
Firefighter Training in Minnesota

Department of Public Safety—State Fire Marshal Division
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Table of contents

Executive summary	9
Purpose and methods.....	9
Background	10
Minnesota’s fire service model	10
Minnesota’s fire training model	10
Policy and oversight.....	10
Training delivery	11
Funding	11
Findings.....	11
MBFTE accomplishments.....	11
Training model serves the goals of the MBFTE	12
Training model serves the needs of firefighters.....	12
Training model is positioned to serve the future service model.....	13
Remaining challenges	13
Firefighter time commitment.....	14
Hands-on training.....	14
Instructor quality	14
Instability of MBFTE funding	14
Recommendations	14
Policy and oversight recommendations	15
Continue to encourage baseline training	15
Provide additional training guidance	15
Continue with plans to improve instructor oversight	15
Training delivery and usage recommendations	16
Offer a statewide, online training and tracking system	16
Offer more props and hands-on opportunities.....	17
Explore ways to make live burns more feasible	17
Encourage and support shared training.....	17
Continue to support safety-focused training	18

Funding recommendations	18
Explore methods to stabilize MBFTE per-firefighter awards	18
Overall recommendations	18
Continue to support shared services.....	18
Explore ways to measure training effectiveness.....	18
Adapt to the changing fire service model	18
Provider recommendations.....	19
Introduction	20
Purpose of study and scope.....	21
Methodology.....	21
Background	23
Fire service in Minnesota.....	23
Changes in communities.....	24
Changes in the fire service.....	24
Firefighter time commitment.....	25
Staffing.....	26
Roles for the fire service.....	27
Fires and tactics.....	28
Other trends and challenges	29
Minnesota’s fire service training model	29
Policy and oversight.....	30
Policy and oversight background.....	30
Federal government	30
State government.....	30
NFPA	31
MBFTE.....	31
IFSAC.....	32
MFSCB.....	32
ISO.....	32
Fire departments.....	33

Policy and oversight findings.....	33
Departments like local control, and some want additional state guidance.....	33
Training requirements.....	33
Requirements have increased over time.....	33
Requirements are onerous, especially for new recruits and volunteers	34
Mixed feelings on whether current requirements should change.....	35
Firefighters want alignment or merger of certification and licensure	36
Firefighters have some concerns about certification.....	37
Firefighters are somewhat dissatisfied with firefighter licensure.....	37
Training delivery and usage	38
Training delivery and usage background.....	38
Training options.....	38
Minnesota department training sources.....	39
Training delivery and usage findings	40
Training availability.....	41
Availability has improved overall	41
Departments are receiving more in-house training by external providers.....	42
Hands-on opportunities are limited	43
Training needs to be easier to complete.....	43
Offer more online training.....	44
Bring training closer to firefighters.....	44
Share more training between departments.....	45
Offer more flexible class options.....	45
Many departments do not use online training	45
Training quality.....	46
Content quality has improved significantly	46
Instructor quality varies.....	46
Mixed feelings on additional instructor oversight	48
Firefighter preparedness	48
Unclear if firefighters are better trained than in the past	48
Limited time availability keeps firefighters from being better trained	52

There is some support for a statewide training tracking system	53
Funding	53
Funding background	53
MBFTE funding	53
Other funding sources	55
Funding findings	56
MBFTE funding has become a large percentage of departments' training budgets.....	56
Departments may not be spending more total money on training than in the past.....	58
Departments are more satisfied with funding than before, but still want more.....	59
Departments are largely satisfied with MBFTE reimbursements	60
The instability of MBFTE funding is a challenge for departments.....	61
Overall model findings	61
Fire service model is affecting training.....	61
Volunteer departments face ongoing staffing shortages.....	61
Fire departments are integrating EMS into their identity.....	62
Elected department leadership may be affecting training quality.....	63
Training model serves the goals of the MBFTE	64
Training model serves the needs of firefighters.....	64
Training model is positioned to serve the future service model.....	65
MBFTE accomplishments and remaining challenges	65
Departments are generally extremely satisfied with the MBFTE.....	66
Quality of course content has improved	66
Availability of training has improved	67
Firefighters may be training somewhat more than in the past.....	67
State share of training costs has increased	67
Funding satisfaction has improved, but is still a key issue	67
Instructor quality is still an issue.....	68
Access to hands-on training is a growing issue.....	68
Instability of MBFTE funding is a new challenge	68
Other considerations	68

MBFTE strategic plan	68
SFMD strategic plan	69
Recommendations	70
Policy and oversight recommendations	70
Continue to encourage baseline training	70
Provide additional training guidance	71
Continue with plans to improve instructor oversight	71
Training delivery and usage recommendations.....	72
Offer a statewide, online training and tracking system	72
Offer more props and hands-on opportunities	72
Explore ways to make live burns more feasible	73
Encourage and support shared training	73
Continue to support safety-focused training	73
Funding recommendations.....	73
Explore methods to stabilize MBFTE per-firefighter awards	73
Overall recommendations	74
Continue to support shared services.....	74
Explore ways to measure training effectiveness.....	74
Adapt to the changing fire service model	74
Provider recommendations.....	75
Acronyms	76
References.....	77
Appendix A: 1998 Fire Training Report executive summary	78
Appendix B: Minnesota Statute creating MBFTE	81
Appendix C: Fire chief conference questionnaire.....	86
Appendix D: Fire service interviews	89
Appendix E: Survey of chiefs and training officers	122
Appendix F: Listening sessions and survey	147
Appendix G: Other states' fire training models.....	156

Appendix H: Participation map161

Appendix I: MBFTE guide to training requirements162

Appendix J: Reimbursable expense list173

Appendix K: Broadband map176

Executive summary

Purpose and methods

The 1997 Minnesota Legislature created the Firefighter Training Study Committee (Laws of MN 1997, ch. 239, art. 2, sec. 9) to study firefighter training needs and options and to report findings and recommendations.¹ The committee's report recommended creating an independent board of firefighter training. It suggested that the board oversee some elements of firefighter training, including curriculum and instructor standards, and that the board receive ongoing funding to reimburse fire departments for some training costs.

As a result of the study, the legislature established the Minnesota Board of Firefighter Training and Education (MBFTE) in 2000 (MN Stat., ch. 299N). The MBFTE's vision is to support every firefighter's training and preparation to perform at the highest level in service to their communities. To achieve the vision, the board's mission is to promote excellence in the fire service by funding standardized training and through the licensing of firefighters in Minnesota.

Because the fire service and firefighter training have changed significantly since 1998, the State Fire Marshal Division (SFMD) engaged MAD to reassess the state of firefighter training in Minnesota. The questions researched were:

- What are the key accomplishments of MBFTE regarding statewide firefighter training? What has worked well? What challenges were addressed and which challenges remain?
- What changes have occurred (or are likely to occur) in fire service and in communities that are served, and what are the implications of those changes for statewide firefighter training?
- Do existing models of statewide fire service training meet the needs of the fire service and the goals of the MBFTE?
- How might Minnesota improve statewide firefighter training, both for the existing fire service and for the fire service as it may change in the near term?

