

# **The State of Call/Volunteer Firefighter Training in Massachusetts and Recommendations for Improvement**

**December 11, 2015**

Prepared by the Massachusetts Call/Volunteer Firefighters  
Association, Inc. (MCVFA)

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# **The State of Call/Volunteer Firefighter Training in Massachusetts And Recommendations for Improvement**

## **Massachusetts Call/Volunteer Firefighters Association**

**December 11, 2015**

In late 2014, the Massachusetts Call/Volunteer Firefighters Association (MCVFA) had a discussion about the training needs of call/volunteer firefighters. This discussion was the culmination of years of anecdotal evidence that call/volunteer firefighter departments had unmet training needs, as well as experiences with providing analysis and recommendations to the Rowe Fire Department and the Leverett Fire Department. It was determined that the experiences of the Rowe FD and the Leverett FD, along with all of the anecdotal evidence over the years warranted a comprehensive look at the current state of training among call/volunteer firefighters.

Over the next few months the MCVFA developed a survey seeking information about the current levels of training by call/volunteer firefighters, the use of the Massachusetts Firefighting Academy (MFA) by call/volunteer firefighters, the in-house training policies and facilities of call/volunteer and combination fire departments and seeking information about the fire chiefs' needs for their department. The survey that was developed asked 42 questions.

A copy of the survey questions and all of the responses can be viewed at the MCVFA website.

### **The Survey Process**

In April 2015, the MCVFA surveyed 202 fire chiefs of call, volunteer and combination fire departments regarding the training of their call and volunteer firefighters. 102 fire chiefs choose to participate in the survey. The fire chiefs that participated represent 26% of all of the fire departments in Massachusetts. About half of all call, volunteer and small combination fire departments in the state participated.

The survey was sent to the fire chiefs using the online survey tool Survey Monkey. Fire Chiefs were first sent an email explaining the project and containing a PDF copy of the entire survey. This way, chiefs had the opportunity to review the survey questions, look-up any information they needed and ask questions before the actual survey was sent. A week later, using Survey Monkey, the electronic version of the survey was sent by email. The survey remained open from March 11, 2015 until June 1, 2015. In this period, two

reminder messages were sent to chiefs who had not yet participated. The last completed survey was received on May 18, 2015.

The chiefs surveyed included all of the chiefs of call and volunteer fire departments in Massachusetts, and the chiefs of the combination fire departments in small towns (up to 37,000 in population).

### **Rounding Off**

In the body of this report, all percentages are rounded-off to eliminate differences of less than 1 percentage point. For example, the percentage 5.85% will be stated as 6%. This will occasionally lead to the percentages not adding up to 100%. For more detailed percentages the reader can consult the raw survey data.

### **Subsets**

In each section of this report we will first review the data as whole. We will look at the medians, means and trends seen when looking at the whole of the call/volunteer fire service in Massachusetts. But, we will first breakout the data so we can look at the 25% of the data that applies to the smallest fire departments in Massachusetts. These are the fire departments serving communities with populations of 3000 or less. They represent 25 departments that participated in the survey. This will be called the “Small FD Subset”.

Secondly, we will breakout the data so we can look at the 25% of the data that applies to the largest combination fire departments in Massachusetts. These are the combination departments serving communities with populations greater than 12,000. They represent 24 fire departments that participated in the survey. This will be called the “Large Combo FD Subset”.

## **Part 1: Call/Volunteer and Combination Fire Department Profile**

A byproduct of the survey is that it provides an up to date profile of the call/volunteer fire service in Massachusetts as of Spring 2015. Profiling the call/volunteer and small combination fire departments is essential to understanding the needs of these organizations and their firefighters.

### ***Classification:***

When asked how the fire chief classifies his/her fire department among the categories, volunteer, call, combination – mostly call/volunteer, combination – mostly career, combination split call/career or career<sup>1</sup>, the chiefs reported:

- 20% Volunteer Fire Department
- 23% Call Fire Department
- 23% Combination Fire Department – Mostly Call/Volunteer
- 18% Combination Fire Department – Mostly Career
- 14% Combination Fire Department – Split Evenly Call/Career
- 3% Career

From this data (Q.29) we can estimate that statewide there are about:

- 40 Volunteer Fire Departments
- 45 Call Fire Departments
- 45 Combination Fire Departments – Mostly Call/Volunteer
- 35 Combination Fire Departments – Mostly Career
- 28 Combination Fire Departments – Split Evenly Call/Career

This means that of the 380 fire departments in Massachusetts (excluding state organizations such as Massport FD and Joint Base Cape Cod FD) that 193 (or 51%) of the fire departments in Massachusetts classify themselves as call/volunteer or combination.

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<sup>1</sup> The survey defined the various types of fire departments as follows:

Volunteer = Firefighters are not paid or are paid a stipend (per call, per drill, per year, etc., but NOT hourly).

Call = Firefighters are paid an hourly rate.

Combo – Mostly Call/Volunteer = Career Firefighters are not more than 15% of the force.

Combo – Mostly Career = Call/Volunteer Firefighters make up 15% or less of the force.

Combo = Call/Volunteer Firefighters make up 15% to 85% of the force.

***Number of Call/Volunteer Firefighters:***

Within these 193 fire departments we estimate from the survey data (Q.30) that these departments comprise a typical response force that looks like this:

- 28 Call or Volunteer Firefighters
- 1 Part-time Firefighter
- 9 Career Firefighters
- 1 Auxiliary or Support firefighter
- 2 Junior Firefighters/Explorers
- 3 EMS Providers (who are not firefighters)

While this describes a fictional fire department based upon the average numbers and types of staff reported, it is helpful as a general guide to visualizing the staffing model of fire departments using call/volunteer firefighters in Massachusetts.

Based upon the survey data (Q.30) there are approximately 1000 volunteer firefighters, 3800 call firefighters and 550 call/volunteer EMS providers in Massachusetts. Within the combination fire departments there are about 130 part-time or per diem firefighters and 1400 career firefighters. We also estimate that spread across these departments there are roughly 140 auxiliaries or support firefighters and 300 junior firefighters or Explorer Scouts.

Estimating a current total of about 5350 call/volunteer firefighters and EMS providers indicates that there has been a significant drop in the number of call/volunteer firefighters and EMS providers in the past decade. In 2005, as part of the legislative effort to pass the McNamara Law, the MCVFA surveyed fire departments and found a total of 6269 call/volunteer firefighters and 512 EMS providers were active at that time. This fits much of anecdotal evidence of a national trend in the reduction of volunteer firefighting forces. It indicates that since 2005, the Massachusetts call/volunteer firefighter and EMS provider population has dropped from 6781 to an estimated 5350. This is a loss of 1431 firefighters and EMS providers, or a 22% decrease.

Of the departments reporting a volunteer force, the largest volunteer force has 40 volunteer members and the smallest has one volunteer member. Both are combination fire departments.

Of the departments reporting a call force, the largest call force has 65 members and the smallest has one member.

The largest career firefighting force at a combination department participating in the survey was 37 members.

The largest auxiliary firefighting force has 8 members, and the largest junior firefighting program has 20 members.

***Population Served:***

The average population served by the surveyed departments is 8456 people. (Q.32) The largest town served by the surveyed departments has a population of 36,500 people and the smallest town has a population of 227 people. In ranges of 5000 populations, the survey respondents breakdown as follows:

Population Less Than 5000:	32 Departments
Population 5001 to 10,000:	28 Departments
Population 10,001 to 15,000:	23 Departments
Population 15,001 to 20,000:	6 Departments
Population More Than 20,000:	5 Departments

The average size of a community with a call/volunteer firefighting force is 8456 people.

Extrapolating this data statewide indicates that entirely call/volunteer or small combination fire departments provide the vast majority of the fire protection for about 80 to 85 communities with populations of less than 15,000 people, and that call/volunteer firefighting drops off significantly in communities with populations in excess of 15,000 people.

About 1.7 million Massachusetts residents are protected by either a call/volunteer fire department or a combination fire department that is either mostly call/volunteer or split call/career.

The call/volunteer and combination fire departments that participated in the survey are dispersed among the various counties as follows. (Q.31) The percentage representing the contribution of call/volunteer and combination department to their statewide total:

Barnstable County	2%
Berkshire County	10%
Bristol County	7%
Dukes County	1%
Essex County	8%
Franklin County	8%
Hampden County	8%
Hampshire County	6%
Middlesex County	10%
Nantucket County	1%
Norfolk County	4%
Plymouth County	8%
Suffolk County	0%
Worcester County	27%

Worcester County stands out as having the greatest share of call/volunteer and combination fire departments in the Commonwealth with 27% of them residing there.

The four western counties, Berkshire, Franklin, Hampden and Hampshire, together represent 32% of the call/volunteer and combination fire departments.

These numbers confirm the general sense that most people in the Massachusetts fire service would have guessed, and that is that there is a high concentration of call/volunteer firefighters in Western Massachusetts and Central Massachusetts.

**Money:**

The survey data says that the average call/volunteer and combination fire department has an operating budget of \$836,572.00<sup>2</sup> and that the average department will spend \$19,230 of those dollars for training. Training represents 2% of the average fire department operating budget.

