

All Hands Herald

Massachusetts Department of Fire Services

September 2017

Hazardous Materials Division

Synchronized
Efforts Cover
Entire State

New Learning Management
System (LMS) Launched

Drone Now Available
for Fire Service

Building Code
Changes



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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.

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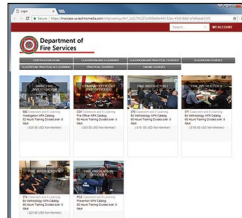
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Cover photo: Julie Weinstein



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From the Fire Marshal

Part of my vision for the Department of Fire Services is to harness technologies to improve customer service. The new Learning Management System (LMS) is a major example of using technology to change the way we do business and provide streamlined course registration, access to online training, transcripts, and certificates.

New Learning Management System

I want to thank the Massachusetts Firefighting Academy staff who have spent the last two years analyzing our business processes, performing quality control on data, and testing the new system to smooth out as many bumps as possible before the roll out. The launch of the new system has been successful and our students have provided positive feedback. I also appreciate the Executive Office of Public Safety and Security (EOPSS) and other DFS staff who invested time and resources to bring the new system to fruition. The new LMS will be a huge benefit to external customers and also to our staff who schedule people and resources for training.

HazMat Inventory and Incident Software

Another example of harnessing technology to improve service is the new inventory and incident response software (DH4) for the Hazardous Materials Emergency Response division. HazMat inventory is challenging to track because it is spread across the state in many locations. The incident response software was rolled out gradually so we could identify and fix problems without impacting the entire system. Through this new system we are better able to monitor supplies and re-stock based on activity in each HazMat district.

Fire Code Revision Cycle

The Board of Fire Prevention Regulations (BFPR) is in its first code revision cycle since adopting NFPA 1 as the base code. The board has completed its review and is moving through the public comment period. Significant proposed changes include:

- Requiring a Certificate of Registration for hood cleaning companies
- Adoption of Chapter 26: Laboratories Using Chemicals
- Changes to Chapter 41: Welding, Cutting and Other Hot Work that includes information about notification and communication with the AHJ, permit requirements, and information about education and training requirements for certain hot works operators.

- The public hearing for the 2015 Edition of the NFPA 1 with Massachusetts amendments will be held before the BFPR on September 7th at 1:00 p.m.

Carbon Monoxide Detection in Schools

The legislative session is in full swing and many public safety bills will be heard. I hope that the legislature will be able to improve carbon monoxide detection in existing school buildings during the session. The 9th edition of the State Building Code requires CO detection in newly built or significantly renovated schools, but we should find a way to provide detection of this invisible gas in all schools.

Staff Changes

DFS is happy to welcome David Evans as the new MFA director. He comes with a unique skill set that matches the needs of the academy. He has worked for 30 years in education and over a decade in the fire service. Evans is deputy chief of the West Newbury Fire Department and was the assistant principal of the Pentucket Regional High School for nearly a decade. He has been able to combine his love of education and public safety through the school's *Safety and Public Service Innovation Academy*. It engages students in a unique sequence of courses and industry certifications that equips them to serve communities. Many have joined local fire departments and graduated from MFA. Evans has a bachelor's in American history from Salem State College, a master's degree in liberal studies from the University of New Hampshire, completed a School Principal Certification program at Northeastern University, and is a certified Firefighter I/II. He has worked for DFS in the Special Operations Unit since 2016. David will be a great addition to the DFS management team and leader for the dedicated academy staff.

David Beaudin, Code Compliance and Enforcement Supervisor in the Fire Safety Division retired after 19 years at DFS. Before coming to us, he spent 20 years as the fire safety officer at the University of Massachusetts/Amherst and worked to make dorms and Greek housing safer. He has been a steady fixture in fire code enforcement – knowledgeable, sensible, and always using education as his



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DFS Hazardous Materials Division

Synchronized Efforts Cover Entire State

The Hazardous Materials Emergency Response program protects the public, the environment, and property by responding to Massachusetts incidents involving a release, or potential release, of hazardous materials. The HazMat program sends specially trained people and specific equipment to incidents from six regional teams that are strategically located so that a team can respond to an incident anywhere in the state within one hour. Regional teams also support local fire departments with technical information and specialized equipment.

Origin of the Division

In 1982, a task force found that the most cost effective way to address hazardous materials emergency response was through a regional system. The Commonwealth was divided into six regions by fire district and a response team was staffed for each region.

In 1994, the Executive Office of Public Safety, the Fire Chiefs' Association of Massachusetts, the Professional Fire Fighters of Massachusetts, and the Massachusetts Association of Hazardous Materials Technicians, proposed that the Administration and Legislature establish a funding mechanism to create a standardized regional response for all hazardous material incidents. The state issued a bond to create the program and to equip it with state-of-the-art equipment and training.

Each regional team has 45 members who are active career firefighters from local communities. Departments provide firefighters to the teams and the Commonwealth provides equipment, training, medical surveillance, annual stipends for team members, on-call pay, and overtime or backfill reimbursement to communities for responses and training.



Decontamination tent set up for use at a HazMat response training.

Work of the Division

The DFS Hazardous Materials Emergency Response division manages team operations and response, including equipment purchase and maintenance, vehicle purchase and maintenance, record keeping, reimbursement by responsible parties, policies and procedures, and planning. All policies, training and equipment are identical for each team, which allows consistency in services and interoperability among the teams.

Funding

The HazMat division is funded through the annual budgetary process at DFS. The division also qualifies for grants, including homeland security and port security grants which have provided substantial equipment to the division. FEMA Hazardous Materials Emergency Planning Grants have also been used to fund training.

Cost Recovery

DFS can recover the costs of a hazardous materials response when a responsible party is identified. DFS must provide an itemized bill within 60 days of identifying the responsible party along with a summary of the legal and factual basis for the liability claim.

Recently enacted legislation amended the law and changed the requirement to seek cost recovery from owners/occupants of residences. In the past, DFS had to seek reimbursement for every incident including broken mercury thermometers or pool or cleaning chemical spills at someone's home.

The Innocent Homeowner Exemption allows DFS to differentiate between an industrial or transportation incident and accidental incidents without gross negligence. The owner or occupant must attest that no illegal or commercial use of hazardous materials occurred. Before leaving an incident at a residential dwelling, the HazMat team provides the owner/occupant with a copy of the application for Innocent Homeowner Exemption. If the form is submitted to the division within 30 days of the incident and all criteria are met, the homeowner is relieved of responsibility for charges incurred during the response.

Extensive Training and High Interest

There are three levels of hazardous materials responders: First Responder Awareness Level, First Responder Operations Level, and Hazardous Materials Technician Level. The MFA also offers Hazardous Materials Specialist and On-Scene Incident Commander training. The federal



Maritime Incident Response Team (MIRT) in training. MIRT technicians can help to locate, identify and mitigate hazardous materials on ships. Photo courtesy of Public Safety Media Group.