MAD completed the study between September 2016 and June 2017. MAD staff conducted independent research, and collected stakeholder input through a variety of methods:

- **Fire Chief Conference questionnaire:** MAD surveyed chiefs during the 2017 Minnesota State Fire Chiefs Association Annual Conference.
- **Interviews:** MAD conducted interviews with MBFTE and Fire Service Advisory Committee members, fire chiefs and training officers, and public and private training providers.
- **Chief and training officer survey:** MAD surveyed fire chiefs and training officers about current training practices, sources of training, training budgets, training needs, and other topics.
- **Listening sessions:** MAD facilitated 16 listening sessions in eight cities around Minnesota. Attendees including firefighters, fire chiefs, training officers, training providers, and others.

¹ Part of this introduction has been adapted from the 1998 committee report.

- **Listening session survey:** MAD posted the five questions from the listening sessions in an online survey for anyone to take.
- **Research on other states:** MAD researched the fire service training model in six other states.

In total, more than 600 firefighters participated in this study.

MAD staff aggregated the information provided through all methods and summarized the feedback into themes. This report provides background on fire service training, describes and analyses the current training model, summarizes the accomplishments of the MBFTE, and provides recommendations for the MBFTE and SFMD.

Background

Minnesota's fire service model

Minnesota currently has 780 fire departments. One of the most defining features of Minnesota's fire service has been its reliance on volunteers. Volunteer firefighters receive no compensation for their role, or may receive compensation while they are on-call or when they respond to a call. In 2017, 88 percent of Minnesota fire departments used only volunteer or paid-on-call firefighters.

Although the mostly-volunteer model has been an effective and cost-efficient way of delivering services for decades, departments are having a harder time maintaining adequate numbers of firefighters on their rosters or responding to calls with sufficient levels of staff. Firefighters have less time available to commit to the fire service, and the requirements of the job have increased. Firefighters typically receive much more training now than in the past, both at the beginning of and during their firefighting career. This is in part because fire departments handle more types of calls, and relatively fewer fires, than in the past. They also must stay up to date on ever-changing tactics, technology, and building materials.

Minnesota's fire training model

The fire service training model in Minnesota can be broken into three primary categories: policy and oversight, training delivery, and funding.

Policy and oversight

Within this report, policy and oversight refer to the entities that make and guide decisions about firefighter training. Ultimately, training decisions rest with a fire department chief, but chiefs are guided by requirements, recommendations, and incentives set at the state and federal level. Departments also often follow training standards and recommendations offered by non-governmental organizations. The MBFTE does not have regulatory authority, but can influence training decisions through funding incentives.

Training delivery

In this report, training delivery refers to the ways in which firefighters receive training: where the training occurs, how the training occurs, and who provides the training. Firefighters now have more training options than in the past. Training takes place in different locations, through different methods, from different sources:

- **Location:** Training can occur within a fire department's facilities (in-house), as well as at technical colleges, the state-run Camp Ripley, the Minnesota Department of Natural Resources Wildfire Academy, fire association conferences, and more.
- **Method:** Training may be delivered in-person, online, or through other materials and methods.
- **Source:** Training may be provided by instructors from technical colleges, private training companies, the SFMD, or other sources.

Funding

Fire departments can draw on a variety of sources to pay for firefighter training. They largely rely on MBFTE and local municipal funds, but can also receive federal, other state, and private funding.

The amount of money available to the MBFTE varies from year to year because of the structure of its funding source. It received between \$1.47 million and \$8.09 million within the past five fiscal years.

The MBFTE spends its funds in a variety of ways. One is by allocating a certain amount of funds per firefighter: in FY 2017, for example, departments could submit for up to \$200 per firefighter for training expenses. It also funds National Fire Protection Association (NFPA) 1001 training, live burns, conferences and seminars, MBFTE-provided training, and other activities.

Findings

MBFTE accomplishments

- **Departments are generally extremely satisfied with the MBFTE:** Respondents were effusive in their praise for the MBFTE. They were generally very satisfied with different elements of the MBFTE: the ease of the reimbursement process, the training guidance offered by the state, the curriculum standards, etc. Their largest areas of dissatisfaction involved which expenses are reimbursable, and the effectiveness of the qualified instructor list. In different areas, respondents requested that the MBFTE offer even more support than they currently do. They wanted more funding, more guidance, and in some cases, more oversight.
- **Quality of course content has improved:** Respondents were significantly more satisfied with course content than in the past. In particular, the survey results showed that this was the area of greatest improvement since the 1998 study.
- **Availability of training has improved:** Participants agreed that more classes are available through more methods than before. Departments receive more in-house training from external providers than in the past, which is likely due in part to the MBFTE reimbursing departments for these costs.

- **Firefighters may be training somewhat more than in the past:** Firefighters may or may not be training more on a monthly basis than in the past. Although funding has increased from the MBFTE, firefighter time commitment is a large barrier to firefighters training more. It is likely that more firefighters are receiving NFPA 1001 training as a result of the MBFTE’s funding.
- **The state share of training costs has increased:** Nearly every department in the state requests MBFTE funding, and state funding has become the largest or only source of training funding for many departments.
- **Funding satisfaction has improved:** Department satisfaction with funding improved significantly between 1998 and 2017. Given the responses provided by stakeholders, this was almost entirely due to the advent of MBFTE funding.

Training model serves the goals of the MBFTE

MBFTE Mission Statement: *The mission of the Minnesota Board of Firefighter Training and Education is to promote excellence in the fire service by funding standardized training and through the licensing of firefighters in Minnesota.*

MBFTE Vision: *The Minnesota Board of Firefighter Training and Education supports every firefighter’s training and preparation to perform at the highest level in service to their communities.*

The training model seems to be meeting the goals of the MBFTE. The structure allows the MBFTE to recommend and fund what it views as a safe amount of initial and ongoing training for all firefighters to promote excellence in the fire service.

Not all firefighters are trained the ideal amount. However, this is because of issues with the non-career fire service model, and not because of issues in the training model itself. The most significant barrier to firefighters receiving more training is a lack of sufficient time for firefighters to dedicate to training. With its current role, the MBFTE cannot directly influence that problem.

Respondents often identified insufficient funding as another barrier keeping departments from reaching their ideal training goals; when departments cannot reach their training goals, the MBFTE is not reaching its goal of supporting firefighter training to perform at the highest level of service. Providing more funding would theoretically allow more training to occur, and would therefore help firefighters provide better service. Even if the MBFTE increased its funding, though, many non-career departments would struggle to train more because of limited firefighter time availability.

Training model serves the needs of firefighters

The existing training model—local decision making that is partially guided and funded by the state—generally seems to meet the current needs of Minnesota’s fire service. Across input methods, most respondents did not want an overhaul of the model. Some respondents suggested that the state take over firefighter training more fully, but they comprised a small minority. Most respondents instead recommended smaller-scale changes to the existing model.