**EMS:**

In profiling these departments we find that only 3% of them have no role in providing emergency medical services (EMS) to their community. The rest of the call/volunteer and combination departments indicate providing EMS at the following levels and in the following percentages (Q.40):

No Ambulance Transport:	
First Responder Level	32%
Basic Life Support (BLS)	12%
Ambulance Transport:	
Basic Life Support (BLS):	13%
Advanced Life Support Intermediate/Advanced EMT	5%
Advanced Life Support (ALS) Paramedic:	36%

A little more than half (about 54%) of the call/volunteer and combination fire departments in Massachusetts are providing ambulance service to their communities.

About 44% of call/volunteer and combination fire departments in Massachusetts are providing EMS first response to medical calls, but do not provide ambulance service.

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<sup>2</sup> This figure is an adjustment. Two departments reported budgets of \$249,097,300 and \$29,000,000. These were determined to be errors, so these budget amounts were removed from the calculations.

This data indicates that the vast majority of call/volunteer firefighters in Massachusetts are providing some level of EMS to their community.

***Call/Volunteer FD Profile:***

Based upon the survey data, the typical small town in Massachusetts (8456 people) has a combination fire department with about 28 call/volunteer firefighters, 9 career firefighters and 1 part-time firefighter. It is likely located west of Route 495. It provides EMS and most likely provides ambulance service. It has an operating budget of \$836,572.00, but only spends \$19,230 or 2.5% of its budget on training.

### **Small FD Subset Profile**

***Classification:***

When asked to classify their department by type, the chiefs of departments serving communities with a population of 3000 or less reported:

- 67% Volunteer Fire Department
- 25% Call Fire Department
- 4% Combination Fire Department – Mostly Call/Volunteer
- 0% Combination Fire Department – Mostly Career
- 4% Combination Fire Department – Split Evenly Call/Career
- 0% Career

***Number of Call/Volunteer Firefighters:***

Within the Small FD Subset of departments serving communities with a population of 3000 or less, only three career firefighters and one part-time firefighter were reported. This represents only about ½ % of the fire and EMS personnel in these small communities. For all practical purposes, communities with populations under 3000 rely entirely upon call/volunteer fire and EMS staff.

Also, within the Small FD Subset, volunteer firefighters outnumber call firefighters by about 2 to 1.

The largest volunteer force reported within the Small FD Subset was 36. The average volunteer force has 18 firefighters.

The largest call force reported within the Small FD Subset was 23. The average call force has 16 firefighters.

The largest group of EMS providers who are not firefighters within the Small FD Subset was 10. The average number of EMS providers is 2.



The departments within the Small FD Subset reported an average of two auxiliary or support firefighters and one junior firefighter or Explorer.

***Population Served:***

All of the fire departments within the Small FD Subset protect communities of 3000 or less population. The smallest of these departments protects a community with a population of 227. The average population of these communities is 1342.

These smallest call/volunteer and combination fire departments that participated in the survey are dispersed among the various counties as follows. (Q.31) The percentage representing the contribution of call/volunteer and combination department to their statewide total:

Barnstable County	0%
Berkshire County	28%
Bristol County	0%
Dukes County	4%
Essex County	0%
Franklin County	32%
Hampden County	12%
Hampshire County	12%
Middlesex County	0%
Nantucket County	4%
Norfolk County	0%
Plymouth County	0%
Suffolk County	0%
Worcester County	8%

84% of the fire departments in the Small FD Subset are located in the four Western Counties of Massachusetts.

***Money:***

The survey data says that the average fire department within the Small FD Subset has an operating budget of \$58,663 (Q.33) and that the average department will spend \$2342 of those dollars for training (Q.34). Training represents 4% of their spending.

***EMS:***

In profiling the departments within the Small FD Subset we found that all of them have a role in providing emergency medical services (EMS) to their community. They are providing EMS at the following levels and in the following percentages (Q.40):

No Ambulance Transport:	
First Responder Level	64%
Basic Life Support (BLS)	24%
Ambulance Transport:	
Basic Life Support (BLS):	8%
Advanced Life Support Intermediate/Advanced EMT	4%
Advanced Life Support (ALS) Paramedic:	0%

While all of these departments are providing some level of EMS to their community, only 12% of them are providing ambulance service.

***Call/Volunteer FD Profile:***

Based upon the survey data for the Small FD Subset, the average small call/volunteer fire department has about 17 call/volunteer firefighters, 0 career firefighters and 0 part-time firefighters. It is likely located in Western Massachusetts (Berkshire, Franklin, Hamden or Hampshire County). It provides EMS first response, but does not operate an ambulance. It has an operating budget of \$58,666 and spends \$2342 on training.

**Large Combo FD Subset Profile**

***Classification:***

Within the Large Combo FD Subset (departments serving communities with populations between 12,000 and 37,000), the chiefs classified their departments as follows:

Volunteer Fire Department	0%
Call Fire Department	18%
Combo-Mostly Call/Volunteer	5%
Combo-Mostly Career	45%
Combo	23%
Career	9%

***Number of Call/Volunteer Firefighters:***

Within the Large Combo FD Subset, there are no volunteer firefighters, however, call firefighters and career firefighters are about equal. The average number of call firefighters reported per fire department was 21 and the average number of career firefighters reported was 19. Within the subset, chiefs of the twenty-four departments participating the survey reported an overall total of 482 call firefighters and 445 career firefighters.

No part-time or per-diem firefighters were reported within the Large Combo FD Subset.

An average of 2 EMS providers (who are not firefighters) and 1 Auxiliary or Support firefighter was reported within the departments of the Large Combo FD Subset.

***Population Served:***

The departments of the Large Combo FD Subset had populations between 12,000 people and 37,000. The average community size was 18,168 people and the total number of people protected by these twenty-four departments is 436,041.

The larger fire departments that participated in the survey are dispersed among the various counties as follows. (Q.31) The percentage representing the contribution of call/volunteer and combination department to their statewide total:

Barnstable County	4%
Berkshire County	0%
Bristol County	13%
Dukes County	0%
Essex County	4%
Franklin County	0%
Hampden County	8%
Hampshire County	4%
Middlesex County	13%
Nantucket County	0%
Norfolk County	4%
Plymouth County	17%
Suffolk County	0%
Worcester County	33%

One-third (33%) of the fire departments in the Large Combo FD Subset are located in Worcester County and 12% of the departments in this subset are located in the four Western Counties of Massachusetts. 43% of these larger departments are located across Plymouth, Bristol and Middlesex Counties.

***Money:***

The survey data says that the average fire department with the Large Combo FD Subset has an operating budget of \$2,058,555.00<sup>3</sup> (Q.33) and they will spend an average of \$27,761.00 for training (Q.34). Training represents slightly over 1% of their budget.

***EMS:***

All of the fire departments within the Large Combo FD Subset provide EMS, with 52% of them providing paramedic level ambulance transport service.

About 35% of these largest departments provided EMS first response at the first responder level and another 4% of them provide EMS first response at the basic life support (BLS) level.

About another 4% of these largest departments provide ambulance transport service at the BLS level and that 4% of them provide ambulance transport service at the intermediate/advanced EMT level.

***Largest Call/Volunteer & Combo FD Profile:***

Based upon the survey data for the Large Combo FD Subset, the average call/volunteer/combination fire department serving communities with a population of greater than 12,000 people has about 21 call firefighters and 19 career firefighters. They have no part-time firefighters and no volunteers, and they have one auxiliary or support firefighter. They typically have 2 EMS providers who are not firefighters. These largest departments provide ambulance service and mostly at the ALS-Paramedic Level. It has an operating budget of \$2 million, and will spend \$27,761 on training.

## **Current Level of Training**

The survey asked chiefs to assess and report on the current level of training of their call/volunteer firefighters. This included such things as Firefighter I & II training, hazmat training, ICS training, the number of hours of training, mutual aid training and the frequency of training. Here is what the data indicates.

Looking at the data from across broad range of survey questions, the data shows that the typical call/volunteer firefighter in Massachusetts:

- Trains with live fire once each year. (Q.2)

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<sup>3</sup> This figure is an adjustment. Two departments reported budgets of \$249,097,300 and 29,000,000. These were determined to be errors, so these budget amounts were removed from the calculations.

- Has Training to the Firefighter I (NFPA 1001) level, however only about one-half of the call/volunteer firefighters are certified to the Firefighter I level. (Q.4 & Q.5)
- Attended a Massachusetts Firefighting Academy (MFA) class or seminar once in the past 12 months (Q.9 & Q.10)
- Trains with his/her mutual aid partners twice a year. (Q.11)
- Trains between 26 to 50 hours each year at their fire station. (Q.15)
- Attends at least one training class or seminar at an outside agency for about 1 to 6 hours per year. (Q.16) This data tends to match up and confirm the statement that they attended a MFA class or seminar once in the past 12 months.

The typical call/volunteer or combination fire department's training program offers training or a drill to their firefighters twice per month. (Q.25)

The typical call/volunteer or combination fire department has the following training equipment:

- 3 or more CPR manikins. (Q17)
- A fire-training manikin. (Q.18)
- A smoke machine. (Q.19)

Ownership of fire training manikins and smoke machines was high, with about 75% of all departments surveyed having both. Keep in mind that 25% of these departments have neither. This means that about 50 of the call/volunteer and combination fire departments across the state lack these basic training tools.