Occupational Safety and Health Administration (OSHA) requires hazardous materials technicians to have a minimum of 24 hours of training. The training is also called HazMat Tech, Level III Responder and Industry Tech. Both OSHA and the National Fire Protection Association (NFPA) require HazMat technicians to meet specific competencies.

All HazMat technicians assigned to district teams receive initial training through the Massachusetts Fire-fighting Academy (MFA). The 6-week, 305-hour HazMat Technician course exceeds national standards. The curriculum includes didactic and hands-on training involving real-world meters, equipment, personal protective equipment (PPE), vehicles and scenarios. Students have the advantage of training on specially built props that simulate actual hazardous materials emergencies including rail car and tanker props. Training happens in classrooms and on the gas field in Stow, and at the MBTA training facility in Boston, where a full-scale exercise is conducted and evaluated. The HazMat division and the MFA meet regularly to discuss curriculum and the needs of regional teams in order to keep training up-to-date.

Some of those waiting have been on the list for over seven years. The hazardous materials environment is constantly changing with new threats, techniques and equipment. Many district teams have a waiting list to become a team member. Those on the waiting list are required to complete an annual, 40-hour HazMat Refresher course. The course provides a review of basic HazMat

material and up-to-date training on new meters, equipment and risks. Team members continue training. Monthly drills include scenario-based exercises, joint training with industry partners and training with subject matter experts. All team members must meet an annual minimum training requirement of 88 hours, 64 of which are with their assigned district. Other hours can be with other district teams or in approved outside training. Many members attend the maximum 96-hours of training allowed annually. Many technicians also pursue additional training without reimbursement from the division. This is a highly motivated, highly skilled group. Our training surpasses the national recommendations.

Team Structure

Many states have regional approaches to HazMat response, but Massachusetts is the only state with a centrally managed and operated system. Central operation and management produces advantages in all aspects of operation and services including: providing a consistent level of service everywhere; leveraging pricing for equipment and vehicle purchasing for multiple teams, maintaining a single back-up stock for vehicles; a single source of contact for other state and federal response partners; and a modular system with complete interoperability that allows teams to cross districts and to make up composite teams for long-term events.

Each of the six HazMat teams has 45 members and elects its own leadership. Team coordinators and assistant

Continued on next page

DFS Hazardous Materials Division (continued)



HazMat rescue training at DFS.

team coordinators are responsible for managing the teams. Training coordinators and assistant training coordinators conduct or monitor all training events and drills. Equipment coordinators and individual truck managers ensure that all equipment is maintained, calibrated and accounted for by conducting monthly preventive maintenance checks and inventories of all vehicles. Those in elected positions serve for one or two years.

Although each team has a leadership structure, leadership at each incident is assumed by those who respond. The team leader at a specific response is often not the team coordinator. Instead the first technician on scene assumes leadership and assigns other roles at the incident. This avoids the wait for any specific individual and allows the team to begin operations quickly. It also gives all team members the opportunity to assume various roles throughout their careers.

HazMat Response

HazMat technicians serve when they are available. They use a responder tracking system called IAMRESPONDING that is monitored at two public safety communication centers in Holbrook and Amherst. An incident commander, usually from a local fire department, calls one of these

dispatch centers for a HazMat response, giving basic information about the incident and the projected tier level. A message is sent to the corresponding district team(s), requesting availability status from team members. Responses include: available; available not responding; unavailable; 15, 30, 45, 60 or greater than 60 minute response; getting truck; and canceled. Available members with the shortest response time are selected. Response times vary, depending on factors such as traffic and current location but regions strive to have a team on scene within one hour, and always try for 30 minutes.

HazMat teams respond with a tiered-level approach. The five tier levels (tier 1 is low; tier 5 is high) determine the number of personnel and vehicles dispatched, based on the severity and expected manpower needed to mitigate the incident. A tiered response allows adjustments to the amount of manpower and equipment as an incident progresses. Decisions regarding tier levels are made by the incident commander (usually the local fire chief) with advice from the HazMat team leader on scene (or by phone prior to arrival).

Vehicles

In 2015, the HazMat division completed an upgrade of all response vehicles. Twenty two vehicles are stationed around the Commonwealth to ensure rapid response times. There are four different types of HazMat vehicles:

- Technical Operational Mobile Units (TOMS) are science and research vehicles that carry meters, some response equipment, and have four areas for conducting research.
- Operational Response Units (ORU) carry most response and decontamination equipment.
- SQUAD is similar to the TOMS but is built on a smaller frame, with less room for research, and 4X4 ability for rough terrain.
- Technical Support Units (TSU) carry specialty equipment for the maritime unit, fire ground air monitoring, and satellite communications.
- SERVICE is a box truck that delivers to other vehicles.

Resources for Each Level of Response

Tier	Vehicles	Number of Technicians
1	1 TOM or Squad	5-7
2	1 TOM and/or Squad, 1 ORU	16-20
3	1 TOM and/or Squad, 1 or 2 ORU, 1 TSU	30-40
4 (Multiple operation periods)	As requested to add to tier 3	Multi-team as requested to add to tier 3
5	3 TOMs, 2 Squads, 4-6 ORU, 2 TSU, EOD and CST	100-130, +EOD, +22 CST

Equipment

The HazMat division purchases and trains with emerging technology to respond to all-hazards environments including: toxic industrial chemicals (TICs), toxic industrial materials (TIMS), chemical, biological, radiological and nuclear threats (CBRN), drugs and energetics, and more. Regular maintenance and calibration of equipment and vehicles are imperative to team success. Equipment and truck managers are diligent in monthly inspections and maintenance procedures to ensure safe operations. The division has recently purchased new technologies for improved identification of hazardous materials including: gas chromatography/mass spectrometry, Fourier transform infrared spectroscopy (FTIR), high pressure mass spectrometry, Raman technology, ion mobility spectrometry (IMS), lateral assay technology, polymerase chain reaction technology, radiation detection and radio-isotope identification, colorimetric technology and remote air monitoring. HazMat technicians are also trained in basic techniques and technologies including: wet and dry pH; observation skill; rescue entry; smoke identification; and more.