The largest area of conflict between fire service needs and the fire training model is the amount of initial training recommended by the MBFTE. The hours to complete NFPA 1001 do not match the amount of time many potential firefighters are willing to offer in exchange for low or no pay. This lack of alignment in the model is making it difficult for departments to maintain appropriate staffing levels, and is therefore not meeting departments' needs.

However, the initial training seems to be serving the preparedness needs of firefighters. NFPA 1001 is a nationally-recognized standard used by many fire departments and by other states (see Appendix G), and most respondents largely supported NFPA 1001 as the standard. Although a significant percent of rural respondents said there is too much of a focus on urban tactics in the course, the majority believed that 1001 otherwise covers the material needed to become a firefighter. Respondents most often took issue with the number of hours to complete 1001, and not the overall content of the course.

The current model requirements may conflict with departments' staffing needs, but it aligns with firefighters' preparedness and safety needs.

Training model is positioned to serve the future service model

Respondents explained that the amount of training requirements has increased over time. Given current trends, it seems likely that requirements and expectations will continue to increase. Medical calls will probably become an even larger proportion of calls as fire prevention improves and the population ages. Rapid advances in building, vehicle, and other technology will require ongoing refresher training for firefighters to learn how to incorporate new science and technology into their tactics. An increasing awareness and dedication to safety and wellness will require more training to keep firefighters informed, and the number of new roles added within the past two decades makes it seem probable that fire departments will be expected to serve more roles in the future.

The training model is well-structured to continue to support departments as requirements and expectations change. State funding and guidance will help departments meet their training needs, while allowing departments to decide for themselves how to reach their goals.

As training needs accelerate and evolve, the time requirements for training will increase. Study participants made it clear that the time availability of non-career firefighters will almost certainly not. This continued conflict between the supply and demand of firefighter time will likely contribute to a shift away from the current fire service model. Some of the study participants said their departments have already begun to share more services with each other, to consolidate, and to switch to more paid staff.

The existing training model is well-positioned to align with those future service models. The existing training model is flexible enough to adapt to the changing fire service model.

Remaining challenges

The MBFTE has helped address many of the issues identified in the 1998 study. However, some challenges remain, and other new challenges have arisen.

Firefighter time commitment

The largest barrier to firefighters receiving more training is that firefighters or potential firefighters are not willing to commit the amount of time needed to undertake the training. The MBFTE cannot address this issue directly with its current role, but the issue does speak to the need for more flexible training offerings and program designs that accommodate individual schedules. Moreover, travel time also presents a barrier. If the training is not nearby and convenient, firefighters will be less inclined to attend.

The primary suggestions for making training easier to complete included:

- Offer more online training.
- Bring training closer to firefighters.
- Share more training between departments.
- Offer more flexible class options.

Hands-on training

Respondents stressed how critical hands-on training is for effective firefighter training. Although new props are available to help firefighters train, they are too expensive for most departments to purchase themselves. Similarly, conducting live burns has become more costly and time consuming. Some called on the MBFTE to help departments with this issue.

Instructor quality

Although the MBFTE created a qualified instructor list, respondents said that the list has had a limited effect on ensuring instructor quality. Respondents agree that while there are quality instructors currently teaching, there is wide variability. However, this does not appear to be regarded as one of the more significant issues affecting how well firefighters are trained.

Instability of MBFTE funding

The current changes in MBFTE funding amounts from year to year make planning training and budgets difficult for departments. Because departments are now much more reliant on state funds than in the past, an unexpected decline in MBFTE funding could limit the amount of training departments can afford to conduct.

Recommendations

Given the findings highlighted in this report, MAD provides the following policy and oversight recommendations to the MBFTE and the SFMD.

Policy and oversight recommendations

Continue to encourage baseline training

The MBFTE should continue to encourage new firefighters to complete standard training; currently the MBFTE suggests NFPA 1001, which is a national standard often recommended by other states. The most common content complaint from respondents about NFPA 1001 was that it focuses too much on urban tactics, but many usually referenced high-rise tactics, which actually apply to any building three stories or taller. The MBFTE could also encourage fire departments to participate in NFPA standards setting, and vote to include the rural chapter in NFPA 1001.

Some respondents suggested reducing initial training requirements to better align with non-career firefighter time availability. Ideas like giving firefighters more time to complete NFPA 1001 and still receive MBFTE reimbursement, or developing a new model of exterior-only firefighters would better align training standards with non-career firefighter time availability. Without the entirety of NFPA 1001, though, firefighters cannot serve many of the roles that a department needs. In addition, with fewer non-career firefighters responding to calls, each firefighter needs to be able to play as many roles as they can to be flexible on the scene.

With a few exceptions, respondents did not believe that the amount of content in NFPA 1001 is inappropriate or excessive; they mostly thought that NFPA 1001 has the information firefighters need to do their job safely. Reducing requirements might help with recruitment, but it would not ultimately address the key staffing challenge: departments need to have enough firefighters to respond to any call at any time, and effectively serve the needs of that call.

Provide additional training guidance

The MBFTE should consider providing additional guidance to departments on training. Respondents appreciated the suggested 11 core elements, but the MBFTE could develop suggested training tracks for leadership development, and for general firefighter development beyond NFPA 1001.

The MBFTE could also better promote and advertise the guidance they already offer. For example, the MBFTE provides a list of minimum federal and state training requirements, but some respondents to this study did not know it existed; they requested a document exactly like the MBFTE's list.

Continue with plans to improve instructor oversight

Although instructor quality is not the most pressing issue identified by respondents, improving oversight would be relatively easy to accomplish, and may not require large amounts of additional funding. Potential oversight changes proposed on the chief and training officer survey did not receive overwhelming support, but they did not receive overwhelming opposition either. In other participation methods, respondents encouraged the MBFTE to make changes to ensure instructor quality.

The MBFTE 2016 strategic plan contained several potential ways to improve instructor oversight. The ideas discussed included:

- “Review and update qualified instructor list. Establish recurring process for maintaining list integrity.
- Review and update qualified class list. Use NFPA standards and EMSRB approval as review criteria.
- Use course evaluations as one standard. Establish online survey tool?
- Training committee must establish parameters for instructors. E.g., how recently has the instructor taught the course? Continuing education requirement?
- Establish appropriate due process for instructor eligibility determinations.”

The MBFTE could also explore using or developing a Yelp or Rate My Professor type system for instructors that would allow course attendees to provide comments on instructor quality.² Regardless of the specific method used, the MBFTE should continue its work on improving oversight to improve instructor quality. Evaluations could also help show whether or not training is improving firefighter skills.

Training delivery and usage recommendations

Offer a statewide, online training and tracking system

The MBFTE should offer an online training and tracking system to all Minnesota fire departments. Although most respondents agreed that more online training would help with current recruitment and retention efforts, access to these tools is still limited. More than half of surveyed chiefs and training officers said their firefighters received no online training in 2016. While many departments likely want to offer some online training, smaller departments likely cannot afford some of the more comprehensive systems. By offering the system statewide, the MBFTE could dramatically increase the number of departments able to offer online training, and also continue to standardize curricula.

