A firefighter's helmet and gear are shown in the foreground, set against a background of intense fire. The helmet is yellow with a black chin strap and a reflective strip. The gear includes a wooden helmet and a black jacket with reflective strips. The fire is bright orange and yellow, filling the upper half of the image.

All Hands Herald

Massachusetts Department of Fire Services

May 2015

Call/Volunteer Recruit Training *Program News*

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American Red Cross Home
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K9 Appreciation Day

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Editor
Jennifer Mieth

Copy Editors
Lorie Anderson
Nicole Delamare
Julie Weinstein

Graphic Artist
Julie Weinstein

The *All Hands Herald* is published three times a year by the Department of Fire Services. Our title incorporates the traditional fire service meaning of all hands working to extinguish a fire. In this publication, all hands is DFS staff providing information, training and assistance with fire service issues which affect all levels of the fire service.

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
978-567-3189

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www.mass.gov/dfs and on
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Photos by DFS staff
Cover photo by Barry Hyvarinen



2 Call/Volunteer Recruit Firefighter Training Program News

Program staff and a broad working group examined and evaluated program curriculum to determine changes that will meet the needs of end users and that reflect the changing profession.



3 American Red Cross Home Fire Preparedness Campaign

The Red Cross is trying to reduce fire deaths and injuries by 25% over five years by establishing partnerships that include fire departments, providing in-home fire education, and installing 500,000 smoke alarms each year.



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From the Fire Marshal

From the Fire Marshal

This winter we welcomed the new Secretary of Public Safety and Security Daniel Bennett to the Department of Fire Services. I appreciate the time he took to tour our campus, listen to senior staff explain our mission and work, and the thoughtful questions he asked.

26th Annual Firefighter of the Year Awards

This has been a long, hard winter for residents, firefighters and other first responders. There have been many heroic acts by the Commonwealth's fire service under difficult conditions. I urge fire chiefs to think now about nominating the brave men and women on their teams for the 26th Annual Firefighter of the Year Heroic Awards while the images and memories are still fresh. Very soon, the Heroic Awards Committee will be accepting nominations for the July 1, 2014 - June 30, 2015 period. One small way for fire chiefs to show how much they appreciate their team is to recognize their efforts through this program.

Legislation

The fire service is monitoring several pieces of re-filed legislation this session. First is legislation that will require all residences (1-5 units), upon sale or transfer regardless of date of construction, to have smoke alarms that meet either the State Building Code in effect at the date of construction, or be equipped with smoke alarms powered by 10-year sealed lithium batteries. This new technology ends the need to replace batteries for the entire life of a smoke alarm and can prevent tampering. If the battery is removed, the device no longer functions and must be replaced. This legislation ensures there are working smoke alarms in buildings when they are sold or transferred. The fire service is also following legislation which would create a local option law to allow individual communities to decide whether or not to require fire sprinklers in newly constructed one- and two-family homes. This decision can affect a community's ISO rating, and thus homeowner insurance premiums.

Two New Division Directors

In January, the Department of Fire Services welcomed two new division directors: George Kramlinger as the new Massachusetts Firefighting Academy Director, and Paul Vigneau as the new Division of Fire Safety Director. Director Kramlinger served in the U.S. Air Force (USAF) for 26 years. While still on active duty he completed the

Massachusetts Call/Volunteer Recruit Firefighter training and in 2008 became a full-time firefighter/EMT in Dover, New Hampshire. He has taught at the New Hampshire State Fire Academy in many programs. Director Vigneau was assistant commissioner for the Worcester Department of Inspectional Services and previously served as special assistant and as project manager for the Worcester City Manager. He served for 23 years in the U.S. Marine Corps.



DFS Springfield Campus

Despite the brutal winter, construction of the Department of Fire Services Springfield campus continued. This was possible because the construction team installed the roof in December before the heavy weather began. We are still on track for completion of the campus this fall. Our facilities manager Jim DiRico has done an excellent job monitoring progress on the construction.



Construction at DFS Springfield.

Revised Fire Code

Implementation of the largest single revision of the State Fire Code has gone smoothly so far. The Board of Fire Prevention Regulations will be asked to issue interpretations on the new code as questions arise and to provide clarification and guidance as we move forward. Fire departments should not hesitate to consult with the Code Compliance and Enforcement Unit in the Division of Fire Safety about code questions to help ensure the code is enforced uniformly across the Commonwealth.

Call/Volunteer Recruit Training

Program News



By Chris Norris, Program Coordinator

2014 brought many changes and accomplishments to the Call/Volunteer Recruit Firefighter Training Program. In January, program staff were asked by the State Fire Marshal to be part of a working group to examine program curriculum. We were asked to evaluate topics that should be added to or removed from the program in order to better meet the needs of end users and to reflect our changing profession.

The working group included the MFA director, fire chiefs from call and volunteer departments across the state, and myself. Over four months we revised the curriculum and the new program began in January 2015. The group removed Emergency Vehicle Operator from the program and minimized the amount of time spent teaching about pumps and hydraulics. We revised the Rapid Intervention Team (RIT) training and will transition away from RIT to teaching several of the self-rescue techniques in the *Saving Ourselves* program. These include the *Long Lug Out* method of using the fire hose to exit if disoriented in a fire, the *Low Profile Drill* for removing airpicks to squeeze through tight spots, and using the *entanglement prop* to escape the wires and cables found above dropped ceilings.

E-Blended Format Began in 2014

The Call/Volunteer Recruit Firefighter Training program began using the Jones & Bartlett online e-blended learning platform last year with good success. We hope that using an online platform for a portion of the training will give students better control of their workload and time commitments. Moving some program components online allows more time for students to get practical training in

performing evolutions when they are onsite. Some early technical issues arose, but the online system is now working well.

New Instructors

The academy has many new instructors and they are completing their audit time. We pair new and senior instructors to provide the best instruction for both students and the new instructors. Training of new instructors is ongoing.

Grading

Throughout 2014 program staff have worked hard with the Massachusetts Fire Training Council, advocating for needed changes in rules and regulations regarding Call/Volunteer training. The most significant change made was in the academic requirements for the program. Previously, in order to pass, a student had to achieve 70% on the final exam. Now a student must achieve a 70% average between the final class academic grade and the final exam grade. This does not affect certification. This final grade better reflects all the work and effort firefighters put into the program, instead of focusing on one final exam grade.

Equipment

In the past year, the academy replaced one of our remote site storage containers. The containers hold all the equipment for the 15-week program at the site.

DFS Springfield Campus

The Call/Volunteer was the first program to use the Department of Fire Services Springfield campus after it

Continued on next page



American
Red Cross

Home Fire Preparedness Campaign

The American Red Cross, through their *Home Fire Preparedness Campaign*, is trying to reduce fire deaths and injuries by 25% over a five year period. They are establishing local partnerships that include fire departments, providing in-home fire education, and installing 500,000 smoke alarms each year.

Alarms Meet Massachusetts Codes

DFS staff has met with American Red Cross of Massachusetts staff to discuss the types of smoke and carbon monoxide (CO) alarms required by the State Fire and Building Codes. While the national program was originally purchasing only ionization smoke alarms, they are now offering several different types of alarms in Massachusetts so that they can meet current fire codes. The alarms include: photoelectric-only smoke alarms (not a 10-year alarm); ionization-only smoke alarms; and combination CO/photoelectric smoke alarms. All alarms are UL listed. The Red Cross is committed to ensuring that installed alarms meet code. The Red Cross program is also replacing batteries in existing smoke and CO alarms.

Local Coalitions Can Complement Senior SAFE Programs

American Red Cross volunteers may be contacting local fire departments about organizing local coalitions to carry out this program. Fire departments must be part of a coalition for the project to proceed. Coalition members will determine how to work together and how to train installers. These coalitions can complement a fire department's Senior SAFE Program, providing additional volunteers for home safety visits, in-home education, and resources for smoke and CO alarms. The Red Cross is well aware of our

Student Awareness of Fire Education (S.A.F.E.) and Senior SAFE programs and is dedicated to complementing and enhancing those programs.

Timely Opportunity

Many fire departments worked with the Massachusetts Department of Public Health over several decades with the U.S. Center for Disease Control funded *Residential Fire Injury Prevention Program*. The partnership provided departments with smoke alarms, but has ended. The American Red Cross project comes along at just the right time to fill the void and will also provide volunteers.

Liability for Smoke and CO Alarm Installation Programs

Departments participating in smoke alarm and/or other safety device installation programs should know there is always a risk of liability on the part of the city, town, or fire district and their employees when providing or installing these devices, if or when the devices fail or the batteries are not changed.

