

DEPARTMENT OF FIRE SERVICES . STOW, MASSACHUSETTS



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About the *All Hands Herald*

he All Hands Herald is published quarterly by the Department of Fire Services in January, April, July and October. The newsletter is meant to incorporate the traditional fire service meaning- all hands working to extinguish the fire. In the case of our newsletter, all hands includes the DFS staff providing each of you with information, training and assistance in dealing with the fire service issues which confront all levels of the fire service.

We hope that you enjoy our new look and feel and we encourage you to let us know how you like the All Hands Herald and what we can do to make it even more useful to you - our dedicated fire service members and customers. If you have suggestions, ideas, questions or want to make a contribution to the All Hands Herald, contact Jennifer Mieth 978-567-3381, Jennifer.Mieth@state.ma.us or Donna Nelson 978-567-3149 Donna.Nelson@state.ma.us

Judy O'Brien is the keen-eyed copy editor; and Meaghan O'Connell is the graphic artist who pulls it all together. ◆

DEPARTMENT OF FIRE SERVICES

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From the Fire Marshal





DEPARTMENT OF FIRE SERVICES . STOW, MASSACHUSETTS

Hazard Assessment Team – where hazardous materials technicians and bomb squad technicians cross-train and are able to respond together to incidents that require the expertise of the team.

Propane Investigation

Norfolk Fire Chief Bushnell recently discovered an issue of underodorized propane that alarmed him. Not wanting a re-occurence of the horrific propane explosion that occcurred on July 30 in his town, he sought out our Division of Fire Safety to trace the source of this under-odorized propane. As part of that investigation, we discovered railroad cars at a bulk processing facility that had unodorized propane. I immediately involved the Attorney General's Office and we have been working with them, the industry, various state police units and fire officials to determine the scope of the problem and to remedy it. Part of this process involved retaining an independent examiner who has produced a report. Since these issues fall under their jurisdictions, the Attorney General and I brought this matter to the attention of the Federal Rail Administration and the U.S. Consumer Product Safety Commission. While under-odorized or unodorized propane is not inherently dangerous, it prevents detection of a leak, which is hazardous. I want to commend Chief Bushnell for his persistence, DFS staff that dropped everything to focus on this issue for several months, and all those who have been involved in this investigation.

Novelty Lighter Ban

On November 7, the ban on novelty lighters – lighters that look or sound like toys or an everyday object that they are not – took effect. Massachusetts is the 14th state to ban these lighters. This ban is another step to protect young children from the dangers of fire. After all, if adults cannot tell the difference between these lighters and toys, how can we expect children to do so?

On-Site Academy

There was an earmark in the DFS FY '11 budget for residential critical incident stress treatment for firefighters at the On-Site Academy, sponsored by State Senator Ken Donnelly. The academy specializes in treating post-traumatic stress disorders in emergency service workers who are temporarily overwhelmed by the stress of their jobs, what they have seen and what they have been through.

Crowd Manager

On March 1, 2011 certain nightclubs, restaurants, discotheques and other venues that have an occupancy of 100 people are more, will be required to have a trained crowd manager on duty for every 250 people. The Department of Fire Services is finishing development of the on-line training program that will be available on January 1, 2011. A Facility Checklist will have to be completed every day that the facility is open for a function that could accomodate 100 or more people. The goal is to have trained staff responsible for crowd management to prevent dangerous overcrowding, ensure exits and pathways are accessible, and to provide assistance for patrons to evacuate in case of an emergency. Instituting a system of crowd managers is the final piece of action recommended by the Task Force on Building and Fire Safety established in response to the 2003 Station nightclub fire. Those recommendations became part of the Massachusetts Fire Safety Act, Chapter 304 of the Acts of 2004.

The leaves are falling on a completely transformed Department of Fire Services Stow campus this year. There are no trailers housing staff, no modular buildings that have outlived their useful life; parking has improved; everyone is working in fully sprinklered buildings; and by the time this issue of the All Hands Herald is published, construction will finally be complete. Recruit graduates recently visiting the remodeled fire academy building are amazed with the changes since their time here, and so am I. I want to thank the DFS staff and students who have stoically endured the inconvenience of the transformation that has led us to this modern facility.

Special Ops and HazMat Milestones

There are two additional milestones worth mentioning in 2010. This year is the 10th anniversary of the Special Operations Unit and the 20th anniversary of the inception of the Hazardous Materials Response Program. Both of these programs continue to be models for the nation. Special Operations provides a system of vehicles and specially trained personnel to assist incident commanders in large-scale, long-term responses as well as to pre-plan emergency response for large, public events. The Hazardous Materials Response Program has been very active in its anniversary year responding to many incidents. They have also continued to prepare and respond to emerging trends. An example of this is the JHAT - Joint

10th Anniversary of the Special Operations Unit

2010 is the 10th anniversary of the Special Operations Unit at DFS. The special operations resources are designed to support the incident command structure at large-scale, longterm, or multi-jurisdictional incidents such as the Danvers explosion, the South Hadley hazardous materials incident, and the Southbridge tire fire. Even so, Massachusetts is the only state to have these incident support resources available statewide and at no cost to the local community.

Special Operations Today

Today, Special Operations involves a team of 70 highly trained staff, three incident support units (one still in production), two rehabilitation trucks (and a commitment for a third), a dormitory vehicle, and lighting and generator resources. The goal is to have an incident support unit and a first responder "rehab" truck stationed across the state (DFS-Stow, South, and West) for quick response.

How It Started

The planning for special operations started in 1999 by designing and building the first incident support vehicle. Coan said, "The first ISU was under construction in 1999 and was not yet ready at the time of the Worcester Cold Storage Warehouse fire. During the long days of recovering the six lost firefighters, we saw time and again the need for an incident support vehicle." The first ISU went into service in September 2000. "More importantly, we discovered the need to have trained personnel respond with it," he added.

ISUs

The ISU, and the trained staff that responds with it, was well received. The ISU provides a place out of the elements for incident commanders to gather and review key information, develop and implement plans, and a vehicle that provides additional technical resources to enhance the decision-making process. The real drawback was the longer response time to some parts of the state. A second ISU was commissioned that is currently stationed in Easthampton with a third currently being outfitted from a converted vehicle that will be stationed in Middleborough.

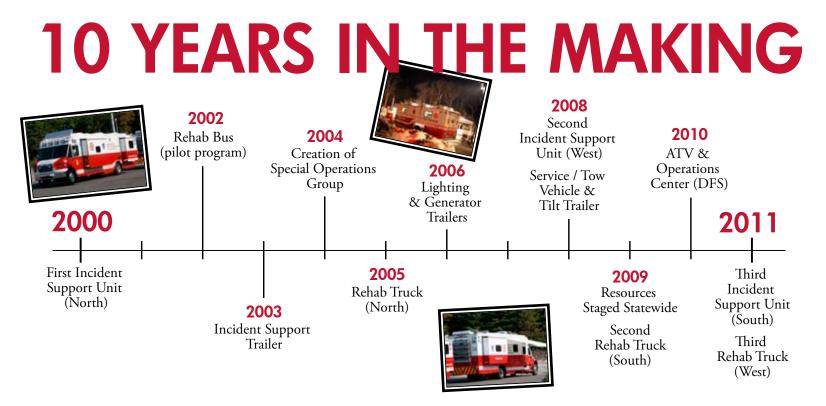
Rehab Trucks

After the first few incidents, it be-

came clear there was a need to provide emergency responder "rehab" services, especially at large-scale or long-term incidents. As a pilot, Special Ops converted an old bus. The pilot was successful and a true incident "rehab truck" was designed and constructed. Today we have two "rehab trucks" with a commitment for a third unit. One is stationed at DFS in Stow, the second is in Middleborough, and the third will be stationed in the western part of the state.

Returning Responders to the Incident

We have discovered that proper "rehab" is essential to keep responders physically and mentally able to continue to function at incidents. By medically monitoring responders and replenishing fluids in a controlled environment, responders are able to continue to function effectively at incidents. The majority of responders leave the "rehab" truck and return to service. There has been one incident of possibly saving a firefighter's life by detecting a cardiac incident in the earliest stages. Local emergency medical services decided to send him to the hospital immediately for treatment.



10th Anniversary

Continued from Page 2

Mobile Dormitory

The dormitory vehicle is an old but safe "Katrina Trailer". It has already been used as a temporary police station, a dorm trailer during the floods of 2010 and on the Esplanade during hot weather to provide a place for state police canines and their handlers to cool off between patrols.

Trained Team is Secret Weapon

The most important part of special operations is not the vehicles or the technology but the highly skilled and uniformly trained team that responds with the vehicles. A minimum of three people will respond with the ISU and two with the "rehab truck" and then the staffing will increase or decrease to match the incident itself. The skills the team brings are: incident management and knowledge of special technologies. Every team member trains on a quarterly basis at the very minimum. Several team members train on specific disciplines at the national level such as all hazard communication leader and technicians command, general staff functions for incident management teams, and special operations team management.

In addition, Special Ops can provide lighting trailers and whisper quiet large generator trailers.

More information about the vehicles and photos can be found on the DFS website at www.mass.gov/dfs and click on Quick Links (left column) then Special Operations.

Responses

As the special operations capabilities have grown, and as word of their success spreads, the calls for service have also grown. In the first year, FY '01 with just the first ISU, there were 19 calls for service. In FY '10, there were 116 calls for service, a six-fold increase.