Because online training often needs to be combined with hands-on components, the online system could also offer training ideas for drills, scenarios, and more. It could also allow fire departments to upload their own training materials for others to view and use. As firefighters have less time to dedicate to the fire service and to training, including fire leaders, statewide guidance and a shared training repository could make providing in-house training easier and more standardized.

Implementing a statewide online training system would also help the state and departments better track their training. The state would have better metrics on training and the MBFTE’s impact, and departments would have a central place to track their training, which would help them with their ISO and OSHA evaluations.

Purchasing or developing a system would be a significant expense, but it would also have a significant, positive impact on many firefighters and departments. The MBFTE should engage chiefs as they explore options to ensure they understand the needs of the fire service, and should offer training to departments on how to use any new system. The MBFTE could consider a phased-in approach, and/or piloting the system with a limited number of departments.

² On Yelp, any individual can rate a restaurant or other venue and provide public comments. Other users can then see an average score for the venue and read others’ comments. Rate My Professor allows students to rate their professors on different criteria and to provide public comments for others to view.

One challenge with this solution would be limited internet access in parts of Minnesota; Appendix K shows a map of broadband internet access across the state. Not all firefighters have access to strong internet connections at home, or have the tools to access online training.

Offer more props and hands-on opportunities

The SFMD and MBFTE should offer more props and hands-on training opportunities around the state. Like online training, many types of props and equipment are too expensive for departments to acquire themselves. The types of opportunities and props could be coordinated with the types of training offered in the online system, giving departments blended learning experiences. In deciding which types of props to obtain and opportunities to create, the MBFTE should engage fire departments to learn more about their specific needs.

Explore ways to make live burns more feasible

The MBFTE should explore ways to make it easier for firefighters to participate in live burns. Respondents explained that live burns are both one of the best learning opportunities for firefighters, and are a requirement for a firefighter to receive initial firefighter certification. The MBFTE already provides a packet and checklist of the steps of creating a live burn opportunity, which it should continue to offer and update.

Although many respondents asked for fewer live burn regulations, the MBFTE would likely face significant barriers in attempting to reduce requirements. Instead the MBFTE could explore other options to make live burns more feasible, including:

- Change budget priorities to offer additional funding for live burns.
- Assist departments with the paperwork to complete live burns, or offer guidance on completing the administrative work.
- Try to negotiate with state agencies for a shorter version of the forms for live burns.
- Encourage municipalities to fund shared, regional live burn opportunities.

Encourage and support shared training

Departments often acknowledged they need to do more shared training with their neighbors. Although this is best organized at the local level, the MBFTE could explore ways to encourage and support shared training. It could offer best practices and/or ideas for shared training.

The MBFTE could also further develop and promote its existing training calendar. The more departments that use the calendar, the more useful the calendar will become, which highlights the need for the MBFTE to better advertise the calendar. The MBFTE could make it easier for departments to add their own events to the calendar, and to receive updates. Currently departments must go check the calendar for new events. The MBFTE could explore ways to let departments receive email updates on trainings added in their area or on certain topics.

Continue to support safety-focused training

The MBFTE already funds regional training opportunities on physical and emotional health. Given the growing focus and concerns about safety and wellness, the MBFTE should continue to offer these opportunities, and could encourage providers to offer more safety-oriented classes.

Funding recommendations

Explore methods to stabilize MBFTE per-firefighter awards

The MBFTE should explore ways to stabilize the per-firefighter awards from year to year. Guaranteeing a set amount to fire departments each year would be a challenge because of the rules governing the Fire Safety Account, but, if possible, the MBFTE should find a way to offer a consistent amount. This would make it easier for fire departments to plan their own budgets and training goals.

Overall recommendations

Continue to support shared services

In general, the SFMD and MBFTE should support more shared services between departments. The Training Delivery and Usage Recommendations section described ways to encourage shared training specifically, but the SFMD should promote any form of shared services. Sharing services is one way for fire departments to address their current challenges, including the dominant staffing challenge. The SFMD already offers the service planning grant program, formerly called the shared services grant; it should continue to offer both the grant program and guidance to departments who are considering sharing services.

Explore ways to measure training effectiveness

The MBFTE funds and provides many different types of training. However, there is little research available that examines the ultimate impact of some of those trainings, or how much better prepared firefighters are as a result of attending a given training. The MBFTE should explore ways to measure the impact of training to ensure that the trainings it funds have an impact. Offering training evaluations and a statewide online training system would make it easier to track these metrics. The MBFTE could also consider using a Results-Based Accountability (RBA) approach to identify relevant performance measures.³

Adapt to the changing fire service model

Training needs are based on the fire service model needs. To that end, the MBFTE should continue to assess how the fire service model is changing, and how to best serve the training needs of firefighters. For example, as fire departments respond to more medical than fire calls, the MBFTE could offer or fund more medically focused

³ In the RBA framework, the important questions about any service's or program's performance are: *How much did we do? How well did we do it? Is anyone better off?* Source: Friedman, Mark. *Trying hard is not good enough: How to produce measurable improvements for customers and communities*. Santa Fe, NM: FPSI Publishing, 2005.

training. As departments have fewer responders on the scene, the MBFTE could promote courses that teach tactics based on these scenarios. These are not specifically recommended options, but rather illustrations on how training and the MBFTE may need to adapt to changes in the fire service.

Respondents said that the MBFTE has become a trusted, valued partner for fire departments. The fire service is changing, and the MBFTE and SFMD can and should help departments with their training during the transition.

Provider recommendations

Some of the findings point to recommendations not for the SFMD or MBFTE, but for fire service training providers. The following list contains a brief summary of some of the more common training-related requests from respondents during this study:

- **Flexible options:** Respondents often talked about the need for courses at different times of the day or week. For example, not all of their firefighters can attend daytime classes.
- **Hands-on activities:** Respondents stressed how critical it is to have hands-on activities. This is both more interesting for firefighters, and often an important part of learning a skill.
- **Safety and wellness classes:** Firefighters are increasingly concerned with their safety and wellness. Respondents said that they are not always dutiful about learning about these topics, but that they need to receive more training on them.
- **Options that incorporate new technology and science:** Respondents often mentioned how critical it is for trainings to stay up to date on the latest technologies and fire science.
- **Options for experienced firefighters:** Respondents suggested courses oriented at experienced firefighters, for instance a Firefighter 1 and 2 refresher course. Experienced firefighters may not want to attend the entirety of Firefighter 1 and 2, but would like to learn about updated tactics and be reminded of firefighter basics.
- **Encourage shared training among departments:** During work with departments, providers should encourage them to share training opportunities with their neighbors. For example, a provider could offer the same course on different nights of the same week at different departments; this would allow firefighters to attend another department's training if they missed their own.
- **Methods for different learning styles:** Respondents discussed how courses need teaching approaches that can accommodate firefighters' different learning styles.

Introduction

The 1997 Minnesota Legislature created the Firefighter Training Study Committee (Laws of MN 1997, ch. 239, art. 2, sec. 9) to study firefighter training needs and options and to report findings and recommendations.⁴ The committee studied funding of training, the current delivery system, selection and evaluation of instructors, levels of service, the need for standardized training, federal and state laws that affected firefighter training, a system for reimbursing local jurisdictions for training programs, and need for centralized administrative direction of training programs.

