

FIREFIGHTER TRAINING FEASIBILITY STUDY



**Homeland Security
and Emergency Services**

**Fire Prevention
and Control**

Introduction

This study is provided to the Governor and Legislature pursuant to Chapter 410 of the Laws of 2018. The law requires the Division of Homeland Security and Emergency Services, Office of Fire Prevention and Control (OFPC) to study the feasibility of teaching firefighting skills currently required to be taught in an academic setting, to be taught through the internet or at a trainee's fire department. This study also examines the following topics as required by the law:

- The coursework required to test for the Firefighter certification, or Firefighter Recruit I and II certifications, as defined by 19 NYCRR Part 426.;
- The costs or savings that could be attributed to training through electronic or Internet course or at the trainee's fire department;
- The costs or savings of required training equipment, ways to decrease the number of certified instructors and certified fire training programs needed;
- Examine the practices of other governmental entities and public and private educational institutions to compare training standards; and
- Make recommendations to enhance Firefighter certification in the State of New York.

Executive Summary

In New York State, all career and volunteer fire departments are required to ensure that their firefighters complete basic U.S. Department of Labor, Occupational Safety and Health Administration's (OSHA) safety training requirements, which vary based upon their role within the department. OSHA regulations define the roles of both interior structural and exterior firefighters.

Career firefighters are required to meet minimum basic and in-service training standards, established pursuant to Civil Service Law §58-a and Exec. Law 158. All career departments train their members to operate as interior firefighters to enable them to perform any function needed at a fire scene or other emergency.

There are no State required training standards for volunteer firefighters in New York State. Volunteer fire departments are responsible to ensure their firefighters are trained to perform their respective roles within the department. Local fire departments may impose in-house training requirements for all members or for certain firefighters based on his/her role (interior and exterior). In addition, volunteer

departments may choose to train firefighters in-house using course materials and programs widely available.

Fire departments have several training opportunities available to their members, including online and at a trainee's department. Training is available through the Office of Fire Prevention and Control (OFPC/State Fire), statewide fire service organizations, community colleges and universities, the National Fire Academy, the National Fire Protection Association (NFPA), Boards of Cooperative Educational Services (BOCES), and commercially available or private sector training organizations. Some training can be accomplished at a trainee's department depending on available resources. However, training in certain basic and essential firefighting skills that are necessary for firefighters to efficiently and effectively perform their duties cannot be done online.

While additional opportunities for volunteer firefighters to train online would reduce time, instructor costs and commuting costs, firefighter training inevitably requires in-person, hands-on training. Additionally, minimum standards and qualifications should be developed and maintained statewide for firefighters to assure the training required to satisfactorily perform firefighter duties is consistent and effective.

This study identifies the various firefighter trainings currently available in New York, minimum levels of performance required for both career and volunteer firefighters, minimum training levels for other first responders in the State and identifies other state minimum training efforts to incorporate online or blended learning. The study also makes recommendations for assuring consistent, effective and safe training for firefighters statewide.

Training Requirements

Generally, minimum firefighter safety training requirements for both career and volunteer firefighters are governed by the federal Occupational Safety and Health Administration (OSHA) regulations contained in 29 CFR 1910.156 and enforced by the New York State Department of Labor, Public Employee Safety and Health Act (PESH). Notably, these standards set minimum occupational safety requirements and should not be presumed to establish a level of skills performance or competency for firefighters.

OSHA requires all employers to provide training and education that is commensurate with the duties and functions that firefighters are expected to perform. While training is required before the firefighter performs any emergency activities, OSHA does not specify the skills or competency.

OSHA also requires all fire service employers to make sure that interior firefighters are physically capable of performing duties assigned to them during emergencies. This requirement is designed to ensure that firefighters are both medically qualified and physically capable of performing the duties of a firefighter operating in an Immediately Dangerous to Life or Health (IDLH) atmosphere.

By comparison, New York police officers and emergency medical services personnel, are required to meet minimum training standards and be certified by the Division of Criminal Justice Services and the Department of Health, respectively. Unlike other New York State first responders, there are no minimum training standards or certifications required for volunteer firefighters.

NYS Career Firefighter Training Standards

All career firefighters in New York must meet the minimum basic training standards, pursuant to Civil Service Law §58-a and contained in 19 NYCRR Part 426. Part 426 requires career firefighters to successfully complete a minimum of 229 hours of basic fire training and 100-hour annual in-service training. In reality or practically speaking, most career fire academies exceed 400-hours of basic firefighting training.

Parts 426 and 427 identify multiple training paths to complete the basic fire training program. The annual 100-hour in-service training is completed in-house at the local career fire department. OFPC certifies that the basic fire training programs, in-service training programs, and individual completions meet the standard outlined in Part 426.

In addition to the basic fire training program firefighters must successfully complete the Candidate Physical Ability Test (CPAT). During a CPAT, candidates wear a 50 lb. weighted vest (simulating the weight of a firefighters protective clothing and equipment) and complete 8 tasks that simulate firefighting activities. This test is a pass/fail test and these 8 tasks must be completed within 10 minutes and 20 seconds.