Pre-Planning for Large Scale Events

The ISU team has supported in-



Lt. Frank McGinn, Gov.-elect Patrick, Lt. Marty Foley inside ISU at Danvers Explosion.

cident commanders to conduct pre-planning for large scale, multijurisdictional events such as the Boston Marathon where there are several different fire, police, EMS, and public health agencies working together to provide safety and security for thousands of participants and spectators. The team is trained to help in the development of incident action plans, anticipating what could go wrong and how to respond guickly to any emergency that could occur during the event. They can also help staff with the implementation of these plans during the events. Another example is the Holyoke St. Patrick's Day parade; still the third largest in the county. Multi jurisdictions – police, fire, EMS – together respond to any incident that occurs using a unified command structure according to the plan they crafted in advance.

Other Incidents

Special Operations has responded to incidents that have been as short as a few hours such as a search for a missing person to up to ten days such as fires, investigations or hazardous materials incidents. The Special Operations Unit responded to the Danvers explosion of 2006 and supported the response and investigation for several days.

They responded to a major chemical incident in South Hadley and were on scene for several days.

Special Operations responded to the 5-alarm fire in an Onset cold storage building at a cranberry bog in 2009. The building was eerily similar to the Worcester Cold Storage Warehouse fire, but with a very different outcome.

Activation

Information about activating the special operations resources is on the DFS website at www.mass.gov/DFS click in the left hand column on Activating Emergency Resources These resources are available seven days a week, 24 hours a day by calling the Mass. Emergency Management Agency at (508) 820-2000. There is certain information the fire department must provide in order to acti-

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Landmark Residential Fire Study Shows How Crew Sizes and Arrival Times Influence Saving Lives and Property

By: NIST Building and Fire Research Laboratory, Published: 4/28/2010

A landmark study issued today by the U.S. Department of Commerce's National Institute of Standards and Technology (NIST) shows that the size of firefighting crews has a substantial effect on the fire service's ability to protect lives and property in residential fires.

Performed by a broad coalition in the scientific, firefighting and publicsafety communities, the study found that four-person firefighting crews were able to complete 22 essential firefighting and rescue tasks in a typical residential structure 30 percent faster than two-person crews and 25 percent faster than three-person crews.

The report is the first to quantify the effects of crew sizes and arrival times on the fire service's lifesaving and firefighting operations for residential fires. Until now, little scientific data have been available.

"The results from this rigorous scientific study on the most common and deadly fires in the country—those in single-family residences—provide quantitative data to fire chiefs and public officials responsible for determining safe staffing levels, station locations and appropriate funding for community and firefighter safety," said NIST's Jason Averill, one of the study's principal investigators.

The four-person crews were able to deliver water to a similar-sized fire 15 percent faster than the twoperson crews and 6 percent faster than three-person crews, steps that help to reduce property damage and lower danger to the firefighters.

"Fire risks grow exponentially. Each minute of delay is critical to the safety of the occupants and firefighters, and is directly related to property damage," said Averill, who leads NIST's Engineered Fire Safety Group within its Building and Fire Research Laboratory. "Our experiments directly address two primary objectives of the fire service: extinguishing the fire and rescuing occupants," said Lori Moore-Merrell of the International Association of Fire Fighters (IAFF) and a principal investigator on the study.

The four-person crews were able to complete search and rescue 30 percent faster than two-person crews and 5 percent faster than three-person crews, Moore-Merrell explained. Five-person crews were faster than four-person crews in several key tasks. The benefits of five-person crews have also been documented by other researchers for fires in medium- and high-hazard structures, such as high-rise buildings, commercial properties, factories and warehouses.

This study explored fires in a residential structure, where the vast

majority of fatal fires occur. The researchers built a "low-hazard" structure as described in National Fire Protection Association Standard 1710 (NFPA 1710), a consensus standard that provides guidance on the deployment of career firefighters. The two-story, 2000-square-foot test facility was constructed at the Montgomery County Public Safety Training Academy in Rockville, MD. Fire crews from Montgomery County, MD., and Fairfax County, VA., responded to live fires within this facility.

NIST researchers and their collaborators conducted more than 60 controlled fire experiments to determine the relative effects of crew size, the arrival time of the first fire crews, and the "stagger," or spacing, between the arrivals of successive waves of fire-fighting apparatus (vehicles and equipment). The stagger time

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During a fire safety experiment, a firefighter ventilates the building to let smoke and heat out to improve conditions inside. Photo courtesy of the International Association of Fire Fighters.



Governor Signs Bomb Component Parts Bill

In July, Governor Deval L. Patrick signed into law a comprehensive statutory scheme criminalizing the possession and use of explosives, dangerous chemicals or other substances, destructive or incendiary devices, hoax devices, and component parts capable of creating such devices, which are intended to be used to kill or injure persons or damage property.

State Law Needed to Keep Pace with Federal Law in Post 9/11 World

The previous statute that regulated the possession of bombs and bomb-making materials was broadly worded, ill-defined, and created loopholes for prospective criminals which in certain instances, required the state's law enforcement officials to meet higher thresholds of proof than would be required by the federal government in similar cases regarding component bomb parts. In many cases, the statutes did not keep pace with the current increase of individuals in possession of dangerous destructive or incendiary devices, in a post 9/11 world. A recent court decision found that proof of assembly was required under the previous law.

Real World Examples that Drove this Legislation

The State Police Bomb Squad assigned to the Department of Fire Services has been frustrated that in several recent cases where they found someone with everything necessary to make a bomb, or bombs in some stage of assembly but not yet complete, with the apparent intent to make bombs, could not be charged. Police have been thwarted in bringing charges against these dangerous individuals because they caught them before the bomb was complete, before it exploded, or before someone was injured.

Littleton

State police road troopers made a motor vehicle stop on Rt. 495 in Littleton. The car contained ammonium nitrate, electronic components and metal pipes. These were all bomb component parts and having all three together made it clear the intent was a bomb. Traffic was stopped on the major interstate. Because no bomb had yet been assembled, no charges could be brought.

Peabody

A young adult had a fascination with the Columbine High School killers. He had a large number of PVC pipes with end caps on them, literature on making improvised explosive devices, and precursors to make explosives all stored in a footlocker ready for assembly. This was another case of successful prevention of bomb making activities, yet no charges could be brought.

Brewster

In 2008, a man had 13 metal pipes foiled with gunpowder capped on both ends with holes drilled in them in his house. The pipe bombs did not yet have any fuses in them. Since they were incomplete, no charges could be brought. Frightened family members who lived in the house called police.

State Police Bomb Squad

Recent statistics from the Massachusetts State Police Fire and Explosion Investigation Unit (Bomb Squad) show that there are approximately 1,000 explosive related service calls per year, 35% of which are for suspect devices. More specifically, from January 1, 2008 to July, 2010, there have been approximately 61 cases involving bomb-making components, some of which could not be criminally charged due to the decision in a recent court case that said proof of assembly was required. ◆

Landmark Study

Continued from Page 4

simulates the typically later arrival of crews from more distant stations as compared to crews from more nearby stations.

Crews of two, three, four and five firefighters were timed as they performed 22 standard firefighting and rescue tasks to extinguish a live fire in the test facility. Those standard tasks included occupant search and rescue, time to put water on fire, and laddering and ventilation. Apparatus arrival time, the stagger between apparatus, and crew sizes were varied.

The United States Fire Administration reported that 403,000 residential structure fires killed close to 3,000 people in 2008—accounting for approximately 84 percent of all fire deaths—and injured about 13,500. Direct costs from these fires were about \$8.5 billion. Annually, firefighter deaths have remained steady at around 100, while tens of thousands more are injured.

Researchers also performed simulations using NIST's Fire Dynamic Simulator to examine how the interior conditions change for trapped occupants and the firefighters if the fire develops more slowly or more rapidly than observed in the actual experiments. The fire modeling simulations demonstrated that two-person, late-arriving crews can face a fire that is twice the intensity of the fire faced by five-person, early arriving crews. Additionally, the modeling demonstrated that trapped occupants receive less exposure to toxic combustion products—such as carbon monoxide and carbon dioxide—if the firefighters arrive earlier and involve three or more persons per crew.

"The results of the field experiments apply only to fires in low-hazard residential structures as described in the NFPA Standard 1710, but it provides a strong starting point," said Moore-Merrell. Future research

PUBLIC EDUCATION

16th Annual MA Fire & Life Safety Public Education Conference

Westford Lt. Don Parsons 2010 Fire & Life Safety Educator of the Year

The Department of Fire Services hosted the 16th annual Fire and Life Safety Education Conference on September 22-23, 2010. Classroom teachers, nurses, firefighters, school resource officers and injury prevention experts gathered at the Westford Regency Inn and Conference Center for two days of training and skill development in 30 workshops and four general sessions presented by 40 speakers. There were core workshops for new fire and life safety educators; workshops on new ideas, programs and teaching techniques to keep educators current; and workshops that continue to challenge and develop new skills for experienced educators.

Fire Safety Education: The Never Ending Story

This year's theme, *Fire Safety Education: The Never-Ending Story* has two focuses. First, it reminded participants that each year there are new students who need fire and life safety education to become safe, successful adults. Secondly, the workshops and keynote speaker looked at ways of using story telling as a teaching tool, whether it is the instructors telling stories, or finding ways to encourage our students to use story telling to learn.