With assistance from Management Analysis and Development (MAD), the committee submitted a report to the legislature in 1998 summarizing its findings. Some of the main challenges identified included:

- Insufficient local-level funding.
- Inadequate curriculum standards.
- Inconsistent quality of instruction.
- Unclear accountability for the uses of current funding.
- Inadequate access to needed training.

The report recommended creating an independent board of firefighter training. It suggested that the board oversee some elements of firefighter training, including curriculum and instructor standards, and that the board receive ongoing funding to reimburse fire departments for some training costs. The executive summary of the 1998 report appears in Appendix A.

As a result of the study, the Minnesota legislature established the Minnesota Board of Firefighter Training and Education (MBFTE) in 2000 (MN Stat., ch. 299N). The MBFTE's vision is support every firefighter's training and preparation to perform at the highest level in service to their communities. To achieve the vision, the board's mission is to promote excellence in the fire service by funding standardized training and through the licensing of firefighters in Minnesota. The MBFTE is funded by the Minnesota Fire Safety Account.

The MBFTE's statutory duties include:

1. Review fire service training needs and make recommendations on training to Minnesota fire service organizations.
2. Establish standards for educational programs for the fire service and develop procedures for continuing oversight of the programs.
3. Establish qualifications for fire service training instructors in programs.
4. Establish standards under which reimbursement will be provided for training and education.

The full legislative text creating the MBFTE is in Appendix B.

⁴ Part of this introduction has been adapted from the 1998 committee report.

Purpose of study and scope

Because the fire service and firefighter training have changed significantly since 1998, the State Fire Marshal Division (SFMD) engaged MAD to reassess the state of firefighter training in Minnesota. The questions researched were:

- What are the key accomplishments of MBFTE regarding statewide firefighter training? What has worked well? What challenges were addressed and which challenges remain?
- What changes have occurred (or are likely to occur) in fire service and in communities that are served, and what are the implications of those changes for statewide firefighter training?
- Do existing models of statewide fire service training meet the needs of the fire service and the goals of the MBFTE?
- How might Minnesota improve statewide firefighter training, both for the existing fire service and for the fire service as it may change in the near term?

Methodology

MAD completed the study between September 2016 and June 2017. MAD staff conducted independent research, and collected stakeholder input through a variety of methods:

Fire Chief Conference questionnaire: MAD designed and distributed a fire service training questionnaire during the Minnesota State Fire Chiefs Association Annual Conference that took place from October 26–29, 2016. Twelve individuals submitted questionnaires by the end of the conference. The questionnaire and results are presented in Appendix C.

Interviews: MAD conducted interviews with 53 individuals about firefighter training. Interviewees included MBFTE and Fire Service Advisory Committee members, fire chiefs and training officers, and public and private training providers. The interview methodology and results are summarized in Appendix D.

Chief and training officer survey: Individuals from 290 departments responded to an online survey sent to chiefs and training officers, for a response rate of 37 percent. The survey asked about current training practices, sources of training, training budgets, training needs, and other topics. The survey methodology and results are presented in Appendix E.

Listening sessions: MAD facilitated 16 listening sessions in eight cities around Minnesota: Inver Grove Heights, Pine City, Rochester, Thief River Falls, Virginia, Wadena, Willmar, and Windom. In each city, MAD hosted an afternoon and an evening session. Nearly 150 people attended the sessions altogether, including firefighters, fire chiefs, training officers, training providers, and others. The listening session methodology and results are summarized in Appendix F.

Listening session survey: MAD posted the five questions from the listening sessions in an online survey for anyone to take. The SFMD distributed the link to its listserv to invite people to participate if they had

missed the listening sessions. Over three weeks, 143 individuals provided feedback. The questions and respondent demographics are shared in Appendix F.

Research on other states: MAD researched the fire service training model in six other states: Kansas, Illinois, Indiana, Iowa, Maryland, and Ohio. The specific states were suggested by the MBFTE and SFMD, and the findings of this research are compiled in Appendix G.⁵

In total, more than 600 firefighters participated in this study. Appendix H shows the number of firefighters by region who provided information to the study through different input methods.

MAD staff aggregated the information provided through all methods and summarized the feedback into themes. This report provides background on fire service training, describes and analyzes the current training model, summarizes the accomplishments of the MBFTE, and provides recommendations for the MBFTE and SFMD.

Throughout this report, select statements from respondents are included in *italics*. The statements reflect the respondent's sentiment and content, but MAD may have edited them for clarity and length. These statements should not be viewed as direct quotations attributable to individuals. Additionally, the report uses the term "respondents" to encompass all individuals who provided feedback through any participation method.



Participants at a listening session

⁵ Based on research early in the project, MAD anticipated that respondents would want to know more about training models that involved a more state-centric approach. The states researched accordingly have stronger state involvement in delivering training. As the project progressed, few respondents discussed that type of model. The results of the research have been included in the appendix, and integrated into this report where applicable.

Background

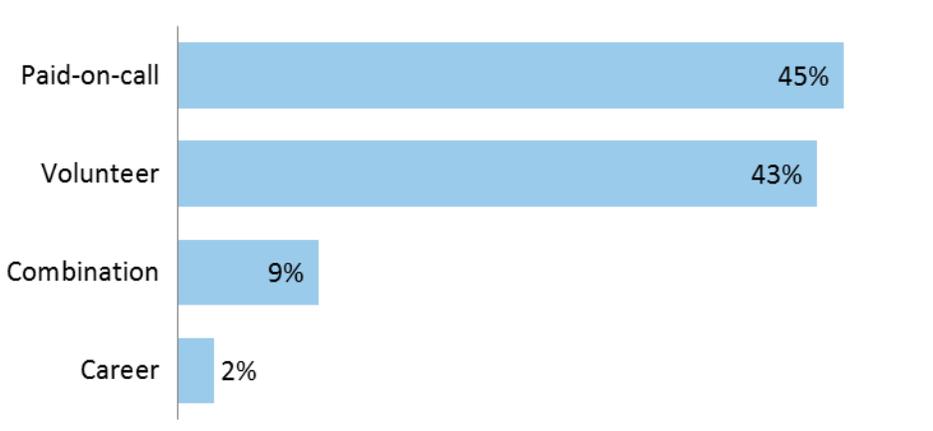
This section provides an overview of the fire service in Minnesota, as well as an analysis of trends affecting fire departments.⁶

Fire service in Minnesota

The state currently has 780 fire departments, or 0.91 fire departments for every city, and more than 20,000 firefighters.⁷ One of the most defining features of Minnesota’s fire service has been its reliance on volunteers. Volunteer firefighters receive no compensation for their role, or may receive compensation while they are on-call or when they respond to a call.

Minnesota has the second highest percentage of departments that rely entirely or mostly on volunteer firefighters in the country.⁸ Figure 1 shows the distribution of fire departments by member type. In 2017, 88 percent of Minnesota fire departments used only volunteer or paid-on-call firefighters. Combination departments use both career and non-career firefighters, and constitute nine percent of fire departments. Only two percent of departments use full-time/career firefighters.

