hazards like bodies of water that would be unknown to the rescuers.

Tethered drones now offer another application as Piece Fire Apparatus. Manufacturing is offering a built-in feature into fire apparatus called their “Situational Awareness” package. The drone is easily launched from a compartment slide out and begins immediate monitoring from...
Communication

Have you ever dealt with communication issues? I would bet that more than likely you have. These are prevalent this day and age. Maybe it is because we have better communication options and we fail to use them. Maybe we just have failed to learn how to communicate. Either way, we as supervisors and leaders need to step up and ensure that this happens.

Our staff cannot read our minds. We must communicate our message to them and ensure that they have received and understood the message. This does not matter if it is in a daily matter situation or on the fireground. If we ensure communicate properly then we will be more efficient in our response and daily operations.

Conclusion

These are just a handful of traits and considerations we should have when doing an internal assessment of our abilities as a supervisor. We should strive constantly to better ourselves as supervisors and leaders. Strive to be the supervisor that your staff and crew deserve. It is a constant and difficult task but the rewards for you AND your staff will be well worth the work!

Until next time, be safe!

David Hesselmeyer, M.P.A., has been in emergency services for 16 years. Currently he is a firefighter, rescue technician, paramedic, and North Carolina Executive Emergency Manager. Hesselmeyer is the owner and primary consultant with On Target Preparedness (OTP) which contracts with emergency services agencies and non profits to assist in risk assessments, plan writing, plan revision, exercise development, etc. He currently volunteers with Hayes Creek Fire Rescue and works part time with Harnett County EMS. He can be contacted at dhesselmeyer@ontargetprep.com or visit his website at www.ontargetprep.com.

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Boss

Cont’d from page 14

A drone flying overhead is able to monitor and see things that cannot be seen from the ground. Above with a switchable visual optic/thermal image view and streaming this information as a supervisor to the situational awareness to the incident commander. As the drone is attached and powered by tether, it does not require changing of batteries. The significance of tethered drone operations is that this does not require a certified remote pilot that is required by free flight drones. This can be custom designed into new apparatus or retrofitted into existing apparatus. Often fire service drone teams will fly for their law enforcement colleagues. These situations may involve SWAT operations, active shooter, overwatch of tactical entry prior to and during operation. This information can be directly streamed to a SWAT commander, which provides the highest level of situational awareness by identifying the location of a shooter in relation to officers’ movement. Thermal image heightens operational awareness significantly during night operations by more quickly locating suspicious people that would otherwise be unseen to law enforcement officers.

Critical infrastructure such as a dam can be monitored safely, quickly and inexpensively as to a state of deterioration and provide advance notifications to citizens who may require evacuation thereby enhancing safety of responders and community.

The situational view from above demonstratively enhances the safety of responders and citizens. This view informs responders of hazards that they would otherwise be unaware without the drone. This results in better decisions, quicker mitigation, operational efficiency and enhances responder safety. Drones make a big difference to responder safety and it’s time to consider a drone program, partner with an existing program or consider a drone service contract.

To learn more about public safety UAS operations, safety and guidelines, consider joining DRONERESPONDERS (DRONERESPONDERS.ORG) and get free access to the largest online resource center with over 500 documents (SOPs, training programs, policy manuals, task books and more).

Charles Werner is a retired Charlottesville fire chief and 45 year public safety veteran. After retirement, he worked with the Virginia Department of Emergency Management for two years as senior advisor/acting deputy state coordinator. Werner served in numerous leadership roles at the local, state, national levels on public safety communications, GIS, broadband, information sharing, thermal imaging, enhanced location technology, FirstNet and drones. He serves as Director-DRONERESPONDERS Public Safety Alliance, Chair-National Council on Public Safety UAS and was appointed by Governor Northam to serve on the Secure & Resilient Commonwealth Panel.
Department Name: High Point Fire
County: Guilford — Forsyth, Davidson, Randolph

Type Department: Career/ Paid
Structure: Municipal

ISO: 1
Number of Stations: 14
Number of Apparatus:
  - Pumpers: 14
  - Aerials: 4
  - Specialty: 9

Do you provide EMS? Non-transport
EMT — What type: FR

Specialty Operations: Hazmat, Dive/ Water, Technical Rescue

Annual Budget: 25.5 million
Area Covered Square miles: 74
Population: 134,183
Total Runs: 15,800

Chief Thomas Reid
Fire: 113 actual fires
EMS: 10,817

Chief: Thomas Reid

Chief Officers: Deputy Chief of Operations, Deputy Chief of Administration, Assistant Chief of Support Services

Other Officers: Training Chief, 7 Battalion Chiefs, Chief Mechanic, Fire Marshal, Emergency Manager

Number of Members: All Paid: 235

Address: 434 S. Elm Street
Website: https://www.highpointnc.gov/Fire
Phone: 336-883-3358

Community Outreach:
Our fire prevention and education training offers several education programs on a wide variety of fire safety topics. Some of these programs include general fire safety education and fire extinguishers

Top Two concerns in the community:
Bi-annual international furniture trade show, transportation of various chemical products through the city including railroad, interstate and pipeline.