Bill Harley, Grammy Award Winning Storyteller Keynote Speaker

Bill Harley, Grammy Award Winning Storyteller, was the keynote speaker. His address, *The Power of Story*, gave insight into the power of story in our daily lives and how story telling could help fire and life safety educators get their messages across more effectively. He also conducted a workshop to work with individual educators to hone their story telling teaching skills; turning those war stories into true teaching stories.

Dr. Elizabeth Englander, MA Aggression Reduction Center Spoke on Cyberbullying

Dr. Elizabeth Englander, director of the MA Aggression Reduction Center presented a riveting general session on cyberbullying and off-line safety. Dr. England is a powerful speaker and nationally known expert

(From Left) FF Phil Tammaro, Lt. Annmarie Pickett, FF Jeff Marcimo, Lt. Irene Foley, Lt. Don Parsons, Insp. Mike Arruda, Kirsten Lundblom, Steve Coan



on how schools and parents can address this issue. Her research on the issue of bullying, cyberbullying and on how children use today's technology is cutting edge. Holding up her cell phone she said, "This is not a phone, it is a mobile computer," as she talked about parents who put controls on the family computer but none on their children's cell phones.

2010 Fire and Life Safety Educator of the Year Award

The 2010 Fire and Life Safety Educator of the Year Award was presented on September 22 to Westford Lt. Donald R. Parsons who thanked both his chief for his leadership and his wife for her support. Lt. Parsons received the award for his dedication to fire and life safety education for every segment of his community, his mentoring young firefighters about their role in fire education and his willingness to share his knowledge and expertise with others across the state

The other outstanding nominees were: Lt. Michael Arruda, Fall River Fire Department; FF Phillip Tammaro, Billerica Fire Department; Lt. Irene Foley, Boston Fire Department; Lt. Annmarie Pickett, Worcester Fire Department; FF David Hodgerney & FF Jeffrey Marcimo, Shrewsbury Fire Department; and Ms. Kirsten Lindblom, Amherst School Department, Retired

About the Award

This award honors an individual or a team for their involvement and commitment to make our world safer from fire and other preventable injuries. It seeks to recognize those who have exhibited excellence in educating their community members about fire and life safety, and have demonstrated outstanding leadership, teamwork, creativity and perseverance. Nominees may be of any profession. ◆

Home Oxygen Fire Safety Campaign

At the beginning of 2010, State Fire Marshal Stephen D. Coan and the *Task Force on Home Oxygen Fire Safety* launched a public education campaign about new and increased fire dangers when you bring oxygen into the home. The basic message of the campaign is to educate patients, families, caregivers, and even physicians about these dangers. Coan said, "Using home oxygen increases the risk of fires and burns; learn to use it safely – especially if you smoke."

Since 1997 home oxygen has been involved in 27 fire deaths in Massachusetts, caused more than 53 serious injuries, seven firefighter injuries and over 75 identifiable incidents . In 2009 alone there were five severe fire incidents with home oxygen; one involved a candle and four involved smoking.

"Tragic blazes such as the Lynn fatal in February 2010, the Quincy fatal fire on December 26, 2009, the Whitman fire May 2008, and the South Boston fire of 2002 — where a smoker using home oxygen ignited a fire resulting in the death of an eight-year-old girl — highlight the risks associated with home oxygen use," says State Fire Marshal Coan.

What Are the Fire Risks?

Medical oxygen adds more oxygen in the air; it makes fires burn faster and hotter. Furniture, clothes, bedding and hair absorb oxygen and can catch fire more easily. Keep 10 feet away from any flame or heat source such as electric razors, gas stoves, heaters, hair dryers, and candles. It is important to avoid using flammable products such as petroleum based lip balms or lotions. These can easily ignite.

Remember the "Rule of Ten"

- Keep ten feet away from flame or heat sources
- If you must smoke, remove oxygen and wait ten minutes (this allows hair and clothing to become less oxygen saturated), and go outside.

Breathe Easy – Using Home Oxygen Safely Resources

To view the brochure and poster and get additional resources, please go to the Department of Fire Services website at www.mass.gov/dfs and search on "home oxygen safety". There are additional resources for fire department educators. Please contact our staff, Adrienne Beaudoin, at (978) 567-3721 or Adrienne. Beaudoin@state.ma.us or Lorie Anderson, (978) 567-3722 or Loretta. Anderson@state.ma.us or Jennifer Mieth, (978) 567-3381 or Jennifer. Mieth@state.ma.us to obtain additional copies of either the brochure or poster. •



Fire Prevention Success Story

Here is an idea from Duane Kaitschuck, FFII/EMT-B/AHA BLS Instructor from Arizona that may be worth stealing.

A few weeks ago I posted a note on how an 11-year old girl gave me the idea of putting up a poster in the middle school's office asking questions about fire prevention and offering rewards for correct answers. To date, I receive approx. 5-6 inquiries a day from interested students resulting in 2-3 fire escape plans written out by the students and one book report a week explaining the process they used to discover the answer to "Sparky's BIG Question". I've had four students that actually "practiced" their escape plan with their parents at home! I am receiving tremendous response using this idea and wanted to share it with you. Here's what is working: I placed a poster asking "Sparky's BIG Question: What is E.D.I.T.H.? How Does It Relate to Fire Prevention?" I provided instructions on the board explaining the process to the students ... "Do the research, answer the question, provide a 2-3 paragraph book report explaining how you achieved your answer, fill out an escape grid and practice it, have parents sign it verifying the

escape plan was practiced, then turn it in to the school nurse to receive the award. The school nurse makes copies of the work and places them in a folder I pick up bi-weekly. She reports to me the children are excited and very interested in the poster and do not hesitate to do the work once they see what the board says. The awards are on a tiered basis: Correct answers get a coupon to the school store (pens, pencils, notebooks, erasers, etc.) Filled out Escape Grids get a popsicle (a treat here in AZ). Book reports get a Certificate of Excellence award along with the other rewards. Practiced plans get the student and their family a "Reward Certificate" good for a station tour at their local fire department. Special Outstanding Rewards go to the student that does the most promoting fire prevention in their community- a free visit to Phoenix's Hall of Flame Firefighting Museum, with a guided tour by a firefighter! A very simple idea created by an imaginative 11-year-old girl is working superbly getting the fire prevention message across. Imagine, getting the fire and life safety message across to middle schoolers without manpower, increased cost, and crews that have to leave in the middle of their presentation! •

Code Compliance & Enforcement

Hood Cleaning

Since late last summer, we have been implementing the Certificate of Competency (COC) process for Commercial Cooking Operations, answering questions from members of that industry as well as local fire officials. Testing applicants have come from all six New England states as well as New York, New Jersey, Kentucky, Ohio and Florida.

Twenty-six test dates have been held in the past year. The application, study materials and a list of people with COCs are posted on our website at www.mass.gov/dfs

As of September 1, 345 certificates were issued for employees working for 134 companies from within and outside of the Commonwealth. An additional 40 applicants will be testing in the months ahead.

Only five of the 345 COC holders have Type 2 Restricted Certificates of Competency. The restricted COC focuses on the new regulation, 527 CMR 11.00 with reference to NFPA 96; and cannot be used outside of the food service establishment that is owned by or employs the licensee.

Labels and service tags must comply with 527 CMR 11.00; tickets may be issued wherever non-compliance occurs. The non-compliant reports from the hood cleaning company must be sent to the local fire department within 48 hours of the completion of the inspection and/or cleaning. Non-compliant reports should focus on the functionality of a commercial cooking exhaust system, but may also include note of an unlicensed person working on a system.

Just because a hood cleaner with a COC has the authority to work on your exhaust system, it does not mean that they can work on your fire suppression system. The same is true for licensed fire suppression technicians who cannot legally work on commercial cooking kitchen exhaust systems. Both of these COCs can also be confirmed with our licensing desk at 978-567-3700.

Some commercial cooking exhaust systems include a water wash system. Water wash systems do not require a Certificate of Competency.

For more technical information, contact our Code Compliance and Enforcement Unit at 978-567-3375 or in our Western Office at 413-587-3181.

New Sheet Metal License

On a related note, the Division of Professional Licensure pursuant to Chapter 232 of the Acts of 2008 now provides oversight and licensure of sheet metal work, including the work in commercial cooking operations. Applications for business licenses have been available since July 1, 2010. More information is available on the website www.mass.gov/dpl or by contacting the Division of Professional Licensure at 617-727-4454.

BLASTERS WITH Restraining Orders Must Surrender COC

Governor Patrick recently signed into law an emergency amendment to Chapter 148 §20B, which authorizes the State Fire Marshal to suspend, revoke or otherwise not issue any Certificate of Competency (COC) to conduct blasting operations while an active 209A restraining order is in place. This amendment is parallel to the requirements for firearms licensees when a 209A active restraining order is issued.

Therefore, effective October 14, 2010, any licensed blaster who is the subject of an active 209A restraining order, must immediately surrender their certificate to the State Fire Marshal – Division of Fire Safety, either in person or by U.S. Mail. Once the Division of Fire Safety has received a Certificate of Competency, a receipt will be issued. During the surrender period, Certificates of Competency must be renewed. This will keep your Certificate active and prevent the holder from having to retest. If the 209A is terminated, contact our office and upon verification, the Certificate will be returned for the balance of its term.