Figure 1: Minnesota fire departments by member type, 2017⁹



The high rate of volunteer firefighters has historically been a low-cost way to deliver services. A report found that the volunteer fire service results in an annual national savings of \$37.2 billion, averaging to more than \$45,000 per volunteer.¹⁰

⁶ Parts of this section have been adapted from the 2016 MAD report *Shared Services Grant Program Evaluation*.

⁷ Based on MBFTE data and the current number of cities listed with the League of Minnesota Cities.

⁸ Only Delaware has a higher percentage of volunteer departments. U.S. Fire Administration. *U.S. Fire Administration Census Quick Facts*. Accessed May 2, 2017. <https://apps.usfa.fema.gov/census/summary>.

⁹ MBFTE data representing 779 of the Minnesota’s 780 departments.

¹⁰ St. Joseph’s University Public Safety and Environmental Protection Institute. *Economic Impact of the Volunteer Fire Service*. 2004.

Volunteers save jurisdictions money, but reliance on volunteers has limitations. Many volunteers have full-time jobs, often in places other than their hometown. This can limit their ability to respond quickly to calls at all hours.

Changes in communities

The communities of Minnesota have changed over time, which has affected resident needs and their expectations for fire departments. For instance, the aging and increasingly diverse population has created new demands on the fire service. Older residents require more medical assistance, a task that is increasingly falling on fire departments. Firefighters must also communicate with people who speak more languages, and immigrants who come from countries with different cultural norms.

We created a video a few years ago on a grant for rental units—there were a lot of cigarettes and cooking fires. We found the top four populations of immigrants, but there are like 21 dialects of Somali, so which one do you pick to do the video in? There’s a huge challenge with that.

Respondents also discussed how their regions had growing or shrinking populations, and how that tied into the economic vitality of the community. The young adults that firefighters want to attract for their departments may not find work in more rural communities.

In addition to these demographic changes, respondents also explained that community expectations of the fire service have increased over time. The primary challenge has been a growing expectation that fire departments will provide medical support, but respondents in this study also brought up smaller programs and roles, like providing home safety inspections and fitting bike helmets.

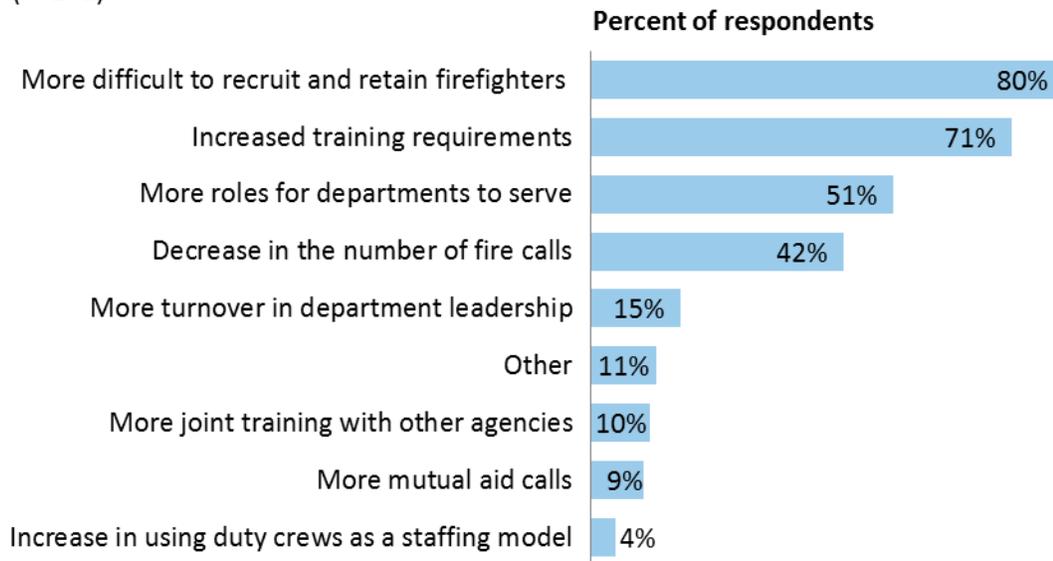
Over the last 20 years, the role of the firefighter ends up being that catch-all. All of a sudden we’re doing hazmat and medical and we start doing things like lift assists. Some of those things are as the population changes and our role ever evolves, and it’s not by our choice. It becomes a community expectations thing, especially in the metro, where we have a community on either side with full-time people. Average Joe Citizen says, “That department does that—why don’t you?”

Changes in the fire service

As communities have changed, so has the fire service. Figure 2 highlights some of the key trends that have affected departments in the past ten years, according to the survey of Minnesota fire chiefs and training officers. Respondents most often identified struggles with staffing levels and increased training requirements. Many also identified having more roles to play and fewer fire calls to respond to as key trends.

Figure 2: Fire service trends affecting departments

Which three of the following trends have most affected your department during the past 10 years?
(n=271)



Based on all data sources, four key areas of fire service changes emerged:

- Firefighter time commitment.
- Staffing.
- Roles for the fire service.
- Fires and tactics.

Firefighter time commitment

Across the surveys, interviews, and listening sessions, respondents explained that firefighters, particularly non-career ones, have less time to provide to the fire service than they used to. This issue came up both within the context of recruiting and retaining staff, and within the context of training firefighters. With the amount of other activities taking up time in people’s lives, volunteers increasingly cannot meet the ever-growing time requirements of becoming and staying a firefighter.

The other downfall of training is, when I grew up, we didn’t start sports until high school. Now my guys have elementary kids in sports, and nowadays it’s hard to get a Saturday. They all have sporting events. Let alone get two nights in a row for training. We’re blessed for the first Monday of month on training. But to try to get another night or weekend, there are church or school events, it’s hard to get there. Families are just busier now.

The availability is there for me to get whatever training I want, but it’s the time commitment. I’d love to provide all training once a week for these guys, but I have some classes now that guys are not jumping at because they don’t want to do any more. They say I have my work and family time commitment.

Staffing

Across the nation, one of the key challenges for departments is a shortage of volunteers. A 2017 report from the National Fire Protection Association found that the overall number of volunteer firefighters did not change significantly between 1986 and 2015.¹¹ However, because of population changes, the rate of volunteer firefighters per 1,000 people protected has decreased to 6.71 in 2015 from 7.88 in 1986. The report shows that the nation experienced a noticeable drop in the rate of volunteer firefighters per 1,000 people beginning in 2010.

The decrease in volunteer rates affects rural areas more than urban ones. The same report found that that 95 percent of national volunteer firefighters are in departments protecting fewer than 25,000 people.¹²

A 2007 report from the U.S. Fire Administration documented many reasons for the decline in volunteer firefighters:¹³

- “More demands on people’s time in a hectic modern society;
- More stringent training requirements;
- Population shifts from smaller towns to urban centers;
- Changes in the nature of small town industry;
- Internal leadership problems; and
- A decline in the sense of civic responsibility.”

