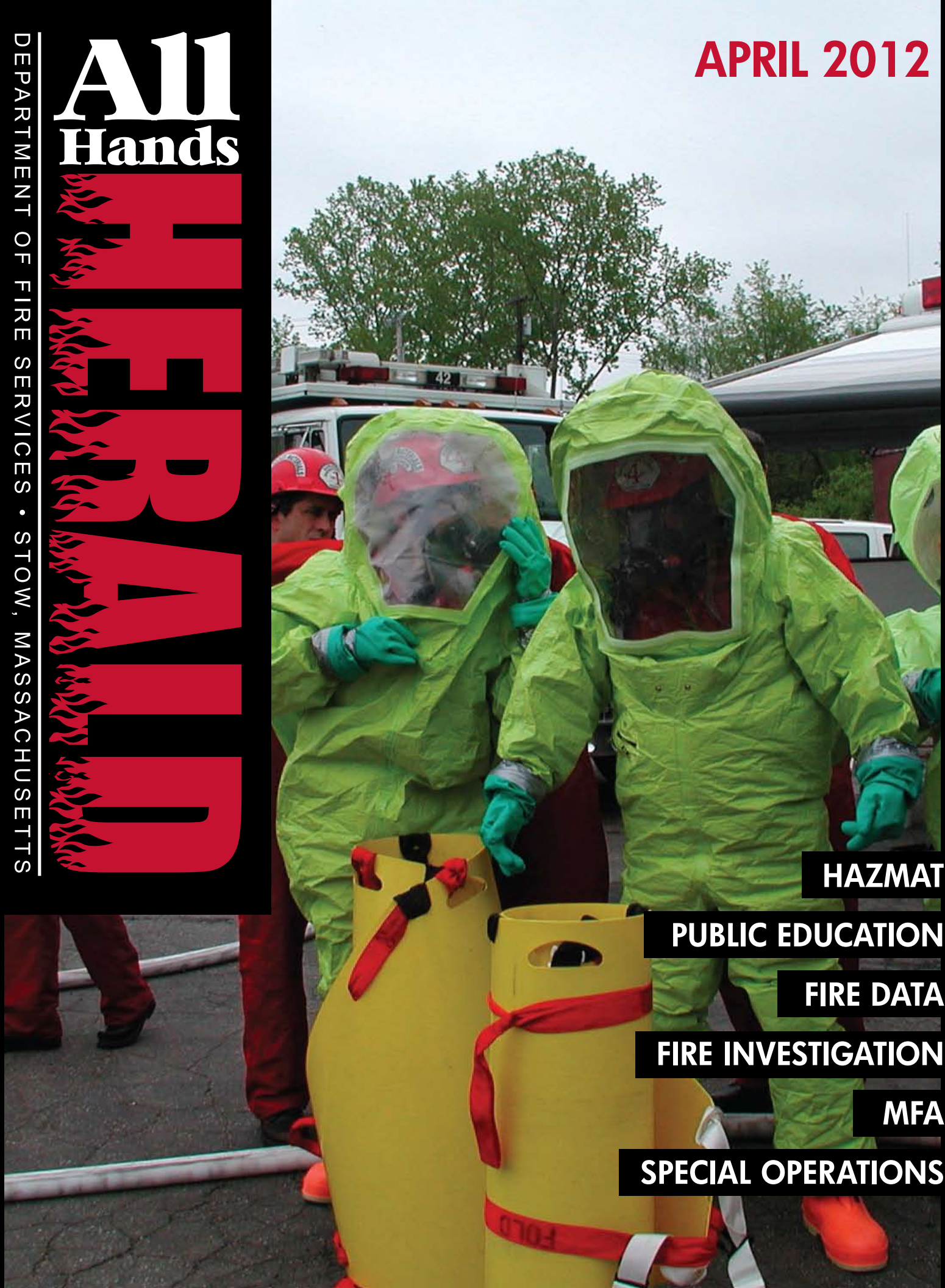
All Hands HERALD

DEPARTMENT OF FIRE SERVICES • STOW, MASSACHUSETTS

APRIL 2012



HAZMAT

PUBLIC EDUCATION

FIRE DATA

FIRE INVESTIGATION

MFA

SPECIAL OPERATIONS

FEATURED ARTICLES

CONTENT

Cover Photo by Tom O'Connell.

ABOUT The All Hands Herald

Editor
Jennifer Mieth

Copy Editor
Lorie Anderson

Graphic Artist
Meaghan O'Connell

The *All Hands Herald* is published three times a year by the Department of Fire Services. 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
Public Information Officer
Department of Fire Services
1 State Road | Stow, MA | 01775
Jennifer.Mieth@state.ma.us
978-567-3381

FROM THE FIRE MARSHAL

All Hands HERALD
DEPARTMENT OF FIRE SERVICES • STOW, MASSACHUSETTS

There have been many changes in the Executive Office at the Department of Fire Services already this year. The most personally significant is the retirement of Barbara Steele who has been my executive assistant since the very beginning. Many people think of her as the "real state fire marshal" for all her organizational skills that have kept the agency humming along. I want to say thank you to Barbara for her friendship and decades of hard work on behalf of the fire service.

Peter Ostroskey has moved from Uxbridge fire chief to deputy state fire marshal and has hit the ground running. Peter has the right combination of fire service and state agency management experience that make him the ideal candidate for this position. He has thirty years of experience in the fire service, rising through the ranks from private to chief the last eight years. Previously he was the deputy director of the Statewide Emergency Telecommunication Board now known as the State 9-1-1 Department. I want to thank Peter for joining the DFS staff.

Kevin Partridge, who came to DFS after serving as fire chief in Berkley and Avon, left DFS to become the fire chief in Easton. The firefighters and citizens of Easton will find him to be a thoughtful, hard working and dedicated leader. I want to thank Kevin for his hard work here at DFS and am glad that I will be able continue to count on his advice and expertise.

SPRINGFIELD ACADEMY ACQUISITION

The process of the state acquisition of the Springfield Fire Training site is moving forward. In March, the Springfield City Council voted to accept the state's offer. Once the Department of Capital Asset Management completes the transfer, we hope to move forward quickly to renovate and equip the facility.

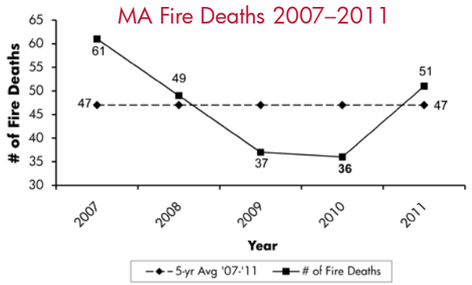
FIRE DEATHS IN 2011

After successive years of new record low numbers of fire deaths in the Commonwealth in 2009 and 2010, the huge jump in fire deaths in 2011 was extremely upsetting. Fire deaths jumped from an all time low of 36 in 2010 to 51 in 2011, a 42 % increase. The only silver lining to these numbers is that 2011 was the first year that we know of, where no one under the age of 18 died in a structure fire. We almost made it through the entire year without anyone under 18 dying in any fire at all, but a 17-year old girl died in a motor vehicle fire in the final days of the calendar year. I strongly believe that the lack of under 18 structure fire deaths in a year where total fire deaths increased significantly is a testament to the success of the Student Awareness of Fire Education (S.A.F.E.) Program.

People over 65 accounted for 43% of the fire deaths last year, up from the usual 33%. We are working with members of the Legislature who are considering expanding the S.A.F.E. Program to protect our seniors as well.

CONTINUED ON PAGE 2

FIRE MARSHAL *CONTINUED FROM PAGE 1*



FIRE PREVENTION OFFICER TRAINING AND CREDENTIAL

We achieved an important milestone this January with the launch of the Basic Level of training and credentialing for fire prevention officers. The Level I and Level II components are being finalized and will be launched later this year. The response to this from the fire service has been enormous which indicates how great the need is for this training. We all know that effective fire prevention is the key component of safety for both the people we protect and the firefighters who respond.

QUINCY LANDLORD CONVICTION

Three landlords have been found guilty of manslaughter for a fatal fire that took place in a Quincy illegal basement apartment. I want to commend Norfolk District Attorney Morrissey for pursuing this case. This is the first conviction under the new statute MGL C 148 s 34B that provides stronger accountability for those who wantonly or recklessly violate state fire or building codes and cause bodily harm or death. The statute was part of the comprehensive Massachusetts Fire Safety Act passed in 2004 in response to the Rhode Island Station Nightclub fire.

I responded to this tragic fatal fire and saw the living conditions and the illegal basement apartment first hand. I personally asked former District Attorney Keating to see if this case met the burden of proof for this new law as landlords who put their tenants at risk must be held accountable.

This was a case of excellent work by the Code Compliance and Enforcement Unit who worked closely with local officials and the State Police South Team that provided the district attorney with a strong case to bring forward. The Quincy Fire Department, Quincy Police Department, State Police assigned to the Office of the State Fire Marshal and to the Norfolk District Attorney's Office, jointly investigated the fire.