If a holder fails to return the Certificate, DFS will treat the offense as an unlicensed person working in the Commonwealth, resulting in serious criminal and/or civil penalties.

If during a renewal process, an active 209A restraining order is discovered during a CORI (Criminal Offender Record Inquiry), the renewal application will be processed and the applicant will be notified. The Division of Fire Safety will hold the renewal until such time as notified by the certificate holder that the restraining order has terminated, expired, or been vacated.

Please contact the Licensing Desk at (978) 567-3700, or by email at Lydia.Bogar@state.ma.us, with any questions, ◆

Schedule of Inspection for Grease Buildup

Type or Volume of Cooking	Inspection Frequency
Systems serving solid fuel cooking operations	Monthly
Systems serving high-volume cooking operations such as 24-hour cooking, charbroiling, or wok cooking	Quarterly
Systems Serving moderate-volume cooking operations	Semi-annually
Systems Serving low-volume cooking operations such as churches, day camps, seasonal businesses or senior centers	Annually

Marine Fueling Permits and Inspections

Although the permit to conduct marine fueling is issued by the State Fire Marshal, local fire departments have a very important role to assure that marine fueling occurs in a safe manner.

Marine fueling takes several forms. The most common is fueling a fixed facility such as a marina, boatyard or pier. These facilities typically have a fuel dispenser on or near a dock or pier. The dispenser is connected to an aboveground or underground tank, located on land. The second most common type is mobile fueling. During mobile fueling, a cargo tank is driven to a pier or wharf, and a fueling hose is extended to the vessel. The least common type of marine fueling is by fueling barge. In this case, a fueling barge is towed to various vessels within a harbor.

527 CMR 15 regulates the refueling of vessels on all of the waters of the Commonwealth. A permit from the State Fire Marshal is required to conduct fueling.

The application for marine fueling permit contains a section for approval by the local fire department. The applicant must obtain fire department approval prior to submitting the application to the Department of Fire Services (DFS). The following are some highlights of the regulatory requirements for marine fueling operations. A complete list of the requirements may be found in 527 CMR 15.

- 1. A valid marine fueling permit must be posted.
- 2. All storage licenses, registrations and permits must be current.
- Aboveground or underground storage tanks must be in compliance with applicable code requirements.
- 4. Refueling warning signs must be posted.
- 5. Fire extinguishers must be readily available.
- Flexible fueling hoses in excess of 30 feet need specific fire department approval.
- Fueling systems must be equipped with marked accessible shut off valves and electric shutdown switches.
- 8. Facilities must be maintained in a neat and orderly condition.

Compliance officers from the Code Compliance and Enforcement Unit regularly inspect marine fueling facilities and are available to assist fire departments in conducting their own marine fueling inspections. For assistance please call the Compliance Desk at (978) 567-3375 or in western Massachusetts at (413) 587-3181. ◆

Photo by: Edmund DeStefano



Why We Do What We Do

This is an e-mail letter sent to the Springfield Fire Department by a young man's mother after last spring's fire department open house. DFS loaned the junior fire gear for the event.

"Thank you so much for taking pictures of my son Connor today at the fire station open house. If you could forward the pictures to me, I would greatly appreciate it. He is wearing the yellow fire fighter uniform and standing by/on a fire truck- I am in one of the pictures with him and wearing a green coat.

Connor has autism and we have been working hard to help him understand fire safety and to overcome fears about fire alarms. Today definitely helped him and he not only learned a lot,he had a lot of fun. Each of the fire fighters and the others that we came in contact with today where wonderful and went out of their way to answer questions and explain things to Connor." •

10th Anniversary

Continued from Page 3

vate the resources, and only the fire department can do so. The Special Operations Unit can be contacted at (978) 567-3171, but do not call this number in an emergency.

Conclusion

A lot has been learned over the past ten years and we have taken the comments and criticisms to heart learning and improving with each response. There was no model to follow, so we have learned from both our successes as well as our mistakes. Today Massachusetts still stands out as the only state to commit to this type of system and resources on a statewide basis. There have been several inquiries from across the county about our program and we are happy to share our experience with them. ◆



Hazmat Incidents and Cost Recovery, a Practical Guide

After most significant hazmat responses, the local fire department wrestles with the issue of cost recovery. The following is a practical guide to recovering response costs from a responsible party for a hazardous materials incident. This is not legal advice and your local town or city counsel should be immediately and thoroughly involved in the process.

Like most things response related, it's almost too late to begin considering reimbursement after the incident. An effective ability to recover costs begins with understanding what is recoverable, from whom and under what circumstances. A somewhat arduous process of "costing services" is also best undertaken before an incident occurs.

The answer to "who? and when?" can be found in the law. There are two state laws regarding cost recovery for hazmat response: Massachusetts General Laws (MGL) Chapter 21E and MGL 21K. MGL 21K refers only to the Department of Fire Services (DFS) Hazmat teams and cannot be used for local cost recovery. Local cost recovery authority is found in MGL Chapter 21E. Specifically, "Chapter 21E: Section 4. Response actions; assessment, containment and removal; liability of persons providing care, assistance or advice," states that: "Any person who undertakes a necessary and appropriate response action regarding the release or threat of release of oil or hazardous material shall be entitled to reimbursement from any other person liable for such release or threat of release for the reasonable costs of such response action."

Importantly, while this statute provides the opportunity, it rests with the "person" to document the "action," determine and document its "reasonable costs" and then to pursue reimbursement from the responsible party. The first place to begin is the calculation of costs.



Photo by: Tom O'Connell

Rest assured that any business or its insurance company will scrutinize the costs of reimbursement claims made against them. There have been many instances in this state and others where costs were challenged and lost because of a lack of predetermination or of proof that costs were incurred and were reasonable. While DFS Hazmat costs are routinely challenged, the outcome is favorable because the system can point to a process of cost determination that is uniformly administered and applied. Moreover, the costing methods are derived from an independent and valid method.

DFS charges an hourly rate for its hazmat vehicles based upon a formula and practices provided by the Massachusetts Department of Revenue *Costing Municipal Services, Workbook and Case Study.* This guide is available on-line (http:// www.mass.gov/Ador/docs/dls/publ/ misc/Costing.pdf). The ability to reference an independent source in development of costs lends credibility to the process.

The Costing Municipal Services guide provides examples of processes to determine costs for various services and projects. DFS hazmat used this guide in developing its calculations for vehicles and non-disposable equipment. By way of example hazmat vehicle rates are calculated by the following equation:

Vehicle and equipment costs/ expected length of service (10 yrs for vehicles and 5 yrs for equipment) plus annual maintenance materials (oil, batteries, tires) and the maintenance costs of equipment (such as meters and SCBA) also divided by the average annual running time/average annual hours running (derived from Hobbs hours meter, not odometer) equals hourly cost of the vehicle and equipment.

These figures are annually reviewed and periodically adjusted when major new equipment is added or operating costs fluctuate significantly.

The next, and probably largest challenge is to determine what vehicles were actually engaged in the operation versus those that simply transported personnel. This is an area that has been challenged and defeated, so extra caution is warranted. When asked, we generally advise the following assessment: was the vehicle itself used to flow water, provide lighting or power, provide a mechanical advantage, or support communications planning

Hazmat Cost Recovery

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or staff functions? If a vehicle performed any of these functions, you can feel comfortable that it was part of the operation. A clear exception is the presence of your ambulance, as its presence on-scene is required by federal regulation. You would require no further justification.

Challenges to bills for vehicles seem to arise for those vehicles that are driven to the scene and shut off, never leaving until the scene is secure or the person driving them is released.

Disposable equipment and/or nondisposable equipment that is damaged or destroyed at the incident are billed on a direct replacement cost. In so doing, the quote or invoice for the equipment replacement becomes an important piece of documentation to retain with the incident record. This category also addresses repairs such as personal protective equipment cleaning or replacement. If replacement is needed, third party (expert) reports that the equipment must be replaced and cannot be cleaned, support the claim and should also be retained.

Finally, personnel costs must be addressed. For the hazmat teams, this calculation is simple as the overtime or replacement personnel costs can clearly be tied to the incident. At the local level, the community may be challenged on its ability to show an extraordinary cost by the responsible party or their insurer. The "trickledown" impact of mutual aid and station coverage is a good measure of these costs. While you may be successful in seeking reimbursement for all personnel, expect a challenge in showing an actual cost relationship. It is also important for departments who have members serving on the state hazmat teams to remember that those personnel will be billed for by DFS and the local department should not include them in a local bill to the responsible party.

Seldom are large hazmat incidents managed without the assistance of other local agencies such as law enforcement and public works and often mutual aid is required. Fire chiefs who have experienced these incidents and successfully sought reimbursement have anecdotally reported a better response when a single consolidated bill for all parties is submitted (except for state hazmat and private clean-up contractors). It stands to reason that, through the local or regional planning committee, other response partners might be urged to preplan their response costs as outlined above.

In preparing a bill, a good final check would be a review before town or city counsel where you are challenged on the costs reflected in your bill. This exercise may identify a single area of potential dispute that may substantially delay reimbursement on the entire response. It is also common to expect a proposed settlement for less than the total cost. Put simply, that's what insurance companies do.

There are specific requirements for notification and discussion with the responsible party and timelines required within M.G.L Ch 21E. These are not discussed here in detail but the entire statute should be reviewed by counsel as part of your local planning process and again throughout the process as you seek reimbursement.