In order to protect the participating municipalities and fire districts and their employees, the Department of Fire Services' general counsel has drafted a sample *Hold Harmless, Waiver and Release* which can be put on local government letterhead and used as part of such programs. It is provided only as a recommendation and fire departments should seek advice from their own city, town or fire district legal counsel regarding use of this document. If you or your legal counsel have any questions, please contact DFS General Counsel Steven Rourke at (978) 567-3182. The waiver and memo were sent to fire chiefs and can be found on the DFS website under *DFS Advisories*.

Call/Volunteer Recruit Training, *continued from previous page*

was transferred from city to state ownership. We used the burn building for live fire training, saving students the travel time to Stow. When the Springfield campus is complete in the fall of 2015, it will provide a state of the art fire training location in the western part of the state for the Call/Volunteer Recruit Firefighter Training program and other MFA programs.

2014 was a productive and successful year for the Call/Volunteer Recruit Firefighter Training program. We graduated four classes and made substantial improvements to the program and the way it is delivered. In 2015, we will be closely evaluating those changes and making adjustments based on feedback from all stakeholders – fire chiefs, firefighters, and instructors.

Fireworks Safety



The Fire Safety Division (FSD) works closely with local fire departments to enforce fireworks laws and regulations and to make sure that supervised fireworks displays are safe for both spectators and shooters. The Fire Safety Division is ready to provide technical, compliance, and enforcement support, 24 hours a day, seven days a week, especially during the busy 4th of July week. For immediate assistance, call the Massachusetts Emergency Management Agency (MEMA) at (508) 820-2000 outside of regular business hours and (978) 567-3375 during normal business hours (8 a.m. to 4 p.m.).

The DFS *Fireworks for Fire Prevention* webpage provides resources for fire departments as they prepare for fireworks displays, including contact information and a fireworks display checklist which includes guidelines for a fireworks program (before the show, day of the show, following the show).

Fire Departments Issue Permits for Supervised Displays

All fireworks shows must have a permit issued by the local fire department and must be supervised by the fire department (527 CMR 1.00:1.12.8.39.2.1). Permit applications must be submitted 20 days prior to the show and the fire department must inform the Fire Safety Division within five days if they approve or disapprove the application.

The permitting process gives the fire department the opportunity to review that the regulations are being met, the shooters are licensed, all other required permits have been issued, the audience will be a safe distance from the shells and debris, an electronic firing board is used, the fireworks will be secured from the moment they arrive on scene, and a first light search will be conducted for unexploded shells, among other safety issues. Fireworks display

applications require the following and are incomplete if all requirements are not met:

- Diagram/site plan showing points where fireworks are to be discharged, location/distance to the audience, buildings, highways, overhead obstructions, etc. (handwritten maps are not acceptable; maps must be from Google, Bing, GIS).
- The number and description of the fireworks/pyrotechnics including the diameter of the shells.
- A copy of the natural barrier letter from the Fire Safety Division (if applicable).
- FAA, Coast Guard, or other agency approvals/notifications (if applicable).

Natural Barrier Approvals

The Fire Safety Division grants natural barrier approvals when needed (527 CMR 1.00:65.1.4.1). If approval was previously received and nothing has changed in the plans submitted by the fireworks shooter, another approval is not needed. If a site inspection is needed, please contact (978) 567-3375, at least thirty (30) days before the proposed date of the display.

Licensed Fireworks Shooters Licenses

The Fire Safety Division issues licenses to people and companies engaged in fireworks, special effects, and cannon and mortar firing (527 CMR 1.00:1.13.9). Applications for certificates of competency (licenses) and the exam schedule are on our licensing webpage. For information about licensing issues, contact the Licensing Desk at 978-567-3700 or at dfs.licensing@dfs.state.ma.us. To check on an individual license there is an easy to use application on the webpage that looks like *Figure 1*.

Figure 1

Professional License Information	
Search by license type to find out where to apply for, renew, or verify a license, or to file a complaint against a license holder. (Ex. Nursing)	
Enter license type: <input type="text"/>	<input type="button" value="Search"/>

Licensed Shooters Must Abide by State Regulations

The Fire Safety Division has reminded licensed fireworks shooters of their responsibility for public safety and their obligation to abide by the state's laws and regulations. Licensed fireworks shooters have also been notified that involvement in an unsupervised and/or unpermitted fireworks display is both a violation of law and the fire code, and a violation of the terms and conditions of their license, which can result in suspension or revocation of a certificate of competency. If a fire or police official is aware of such activity they should contact our office immediately.

Contact State Police Bomb Squad to Dispose of Confiscated Illegal Fireworks

All police officials are required to confiscate illegal fireworks. Police and fire officials should contact the State Police Bomb Squad at (978) 567-3310 during normal business hours to dispose of the materials. Depending on type, quantity and condition, they will advise on whether an emergency response is required or if the fireworks can be safely stored until pick-up is arranged. Notify the Bomb Squad immediately if you receive a large quantity of materials, commercial grade materials, or deteriorated materials. After hours, contact the Troop Duty Officer for your area, or call State Police dispatch (508) 820-2121 and ask to be connected to your Troop Duty Officer. Ask the duty officer to contact the State Police Bomb Squad on call person right away.



Fireworks Display Checklist

Date of Show: _____

Before Show /check:

- Pre show site inspection.
- Natural barriers must be pre-approved by the Fire Safety Division (plan sufficient time ahead)
- At least 20 days prior to display application/permit must be submitted, including site diagram (hand drawn sketches are not acceptable) and shell inventory.
- Verify that all applicable State Fire Marshal permits such as transportation, electrical firing board, portable firing trailers, 12-inch shells have been issued.
- Within 5 days of receipt of application/permit, form must be approved or disapproved and forwarded to the Fire Safety Division (FSD). This may be done via mail, email or fax.

Day of Show /check:

- Establish secured area with a suitable barrier such as snow fencing or equivalent (caution tape is not sufficient), natural barriers, as approved by FSD (secured area must be established and maintained from the arrival of the fireworks until the completion of the display).
- Verify State Fire Marshal permits (transportation, electric firing boards, and portable firing trailers).
- If using racks, determine that the rack placement conforms to the approved site.
- Check racks for correct spacing and stability. Check angling of mortars.
- If not using racks, determine that tubes are sufficiently buried. Check angling of mortars.
- Determine weather and wind condition prior to display.

Following the Show /check:

- A competent operator must ensure a thorough search is made for any unignited shells immediately following the display and at the first available daylight.
- Upon completion of the search, a competent operator shall report all findings to the head of the fire department.

The Fire Safety Division is ready to provide technical, compliance, and enforcement support, 24 hours a day, seven days a week, especially during the busy 4th of July week.



Summer Fire Prevention

Marine Fueling Permits

The Fire Services Division (FSD) issues three types of Marine Fueling Permits: Barge Marine Fueling (FP 293B), Fixed Marine Fueling (FP 293F), and Mobile Marine Fueling (FP 293M). The applications are available at www.mass.gov/dfs.

Existing permit holders received renewal notices in October 2014, along with notification of the changes in the State Fire Code that took effect on January 1, 2015.

Applicants are responsible for holding a valid permit when fueling.

Code enforcement officers will conduct inspections of marine fueling facilities to ensure they are properly permitted and licensed and the operations are conducted in conformance with the State Fire Code. For technical questions, please contact the Code Compliance and Enforcement Unit at 978-567-3375 or in western Massachusetts at 413-587-3181.

Grills in the Revised Fire Code

The revised fire code and Massachusetts amendments specifically address barbecue grills (open flame cooking devices) directly for the first time. Previously, the code addressed only the use and storage of LP-gas, not grills, as a fire hazard. NFPA 58-LP-Gas Code (2011 Edition) is adopted by reference and provides guidance on gas grill use and storage.

Look for grill regulations in 527 CMR 1.00:10.11.6, Cooking Equipment. 10.11.6.1 addresses where grills can be used and 10.11.6.2 addresses where they can be stored.

In essence, no open flame cooking device (non-electric grill) can be used on a balcony, porch, deck or under overhangs, except in certain conditions for single-family dwellings. Gas grills can only be used on first floor balconies of single-family homes if an outdoor stairway leading to

the ground exists (NFPA 58). This allows propane tanks to reach the grill without entering the home.

The code prohibits the use of grills on fire escapes since grills must be used ten feet away from buildings (with the exception for single family dwellings mentioned earlier).

Grills can be stored on the first floor balconies of both one- and two-family dwellings, but they cannot be used on the balconies of two-family homes.

527 CMR 1.00:10.11.6 Cooking Equipment

10.11.6.1 For other than a single-family dwelling, no hibachi, grill, or other similar devices used for cooking, heating or any other purpose shall be used or kindled on any balcony, under any overhanging portion, or within ten feet of any structure.

10.11.6.2 For other than one- and two-family dwellings, no hibachi, grill, or other similar devices used for cooking, heating or any other purpose shall be stored on a balcony.