However, the typical call/volunteer or combination fire department does not have the following training facilities:

- Computer Fire Simulation Software. 84% lack this. (Q.20)
- Any kind of live fire training prop. 69% lack this. (Q.21)
- A ladder-training tower, platform or prop. 76% lack this. (Q.24)

About half (48%) reported having regular access to a smoke building or burn building for training. (Q.23)

About three-quarters (72%) of departments do not have a smoke building or burn building. (Interestingly, departments' reported having more smoke/burn buildings and trailers than the project coordinators thought existed in Massachusetts). The data showed (Q.22):

- 7% of departments have a Smoke Building
- 13% of departments reported having a smoke/burn building. (This means 13 departments who participated in the survey have a smoke/burn

- building, and it indicates there may be as many as 26 smoke/burn buildings of some type around the state.)
- 3% of departments reported having a smoke trailer.
- 5% of departments reported having a smoke/burn trailer.

Finally, 25% of the call/volunteer and combination departments do not have a single certified fire instructor. However, 23% have five or more certified fire instructors. (Q.26)

### **Small FD Subset Current Training Levels**

According to the data from a range of questions, the typical call/volunteer firefighter in a fire department that serves a Massachusetts town with a population of 3000 or less:

- Trains with live fire once each year. (Q.2)
- Has Training to the Firefighter I (NFPA 1001) level, however fewer than half of the call/volunteer firefighters are certified to the Firefighter I level. (Q.4 & Q.5)
- Attended a Massachusetts Firefighting Academy (MFA) class or seminar once in the past 12 months (Q.9 & Q.10)
- Trains with his/her mutual aid partners four times per year. (Q.11)
- Trains between 50 to 100 hours each year at their fire station. (Q.15)
- Attends at least one training class or seminar at an outside agency for about 6 to 12 hours per year. (Q.16)

It is notable that departments within the Small FD Subset have much fewer firefighters trained to and certified to the Firefighter I (NFPA 1001) standard than those departments in larger communities. However, these departments train more often than reported by the departments in larger communities. This higher amount of training can be seen in Q.15 where they report 50 to 100 hours each year of training as typical. And, they train twice as often with their mutual aid partners.

The typical Small FD Subset fire department's training program offers training or a drill to their firefighters twice per month. (Q.25)

Within the Small FD Subset, the typical call/volunteer fire department has less training materials than the larger departments. The data shows these small departments:

- Have 3 or more CPR manikins. (Q17), but 30% of departments have none.
- 42% have a fire-training manikin. (Q.18)
- 50% have a smoke machine. (Q.19)
- 12% have computer fire simulation software. (Q.20)
- 29% have some kind of live fire training prop. (Q.21)
- 16% have some kind of ladder-training tower or prop. (Q.24)

These numbers show that the departments of the Small FD Subset have fewer training tools than larger departments.

However, half (50%) of the Small FD Subset departments reported having access to a smoke building or burn building for training. This is the same as was reported by the larger departments. (Q.23)

And, the exact same percentage (72%) of the Small FD Subset departments as the larger departments, reported not having a smoke building or burn building. The data showed (Q.22):

- 4% of small departments have a Smoke Building
- 4% of departments reported having a smoke/burn building. (This means 1 small department who participated in the survey has a smoke/burn building.)
- 8% of small departments reported having a smoke trailer.
- 12% of small departments reported having a smoke/burn trailer.

Finally, 60% of the call/volunteer departments serving communities with a population of 3000 or fewer people do not have a single certified fire instructor. 28% of these departments have only one fire instructor. (Q.26)

## **Large Combo FD Subset Current Training Levels**

According to the data from a range of questions, the typical call/volunteer firefighter in a fire department that serves a Massachusetts town with a population of 12,000 or more:

- Trains with live fire once a year. (Q.2) (40% do not train annually with live fire.)
- Is both trained and certified to the level of Firefighter I & II. (Q.4 & Q.5)
- Attended a Massachusetts Firefighting Academy (MFA) class or seminar once in the past 12 months (Q.9 & Q.10)
- Trains with his/her mutual aid partners once a year. (Q.11)
- Trains between 26 and 50 hours each year at their fire station. (Q.15)
- Attends at least one training class or seminar at an outside agency for about 6 to 12 hours per year. (Q.16)

The typical Large Combo FD Subset fire department's training program offers training or a drill to their firefighters twice per month. (Q.25)

Within the Large Combo FD Subset, the typical department has slightly more training materials than the smaller departments. The data shows these larger departments:

- Have 4 or more CPR manikins. (Q17), but 13% of departments have none.
- 91% have a fire-training manikin. (Q.18)
- 82% have a smoke machine. (Q.19)
- 17% have computer fire simulation software. (Q.20)
- 26% have some kind of live fire training prop. (Q.21)
- 30% have some kind of ladder-training tower or prop. (Q.24)

These numbers show that the departments of the Large Combo FD Subset have more training tools than smaller departments, except that the smallest departments report having slightly more fire training props.

Access to a smoke building or burn building for training and ownership of a smoke or burn building for training is about the same as for smaller departments. (Q.22 & Q.23)  
The data showed (Q.22):

- 17% of departments reported having a smoke/burn building.
- 4% of small departments reported having a smoke trailer.
- 4% of small departments reported having a smoke/burn trailer.
- 74% have none.

Only 4% of these largest combination departments had no certified fire instructors, and 39% of them have five or more instructors. (Q.26)

## **FF I/II Training and Certification Gap**

There is no baseline data from the past to compare today's Firefighter I/II training and certification levels to in order to see any trends. The MCVFA feels it is critical that we track this data going forward in order to see if the level of training is improving, static or falling behind.

The data shows (Q.4 and Q.5) that there is a significant gap between how many call/volunteer firefighters are trained to the level of Firefighter I, and how many are certified to the level of Firefighter I. (It is important to note that there is no law, regulation or standard that requires certification in addition to training, and there is no Massachusetts law, regulation or standard that requires Firefighter I training.)

Looking first and only at the 48% of the fire chiefs' reporting that 95% to 100% of their firefighters have had training that meets the Firefighter I standard (NFPA 1001), you see that only 18% of these same chiefs next report that their firefighters have been certified as Firefighter I. This indicates that 63% of the call/volunteer firefighters, who



have training that meets the Firefighter I Standard, have not taken the additional step of becoming certified.

This gap also exists when we look at Firefighter II training and certification (Q.6 & Q.7). Fire chiefs report that 34% of their call/volunteer firefighters have had training that meets the Firefighter II Standard (NFPA 1001), but that only 14% of them have been certified Firefighter II. Similar to Firefighter I, 41% of the call/volunteers who have training that meets the Firefighter II Standard, have not taken the additional step of becoming certified.

It is interesting that 18% of chiefs report that all of their call/volunteer firefighters are certified to Firefighter I and that 14% of chiefs' report that all of their call/volunteer firefighters are certified to Firefighter II. The reason these two numbers may be close together is the general practice or preference in Massachusetts to give the combined Firefighter I/II certification test, rather than testing for each level separately.

This “certification gap” is one training issue that we can need to address. The certification gap, however, isn't likely to be the only big training issue the survey reveals.

When asked what percentage of their departments' call/volunteer firefighters had training (not certification) to the level of Firefighter I & II (Q.4 & Q.6) the results were as follows:

	FF I	FF II
None	4%	11%
1/3 Trained	7%	11%
1/2 Trained	18%	23%
3/4 Trained	23%	22%
All	48%	34%

Slightly fewer than half of all of the call/volunteer fire departments in Massachusetts have trained all of their staff to the Firefighter I Level. Slightly more than half (52%) has a significant number of their staff that has not been trained to the Firefighter I Level.

When asked what percentage of their departments' call/volunteer firefighters had been certified to the level of Firefighter I and Firefighter II (Q.5 & Q.7) the results were as follows:

	Certified FF I	Certified FF II
None	18%	24%
1/3	23%	17%
1/2	20%	26%
3/4	22%	20%
All	18%	14%

The data tells us that between 20% and 25% of all of the call/volunteer and combination fire departments have no call/volunteer firefighters who are certified as either Firefighter I or II.

Recently the question of whether or not it would be better to break the current Massachusetts Firefighting Academy Call/Volunteer Firefighter I/II Program into two separate programs, by splitting it into a Firefighter I and a Firefighter II program has been discussed in some fire service circles. The idea being that it might be easier for call/volunteer firefighters to find the time to participate in the program. They could take Firefighter I and then later on take Firefighter II. Based upon the topics for Firefighter I and Firefighter II as set forth in NFPA 1001, this approach would likely result in a Firefighter I class that is about 2/3 the length of the current combined Firefighter I/II class. The add-on Firefighter II program would be about 1/3 the length of the current combined program.

When asked about this option, 33% of the chiefs said they would like to have the option of a split class. 11% of the chiefs said they needed more information to be able to express an opinion, and 56% of chiefs said, no, leave the program the way it is and teach both levels in a combined manner. (Q.36)

It is clear from comments made throughout the survey on multiple questions (Q.36 & Q.14 in particular), that the Massachusetts Firefighting Academy's Call/Volunteer Firefighter I/II program is highly regarded and considered the best training program that the MFA provides to the call/volunteer fire service. It is clear that this an excellent program that must be continued and grown.