Response Types

Each HazMat incident is unique, but it is possible to classify them by category or type. While there are no simple HazMat responses the most common types include:

- Suspicious Substance: an unknown, often a white powder
- Joint Hazard Incident Response Team (JHIRT): collaborating with the Bomb Squad
- Clandestine Drug Lab
- Law Enforcement: assist with advice, decontamination, and more
- Event detail assistance with pre-planned special events including July 4th celebrations on the Esplanade
- Decontamination
- Interstate Response: a highway incident or tanker rollover
- Operational Support
- Fireground Air Monitoring (FGAM): monitoring combustibles and toxins in the air at a fireground
- Mercury: any size mercury spill
- Radiation
- Homeland Security potential high threat events including the Boston Marathon
- Community Service: parades, show and tell, touch-a-truck events
- Threat of Release: industrial accidents with potential for hazard release
- Bioterrorism: biologicals, toxins, viruses

Locations of HazMat Vehicles

District	Town	Truck #	Truck Type
1	Easton	11	TOM
1	Bourne	12	ORU
1	Westwood	13	ORU
1	Yarmouth	14	SQUAD
1	New Bedford	15	TOM
2	Massport	21	TOM
2	Revere	22	ORU
3	Marlboro	31	TOM
3	Worcester	32	ORU
3	Stow	70	SERVICE
3	Natick	72	TSU
4	Chicopee	41	TOM
4	Chicopee	42	ORU
4	Northampton	43	ORU
4	Greenfield	44	SQUAD
4	E. Longmeadow	71	TSU
5	Pittsfield	51	TOMS
5	Pittsfield	52	TSU
6	Danvers	61	TOMS
6	Dracut	62	ORU
6	Fitchburg	63	ORU
6	Shirley	64	SQUAD



Above: Operational Response Units (ORU) carry most response and decontamination equipment. Below: Technical Operational Mobile Units (TOMS) are science and research vehicles that carry meters and response equipment and have four areas for conducting research.



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HazMat Specialty Teams

Responding to Unique Situations Across Massachusetts

The HazMat division includes three specialty response teams in addition to the six regional response teams. The Maritime Incident Response Team (MIRT), the Technical Support Unit (TSU) which conducts Fireground Air Monitoring (FGAM), and the Joint Hazard Incident Response Team (JHIRT) enhance the capabilities of district teams. The specialty teams are made up of district team members that volunteer to learn additional skills and commit to maintaining those skills. Each specialty team attends four additional annual drills for the specific specialty.

Maritime Incident Response Team (MIRT)

After several New Bedford fishermen were badly injured from hauling in a mustard gas canister along with their fish, the HazMat division realized there was a need for a maritime specialty team that could respond to vessels on the water.

Maritime Incident Response Team (MIRT) technicians can help to locate, identify and mitigate hazardous materials on ships at sea or in port. They train on ship-board specific communications, maritime terminology, ventilation, stability, engineering and equipment, and marking and safety systems. Due to the dynamic environment, physical stressors and confined spaces on ships, their training focuses on self-rescue and rapid intervention techniques. They also have annual water survival training to address man overboard conditions.

Joint Hazards Incident Response Team (JHIRT)

The Joint Hazards Incident Response Team (JHIRT) provides technical or operational assistance, in conjunction with the Massachusetts State Police Bomb Squad, at

incidents involving reactive or energetic materials that can harm the public or first responders. JHIRT members act as subject matter experts and do not replace a HazMat team. They assess a hazardous environment and work in conjunction with bomb technicians.

The willingness of bomb and hazardous material technicians to share knowledge and equipment has led to



JHIRT response to the 2016 Dow Chemical explosion in North Andover.

successful JHIRT responses. The team responded to the Dow Chemical explosion in North Andover in 2016 and to many suspected and confirmed drug labs. JHIRT is a model for interagency cooperation by HazMat teams and bomb squads across the country. Training for members includes equipment and capability review, scene management, chemistry review and lab recognition, complex lab scenario exercises, and the use of dispersal devices.

A joint team from the HazMat division and the Massachusetts State Police Bomb Squad conducts the selection process for team members. Applicants must be current HazMat technicians on state/district teams. Selected applicants must demonstrate agility, dexterity and endurance in ballistic protective equipment and have experience using and interpreting data from metering devices. The need for a JHIRT response is decided by a local incident commander with advice from Bomb Squad or HazMat technicians at the scene.

Fireground Air Monitoring (FGAM)

The Technical Support Unit (TSU) is another specialty team in the HazMat division. The TSU conducts fireground air monitoring (FGAM). Technicians are trained to provide air monitoring in the immediate fireground and in areas outside the fireground where personnel from fire departments and other support agencies' are present. The teams can perform remote air monitoring in neighborhoods close to the incident, giving the incident commanders hazard data to protect the public against harmful materials. This information helps commanders to make informed decisions about evacuations, especially for nearby schools or nursing homes.

This team is also skilled with highly technical equipment that includes satellite communications, Gas



JHIRT team members in bomb suits.

Continued on next page

HazMat Collaborates with Public Safety Agencies

For Event Planning and Responses

The HazMat division works with many agencies to plan for and respond to major events in the Commonwealth, including the Boston Marathon and the Fourth of July celebration. Significant planning and collaboration makes these events as safe as possible.

CAT Protocols

The HazMat division worked with the Massachusetts State Police Bomb Squad, FBI Weapons of Mass Destruction (WMD) Coordinators, and the Massachusetts National Guard Civil Support Team, to establish CAT (C-Chemical, Biological, Radiological, Nuclear, A-Assessment, T-Team) protocols for major public events. Multiple teams of 3 or 4 people scour the area, responding to potential threats including unattended bags and objects out of place. The



teams include members from each agency who use their combined knowledge and experience to assess threats and mitigate situations. Teams can also request additional help. Teams fall under one jointly coordinated CBRN/EOD Command as part of the response to events that require SEAR (Special Event Assessment Rating).

At local incidents, HazMat teams coordinate with local fire and law enforcement and agencies including the Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (DEP), State Radiation Control Program, the Massachusetts Department of Public Health (MDPH) and others.

Massachusetts is fortunate to have professionals willing to work together for the common good. Inter-agency collaboration is well established and endures.

DFS Hazardous Materials Division, *continued from page 5*

The Hazardous Materials Emergency Response division is a unique response organization that serves Massachusetts every day, around the clock. The men and women who serve on the teams are a dedicated group who sacrifice their time and safety for the protection of the public. HazMat team member positions are coveted, as shown by long wait lists in most districts. Team members are among the best trained, best equipped hazardous materials teams in the nation, ready to respond at a moment's notice to any and all hazards. Working with partner agencies and local responders, Massachusetts provides a truly integrated HazMat response system.



Tanker truck rollover, Wilmington, Massachusetts, 2017.

Photo courtesy of Massachusetts HazMat Technicians Association.

HazMat Specialty Teams, *continued from previous page*

Chromatography/Mass Spectrometry (GC/MS), maritime support, and hazard plume modeling.

Interagency Partnerships

Since September 11, 2001 hazardous materials response has worked with an ever-changing environment where new threats are introduced regularly. Fortunately, in Massachusetts, close working relationships among fire departments, law enforcement, bomb squads, state and federal environmental management, military assets, federal law enforcement (FBI, DEA, ATF), public health and public health laboratories form the basis of a coordinated, effective response.