At the end-of-the-day, reimbursement is not assured and can take a long time if challenged. Many businesses that are in the hazardous materials business are well aware of the special risks that they carry and promptly reimburse reasonable costs without argument, but you should be prepared for those that do not.

It is worth a special caution regarding unusual incurred costs. A fire department should be very wary of calling in a private contractor for any services related to the response. It is probable that the contractor will bill the community and require prompt payment and not be willing to assume the risk of responsible party reimbursement or the time required to obtain it. In most instances, the

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Landmark Study

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could extend the findings of the report to quantify the effects of crew size and apparatus arrival times in medium- and high-hazard structures, she said.

The next step for this research team is to develop a training package for firefighters and public officials that would enable them to have both quantitative and qualitative understanding of the research, a project also funded by FEMA's Assistance to Firefighters Grant Program.

The study's principal investigators were Averill, Moore-Merrell and Kathy Notarianni of Worcester Polytechnic Institute. Other organizations participating in this research include the International Association of Fire Chiefs, the Commission on Fire Accreditation International-RISK and the Urban Institute.

The report was funded by the U.S. Department of Homeland Security, Federal Emergency Management Agency's (FEMA) Assistance to Firefighters Grant Program and released today in Washington, D.C., before the start of the annual Congressional Fire Services Institute meeting that draws top fire safety officials from across the nation.

The Report on Residential Fireground Field Experiments, NIST Technical Note 1661, can be downloaded from: http://www.nist.gov/ bfrl/fire_research/residential-firereport_042810.cfm

Founded in 1901, NIST is a nonregulatory agency of the Commerce Department that promotes U.S. innovation and industrial competitiveness by advancing measurement science, standards and technology in ways that enhance economic security and improve our quality of life. ◆

Fire Sprinklers Can Reduce Greenhouse Gases From Building Fires By 98%

New groundbreaking research released from commercial property insurer FM Global and the nonprofit Home Fire Sprinkler Coalition finds fire sprinklers help protect the environment, in addition to preventing property loss and saving lives. Firstof-its-kind scientific research shows conclusively that fire sprinklers not only prevent the devastating impact of fires but also negate significant environmental risks.

Johnston, R.I. (PRWEB) April 13, 2010 -- Greenhouse gases released by burning buildings can be reduced by 98 percent when automatic fire sprinklers are installed, according to a groundbreaking joint research project released today from FM Global, one of the world's largest commercial property insurers, and the nonprofit Home Fire Sprinkler Coalition (HFSC). The research findings also reveal that a single fire in an unsprinklered building can negate the typical environmental benefits of "green" construction.

Scientists at the FM Global Research Campus in Rhode Island, USA complete large scale fire tests that have proven automatic fire sprinklers reduce the amount of air and water pollution released into the environment from building fires and reduce the amount of water usage needed to fight a fire. The first-ofits-kind research was conducted as a partnership between commercial property insurer FM Global and the Home Fire Sprinkler Coalition.

The study, conducted at FM Global's Research Campus in West Glocester, R.I., USA, sought to identify, analyze and evaluate the environmental impact of fires, as well as determine the effectiveness of preventive measures in minimizing their effect on the environment--issues of increasing global significance. The 1,600 acre, US\$125 million Research Campus is one of the largest and most innovative fire and natural hazards research and testing centers in the world.





Sprinkler demonstration at the Department of Fire Services.

Researchers constructed two identical living rooms to represent a setting any homeowner or business owner could relate to. One of the two rooms was protected with a sprinkler and a fire was ignited in each room. As a result, scientists additionally have discovered that automatic fire sprinklers:

- Reduce fire damage by up to 97 percent;
- Reduce water usage to fight a home fire by upwards of 90 percent; and



Photos by: Robert Duval, NFPA

• Reduce the amount of water pollution released into the environment.

"For most of its 175 years in business, FM Global has conducted scientific fire research to develop solutions that help commercial organizations protect their property and operations," said Dr. Louis Gritzo, vice president and manager of research at FM Global. "Fire sprinklers perform the same way, no matter the kind of building, and now we see conclusively that they not only

Massachusetts Bans Novelty Lighters

The Governor signed into law *An Act Prohibiting the Use of Novelty Lighters* on August 9, 2010. This law became effective November 7, 2010. This new law prohibits the manufacture, sale, exchange, storage or transportation of any novelty lighter.

In general, novelty lighter is defined as a mechanical or electrical device. which produces a flame and due to its physical or audio features, would appeal to a child under the age of 10. Such features are those that resemble cartoon characters, toy gun, watch, musical instrument, etc. and which plays musical notes or otherwise displays flashing lights. The thrust of the statute is to prohibit toy like novelty lighters. Violations of the statute are punishable by fines not less than \$500 nor more than \$1,000 or by imprisonment for not more than one year, or both.

The statute contains several exceptions for novelty lighters: (i) collectibles manufactured before January 1, 1980; (ii) disposable or refillable lighters with logos, labels, or other artwork printed on the lighter or on a shrink wrapped sleeve, provided they do not otherwise resemble a novelty lighter; and (iii) lighters not intended for sale or use in the Commonwealth, being transported or temporarily being stored while in interstate commerce.

This is a criminal law. Like all crimes, they are subject to the filing of a criminal complaint in a court of competent jurisdiction (typically, district court). As a practical matter, the head of the fire department (or his designee) should order the individual to cease and desist from the selling, storage, or distribution of these lighters, in violation of the statute (M.G.L. Chapter 148, section 60) and order them off the shelves. If there is no compliance or an unwillingness for the owner to comply, the head of the fire department may seek a criminal complaint in the district court having jurisdiction.

The Department of Fire Services has created a fact sheet on novelty lighters and a copy of the new law. Fire departments are encouraged to distribute these two documents to all retail outlets in the community and follow up with a site visit to those locations to ensure compliance.

For questions please contact the Code Compliance and Enforcement Unit at (978) 567-3375 or in Western, Massachusetts at (413) 587-3181. ◆



Beware! Lighters of this nature are not yet illegal nationwide. Even though your supplier may still offer these items for sale, you <u>MUST</u> not offer for sale, sell, exchange, give away, or stock them in your establishment. Questions? Contact the State Fire Marshal's Office at (978) 567-3712.

DFS Staff Serve Up Scrumptious Buffet

The Department of Fire Services **Diversity Committee celebrated** diversity in the workplace by hosting a potluck luncheon on October 6, 2010. Several staff members, both fulltime and contractor staff, participated by bringing dishes to share that represented their heritage and background. Some of the tasty treats included: Polish kielbasa, Greek salad, Latin American rice and beans, and anise cookies from an Albanian recipe. The Department of Fire Services strives to create a work environment that maximizes the potential of all employees. Diversity is not just about Human Resources policies and practices. It is an integral part of who we are, how we operate and what the Department of Fire Services' vision is for the future. As a public safety agency, our ability to understand, embrace and operate in a multicultural world and provide support systems for groups is critical to our sustainability. We focus on commitment, building a culture that values diverse perspectives, and promoting communication and mutual understanding.

Fire Sprinklers

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prevent the devastating impact of fires but also negate significant environmental risks. This is especially important as more businesses seek to design and build energy-efficient, environmentally sustainable facilities."

According to Gary Keith, HFSC chair, when sprinklers activate, they control the heat, flames and smoke released by a fire, effectively mitigating the products of combustion. "The fire safety community's efforts to increase awareness of all aspects of fire sprinkler technology will benefit from this new environmental data. Consumers, builders, the fire service, code officials and water purveyors now have a new and important way to view sprinkler protection," Keith said.

The complete scientific research findings are available in a downloadable technical report "The Environmental Impact of Automatic Fire Sprinklers" at www.fmglobal.com/ researchreports. A video about the research also can be viewed on YouTube.

http://www.prweb.com/releases/fm_global/hfsc/prweb3859414.htm ◆

Keep Warm, Keep Safe

As the heating season approaches, the Department of Fire Services would like to remind the public and fire educators that we have a lot of

helpful material on our website (www.mass.gov/ keepwarmkeepsafe) about preventing heating fires as part of our Keep Warm, Keep Safe campaign.

Be sure to look at the Keep Warm Keep Safe Toolkit for teaching tools and educational materials in multiple languages. In addition, the television public service announcements in English and Spanish are available for viewing and downloading on the DFS YouTube Channel: www. YouTube.com/DFSOSFM.

Chimney & Woodstove Fire Safety

In 2009, there were 928 fire incidents involving chimneys, fireplaces, and woodstoves. These fires were responsible for:

- 2 civilian deaths;
- 6 civilian injuires;
- · 14 firefighter injuries, and
- \$3.1 million in property losses.

These incidents make up 35% of fires linked to heating systems.

Space Heater Fires

1 of every 7 space heater fires causes a fatality.

Fifty-nine (59) space heater fires were reported to the Office of the

State Fire Marshal between 2005-2009. While these fires are not frequent, they are deadly. One of every seven space heater fires causes a fatality. These fires caused:

- · 8 civilian deaths;
- 7 civilian injuries,
- · 14 fire service injuries; and
- \$3 million estimated dollar loss.

The average dollar loss for a space heater fire is \$42,835.