Mulch Fire Safety

Spring is the time for businesses and homeowners to spruce up landscaping. Spring is also the time when fire departments respond to mulch fires from spontaneous combustion or the improper disposal of smoking materials. The State Fire Code has regulations on mulch wood projects that were developed in response to significant fires in the state. Fire officials may want to alert nurseries, local landscaping companies, and building owners and managers about the proper placement and storage of mulch in order to prevent fires. The Department of Fire Services has an educational flyer called *Preventing Mulch Fires* that explains the regulation and provides safety tips.

527 CMR 1.00 Regulates Mulch

527 CMR 1.00:10.14.10.4 prohibits the new application of mulch within 18" from combustible exteriors of buildings including wood and vinyl but not brick or concrete.

Residential buildings with six units or less are exempt from this regulation, but all homeowners may want to adopt these safety practices. The regulation applies to all other buildings including commercial properties.

Storage and Manufacturing of Mulch

The regulation also has safety requirements for those who store or manufacture mulch (527 CMR 1.00:31.3.7). It limits the size of mulch piles and requires a distance of 30 feet between piles. Large piles of mulch generate heat and can spontaneously combust, so it is important to be vigilant and employ good housekeeping. The distance between piles prevents a fire from spreading to another pile or to a building.

Continued on next page

Preventing Mulch Fires

Mulch is a combustible material that can be easily ignited by improperly discarded smoking materials. Hundreds of small and large fires are started this way every year. The risk is that what starts as a small outdoor mulch fire can quickly spread to buildings. A mulch fire can be well underway before someone notices or is alerted by smoke alarms or sprinkler systems activating.

Regulation on Mulch Safety

Safe use of mulch is regulated through 527 CMR 1.00, section 10.14.10.4. The regulation prohibits new application of mulch within 18" around combustible exteriors of buildings, such as wood or vinyl, but not brick or concrete. Residential buildings with six units or less are exempted from the regulation, but all homeowners may want to adopt these safety practices. The regulation applies to all other buildings including commercial properties.

Tips for Property Managers, Building Owners & Landscapers

- Provide a minimum of an 18-inch clearance between landscape mulch beds and combustible building materials, such as wood, vinyl siding and decks.
- Use non-combustible mulch such as rock or pea stone around gas meters and combustible portions of the structure.
- Provide proper receptacles for smoking materials at all entrances to public buildings and in designated smoking areas. Place them at least 18" away from the building, do not mulch in these areas and remember to regularly empty smoking receptacles.
- Grounds and maintenance crews should be aware when conditions are favorable for mulch fires and increase surveillance of mulch beds.
- Keep mulch beds moist when possible.

Million Dollar Mulch Fire

- The most notable mulch fire in Massachusetts occurred at a Peabody apartment complex in May 2008. The cigarette-lit fire caused a \$6.7 million loss, and displaced 750 people temporarily and 36 permanently.
- In April 2012, improperly discarded smoking materials ignited mulch outside an assisted living center in Braintree. The fire forced the early morning evacuation of many older adults, some of whom suffered smoke inhalation injuries.

FireFactors
Office of the State Fire Marshal • www.mass.gov/dfs • (978) 567-1300

Fire Marshal Advisories

State Fire Marshal Coan has sent recent advisories to local fire chiefs in order to spread awareness of code changes and interpretations and issues affecting code enforcement. Advisories are posted on the DFS website (www.mass.gov/dfs) under *DFS Advisories* and as part of the monthly *DFS Briefs*. For questions or assistance, contact the Code Compliance and Enforcement Unit at (978) 567-3375 or in western Massachusetts at (413) 587-3181.

January 1, 2015

Sky Lanterns

In response to concerns regarding the dangers posed by sky lanterns, I want you to be aware of a provision in the revised Massachusetts Comprehensive Fire Safety Code, which became effective January 1, 2015.

527 CMR 1.00:10.11.9.1 now prohibits the use of open flame devices, including sky lanterns, unless a permit is issued from the Authority Having Jurisdiction (AHJ). The citation is as follows:

10.11.9.1 Welding torches, tar pots, fire lanterns, and other devices, machines or processes liable to start or cause fire shall not be operated or used in or upon any areas, except by permit from the AHJ.

This violation is also included in the M.G.L. Chapter 148A revised ticket books. Tickets can now be issued for \$100, \$500 or \$1,000 for first, second and third or subsequent offense for violations of this provision.

February 1, 2015

Open Air Burning

Apparently there is some confusion regarding the provisions of 527 CMR 1.00:10.11.4.3 as it relates to the 25-foot distance from structures.

The Department of Environmental Protection (DEP) regulation on open burning, 310 CMR 7.07, requires that open air burning take place at least 75 feet from a



structure. Because the DEP regulation provides for a higher standard of safety, it prevails (527 CMR 1.00:1.3.3.3).

For additional information on open burning, please visit our web page at <http://www.mass.gov/eopss/agencies/dfs/dfs2/osfm/pubed/fs-topics/fs-topics-a/safety-tips-for-open-burning-season.html>.

March 1, 2015

Fire Suppression System Initiators Containing Explosive Materials

Recently, a municipal fire department and the State Police Bomb Squad assigned to my office were called out to a facility that contained a Halon fire suppression system.

A fire suppression system company had been contacted to remove components of the fire suppression system. The company removed the agent cylinders, but left the explosive-containing initiators and contacted the fire department for disposal.

I want to remind you that work on systems containing these initiators must be conducted by companies and individuals possessing the proper technical qualifications, certificates of registration and competency, along with the appropriate federal and state licenses related to the possession and use of explosive materials. It is the responsibility of these companies and individuals to properly handle and dispose of the explosive-containing initiators.

Summer Fire Prevention *continued from previous page*

Permits Required to Store 300+ Cubic Yards of Mulch

Permits from the fire department are required wherever more than 300 cubic yards of mulch is produced or stored (527 CMR 1.00:1.12.8.17).

Tips for Landscapers, Property Managers and Building Owners

How to prevent mulch fires:

- Keep wood mulch 18" away from combustible exteriors of buildings such as wood or vinyl siding. Don't put it right up against the building.
- Create an 18-inch barrier around the foundation of a

building using pea stone or crushed rock.

- Provide proper receptacles for smoking materials at entrances to buildings (place at least 18 inches away from the building) and in designated smoking areas. Empty regularly and do not mulch these areas.
- Train maintenance staff to watch for mulch fires especially when conditions are most favorable: when mulch is fresh or weather is very hot and dry or windy.

The Massachusetts Department of Public Health has information for landlords and owners on making properties smoke-free on their *Let's Make Smoking History* webpage.

Smoke and CO Alarms

for People Who Cannot Hear Audible Signals

By Jonathan O'Dell, Massachusetts Commission on the Deaf and Hard of Hearing

Fire and carbon monoxide (CO) are deadly threats for everyone, but especially for Deaf, hard of hearing and deafblind individuals who cannot hear the audible signals generated by conventional smoke and CO alarms. Often, people test their ability to hear these alarms while they are wearing hearing aids or cochlear implants; but as these are always taken off at bedtime, someone who hears the alarm with an aid during the day may not hear it at night.

Although strobes are very bright, they may not wake Deaf and hard of hearing individuals who are stomach or side sleepers, as they may have a pillow or blanket covering their eyes. Very few residences, whether rental properties or private homes, feature strobes in the bedroom. If strobes are installed, they are likely to be in a hallway where a closed door can render them invisible.

The inclusion of a tactile component is very important when implementing fire and carbon monoxide safety protocols for individuals who are Deaf, hard of hearing or deafblind. This is usually a bed shaker (also called a pillow shaker) which is generally placed between the mattress and the box spring and connected to a controller or receiver unit at the bedside. The controllers and receiver units often double as alarm clocks, and may include a strobe.

If audible-only alarms are used in a residence, it is important to add units that detect the sound of an alarm, and will activate a bed shaker. The devices must be close enough to audible fire and CO alarms to activate; they may also require a specific alert frequency and pattern, such as the Temporal-3 (T3). In my opinion, the shortcoming of these devices is that they are not actually detectors; they merely *listen* for the sounds of alarms.

Some equipment manufacturers have created fire panel transmitters and proprietary system-integrated fire/CO alarms that give audible alerts and send triggering signals to remote receivers in different locations. In the bedroom, the receiver flashes a built-in strobe and shakes the bed, while in other rooms the visual signal is activated. The components can also be integrated into a larger whole-house system including entry and egress, as well as doorbell and telephone alert systems.

To find out more about accessible fire and CO detectors, please contact Jonathan.ODell@Massmail.state.ma.us. Jonathan can provide equipment consultation, vendor referrals, and information on the availability of potential funding sources.

Firefighters and Hearing Loss

What did you say?

Firefighters with hearing loss? Sadly, it is not uncommon for firefighters to have minor to moderate hearing loss. While many people wear eye glasses easily, many are embarrassed to use technology to help address hearing loss. But hearing all of an important training program is crucial. A firefighter's life could depend on it.