Fireground air monitoring at Webster mill fire in 2015.

Photo courtesy of Massachusetts HazMat Technicians Association.

New 9th Edition of the State Building Code

The 9th edition of the Massachusetts State Building Code (780 CMR) is expected to go into effect in September. A concurrency period, where either the 8th or 9th edition can be applied, will help designers transition between versions of the code. The concurrency period ends in January 2018 when the 9th edition of 780 CMR will be the only acceptable code. During the concurrency period, owners must choose one edition to comply with for the entire building. Owners cannot design using favorable sections of both editions. In past concurrency periods, owners favored the existing code over the new code.

The Massachusetts State Building Code consists of Massachusetts amendments to the International Code Council (ICC) model code series. The 9th edition is based on the 2015 ICC series which includes the International Building Code (IBC), International Residential Code (IRC) and International Existing Building Code (IEBC).

Although the 9th edition is similar to the 8th edition in content and layout, there are changes that fire prevention officers need to be aware of. The changes include: new terms, redefinition of existing terms, relocation of fire protection requirements, relaxation of some fire protection requirements, and some increased fire protection requirements. Massachusetts Firefighting Academy (MFA) trainings will cover changes to the code in detail.

In addition to code changes, some editions of referenced standards in the 9th edition code will be updated, such as the 2010 NFPA 72 (Fire Alarm) to the 2013 NFPA 72.

Please note:

- Not all referenced standards were updated in the 9th edition. For example, the 2013 NFPA 13 - *Sprinklers* was not changed.
- Referenced standards have not necessarily been updated to the most recent edition of the standard. For example, the 2016 NFPA 72 and 13 have been published but not adopted in the 9th edition.

Massachusetts amendments to the 2015 ICC code series are available on the Board of Building Regulations and Standards (BBRS) website at <http://www.mass.gov/ocabr/government/oca-agencies/dpl-lp/opsi/consumer-prot-and-bus-lic/license-type/csl/building-codebbrs.html>. The 2015 ICC codes are available at <https://codes.iccsafe.org/>. You can also purchase copies of the code.

For more information, contact the Division of Fire Safety. Contact Jake Nunnemacher at 978-567-3377 or Jacob.Nunnemacher@state.ma.us for jurisdictions south of, or containing, the Massachusetts Turnpike. Contact Chris Melite at 978-567-3376 or Christopher.Melite@state.ma.us for jurisdictions north of the turnpike.

From the Fire Marshal, *continued from page 1*

primary code enforcement tool. His goal was to obtain long term voluntary compliance with the fire code, knowing that legal enforcement was always an option. I know that fire prevention officers will miss his expertise and guidance and so will I. We wish him a long and happy retirement.

Betti Perry was the first face people saw for many years as she sat at the front desk of DFS greeting staff, students and visitors. Since then she held positions in the Business Office and the Facilities Unit helping to keep the agency running smoothly, particularly through major construction projects. Betti retired this summer after 20 years. Inside DFS she coordinated many projects that allowed DFS employees to contribute to the community. For ten years she successfully ran the DFS Coat Drive for Anton Cleaners. As of last winter, 529 coats were collected. She

also ran the DFS Food Pantry Drive for Hudson Food Pantry for 12 years. Her decorated boxes in the DFS lobbies reminded everyone to do a little something for others. Betti was also the cake baker for the Facilities Unit and many other DFS celebrations. Thank you Betti for all you did at DFS and best wishes for a wonderful retirement.



Dave Beaudin.



Betti Perry celebrates her retirement.

Learning Management System Launched

This summer, the Department of Fire Services (DFS) replaced the Massachusetts Firefighting Academy (MFA) Course Management System with the new Learning Management System (LMS). The LMS will improve the user experience for nearly every aspect of training from searching for courses to getting training records. Students will be able to login from a computer, tablet, or smart phone at any time of day or night. DFS staff has been working hard with our vendor for nearly two years to create this system and to make the transition as smooth as possible.

Learning to Use the LMS

Our team has created tools to help everyone learn to use the new system. Online guidance is available for every task and an online help menu is available at the bottom of every page of the LMS. Trained staff are also available for assistance during business hours.

Electronic Calendars Alerts on Personal Devices

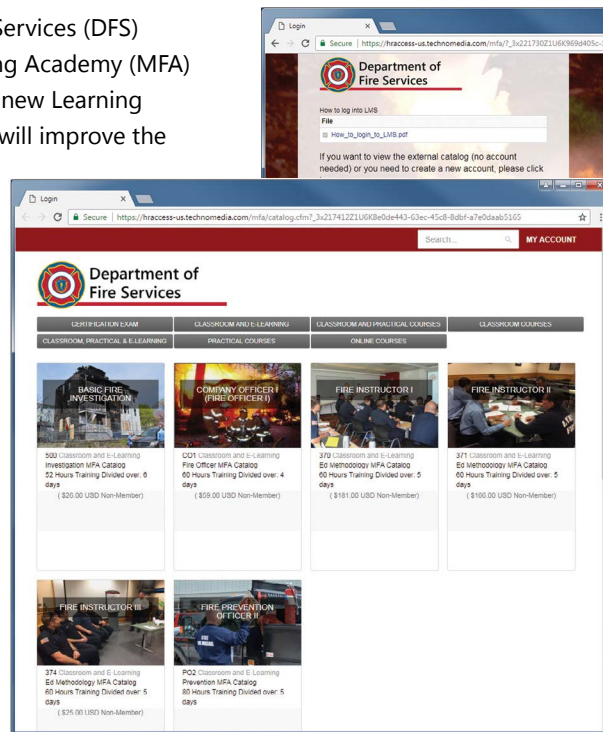
The LMS allows students to add training to their personal device calendars and to request email and text reminders about programs. Notifications include upcoming training, class enrollment and any changes to training schedules.

View the Entire Course Catalog

Our entire course catalog is on the new LMS. It is searchable by activity type, category, or keyword. This is helpful to students looking for training and also for chiefs and training officers requesting training for departments.

Student Profiles

Students will use an online profile in the LMS to register for courses. DFS has created a profile for everyone who has taken a course since 1999. If we have your current email address, you received an email notification prior to the transition to check and update your online profile. This ensured that the LMS had correct information and also allowed students to set up preferred contact information and to select notification options. If you did not get this email but have taken a course, please contact DFS to access your account. Please note: If you create a duplicate account or profile you won't be able to access your training history.



Immediate Online Training

In the LMS, students will receive immediate

notification of enrollment in online courses and can begin training right away. When students complete an online program successfully, it will be added to their training history immediately. This feature will be available in the second phase of the launch.