Twenty percent of these fires were caused when combustible materials such as bedding, magazines, news-papers, clothing or furniture were too close to the heater, and another 7% were caused when rugs, carpets or mats were under or too close to the heater. •

DPH Smoke Alarm Project

The MA Department of Public Health has managed the Residential Fire Injury Prevention Program for nearly a decade, funded by a series of grants from the U.S. Centers for Disease Control (CDC). The project has provided free smoke alarms to local coalitions of fire departments and community groups willing to install smoke alarms, provide in-home fire education (the most effective kind) and conduct a follow-up visit to make sure the smoke alarms are still working.

Last Chance to Participate

The CDC funding for the Smoke Alarm Program at the Massachusetts Department of Public Health will end on September 29, 2011. If your community has not participated in the program it is not too late. If your community did participate previously and completed all requirements you are still eligible. Submit your application now.

Both dual ionization/photoelectric smoke alarms and photoelectric alarms are available. You must partner with a community agency, such as the Council on Aging.

For more information contact: Christine M. Farrell-O'Reilly, Christine. farrell-oreilly@state.ma.us, (617) 624-6076. ◆

Hazmat Cost Recovery

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Massachusetts Department of Environmental Protection is or should be on scene and they may serve to expedite needed services and can undertake the requirement for reimbursement.

With all of this said and done, there will be incidents where reimbursement cannot be obtained and/or where no responsible party can be identified. An avenue for reimbursement to local authorities in such circumstances exists through the U.S. Environmental Protection Agency under 40 CFR 310. This fund may be (subject to approval) available to local authorities, but not state authorities. Like M.G.L. ch 21E, this should be presented to local counsel for review. One critical element of this federal regulation is that the incident commander must notify the National Response Center (800) 424–8802 or (617) 723–8928 during the emergency.

Hazardous materials incidents can be taxing events in terms of immediate resource needs and in costs of operation. Laws recognizing the special responsibility of those using, transporting and manufacturing these materials have been provided to relieve the taxpayer of the costs of these responses where applicable. Attempting to compile a defensible bill for reimbursement after the event without having preplanned for it will prove frustrating. The development of a simple spreadsheet and construction of clear policy will expedite your ability to recover your costs for these incidents, but these should be completed well in advance of the emergency.

For further information, please contact David Ladd at the Department of Fire Services, 978-567-3117 or david.ladd@state.ma.us. ◆



PLANS REVIEW DESK

Most code officials are aware of the fact that "26G" is enforceable in every jurisdiction of Massachusetts now, which requires fire sprinklers in certain structures that are more than 7500 square feet in aggregate area when those structures are new construction, involve additions, or involve substantial renovation. Based on field experience, and feedback from those officials, not all of those in the design/construction community are aware of this recently revised provision of the Massachusetts General Laws (MGL) involving Chapter 148 Section 26G

There appear to be some myths circulating about the relationship between MGL Chapter 148 Section 26G ("26G") and the Massachusetts State Building Code (780 CMR). This edition of Plans Review Desk is aimed at displacing those myths.

First, the recent revisions to 26G became enforceable across the Commonwealth on January 1, 2010. The State Legislature revised the statute through Chapter 508, in the Acts of 2008, out of concerns stemming from a tragic fire in an office building in Newton that occurred in 2000. Five people lost their lives in this day-time workplace fire. Investigators concluded that renovations in the building that had occurred over time, for which no fire protection system upgrades had occurred, as a lead reason for the occupants not being able to get out of the building.

The main confusion with 26G is its relationship with the State Building Code in determining when fire sprinkler systems are required to be installed in buildings. Some are under the false impression that the State Building Code takes precedence in determining if fire sprinkler systems are required to be installed. This view would suggest that a fire sprinkler system would not be required if the Building Code did not require fire sprinkler protection, even if 26G did require such sprinklers. Conversely, some are under the false impression that 26G requires sprinklers for all large structures, and that a review of the Building Code is no longer

necessary to determine if fire sprinkler protection is required. Neither of these impressions is correct.

A correct analysis of whether a structure requires fire sprinkler system protection would need to include a review of the structure against the Building Code and a review of 26G applicability. This is due to the different enforcement mechanisms for the State Building Code and 26G, as well as the difference in sprinkler requirement thresholds. The Building Code is enforced in accordance with Chapter 1 of the Building Code, with an appeal mechanism through the State Building Code Appeals Board. The provisions of 26G are unilaterally enforced by the head of the fire department, with an appeal mechanism through the Automatic Sprinkler Appeals Board. One needs to realize that certain structures could be reguired to be protected by sprinklers per the Building Code when 26G does not, and that other structures may need to be protected by fire sprinklers per 26G when the Building Code does not. In other words, if either the Building Code or 26G requires sprinkler protection, then such protection is required - one provision does not cancel the other.

A complete review of where sprinkler protection is required by either 26G or the Building Code is too detailed for this article. For guidance on enforcing 26G, please visit the DFS website (www.mass.gov/dfs) and search for "Automatic Sprinkler Appeals Board". There is a 10/14/2009 guidance memo from the Board, written decisions from previous 26G appeals, and an unofficial copy of 26G found at the site. Unofficial copies of the Building Code are posted on-line at www.mass.gov/dps

How to contact a Fire Protection Specialist in the Division of Fire Safety (formerly the Office of the State Fire Marshal): for the MA Pike or south – contact Jake Nunnemacher at 978-567-3377 or jacob.nunnemacher@state.ma.us. North of the Mass Pike – contact Dana Haagensen at 978-567-3376 or dana.haagensen@state.ma.us. ◆

statewide mass Decontamination Response System

Communication and Activation Exercises

Over the past year there have been a number of communication and activation exercises that have been conducted to test the readiness of the Massachusetts Statewide Mass Decontamination Response System Plan. These exercises were announced to the fire departments and the hospitals prior to the exercises being conducted.

Through the participation of the fire district control centers, fire departments, the hospital and other response partners in Massachusetts, a few gaps in the plan have been identified through those announced exercises and revisions have been made to improve the plan.

Going forward, the next phase of the exercises will center on improving the response system partners' familiarization with the plan. This will be addressed by conducting periodic unannounced communication and activation exercises.

The activation and communication exercises will follow the guidance contained in the Recommended Standard Operating Guidelines for Mass Decontamination Units and Statewide Mass Decontamination System Activation along with the Statewide Mass Decontamination Response System Plan. The plan outlines which Mass Decontamination Units (MDU) will be activated and deployed based on the location of the city or town along with the

> CONTINUED ON PAGE 16 Photo by: Tom O'Connell



Decontamination Response

Continued from Page 15

Mass Decon activation level (Level A, B, C or D) that is being requested by that city or town.

There are two communication systems within the Statewide Mass Decontamination Response System Plan that are utilized to notify the fire services sector (both hospital covering MDUs and fire district MDUs) and the healthcare infrastructure of an activation of the plan. These communication systems are the NAWAS radios within the Fire District Control Centers and the Massachusetts Health and Homeland Alert Network (HHAN).

A MDU Group has been created within the HHAN to notify the health care infrastructure of an activation of the Statewide Mass Decontamination Response System Plan, however the MDU Group on the HHAN is also open to fire departments operating MDUs.

The Fire District Control Centers and Massachusetts Emergency Management Agency use the NAWAS radio system to communicate information pertaining to the activation of the Statewide Mass Decontamination Response System Plan.

Activation worksheets have been distributed to all of the fire district control centers to facilitate their notification/activation of the fire departments within a fire district that own an MDU. MDUs will be activated according to the plan based on the location of the city or town activating the request and the level of the activation being requested. Every city and town has a page within the plan that identifies the MDUs that would be mobilized to that city or town for the four activation levels that are identified in the plan.

For further information on the Statewide Mass Decontamination Response System Plan and/or to request documents referred to in this article, please contact the Department of Fire Services Hazardous Materials Response Division at (978) 567-3150. ◆

A Brief Overview of Mutual Aid Laws

By: Steven P. Rourke, General Counsel, Department of Fire Services

This article is a refresher to remind you about the importance of M.G.L. Chapter 48, section 59A, mutual aid and will provide you with an overview of the law, participation in mutual aid, and best practices when utilizing such mutual aid.

M.G.L. Chapter 48, section 59A is unique to fire departments and was enacted in 1925 to allow mutual aid fire response in neighboring cities and towns. This statutory authorization for local mutual aid response should not be confused with responses made under the Emergency Management Assistance Compact (EMAC), the International Emergency Management Assistance Compact (IEMAC) or the fire mobilization plan (Executive Order 221), which are made upon either the declaration of an emergency by the governor or in the case of IEMAC, through a memorandum of understanding (MOU) approved by the governor's office and coordinated through the Mass. Emergency Management Agency (MEMA). The authorization for mobilization under EMAC is vested in the governor as the chief executive of the Commonwealth, or his designee, MEMA, and is not a Chapter 48, section 59A response.

Participation in local mutual aid (Chapter 48, section 59A) is voluntary and may be authorized by cities, towns, and fire districts by ordinance or by-law, or by vote of the alderman, selectman or prudential committee or board exercising similar powers. Such authorization allows the fire departments to render aid to another city, town, fire district or area under federal jurisdiction in the Commonwealth or in any adjoining state. Once authorized, the statute allows for cross-jurisdictional emergency response by fire departments to: extinguish fires, render emergency aid or provide any other detail ordered by the head of the fire department. However, the authorization to

the head of the fire department to extend such aid, may be subject to conditions as prescribed in the approval.