What upgrades will you make in your department this year?
Continue with station renovations and equipment upgrades

What special hazards or unique businesses in your community?
Chemical manufacturing, High Point University, and large population from International furniture trade show.

Accomplishments:
Station alerting in all stations and institution of 15-year front-line fleet replacement program. Recent recertification of ISO Class 1 Department and renewal of annual compliance with CPSE Accreditation.
City of Lancaster Fire Department

Department Name: City of Lancaster Fire Department
County: Lancaster
Type: Combination
Structure: Brick
ISO: Class 1
Number of Stations: 2
Number of Apparatus: 8
4 Pumpers, 1 Aerial, 3 Specialty
Do you provide EMS? Yes
What type: BLS ALS FR

Annual Budget: $1,800,000
Area Covered Square miles: 6
Population: 9500
Total Runs: 2040
Fire: 222 EMS: 1102
Other Call Types: 16
Chief: Justin McLellan
Chief Officers: Fire Marshal Tom Lever
Other Officers: 4 Captains and 3 Lieutenants
Number of Members: 37
28 Paid, 9 Volunteer
Address: 401 E. Arch Street Lancaster, SC 29720
Website: www.lancastercityfire.com
Phone: 803-283-4385

Community Outreach: We provide smoke alarms and carbon monoxide detectors free of charge to the citizens as long as they allow us to install the alarms. We will also change out the batteries in existing alarms that are still in date. We are active in schools and at community functions providing fire and life safety information to kids and adults. We utilize an interactive fire safety trailer or a newly purchased inflatable fire safety house to teach children about fire safety, and will teach fire extinguisher training courses to businesses at their request. We also put on an annual Fire Safety Expo each October which is attended by 2500 plus adults and children.

Top Two concerns in your community: Providing a professional and highly trained all hazards department and staying ahead of future growth needs.

What upgrades will you make in your department this year? We will be replacing an engine with a quint as a first out piece of apparatus at one of our stations. We will also finish building our first ever burn building which we will be utilized to better train our responders.

What special hazards or unique businesses in your community? We cover residential areas, commercial areas and manufacturing districts. All of which provide a different challenge. We have several new residential neighborhoods that are being built which will provide a new challenge for our department with houses being built on smaller lots to maximize the number of houses being built, which we haven’t had in the city limits.

What problems in your department that you would like feedback from others? Maintaining staffing and recruiting new volunteers.

What makes you proud? Our department is a proactive department that provides a quality service to the citizens and business owners of our city. We worked hard to obtain a Class 1 ISO rating and will continue to take steps to ensure that we keep that rating.

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In November, I was fortunate to be invited to join some well-known PIO instructors at Wake Forest University for a Public Information Officer (PIO) Basic Course hosted by the college and Forsyth County Emergency Management. While I attended the class and answered students' questions, it made me think back to my PIO training over the years and the numerous opportunities for me to improve my PIO skill sets through the many professional development courses offered, many through FEMA. I decided right then and there; what my winter PIO column would be about — so here we are.

If you’ve read my previous articles, you’ve probably picked up on how important I think the position of Public Information Officer really is. It’s a position that every agency should have assigned within their organization. Whether you’re a small volunteer, community department or a larger paid, municipal department. You need someone representing the agency with your customers. Yes, as also mentioned in my previous articles – we have “customers” here in the public safety world. A PIO is the link to your community, the protector of your brand and the teller of your stories. But not just ANYONE can be your PIO. So how do you select the right person and then how do you train them to be a PIO? As mentioned in the previous paragraph, there’s excellent training out there through FEMA and your local Emergency Management (EM) organizations — all of which I am going to share with you.

Selecting Your PIO
A recent trend, among public safety agencies and specifically within larger agencies, is to select a local, trusted journalist to move over to the public safety world as the PIO. This has worked very well in a multitude of markets with the journalists bringing over their vast media experience, brand protection knowledge and ever more important contacts. As with everything, there are also some examples of this not working out as planned. I’ve known of a few that have crashed and burned, mainly because they could not grasp the unique world of public safety operations. This should not influence you either way, the choice is yours to determine. Neither is a wrong or a right move; the ultimate decision should be made on a case by case basis. This is where a formal selection and vetting process along with a very specific job description and understanding of what is expected from your PIO.