Respondents who provided input for this study overwhelmingly agreed that this is the most significant challenge currently facing the fire service in Minnesota. About three-quarters of interviewees mentioned that many departments are currently struggling to meet their staffing needs, and 80 percent of surveyed chiefs selected “more difficult to recruit and retain firefighters” as a trend that has most impacted their department in the past ten years. Similarly, in the chief and listening session surveys, an open-ended question asked respondents what they saw as the most significant issue facing Minnesota’s fire service in the next ten years: 80 percent of chiefs and training officers and 72 percent of listening session survey respondents described the challenges of maintaining staffing levels. The issue also came up often in the listening sessions.

Most respondents talked about this problem as the “recruitment and retention” issue. Some framed it a little differently, discussing how they will eventually not have enough daytime respondents, or how their firefighters work too far away to respond quickly to calls. The issue appears to be more pronounced for non-career departments, but career departments also reported having a hard time finding and keeping recruits.

Respondents mostly cited reduced time commitment as the root issue deterring people from the fire service, but they also mentioned an increase in training requirements, high cancer and suicide rates, and community

¹¹ Hylton J.G. Haynes and Gary P. Stein. *U.S. Fire Department Profile 2015*. National Fire Protection Association. April 2017.

¹² Ibid.

¹³ U.S. Fire Administration. *Retention and Recruitment for the Volunteer Emergency Services: Challenges and Solutions*. May 2007. List adapted from text on page 2.

trends. For example, one interviewee estimated that 90 percent of area firefighters do not live in the communities where they work, which makes it difficult for them to respond to calls and be on the department.

When we say we're hiring and would like to have some daytime personnel, we can't get anyone to apply for the job that works in town. Everyone works out of the city. At night we can get 30 people there—in the daytime we have the same 12 and they're getting pretty old. I don't have anyone on my department available during the day with less than 15 years of service.

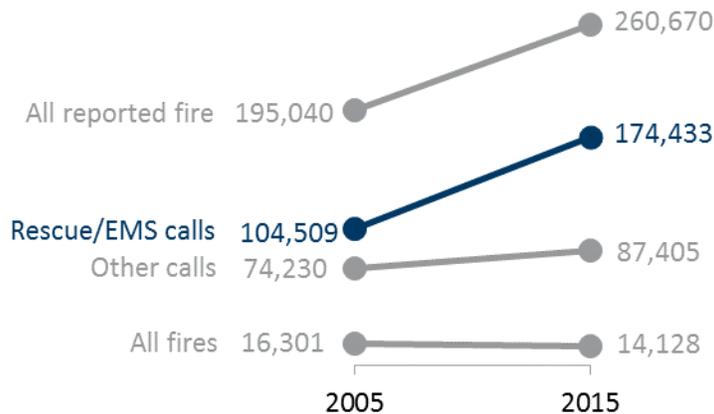
Roles for the fire service

While departments have had a harder time recruiting and retaining staff, the responsibility of a fire department has been changing. The largest role change cited by respondents has been an increasing reliance on the fire service to answer medical calls. Not all departments offer emergency medical services (EMS), but the ones that do must now receive more medical training.

In addition, departments are now expected to respond to, and therefore train on, many different topics, including hazardous materials, terrorism, and active shooter events. Respondents also explained that departments now do more community outreach and programming than in the past. This has had wide implications for the fire service, and accordingly for fire service training.

Departments play more roles than before, and the frequencies of different incident types have also been changing. Figure 3 shows the frequency of incident types that Minnesota fire departments responded to in 2005 and 2015. Overall, fire departments responded to 34 percent more incidents in 2015 than 2005, even though the number of responses to fires decreased. Most of the increase in incidents came from a significant jump in the number of Rescue/EMS calls—departments responded to 67 percent more Rescue/EMS calls in 2015 than they did in 2005.

Figure 3: Minnesota fire department responses to incident types, 2005–2015¹⁴



¹⁴ Data from State Fire Marshal Division *Fire in Minnesota* reports. In 2005, 95 percent of Minnesota fire departments submitted data. In 2015, 99 percent submitted data.

The decline in fire calls has been a trend, but not a problem. As one interviewee explained, fire departments will be successful if they put themselves out of business and prevent all fires. However, this does make it more difficult to have well-trained firefighters because they have fewer opportunities to practice their firefighting skills.

Some trainings seem a little extreme. But at the same time I see that a lot of what we do is not even a standard house fire. We don't get a lot but when we do, they're very dangerous and high skill. Low-frequency, high-risk calls are a lot of what we get, and that's the standard. We know how to operate trucks, pumps, ladders, hoses—even though we don't do them often, we have to be proficient.

With an increasing number of roles to play, departments must train on and be prepared for a growing number of events and calls, all while adjusting to lower staffing levels.

The expectation from our community is that if it's not illegal and it's two in the morning, we go fix it, whether that's a leaky toilet or a cat stuck wherever. They rely on the fire department to fix their problems. People assume the fire sprinkler system is leaking but it's really the toilet and bath. We stop the issue until someone can fix it. We have to be trained broad enough to fix problems and understand issues.

Fires and tactics

In all areas of stakeholder input, respondents discussed changes to both fires and tactics that have happened over time. They often stressed the need for training to stay current and meet future changes.

First, fires themselves have changed over time, in large part because of changes in building materials and vehicle construction. Respondents explained that buildings are now made of more lightweight materials that burn more quickly than older construction materials. These different building materials require different firefighter techniques. For instance, newer joint types mean buildings will collapse faster in a fire, and firefighters must keep that in mind when strategizing for how to respond to the fire. The changes in vehicle technology have also been a challenge for the fire service to keep current on; different technologies and building materials require different tactical responses, and pose different safety risks.

A new construction house has a very limited time from when the fire starts to when structural integrity is compromised. Now as homeowners or different buildings get solar panels, that's added weight to roofs that was not there before, that weren't built for that. Once you have a fire, the impingement system will fail a lot sooner with that weight on it. There are so many different factors these days. You have building joints that in 10 minutes of burning are going to fail. You need to learn all that. You need hands-on fire training to survive. We need a lot of book-learned fire training to learn fire characteristics, construction, etc.

Many respondents also discussed how advances in fire science have led to changes in tactics. Scientists are learning more about which techniques are most effective and safest for fighting fires, and firefighters must adapt their ingrained techniques to new information.

One of the biggest things that has come into service in last years is Underwriter Laboratories. They're doing fire studies science and publishing for free—we've been finding out a lot of the so-called science we used as gospel forever turned out not to be true. A lot of these studies are getting incorporated heavily into programs.

Firefighters must further adapt their techniques to current, lower staffing levels. For instance, one interviewee said departments have to train on different approaches that assume they will have three to four people on a scene initially, instead of the 20 they used to rely on.

Other trends and challenges

In the past decades, the fire service has also changed to improve firefighter health and safety. Firefighters are now more aware of the job's effect on their physical and mental wellbeing. For example, participants cited studies that have shown the impact of firefighting on cancer, post-traumatic stress disorder (PTSD), and suicide rates. Firefighters must be trained on these topics, as well as how to safely clean equipment, and how to work as safely as possible during training and incident response.