Access to Training History, Transcripts and Certificates

Another benefit of the LMS will be online access to your training history, including transcripts, dating back to 1999. Students will also be able to print training certificates from the system. This feature will also be available in the second phase of the launch. If you need a transcript, contact MFA staff at (978) 567-3200.

Did you Enroll in a Course Before the LMS Launch?

All existing registrations were transferred to the new system by DFS staff. You do not have to re-register for any program.

Changes

Every student is now required to pre-register online for courses by the published deadline date, which varies by course type. Paper registrations will no longer be accepted. Late registrants must provide proof to instructors that they have registered online in order to participate, and to receive credit for, a class.

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Available Now Drone and Trained Pilots



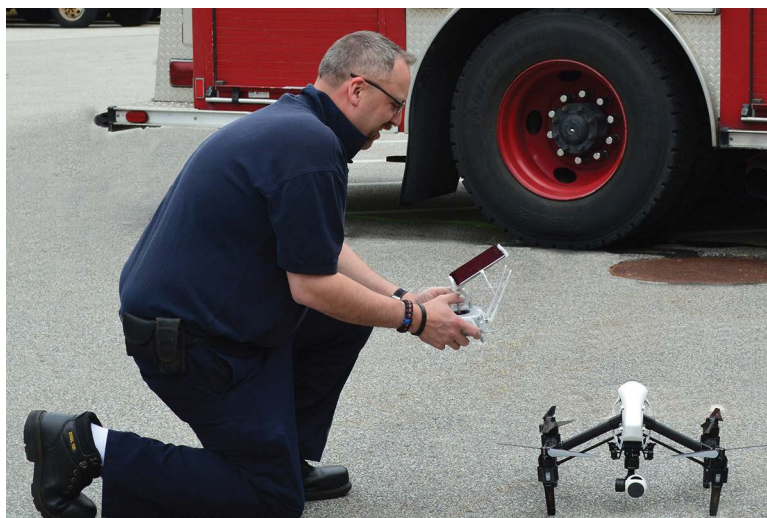
The Special Operations Group at DFS has added a small unmanned aircraft system (sUAS or drone) to the equipment we share with the public safety community. State Fire Marshal Ostroskey asked the Special Operations Group to investigate and develop a drone program in 2016. Today, DFS has two licensed sUAS pilots and will add more if the need arises.

The DFS drone is a DJI Inspire 1 that allows the pilot to control the aircraft and camera independently so that an incident commander can see what he or she needs for operations while the aircraft maintains a safe flight pattern. The drone has an FLIR infrared camera that can distinguish temperature gradients. This is helpful in missing person searches.



Local public safety can request drone service for large structure fires, CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive) incidents, photo and video documentation, storm damage review, missing person searches, and more. Please note that drone missions are weather and location dependent. Our missions will be in strict compliance with all Federal Aviation Administration (FAA) regulations, including but not limited to 14 CFR 107. After an agency requests the drone, we may contact you to determine the exact location and current weather conditions.

Request emergency drone missions using normal Special Operations request procedures at 508-820-2000.



Massachusetts Fires in 2016

Data Report

Massachusetts had 31,889 fires in 2016, up 1% from 2015. These fires resulted in 56 civilian deaths, 295 civilian injuries, 483 fire service injuries, and \$258.6 million in property damage. During 2016, 742 arsons were reported in the state.

Structure Fires

Massachusetts had 16,955 structure fires in 2016, down 1% from 2015. These fires resulted in 47 civilian deaths, 258 civilian injuries, 417 fire service injuries, and \$234.6 million in property damage. During 2016, 151 structure arsons were reported in the state.

Motor Vehicle Fires

Massachusetts had 2,357 motor vehicle fires in 2016, down 11% from 2015. These fires resulted in 9 civilian deaths, 13 civilian injuries, 16 fire service injuries, and \$18.2 million in property damage. During the year, 88 motor vehicle arsons were reported in the state.

Other Fires

Massachusetts had 12,577 other fires in 2016, up 6% from 2015. These fires resulted in 24 civilian injuries, 50 fire service injuries, and \$5.8 million in property damage. During 2016, 503 other arsons were reported in the state.

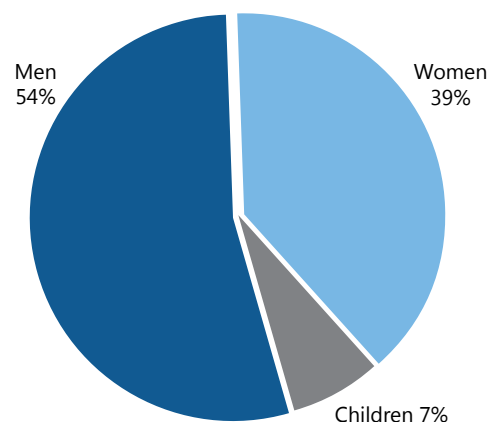
Arson

Structure arson decreased by 27% and motor vehicle arson decreased 10% from 2015 to 2016. Since 1985, motor vehicle arson has fallen 98.3%. For statistical purposes, a fire is considered arson when the cause is listed as intentional & age is not a factor or the person involved was over 18. This definition excludes many suspicious and juvenile-set fires.

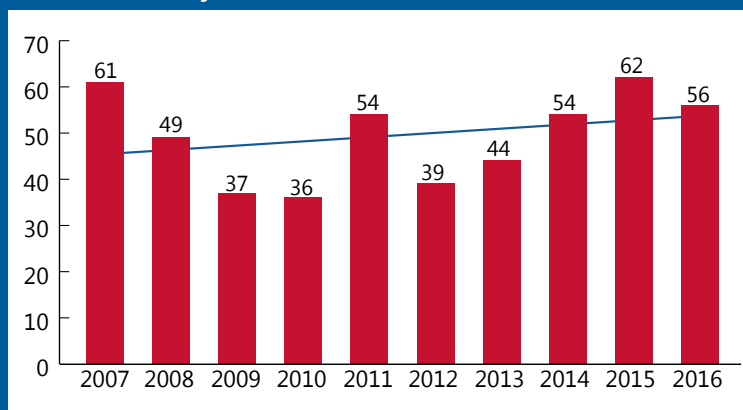
Fatal Fires

Forty-five fatal fires killed 56 civilians in 2016, 30 men, 22 women and four people under age 18. Twenty-nine percent (29%) of fatal fire victims were older adults (over 65). Fire deaths decreased by 10% from the 62 deaths reported in 2015. Over three-quarters (79%) of civilian fire victims died in their homes. In 2016, smoking fires were the leading cause of residential fire deaths. Smoking fires caused 19, or 43% of home fire deaths.