My opinion; given my experience over the years is to select a trusted member of your agency and send them through a PIO training program. The person you select should have the...
following attributes:

• A tenured member who is calm, patient, mature and action oriented, and someone you can trust with your agency brand.
• A member possessing positive experience with social media (Twitter, Instagram, Facebook, etc.).
• A member willing to attend and complete the various FEMA, accredited PIO and IMT training courses, which I will list within this article.
• A member willing to complement and work with surrounding agencies, town/city/county government agencies and the residents of your community. A member who can build interagency relationships.

All-Hazards PIO

There are quite a few training courses out there available for public safety personnel. I’ve attended all of them, and they are well worth attending, not to mention they can help you become credentialed as an All-Hazards Public Information Officer, which was a goal for me. An All-Hazard Public Information Officer is a PIO specifically assigned to an All-Hazard Incident Management Team (AHIMT). An AHIMT plays an essential role in the management of, and response to, local/regional/national emergencies, natural disasters and planned public events. According to the U.S. Fire Administrations an AHIMT can enhance ongoing operations through provision of infrastructure support, or when requested, transition to an incident management function. “These enhance include all components/functions including the following: command and general staff members as well as support personnel, statutory authority and/or formal response requirements and responsibilities, pre-designated roles — with PIO being one of them — and responsibilities for members of the AHIMT (who can be deployed), as well as the ability to operate across multiple operational periods 24 hours a day, seven days a week until the incident is closed out.

To become an All-Hazards PIO, you will need to complete the All-Hazards courses and complete a Position Task Book (PTB). More information on the AHPIO course (FEMA E/L-952) can be found here: https://www.firstrespondertraining.gov/frts/npcatalog/catalog=EMI.

ICS and NIMS Training

Starting down the path towards PIO training, you will need to start with your basic ICS and NIMS training. ICS is the Incident Command System and NIMS is the National Incident Management System and many of those reading this article most likely already have your basic ICS training certificates. If not, probably time to start attending. These basic NIMS courses are prerequisites see BAD NEWS on page 46.
Bad News  
Cont’d from page 44

for future courses and credentialing and many public safety agencies require them for promotion as well.

The core ICS/NIMS courses you will need include:
• ICS100 – Introduction to the Incident Command System (online course)
• ICS200 – ICS for Single Resources and Initial Action Incidents (online course)

The core ICS/NIMS courses you will need include:
• ICS100 – Introduction to the Incident Command System (online course)
• ICS200 – ICS for Single Resources and Initial Action Incidents (online course)

Additional ICS/NIMS courses that are recommended include:
• IS700 – National Incident Management System Introduction (online course)
• IS701 – NIMS Multiagency Coordination System (online course)
• IS702 – NIMS Public Information System (online course)
• IS703 – NIMS Resource Management System (online course)
• IS800 – National Response Framework Introduction (online course)

Additional Social Media/PIO courses that I personally recommend include:
• PER304 - Social Media for Disaster Response and Recovery, provided by *NDPTC (eight-hour in person course)
• PER343 – Social Media Engagement Strategies, provided by *NDPTC (eight-hour in person course)
• PER344 – Social Media Tools and Techniques, provided by *NDPTC (eight-hour in person course)
• Digital Imagery and Social Media Challenges in the Fire Service course, taught by Chief Kurt Varone: http://www.firelawblog.com/courses/

*Note the courses I listed that are provided by the NDPTC (National Disaster Preparedness Training Center) are located throughout the country annually, here’s a link to their site: https://ndptc.hawaii.edu/training/

Specific Public Information Officer Training

As mentioned earlier in my article, there are some very good PIO courses you can take. They are all in person courses and can be found at various locations around the Carolinas each year. Once you nail down your basic ICS/NIMS certifications, I suggest you...
begin searching out these classes, sign up and dive in. You will learn the basic PIO skill sets and core competencies to be a successful and effective Public Information Officer. These courses are Federal Emergency Management Agency (FEMA) courses and are available through their National Training and Education Division and their Emergency Management Institute (EMI). I will list these classes below. When considering your attendance, pay close attention to the course prerequisites.

Public Information Officer EMI Courses:
- G0290 – Basic Public Information Officer Course (14-hour local in-person course)
- G0291 – Joint Information System/Center Planning for PIO’s Course (7-hour local in-person course)
- E0952 – All-Hazards Public Information Officer Course (35-hour local in-person course)
- E0388 – Advanced Public Information Officer Course (38-hour local or EMI resident course)
- E0388 – Master Public Information Officer Course (96-hour EMI resident course)

More information regarding the above courses can be found at the following EMI site: https://www.firstrespondertraining.gov/trts/npcatalog?catalog=EMI and by searching PIO in the search bar at the top. You will be able to peruse the course description as well as any prerequisites required in order to attend.