The Department of Fire Services (DFS) has equipment that amplifies a speaker's voice and eliminates distracting background noises. The equipment is available to all students. For students, the devices include a battery-operated receiver and headphones, or a neck loop for those who use hearing aids. The presenter wears a microphone on a neck loop that plugs into a transmitter they wear on a belt (like a lavalier microphone). DFS has seven receivers for students. Any student or audience member can request the assistive device by asking the instructor or the front desk to contact Cynthia Ouellette or Jennifer Mieth. The devices are currently housed in the Public Education Unit.

NIOSH Study on Hearing Loss Among Firefighters

In May 2013, the National Institute for Occupational Safety and Health (NIOSH) issued a bulletin called *Promoting Hearing Health among Firefighters* (<http://www.cdc.gov/niosh/docs/wp-solutions/2013-142/pdfs/2013-142.pdf>). The bulletin says, "Exposure to high noise levels among fire fighters is well documented and increases the risk for noise-induced hearing loss. NIOSH recommends measures to promote better hearing health through the use of quieter equipment, better work practices, hearing protection devices, and implementation of effective hearing loss prevention programs." It also cites a 2001 study of Massachusetts firefighters that shows they suffered a greater than average rate of significant hearing loss than the general population.



Assistive Safety Devices

Available Through Grant

With early warning from smoke or carbon monoxide (CO) alarms, people are better able to escape a fire or CO event. Hearing the familiar beeping sound tells us there is an emergency and to respond quickly. We only have a few minutes to get out of our homes – fire doubles in size every minute. Imagine that you cannot hear the sound of CO or smoke alarms. Without a warning, someone who is deaf or hard of hearing could succumb to fire, smoke or CO. But devices that alert people who are deaf and hard of hearing to danger do exist.

Assistive Devices are Available

In 2013, the Massachusetts Department of Public Health (MDPH) partnered with the Massachusetts Commission for Deaf and Hard of Hearing (MCDHH) and the Department of Fire Services (DFS) and applied for a federal Assistance to Firefighters Grant (AFG) to supply hearing impaired citizens with assistive alarms. Through the MCDHH, independent living organizations were contacted to help identify clients in need of the technology. Fire safety education was also provided as part of the requirements to receive the alarms. Both trained firefighters and agency staff went into homes to install assistive devices that include:

- **Bedside fire alarm and clock-alert device with a bed shaker.** The device is not a smoke alarm but detects the sound made by alarms that emit the Temporal-3 (T3) signal. The bedside device emits a low-frequency signal which may be heard by those with hearing loss. It also flashes an emergency signal on a digital screen. A bed shaker that is placed under the mattress or pillow to shake a person awake is an option. The device is electronic with battery backup. It must be synced with a T3 alarm in order to operate.
- **Photoelectric smoke alarm with visual signaling.** The device gives an early warning of smoke with audio and visual (flashing strobe light) signals. This electronic alarm is plugged into an outlet with battery backup for the audible alert only, not the strobe.
- **CO alarm with a strobe.** The device senses carbon monoxide and triggers both a strobe light and an audio alert. This electronic alarm must be mounted on a wall. It has a battery backup for the audible alert only, not the strobe.

The Department of Fire Services received 100 of each device, as well as T3 smoke alarms to sync with the bed shakers.

So far, eighteen fire departments received and have installed more than 85 devices. The one-year grant successfully provided new and better options for early fire warnings. One person was thrilled to have the devices installed and wanted to “pay it forward”. They have volunteered to help the fire department educate other seniors about fire safety.

A few alarms are still available from the Department of Fire Services or the Massachusetts Commission for Deaf and Hard of Hearing. At DFS, contact Cynthia Ouellette, Fire Data and Public Education Coordinator at 978-567-3381 or Cynthia.ouellette@state.ma.us. At the MCDHH, contact Jonathan.O'Dell@state.ma.us or Debra.Lobsitz@Massmail.state.ma.us.

CO alarm with a strobe



Photoelectric smoke alarm with visual signaling



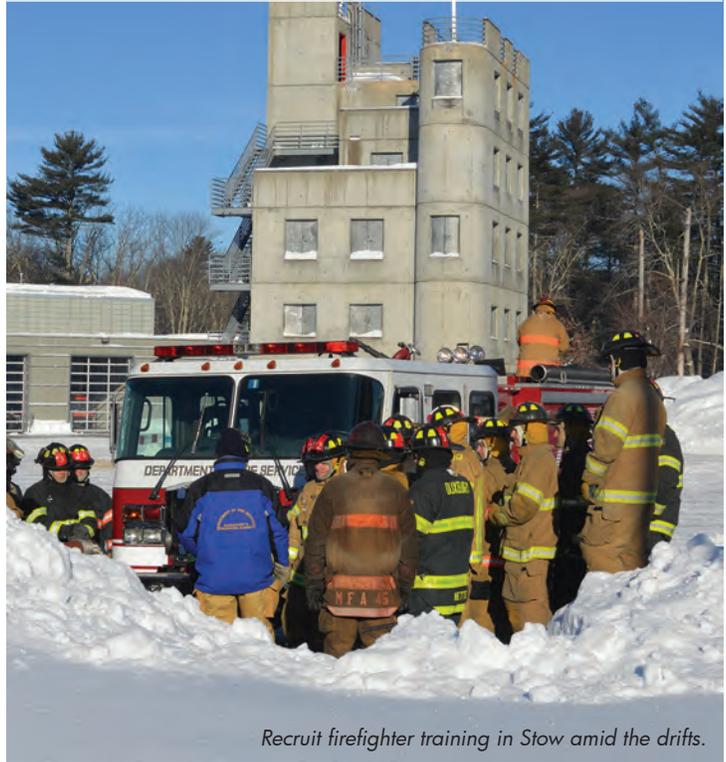
Bedside fire alarm and clock-alert device with a bed shaker



Massachusetts Fire Training Council Policy

The Massachusetts Fire Training Council (MFTC) recently revised its policies on withdrawal and readmission for the Career Recruit Firefighter Program, and on reasonable accommodations for both the Career and Call/Volunteer Recruit Firefighter Training programs. Unless a student is dismissed for misconduct, a student may have a second opportunity to complete their Career Recruit Firefighter Training under the new policy. In addition, the reasonable accommodation policy has been amended to ensure consistency with Executive Order 526. These revised policies were recently sent to all fire chiefs.

DFS During the *Snowiest Winter . . .*



Recruit firefighter training in Stow amid the drifts.

Vuona Wins *Fire Chiefs' Leadership 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 Shrewsbury Fire Chief James M. Vuona at the Fire Chiefs' Association of Massachusetts' (FCAM) annual professional development conference on February 4 in Boxborough. Citations were also presented to Oxford Fire Chief Sheri Bemis, Granby Fire Chief Russell E. Anderson, Chicopee Fire Chief Stephen S. Burkott, and Worcester Deputy Fire Chief John Sullivan.

Tustin said, "Shrewsbury Fire Chief James Vuona has changed the culture of his department through his emphasis on customer service, and has made fire education the cornerstone of that change. His ability to communicate and share this vision with his staff, residents and other town agencies is an example of his leadership in community risk reduction."



Left to right: Cynthia Ouellette, Chief James M. Vuona, and Captain Rick Tustin.

MaSAFE created the Fire Chiefs' Leadership in Fire Education Award to honor fire chiefs for excellence in leadership of community fire education efforts. Often these efforts take place behind the scenes and are not noticed. No community fire educator can be successful without the support of the fire chief. Introducing the award, Capt. Tustin said, "Fire chiefs know they not only have the responsibility to 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."



You Tube Burn Awareness Video Contest

Winners Announced

Teams of high school students and media teachers received awards on April 9, 2015 for their YouTube™ videos from the 7th annual statewide YouTube™ Burn Awareness Video Contest. State Fire Marshal Stephen D. Coan was joined by contest co-sponsors Ron Meehan from the Massachusetts Property Insurance Underwriting Association (MPIUA) and Captain Rick Tustin, president of the Massachusetts Association of Safety and Fire Educators (MaSAFE). The ceremony was held at Shriners Hospital for Children® in Boston. National Burn Awareness Week was February 1-7, 2015. The award ceremony was originally scheduled for Burn Awareness Week but was postponed due to weather.

Winning Videos

Thirty-eight teams from nine high schools in Agawam, Ayer-Shirley, Bedford, Mashpee, Sharon, Spencer, Westford, Worcester, and Williamstown participated in this year's contest. The first place winner was the team from Mashpee High School with their dramatic video *Make a Plan*. Second place went to Sharon High School students for their video *Silent Film*. Third place winners were from Nashoba Valley Regional High School for their video *Fire*

Fairy. The Department of Fire Services posted the winning videos on its You Tube™ channel at www.youtube.com/DFSOSFM.

Honorable Mentions

Three teams from Ayer-Shirley Regional High School, Mt. Greylock High School and Sharon High School received honorable mention for their entries.