In the absence of any agreement to the contrary, the statute assesses responsibility and liability as follows: 1) A municipality rendering aid is responsible for the operation of its own equipment and for any damages that may occur to it; 2) the municipality rendering aid is responsible, "subject to the limitations of municipal liability, for personal injury sustained or caused by a member of its department;" and; 3) the municipality rendering aid is responsible for "any payment which it is required to make to a member of said department or to his widow or other dependants on account of injuries or death." This means that a municipal fire department rendering aid assumes all risk and associated costs for property damage, personal injury to its own firefighters and civilians injured by its firefighters and death benefits for widows or dependants of injured firefighters. The provisions of the Massachusetts Tort Claim Act (Chapter 258) still operate to provide indemnification for liability of firefighters and liability limitations for the rendering city or town. These immunities and privileges extend to the rendering departments as if they were performing their duties in their own city or town.

While mutual aid has become commonplace in today's fire service, I encourage all departments that participate in mutual aid to review their mutual aid agreements. Cities and towns that participate in mutual aid should review what, if any, authorization you have been given in your city, town, or district pursuant to Chapter 48, section 59A. Has the city, town or district authorized you to participate in the statewide mutual aid plan, regional plans or other plans you have? Always review with city or town counsel all plans with an eye toward responsibility for personal injury, death, property loss,

MFIRS Corner

MFIRS Coding Tips for Heating Fires

The reason we offer coding tips and why consistent coding for similar fire incidents is important, is so that the information can be extracted

Fuel Burner/Boiler Malfunction

- Incident Type: Type = 116

 Fuel Burner/Boiler Malfunction, Fire Confined
- Basic Module only if fire is confined, there are no injuries, and dollar loss is <\$5,000.

Chimney or Flue Fire

- Incident Type = 114 Chimney or Flue Fire, Contained to Chimney or Flue.
- Basic Module only if fire is confined, there are no injuries, and dollar loss is <\$5,000.

Unconfined Heating Structure Fires

- Basic Module, Fire Module
 and Structure Fire Module
- Incident Type: 111-112 or 120-123 – structure fire, mobile home
- Heat Source: 10-13 heat from operating equipment or 43 – hot ember/ash
- Type of Material First Ignited: 11-12, gas; 25, oil/kerosene; 34, creosote; 56, coal.
- Equipment Involved in Ignition

120-152 - heating equipment.

- Equipment Power Source Required.
- Equipment Portability Required: 1 – Portable or 2- Stationary.

Some examples are:

Portable electrical heater ignites bedding in an apartment building

- Incident Type = 111 building fire.
- Property Use = 429 multifamily housing.
- Heat Source = 12 radiated heat from equipment.
- Item First Ignited = 32 bedding.
- Type of Material First Ignited = 71 – fabric.
- Equipment Involved in Ignition = 141 – space heater.
- Equipment Power Source = 12 – electric.
- Equipment Portability = 1 portable.

Sparks from a wood burning stove ignite the carpeting in the room on fire

- Incident Type = 111 building fire
- Heat Source = 43 hot ember/ash Item First Ignited = 14 – rug
- Type of Material First Ignited = 70 – fabric
- Equipment Involved in Ignition = 123 – stove.

- Equipment Power
 Source = 41 wood
- Equipment Portability = 2 - stationary

Kerosene heater ignites an interior wall in a mobile home (being used as a fixed structure)

- Incident Type = 121 mobile home.
- Heat Source = 12 –radiated heat from equipment.
- Item First Ignited = 15 interior wall covering.
- Type of Material First Ignited = 65 – particle board.
- Equipment Involved in Ignition = 141 – space heater.
- Equipment Power Source = 33 - kerosene.
- Equipment Portability = 1 portable.

Chimney fire in 1-Family

- Incident Type = 111, building fire.
- Heat Source: 11, flame from operating equipment (fireplace).
- Item First Ignited: 95, chimney film or residue.
- Type of Material First Ignited: 34, creosote.
- Equipment Involved: 126, brick chimney.
- Equipment Power Source: 41, wood.
- Equipment Portability: 2, stationary.

Overview of Mutual Aid Laws

Continued from Page 16

indemnification, etc. If a city, town, or district is comfortable with the standard Chapter 48, section 59A terms regarding liability and costs, that's fine. However, if not, then mutual aid agreements must be revised to reflect the changes agreed to between the parties.

Finally, let me offer a cautionary note about out of state mutual aid response. The statute authorizes fire departments to provide mutual aid in any adjoining state . . . and while extending such aid, the members of that department shall have the immunities and privileges as if performing the same within their respective cities, towns, or districts. However, the granting of immunities and privileges to a Massachusetts firefighter while rendering aid in another state, may only be granted by the approval of that other state through an act of its Legislature. Simply put, Massachusetts cannot extend privileges and immunities outside its borders. While this area is covered under both EMAC and IEMAC, it is not addressed in mutual aid responses undertaken in accordance with Chapter 48, section 59A. Therefore, it is critical that you raise the issue with your city solicitor or a town counsel if you intend to respond out of state, so that they may review and negotiate issues of liability and indemnification for your department if an incident arises out of state. •

After Years of Construction, New DFS Facility Complete

The trailers are gone. The lines are painted in the parking lots. New trees, shrubs and flowers are in the ground. Final touches continue to be made to floors, walls and ceilings. The activity never seems to stop as the new Department of Fire Services' (DFS) headquarters in Stow, MA is nearing completion after three years of ceaseless construction work.

"It is quite an accomplishment to finally complete this complicated project," says State Fire Marshal Stephen Coan, "however, the biggest accomplishment has been that DFS' important work – protecting the public and training firefighters – has continued over the past three years without interruption."

"In addition to meeting the needs of DFS' growing audience," added the marshal. "Another major accomplishment is that our new facility has met the criteria for being LEED Gold certified and has recently been recognized by the Commonwealth of Massachusetts with a 2010 Leading by Example Award."

This extensive construction project actually began over 10 years ago with an appropriation of funds from the state legislature for the expansion of the Massachusetts Firefighting Academy (MFA) and the Department of Fire Services. Originally, the Stow training location with its burn building, training tower and gas school, was completed in 1998 and only housed the MFA. With the The new DFS needed office and training space for the MFA staff and instructors plus: the Fire Safety Division (formerly known as the Office of the State Fire Marshal), which included Code Compliance, Fire Data and Public Education staff; the MA State Police members of the Fire Investigation and Hazardous De-

It is quite an accomplishment to finally complete this complicated project.
 However, the biggest accomplishment has been that DFS' important work
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- State Fire Marshal Stephen Coan

creation of the larger "umbrella" fire protection agency, the Department of Fire Services in 1996, additional office space was needed as this new agency combined the MFA and the Hazardous Materials Response Program with the State Fire Marshal's Office, which had been based in Boston. vices Unit; the technical experts and support staff of the Hazardous Materials Response Unit; administrative support people in fiscal, information technology and facilities.

Construction of the new DFS facility began in earnest in August 2007 with CONTINUED ON PAGE 19



DFS Facility Complete

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a new waterline along State Road from the Sudbury Water District to the Stow location. This new line was needed in order to provide a reliable source of drinking water. During this phase, clearing trees throughout the site began to eventually allow for the construction of new buildings, an expanded septic system and larger parking lots.

In 2008, work pushed ahead even in the winter months. Excavation for the foundation of the new warehouse was completed and some work began on the area for the new administration building's foundation. By-mid winter, the foundation and steel frame of the new warehouse were completed as work continued on the new waterline and additional drainage areas. At the end of the winter, five trailers were moved on site at the front of the DFS parking lot, across from the MFA building facing State Road. These trailers temporarily housed office space, classrooms and meeting rooms for the next two and half years.

Construction on the main structures of the new facility progressed at a quick pace through the end of 2008 and throughout 2009. The warehouse finally opened in March 2009. During this time, work moved ahead on the Administration Building, which officially opened in August 2009. Then DFS staff moved out of the trailers and the MFA building and into the new Administration Building. All of the MFA staff now moved out and into the trailer office space and the classroom/meeting space in the trailers remained the same. Retrofitting of the MFA building began full time in fall of 2009.

The new 10-bay fire station, and a five-bay maintenance area was completed and opened in September 2009. Finally, new space to adequately house training apparatus and maintenance equipment as well as provide additional training space was complete.

The new "crib room" and locker room area opened a month later which allowed for expanded shower space





(Opposite Page) The Link, (Top) Warehouse, (Bottom) MFA Building.

Photos by: Donna Nelson

for recruits and instructors as well as better access to training equipment.

The finishing touches to the DFS expansion project took place at the end of 2009 and through most of 2010 with the continued retrofitting of the MFA building and completion of the "Link" which connects the administration, the fire station/crib room and MFA buildings.

In the MFA building, the former vehicle maintenance bays have been converted into two large classrooms, one for up to 72 students and the other for 50 students. The former auditorium was slightly downsized to 50 seats but has been made handicapped-accessible along with the rest of the project. The three other former first floor classrooms remain but one has been expanded and converted into a computer lab. The former crib room area has been totally changed and converted into nearly 100 lockers and showers for both male and female students. The former fire station area has been enclosed and will be used as a physical training area and meeting space. The second floor of the MFA building will remain as administrative staff office space but the work area has been improved with updated workstations, revamped offices and more windows for natural light.