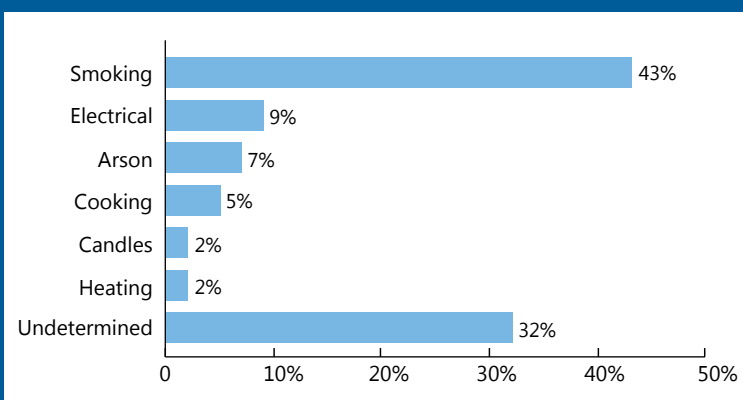
Civilian Fire Deaths



Fire Deaths by Year



Causes of Residential Structure Fire Deaths





The Threat of Unknown Powders

HazMat Division Collaborates to Develop Response Protocols

Massachusetts established response protocols for unknown powders after anthrax attacks in September 2001. The Hazardous Materials Emergency Response division of DFS and the Massachusetts State Public Health Lab (SPHL) Bioterrorism Response Lab (member of the CDC Laboratory Response Network (LRN)) collaborated to develop the protocols and established the Joint Biological Threat Response System (JBTRS) program. This program instituted a standardized protocol for district HazMat teams responding to, and investigating, suspected biological threats. The field screening by

HazMat teams is an initial threat assessment to help local officials make decisions regarding hazard isolation. Field identification of substances is presumptive until confirmed by the LRN. Only the LRN laboratory can identify substances. HazMat district members must complete the initial JBTRS training within a year of joining the team. All members must pass an annual recertification exam in order to remain an active member of the team.

Opioids

The opioid epidemic is taking a toll on Massachusetts. The manufacturing and use of drugs including methamphetamine, butane hash oil (BHO), fentanyl, and carfentanyl are serious threats to first responders. Clandestine laboratories are being found all over the state. A lethal dose of one of these drugs is so minute that response protocols are needed to prevent injury and death to EMS, law enforcement, firefighters and HazMat technicians. The HazMat division is working with the Massachusetts State Police and the U.S. Drug Enforcement Agency (DEA) to establish response protocols. Scientists from the Massachusetts Institute of Technology's (MIT) Lincoln Labs are working with this group to help identify fentanyl and its derivatives in the field. The priority is always to obtain samples first for confirmatory testing at the State Public Health Lab or the State Police Crime Lab. If enough sample remains and it is practical, teams may also conduct presumptive field testing.



Demonstrating the relative strength of heroin, fentanyl, and carfentanyl.

Advisory: PPE for Fentanyl Response

In August of 2017, the State Fire Marshal shared an advisory from the InterAgency Board for Equipment Standardization and Interoperability (IAB) with fire chiefs: *Recommendations on Selection and Use of Personal Protection Equipment for First Responders Against Exposure Hazards to Synthetic Opioids, Including Fentanyl and Fentanyl Analogues*. The IAB is a voluntary collaborative panel of emergency preparedness and response practitioners from a wide array of professional disciplines that represent all levels of government and public safety.

Every public safety agency must develop their own fentanyl response protocols and the recommendations in this

advisory on appropriate personal protective equipment (PPE) are helpful when developing those protocols because PPE alone may not be sufficient to ensure safety. The advisory also has recommendations on doffing and donning procedures and creating the smallest possible hot zones. Go to www.interagencyboard.org.

Local incident commanders can consult on procedures at any time by contacting the appropriate HazMat dispatch center at (877) 385-0822. If a HazMat team response is required, technicians will work with the incident commander to determine the response level.

Illegal Fentanyl Use & Overdose Deaths

Reprinted from a report by the Centers for Disease Control and Prevention (CDC) and the National Institute for Occupational Safety and Health (NIOSH). To see the complete report, visit <https://www.cdc.gov/niosh/topics/fentanyl/illegaluse.html>

Illegal Use of Fentanyl

The DEA describes fentanyl as a powerful narcotic associated with an epidemic of opioid-related overdose deaths in the United States. Fentanyl and its analogs are being mixed with heroin to increase potency or are being sold as heroin so dealers and buyers may not know exactly what they are selling or using. Fentanyl and its analogs come in several legal forms including powder, patches, tablets, and spray. Legally prescribed fentanyl is typically administered in patches or lozenges. Illegal use is often in the form of powder used for inhalation or injection, blotter paper, and patches. Illicitly manufactured fentanyl is also being pressed into counterfeit tablets and sold as commonly misused prescription opioids such as oxycodone and hydrocodone as well as being found in samples of cocaine, methamphetamine and other non-opioid substances.

National Overdose Deaths — Number of Deaths from Heroin

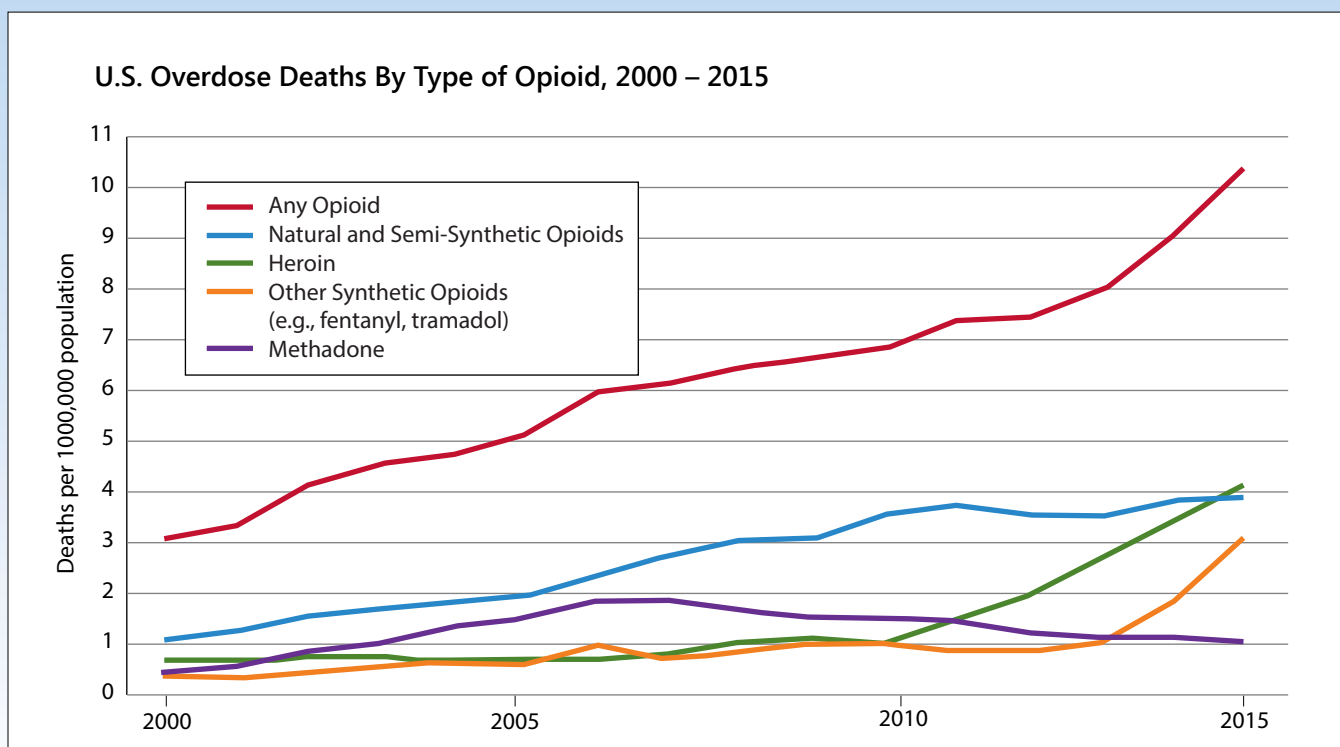
From 2001 to 2014 there was a 6-fold increase in the total number of U.S. deaths from heroin. Source: [https://www.drug-](https://www.drug-abuse.gov/related-topics/trends-statistics/overdose-death-rates)