State Fire Marshal Stephen D. Coan said, "YouTube™ is ten years old and our contest is seven years old. The contest is a great way for young people to learn about the consequences of fires and burns without getting hurt, and more importantly to teach others. There are too many internet videos that don't show the true impact of burn injuries." Recent headlines from across the country about teens being injured participating in "The Fire Challenge" and unthinking parents being charged for filming their kids lighting themselves on fire, demonstrate how this problem persists. Perhaps the fact that there have been no "fire challenge" burn injuries in Massachusetts says something about the effectiveness of the video contest in our state. Or perhaps we have just been lucky.

9th Annual Northeast Youth Firesetting Conference

The Brandon School, MaSAFE, FirePsych, Inc., and Telamon have joined forces to offer the ninth annual *Northeast Youth Firesetting Conference*. This year's theme is *Strength Training: Promoting Resilience in Kids, Caregivers, and First Responders*. The conference will be held May 14 - 15, 2015 at the Hampton Inn in Natick, Massachusetts. Workshop highlights include: Positive Psychology and Strength-Based Assessments; Straight Talk About Stress: Resiliency and Self-Care; and a Shriners Hospital program on Supporting Families Through Crisis.

The conference is designed for professionals in the fields of education, social services, fire services, mental health, juvenile justice, burn care, and injury prevention. For more information and to register online, visit www.brandonschool.org/pathways.

Ninth Annual Northeast Youth Firesetting Conference
Strength Training: Promoting Resilience in Kids, Caregivers and First Responders

Please plan to join us

- > **May 14-15, 2015**
Hampton Inn - Natick, MA
- \$130** - 1 Day Registration
- \$160** - 1.5 Day Registration (Only 80 slots!)
Register 3 or more to save \$10 per person!
- > **Workshop Highlights:**
 - Positive Psychology & Strength-based Assessments (Only 80 slots!)
 - Keynote by Mike McEvoy, Straight Talk About Stress: Resiliency & Self Care
 - Shriners Hospital Educates on Supporting Families Through Crisis
- > OEMS credits & 9 CEUs anticipated
- > Workshops for new & seasoned professionals
- > Easy access from all northeast states & Logan Airport
Discounted rooms at Hampton Inn, for more information:
www.brandonschool.org/pathways/directions.html
- > For more information or to register online:
www.brandonschool.org

educators
social services
fire service
mental health
juvenile justice
burn care
injury prevention

Sponsored by **Brandon**,
MaSAFE, FirePsych, Inc., & Telamon

Springtime

Fire Safety

Public Education Conference in September

Mark your calendar for September 28 and 29, 2015 for the 21st annual Fire and Life Safety Education Conference, *Here We Grow Again*. The conference will be held at the Westford Regency Inn and Conference Center in Westford, Massachusetts. See the back cover of this *All Hands Herald* for more information.

Grill Fire Safety

Memorial Day is the traditional launch of the summer barbecue season. It is also when the number of grill fires begins to rise. In 2013, there were 85 grill fires reported to the Massachusetts Fire Incident Reporting System (MFIRS). The fires caused two civilian injuries and an estimated dollar loss of \$300,000. Three-quarters (75%) of all grill fires happen between May and September. The Department of Fire Services has developed a new *Grilling Safety FireFactor*. Visit www.mass.gov/dfs, click on *Public Education*, then *Fire Safety Topics and Flyers*.

Safety Tips for Grill Use

- Inspect grills for leaks and cracks.
- Check to make sure all connections are tight and secure

before lighting a gas grill for the first time this season. Using a brush, apply a soapy solution made of one part dish liquid and one part water to the tank connection. If the solution bubbles, you have a leak that needs repair.

- Check for and replace cracked hoses.
- Place grills well away from the exterior of a house (ten feet), deck railings and out from underneath eaves and overhanging branches to prevent a grill fire from igniting a building.
- Never use a grill indoors.
- Keep children and pets three feet away from grilling, creating a *circle of safety*.
- Never leave a burning grill unattended.
- Never use gasoline on any grill.

No Grills on Balconies or Fire Escapes

Unless you live in a single-family home, you may not use a charcoal or gas grill on a porch or balcony. Electric grills have no open flames and can be used instead.

- Never use a grill on a fire escape.
- Gas grills can be used on the first floor deck or porch of a single family home only if there is an outside stairway to the ground.
- Never bring a propane tank into a house.
- Keep your grill clean by removing grease and fat from grills and trays below the grill.
- If you smell gas while cooking, immediately get away from the grill and call the fire department. Do not move the grill.
- If the flame goes out, turn the grill and gas off and wait 15 minutes before relighting.

Mulch Fire Safety

Mulch is a combustible material that can be easily ignited by improperly discarded smoking materials. Hundreds of small and large fires are started this way every year. Small outdoor mulch fires can quickly spread to buildings and a mulch fire can be well underway before a smoke alarm sounds or a sprinkler system is activated. The DFS *Mulch Fire Safety* webpage has information for fire prevention officers, property and building owners, nurseries and landscaping companies, and the public on the use and storage of mulch. The webpage includes an informative *Mulch FireFactor*.

Grilling Safety

Many people enjoy barbecuing in the summer months. But when grills are not used safely, things can go horribly wrong. Between 2009 and 2013 Massachusetts fire departments responded to 356 fires involving grills, hibachis, and barbecues. These fires caused 16 civilian injuries, one firefighter injury, and \$2.4 million in property damage. For safe grilling, always follow your owner's manual and practice the safety tips provided here.



Safety First

- Always grill outdoors.
- Place grills away from the house and deck railings. Make sure grills are not under eaves or overhanging branches.
- You should not use a gas or charcoal grill on any porch or balcony. Electric grills that have no open flame may be used.
- Gas grills can be used on first floor decks or patios, only if there is an outdoor stairway to the ground, or it is at ground level.
- Grills cannot be used on fire escapes.
- Keep all matches, lighters and lighter fluid away from children.
- Keep children and pets three feet away from grills. Children should never play near grills or propane cylinders.

Gas Grill Safety

Gas grills are safe and convenient when they are assembled and used properly. Gas grills are fueled by liquid propane which is pressurized and requires special handling and storage.

Safe Cooking

- Make sure that the lid of a gas grill is open when you light it. Propane can build up inside and when ignited, the lid may blow off.
- If you smell gas while cooking, turn off and get away from the grill. Call 911 from a safe location. Do not move the grill.
- Always turn off the burners and close the propane cylinder when done cooking.
- Never leave a burning grill unattended.

(over) →

 **FireFactors**
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3/15

Continued on next page

Leave *Fireworks* to the Professionals

The possession and use of all fireworks by private citizens is illegal in Massachusetts. This includes Class C fireworks which are sometimes falsely called "safe and sane fireworks." Class C fireworks include sparklers, party poppers, snappers, firecrackers, spinners, cherry bombs and more. One example of the danger of these so-called safe fireworks is that sparklers burn at 1800°F.

July 4th is No Holiday for Fire Departments

Between 2004 and 2013, there were 802 major fire and explosion incidents involving illegal fireworks reported to the Massachusetts Fire Incident Reporting System (MFIRS). These incidents caused 14 civilian injuries, two fire service injuries, and an estimated dollar loss of \$2 million (high considering most fireworks fires are outdoor brush fires). The majority of these fireworks fires and injuries occur over the holiday weekend each year. During this time, 49 people were treated at Massachusetts emergency rooms for severe burn injuries from fireworks (burns covering 5% or more of the body) according to the Massachusetts Burn Injury Reporting System (M-BIRS). Seventy-two percent of the victims were children and youths under age 25. Many of these victims are scarred for life.

Outreach to Law Enforcement, Community Groups and Citizens

May is a good time for fire departments to reach out to local law enforcement, remind them of the fireworks law in the Commonwealth and develop a plan to work together over the July 4th holiday weekend. Some communities send letters to homeowner associations (often around beaches and lakes) where there have been past problems with illegal fireworks. Prevention and education in communities ahead of time can help to reduce the danger of this holiday.

During the July 4th holiday, fire departments are busy both supervising permitted fireworks displays, and responding to fires and emergency medical incidents. Illegal fireworks cause fires and injuries and are also used in crimes including the 2013 Marathon bombing. We must work hard to prevent the flow of illegal fireworks into our state and to educate the public about the dangers of fireworks.

Visit www.mass.gov/dfs and search for *Leave Fireworks to the Professionals*. The page includes a wide range of information for both the fire service and the public.

Springtime Fire Safety, *continued from previous page*

May is Electrical Safety Month

Electrical fire safety is a critical area for public education because these fires are a leading cause of fire deaths. In 2014, electrical fires were the leading cause of all residential fire deaths and the number one cause of fire deaths for seniors.*

The Department of Fire Services has resources for fire educators and the public on electrical fire safety at www.mass.gov/dfs. The U.S. Fire Administration (<http://www.usfa.fema.gov/prevention/outreach/electrical.html>) and the National Fire Protection Association (<http://www.nfpa.org/>) also have excellent public education materials and videos on electrical safety on their websites.