### **Small FD Subset Firefighter I/II Training Gap**

The Firefighter I/II training gap is greatest in the fire departments serving communities with populations of 3000 or less.

Within the Small FD Subset, 17% of the chiefs reported that they have no firefighters or almost no firefighters who are trained to the Firefighter I level. Within this same subset, 32% of these departments have nobody or almost nobody certified to the level of Firefighter I. This compares to the overall results showing that 4% of departments have no firefighter or almost no firefighters trained to the Firefighter I level, and 17% having no firefighters or almost no firefighters certified to the Firefighter I level. (Q.5 & Q.6)

Only three (12%) of the departments in the small FD Subset reported having almost all or almost all of their firefighters certified to the Firefighter I/II level. This compares to the overall results showing 18% of all departments reported having all or almost all of their firefighter certified to the Firefighter I/II level. (Q.7 & Q.8)

## **Large Combo FD Subset Firefighter I/II Training Gap**

The Firefighter I/II training gap for call/volunteer firefighters in the Large Combo Subset is smaller than reported generally across the industry and when compared to the Small FD Subset.

The chiefs of the Large Combo FD subset reported that most of their staff is trained to the level of both Firefighter I and Firefighter II. 61% of these departments reported having almost all of their staff trained as Firefighter I and 39% of them reported having almost all of their staff certified as Firefighter I.

At the Firefighter II Level, 57% of the departments reported having almost all of their call/volunteer firefighters trained to Firefighter II, and 61% of them reported having between 60 and 99% of their call/volunteer firefighters certified to the Firefighter II level.

However, even within this group, the data shows about 25% of call/volunteer firefighters are not certified Firefighter II or I.

## **Best Massachusetts Firefighting Academy Classes (Q.14)**

When asked to name the best classes and programs at the Massachusetts Fire Academy, besides the positive comments about the Call/Volunteer Firefighter I/II program, the responses were all over the place and listed dozens of programs, almost to the point of not being able to identify standouts. However, of the 174 responses, seven stood out with repeated mentions:

1.	Flashover	18 mentions	(10%)
2.	Call/Volunteer Firefighter I/II Program	16 mentions	
3.	Fire Officer 1 (Blended)	14 mentions	
4.	Electrical Safety	8 mentions	
5.	RIT/Managing the Mayday	8 mentions	
6.	Driver/EVO Safety	6 mentions	
7.	Instructor	6 mentions	(3.5%)

The Call/Volunteer Firefighter I/II Program and Flashover Class dominated among the six top responses. In the case of the other four classes, it was unclear if there was more than one program with a similar focus. For instance, responses such as “driver safety”, “EVO”, “driver course” and “emergency driver” have all been combined into a single category above.

In the case of the Fire Officer I class, it wasn’t clear whether the mention of the case was the e-blended program or a traditional classroom program. And in some cases, the participant only said, “fire officer”. These responses were combined into one.

In all 47 programs or similar sounding programs were listed on the survey responses, most of them only once, twice or three times.

Also, in addition to the 147 responses that named a MFA class or program, 30 responses said “none”. Half of these none responses came from the Small FD Subset of departments serving communities with populations of 3000 or less.

### **Small FD Subset Best Massachusetts Firefighting Academy Classes (Q.14)**

When asked to name the best MFA Classes the Small FD Subset departments no classes stood out among those listed. In fact, “none” dominated the answers with 14 responses. Otherwise, three classes each received three mentions:

1. Flashover
2. Rural Water Supply
3. Driver/EVO Safety

In all 19 programs or similar sounding programs were listed on the survey responses, almost all of them only once. The Call/Volunteer Firefighter I/II program was mentioned twice.

14 of the departments responded by saying “none” to this question. This over represents the size of the group of small departments by 100%. So while these departments represent 25% of the departments surveyed, they provided 50% of the “none” answers.

### **Large Combo FD Subset Best Massachusetts Firefighting Academy Classes (Q.14)**

When the Large Combo FD Subset departments were asked to name the best three best MFA classes, chiefs could only name an average of 1 ½ classes (30 out of 72 possible classes). Of these, five chiefs named Fire Officer 1 and four chiefs named the call/volunteer recruit program. None also garnered four nominations.

### **Company Training Evolutions: NFPA 1410**

When asked about how often call/volunteer firefighters participate in company training evolutions based upon or similar to those set forth in NFPA 1410, Standard for Training for Initial Emergency Scene Operations, 24% of chiefs were unfamiliar with this type of training. The rest of the chiefs reported their call/volunteer firefighters participated in a company evolution based upon NFPA 1410 as follows:

Once or twice per year	28%
Quarterly	11%
Monthly	14%

Another 24%, while they were familiar with NFPA 1410 Company Evolutions, reported that their department did not use them. This means that 48% of the departments never conduct this type of training.

### **Small FD Subset Company Evolutions: NFPA 1410 (Q.27)**

When the departments of the Small FD Subset were asked about how often call/volunteer firefighters participate in company training evolutions based upon or similar to those set forth in NFPA 1410, Standard for Training for Initial Emergency Scene Operations, 48% of chiefs were unfamiliar with this type of training (twice as many as reported by the whole). The rest of the chiefs reported their call/volunteer firefighters participated in a company evolution based upon NFPA 1410 as follows:

Once or twice per year	22%
Quarterly	13%
Monthly	0%

Another 18%, while they were familiar with NFPA 1410 Company Evolutions, reported that their department did not use them. This means that 66% of the smallest departments never conduct this type of training.

### **Large Combo FD Subset Company Evolutions: NFPA 1410 (Q.27)**

When the departments of the Large Combo FD Subset were asked about how often call/volunteer firefighters participate in company training evolutions based upon or similar to those set forth in NFPA 1410, Standard for Training for Initial Emergency Scene Operations, 22% of chiefs were unfamiliar with this type of training (twice as many as reported by the whole). The rest of the chiefs reported their call/volunteer firefighters participated in a company evolution based upon NFPA 1410 as follows:

Once or twice per year	26%
Quarterly	9%
Monthly	17%

Another 26%, while they were familiar with NFPA 1410 Company Evolutions, reported that their department did not use them. This means that 48% of the larger departments never conduct this type of training.

## **Hazmat Training**

The data regarding hazardous materials training stood out and warranted some special attention at this point in the report. When asked about how often call/volunteer firefighters participated in some kind of hazmat field exercise or hands-on hazmat training the chiefs reported the following data (Q. 3):

Overall:	45% did not participate in a hazmat drill last year.
Small FD Subset:	52% did not participate in a hazmat drill last year.
Large Combo FD Subset:	62% did not participate in a hazmat drill last year.

And:

Overall:	43% participated in one hazmat drill last year
Small FD Subset:	48% participated in one hazmat drill last year.
Large Combo FD Subset:	24% participated in one hazmat drill last year.

Only 8% of departments held two hazmat drills last year, 2% held three hazmat drills last year and 1% held four or more hazmat drills last year.

## **How To Use These Profiles**

First and foremost these profiles create a baseline of data to measure future changes in the state of training among call/volunteer firefighters, and changes in the make-up of the fire departments that rely upon them. As baseline for measuring future change they are at their most valuable.

Secondly, departments can compare themselves to their peers using these profiles. However, much care must be exercised in doing so. The penultimate measure of a fire department should be how well it suits the needs of its community, and not how it compares to its neighbors, some national or state average or some mythical statistical model.

Similar sized communities or geographic neighboring departments may require substantially larger or smaller fire departments or different specialty equipment or specialized training because of community differences such as industrial uses or lack of industrial uses, transportation networks, age of housing stock, age and education of population, water supply (hydrants or no hydrants), population density, zoning and many other factors. Each fire department should conduct a community risk analysis and a

critical task analysis to determine the appropriate mix of staff, training, equipment and distribution of resources.

When one department is significantly outside the normal parameters of these profiles, this should be used a flag for further inquiry, not as an absolute statement that the department is substandard or above standard.

Regional, state and national policy makers can use these profiles as a means of setting policy targeted at the various subsets. The profiles can stand-in for a particular department and simply act as representation to make policymaking and discussions easier.

## Part 2: Training Needs

The survey asked chiefs about what their call/volunteer firefighter training needs are. Here is what they told us.

### Specific Training Topics (Q.1)

The survey first asked chiefs about some specific training needs and topics. The topics were based upon anecdotal information that the call/volunteer fire service in Massachusetts was either lacking this training or struggling to provide this training.

The topics included ICS 300/ICS 400 training, EMS First Responder Training, EMT Training, driver/operator training, live fire training, hazmat training, wildland/brush fire training, fire officer training and CPR training. Chiefs were asked to rank the need for these training topics as “greatly needed”, “moderately needed”, “somewhat needed” and “not needed”. (Q.1)

Of these topics, four stood out as being greatly needed as showing by the following data:

Live Fire Structural Fire Training: 36% of chiefs said this is greatly needed.

Line Officer/Management Training: 35% of chiefs said this is greatly needed.

New Driver/Operator Training: 28% of chiefs said this is greatly needed.

Hazardous Materials Training: 20% of chiefs said this is greatly needed.

When these same four topics had their “greatly needed” score and their “moderately needed score combined the data looks like this:

Live Fire Structural Fire Training: 71% greatly or moderately needed.