NEW PROCESSING HAZARDOUS MATERIALS REGULATIONS

The Board of Fire Prevention Regulations has created a new regulation, 527 CMR 33 that regulates hazardous material processes. This regulation is the result of years of work to regulate the processing industry as a result of several explosions (Leominster, Danvers and Middleton). The goals of the regulation are to protect the public and responding fire service personnel from fire and explosion hazards resulting from processing chemicals. This is done by establishing thresholds for reviewing the controls over processes in accordance with accepted industry practices. Through permitting and self-identification, it is the goal that these companies and their local fire departments discuss what is taking place at facilities and how the hazards are being controlled. It is to highlight the importance of necessary controls being in place to prevent and mitigate explosions. The regulation requires interaction with the incident commander to ensure appropriate plant personnel are available to assist the local fire departments in understanding their processes and in times of emergency, proper shutdown techniques, so as not to create worse conditions.

The Division of Fire Safety will be delivering training on these new regulations. It is important for fire prevention and operations officers to familiarize themselves with these regulations and the new permits it requires. The first permits are not required until January 1, 2013 and they are phased in over time for different classes of hazards.

The Division of Fire Safety is also in the process of hiring a chemical engineer who will be able to provide expertise to the agency and guidance to local fire departments as we move forward to implement these new regulations. ▪

MaSAFE PRESENTS TOPSFIELD FIRE CHIEF GIOVANNACCI

2011 Fire Chiefs' Leadership in Fire Education Award

Captain Rick Tustin, president of the Massachusetts Association of Fire and Safety Educators, (MaSAFE), presented the Fire Chiefs' Leadership in Fire Education Award to Topsfield Fire Chief Ronald P. Giovannacci at the Fire Chiefs' Association of Massachusetts' (FCAM) annual professional development conference on February 9, 2012 in Boxborough, MA. Citations were also presented to Chief Joseph Bosselait of Groton and Chief James Doyle of Rockport.

Tustin said, "Chief Giovannacci's mantra is 'help the people.' Instead of seeing fire education as a place for cuts in times of bare bones budgets, he stretches his suppression dollars wisely by preventing as many fires as possible and by building as many coalitions with others as he can. His vision of the community is one where the citizens know how to be safe and the firefighters and paramedics are there when the inevitable emergencies happen. And every member of the fire department knows he is enthusiastically committed to this vision."

Chief Giovannacci said, "I appreciate this honor but it reflects more on the great people in the Topsfield Fire Department and in the other agencies we collaborate with."

MaSAFE created the Fire Chief's Leadership in Fire Education Award to honor fire chiefs for excellence in leadership of community fire education efforts. Often these efforts are behind the scenes and not readily noticed. No community fire educator can be successful without the support of the fire chief. Introducing the award, retired Mendon Fire Chief Charlie Johnson said, "Fire chiefs know that our responsibility is to not only respond to and suppress fires but also to prevent them from happening. There is no better way to accomplish this than with prevention through education."

CHIEF RONALD P. GIOVANNACCI, TOPSFIELD FIRE DEPARTMENT

Chief Ronald P. Giovannacci was nominated for his dedication and support of his department's Student Awareness of Fire Education or S.A.F.E. Program activities and to his community's fire prevention efforts especially during tough budget times. He helped develop and then participated in the implementation of various school events including lock-down drills, evacuation drills and reading programs. As a member of the Topsfield Elementary School Committee, he worked toward regionalization of resources including Fire Prevention Grants, equipment and the S.A.F.E. Program. Through his work and volunteer efforts, he helped build and strengthen partnerships with Topsfield's law enforcement agencies, elementary schools and Council on Aging. He supported firefighter training and education toward public education. He supported his department's child passenger safety seats inspection program.

CHIEF JOSEPH BOSSELAIT, GROTON FIRE DEPARTMENT

Chief Bosselait has invested his limited resources into public education programs for school children and older adults, uses bill stuffers and local media to disseminate regular fire safety messages, and uses every community event as an opportunity to educate the general public. He has demonstrated leadership by forging strong relationships with other agency heads including the superintendent of schools, the senior center director, and the housing authority director. Chief Bosselait believes that prevention stretches suppression dollars, but more importantly realizes that

CONTINUED ON PAGE 7

RADIATION RESPONSE GUIDANCE

By Tom O'Connell, DPH Liaison

A number of agencies have purchased radiation detection equipment to meet the capability to detect and measure radiation that may be present at a response due to accidental or nefarious incidents.

Having the equipment is one thing, knowing how to use the information being displayed to interpret the hazard, make notifications, implement control zones and manage exposure due to the hazardous materials is another.

Let's explore some answers to "I have an instrument to measure radiation, what do I do next?"

First responders of all disciplines may be the first people to be aware of the presence of radiation at an incident or during the conduct of their typical daily field duties.

Responders can identify the potential presence of radiation by looking for visual clues such as the various signs, markings, labels and placards that are used in shipping, transport and at fixed facilities that use and possess radiation sources or devices that produce radiation (see http://hps.org/hsc/documents/EPR_FirstResponder_web.pdf pages 38-39, and http://www.remm.nlm.gov/radsign.htm for some of the visual clues that are associated with radiation).

The U.S. Department of Energy has developed a very useful radiation job aid that can be laminated and placed in all response vehicles. The radiation job aid has visual clues and basic radiation response guidance. The majority of radioactive materials that responders could encounter would be legally transported over the roads and are used for medical, industrial, research and academic applications (see http://hps.org/hsc/documents/dot_quick_reference_sheet.pdf).

As radiation cannot be detected by any of the human senses, it is very appropriate that first responders utilize a radiation detection or measurement tool to identify its presence above the normal background levels that exist in the community.

Since there are multiple first responder disciplines it should come as no surprise that each responder group may have a different mission. These mission differences can place individuals closer to a radiological impacted area and therefore pose a greater potential of receiving higher radiation doses and of working in higher dose rate fields.

The mission of law enforcement is typically in the realm of interdiction. Active radiation monitoring while on routine patrol or during a response to an incident will warn responders of the presence of radiation. Once warned of the presence the responder can then take appropriate actions to address the safety of the response personnel, to investigate why the radiation is present, to isolate the area and to notify additional responder assets.

It must be mentioned that although radiation may be detected by these devices and the detection must be investigated, there are circumstances where the increase in radiation levels may be due to the presence of naturally occurring radioactive materials in building materials, legal uses of radiation sources in industry and medical settings, or from patients that have undergone medical treatment using sources of radiation, as opposed to nefarious activities.

At any response where radiation has been identified the radiation authority for your jurisdiction should be notified (see http://www.crcpd.org/Map/RCPmap.htm for state radiation authorities in the United States). The radiation authority may also be able to give you specific state guidance for radiation response and provide radiation response personal and equipment. It is always best to involve them in your development of a plan for a response to a radiation incident as opposed to when you are actively involved in an incident. The radiation authority in Massachusetts is the Department of Public Health's Radiation Control Program (telephone number 617.242.3035).

There are documents that can be used during the development of plans for a response to an incident involving radiation. These documents can also help create response guidance for your agency. These include the National Council on Radiation Protection (NCRP) Report 138 Management of Terrorism Events Involving Radioactive Material, NCRP Report No. 165 - Responding to a Radiological or Nuclear Terrorism Incident: A Guide for Decision Makers (2010) and NCRP Commentary No. 19 - Key Elements of Preparing Emergency Responders for Nuclear and Radiological Terrorism (2005) (available for purchase at http://www.ncrppublications.org); International Atomic Energy Agency Manual for First Responders to a Radiological Emergency 2006 (free at http://hps.org/hsc/documents/EPR_FirstResponder_web.pdf) and the ASTM International Standard Practice for Radiological Emergency Response Designation: E2601–08 (available for purchase at http://www.astm.org/Standards/E2601.htm).

The ASTM radiation response standard is also available through the Responder Knowledge Base (RKB) website (https://www.rkb.us). You can subscribe to the Responder Knowledge Base for free. Once you have an account on the RKB, login and go to the RKB Recommends Section on the home page. Within that section you will find a link that allows access to ASTM Committee E54 standards. The U.S. Department of Homeland Security makes the ASTM Committee E54 standards available to Federal government and responder users of the RKB. The ASTM standard can also be found at https://secure6.astm.org/STORE/review_order.html.