* 2014 data is preliminary.

Preventing Electrical Fires at Home

DEPARTMENT OF FIRE SERVICES
Stephen D. Coan • State Fire Marshal

Electrical Fires: A Leading Cause of Fire Deaths

From 2009-2013, Massachusetts fire departments reported 2,694 home fires caused by electrical problems. These fires caused 35 civilian deaths, 1 fire service death, 138 civilian injuries, 311 fire service injuries and an estimated dollar loss of \$122.6 million. The average loss per fire was \$45,499. Electrical fires were the leading cause of fire deaths in 2011 and they were tied for the second cause in 2012 and 2013.

Potential Warning Signs and Hazards

Call the fire department immediately if you have any of these warning signs:

- Arcs, sparks or short circuits;
- Sizzling or buzzing sound;
- Odors, vague smell of something burning

Firefighters can use thermal imaging technology to see excessive heat inside the walls.

Call a professional electrician soon if you have any of these warning signs:

- Frequently blown fuses or tripped circuit breakers;
- Dim or flickering lights, bulbs that wear out too fast;
- Overheated plugs, cords or switches;
- Shock or mild tingle – more than normal static electricity;
- Loose plugs; or
- Unusually warm or faulty outlets or switches.

Look around for these hazards in your home and correct them:

- Overloaded outlets – more than one appliance cord plugged into one wall outlet.
- Cords pinched behind furniture like couches or bureaus.
- Overloaded power strips. They should only be used with a few low current devices such as electronics.
- Lamps or fixtures with light bulbs higher than the recommended wattage. Most lamps recommend 60 watts. Be careful where you use higher wattage light bulbs.
- Electrical cords underneath rugs, carpet or furniture. Move them to reduce the risk of fire from overheating due to worn insulation.
- Cords with frayed wires or cracked insulation. Replace them with new ones having a certification label from an independent testing laboratory.
- An extension cord that is not properly rated for the appliance it powers. Typical "lamp cord" extension cords cannot carry the electrical current needed for appliances such as space heaters or air conditioners.
- Cords or wires that are nailed into place. This can cause electrical shorts and arcing.
- Indoor appliances and cords being used outdoors.

Fire Investigation News

This winter brought a large number of fatal fires to Massachusetts and devastated the families involved. Fatal fires also take a toll on public safety personnel. From October 1, 2014 to March 31, 2015, the Fire and Explosion Investigation section responded to 25 fatal fires and one explosion that resulted in 27 deaths. On March 31, Det. Lt. Paul Zipper coordinated with the Massachusetts Firefighting Academy to sponsor a 3-hour presentation entitled *Psychological Effects of Working a Fatal Fire Scene*. Over 120 people attended the seminar which provided public safety professionals an understanding of how responding to fatal fires can affect them. The seminar covered current research into the psychological effects of working fatal fire scenes and included a methodology of how to perform duties while navigating a fatality. The speaker was Special Agent William Visnovske who is a certified Fire Investigator with the Federal Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF).

Chelmsford Fatal Fire Ruled Accidental

The December 30, 2014 fatal fire at 20 Summer Street, Chelmsford was accidental. It was, most probably caused by the improper disposal of smoking materials. The fire took the life of 76-year old Marion Guarino, a resident of Summer Place, an independent senior living residence. Fire sprinklers contained the fire to a single apartment. The fire started on the victim's bed. She was seriously burned and died later that day in the hospital. The fire was jointly investigated by the Chelmsford Fire and Police Departments, and State Police assigned to both the Office of the State Fire Marshal and to the Office of the Middlesex District Attorney.

Cause of Holden Fatal Fire Self-Immolation

The October 26, 2014 fatal fire at 18 Farragut Way, Holden was started by self-immolation. The victim was found in a closet under the basement stairs, doused in gasoline, with a gas can at his feet. There were no signs of foul play. The fire spread from the basement through the home. Two separate explosions were reported and are believed to be from gasoline vapors igniting inside of enclosed containers such

as heating ductwork. Firefighters found the front door blown outwards and had to move it to gain entry to the house.

The fire was jointly investigated by the Holden Fire Department, Holden Police Department and State Police assigned to both the Office of the State Fire Marshal and to the Office of the Worcester District Attorney.

One firefighter suffered minor injuries fighting the fire. Arriving firefighters found a car inside the garage but no occupants outdoors. They had to assume that someone might be trapped inside and focused on search and rescue first and fire suppression second, which always increases the risk to firefighters.

Self-immolation is sadly not an uncommon cause of fatal fires. In 2014, five people died from self-immolation or in fires they intentionally set themselves. In 2013, four people died in similar fires. In 2012, self-immolation was the leading cause of fire death; twelve people lost their lives in these fires.

Candle Ignited Palmer Fatal Fire

The cause of the fatal February 9, 2015 fire at 1047 Pleasant Street, Palmer was a candle. The fire took the life of Christine Grinaski, age 53, who lived in the basement studio apartment where the fire originated.

Ms. Grinaski notified a neighbor of the fire in her apartment saying a candle had started it, and asked her to call the fire department. The neighbor barely made it out alive. Like most people who die in fires, Ms. Grinaski was overcome by smoke.

Investigators found evidence of a melted candle where the fire started in the living room and eliminated all other possible causes. The fire was jointly investigated by the Palmer Fire Department, the Palmer Police Department, State Police assigned to both the Office of the State Fire Marshal and to the Office of the Hampden District Attorney. Assistance was received from the Code Compliance Unit in the Department of Fire Services' Division of Fire Safety and State Police Crime Scene Services.

The fire displaced 33 people living in the 20-unit apartment building. Hard-wired, interconnected smoke alarms in the common hallways activated and alerted residents, but it is unclear if the battery-operated smoke alarms in the individual apartments worked. After the fire, many of the smoke alarms that had not been destroyed by the fire were found to have missing or dead batteries.

Adams Fatal Fire Caused by Candle

The second fatal fire in two weeks that was caused by a candle took place on February 18, 2015 fire at 5 West Street,

Candle Fires

In 2013, 135 Massachusetts candle fires caused two civilian deaths, 25 civilian injuries, six firefighter injuries and an estimated dollar loss of \$4.3 million.

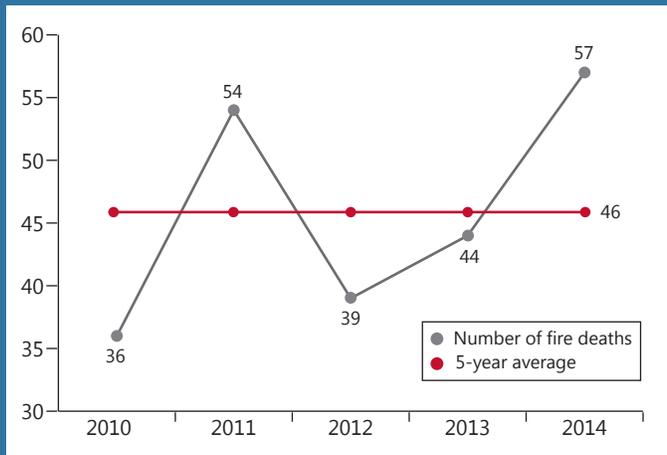
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Fire Deaths High in 2014

57 Civilian and 2 Fire Service Deaths

Preliminary figures show 57 civilian fire deaths and two fire service deaths in 2014. This is a 30% increase from 44 civilian fire deaths in 2013. The main reason for the increase in fatalities was two fires that each killed seven people: a private jet crash at Hanscom Field in Bedford that killed all seven passengers; and an electrical fire in a Lowell apartment building that killed seven residents. The 57 deaths in 2014 was the highest number of civilian fire deaths since 2007 when 61 people died in fires. This chart shows both the number of fire deaths and the average number of fire deaths over the past five years. 2014 deaths are 21% higher than the five-year average. (2014 figures are preliminary.)

Massachusetts Fire Deaths, 2010 - 2014



2015 Fire Deaths

Unfortunately, the winter of 2014 -15 continues to be a difficult one with a higher than average number of fire deaths so far. As of March 31, Massachusetts already had 19 civilian fire deaths. Twelve of the victims were men and seven were women. Older adults, people over the age of 65, account for nine of the deaths.

Fire Investigation News, *continued from previous page*

Adams. The fire took the life of Eunice St. Hilaire, the 88-year old resident of the home.

The fire started on the nightstand in the woman's first floor bedroom. Remnants of a candle were found in the area of origin and all other possible causes were ruled out.

A life alert-type system that included a connection to a smoke alarm notified the fire department of the blaze. The victim lived in the home alone.