MFA staff and the recruit classes moved out of trailers and into the "new" MFA building in August 2010. The Link, which is comprised of mostly glass and metal, eloquently connects all the buildings while allowing for both small and large seminar space (up to 125 people), a new state-of-the-art kitchen area and a cafeteria seating area for up to 125 people. Completion and full occupancy of the Link happened in mid-November 2010. ◆

A Fire in Boston

By: Nancy Walsh, October 26, 2010

The recent report of the deliberate infection of Guatemalans with syphilis in the 1940s to see if penicillin could cure and prevent transmission of the disease was a reminder of just how short the time has been since most infectious diseases were untreatable. Penicillin – discovered by Scottish biologist Alexander Fleming in 1928 but not available for clinical use until the 1940s - initially was largely reserved for use by the military, saving many wounded soldiers on the battlefields of World War II who otherwise would have died of their infected wounds.

At the time, few civilians had been treated with penicillin, until a Saturday night in late November of 1942, when a catastrophic fire broke out in a popular Boston nightclub, the Cocoanut Grove. That day, a much anticipated football game between archrivals Boston College and Notre Dame was played, with the home team strongly favored to win. A festive post-game celebration had been planned by B.C. fans, but was canceled after their disappointing rout by the out-of-towners.

The nightclub was packed anyway, with many servicemen in town for the weekend, and when fire broke out most were trapped -- the club had only a single, revolving door entrance. The Boston newspaper headlines the next morning announced that 450 people had died in the worst fire in the country in 40 years. (Another 42 died in the days that followed from injuries sustained in the fire.)

Most of the victims were taken to the city's large hospitals, and many were already dead or succumbed shortly after arrival. Those who had been sent to Massachusetts General Hospital and survived their initial injuries were given a "miracle drug," as penicillin was soon called, a small amount of which had been rushed to the hospital from the Merck manufacturing facility in Rahway, N.J. The drug could quickly cure the severe, often lethal, staphylococcal

DFS Receives LEED Award

The Department of Fire Services is the recipient of one of the 2010 Leading by Example Awards for our innovative, new facility. State Fire Marshal Coan was honored to accept this award with members of our construction team on behalf of DFS at an Oct. 19 awards ceremony at the State House with Governor Patrick.

The Leading by Example Awards recognize outstanding efforts among Commonwealth agencies, public higher education institutions, and municipalities that have established and implemented policies and programs resulting in significant and demonstrable environmental benefits including energy efficiency, renew-

What is LEED?

LEED (Leadership in Energy and Environmental Design) certification is the recognized standard for measuring building sustainability. Achieving LEED certification is the best way to demonstrate that a building project is truly "green.".

The LEED green building rating system – developed and administered by the U.S. Green Building Council, a Washington D.C.-based, nonprofit coalition of building industry leaders – is designed to promote design and construction practices that increase profitability while reducing the negative environmental impacts of buildings and improving occupant health and well-being.

A Fire in Boston

Continued...

infections that patients with burndamaged skin can acquire, and the Mass. General physicians managed to save far more victims than had been possible previously

In my years as a medical writer I've written a good deal about infections and antibiotics, and my father often told me the story of the Cocoanut Grove fire. In 1942 he was serving in the Navy in Boston, and as a lifelong able energy, water conservation, and waste reduction.

The Leading by Example Awards are given by the Leading by Example Program (LBE) that was established in April 2007 by Governor Deval Patrick's Executive Order No. 484, "Leading by Example - Clean Energy and Efficient Buildings". The program is overseen by the Executive Office of Energy and Environmental Affairs (EEA) and the Executive Office for Administration and Finance (A&F).

To view photos of this year's LBE awards ceremony, visit EEA's Flickr page. http://www.flickr.com/photos/masseea/5097397338/in/set-72157625199007824/ ◆

LEED certification, which includes a rigorous third-party commissioning process, offers compelling proof that environmental goals are achieved and that a building is performing as designed. The LEED rating system offers four certification levels for new construction - Certified, Silver, Gold and Platinum – that correspond to the number of credits accrued in five green design categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources and indoor environmental guality. LEED standards cover new commercial construction and major renovation projects, interiors projects and existing building operations.

B.C. fan, had intended to attend the victory party. After his team lost, he stayed home that night -- so I got to be here, and my father lived another 63 years.

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LICENSING EXAMS

The Division of Fire Safety issues licenses to people and companies engaged in fireworks, blasting, explosives, cannon and mortar firing, special effects, special hazard systems, portable fire extinguishers and commercial kitchen exhaust systems. Information on applications, exam dates, to obtain new licenses, or to renew existing licenses may be obtained by calling 978-567-3700. Examinations for licenses are held quarterly.

Filing deadlines, exam locations, dates and times can be found online

at: http://www.mass.gov/dfs/osfm/ license_exams.htm.

All license exams are offered at both Department of Fire Services locations: State Road in Stow, MA and One Prince Street (Northampton State Hospital) in Northampton, MA.

Applicants must be pre-registered for all license exams, no walk-ins permitted. Completed applications must be received by 5:00 p.m. on the deadline date listed below. If an application is received after the applicable deadline, the applicant will not be allowed to sit for the exam.

Directions to our offices are listed on the web at:

http://www.mass.gov/dfs/about_dfs/ dfsmap.htm

A list of study materials for each examination are listed on the web at: http://www.mass.gov/dfs/osfm/license_exams.htm

All exams begin promptly at 9:00 a.m. unless noted otherwise.

2011 License Examination Schedule

Examinations

Fire Extinguishers Commercial Hood Cleaning

Cannon/Mortar Fireworks & Special Effects Blasting, Blasting R&D Commercial Hood Cleaning

Examination Dates

January 26, 2011 (Wednesday) April 27, 2011 (Wednesday) July 20, 2011 (Wednesday) October 12, 2011 (Wednesday)

February 23, 2011 (Wednesday) May 18, 2011 (Wednesday) August 17, 2011 (Wednesday) November 16, 2011 (Wednesday)

Application Deadlines

January 14, 2011 (Friday) April 15, 2011 (Friday) July 8, 2011 (Friday) October 7, 2011 (Friday)

February 11, 2011 (Friday) May 6, 2011 (Friday) August 5, 2011 (Friday) November 4, 2011 (Friday)

STATUS REPORT OF Compliance and Enforcement Actions

The following is a status report of recent compliance and enforcement actions taken by the Department of Fire Services against individuals or companies for violations of MGL Chap. 148 and 527 CMR. The status of the action is provided and notation

is made regarding the effective date of the action. While other actions may be pending, only those individuals or companies who have had administrative hearings with decisions rendered will be documented in this space. Should there be any question regarding the status of any license or certificate, please call the Division of Fire Safety at any time for verification at 978-567-3700. ◆

Compliance and Enforcement Actions by the Department of Fire Services

Name	Action Taken	Terms	Ends	
Blasting Certificate of	Competency			
Anderson, David V.	1-year suspension	Probation	11/3/2011	
Fireworks Certificate o	f Competency			
Arnold A. Villatico	1-year suspension	Completed; not renewed		
Fire Equipment Certific	cate of Competency			
James Tecce	Permanent Revocation	Prohibited from ever holding a business reg. of any kind from DFS		

GRADUATIONS

MFA Graduating Classes

Recruit Class #187

Recruit class #187 graduated on June 11, 2010. The ceremony took place at the Assabet Valley Regional Technical High School in Marlborough, MA.

46 Graduates from 20 Fire Departments

The 46 graduates, 44 men and two women, represent the 20 departments of: Agawam, Bedford, Beverly, Burlington, Cambridge, Duxbury, Holden, Lowell, Manchester-bythe-Sea, Marblehead, Methuen, Northampton, Revere, Somerville, Sudbury, Walpole, Wellesley. Wellfleet, Westford, and Woburn.

Revere Fire Chief Eugene Doherty Addressed Recruits

Revere Fire Chief Eugene Doherty addressed the recruits. He was appointed to the department in 1976 and grew through the ranks to the position of chief in 2001. He is a member of the state HazMat team and also the FEMA, Urban Search and Rescue Team. He was also the recipient of the DFS Firefighter of the Year award for meritorious service in 2004 and 2006.

Recruit Class #188

State Fire Marshal Stephen D. Coan and Massachusetts Firefighting Academy Director Edmund M. Walker announced the graduation of the 188th class of the Massachusetts Firefighting Academy's sixtyday Recruit Firefighting Program on Sept. 24, 2010. The ceremony took place at the Assabet Valley Regional Technical High School in Marlborough, MA.

45 Graduates from 25 Fire Departments

The 45 graduates, 43 men and two women, represent the 25 departments of: Acton, Attleboro, Belmont, Beverly, Billerica, Canton, Devens, Fitchburg, Framingham, Holbrook, Holden, Ipswich, Longmeadow, Lowell, Milton, North Attleboro, North Reading, Oxford, Stow, Swampscott,





Wakefield, Walpole, Westfield, West Springfield, and Wilmington.

MFA Deputy Director Mark Pare Addressed Recruits

Massachusetts Fire Academy Deputy Director Mark Pare was on the Providence Fire Department for 29 years, retiring as assistant chief. He served from 2008-2010 as chief of the Wrentham Fire Department and joined the fire academy as deputy director in May 2010. He has been an instructor with the Rhode Island Fire Academy for 20 years and is a graduate of the Executive Fire Officer Program at the National Fire Academy. •