Your jurisdiction should develop guidance for

ELECTRONIC DOSIMETER ALARM POINT GUIDANCE TABLE 1

Alarm Set Point Type	Reading[3]	Comments[1, 2]	Responder Actions
1st Dose Rate	2 mrem/hr	This is a generally accepted value to be used to establish the hot zone (exclusion area) for a response to a transportation accident involving radiation.	Continue rescue and investigation activities. Establish exclusion zone.
2nd Dose Rate	10,000 mrem/hr (10 rem/hr)	Recommended value listed in National Council on Radiation Protection and Measurements Report Number 138	Leave the area unless rescue of known victims can be accomplished efficiently and within guidance values for accumulated dose alarms to responders. Accumulated doses greater than 10 rem must be carefully considered. Seek expert advice.
1st Accumulated Dose	2500 mrem (2.5 rem)	This is one-half of the 5,000 mrem annual regulatory exposure limit for occupationally exposed radiation workers. (U.S. Nuclear Regulatory Commission 10 CFR Part 20)	
2nd Accumulated Dose	10000 mrem (10 rem)	This is less than one-half the 25,000 mrem dose value listed in EPA 400-R-92-001 for lifesaving or protection of large populations. Recommended value listed in National Council on Radiation Protection and Measurements Report Number 138.	

1. REM refers to all exposure pathways. If proper respiratory protection is being used, the internal pathways contributions to dose are minimal.
2. Basis of the value used is taken from the document indicated in the table Comments column.
3. At the listed values, no immediate health effects from the radiation exposure would be observed in the responder.

DOWN-RANGE STAY TIME TABLE 2

DOSE RATE	ACCUMULATED DOSE TARGET	DOWN RANGE TIME
10,000 mrem/hr (10 Rem/hr)	25,000 mrem (25 Rem)	150 minutes (2.5 hours)
10,000 mrem/hr (10 Rem/hr)	10,000 mrem (10 Rem)	60 minutes (1 hour)
10,000 mrem/hr (10 Rem/hr)	5,000 mrem (5 Rem)	30 minutes
10,000 mrem/hr (10 Rem/hr)	2,500 mrem (2.5 Rem)	15 minutes
10,000 mrem/hr (10 Rem/hr)	1,000 mrem (1 Rem)	6 minutes
DOSE RATE	**ACCUMULATED DOSE TARGET**	**DOWN RANGE TIME**
2,500 mrem/hr (2.5 Rem/hr)	25,000 mrem (25 Rem)	600 minutes (10 hours)
2,500 mrem/hr (2.5 Rem/hr)	10,000 mrem (10 Rem)	240 minutes (4 hours)
2,500 mrem/hr (2.5 Rem/hr)	5,000 mrem (5 Rem)	120 minutes (2 hours)
2,500 mrem/hr (2.5 Rem/hr)	2500 mrem (2.5 Rem)	60 minutes (1 hour)
2,500 mrem/hr (2.5 Rem/hr)	1,000 mrem (1 Rem)	24 minutes
DOSE RATE	**ACCUMULATED DOSE TARGET**	**DOWN RANGE TIME**
1,000 mrem/hr (1Rem/hr)	25,000 mrem (25 Rem)	1,500 minutes (25 hours)
1,000 mrem/hr (1Rem/hr)	10,000 mrem (10 Rem)	600 minutes (10 hours)
1,000 mrem/hr (1Rem/hr)	5,000 mrem (5 Rem)	300 minutes (5 hours)
1,000 mrem/hr (1Rem/hr)	2,500 mrem (2.5 Rem)	150 minutes (2.5 hours)
1,000 mrem/hr (1Rem/hr)	1,000 mrem (1 Rem)	60 minutes (1 hours)
DOSE RATE	**ACCUMULATED DOSE TARGET**	**DOWN RANGE TIME**
200 mrem/hr	25,000 mrem (25 Rem)	7,500 minutes (125 hours)
200 mrem/hr	10,000 mrem (10 Rem)	3,000 minutes (50 hours)
200 mrem/hr	5,000 mrem (5 Rem)	1,500 minutes (25 hours)
200 mrem/hr	2,500 mrem (2.5 Rem)	750 minutes (12.5 hours)
200 mrem/hr	1,000 mrem (1 Rem)	300 minutes (5 hours)
DOSE RATE	**ACCUMULATED DOSE TARGET**	**DOWN RANGE TIME**
2 mrem/hr	25,000 mrem (25 Rem)	750,000 minutes (1.4 years)
2 mrem/hr	10,000 mrem (10 Rem)	300,000 minutes (208 days)
2 mrem/hr	5,000 mrem (5 Rem)	150,000 minutes (104 days)
2 mrem/hr	2,500 mrem (2.5 Rem)	75,000 minutes (53 days)
2 mrem/hr	1,000 mrem (1 Rem)	30,000 minutes (21 days)

The method to calculate down-range time in minutes is to divide the Accumulated Dose Target (mrem) by the Dose Rate (mrem/hr). The result of the division equals the Down-Range Time in hours. To calculate the number of minutes of down range time, multiply the Down-Range Time in hours value by 60 minutes per hour. This value will now be the down range time in minutes. The following operational conditions have to be taken into consideration when considering the down range time that an entry team can spend in the exclusion zone.

1. Time to get from the entry location to the work location.
2. The amount of time that has been projected to complete a mission.
3. The time it takes for the entry team to leave the work area and arrive back at the exclusion zone/decontamination corridor.
4. The amount of time needed to be surveyed and/or decontaminated.

radiological response based on the local jurisdiction. The guidance your jurisdiction develops should be used as a starting point for radiological response and be adjusted based on the incident type and phase of the incident. In longer operations, radiation dose management will be implemented to keep doses as low as reasonably achievable.

Table 1 (page 5) is an example of a radiation dose and dose rate table along with the action taken when measured accumulated dose or dose rate is measured. Most electronic dosimeters sold these days will allow the user to program into the devices preset alarm points. This table was developed using a number of the documents listed above.

Table 2 (page 6) is an example of a generic stay time table. The table is based on selected dose rates and the amount of exposure that any one responder is limited to receiving while in the field of radiation. Incident stay-time tables should be developed based on the radiological conditions that exist at an incident. A generic job aid is always good to have as quick reference for an initial response starting point.

There are various free training programs that are available to response organizations. The following are two different training programs that are delivered at your location that are free of charge:

- The U.S. Department of Energy Transportation Emergency Preparedness Program MERRTT course (http://www.em.doe.gov/Transportation/TEPP_Home.aspx)

Members of the DFS HazMat team. Photo by Tom O'Connell.

- Counter Terrorism Operations Support (CTOS) – Center for Radiological/Nuclear Training (http://www.ctosnnsa.org/index.html)

The three radiation job aids that should prove useful to your personnel are:

- U.S. Department of Energy radiation job aid that can be laminated and placed in all response vehicles. The radiation job aid has visual clues and basic response guidance. (http://hps.org/hsc/documents/dot_quick_reference_sheet.pdf)
- Electronic Dosimeter Alarm Point Guidance Table 1
- Down-Range Stay Time Table 2 ▪

MASAFE AWARD CONTINUED FROM PAGE 3

his community expects him to help them stay safe in the first place and prevent the need for fire or emergency medical services. He invests in training his people in public education and demonstrates his belief that a fire chief must be the lead fire educator in the community by keeping his own skills up to date. His staff says that he leads by example whether it is community-reading day, visiting the senior center, or answering questions wherever he meets townspeople. Groton had three young heroes from the S.A.F.E. Program – three sisters.

CHIEF JAMES DOYLE, ROCKPORT FIRE DEPT.

His school principal with whom he has developed a close working relationship nominated Chief James Doyle. Because Chief Doyle is the sole fire educator in his small volunteer department, he gets to personally meet all the students in his school and develop a rapport with them. One of the projects he is involved in is the school's Halloween parade to a local nursing home, connecting two important segments of the community.

PAST RECIPIENTS

Worcester Fire Chief Gerard Dio was the 2010 honoree. Chief David LaFond, now retired of Holyoke, received the award in 2009 and Chief Ronald Scott, now retired of Mattapoisett, received the first award in 2008. ▪

YOUTUBE CONTEST WINNERS

Teens, Fire, Education and Medical Officials Celebrate Burn Awareness Week

View the winning videos on our YouTube Channel - DFSOSFM
www.youtube.com/DFSOSFM

State Fire Marshal Stephen D. Coan and Carol Scott, RN, Shriners Hospitals for Children® - Boston celebrated Burn Awareness Week (February 5-11, 2012) at a presentation hosted by Shriners Hospitals for Children in Boston, a pediatric burn hospital. The winners of a statewide contest for high school media students, the YouTube™ Burn Awareness Video Contest, sponsored by the state Department of Fire Services, the Mass. Association of Safety and Fire Educators (MaSAFE), and the Mass. Property Insurance Underwriting Association, were announced at the event.

WINNING VIDEOS

This is the fourth year of the contest and 60 teams from ten high schools in Agawam, Everett, Millis, Sharon, Sturbridge, Topsfield, Waltham, Westford, West Newbury and Worcester submitted entries. While all 60 videos were creative and interesting, the first place winning team was from Millis High School for their video *Catch the Heat*; the second place winners were from Sharon High School for their video *Kids and Lighters*, and the third place winners were from Masconomet Regional High for their video *Girls Night Out*. The Department of Fire Services has posted the winning videos on its YouTube™ channel at www.youtube.com/DFSOSFM.