Line Officer/Management Training: 68% greatly or moderately needed.

New Driver/Operator Training: 56% greatly or moderately needed.

Hazardous Materials Training: 51% greatly or moderately needed.

The data shows that departments were not lacking or needing help with three training topics: EMS First Responder Training, EMT Training and CPR/AED Training. High percentages of the chiefs responded by saying these training topics weren’t needed at their departments. The data showed:

EMS First Responder: 59% said their department didn’t need help to provide this training.



EMS/EMT Training: 44% said their department didn't need help to provide this training.

CPR/AED Training: 67% said their department didn't need help to provide this training.

In the area of ICS 300/ICS 400 training, 24% of chiefs said their department didn't need help to provide this training and 40% of chiefs said the training was "somewhat needed" at their department.

41% of chiefs reported that Veteran Driver/Operator Training was "Moderately Needed" and 35% reported the need as "Somewhat Needed". The combined moderate and somewhat need is 76%.

And, 41% of chiefs reported Wildland/Brush Fire Training was "Somewhat Needed" and 34% reported the need as "Moderately Needed". The combined moderate and somewhat need is 75%.

Chiefs were also given the opportunity to list additional training topics they needed, but only three suggestions were made. They are radio communications, vehicle extrication and senior officer training.

### **Small FD Subset Specific Training Needs (Q.1)**

Within the Small FD Subset, departments serving communities with populations of 3000 or less, the data showed the following four topics were determined to be of the greatest need:

New Driver/Operator Training: 36% of chiefs said this is greatly needed.

Live Fire Structural Fire Training: 33% of chiefs said this is greatly needed.

Line Officer/Management Training: 32% of chiefs said this is greatly needed.

ICS 300/ICS 400 Training: 21% of chiefs said this is greatly needed.

When these same four topics had their "greatly needed" score and their "moderately needed" score combined the data looks like this:

Live Fire Structural Fire Training: 75% greatly or moderately needed.

Line Officer/Management Training: 60% greatly or moderately needed.

New Driver/Operator Training: 64% greatly or moderately needed.

ICS 300/ICS 400 Training: 54% greatly or moderately needed.

And, a fifth topic emerged as highly needed when its “greatly needed” score and its “moderately needed” scored were combined:

Veteran Driver/Operator Training: 67% greatly or moderately needed. (50% of chiefs rated its need as “moderately needed”.)

As with the overall results, the three EMS training topics (EMS First Responder, EMT & CPR/AED) were all rated as “not needed” by at least 50% of the chiefs.

### **Large Combo FD Subset Specific Training Needs (Q.1)**

Within the Large Combo FD Subset, departments serving communities with populations of greater than 12,000, the data showed the following four topics were determined to be of the greatest need:

New Driver/Operator Training: 36% of chiefs said this is greatly needed.

Line Officer/Management Training: 36% of chiefs said this is greatly needed.

Live Fire Structural Fire Training: 32% of chiefs said this is greatly needed.

Hazardous Materials Training: 27% of chiefs said this is greatly needed.

When these same four topics had their “greatly needed” score and their “moderately needed score combined the data looks like this:

Live Fire Structural Fire Training: 64% greatly or moderately needed.

Line Officer/Management Training: 54% greatly or moderately needed.

New Driver/Operator Training: 54% greatly or moderately needed.

Hazardous Materials Training: 54% greatly or moderately needed.

As with the overall results, the chiefs of the larger departments also determined that help with the three EMS training topics (EMS First Responder, EMT and CPR/AED) were “not needed”. 52% ranked EMS First Responder as not needed and 68% ranked CPR/AED as not needed. 48% ranked EMT Training as not needed.

## Training Needs - Open Ended Responses

Next, the survey asked in Question 13, “What specific training programs would you like the Massachusetts Firefighting Academy to provide to your fire department? (Programs that are not currently offered.)” The survey allowed the chief to write as much or as little as he/she wanted to.

The most requested (specific) training topic was fire officer training. Six different chiefs mentioned some kind of officer training program was needed. In their requests, they talked about the need for training that is targeted to the call/volunteer officer, the need for officer classes on nights and weekends, the need for some kind of skills maintenance training for officers and more of focus on management skills for officers.

The mix of pump operator training, aerial operator training and driver training was requested ten times. Within this mix, pump operator training was mentioned five times, aerial operator was mentioned twice and driver training was mentioned three times.

Coming up five times was some type of hazmat training. Three chiefs asked for hazmat refresher training and one asked for hazmat operational training. One chief was very specifically looking for training on CNG facilities and pipelines.

Auto extrication was mentioned three times. The rest of the requests were mentioned only once or twice. These programs were:

- Flashover
- Solar Panels
- CAFS
- Strategy and Tactics
- Rotary & Fixed Wing Aircraft Emergencies and Fires
- Structural Firefighting
- Wellness/PT
- Mentoring
- Shorter Firefighter I/II Program
- First Responder
- Hybrid Vehicle Fire & Extrication
- Call FF to Career FF Bridge Class
- Instructor
- Live Fire
- Classes to utilize the Springfield location

In addition, chiefs made some other suggestions regarding MFA training that should be reported here.

One chief challenged the premise of the question that new and additional classes are needed and instead suggested that the problem is one of delivery. Here is what he/she said:

*“The selection of classes is not the problem --- it is the quality of district delivery classes which needs to improve. They are canned programs from 20 years ago taught by a body who can read slides. District delivery needs to follow the same format as the academy’s other classes --- find someone who is an expert on the topic to develop the program and find specific instructors who are enthusiastic and knowledgeable about a topic to teach. Also, there need to be multiple levels or classes, such as pumps 1, 2 and 3. Pumping cannot be taught in one weekend and not everyone can devote the time to take the full motor pump operators class in a month or two. Auto Extrication is another class which should have multiple, progressive, levels.”*

And another chief said:

*“Classes that can be delivered locally on micro-subjects such as attic fires, propane truck fires, thermal imaging and tactics/strategies.”*

And a third chief suggested:

*“The Massachusetts Firefighting Academy should maintain a library of books, videos and other training curriculum and support items that fire departments can sign out to use in their own local programs.”*

What these and other comments have in common is a theme that the MFA needs to address the delivery of training in addition to the training topics or course offering.

The survey also asked in Question 37, “Please describe any training needs for your fire department that you believe the Massachusetts Call/Volunteer Firefighters Association (MCVFA) should or can provide.” The chiefs made 29 different suggestions for the MCVFA:

- Structural Firefighting
- Funding
- Strategies and Tactics
- Emergency Vehicle Operator (EVO)
- Live Fire
- Provide Training Props
- Grants for Training Props
- Firefighter I/II
- Hazmat Ops
- Water Rescue
- Rope Rescue
- Template for a Successful FF I Class
- PTSD
- Company Officer
- Pump Operator
- Physical Training

- Create a Pool of Local Instructors
- Forced Entry
- Firefighter I/II Training Aids
- Call to Career Bridge Program
- Prep Course for Veteran FF's to Challenge the FF I/II Certification Test
- Any
- All
- Local Training
- Local Mini-Academy
- Firefighter II Class (for those already with FF I)
- Volunteer Instructor
- Training the Trainer - Driver/Operator
- Progressive Firefighter I Format
- Continue with the MCVFA Seminars at Greenfield Community College

The most commonly requested program was for Company Officer Training. It was requested four times. Hazmat operations, live fire training and emergency vehicle operator training was requested three times. Grants for Training props was requested twice.

Seven of these requested programs came from within the Small FD Subset as follows:

- Template for Successful FF I Class
- PTSD
- Create a Pool of Local Instructors
- Training the Trainer – Driver/Operator
- Volunteer Instructor
- Hazmat Ops
- Continue with the MCVFA Seminars at Greenfield Community College

Six of these requested programs came from within the Large Combo FD Subset as follows:

- Strategy & Tactics
- Emergency Vehicle Operator (EVO)
- Live Fire
- First Responder/CPR
- Forcible Entry
- FF I/II Training Aids

Of these, EVO was requested twice.

The survey next asked, in Question 38, "Please describe any other Training needs your fire department requires, but currently cannot provide to your firefighters." Nine chiefs

said they needed to provide live fire training, but couldn't provide it, and another five chiefs identified hazmat training as the area they needed but couldn't provide.

A total of thirteen different training topics were identified as needed:

- Live Fire (nine times)
- Hazmat (five times)
- FF Training Materials – books, study guides, DVDs, etc. (twice)
- Confined Space
- Large Scale Evacuation/Search
- SCBA Fit Testing
- Medical Screening
- Local Instructors
- All
- Provide Training Equipment such as dummies
- Drafting
- Standpipe Ops
- Realistic RIT Drills

Seven of these needed training topics came from within the **Small FD Subset**:

- Confined Space
- Large Scale Evacuation/Search
- Fit Testing
- Medical Screening
- Live Fire
- All
- Hazmat Ops

Four of these needed training topics came from within the **Large Combo FD Subset**:

- Live Fire (Three times)
- Hazmat
- Training Equipment such as dummies
- Firefighter I/II Training Materials

### ***Question 35 – Training Delivery Options***

Question 35 asked the chiefs about some training delivery options and which ones they would like to use for in-house training at their fire station. However, there was an error in the format and options that makes using the data from this question unusable. The MCVFA will have to redesign this question and follow-up with the fire chiefs to collect the data.