To find local course opportunities around the Carolinas (ICS 300, 400, Basic PIO, JIS/JIC, Advanced PIO), I recommend using NC Terms for North Carolina (https://terms.ncem.org/TRS/). Hopefully you already have an NC Terms account, if not I recommend you sign up for one. It’s free and offers a portal to view and register for upcoming classes. It will also be a repository for your course transcripts and certifications.

For South Carolina, I recommend using the SC EMD site located at (https://www.scemdlms.org/TRS/home.do), it also functions much like NC Terms and is a good resource for future course offerings. Both sites have training calendars.

Bill Suthard is a firefighter/EMT and Public Information Officer (PIO). He works part-time for the Huntersville Fire Department and full-time for the Charlotte Fire Department where he is currently assigned as the Operations Manager for their Communications Division. Suthard directly manages the five Shift Supervisors and 36 other members of the Division. He manages the Division’s public information, social media accounts. Suthard is also an instructor for the Federal Emergency Communications Division (ECD), a portion of the Department of Homeland Security. Each year in October, he also serves as the PIO for the National Fallen Firefighter Memorial service in Emmitsburg, Maryland which he lists as one of his greatest accomplishments.

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Cancer is Everyone’s Concern

We have known for quite a while now that cancer is affecting firefighters in an unprecedented manner. You can’t go to a conference, class, or website without seeing information on the dangers of cancer and sometimes even recommendations on how to take preventative action. This is good. We are finally getting the message as firefighters. However, there is still a lot of work to do in addressing cancer in the fire service.

A lot of times when the topic of firefighter cancer comes up, organizations, companies, and educators that focus on cancer education often get stuck on a misconception: all firefighters ride a big red truck. Most of the focus on cancer prevention is focused on suppression personnel and the activities that they are engaged in. This is important since the majority of work on the active fire scene is done by suppression personnel, however many times the other activities conducted on scene do not receive the same attention when it comes to cancer reduction strategies.

Everyone on the fire scene needs to be “cancer aware.” Think of all of the medical support personnel, command officers, safety officers, information officers, investigators and other persons who have specific tasks on the fire scene, and often times they face the same exposure risks, just with little to no protective equipment.

The most important thing to keep in mind when you talk about exposure protection on the fire scene is placement and set up of equipment. Often times the placement of trucks and fire apparatus is dictated by the fire itself. However, the other equipment on scene is often placed based on convenience and preference. Think about the placement of things such as command post and medical monitoring and rehabilitation. These functions, while important, can often be setup in various different locations and maintain their effectiveness.

Once a fire scene has been established, if command personnel take time to look at conditions such as wind direction and environmental factors the placement of these secondary functions can be put into locations that minimize exposure to smoke and debris. Also taking time to verify the location of these functions can help protect the workers at these positions and reduce the exposure of firefighters during rehab and monitoring.

Additionally, when vehicles are parked on scene, it is important to protect them as well from exposure to smoke and carcinogens. This can be done by parking vehicles away from the actual fire scene and keeping windows and compartment doors closed as much as possible. These simple steps can go a long way in reducing exposure to support staff.

If support staff need to be near the active fire scene, even into salvage and overhaul phase, make sure adequate filtration masks or scba are available for the personnel that are in those areas. Even after the fire is out, there is still a lot of particulate matter in the air and the scene can still be off gassing for many hours after the fire is “out.”

This brings me to another key area that is important to me since on the fire scene I normally work as an investigator. Investigator safety as far as wellness goes is pretty abysmal. To date there have been several significant studies dealing with the need to use respiratory protection and adequate skin protection due to the fact that the exposure to soot and debris is much more focused for investigators generally. Also, the ATF conducted a very important study on the effects of washing uniforms and clothing and how it can almost completely remove carcinogens, but it also needs to be washed separately from other non “contaminated” clothing to prevent cross-contamination. We have all of this very useful health and wellness information for investigators but it is seldom even mentioned.

Another practice that drives me crazy with investigators is the “sniff testing” of debris when looking for the use of accelerants. We don’t need to be sniffing evidence and debris, it is very unhealthy. Let’s leave that to the arson dogs who have a much better nose than we do for finding evidence. As investigators we need to always use utmost caution when handling and packaging evidence. Remember it is not only to preserve the evidence, but we want to be health conscious as well. Always wear a mask and gloves when packaging up evidence.