[abuse.gov/related-topics/trends-statistics/overdose-death-rates](https://www.drug-abuse.gov/related-topics/trends-statistics/overdose-death-rates).

Overdose deaths involving synthetic opioids other than methadone, including fentanyl, increased by 80% from 2013 to 2014. Reports from law enforcement indicate that most of the synthetic opioid overdoses may be due to illegally made fentanyl. For health advisory information about fentanyl-related overdose fatalities in all states, see <http://emergency.cdc.gov/han/han00384.asp>. For more fentanyl overdose data see <https://www.cdc.gov/drugoverdose/data/fentanyl.html>.

The DEA's National Forensic Laboratory Information System (NFLIS) reported an increase in law enforcement seizures of fentanyl from 2012 to 2014. They reported that more than 80% of law enforcement seizure of fentanyl and its analogs occurred in just 10 states.

An analysis of the relationship between illicitly manufactured fentanyl seizures by law enforcement and fentanyl overdoses was published in August, 2016, in the CDC Morbidity and Mortality Weekly Report (MMWR). This study revealed that changes in synthetic opioid-involved overdose deaths in 27 states were highly correlated with illicit fentanyl seizures by law enforcement in those states.



Source: www.cdc.gov. CDC/NCHS, National Vital Statistics System, Mortality. CDC Wonder, Atlanta, GA: U.S. Department of Health and Human Services, CDC; 2016. <https://wonder.cdc.gov/>.

Fall Fire Prevention

As the weather gets colder and days get shorter, we begin to think about holidays and heating. In the winter of 2016-17, 41 Massachusetts residents died in fires. Seventeen victims were 65 or older. One way to prevent another season filled with fatalities is to promote as many fire safety messages as possible in your communities. Begin with the *Change your Clock, Check Your Alarm* campaign for daylight savings on Sunday, November 5. Working smoke alarms are critical to escape fire so consider using the DFS Smoke Alarm Tool Kit for ideas to promote the message (Visit www.mass.gov/dfs and search for Smoke Alarm Tool Kit).

Fire Prevention Week Begins October 8

The combination of a practiced home escape plan and working smoke alarms allows the best chance for people to escape fire. October 8-14 is Fire Prevention Week and this year's theme is *Every Second Counts: Plan 2 Ways Out!* During Fire Prevention Week, teach students to create home escape plans and ask them to take these home and have their families practice the plan for homework. The National Fire Protection Association sponsors Fire Prevention Week. Go to www.nfpa.org/fpw for more information.



Cooking Fire Safety

More home fires happen on December 25 than any other single day in Massachusetts except Thanksgiving. Cooking fires are the leading cause of structure fires and increase around the holidays. Promoting cooking safety during the fall season is critical to public safety. *Put a Lid on Cooking Fires* and *Stand by Your Pan* are two messages people can remember and use. DFS will launch new cooking public service announcements (PSAs) on radio and TV this fall. The new cooking



safety campaign uses real firefighters with real fire house recipes to promote cooking fire safety. Go to www.mass.gov/cookingsafety for more information.



Keep Warm, Keep Safe

Heating fires also increase in fall and winter. A heating fire killed five members of a family in Warwick last March, and several people died in space heater fires last winter. Whether people heat with oil, gas, electricity, coal, wood or propane, they need to *Keep Warm, Keep Safe*. DFS has a *Keep Warm Keep Safe* Tool Kit (Visit www.mass.gov/dfs and search for *Keep Warm Keep Safe*). The campaign includes messages about maintaining and using heating equipment, carbon monoxide and smoke alarms.

Candle Fire Safety

Candles are used in many fall and winter holiday celebrations and candle use increases the risk of fire. DFS recommends using battery-operated flameless candles and practicing the 1-foot circle of safety for candle use. December 11th is candle safety awareness day.

For more fire safety and prevention information visit our website at www.mass.gov/dfs.



Fire Marshal Advisory

June 5, 2017

PEMALL Watchman Model PGS-70 Gas Station Suppression Systems

In 2014 PEM Systems, Inc., the manufacturer of two PEMALL brand gas station suppression systems, was liquidated in U. S. Bankruptcy Court. This memo concerns one of those systems, the PEMALL Watchman Model PGS-70 Gas Station Suppression Systems (PGS-70).

Because no company has acquired an ownership interest in the system, or the Underwriters Laboratory (UL) listing for the PGS-70, availability of listed parts for the systems is limited and may be exhausted in the next 12 months. The Massachusetts State Fire Code (527 CMR 1.00) and NFPA 17-2009 edition require that only replacement parts listed for this specific system be used in repairs. Also, the PGS-70 system does not meet the UL-1254 standard which has been a requirement for all installations in Massachusetts since 1996.

For these reasons, effective immediately: Companies holding a Certificate of Registration for servicing fixed fire suppression systems shall tag any PGS-70 system in need of replacement parts *non-compliant* where listed parts are unavailable.

Effective June 1, 2018, companies holding a Certificate of Registration for servicing fixed fire suppression systems shall upon inspection tag all PGS-70 systems *non-compliant*.

I ask all companies holding a Certificate of Registration for servicing fixed fire suppression systems to notify their affected customers of this advisory as soon as possible.

If you have any questions or need further assistance, please contact the Code Compliance & Enforcement Unit at (978)567-3375.