By comparison, within the New York State Department of Health, the minimum requirements for emergency medical services personnel (EMS) are based upon content. Generally, for a Certified First Responder the range of training hours is 48-60. For an Emergency Medical Technician, the range is 150-190 hours and for a Paramedic the range is 1000-1200 hours of initial training.

Similarly, within the Division of Criminal Justice Services, which oversees police officer training, the current minimum number of hours to become a police officer in New York is 699 hours.

New York State Volunteer Firefighters Training Requirements

There are no required minimum training standards, certification requirements, or minimum number of hours of training required to become a volunteer firefighter in New York. Notwithstanding, OFPC, in conjunction with the New York State Department of Labor, Public Employee Safety and Health (PESH), in consultation with the New York State Fire Chiefs Association, the Fireman's Association of the State of New York, the County Fire Coordinators Association and the Fire Districts Association of the State of New York developed "Recommended Best Practices for Fire Department Training Programs" to urge minimum training based on a volunteer firefighter's job responsibilities. Local authorities remain responsible for establishing minimum training requirements for firefighters in their jurisdiction and may, but are not required to, adhere to the recommended best practices.

The guidance breaks the core competencies of a firefighter into four categories; exterior firefighter, interior firefighter, apparatus operator and incident commander. The guidance references numerous opportunities to meet these training objectives, including State Fire training programs, national firefighter certification, and training programs available at both Nassau and Suffolk County Fire Academies.

It should also be noted that the members of the North American Fire Training Directors indicated that volunteer firefighter training standards within their states vary. These requirements range from no training requirements at all in the State of Massachusetts to 160 hours of initial training and 24 hours of annual refresher training in the State of Iowa.

New York State Volunteer Firefighter Training Opportunities

Firefighter training is available through the State Fire Training Program, in-house fire department training, commercially available training, private training organizations, statewide and local fire associations, the National Fire Academy, and a limited number of high-school programs.

The New York State Fire Training Program, administered by OFPC, provides training to volunteer firefighters at the local level (county training facilities and firehouses) and at the New York State Academy of Fire Science. Often, the State Fire Training Program is the principal source of training for volunteer firefighters, based on availability, scheduling, and costs of other training alternatives. State fire training is scheduled and provided, upon request, based upon local need, which may include day, evening, and weekend offerings, modular delivery formats (condensed or expanded), and is offered at no cost to the firefighter, fire department, or county. Basic and advanced level training is also offered

at the State Fire Academy at a nominal cost. In 2018, 46,471 students completed over 3,300 state fire trainings, representing over 952,000 direct student contact hours.

State Fire Training is delivered locally and at the State Fire Academy using full and part time OFPC staff. The majority of training offered by OFPC involves classroom and hands-on practical skills training. Hands-on skills training is necessary to develop and demonstrate competency of skills, required of a firefighter. This training offers firefighters a learning environment which simulates realistic conditions to assure that a firefighter can safely perform his or her firefighting duties under stressful conditions.

A holistic approach to fire training includes in-house fire department training necessary to build upon acquired skills to attain mastery of such skills and provides familiarity with local standard operating procedures and local policies. In addition to delivery of training directly to firefighters, OFPC trains and authorizes county and municipal instructors to deliver certain state fire training courses locally.

Online Firefighter Training

Online training can supplement hands-on and in-house training to provide awareness and refresher training. However, online training cannot substitute for practical hands-on training. The U.S. Department of Labor has concluded on numerous occasions that online training alone is not adequate to meet OSHA requirements. OSHA's position is that while interactive computer based training serves as a valuable training tool, by itself, it is insufficient to meet the intent of their training standards and that hands-on experience and exercises are necessary to provide trainees with familiarity and practical experience with equipment and skills necessary to perform the job safely.

All New York Firefighters are required to complete National Incident Management System (NIMS) training which can be accomplished online. In New York, police officer and emergency medical technician training requires in-person, skills-based training, with limited online training (i.e. National Incident Management System training).

Blended learning offers a mix of online and hands-on training but has not proven to offer cost-savings. The State Fire Training Program currently includes a blended learning Firefighter 1 (interior firefighting) course. Interest and success have varied, and the primary savings realized is student commuting time and expenses.

The National Fire Academy (NFA) offers online training events as self-study or online mediated courses. The Federal Emergency Management Agency (FEMA) Emergency Management Institute offers Incident Command System training and emergency management training courses as on-line self-study courses as well. Students enroll in the course at any time and the course proceeds at the student's pace without

interaction from an instructor. The NFA online mediated courses are monitored by an instructor who engages the students. The course is time dependent and may require pre-course work, off-line reading assignments, daily readings and posting, student feedback, and end of course testing. The NFA's online programs do not involve practical or hands-on skills training.