In conclusion, everyone on the fire scene, including support personnel need to be “cancer aware” and practice the same strategies that we know work in exposure reduction and contamination. Remember, cancer is indiscriminate when it comes to choosing its victims.

Travis McGaha currently works as an assistant fire marshal with the Concord Fire Department. He has worked in the fire service for seven years and has been working as an advocate for cancer awareness and prevention for more than 15 years through various organizations. In the last year he has worked with several other firefighters around the state in founding the North Carolina Firefighter Cancer Alliance which is a non-profit organization that focuses on educating and supporting firefighters about the dangers of the exposures that they face.

The most important thing to keep in mind when you talk about exposure protection on the fire scene is placement and set up of equipment.
So, What’s Your Excuse?

As I test Firefighters I often hear two excuses.

**Excuse No. 1** — I am getting older and therefore shouldn’t be expected to be as fit as the younger firefighters.

Age is not an excuse for being unfit. Everyone can remain fit as they age. Becoming unfit as we age is a result of moving less and often overeating and gaining weight. Epidemiology studies by Steven N. Blair, B.A., M.S., P.E.D., Arnold School of Public Health at the University of South Carolina, has conducted numerous studies documenting that physical inactivity and low physical fitness are the major health problems of current times.

**Excuse No. 2** — Our department doesn’t have any exercise equipment.

Exercise equipment such as treadmills, rowers, bikes and strength machines are not necessary to becoming and remaining fit. All you need is your body weight and equipment found at every department. Below is a 20-minute workout (five stations spending four minutes at each station) using old fire hoses. This makes a great partner workout. The first partner performs the exercise at that station for 30 seconds. The second partner then performs for 30 seconds while the first partner takes a break. Repeat four times (four minutes at each station). Continue by rotating through all five stations. This is supposed to be a HIIT (high intensity interval training) workout therefore when it is your turn to perform do so as rapidly as you can. Also have all stations setup so you can move quickly to each station.

**Station 1: Alternating Lifts from Floor to Shoulder**

Take an old folded hose lying on the floor. Lift to shoulder and return to floor. Alternate from left to right shoulder. Make sure you use your legs. Squat to pick it up and when returning to the floor. Keep your back straight by keeping your head up.

**Station #2: Stationary Lunges with Hose**

Holding hose overhead perform stationary lunges alternating legs. Pick a point to stare at in front of you so you don’t keep looking down. Always engage your core. Step forward with one leg, lowering your hips until both knees are bent at about a 90-degree angle.

**Station #3: Hose Slams**

Wrap an old hose around a stationary pole or column. Hold the ends of the rope at arm’s length in front of your hips with your hands shoulder-width apart. Brace your core and begin alternately raising and lowering each arm explosively.

**Station #4: Hose Drag**

Attach a weight to the hose such as an old tire. Place hose over shoulder and run or walk fast. Keep core tight as leaning into the forward movement. Second partner will need to follow beside so they can pick up as soon as first partner completes 30 seconds.

**Station #5: Fire Hose Rows**

Wrap hose around pull up bar or top of fire truck. Hold straps and lean backwards. Pull your torso towards your hands keeping your elbows close to your body. If it is too difficult with correct form, move your feet back a bit.

If you do this with a partner up to 10 people can work out in the 20-minute period (two at each station). To make it competitive keep track of the number of total reps for your team. You can also do this without a partner. Just perform 30 seconds, take 30 second breaks, and repeat four times.
What Do You Know About Your Member of Congress?

The legislative process is like a road under construction with many potholes and detour signs. It requires patience, determination, and an understanding of committee leadership and the 535 representatives who control the flow of the legislative traffic — or gridlock as representatives who control the flow of determination and an understanding under construction with many potholes constituents back home. There are, however, many meaningful bills worthy of consideration by Congress, and yet many of them meet the same fate.

The legislative process is a process of negotiation, compromise, and committee assignments. Whenever the legislative traffic — or gridlock as representatives who control the flow of legislation, I stress and committee assignments. Whenever a member serving on the committee of jurisdiction has a greater likelihood of advancing than a measure introduced by a member not serving on this committee: That is why the Congressional Fire Services Institute (CFSI) and the National Fire Sprinkler Association sought support from members of the House Ways and Means Committee and Senate Finance Committee when we were looking for sponsors and cosponsors of the Fire Sprinkler Incentive Act that was eventually approved as part of the Jobs and Tax Cut Act of 2017.

Quite often, members of Congress seek appointments on committees that authorize programs benefiting large swaths of their congressional districts. Many members from the Midwest region serve on the Senate and House Agriculture committees. Members with large military bases in their districts seek coveted positions on the House and Senate Armed Services Committee. And members with legal backgrounds will serve on the House and Senate Judiciary committees.