UL Warning

Potentially Hazardous Direct Replacement LED Tube Lamps

This is a notification from UL that the Direct Replacement LED Tube lamp identified at right bears an unauthorized UL Mark for the United States and Canada and may pose a fire hazard. The LED lamp does not comply with UL Standards for Safety and is not authorized to bear the UL Mark for the United States and Canada.

Link to the notice at: <http://www.ul.com/newsroom/publicnotices/ul-warns-of-counterfeit-ul-mark-on-sharks-personal-floatation-devices-release-17pn-10/>.



New Learning Management System, *continued from page 9*

No Excused Absences Except for Extended Duration Classes

There will be no excused absences unless a student is enrolled in an extended duration class (Career Recruit, Call/Volunteer Recruit or HazMat Tech).

MFTC No-Show Policy

The Massachusetts Fire Training Council (MFTC) has a longstanding policy that three no-shows in a calendar year will lead to a ban on registering for training for one year. This is a matter of courtesy to others who wanted to take the class. The online registration system allows staff to easily track no-shows and we will be strictly enforcing the no-show policy.

E-Payment

Students taking certification exams and out-of-state students attending courses must pay online with a credit card or an automated clearing house (ACH) transfer payment. When a student chooses ACH, they are authorizing a debit to their checking or savings account.

The LMS is already improving processes and activities in MFA course registration and training and we look forward to the many efficiencies and conveniences the system will provide to all students and staff.

Massachusetts Firefighting Academy *Graduations*

Class #253



Class #254



Class #255



Students receive classroom training in all basic firefighting 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.

Career Recruit Firefighter Training

In the 51 day Career Recruit Firefighter Training program, 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 the 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, which is accredited by the National Board on Fire Service Professional Qualifications. Training is held at both the Stow headquarters of DFS and at the new DFS Springfield campus.

Class #253

On April 28, 2017, members of Class #253 of the Career Recruit Firefighter Training Program graduated. The 36 graduates, all men, represent the 19 fire departments of: Acton, Beverly, Bourne, Braintree, Easton, Gardner, Lexington, Lynnfield, Medford, Melrose, Methuen, North Andover, Raynham, Saugus, Shrewsbury, Somerville, Stoneham, Waltham, and Yarmouth. The graduation guest speaker was Patrick McMurray, Undersecretary for Homeland Security. The ceremony took place at the Department of Fire Services in Stow, Massachusetts.

Class #254

On June 5, 2017, members of Class #254 of the Career Recruit Firefighter Training Program graduated at the Department of Fire Services in Stow, Massachusetts. The 34 graduates, 32 men and two women, represent the 16 fire departments of: Attleboro, Belmont, Boxborough, Bridgewater, Burlington, Cohasset, Dracut, Hanson, Harwich, Lincoln, Natick, Revere, Sandwich, Sharon, Shrewsbury, and Taunton. The graduation guest speaker was Bridgewater Firefighter/Paramedic Richard Smith.

Class #255

On July 14, 2017, members of Class #255 of the Career Recruit Firefighter Training Program graduated. The 36 graduates, 34 men and two women, represent the 19 fire departments of: Burlington, Cambridge, Falmouth, Framingham, Franklin, Leominster, Mansfield, North Attleboro, Natick, Needham, New Bedford, Newton, Norfolk, Sandwich, Somerville, Sudbury, Tewksbury, Whitman, and Yarmouth. The graduation guest speaker was retired Leominster Fire Chief Alfred LeBlanc. The ceremony took place at the Department of Fire Services in Stow, Massachusetts.

Class #S04

Class #S04

Members of the Career Recruit Firefighter Class #S04 graduated on Wednesday, June 21, 2017 in a ceremony at the Department of Fire Services, Springfield campus. The 21 graduates, two women and 19 men, represent the eight fire departments of: Chicopee, Easthampton, Greenfield, Ludlow, Northampton, Springfield, West Springfield, and Westfield. The graduation guest speaker was Greenfield Fire Chief Robert Strahan.

Call/Volunteer Recruit Firefighter Training

The Call/Volunteer Firefighter Recruit Training program is unique in that it delivers a standard recruit training curriculum, meeting national standards, on nights and weekends to accommodate the schedule of firefighters in suburban and rural areas. Graduates complete 240 hours of training. Bringing the training closer to the firefighters often means more firefighters can participate. The program uses an online format that has students doing more work outside of class and taking quizzes online. This allows students more time to practice training skills with instructors and to better control their own workloads and time commitments. Upon successful completion of this program, all students have met the standards of National Fire Protection Association 1001.

Class #64

On June 22, 2017 members of Call/Volunteer Recruit Firefighter Training Class #64 graduated. The 35 graduates, two women and 33 men, represent the 15 fire departments of: Acushnet, Berkley, Dartmouth Districts #2 and #3, Fairhaven, Freetown, Lakeville, Marion, Mattapoisett, Middleborough, Raynham, Rehoboth, Rochester, Swansea, and Westport. The ceremony took place at the Kuss Middle School in Fall River.

Class #65

On June 26, 2017, Class #65 of the Call/Volunteer Recruit Firefighter Training program graduated. The 36 graduates, 34 men and two women, represent the 23 fire departments of: Ayer, Barre, Berkley, Boylston, Carlisle, Dover, Groton, Holden, Lancaster, Littleton, Medway, Middleton, Millbury, Northborough, Princeton, Sherborn, Shirley, Spencer, Stow, Sutton, Tyngsborough, Webster, and West Brookfield. The ceremony took place at the Department of Fire Services, Stow campus.

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



Class #64



Class #65



rescue people from stalled elevators and those who are trapped in vehicle crashes. They test and maintain their equipment including self-contained breathing apparatus (SCBA), hydrants, hoses, power tools, and apparatus.

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.



Department of Fire Services
Commonwealth of Massachusetts
978-567-3100

www.mass.gov/dfs



Register Now!



Join us for the 23rd Fire & Life Safety Education Conference, *Bridging the Gap – Fire Safety For All Ages*. The conference theme addresses the need to fill the fire safety knowledge gap for those between 18 and 65.

Keynote and General Session Speaker Topics

- In-depth look at the gap in fire safety knowledge among adults aged 18 - 65
- Developing social marketing campaigns and using social media to help adults re-learn fire safe behaviors
 - Addressing the complex problem of hoarding

Workshop Topics

- Teaching fire safety to adults, seniors and children
 - Programs for new fire and life safety educators
 - Workshops to challenge experienced educators
- Teaching new ways to develop partnerships, collaborate, and expand programs

Registration Information

Email Cynthia.Ouellette@state.ma.us. Include "conference" in the subject line of your email.
Or visit www.mass.gov/dfs and type Public Education Conference 2017 in the search bar.

Location

Southbridge Hotel and Conference Center, Southbridge, Massachusetts

Presented by the Department of Fire Services and the Massachusetts Public Fire and Life Safety Task Force.