HONORABLE MENTIONS

Teams from Nashoba Valley Technical High School in Westford and two from Masconomet Regional High in Topsfield received honorable mention for their entries.

"YouTube™ is a powerful tool for communication around the globe as we have seen in recent years, but there are many negative, false and just plain scary messages about fire and burns on the Internet," said Fire Marshal Coan. "Our goal is to allow teenagers to research the truth for themselves without being lectured to by adults and without getting hurt."

TEENS TALKING TO TEENS

"As a parent and a fire educator I have been appalled at some of the videos on YouTube™ made by teens or directed to teens. Yet as an educator I know

CONTINUED ON PAGE 21

READ E-MAIL ALOUD

To Make Sure You Convey Right Message

Reprinted with permission by author, Peter Post Etiquette at Work Column in the Boston Globe, February 12, 2012

At a recent seminar, we were discussing rudeness in the workplace. A hand shot up. One participant lamented the unfriendly tone in e-mails. What, she wanted to know, is going on with people who write e-mails that seem rude?

Tone matters. And e-mail writers often underestimated the tone of their writing. When you talk on the phone, the other person hears inflection and other clues that help transmit the tone of your words. When you speak face-to-face with a person, he has the visual clues from facial expressions and body language to help understand the tone. What can be said sarcastically in person, and understood as joking, can seem rude when just the words are on the screen.

Studies show that if you write something you think is in a positive tone, the recipient will think it is neutral. And when you write a message that you think is neutral in tone, the recipient takes it as negative.

So, what do you do when writing a difficult e-mail or responding to someone who has been rude? How do you protect your messages from being interpreted negatively?

First, control the urge to hit the send button immediately. Let it simmer for a few minutes and then reread it to see if you need to tone it down.

Second, read it out loud. Not silently. When you read it out loud, you will hear the tone your words are conveying.

Third, ask someone you trust to read the e-mail before sending it. More than once, I've printed out a copy of an e-mail and asked a colleague to read it to make sure I wasn't inadvertently being negative or rude. Often it comes back to me with suggested edits that most likely saved me from sending a message with a tone I really didn't want to convey.

Finally, if you don't think your e-mail is hitting the right note or the issue is a complicated one, consider picking up the phone or setting up a meeting.

E-mail is a great business communication tool especially for who, what, when and where. Save the why for in-person or phone conversation. Like any technology, it's not the tool that's rude, but how it's used. ▪

S.A.F.E. IN-SERVICES

Need new ideas for your S.A.F.E. program? Do you wish you had Sparky® at your open house? Want to hear what other educators are doing across the state? The S.A.F.E program will be hosting a spring in-service training session in four locations across the state (North, South, Central, and West). This program is designed to make S.A.F.E. educators aware of the resources available to them through the Department of Fire Services. We will be talking about resources such as the Hazard House, Sparky Costume, Jr. Fire Gear, and many other tools that are at your disposal. We will also be showing the new Hazard Kitchen that has been introduced to try to lower the alarmingly high number of cooking fires. The immense library of videos, handouts, and FireFactors that are available will also be highlighted. We will also discuss the rollout of the new 6th grade evaluation tool. ▪

All classes will consist of a 9:30-12:30 session on the resources, and a 1:30-3:30 session after lunch on the new 6th grade student evaluation tool. Refer to the dates on the right for class locations.

MAY 21
DFS Stow
1 State Road

MAY 24
Holyoke Fire
600 High Street

JUNE 4
Reading Fire
757 Main Street

JUNE 6
Middleborough FD
125 North Main St.

FIRE SERVICE PROFESSIONAL DEVELOPMENT SUMMIT

Colleges Recognized for Adopting FESHE Curriculum

On March 12, the Department of Fire Services hosted the second Fire Service Professional Development Summit where Superintendent of the National Fire Academy Dr. Denis Onieal presented certificates of recognition to the representatives of four Massachusetts colleges for their adoption of the nationally recognized Fire and Emergency Services Higher Education (FESHE) model curriculum for fire science majors. The four colleges honored were Anna Maria College, Bunker Hill, Mount Wachusett and Quinsigamond Community Colleges.

Dr. Onieal said, "The national challenge is for state and local providers of training, education, and certification to integrate their activities to eliminate these duplications while enhancing the overall professional development of the fire and emergency services."

David Cedrone, Associate Commissioner of Economic and Workforce Development said, "We are very proud that these are the first community colleges in the country to be recognized."

State Fire Marshal Stephen D. Coan said, "Massachusetts has taken the lead in working to integrate the training that the Massachusetts Firefighting Academy provides with the education colleges provide. This integration helps to eliminate duplication of training and education efforts while enhancing the overall professional development of the fire service."

The model FESHE curriculum, developed by the National Fire Academy, allows state fire training directors to work with colleges so that college credit can be received for fire training courses and that college courses can be accepted by training directors. Working together they can create a clear path for advancement in the fire service. Edmund Walker, director of the Massachusetts Firefighting Academy said, "The goal of the summit is to build on the successful collaboration between the Mass. Firefighting Academy and these four colleges and expand the program to additional ones." Colleges from around the state participated in the summit to hear how the FESHE model curriculum has been implemented in Massachusetts and discuss how it could be expanded to additional schools.

For the American fire service, there is no single, national system of fire and emergency services professional development; rather, there are 50 state systems of professional development. Relationships between training, certification, and higher education providers vary from state-to-state where levels of cooperation between and among them range from fully integrated to nonexistent.

State Fire Marshal Coan said, "The goal is that firefighters and fire officers, armed with knowledge and a college degree, can more effectively reduce the human and economic impact of fires in their communities." ▪

Representatives from Bunker Hill CC accept their award. Photo by Susan Neaz, DFS.

FIRE SPRINKLERS SAVE HOMES

SPRINKLERS SAVE A LUNENBURG CONDO AND DOG

State Fire Marshal Stephen D. Coan and Lunenburg Fire Chief Scott Glenny said a single fire sprinkler head controlled the fire in a condominium the morning of January 9, 2012 at 69 Royal Fern Drive in Lunenburg. The fire started in the living room couch with a Christmas tree right next to it. Only one of the four sprinkler heads in the living room activated and controlled the fire. The Christmas tree, probably very dry by then, was not involved in the fire.

State Fire Marshal Coan said, "This demonstrates the reason why sprinklers are such a valuable tool for life safety and protection of people's homes."

No one was home in the condominium where the fire started and firefighters were able to rescue a dog trapped inside. People were home in two other apartments, including a grandmother watching a toddler. The sprinklers prevented the fire spreading to other units.

Chief Glenny said, "The million dollar building suffered an estimated $25,000 in damage and no one is displaced. As fast as we were able to get there, the fire sprinkler was faster and had the fire under control frankly before we even left the station."

Jon Jones, a Lunenburg resident and chairman of the Board of Fire Prevention Regulations said, "Opponents to residential sprinklers often say that newer buildings don't have fires or that smoke alarms are adequate fire protection. This building was built in the 1980s and the fire would have progressed significantly and quickly without sprinklers, impacting the people in the other condos and their homes and possessions and pets." He added, "This underscores how important it is for local jurisdictions to have the flexibility to require residential sprinklers where they think they are needed."

Chief Glenny said, "It is absolutely amazing that the Christmas tree was never involved in this fire and that everyone got out safely. What is even more amazing is that everyone could sleep there that night. This fire demonstrates the need for residential fire sprinklers in every new home."

Inside Lunenburg condo. Photo by Jon Jones.

SPRINKLERS EXTINGUISH FIRE DURING HALLOWEEN STORM

On October 31, 2011, the early season snowstorm was heavy and wet on trees still full of leaves. As a result, there were extended outages across the state causing people to leave their homes in search of heat, light and food.

A 3 p.m. fire at 5 Riverhurst Road, Billerica, started when the power was restored to the apartment building and combustibles on the stove ignited. A single sprinkler head contained the fire to the kitchen. A master box alerted the fire department who found light smoke in the common hall and water coming from under the apartment door. ▪

OFF ROAD GATORS

Distributing water to dehydrated firefighters. Getting a radio repeater site up and running up in the aftermath of a tornado. Transporting a runner in cardiac arrest in a road race. Do these sound like random tasks done by fire departments all over the state? They are not; they are just some of the recent uses for the special operations new off road utility vehicles. These two new John Deere utility vehicles are available to fire departments all over the state with just a phone call. The gators come in an enclosed trailer ready to deploy and each has an assigned DFS operator that will remain as long as the unit is needed. One of the gators has an optional medical bed that holds a Stokes basket for transporting patients; the other has a utility bed that can haul coolers for rehab in the woods, medical equipment, or anything that needs to get off road. Both of these gators are housed in Stow and can be activated by calling the special operations activation number.