This information is important to know, not only for you but also for the national fire organizations. When a congressional committee is acting on a piece of fire service legislation, we often seek support from fire service officials represented by committee members to deliver a message. Members are often more receptive to receiving messages from their constituents then a lobbyist in D.C.

So how can you learn more about your member? You have to find out about the website that didn’t include biographical information, including committee assignments. If your member serves on the Senate or House Committees on Commerce, you can help us advance legislation that will provide incentives for volunteer recruitment and retention, and for the installation of fire sprinklers in businesses and high-rise structures.

The same can be said of members serving on the committees with oversight of our forests and wildlands and legislation that fund suppression and mitigation programs.

As former Speaker of the House, Thomas "Tip" O’Neill once stated, "all politics is local." Don’t think otherwise. Your voice can make a difference, especially when your member holds the key that can unlock the door to action on legislation benefiting our nation’s fire service.

Bill Webb has served as Executive Director of the Congressional Fire Services Institute since 1995. CFSI is a nonprofit, nonpartisan policy institute designed to enhance congressional awareness about the concerns and needs of the fire and emergency services. As Executive Director, he works closely with members of Congress and fire service leaders to sustain support on Capitol Hill for programs and legislation that benefit our nation’s fire and emergency services. Before joining CFSI, Webb worked for the Firefighter Combat Challenge as the project manager for the competition. He currently serves as Vice Chairman of the National Fallen Firefighters Foundation and is an honorary member of the Vienna Volunteer Fire Department, the Delaware Volunteer Firefighters’ Association and the International Association of Fire Fighters Local 36.

Industry News

KIMTEK’s New FIRELITE® Answers FD Calls for Rear-windng Reel

In response to requests from fire departments, KIMTEK has introduced the FIRELITE® FH-205, a new version of its popular FIRELITE® series skid units for use with UTVs. Distinct from KIMTEK’s patient transport units in the FIRELITE series, the FH-205 skid unit positions the reel to wind on the vehicle’s hood to the rear. Constructed of KIMTEK’s signature rugged, high quality aluminum diamond plate and tubing, FH-205 skid units are durable, attractive, and produced to KIMTEK’s highest standards of manufacturing.

Utilizing the space other models reserve for patient transport, KIMTEK’s FH-205 has positioned the Hannay 4000 Series manual reel to face rearward, winding off to the rear rather than to the side. In addition to the Hannay reel, FH-205 units come with a hose storage area with tailgate adjacent to the pump and a Darley-Davey pump.

KIMTEK Introduces Three New Brush Truck Skid Units

Fire departments with brush trucks are benefiting from three new skid unit options just introduced by KIMTEK Corporation. These additions to KIMTEK’s FIRELITE® series meet the latest demand for basic firefighting-only skid units ideal for applications that do not require area for storage and patient transport.

KIMTEK’s new FDHP 304, 305, and 506 model skid units come equipped with a manual Hannay 4000 Series reel and a water tank in 125, 160, or 200 gallon capacity. Buyers have their choice of four pump options: the Davey 6.5, 9, and 13 hp pumps and the new Darley 1.5 AG 15XH which produces pressures up to 200 psi and is also available with KIMTEK brush truck 300 series skid units.

The entire line of KIMTEK brush truck skid units and all available options may be viewed at www.kimtekresearch.com. For more information, contact Cathy Prudhomme, cprudhomme@knoxbox.com or 602-889-1084.

Rosenbauer America Appoints Phoenix Fire Apparatus as Dealer for South Carolina

Rosenbauer America is pleased to welcome Phoenix Fire Apparatus as the authorized sales and service dealer for fire apparatus and products for South Carolina. Rosenbauer Fire Apparatus was founded in 2014 and is owned by Kent Cummings, who has over 30 years of fire apparatus design, sales, and service experience. Phoenix Fire Apparatus is centrally located in Sumter, S.C., and is a full-service dealer that offers bumper-to-bumper inspection, testing, and maintenance performed by EVT certified technicians onsite at its 7,500 square-foot facility, or remotely using its mobile service fleet.

“Phoenix Fire Apparatus is an important part of the Rosenbauer family,” said Rosenbauer Rosenbauer’s National Sales Manager, “Kent has a great facility and many years of experience selling and servicing fire apparatus. Visit www.phoenixfapi.com and their Facebook page for more information.

Fox Manufacturing Acquires Glass-Master from Wehr Engineering

Fox Manufacturing, LLC is pleased to announce the acquisition of the Glass-Master business from Wehr Engineering. This transition took place November 1, 2019. All manufacturing practices and equipment have transferred as part of the acquisition, ensuring that the Glass-Master tool is manufactured using identical tooling and to the same quality standards. The business is now located just 15 minutes from its original location, assuring that shipping transit time & cost remain unchanged.