## Part 3: Barriers

The survey next looked at the barriers to training faced by call/volunteer firefighters in Massachusetts. We need to understand these barriers in order to find ways to effectively deliver needed training.

The survey addressed barriers with a direct question (Q.39) that asked, “**Please describe any barriers to providing training to the firefighters in your fire department**”. This question and all of the open-ended questions related to training barriers, the fire chiefs to write as much or as little as they liked.

Of the responses to this question about barriers to training, the issue of time stood out as the overwhelmingly cited barrier by the fire chiefs. More than one-fifth of the chiefs identified time as barrier to training. Comments from the chiefs ranged from simply one word, “time”, to explaining work schedule conflicts with their staff that work multiple jobs.

A lack of funds was also cited by a substantial number of chiefs as a barrier to training. The next most cited barrier was travel distance.

Three chiefs each identified a lack of training props, a lack of drill facilities, and the need for more night classes as barriers to training needed by their call/volunteer firefighters.

Two chiefs said that a lack of shared curriculums is a barrier to providing needed training.

A summary of other barriers to training as identified by the chiefs is as follows:

- Lack of Staff to Conduct Live Burns
- Lack of Overtime Pay
- Scheduling Conflicts
- Location of Training
- Sessions Too Long and Need to be Broken into Smaller Segments
- A Need for Local Instructors to Deliver Training
- Lack of Training Materials
- MFA Prerequisites
- Overcoming Complacency
- Cost of Medical Exams
- Course Availability
- The MFA Missed Class Policy Discourages Participation
- Weekend Classes are Needed
- Lack of Local Resources

Among the chiefs of the Small FD Subset, time was also the number one barrier to training. Chiefs in this group pointed out the need for scheduling more night classes, weekend classes and closer classes.

The chiefs of the Large Combo FD Subset were more focused on scheduling issues than time generally. They mentioned distance to training and course availability in this regard.

Also trying to measure barriers to training was Question 28 that read, “**What policies or procedures related to firefighter training would you like the Massachusetts Firefighting Academy to adopt, change or clarify?**” This question was included because the survey authors routinely hear chiefs and firefighters in small departments complain about MFA policies and thought there might be policies that acted as barriers to training.

The most cited MFA policy that the chiefs identified as a barrier to training is the policy of requiring personal protective equipment (PPE) be no more than ten (10) years old to participate in MFA training. It was suggested that this policy should be dropped or loosened in some manner, as it is a barrier to call/volunteer firefighters taking MFA classes.

Additionally, a number of chiefs suggested the MFA needed to schedule more night and weekend classes. While not exactly a policy topic, it reinforces the needs identified in other questions regarding time and scheduling issues for call/volunteer firefighter training.

The balance of the suggestions by the chiefs for adoption, changes or clarifications to MFA policies and procedures read as follows:

- Shorter Call/Volunteer Firefighter I/II Program
- Don't use certification as a prerequisite for a class
- Allow use of the burn building
- Prevention Certification
- Priority Selection Policy Isn't Transparent or Timely
- More Firefighter I/II Classes for Berkshire County
- Better Outreach to Fill Classes
- Simplify and Improve the Process for Requesting Field Courses
- Develop an Annual Minimum Training Requirement
- Medical Qualification Standard
- Live Burn Firefighter I/II Requirement
- Adopt a Required Skills Assessment to Maintain Firefighter I/II
- PT Training/Nutrition
- Higher Bar for Fire Chief Credentialing (It's too easy)
- Require Continuing Education for All Fire Officers, Not Just Credentialed Chiefs
- More Progressive Scale for Fire Officers



On this question of MFA policies as barriers to training, there is a difference in how the Small FD Subset and the Large FD Subset fire chiefs responded. The Small FD Subset chiefs focused on scheduling issues, simplifying the process for requesting classes and loosening the PPE age requirement. The Large FD Subset chiefs focused on raising standards and requiring/providing refresher training.

## **PART 4: Summary**

To this point, this report has focused on simply presenting the data in a factual manner without discussing what the data means or coming to any conclusions. In this part we will start the process of discussing the data and seeing what it tells us about the call/volunteer fire service in Massachusetts and its training needs. The report will now draw conclusions and make recommendations.

Call/volunteer firefighters are almost exclusively relied upon to provide fire and EMS services to in Massachusetts's communities with populations of less than 8500 people. They are the primary emergency responders to 1.7 million Massachusetts's citizens. This is an important number because we tend to think about the call/volunteer fire departments as serving small towns of a few hundred or few thousand people, and when we only look at it from that micro-perspective on a small town by small town basis it is too easy to dismiss the call/volunteer fire service in Massachusetts as insignificant. However, when you look at the situation collectively, and come to grasp that 1.7 million citizens rely upon call/volunteer firefighter and EMS providers, you cannot ignore the needs of the call/volunteer fire service.

The areas where call/volunteer firefighters are the primary fire and EMS responders tend to be located in the counties of Worcester, Hampden, Hampshire, Franklin, Berkshire and Dukes. Call/volunteer firefighters are strong secondary responders in most other parts of the Commonwealth, except in the metro Boston area.

Now, circling back to the data regarding Firefighter I/II training and certification, the survey makes the case that we need to find way to reach more firefighters with the MFA's Call/Volunteer Firefighter I/II program because upwards of a third of the call/volunteer firefighters haven't had Firefighter I/II training.

The data shows that call/volunteer firefighters have significant gaps in their training. They need more live fire training. They need better and more HAZMAT training. They need more officer training and officer training that is better focused on their operational needs. They need more access to training on nights and weekends, and training that is closer to their homes.

In the big picture, the MCVFA, the MFA and the call/volunteer fire departments themselves need to collaborate to provide improved training to call/volunteer firefighters. It is incumbent upon all three groups to improve the training and capabilities of call/volunteer firefighters. If they don't, the 1.7 million citizens in communities that rely

upon call/volunteer firefighters will not have the fire and EMS services that they expect and deserve.

Communities of 8500 residents and communities of 500 residents do not have the financial ability to provide for a fully career fire department. These communities are unlikely to ever be able to afford a career fire department. The smaller of these departments (serving towns of 3000 or less) are operating on an average annual budget of \$58,000, less than the cost of hiring one career firefighter in Massachusetts. In the communities with populations between 3000 and 12,000 people, the average budget is only \$641,031 per year. This is hardly enough to hire more than a handful of career firefighters. When you look at these financial realities you will realize that the call/volunteer firefighter & EMS providers must be an integral part of the Massachusetts Fire Service for the foreseeable future.

In the larger towns, combination fire departments are becoming the norm. In the smaller towns, exclusive reliance upon call and volunteer firefighters is the norm. This norm is driven by, among other things; the financial needs of smaller communities, in particular those with fewer than 12,000 people. The Massachusetts fire service simply cannot function on the theory that call/volunteer firefighting is going away and therefore we can ignore the training issues of the call/volunteer firefighter.

Therefore, it is critical that we refocus on the training needs of the call/volunteer firefighter and start finding new ways, through improved training, to increase the capabilities of the typical call/volunteer fire department or small town combination fire department.

When you look at the data from questions regarding call/volunteer firefighter training needs and barriers to training you see the need for live fire training come up over and over again. The need for training closer to home and the need for more flexible training times and schedules to better accommodate the life schedules of call/volunteer firefighters is another reoccurring theme.

This data clearly shows that there is not enough fire training facilities in Massachusetts. This doesn't necessarily mean we need lots of fire academies in the image of the Massachusetts Firefighting Academy. The data suggests we need drill yards and local/regional facilities where call/volunteer fire departments could train close to home. These facilities need some kind of live fire props or buildings. These need to be places where call/volunteer firefighters could go, as part of an organized department drill, and practice engine and truck company skills on weekends and evenings.

## **Measuring Progress**

In order to measure progress and changes in the various goals and data presented in this report, the MCVFA will conduct a follow-up survey, asking the same questions in five years.

When we conduct this follow-up survey we need to add one additional question: “Did you participate in the 2015 MCVFA Call/Volunteer Training Survey”. This will allow us to measure progress from two distinct angles. We can measure changes within the participant group of 102 call/volunteer fire departments that provided the data for this survey. And, we can measure changes within the overall call/volunteer fire service of Massachusetts. Seeing if these two groups change in a similar manner will provide us with a more accurate view of how successful our efforts to effect change have been.

## Part 5. Goals

Based upon the data from this survey the MCVFA recommends we set the following tentative<sup>4</sup> five-year goals for improved call/volunteer firefighter training in Massachusetts (not in any order of preference):

1. That the percentage of call/volunteer firefighters who annually participate in live fire training increases from 77% to 90%. (About 700 additional firefighters)
2. That 90% of departments have a training manikin and smoke machine. (About 45 additional departments)
3. That the percentage of departments with computer fire simulation software increase from 15% to 30%. (About 60 additional departments)
4. That the percentage of departments with some type of live fire training prop increases from 31% to 50%. (About 40 additional departments)
5. That the percentage of departments with regular access to a fire training drill yards that has a smoke/burn building increases from 52% to 70%. (About 30 additional departments)
6. That the percentage of call/volunteer fire departments that trains once per month decreases from 22% to 10%. (About 20 additional departments)
7. That the percentage of call/volunteer fire departments that trains three times per month increases from 17% to 30%. (About 23 additional departments)
8. That the percentage of departments that have no certified fire instructors decreases from 25% to 10%. (About 15 departments)

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<sup>4</sup> These are tentative goals because they have not been discussed by all of the parties yet. The MCVFA, in another upcoming section of this report, will be recommending a process for all stakeholders to meet, discuss and adopt recommendations.