Other state training programs offer awareness level training online and blended learning training through a variety of online formats. For example, the State of Indiana's Department of Homeland Security offers self-study online hazardous materials and technical rescue awareness level courses however they have concluded, based upon past experience, that operational or technical training is better served by a hybrid of online training combined with in-person, hands-on skills coaching and evaluation.

Texas A&M Engineering Extension Services (TEEX) offers a hybrid Firefighter-I and II course in which participants have ten weeks to complete 24 online chapter assignments and then report to the TEEX campus for three weeks of psychomotor skills training that utilizes several props and evolutions to prepare the entry level firefighter for duty. The cost of registration in the program is currently \$5400 per participant.

By comparison, the Ohio State Fire Academy uses a classroom model whereby the students complete online course work ahead of scheduled on-campus sessions to shorten the amount of time spent on campus and create a learning environment that uses discussions and other activities rather than traditional lecture-based training. 30-35% of the course's traditional classroom time is reduced into online activities thereby shortening the amount of time the student spends on campus to achieve Ohio Fire Inspector certification. The remaining skills cannot be replicated in the online environment and need to be performed in a traditional face to face classroom/ training area format.

Volunteer Firefighter Training Costs and Saving Opportunities

Firefighter training costs vary depending on the training method and location, which ranges from in-house and State Fire Training with no or low costs to expensive commercially available and/or private training providers (contractors). In-house and online training provide an opportunity for costs savings to the students. However, this type of training alone is not singularly sufficient to provide the firefighter with practical firefighting skills. The objective of firefighter training is to provide the firefighter with the necessary skills to safely and effectively perform his or her duties.

Expanding online training opportunities to include awareness level training would reduce the need for an instructor. However, instructor numbers cannot be reduced for blended learning or hands-on training as the instructor-student ratio is critical to assuring the safety of the firefighters and instructors during training.

By expanding the ability of local fire departments and county fire training programs to utilize and conduct State Fire Training in-house at the local level, in whole or in part, the locals have the ability to develop and sustain their own instructors and resources.

Any evaluation regarding firefighter training must include the need for job-appropriate training standards to ensure consistency, effectiveness and safety. Establishing standards for the volunteer provides a clear path for what training is necessary while at the same time respecting the limited time individuals can commit to training. The use of online training combined with proficient instruction can reduce the amount of classroom time required to complete entry level training courses, which, in turn, can reduce the overall training time commitment.

Recommendations and Conclusion

The following recommendations should be considered to support the volunteer fire services training efforts:

- Volunteer firefighter minimum training standards be established in order to provide a clear, consistent, effective, efficient, and safe training path for New York State's volunteer firefighters;
- Build a platform for the delivery of appropriate online training programs;
- Continue to supplement state fire training at the county and local level; and
- Continue to work with other fire service organizations to further develop best practices regarding the delivery of firefighter training.

The challenge of the volunteer fire service in New York State is recruitment and retention of volunteers. Volunteerism is a balance between time demand, commitment, safety and effectiveness. Costs to the fire department and individual firefighter should continue to be one of several considerations.

OFPC continues to identify and implement opportunities to ensure that the training it provides meets the needs of the fire service efficiently and effectively, so the time invested by fire departments and their members, whether career or volunteer, is utilized well and provides a maximum return on that investment.

The objective is to provide the fire service with the most appropriate, effective and consistent training to assure the safety of the individual firefighter, the fire department and the community they serve.

Interviews Conducted

Becker, Paul, Lead Instructor, Baldwinsville Central School District, personal interview, *20 May 2019*.
Bender, Mark, Instructor Citi BOCES, personal interview, *13 May 2019*.
Clark, Wayne, Orange/Ulster County BOCES, personal interview, *12 June 2019*.
Forbes, Donald, Oswego County Fire Coordinator, personal interview, *10 May 2019*.
Geidel, Kevin, Onondaga Community College, personal interview, *13 March 2019*.
Loyd, Jason, Texas A&M Engineering Extension Services, Blended Learning Firefighter-1 Coordinator, personal interview, *5 March 2019*.
McDonald, William, Herkimer Community College, personal interview, *13 March 2019*.
Myers, Cory, Vice President Envisage Technologies, personal interview, *27 March 2019*.
Schell, Matthew Dutchess Community College Fire Science Program Chair, personal interview, *12 March 2019*.
Starrett, James Ohio State Fire Academy Fire Service Instructor III, personal interview, *29 August 2019*.
Sullivan, Stephen, Adjunct Instructor, Jefferson Community College, personal interview, *10 May 2019*.
Survey project working group, Executive Board of NYS County Fire Coordinators Association, personal interview, *3 April 2019*.
Tanner, Leslie, Principal of Orleans Niagara Board of Cooperative Educational Services, personal interview, *14 March 2019*.
Westfall, Elizabeth, Program Director of Quality Assurance & Curriculum Development, Indiana Department of Homeland Security, personal interview, *26 April 2019*.

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