Also now added to the list of Special Operation resources is the "D.O.T." or dorm office trailer. This trailer was formally a FEMA housing trailer, left over from hurricane Katrina. It has been used several times as a temporary fire station by area fire departments. During the June tornado after the town of Monson lost their dispatch center, special operations stepped up to the plate and offered up the FEMA trailer for use. The only issue was a living trailer was not very functional as a dispatch center and police station, so the special operations crew went to work with screw guns and power tools until it became a fully functional dispatch center. After a month of use, the trailer returned to Stow, and we realized it had to be more versatile. The trailer was gutted and rebuilt to be more multi-functional. Long counters were added, power for radios and computers tied in, tables and chairs stored in it, and new lights placed inside to allow for it to be used as an office, conference room, dispatch center, or command post, and there are folding cots so it can still sleep four, if needed.

For more information on any Special Operations resources please call the office at 978-567-3171, and as always, for activation of Special Operations resources call MEMA 24 hours a day at 508-820-2000. ▪

Special Operations new off road utility vehicles. Courtesy photos.

MASSACHUSETTS NFA WEEKEND

The Massachusetts weekend at the National Fire Academy will be June 16-17, 2012. The application deadline is May 11, 2012. The course offerings include:

- Courtroom Preparations and Testimony for First Responders
- Decision-making of Initial Company Operations
- Preparations for Initial Company Operations
- Strategy and Tactics for Initial Company Operations
- Leadership I for Fire and EMS: Strategies for Company Officer Success
- Training Operations in Small Departments
- The application process is to complete FEMA Form 119-25-2, AUG 2010-General Admission Short Form (the previous edition of FF75-5A is obsolete) and the Massachusetts Department of Fire Services State Weekend Registration From. It is located on the DFS website at www.mass.gov/dfs. Do not use the standard MFA Application form. ▪

CHANGE IN NFA APPLICATION PROCESS BEGINNING APRIL 15

January 23, 2012 Letter from NFA Superintendent

Each of us has heard of some organization, government or private, that experienced the loss or compromise of data due to hacking. Many of us have had our personal e-mail accounts hacked. Unfortunately, hacking has become a sport, simply a sign of the times. Aside from the sport hackers, criminals have collected personal information from several different unrelated databases in order to assemble personal information to commit fraud. As a government agency, we are not immune to this potential; we're required to protect personally identifiable information (PII).

This is a 3-month heads-up on a *major change to the admissions process*. In order to protect PII, we can no longer use Social Security numbers (SSN) in our paper or on-line application process. We do, however, need a unique identifier that will allow us to record class registration, send acceptance and rejection notifications, provide stipend reimbursement (when appropriate), and record course performance and transcripts for John Jones or Mary Jones.

That unique identifier will be a FEMA Training Identification Number (FTIN). The explanation and process are provided on the *How to Apply* page on the NFA Website; the requirement applies to all FEMA academies / schools. I tried the process and timed myself, it took about 90 seconds. For those applicants without home or work access to the Web, they may use a computer at a library.

Of course we realize that this change will cause headaches for students applying for classes ON and OFF Campus 2 day, 6 day, 10 day and eventually Online classes. It will cause problems for our partners in state and local fire training, including all our staffs. This will take education, patience and understanding; we're going to do our best, and ask for everyone's cooperation.

I ask that you share this information with your students, subscribers, clients, members, organizations and list-serves. In order to ease the process, we're going to do everything we can to continuously advise and remind everyone of this upcoming change as we implement it beginning April 15th.

Again, the web address for this information is: www.usfa.fema.gov/nfa/about/attend/ftin.shtm

Dr. Denis Onieal
Superintendent
National Fire Academy
United States Fire Administration
Federal Emergency Management Agency
Department of Homeland Security ▪

One February weekend was particularly busy for State Police fire investigators assigned to the Office of the State Fire Marshal.

WEST TEAM

On Friday, February 24, 2012 a member of the West Team responded to 501 Dalton Ave. in Pittsfield for a reported working fire in a commercial structure housing a moving and storage company and a billiards company. Investigators quickly found that someone had broken into the structure and set numerous small fires. At least two motor vehicles were stolen as well.

As luck would have it, the stolen vehicles went in opposite directions and both crashed later that night. The occupants were placed in custody and one was taken to the hospital. All are charged with breaking and entering commercial property, arson of a building, possession of stolen motor vehicles, and other infractions.

On Sunday, February 26, 2012 at 7 a.m. the West Team responded to a reported working fire in a multi-unit residential structure at 167-169 Norfolk Road, New Marlborough. No injuries were reported. There was heavy fire damage to the structure. The cause of the fire was determined to be accidental in nature, a chimney fire extended to the structure. While on scene investigators discovered a marijuana grow operation in the dwelling and the Berkshire County Drug Task Force was called in.

NORTH TEAM

On Thursday, February 23, 2012 at 9:30 a.m. the North Team responded to a reported gas explosion and fire at 627 Pleasant Street in Winthrop. Three civilians suffered minor injuries. The father had driven the mother to work and she said she had smelled gas in the basement early that morning and asked her husband to call the gas company when he returned home. While he was on the telephone making the report, the home exploded. The two adult daughters were still asleep but fortunately not seriously injured despite the heavy damage to the structure. The cause of the explosion and fire was determined to be a natural gas leak in contact with an undisclosed ignition source. The Department of Public Utilities is investigating the source of the leak.

On Friday, February 24, 2012 at 2:30 in the morning, the North Team responded to a reported working fire at 19 Maple Avenue, Nahant. The homeowner had been alerted to the fire by the smoke alarms and when he got out of bed discovered an intruder in his home and called the police. The homeowner was able to put the fire out and give a description to officers. The Mass. State Police K-9 unit was able to track the intruder. An adult male suspect was identified and placed under arrest. He had been using a candle to see inside the house in the dark and started the fire. He is charged with breaking and entering a dwelling in the nighttime and arson of a dwelling. He was held without bail.

CENTRAL TEAM ARREST

On Monday, February 13, 2012 the Central Team, the State Police Bomb Squad, the federal Bureau of Alcohol, Tobacco, Firearms and Explosives and the Grafton Fire and Police Departments were working on the investigation into two recent fires in the same neighborhood in Grafton. While awaiting a search warrant, officers observed an adult male, who lived in the home, leave. He was followed to 115 Southwest Cutoff in Worcester where he set fire to two motor vehicles. He was apprehended and placed under arrest and charged with two counts of burning a motor vehicle and two counts of malicious damage to property. The search warrant for the Grafton home was served and additional evidence in the arson of the motor vehicles taken. The suspect is not charged with the original two building fires in the neighborhood. ▪

EFFECTIVENESS OF HOME COOKING SAFETY TECHNOLOGIES

Action plan developed to mitigate home cooking fires

Cooking fire in Billerica, MA. Photo by Deputy Chief Tom Ferraro, Billerica F.D.

December 7, 2011 – The Fire Protection Research Foundation (Foundation) is addressing ways to reduce the numbers of deaths, injuries and property losses from home cooking fires. The Foundation recently released a report with the results of a study commissioned by the National Institute of Standards and Technology (NIST). The study identified major cooking fire scenarios and focused on the types of prevention technologies suitable for use on or with home cooking appliances, and provided an action plan on how to further utilize these technologies to improve cooking fire safety. The Foundation is an affiliate of the National Fire Protection Association (NFPA).

Cooking-equipment related fires are a leading cause of U.S. fire loss. According to NFPA, from 2005 – 2009, cooking ranges accounted for 58 percent of the total reported home cooking equipment fires while accounting for 84 percent of deaths and 77 percent of injuries. As demand for home cooking appliances, in particular, stove tops increases, reducing the number of fire deaths and injuries related to cooking accidents remains a priority. The report provides an assessment of new and existing promising safety technologies or concepts that focus on three criteria consumers look for when buying products including fire protection effectiveness, cooking performance, and cost and convenience.

Several products sold on the market today already address safety for stove tops including those that provide motion sensors and alarms to warn homeowners of a potential fire during unattended cooking, as well as contact temperature sensors used to detect possible food ignitions due to excess heat. The report provides a status update of the development of this technology over the last 10 years and presents an assessment for future growth.

To conclude the project, leaders from the kitchen appliance, fire service and user communities met at a workshop in July 2011 to review the results of the Foundation study and develop an action plan for identifying potential barriers to further research and product development of these emerging state-of-the-art technologies, and their effectiveness to mitigate home cooking fires.

The Foundation's report, "Home Cooking Fire Mitigation: Technology Assessment" and workshop report are both available at www.nfpa.org/foundation. Additional information on home cooking fires and NFPA's recent "Home Fires Involving Cooking Equipment" report can be found at www.nfpa.org/cooking. ▪

GRADUATIONS

State Fire Marshal Stephen D. Coan and Massachusetts Firefighting Academy Director Edmund M. Walker are pleased to announce the graduation of the 194th class of the Massachusetts Firefighting Academy's sixty-day Recruit Firefighting Program on March 30, 2012 at 1:30 p.m. "This rigorous professional training provides our newest firefighters with the basic skills to perform their jobs effectively and safely," Coan said. The Massachusetts Firefighting Academy (MFA), a division of the Department of Fire Services, offers this program, tuition-free. The ceremony took place at the Department of Fire Services in Stow, MA.