9. That the number of fire departments that conduct NFPA 1410 Drills increases from 53% to 70% (about 17 departments), and that the number of chiefs who have never heard of NFPA 1410 Drills decreases from 23% to 10% (about 17 chiefs).
10. That we close the Firefighter I/II Training and Certification Gaps by 10% across all categories.
11. That we eliminate the following barriers to the increased use of the MFA by call/volunteer firefighters<sup>5</sup>:
  - a. PPE Age Limitation
  - b. Provide for more night and weekend training.
  - c. Assess MFA policies & procedures with an eye towards:
    - i. Better outreach with call/volunteer departments & firefighters
    - ii. Simplifying and improving the process for requesting field classes and other training at local fire departments.
    - iii. More transparency in the application/acceptance process.
12. That we eliminate a general barrier to training by providing up to date curriculums and training materials for use by local departments<sup>6</sup>.
13. That we decrease the number of departments that describe their need for Hazmat Training from “Greatly Needed” from 20% to 10%.
14. That we decrease the number of departments that describe their need for Line Officer/Management Training from 38% to 20%.
15. That we decrease the number of departments that describe their need for driver/operator training from 28% to 15%.

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<sup>5</sup> Goals 11 & 12 are really procedural suggestions that apply across many of the other goals, and the authors felt they deserved being highlighted as distinct “goals” in order to emphasize their importance. There is a more detailed discussion of these under the Recommendations Section.

<sup>6</sup> Goals 11 & 12 are really procedural suggestions that apply across many of the other goals, and the authors felt they deserved being highlighted as distinct “goals” in order to emphasize their importance. There is a more detailed discussion of these under the Recommendations Section.

## Part 6. Recommendations

The following are recommendations for the MCVFA, the Massachusetts Firefighting Academy (MFA), the Department of Fire Services (DFS), Massachusetts Fire Training Council (MFTC), Fire Chief Association of Massachusetts (FCAM) and the call/volunteer fire departments of Massachusetts based upon the survey data. While each recommendation will identify one or more organizations or parties that should be responsible for implementing the recommendation, there is an implied statement with each recommendation that the MCVFA, FCAM, the MFA, the DFS, the MFTC and the fire departments should collaborate and cooperate with each other to successfully execute these recommendations.

We have also given each recommendation a “Doability Rating” of Simple, Moderate or Complex. This is a subjective rating by the authors of this report that takes into account such factors as needed funding, time needed to implement, political considerations, legal considerations, specialty staff needs, number of parties needed and so forth. The purpose of this is to help us organize these recommendations into some kind of action plan and help us prioritize them. The Doability Rating is shown in (parenthesis) at the end of each item.

### **Goal #1: Live Fire Training:**

The data showed a significant need for live fire training among the call/volunteer fire service. In order to accomplish this goal we recommend the following:

1. That DFS and/or the MFA conduct a survey of all of the local/regional live fire training facilities (burn buildings, smoke houses, burn trailers, etc.) in the Commonwealth, and that it publish a map and listing of each facility, along with information about that facility’s capabilities, availability for outside organizations to use, cost of use and policies/procedures for use. (Simple)
2. That MCVFA consult with local departments to write AFG training grants for the purchase of live burn props and for the purchase of regional burn trailers. (Moderate)
3. That the MFA and MFTC look to create more dates and programs for live fire training at Stow and Springfield targeted at call/volunteer firefighters, including but not limited to, nights and weekends. (Moderate)

### **Goal #2: Fire Training Manikins and Smoke Machines:**

The data indicated that about a quarter of all call/volunteer fire departments lack fire training manikins and smoke machines. In order to provide needed training tools to the call/volunteer fire service we recommend the following:

4. That DFS and the MCVFA seek funding from the Commonwealth to create training grants for fire departments to be able to purchase training manikins and smoke machines. For instance, a state grant program of \$340,000 could probably provide a training manikin and a smoke machine to every fire department that needs one (about 75). (Moderate)
5. That the MCVFA consult with local departments to assist local departments in successfully applying for AFG grants to purchase training manikins, smoke machines, simulation software and similar items. (Simple)

**Goal #3: Fire Simulation Software:**

The data indicated that only about 16% of call/volunteer fire departments have any kind of computer simulation software for fire training. Basic computer simulation training such as FireStudio costs about \$800 and has no annual fees. Providing this to 30 additional departments would cost around \$24,000.

6. That the MCVFA consult with local departments to assist local departments in successfully applying for AFG grants to purchase training software. (Simple)

**Goal #4: Live Fire Training Props:**

The data showed that only about one-third of call/volunteer fire departments have any kind of live fire training prop. A heavy-duty multi-purpose live fire prop, such as the Bullex Magnum, costs about \$11,000. Providing these to a modest number of departments to increase the percentage of departments owning such a tool, means purchasing about 40 units for a total cost of \$440,000.

7. That the MCVFA consult with local departments to assist local departments in successfully applying for AFG grants to purchase live fire training props. (Moderate)
8. That DFS and the MCVFA seek funding from the Commonwealth to create training grants for fire departments to be able to purchase live fire training props. (Complex)

**Goal #5: Increase Access to Drill Yards:**

Slightly less than half of the call/volunteer fire departments have regular access to a fire training drill yard with a smoke/burn building. Increasing access to these facilities will help to increase the number of call/volunteer firefighters who participate in annual live

fire training. Currently, 24% of call/volunteer firefighters (about 1284 firefighters) does not train with live fire at least once per year.

9. That DFS/MFA identifies all of the local drill yards and smoke/burn buildings and trailers operated by fire departments in Massachusetts, and create a list of them and whether they are accessible to outside agencies, along with the policies and costs for using them. (Simple)
10. That DFS/MFA develops a program to provide instructors and a training curriculum for live fire training field courses conducted at burn buildings owned by local fire departments. (Complex)

**Goal #6: Increased Monthly Training from One Drill to Two Drills per Month:**

Currently about a quarter of all call/volunteer fire departments only train once per month. At best, this means their firefighters are drilling about 36 hours per year, below the level to maintain skills and keep up to date with changes.

11. There is no action that any outside agency or individual can do to affect this change. The change must come from within the members of the fire department. The MCVFA will provide technical consulting and material support to those departments seeking to increase training. (Moderate)

**Goal #7: Increased Monthly Training from Two Drills to Three Drills per Month:**

About one-third of all call/volunteer firefighters train twice per month, but the number of departments training three times per month drops by 50% to about one-sixth. This is a significant drop-off and the difference between twice per month training and three times per month training is substantial. Departments that train twice per month are providing about 60 hours per year of training and departments that train three times per month are offering about 90 to 100 hours per year.

12. There is no action that any outside agency or individual can do to affect this change. The change must come from within the members of the fire department. The MCVFA will provide technical consulting and material support to those departments seeking to increase training. (Moderate)

**Goal #8: More Certified Fire Instructors:**

One-quarter of call/volunteer fire departments do not have single certified fire instructor in their ranks. About half that many departments (14%) only have one instructor. While

not all training needs a certified fire instructor to conduct or oversee, the presence of a certified instructor increases the credibility of the training program. The current MFA Fire Instructor I program is fine and it meets the needs of providing appropriate training that leads to certification. The issue may be one of delivery and marketing. There be an incorrect perception among the smaller fire departments that the Fire Instructor Class is just for the “big city” or career firefighter.

13. The MFA should increase alternate time and electronic delivery of the Fire Instructor I program. (Complex)
14. The MFA in collaboration with FCAM and MCVFA should seek ways to better market or position the Fire Instructor Program so that call/volunteer firefighters, and their chiefs, will feel the program is valuable to them. (Complex)

**Goal #9: NFPA 1410 Drills:**

NFPA 1410 Drills are a tried and true method of providing inexpensive and effective training to firefighters, however, about one-quarter of fire chiefs were unfamiliar with them and another quarter of chiefs said their departments never conduct them. These would be the ideal additional monthly drill for many departments because no special equipment, curriculums or training staff is needed to conduct them.

15. The MCVFA will conduct an education program/train-the-trainer program to teach local departments how to use NFPA 1410 as part of their regular training program. (Simple)

**Goal #10: Closing the FF I/II Training & Certification Gaps:**

This may be the most complex goal. The data shows not only a significant gap between those who are trained to FF I & FF II verses those who are certified to FF I & FF II. This is especially true in the smaller fire departments.

Also, the goals of providing for more fire instructors and more fire officer training are highly contingent upon getting significantly more call/volunteer firefighters certified to the level of Firefighter I/II because Firefighter I/II is a pre-requisite for fire instructor and fire officer certification. The FF I/II training and certification gap is one cause of the issues surrounding fire instructor and fire officer training/certification.