Chief Goyette said, "We had to dig out the nearest hydrant but had sufficient water from the engine until the hydrant connection was made. If it had been a larger fire, digging out the hydrant might have caused a delay at a time when seconds count."

The fire was jointly investigated by the Adams Fire Department, the Adams Police Department and State Police assigned to both the Office of the State Fire Marshal and to the Office of Berkshire District Attorney. Assistance was received from an electrical expert, the Code Compliance Unit of the Department of Fire Services' Division of Fire Safety and State Police Crime Scene Services.

Arson Ruled Out in Waltham Fatal Fire

The February 16, 2015 fire at 67 Ash Street, Waltham took the life of 49-year old Eric Miller and his 75-year old mother, Elizabeth Miller. Investigators have ruled out arson, cooking, heating and electrical as possible causes of the fire that started in Mr. Miller's second floor bedroom.

He was known to be a heavy smoker and investigators cannot rule out the improper disposal of smoking materials as a possible cause. However, despite eliminating several possible ignition scenarios, investigators could not pinpoint a definitive cause.

The fire was jointly investigated by the Waltham Fire Department, Waltham Police Department and State Police assigned to both the Office of the State Fire Marshal and the Office of the Middlesex District Attorney. Assistance was received from an electrical expert and the Code Compliance Unit of the Department of Fire Services' Fire Safety Division.

New E-K9 in Training

The State Police Bomb Squad has a new explosive detection canine in training. Dash will join the eight other E-K9s in the unit once he and his handler, have been certified. To see the rest of the explosive detection canine team, visit www.mass.gov/dfs and search for *canines*.



Summary of Massachusetts Fireworks Law MGL Chapter 148, S. 39



What does the law prohibit?

It is illegal for private citizens to use, possess, or sell fireworks in Massachusetts, or to purchase them legally elsewhere and then transport them into the state. The law prohibits any article designed to produce a *visible* or *audible* effect.

Sale of fireworks

Penalty: Fine or imprisonment or both, and confiscation

Fine: \$100 to \$1000

Imprisonment: Maximum of 1 year

Seizure of fireworks: Mandatory

Who can arrest? Any officer qualified to serve criminal process.

Must an officer arrest? No. Statute says the officer *may* arrest without a warrant.

Must an officer seize the fireworks? Yes, the statute says the officer *shall* seize any fireworks.



Possession, use, cause to explode of fireworks

Penalty: Fine and confiscation only

Fine: \$10 to \$100

Seizure of fireworks: Mandatory

Who can seize? Any officer qualified to serve criminal process.

May an officer arrest? For possession, no. The statute only provides for a fine upon conviction and automatic confiscation of fireworks.

Must an officer seize the fireworks? Yes, the statute says the officer *shall* seize any fireworks.

Seizure

Can people get their fireworks back? No. If convicted, the fireworks are forfeited to the state.

What does an officer do with confiscated fireworks? During business hours, contact the State Police Bomb Squad at (978) 567-3310. Notify them immediately for large quantities, commercial grade, or deteriorated materials. After hours, call (508) 820-2121 and ask for the Troop Duty Officer in your area. An on-call Bomb Squad Officer will arrange for pick-up.



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MFA Graduations

Career Recruit Firefighter Training

Class #222

On January 16, 2015 members of Class #222 of the Career Recruit Firefighter Training program graduated after nine weeks of training. The 23 graduates, two women and 21 men, represent the 12 fire departments of Attleboro, Belchertown, Framingham, Hingham, Lowell, Medway, Newton, Salem, Sandwich, Saugus, Wakefield and Wellfleet.



Class #223

On February 6, 2015, members of Class #223 of the Career Recruit Firefighter Training program graduated. The 22 graduates, all men, represent the 13 fire departments of Arlington, Boxborough, Canton, Concord, East Bridgewater, Hanson, Haverhill, Holyoke, Littleton, Marshfield, Stoughton, Watertown and Wilmington.



Class #224

On February 27, 2015, members of Class #224 of the Career Recruit Firefighter program graduated. The 24 graduates, all men, represent the 18 fire departments of Billerica, Clinton, Cotuit, Dracut, Dudley, Hudson, Hyannis, Ludlow, Mashpee, Maynard, Methuen, North Reading, Peabody, Plymouth, Taunton, Weston, Wilmington, and Woburn.



Class # 225

On March 20, 2015 members of Class #225 of the Career Recruit Firefighter program graduated. The 25 graduates, 23 men and two women, represent the 14 fire departments of Acton, Centerville-Osterville-Marston Mills, Duxbury, Easton, Hanover, Lancaster, Leominster, Methuen, Nantucket, North Attleboro, Sandwich, Saugus, Scituate, and Stoughton.



Class # 226

On April 10, 2015, members of Class #226 of the Career Recruit Firefighter Training program graduated. The 23 graduates, all men, represent the 12 fire departments of Acton, Arlington, Centerville-Osterville-Marston Mills, Concord, Fitchburg, Needham, Norton, Tewksbury, West Springfield, Westford, Westminster, and Woburn.



Classes 223, 224, and 225 trained during the snowiest winter on record. Some classes took pictures on the huge snow piles in the drill yard. All classes gained valuable experience in the extreme weather conditions.

Standpipe System

Inspection and Testing



Hose valve reducer with incorrect thread



Checking for correct pressure



Flow testing

Inspections

During a standpipe system inspection, each hose valve must be exercised to verify ease of operation and full opening/closing. Every hose valve must have a cap to protect the valve's thread. The valve's position must be assessed to reduce kinking of the hose; a downward 45° position is acceptable for many departments.

Hose Valves in Cabinets

Hose valves in cabinets must be located far enough away from the wall or inside of the cabinet to ensure that a

In recent years the fire service has become better at ensuring that a new building's fire alarm, sprinkler, and kitchen suppression systems are inspected and properly tested prior to issuing a Certificate of Occupancy. With all the attention being given to the fire alarm, sprinkler, and kitchen suppression systems, the inspection and testing of the standpipe system is often overlooked. This article describes inspection and testing criteria for a standpipe system.

Most installed standpipe systems are specifically designed for the fire department's use and it is in the fire service's best interest to ensure that the system is inspected and tested before it is needed.

For new construction, the Massachusetts State Building Code (780 CMR) Section 905 sets the requirements for when standpipe systems must be installed. 780 CMR refers to the 2013 Edition of NFPA 14: Installation of Standpipe and Hose Systems for the system's installation criteria. NFPA 14: Chapter 11 contains the standpipe system's inspection, and acceptance testing criteria.

Design Issues

Four major issues commonly found during final standpipe system inspection are really design issues that should have been addressed prior to installation because of the time, cost, and inconvenience in resolving them later:

1. The location of the standpipe system in the stairway, whether on the floor landing or the intermediate floor landing, is at the discretion of the fire department.
2. The location of the hose connection must not be blocked or obstructed by the opening of a door.
3. A fire hydrant must be within 100 feet of the fire department connection unless the fire department permits otherwise.
4. At least one hose connection shall be located at the highest landing of stairway with stair access to the roof, or on a flat roof.

firefighter's gloved hand can easily operate the valve's handwheel. The valve must not be too close to the bottom of the cabinet, preventing easy attachment of a hose to the valve. The position of the valve in the cabinet must be evaluated to reduce kinking but also to ensure that the cabinet door can be fully closed.

Signage

There must be signage on all valves stating the purpose of the valve and what portion of the system is controlled by the valve. All hose valve cabinets must have signage

Continued on next page

Canine Appreciation Day

February 23 was K-9 Appreciation Day for the State Police Fire and Explosion Investigation Section (F&EIS) assigned to the Department of Fire Service. The event was an opportunity to thank the Connecticut State Police, who train our teams, the Massachusetts-Rhode Island FAIR Plan for their support of the program since its beginning, the State Police chemist who tests evidence the dogs help to collect, the State Police Association of Massachusetts, and the State Fire Marshal for their support of the program.

Since 1990, 37 dogs and 28 handlers of accelerant and explosive detection dogs have served the state. Currently, the F&EIS has six accelerant detection dogs working with State Police fire investigators and nine explosives detection dogs working with State Police bomb technicians assigned

to the Office of the State Fire Marshal. Each K9 team is trained by the Massachusetts State Police in conjunction with the Connecticut State Police using a food reward method. Because the dogs must work to eat, the handlers train with them every single day. The dogs live with their handlers and families, even after they retire from duty.

K9 teams respond to fire or explosion incidents around the clock and across the state. They help detect potential evidence of arson or malicious use of explosives.

All F&EIS canines were purchased by the Massachusetts Property Insurance Underwriting Association (MPIUA), which is also known as the Massachusetts and Rhode Island FAIR Plan (Fair Access to Insurance Requirements) for the Office of the State Fire Marshal.



Standpipe System, *continued from previous page*

indicating the cabinet's contents. A weatherproof sign must be adjacent to the fire department connection indicating the pressure required to achieve the demands of the system.