The guest speaker was Lowell Fire Lieutenant Ryan C. Carvalho, a graduate of Recruit Class #174. He and another firefighter, Charlie Savard, became disoriented fighting a church fire on September 13, 2011 and were rescued by a rapid intervention team (RIT). They spoke about how important this strategy is for firefighter safety.

69 GRADUATES FROM 33 FIRE DEPARTMENTS

The 69 graduates, 65 men and 4 women, represent the 33 departments of Amherst, Arlington, Billerica, Bourne, Canton, Chelmsford, Clinton, Cohasset, Dennis, Duxbury, Fitchburg, Gloucester, Haverhill, Holden, Holyoke, Lawrence, Lynn, Malden, Marshfield, Melrose, Northampton, Norwell, Randolph, Salem, Saugus, Seekonk, Sudbury, Walpole, West Springfield, Westfield, Westport, Wrentham and Yarmouth.

TODAY'S FIREFIGHTERS DO FAR MORE THAN FIGHT FIRES

Today's firefighters do far more than fight fires. They are the first ones called to respond to chemical and environmental emergencies ranging from the suspected presence of carbon monoxide to a gas leak. They may be called to rescue a child who has fallen through the ice or who has locked himself in a bathroom. They rescue people from stalled elevators and those who are trapped in vehicle accidents. They test and maintain their equipment, ranging from self-contained breathing apparatus to hydrants to hoses, power tools, and apparatus.

Recruits from Class #194 distinguish a car fire during training. Photo by Jim Hagerty.

At the Massachusetts Firefighting Academy they learn all these skills and more from certified fire instructors who are also experienced firefighters. Students learn all the basic skills they need to respond to fires and to contain and control them. They are also given training in public fire education, hazardous material incident mitigation, flammable liquids, stress management, water rescue procedures, confined space rescue techniques, and rappelling. The intensive, 12-week program for municipal firefighters; involves classroom instruction, physical fitness training, firefighter skills training and live fire practice.

BASIC FIREFIGHTER SKILLS

Students receive classroom training in all basic firefighter skills. They practice first under non-fire conditions and then during controlled fire conditions. To graduate, students must demonstrate proficiency in life safety, search and rescue, ladder operations, water supply, pump operation, and fire attack. Fire attack operations range from mailbox fires to multiple-floor or multiple room structural fires. Upon successful completion of the Recruit Program all students have met national standards of National Fire Protection Association 1001 and are certified to the level of Firefighter I and II, and Hazardous Materials First Responder Operational Level by the Massachusetts Fire Training Council. ▪

Please see back cover for graduation photo.

ETHANOL AWARENESS

For First Responders

Ethanol is the leading hazardous material shipped in the U.S. today. It is transported throughout Massachusetts by rail, barge, tanker trucks and private vehicles. It is stored in large volumes (20 million gallons) at bulk storage plants and smaller quantities at local retail gasoline stations.

A unit train consists of 80-100 railcars (2.9 million gallons) and impacts 88 Massachusetts communities. This occurs 2-3 times per week. The sky is not falling, but are we prepared?

The Massachusetts Firefighting Academy has developed a 4-hour program that introduces the risks and challenges for first responders when dealing with small and large volumes of gasoline and ethanol blended fuels and denatured ethanol.

Topics covered are what ethanol is, how ethanol is made, it's transportation modes, primary and secondary hazards, public protective actions, EMS issues including types of blast injuries, burns, rule of nines, triage, treatment, transport and the importance of decontamination.

A live demonstration of an ethanol fire stresses the use and application techniques of alcohol resistant firefighting foams and dry chemical extinguishing agents, as ethanol is a polar solvent.

There will be two deliveries per fire district this spring. To register for an MFA Program go to: http://mfa.chs.state.ma.us/mfa_courses/courseDetails.asp?cid=266&curr=1 ▪

STATEWIDE FIRE MOBILIZATION FOR TASK FORCE LEADER TRAINING

This 4-hour program is designed for all task force leaders as part of the Massachusetts Fire and Ambulance Mobilization Plan. This course will familiarize chief officers with their role and responsibilities when activated as part of the plan and what to expect from requesting communities. Exercises will be used to help demonstrate the activation process, response objectives, information flow, and documentation requirements associated with activations. For more information on the course, and to register online, go to www.mass.gov/dfs. ▪

Course #: 200-000-599 Session C
Date: Wednesday, May 2, 2012
Time: 0900-1300
Location: United Methodist Church
271 Rocky Hill Road
Northampton, MA

Course #: 200-000-599 Session A
Date: Wednesday, May 9, 2012
Time: 0900-1300
Location: Department of Fire Services
1 State Road
Stow, MA

Course #: 200-000-599 Session B
Date: Wednesday, May 30, 2012
Time: 0900-1300
Location: Raynham Middle School
420 Titicut Road
Raynham, MA

State Fire Marshal Stephen D. Coan has sent recent advisories to local fire chiefs in order to spread awareness of these dangers and prevent dangerous situations from happening. These are all posted on the DFS website under *OSFM Advisories* and as part of the monthly *DFS Briefs*.

If you have any further questions contact the Code Compliance and Enforcement Desk at (978) 567-3375 or in western MA at (413) 587-3181.

March 1, 2012

RECENT AMENDMENTS TO 527 CMR

Included were portions of several regulations that have recently been amended by the Board of Fire Prevention Regulations.

527 CMR 9.00, was amended to strike out certain provisions of the regulation dealing with underground storage tank "operator training requirements" (see changes to s. 9.07 Q, R, S, T, U). This amendment with an effective date of January 6, 2012 was necessary as part of an initiative to transfer this regulatory requirement to the Mass. DEP.

527 CMR 10.15, was amended with an effective date of January 6, 2012 eliminates a conflict that existed between the current regulation and a recent new law, MGL c. 94, s. 329. The purpose of both the statute and amendment is to reduce the risks associated with fire and explosion associated with the use of certain flammable liquid sealers used for floor refinishing operations. The amendment codifies the new statutory prohibition (MGL c. 94, s. 329) of the use of certain flammable sealers used by commercial wood floor finishing operations.

527 CMR 38.00, is a new regulation with an effective date of January 6, 2012 which creates regulation dealing with the subject matter of movie and television production activities in a more detailed manner. This regulation is filed to coincide with a companion regulation of 780 CMR.

PROCESSING HAZARDOUS MATERIALS REGULATION – 527 CMR 33

The Board of Fire Prevention Regulations recently adopted 527 CMR 33.00, which is effective as of February 3, 2012. It establishes criteria and permitting requirements for facilities that engage in the processing of hazardous materials, as defined.

The proposed regulation would expand required permits to include additional hazardous materials and related material processing (as defined) that may not have been previously subject to a permit or related government oversight. The permit will be issued by the local head of the fire department, who will also carry out an enhanced oversight role in implementing the regulatory requirements. As a condition to such permitting, the regulation requires disclosure and an evaluation regarding the details about the hazardous material process activity-taking place at the facility. Once disclosed, certain requirements are established based upon category classification. Maintaining the required permit is conditioned upon continued compliance with the regulatory requirements, which focus on preventative, protective, and safety control measures in conformance with recognized and generally accepted practices, including conformance with certain Federal and Mass. DEP regulations.

TRACKING FIRES IN PHOTOVOLTAIC ARRAYS

As everyone is aware, the installation and use of photovoltaic (PV) arrays is increasing. Our office is aware of two fires in the Commonwealth at this time. We are interested to learn if you have had a fire in a PV array in the past or if you encounter a fire in the future.

Please e-mail information regarding any fires in PV array equipment to Timothee.Rodrique@state.ma.us. We are trying to specifically track these and determine if there are any specific codes changes or other issues that need to be addressed. Thanks in advance for your assistance.

[NOTE: On page 23 you will notice the National Fire Incident Reporting System (NFIRS) has added solar panels as new code in *Fire Suppression Factors.*]

SKY LANTERNS

Recently, the issue of sky lanterns came to the attention of the Department of Fire Services. I have had our legal counsel look at this matter and to see if there is law or regulation on the books that would address this issue.

Currently, there is no statute that specifically mentions "sky lanterns." The closest relevant term is used in Massachusetts General Law, Chapter 148, section 39 and states "the type of toy balloon which

Photovoltaic arrays installed on the roof of a home. Photo by Velo Steve.

requires fire underneath to propel the same."

Our counsel indicates that he does not believe that sky lanterns were envisioned to be covered under this term, although the harm they present is the same. In criminal statutes such as Chapter 148, s. 39, terms are strictly construed against the government and if an individual cannot fairly understand that the term applies to their behavior or conduct (i.e. a sky lantern is the same as a toy balloon), then the statute is deemed void for vagueness.