16. The MCVFA should embark on an education program to better explain to chiefs and firefighters what is and is not a requirement of NFPA 1001 (the Firefighter I/II Standard), and how veteran firefighters can achieve certification without having to attend a recruit class. (Moderate)



17. The MFA & MFTC should develop a gap class and/or skills refresher class for veteran call/volunteer firefighters who wish to challenge the Firefighter I/II certification test. (Complex)
18. That the Massachusetts Fire Training Council (MFTC) clarifies what national qualifications obtained in other states and certified by the National Board on Fire Service Professional Qualifications are reciprocal with Massachusetts. (SIMPLE)

**Goal #11: Eliminate Policy Barriers at the MFA:**

What may seem like perfectly logical and simple policies can sometimes have an overly burdensome effect on participation, and the data shows a clear need to increase call/volunteer firefighter participation at the MFA. Chiefs also report a number of MFA policies and procedures are in fact a barrier to participation by their department and firefighters.

19. That the MFA should retain the 10-year PPE age limit, despite its unpopularity and burden on call/volunteer fire departments and firefighters, because safety must trump all other concerns in this case. However, the DFS should identify those fire departments that need new PPE and the MCVFA should provide grant writing assistance to those departments so they can get AFG funds to purchase new PPE. (Moderate)
20. That until such time as all departments have PPE that is less than 10 years old, the MFA should develop a shared PPE pool that allows for firefighters who need PPE for training to borrow it. (Complex)
21. That the MFA, MFTC and MCVFA should conduct a review of all training policies and procedures with an eye towards:
  - a. Simplifying and improving the process for requesting field classes and other training at local fire departments. (Simple)
  - b. All policies and procedures should be posted on-line for easy viewing (Simple)

**Goal #12: Curriculums for Local Use**

Small fire departments need help with their local training programs. The data shows that a quarter of departments don't have any instructors, leaving them without a key resource for developing local drills and training. Chiefs expressed a need for curriculums they can adopt for their department, and some commented they would provide training on more topics if they had access to the materials.

22. The MFA and the MCVFA should work together to create up-to-date curriculums and materials for basic fire training to be conducted at local fire departments by local instructors or chiefs. Such programs must be able to be delivered in 2-3 hour segments so they can be taught at evening drills. (Moderate)

### **Goal #13: More Hazmat Training**

The need for more hazmat training was identified by the responses of the chiefs to more than one survey question. For instance, one-fifth of chiefs said their department “Greatly Needed” assistance with hazmat training and almost one-third of chiefs described their departments need for hazmat training as “Moderately Needed”. Improved delivery of hazmat training was one of the top three topics identified as needed when chiefs were asked open-ended questions about needed training topics, topics that the MCVFA should help them with and topics that the MFA should better provide them with.

23. The MCVFA should develop and provide hazmat refresher training seminars/programs that can be delivered on a regional basis for call/volunteer firefighters. (Simple)
24. The MFA should develop and provide a series of short (2 to 3 hours) single topic hazmat programs that can be delivered at local fire departments either by fire academy staff or by local instructors/chiefs. (Simple)

### **Goal #14: More Officer Training**

The need for more officer training, with an emphasis on call/volunteer officer training, stood out as one of the three most highly desired training programs by the fire chiefs who participated in the survey. One-third of chiefs said their department “Greatly Needed” assistance with fire officer training, and another one-third of chiefs said their department “Moderately Needed” officer training. As with, HAZMAT, officer training was one of the top three topics that the data identified, across multiple questions, as most needed.

Officer training is also related to the FF I/II training and certification gap because without being certified as Firefighter I & II you cannot be certified as a Fire Instructor I, and Fire Instructor I is a pre-requisite to certification as a Fire Officer I. The interrelated aspect of these training and certification programs makes for a complex issue.

This goal is further complex because chiefs commented about the need for officer training that is targeted to the call/volunteer fire service. It is unclear about what this means. The MFA’s current Fire Officer I class is quite good and covers all of the topics required in order to pass the certification exam and meet the minimum professional requirements for a fire officer per NFPA 1021. It could be that chiefs are saying that call/volunteer fire officers in their departments have a more narrow scope of practice or a different scope of practice than NFPA 1021 expects, and they would like the MFA to

acknowledge this and help them by providing training tailored to fit their needs. It could also be that the issue isn't the current fire officer class curriculum as much as it is the need for a class delivery method targeted to the needs of the call/volunteer firefighter.

25. The MFA, FCAM & MCVFA should conduct a series of focus groups with the chiefs of call/volunteer and combination fire departments to better define and address what the chiefs would like in the way of fire officer training, and/or how to better deliver it. (Moderate)
26. The MCVFA & MFA should collaborate to create a new company officer orientation class for call/volunteer fire officers. The focus of the program is help the new officer understand his/her new role, what resources are available and provide an overview of some of the ethical, leadership and supervisory issues that they will face. (Not designed to replace or supplant Fire Officer I.) (Moderate)

### **Goal #15: More Driver/Operator Training**

The survey data shows that chiefs are also seeking ways to provide more and better driver/operator training for their call/volunteer firefighters. A little more than a quarter of chiefs (28%) said their department needs a lot of help with new driver/operator training, and another same sized group of chiefs said their department is moderately in need of this training. More than one-third of chiefs (41%) said their department "Moderately Needed" assistance with driver/operator training for veteran firefighters.

As with hazmat and fire officer training, driver/operator training was generally mentioned as one of the top three topics that the chiefs said they needed help delivering and would like the MFA and MCVFA to help them with.

27. The MFA should develop a new field course for more advanced pump operator training as an extension to its current two day class: Pumps & Hydraulics that can be delivered on a weekend. (Complex)
28. That MFA partner with VFIS, MMIA and other municipal insurance companies to provide additional local delivery of basic driver safety training classes. (Complex)

## **Part 7. Stakeholder Meetings**

The MCVFA realizes that these goals and recommendations require agreement by most, if not all, of the stakeholders within the call/volunteer fire service in Massachusetts. Therefore, we feel it is critical that all of the stakeholders, DFS, MFA, MFTC, FCAM, fire chiefs and the MCVFA meet in person to review the data, the goals and recommendations and come to an agreement on a common course of action.

The MCVFA suggests these meetings occur in the second half of 2016.

The MCVFA suggests that these groups look to collaboratively create a five-year plan of improvement for call/volunteer training in Massachusetts and adopt written goals and action items similar to those presented in this report.

## Part 8. Post Script

During the process of reviewing and analyzing the survey data, and the process of writing this report, a number of fire chiefs and MCVFA officers were consulted to review and comment on various drafts. This review process resulted in some comments that while not part of the survey seemed to sum up some of the feelings and opinions. We include these comments here to help bring some additional context to the report, and to give a voice to these sentiments.

The comments are:

*“We spend way too much time and effort on "hot topics" and the mass terrorist attack that is probably being planned against the Bridge of Flowers in Shelburne Falls as I write this. Then when we find that our firefighters are struggling to raise ladders, advance hose lines, operate pumps and aerials, and even drive trucks we act surprised. And this isn't even addressing slightly more advanced items like fireground hydraulics and water supply. I would rather train to keep myself out of trouble rather than RIT. I am much safer if RIT isn't needed. We were testing the participants in the FF1 class a couple weeks ago. My station was the one person raise of the 24 ft. Extension ladder. Not one person could do it without being shown how. Now isn't this a skill that EVERY volunteer FF should be proficient at? Spend hours on ladder commands and how to tie the rope after raising the ladder instead.”*

*“I agree with the chief who gave you the comments about poor programs from the MFA. Yes, a body to read slides and programs that are 20 yrs out of date. Can ANYONE train us in operation of electronic pressure governors? All engines now have them and have for the last ten years! Just an example of how far out we are. I took the MFA pumps and hydraulics class about two years ago just to see what it was. Yup, 20 yrs old and taught by a veteran slide reader.”*

*“A lot comes down to quality of training. Poor quality causes us to lose recruits. It causes them to see the training as a waste of their time. Probably a big challenge to try to improve on this, but i think it is where we need to start.”*

## **Part 9. Conclusion**

This survey painted detailed picture of the call/volunteer fire service in Massachusetts and its training needs. It sets forth fifteen goals and twenty-eight recommendations for improving training for Massachusetts call/volunteer firefighters. It suggests a method for measuring progress in the future. So now what?

It's not realistic to expect that we can implement and complete all fifteen goals and twenty-eight recommendations in the next five years, but all of the fire service partners need to get together and decide on which ones we can tackle, and develop a timeline and make the commitment to tackle them.

To the chiefs reading this, don't wait for the MCVFA, FCAM or the fire academy to lead the way. There are many goals and recommendations you can implement, right now, in your department, without any or much outside help. Just do it.

To the statewide fire service organizations target one or two of these goals and adopt it as your own regardless of what anyone else is going to do.

The survey data from 102 fire chiefs and their departments clearly shows that the call/volunteer or small town fire service needs help to keep the 2 million citizens they protect safe from fire, hazardous materials and other hazards. The entire fire service needs to step-up and help. While some of the goals and recommendations in this report have may have been talked about before, this is the first time these needs have been quantified in a comprehensive manner. We don't need to talk anymore about the past or discuss the problems, we now need to take action and help each other make things better.