Testing

Piping between the fire department connection and the check valve must be hydrostatically tested at 200 psi.

The standpipe must be flow-tested to ensure that actual system demand has been provided for and the flow meets the design specifications. If the fire department's apparatus pump was used to determine the required flow and pressure, either an apparatus or a portable pump must be used to verify that the flow can be achieved through the fire department connection.

Check for Proper Hose Thread

Every hose connection and reducer must be checked to confirm that it has the proper hose thread. Over half of standpipe installations seen by the Division of Fire Safety have at least one connection with the incorrect thread. The most effective way to confirm the proper thread is to use your own department's double-female fittings.

For concerns, questions, or more information, contact the Division of Fire Safety's fire protection specialists. Communities north of the Massachusetts Turnpike should contact Jen Hoyt at 978-567-3376 or Jennifer.Hoyt@state.ma.us. For communities south of, or on the Massachusetts Turnpike, contact Jake Nunnemacher at 978-567-3377 or jacob.nunnemacher@state.ma.us.

2015 License Examination Schedule

The Department of Fire Services' Division of Fire Safety issues licenses, permits and certificates of competency ("licenses") to people and companies engaged in fireworks, blasting, explosives, special effects, cannon and mortar firing, commercial cooking exhaust system cleaning and inspection, special hazard systems, portable fire extinguishers, marine fueling facilities and above ground tanks.

To see the licensing status of an individual or company, visit the DFS License Look Up at http://elicense.chs.state.ma.us/DFS_Verification/Search.aspx or www.mass.gov/dfs and click on *Licensing* and *DFS License Look-Up*.

For information about licensing issues, contact the Licensing Desk by phone at 978-567-3700 or by email at dfs.licensing@dfs.state.ma.us.

License Exam Schedule

- Applicants must be pre-registered to sit for exams. Completed applications must be received by 5:00 p.m. on the deadline date listed below. Application forms are available at www.mass.gov/dfs then click on *Licensing*. If your application is received after the deadline, you will not be allowed to take the exam.
- All exams start promptly at 10:00 a.m. unless otherwise noted.
- License exams are given at DFS in Stow at 1 State Road, Stow, MA and at the Northampton office, 1 Prince Street, Northampton, MA. In Stow, please park in the remote lot at the top of the hill. In Northampton, park only in visitor spaces. Directions: www.mass.gov/dfs.

Examinations	Examination Dates All exams start at 10:00 a.m. unless noted	Deadlines for Applications
Fire Suppression, 10:00 a.m., Commercial Hood Cleaning, 1:00 p.m.	July 29, 2015 (Wednesday) October 28, 2015 (Wednesday)	July 10, 2015 (Friday) October 9, 2015 (Friday)
Cannon/Mortar, Fireworks, Special Effects, Blasting, Blasting R & D	May 20, 2015 (Wednesday) August 26, 2015 (Wednesday) November 18, 2015 (Wednesday)	May 1, 2015 (Friday) August 7, 2015 (Friday) October 30, 2015 (Friday)

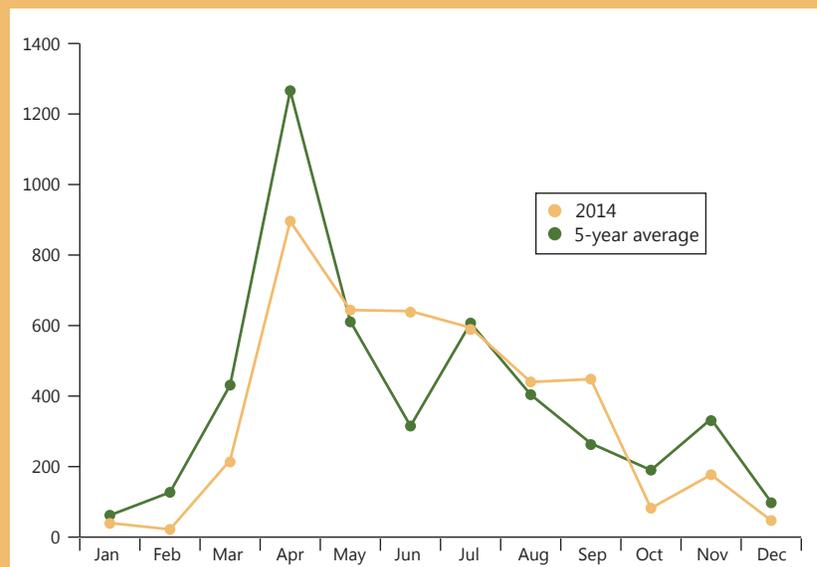
Brush Fires

Springtime brings brush fires to Massachusetts. April is the peak of the Massachusetts brush fire season as illustrated in this graph. On average, the Commonwealth has 107% more brush fires in April than it does in the next busiest month, May. However, in 2014 there were only 39% more brush fires in April than in May.

Every spring, wind and weather conditions combine to elevate the hazards of brush fires. Once the snow melts it reveals dried grass, leaves, and fallen branches. Warm winds, low humidity and sunshine make them tinder dry, providing the fuel for brush and wood fires.

DFS has an *Open Burning FireFactor* that fire departments can hand out with open burning permits to educate the public about safe practices.

Massachusetts Brush Fires, 2010 - 2014



MFIRS Coding Tips

for Wildland, Mulch, Grill and Drug Fires

Fire vs. Wildland Fire Modules

In Massachusetts, we strongly recommend using the Fire Module for brush and outdoor fires. The Wildland Module is an **optional** module that may be used for any of the following incident types: 140-143, 160, 170-173, 561, 631 and 632, but is really designed for reporting the large scale wildland fires seen in the western part of the country, not the smaller woodland and brush fires typically seen in New England. Third party software should offer the option of using the Fire Module instead of the Wildland Module. If a software program does not, contact the vendor to remind them that they must.

Permit Fires and Unauthorized Burning

When responding to a permit fire that requires extinguishment, code it as an *Incident Type* = 631: Authorized controlled fire or 632: Prescribed fire. If the fire expands beyond the focus of the permit, then use an *Incident Type* = 140-143.

- Do not use *Cause of Ignition* = 1: Intentional. This is reserved for arsons.
- Use either *Cause of Ignition* = 2: Unintentional or 4: Act of Nature depending on the reason the fire got out of control.

When responding to an illegal burn use

Incident Type = 561: Unauthorized burning.

Mulch Fires

Mulch fires should be coded as *Incident Type* = 140: Natural vegetation fire, other & *Item 1st Ignited* = 72: Light vegetation (not crop) – Includes mulch, grass, leaves, needles, chaff, & compost.

Do not code any fires as *Incident Type* = 100: Fire, other, unless it does not fit into any of the other incident types between 111 and 173.

Outside Rubbish Fires

Code outside rubbish fires as *Incident Type* = 150-155. Do not use *Incident Type* = 118: Confined trash or rubbish fire **in a structure**. Outside rubbish fires also do not require a Fire Module.

Grill Fires

The incident type for grill fires depends on the situation. They can be building fires if they are on a deck or an adjacent patio (111 or 120 – 123) or in a structure that is not a building (112). They can be motor vehicle fires if someone is grilling in the back of pickup truck while tailgating, picnicking or camping (130 – 138). If the grill is not on

something attached to a building and it is the only thing that is burning, i.e. does not start a natural or cultivated vegetation fire, then it would be an outside equipment fire (162). If the grill is away from structures and vehicles but it starts a natural or cultivated vegetation fire use these incident type codes: 140 – 143 or 170 – 173.

Under *Equipment Involved in Ignition* on the Fire Module use the code 643 – Grill, hibachi, or barbecue. Then complete the equipment subfields *Power Source* and *Portability*.

Fires Involving Illegal Drugs

It is important for the fire service to track drug-related fires and drug operations that are discovered during fire suppression in order to identify risks to residents and first responders. This could include marijuana grows, clandestine meth labs, and hash oil fires. Many states where marijuana has been legalized or decriminalized have had an increase in hash oil fires that can include flammable gases. Despite recent changes in Massachusetts law regarding marijuana, the only codes available in MFIRS to track these issues deal with illegal drugs, but should be used anyway until the National Fire Incident Reporting System (NFIRS) codes catch up. These codes are in *Fire Suppression Factor*, a less frequently used field, and the Arson Module (if relevant).

Code *Fire Suppression Factors* on the Fire Module as 222 – Illegal and clandestine drug operation. Also code *Other Investigative Information* on the Arson Module as 5 – Illicit drug activity. If the fire was set to destroy the operation and/or the evidence also code *Suspected Motivation Factors* on the Arson Module as 64 – Destroy records/evidence.



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Commonwealth of Massachusetts
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For registration information
• Email cynthia.ouellette@state.ma.us
Include "conference" in the subject line
• Visit www.mass.gov/dfs under *What's New*