Wehr Engineering developed the Glass-Master tool and created specialty manufacturing processes and first-class quality standards. Tom & Kyle Wehr served as stewards of this product from its inception until this sale. Fox Manufacturing’s president, Todd Fox, brings 30 years of manufacturing experience to this acquisition and is dedicated to maintaining the same level of quality & service that Glass-Master customers have come to expect. One of the critical points in this acquisition was that it be seamless, with customers noticing no changes in pricing, shipping, packaging or documentation and that shipments continue uninterrupted. The only planned change is to maintain inventory of finished tools, thereby reducing shipment leadtime. We sincerely look forward to serving the Glass-Master customers for many years to come!

For more information: 317-430-1493, 800-487-4527 or visit www.glass-master.com.
Belfast-Rosedale Volunteer Fire Dept.
2020 Rosenbauer Commercial Top Mount Pumper w/Freightliner chassis, Cummins ISL 350 HP engine, 1250 GPM Hale pump, 1250 water/20 foam UPF tank, Rosenbauer EZ-Climb ladder. Delivered by C.W. Williams & Co.

Gaston Volunteer Fire Dept.
2019 Rosenbauer Commander Custom Top Mount Pumper w/Cummins ISL 380 HP engine, 1500 GPM Waterous pump, 1000 gal. UPF tank, Task Force Tips Crossfire Monitor Package. Delivered by C.W. Williams & Co.

Goodson Kinderhook Volunteer Fire Dept.
2020 Rosenbauer Commercial Sidemount Pumper w/Freightliner chassis, Cummins engine, 1500 GPM Waterous pump, 1250 gal. UPF tank, Rosenbauer 5/16" aluminum body. Delivered by C.W. Williams & Co.

County of Roanoke

North Chatham Volunteer Fire Dept.
2019 Rosenbauer Commander Custom Side Mount Pumper, Cummins ISX 505 HP engine, 1500 GPM Waterous pump, 750 gal. UPF tank, FireCom (6) position intercom system. Delivered by C.W. Williams & Co.

Sidney Volunteer Fire Dept.
2020 Rosenbauer Commercial Top Mount Tanker w/Freightliner chassis, Cummins engine, 1250 GPM Waterous pump, 1500 UPF tank, internal storage for ladders, drop tank. Delivered by C.W. Williams & Co.

DON’T MISS FEATURING YOUR PRODUCT in our upcoming Spring 2020 Issue
CAROLINA FIRE RESCUE EMS JOURNAL www.carolinafirejournal.com
debunk the misconception that green building costs more than traditional construction. If a fire department pursues green building early in the design process, there is often little to no economic impact compared to conventional construction, especially when you calculate the total cost of ownership over the lifetime of the station.

Green fire stations offer savings through reduced energy and water consumption, leading to lower costs for electricity, heating, cooling and water. LEED buildings have been shown to reduce building maintenance costs by up to 20 percent compared to conventional commercial buildings, and green building retrofits can decrease operational expenses by up to 10 percent.²

Employee Health and Productivity

As your fire and rescue personnel are your most valuable asset, maintaining an optimal work environment is paramount. By providing employees with natural light and fresh air, as well as reducing or eliminating the harmful VOC content found in conventional building materials (e.g., hazardous paints, adhesives, solvents, caulks, wood composites, carpets and sealants), you can enhance the health and well-being of your firefighters. Improved indoor air quality can even increase productivity and reduce absenteeism caused by asthma, respiratory allergies, depression and stress, according to USGBC studies. As sustainable municipal operations go from “nice to have” to “must have,” fire departments are talking more about the business side of sustainability. Looking at the benefits for personnel, communities and the bottom line, green building is a win-win-win for all involved.

Chris Goins is a Project Developer and a LEED Green Associate at Bobbitt Design Build. As a green builder and member of the USGBC, Bobbitt delivers significant value to clients and the community with its sustainable building expertise.

1 https://www.iea.org/topics/energyefficiency/buildings/

Crossword Puzzler Answers

| Wildland Fire III | T | A | R
|-------------------|---|---|---
| UNDER STORY      | I | O | N
| FLUX             | B | W | S | A | B
| LINE             | R | A | D | I | A | N
| R               | T | E | D
| V | I | N
| G | O | E
| S | T | E | R
| M | A | S | T
| 2 | 1 | 0 | 3 | 4 | 5
| C | U | P
| O
| B | L | A
| L | E
| C
| K
| L
| I
| N

EVALUATION

POINTER

SADDLE

STRAINER

ARSONIST

STRESS

52 Winter • 2020
 Raleigh Durham Airport Fire Dept.
Pierce Freighliner Pumper w/Cummins L9 350 HP engine, 26” under-slung “Chicago” style bumper, Waterous CSPA 1250 GPM single stage pump, 750 gal. poly tank, Allison 3000 EVS transmission. Delivered by Atlantic Emergency Solutions.