As Chapter 148 does not specifically define the term "toy balloon," the Court would look to the plain and usual meaning of the term. In this case, the American Heritage Dictionary defines the term "balloon" as "a spherical, flexible, non-porous bag inflated with a gas, lighter than air ... that causes it to rise and float." This does not comport with the reality of how a sky lantern operates. It was for these reasons, that we have directed fire chiefs to Chapter 148, section 5, "conditions likely to cause fire," which they can regulate and prohibit.

I will continue to discuss this matter with the leadership of the Fire Chiefs' Association of Massachusetts to determine if there is sufficient interest to propose an amendment to MGL, Chapter 148, s.39 to specifically include the words 'sky lanterns'.

February 1, 2012

BBRS INTERPRETATION

The Board of Building Regulations and Standards at their January 10, 2012 meeting issued this interpretation regarding smoke detectors in one-and two-family homes. We are passing this information on to you.

BBRS OFFICIAL INTERPRETATION No. 2012-001

DATE: January 10, 2012

SUBJECT: Smoke, Heat, Carbon Monoxide Detection and Alarm Systems

At a regular meeting of the Board of Building Regulations and Standards held on Tuesday, January 10, 2012, the Board approved the following interpretation of the application of 780 CMR Appendix J, Section AJ102.3 of the Eighth Edition of the State Building Code.

Background/Discussion:

Presently there is an apparent contradiction between two sections of the promulgated 8th Edition Residential Code (IRC 2009).

Virgin IRC 2009 *(DFS Comment – means unammended 2009 IRC*), Section R314.3.1 essentially requires updating of smoke detectors whenever a building permit is "pulled" (with some exceptions).

The 8th Edition Residential Code, Appendix J (IRC 2009), is titled "EXISTING BUILDINGS AND STRUCTURES". A MA amendment to Section AJ102.3 has brought forward the traditional triggers for existing buildings when smoke detector upgrade is required; for example, when new sleeping rooms are added or created, the building is "gutted", etc.

DPS/BBRS staff recommended that Appendix J be utilized for the requirements of existing buildings and that an FAQ be issued and an official interpretation issued, in the short run, and if necessary a code correction (i.e., an amendment to R314.3.1 sending the reader to Appendix J for existing buildings) follows.

Q: *For the 8th Edition Residential Code, where does one start in ascertaining what code requirements apply to existing residential buildings undergoing proposed building permittable activity?*

A: For existing one- and two-family dwellings and existing low-rise residential townhouses, one must start in the MA 8th Edition One- and Two-Family Dwelling Code, Appendix J, titled: "EXISTING BUILDINGS AND STRUCTURES" which may or may not also send the reader back to the code for new construction, as applicable.

Staff-developed FAQ to Further Support

BBRS OFFICIAL INTERPRETATION 2012-001

8th Edition Residential Code Volume

CONTINUED ON PAGE 21

DFS HELPS FRANKLIN PARK ZOO

By Michele Hebert

Early one Friday morning Dick Farrar and I noticed a woman waiting at the receptionist entrance before anyone was on duty, so I invited her in. She introduced herself as Lyna Watson, Ph.D, a primate behaviorist who lives in Northborough and donates her time to the Franklin Park Zoo. She was looking for a donation of fire hose and her usual source, Northborough Fire Department had none at the moment and Boston Fire Department was also unable to help her out. The fire hose is used to make hammocks for the gorillas; the hose is tough, so when the gorillas occasionally bite it, it holds up. I happened to have a lot of 3" hose in the warehouse, acquired from a fire department upgrading to large diameter 4" hose. Needless to say, we donated four lengths of good used fire hose, for gorilla hammocks. The Franklin Park Zoo is putting a plaque up, (they said near the gorillas), crediting the Training Division of Mass. Dept. of Fire Services for the donated hose. Anyone going to the zoo, checkout the gorillas. ▪

Gorillas at the Franklin Park Zoo enjoy hanging out in hammocks made from old fire hose donated by DFS. Photos by Christina Demetrio and Paul Luther.

FATHER DANIEL HARRIS

Father Daniel Harris, the first chief chaplain of the Massachusetts Corps of Fire Chaplains, passed away on December 29, 2011 in Long Island, NY. Father Dan served as the fire chaplain in Weymouth, MA, and led members of the corp to deployments at both Ground Zero in NYC and the Station Nightclub fire in West Warwick, RI in 2003.

Father Dan worked tirelessly with members of the Critical Incident Stress Management teams, and made sure that the Corps of Chaplains had experience on the fire ground as well. He was proud of his service to the fire service in MA and was awarded a commendation in June of 2004 by State Fire Marshal Stephen D. Coan.

Members of the Massachusetts Corps of Fire Chaplains, Chief Paul Zbikowski, President of the Fire Chiefs Association of Massachusetts and State Fire Marshal Stephen D. Coan attended the services for Father Harris on Long Island. ▪

ADVISORIES CONTINUED FROM PAGE 19

(Smoke Alarm requirements for Existing Buildings)

Q: *I am pulling a permit to do a small bump out of a kitchen in a single-family home. Do I need to update the smoke detector system in the entire home per section R314.3.1 of the International Residential Code 2009?*

A: No. Section AJ102.3 of Appendix J, addressing when smoke detector/alarm upgrades are required, is intended to apply to construction for existing buildings / Section R314.3.1 should have been amended to send the reader to Appendix J, Section AJ102.3 and will be corrected/amended in the near future. Further, Section AJ102.3 was replaced with a MA amendment which invokes fire protection requirements for certain construction projects, including but not limited to the addition of a sleeping room, the "gutting" of the building, etc. These requirements are consistent with BBRS intent, as recorded in meeting minutes, and previous editions of the building code (also refer to BBRS Official Interpretation, No. 2012-001).

December 21, 2011

OVERNIGHT SHELTERS IN PLACES OF WORSHIP: EXTENSION OF PROVISIONS ALLOWING THE USE OF BATTERY OPERATED SMOKE ALARMS AND CARBON MONOXIDE DETECTORS (527 CMR 10.13(8))

Please be advised that the Board of Fire Prevention Regulations has filed an emergency regulation (eff. 12-13-11) which extends the ability of overnight shelters in places of worship to use battery operated smoke detectors and carbon monoxide alarms from 1-1-12 to 5-1-12. After said new date the shelters will need to be equipped with monitored and interconnected devices as described in the State Building Code. In all other respects the regulation (527 CMR 10.13(8)) remains unchanged. The regulation with the modifications was attached.

Please note that the Board of Building Regulations and Standards has also filed a companion emergency regulation in coordination with the Board of Fire Prevention Regulations. ▪

YOUTUBE™ WINNERS CONTINUED FROM PAGE 8

that the best way for youth to learn about the true life consequences of the misuse of fire, was for them to research it on their own and to use their own language to effectively communicate to other teenagers," said Capt. Rick Tustin, president of MA SAFE. "Our goal was to partner with high school media teachers and use burn prevention as a vehicle to help them reach their own education goals while allowing the students to harness their creativity."

BURN AWARENESS VIDEO CONTEST

The contest was open to grade 9-12 students enrolled in Massachusetts' schools and submissions had to be from school-sponsored communications courses or sponsored extra-curricular groups. Communications teachers or faculty sponsors were required to review and approve all storyboards before filming started.

Videos were required to be one to three minutes long, explore burn prevention topics, be well researched, not demonstrate risky or unsafe behavior, and to be both educational and informative. This contest addressed learning standard components 27.6 (Gr. 9-10) and 27.8 (Gr. 11-12) of the Massachusetts English Language Arts Curriculum Framework (June 2001), Media Strand - General Standard 27: Media Production. School districts offering communications classes, which include the design and creation of media productions, were encouraged to promote this contest through an independent or group assignment as part of its curriculum delivery.