Cary Fire Department
Pierce Enforcer Aerial Tiller w/DDC DD13, 525 HP, 1850 lb-ft engine, Waterous S100 1500 GPM pump, 60” cab, 13” extended front bumper, 76,600 GVWR. Delivered by Atlantic Emergency Solutions.

Cherokee Fire Department
Pierce Enforcer 107’ Aerial w/DDC DD13, 525 HP, 1850 lb-ft engine, Hale QMAX-200, 2000 GPM single stage pump, 50” side control pump house, 13” extended front bumper, 500 gal. poly tank. Delivered by Atlantic Emergency Solutions.

Lovelady Fire/Rescue
Pierce Enforcer Dry Side Tanker w/DDC DD13, 525 HP, 1850 lb-ft engine, 2500 gal. tank, Waterous CSXK 1250 GPM single stage pump, 70,000 GVWR. Delivered by Atlantic Emergency Solutions.

Cary Fire Department
Pierce Enforcer Heavy Duty Rescue w/DDC DD13, 525 HP, 1850 lb-ft engine, 13” extended front bumper, side roll and front impact protection, HiViz LED lighting, 52,360 GVWR. Delivered by Atlantic Emergency Solutions.

Ayden Fire Department
Pierce Enforcer Pumper w/Cummins L9, 380 HP, 1150 lb-ft engine, 60” cab with 10” raised roof, 22” extended bumper, Husky 5 foam system, Hale QMAX-150 1500 GPM pump. Delivered by Atlantic Emergency Solutions.

Lovelady Fire/Rescue
Pierce Enforcer Dry Side Tanker w/DDC DD13, 525 HP, 1850 lb-ft engine, 2500 gal. tank, Waterous CSXK 1250 GPM single stage pump, 70,000 GVWR. Delivered by Atlantic Emergency Solutions.

Cherokee Fire Department
Pierce Enforcer Heavy Duty Rescue w/DDC DD13, 525 HP, 1850 lb-ft engine, Hale QMAX-200, 2000 GPM single stage pump, 50” side control pump house, 13” extended front bumper, 500 gal. poly tank. Delivered by Atlantic Emergency Solutions.

Cary Fire Department
Pierce Enforcer Aerial Tiller w/DDC DD13, 525 HP, 1850 lb-ft engine, Waterous S100 1500 GPM pump, 60” cab, 13” extended front bumper, 76,600 GVWR. Delivered by Atlantic Emergency Solutions.
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### Generations

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Public servant. On two occasions in 2018, I know of two completely different occasions where a recruit was in an academy situation and turned their equipment in and left each academy stating that they did not know that, one you had to be in physical shape/condition to be a firefighter and two you had to work a 48-hour shift. As a leader did we miss something here or did the recruit not understand the demands of the job? Both recruits were Millennials.

What does each of the generations have to offer the next generation and how does each generation work side by side with each other. In a Human Resource Management class we had the task of selecting a work group. When a co-worker and I were selected to head up a work group, I selected the youngest person in the group, I Millennial. When asked by the instructor as to why we selected him so quickly, I responded, because he has the technology skills and quickness to properly operate a computer. What our group needed to teach him was to follow up on what we didn’t have experience in the computer technology, which he knew very well and we could teach him our skill-set in the down time.

There was an older group within the class and a statement from them was really valid to our point. The older group did not want to be intimidated by some young kid and we can just figure out what we need afterwards. These are the type of opportunities that we as public safety employees need to understand and really make that effort to take members of all generations under our wings to help get the job done and learn from top to bottom as well as bottom to top.

Mark Rivero worked for the City of Las Vegas, Nevada, Fire and Rescue from 1992 until 2011, holding positions as firefighter, training officer and, ultimately, professional development officer, creating degree pathways for fire service personnel and bringing in educational institutions to address higher education topics and degrees that were specific for the fire service. He currently serves as a program advisor/site coordinator for Southern Illinois University, and as the chairperson for the doctoral degree path committee for professional development at the National Fire Academy. He also works with the American Council on Education, reviewing fire service courses at various institutions across the United States. Rivero received his doctorate from the University of Nevada, Las Vegas, in 2004.
South Atlantic FIRE RESCUE Expo

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Raleigh Convention Center

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