For more information about burn safety or the contest go to www.mass.gov/dfs, then click on *Fire Safety Topics*, then select *Burn Awareness* or www.burnawarenessweek.org. ▪

‘NEW’ MFIRS SYSTEM CHANGES AS OF JANUARY 1, 2012

There are some changes in the system, many of which may cause ‘Critical’ errors that are coming with the latest release of MFIRS v5 on January 1, 2012. Any ‘Critical’ error in an incident will not allow that incident to be saved in the state database and has to be corrected and the entire incident resubmitted. These changes were made at the national level to NFIRS by the U.S. Fire Administration (USFA) and all vendors have been made aware of them and only affect any incident on or after January 1, 2012. If you have not received a recent update to your MFIRS software please speak to your software vendor.
The changes that will affect MFIRS users are:

1. *Incident Type* (Basic Module) code 611 – *Dispatched and cancelled en route* - If your *Incident Type* is code – 611 – Dispatched and cancelled en route, then the only *Actions Taken* (Basic Module) code that you can use is 93 – *Cancelled en route*.
   a. This *Incident Type* code is to be used only when all apparatus and personnel that were sent on the call were cancelled before any arrived.
   b. It does not matter what the original call was for, or whether it was for mutual aid.
   c. If you need to track different types of calls that you were dispatched for and cancelled en route, you’ll need to create a ‘plus one’ code under *Incident Type* code – 611. Contact your vendor for details on how to do this.
      i. E.g. 611.1 – Dispatched, cancelled en route – BLS
      ii. 611.2 – Dispatched, cancelled en route – ALS
      iii. 611.a – Dispatched, cancelled en route – motor vehicle crash
2. *Actions Taken* (Basic Module) code 93 – *Cancelled en route* - If your Actions Taken (Basic Module) code is 93 – *Cancelled en route* then the *Incident Type* code – must be 611 – Dispatched and cancelled en route.
   a. If the two codes do not match, then a ‘Critical’ error will result.
3. *Heat Source* (Wildland Module) – The field *Heat Source* on the Wildland Module is now a mandatory field.
   a. A ‘Critical’ error will result if the field is not completed.
4. *Factors Contributing to Ignition* (Wildland Module) – The field *Factors Contributing to Ignition* on the Wildland Module is now a mandatory field.
   a. A ‘Critical’ error will result if the field is not completed.
5. *Human Factors Contributing to Ignition* (Wildland Module) – The field *Human Factors Contributing to Ignition* on the Wildland Module is now a mandatory field.
   a. A ‘Critical’ error will result if the field is not completed.
6. The *Incident Type* (Basic Module) code 320 – *Emergency Medical Service, other* is no longer a ‘conversion only’ code. It may now be used for normal data entry.
7. *Equipment Involved in Ignition* (Fire Module) new rule. The field *Equipment Involved in Ignition* (Fire Module) is now required and cannot be NNN – None, if the *Incident Type* is between 100 – 112, 120 – 129, 140 – 199 (i.e. not a motor vehicle fire) and the *Heat Source* code is between 10 – 19 (Operating Equipment) or the field *Factors Contributing to Ignition* (1 or 2) is coded as 36 – 37 (Arcing) or 52 – 58 (Operational Deficiency).
   a. A ‘Critical’ error will result if the field is left blank or coded as NNN – None.
8. If *Incident Type* (Basic Module) = 112 – *Fire in a structure other than a building*, the *Structure Type* (Structure Fire Module) cannot be 1 – *Enclosed building*, or 2 – *Fixed portable or mobile structure*. A ‘Critical’ error will result if either of these codes is used.
9. If *Property Use* (Basic Module) = 464 – *Barracks, dormitory*, then the *Mixed Use Property* (Basic Module) field is required to be completed. A ‘Critical’ error will result this condition is not met.
10. A new *Property Use* (Basic Module) code has been added = 63 – *Flight control tower*.
11. A new *Fire Suppression Factor* (Fire Module) code has been added = 115 – *Solar panels*.
12. A new *Suspected Motivation Factors* (Arson Module) code has been added = 16 – *Foreclosed property*.
13. A new Incident Type (Basic Module) code has been added = 244 – *Dust explosion (no fire)*.
14. If *Last Unit Cleared Date/Time* (Basic Module) is greater than 24 hours than the *Alarm Date/Time* (Basic Module) and the Incident Type is not between 800 – 899 (Severe Weather or Natural Disaster) then a ‘Warning’ error will be generated.

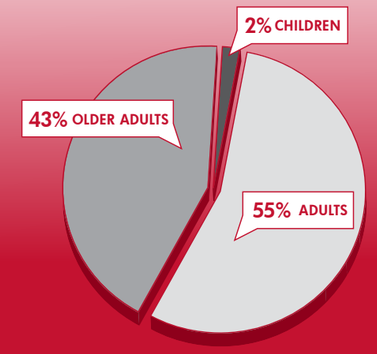
NEED FOR UPDATED REPORTS

Departments need to submit updated MFIRS reports once investigators have completed their investigations. Whether your Standard Operating Guidelines (SOG’s) allow the fire investigator, the chief, deputy chief, or officer in command, to do this, the MFIRS report needs to be updated and then resubmitted (the next time incident reports are submitted) when anything new is discovered or an investigation is completed. This needs to be done even if the fire investigators are using another system other than MFIRS for their investigative reports.

If you are working with outside investigators such as troopers from the OSFM’s Fire Investigation Unit, it is the fire department’s responsibility to contact them and inquire as to their results and update your MFIRS report accordingly. This is especially true for fatal or large loss fires.

2011 Fire Deaths

- 51 civilian deaths, up 42%
- 2 firefighters
- 22 older adults, 28 adults and 1 child
- No one under 18 died in a building fire.



FATAL OR LARGE LOSS FIRES

If you have a fire or explosion with a **fatality** or **large loss (>$1,000,000)**, please forward a paper copy of the MFIRS report with a completed Remarks section to Derryl Dion within two business days. The report should include the Basic, Fire, Civilian Fire &/or Fire Service Casualty Module(s), and Structure Fire Module (needed for all structure fires). This most likely will be a preliminary report and you can file the complete report at a later date unless otherwise noted. Every effort should be taken to make sure that these reports are as complete as they can be given all of the information available at the end of your investigation.

ELECTRONIC REPORTING

The e-mail address to send your electronic MFIRS reports to is: MFIRS.Report@state.ma.us. You should be submitting your reports on a monthly basis.

ASSISTANCE

Please contact Derryl Dion, Research Analyst/ MFIRS Manager at 978-567-3382 or Derryl.Dion@state.ma.us with any questions regarding MFIRS or to conduct fire data or histories research. ▪

PLASTIC FIRE SPRINKLER PIPE

Many familiar with current sprinkler system technology are aware that manufacturers are always coming out with new products to address market needs. One such advancement was the introduction of plastic pipe to the industry. Even though it has been over 20 years since it was directly recognized in the standards, the proper utilization of plastic pipe in fire sprinkler systems is often misunderstood.

Historically, the first plastic pipe commonly used in sprinkler systems was made of Polybutylene (PB). Although listings still remain for PB pipe on the books, there are no manufacturers that sell it. Chlorinated Polyvinyl Chloride (CVPC) pipe followed shortly thereafter, and remains in common use today. Crosslinked Polyethylene (PEX) tubing has also recently been listed for use in certain fire sprinkler systems, but is not used in Massachusetts due to 2007 NFPA requirements.

Sprinkler Head. Photo by Jessamyn West.

CVPC PIPE USAGE

CVPC pipe can be used in any type of fire sprinkler system – NFPA 13, NFPA 13R, or NFPA 13D. Many falsely believe that CVPC piping can only be used in residential buildings (NFPA 13D and NFPA 13R). Although CVPC pipe can be used in any of the three different types of sprinkler systems, there are restrictions on its use, especially when utilized in an NFPA 13 type system. When the system designer or installer proposes the use of CVPC piping, it is important that the plans reviewer receive a current copy of the manufacturer's informational sheets for the specific product that will be installed.

There are multiple manufacturers of CVPC pipe, and the product listings are not exactly the same between manufacturers. Since the development of sprinkler system component technology is ongoing, the manufacturers are constantly updating listings – meaning that manufacturer's information as recent as last year may no longer be valid. The manufacturer's information sheets are typically many pages long (30+ pages), and will need to be reviewed in detail to make sure that the proposed use and final installation is in compliance. Another cautionary note on the use of CVPC pipe is that CVPC is incompatible with some common building materials (certain paint, pipe cutting oils, antifreeze, etc.). Therefore, care must be taken during the installation that only compatible materials, identified by the manufacturer, come into contact with the pipe.

CONTACT US

How to contact a fire protection specialist in the Division of Fire Safety (formerly the Office of the State Fire Marshal): if your jurisdiction contains, or is South of the Mass. Pike – contact Jake Nunnemacher at 978-567-3377 or jacob.nunnemacher@state.ma.us For jurisdictions North of the Mass. Pike – contact Dana Haagensen at 978-567-3376 or dana.haagensen@state.ma.us. ▪

Photo by Lydia Bogar, DFS.

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, times, and study materials can be found online at: www.mass.gov/dfs, under "Key Resources" in the left column; click on "Licensing."

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

Directions can also be found online at: www.mass.gov/dfs, under "Key Resources;" click on "DFS Directions."

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. ▪

2012 EXAM SCHEDULE

EXAM	EXAM DATE	APPLICATION DEADLINE
Fire Suppression Commercial Hood Cleaning *Exams begin at* **10:00 am**	April 25, 2012 July 18, 2012 October 17, 2012	April 13, 2012 July 6, 2012 October 5, 2012
Cannon/Mortar Fireworks & Special Effects Blasting, Blasting R&D *Exams begin at* **10:00 am**	May 23, 2012 August 15, 2012 November 14, 2012	May 11, 2012 July 3, 2012 November 2, 2012

Recruit Class 194. Photo by Brian Gallant.