Respondents also discussed changes in fire service delivery and culture. They explained that departments more often share services now, and that department consolidations have become more common. They also mentioned how the service is now a more serious endeavor than it used to be, with a few specifically explaining that “it's not the good old boys club anymore.”

Many departments I've talked to over the years, 15-20 years ago they did one kind of a drill a month, and then broke out the beer and started drinking. That doesn't happen anymore. Very few even allow alcohol in the department. It's not a social call, it's getting down to working.

Minnesota's fire service training model

This section provides an overview and analysis of the current firefighter training model. In this study, the training model refers to how firefighters receive training, what training they receive, and why they receive that training.

This section first examines the model in its three component parts: policy and oversight, training delivery and usage, and funding. Each component's piece provides an overview of the component, followed by findings related to the Minnesota model. This report section concludes by analyzing the Minnesota fire training model as a whole.

Policy and oversight

Policy and oversight background

Within this report, policy and oversight refer to the entities that make and guide decisions about firefighter training. Ultimately, training decisions rest with a fire department chief, but chiefs are guided by requirements, recommendations, and incentives set at the state and federal level. Departments also often follow training standards and recommendations offered by non-governmental organizations. This section provides an overview of the different entities that are involved with or influence policy and oversight around fire service training.

This section discusses some of the training requirements for firefighters at a high level. The MBFTE has compiled a more detailed list of initial and ongoing training requirements for firefighters to meet state and federal regulations, which is available in Appendix I.

Federal government

At the federal level, most training requirements are set by the Occupational Safety and Health Administration (OSHA). The fire brigade section sets broad training requirements for fire departments, including:

The employer shall assure that training and education is conducted frequently enough to assure that each member of the fire brigade is able to perform the member's assigned duties and functions satisfactorily and in a safe manner so as not to endanger fire brigade members or other employees. All fire brigade members shall be provided with training at least annually. In addition, fire brigade members who are expected to perform interior structural fire fighting shall be provided with an education session or training at least quarterly.¹⁵

Other OSHA sections describe more specific initial and ongoing training requirements. Training topics include personal protective equipment, portable fire extinguishers, respiratory equipment, bloodborne pathogens, hazardous materials, and confined space. OSHA inspects fire departments to check for different violations, including whether departments are meeting these training requirements.

State government

At the state level, fire departments must meet Employee Right to Know standards. For firefighters, this largely involves initial and ongoing training on hazardous materials.

The state also requires that full-time firefighters be licensed by the MBFTE (MN Statute 299N.05). Non-career firefighters may be licensed but are not required to be. To obtain a license, a firefighter must complete an application and have certification from the International Fire Service Accreditation Congress (IFSAC). A license is valid for three years. After three years, the firefighter may renew their license if the chief provides evidence that

¹⁵ U.S. Department of Labor. *Occupational Safety and Health Standards 1910, Subpart L Fire Protection, Standard Number 1910.156*. Accessed May 18, 2017.

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9810&p_table=standards.

the firefighter has received 72 hours of approved firefighter training in the preceding three years. At both the initial application and at renewal periods, a license costs \$75.

NFPA

The National Fire Protection Association (NFPA) is a nonprofit organization “devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards.”¹⁶ The NFPA sets codes and standards not only for firefighter training, but for sprinkler installation, electrical codes, fire extinguishing systems, and more. NFPA standards are not legal requirements, but they are largely respected and used by Minnesota fire departments.

One of the key NFPA documents is NFPA 1001: Standard for Fire Fighter Professional Qualifications, which sets minimum job performance standards for volunteer and career firefighters. To meet NFPA 1001 standards, Minnesota firefighters typically complete the courses Firefighter 1, Firefighter 2, and Hazardous Materials Operations.

MBFTE

The MBFTE does not directly set training requirements for Minnesota fire departments. Its regulatory impact is mostly based on incentives. For instance, the MBFTE does not have the authority to require new firefighters to complete a specific training course. However, the MBFTE will pay the tuition cost for new firefighters to receive initial training that meets NFPA 1001 guidelines. The training must be completed within one year.

The MBFTE also maintains a list of other reimbursable classes, which is available in Appendix J. Most of the courses on the list must follow NFPA standards. If the course is not already on the MBFTE reimbursable course list, the course must be taught by an instructor on the MBFTE’s qualified instructor list to be eligible for reimbursement. Similarly, the MBFTE will pay up to \$1,500 for a live burn (in which a structure is burned for training purposes) provided that the exercise follows NFPA 1403 live burn standards.

To appear on the MBFTE qualified instructor list, an instructor must meet the following guidelines:¹⁷

- a) “Five years’ experience as an instructor in any of the MBFTE reimbursable classes; or
- b) Firefighter 1, Firefighter 2, and Instructor 1 Certification or Bachelors or Master’s degree in adult education and
- c) The equivalent of five years active firefighter; or
- d) Professional Educator/Specialist (Example: Leadership; Ethics) Submit course outline along with required documents.”

The MBFTE’s originating legislation charged the MBFTE with appointing “an organization that is accredited by the International Fire Service Accreditation Congress to prepare and administer firefighter certification

¹⁶ National Fire Protection Association. *NFPA Overview*. Accessed May 18, 2017. <http://www.nfpa.org/overview>.

¹⁷ Minnesota Board of Firefighter Training and Education. *Qualified Instructor Form*. Accessed May 18, 2017. <http://www.mbfte.org/forms/QualifiedInstructorApp.pdf>.

examinations.” Currently, the Minnesota Fire Service Certification Board (MFSCB) has been appointed to complete this responsibility.

Firefighters in Minnesota may receive certification, but are not legally required to. If the department would like MBFTE reimbursement for a firefighter to attend Firefighter 1 and 2, though, the firefighter must take MFSCB certification tests for those levels after completing the courses.

By setting standards for financial reimbursement, the MBFTE has a strong impact on the training firefighters attend. The MBFTE also created a list of 11 suggested core elements for firefighters to receive regular training on, which is available in Appendix I. It encourages departments to develop trainings and drills based on those core elements.

IFSAC

The International Fire Service Accreditation Congress (IFSAC) is a not-for-profit organization whose mission is “to plan and administer a high-quality, uniformly delivered accreditation system with an international scope.”¹⁸ Among other things, IFSAC reviews and accredits fire service certification programs to ensure they meet IFSAC standards.

MFSCB

The Minnesota Fire Service Certification Board (MFSCB) is a nonprofit organization that has been appointed by the MBFTE to administer firefighter competency examinations designed to meet IFSAC standards. The MFSCB currently offers 29 certification exams in different areas, including basic firefighter skills (Firefighter 1 and 2), fire inspection, fire instruction, and others.

A certification is valid for three years. To renew certification, firefighters must submit evidence that they received an average of at least 24 hours of training per year in that discipline in the preceding three years. A chief may attest that the firefighter received the requisite hours. The cost to recertify is \$25 per discipline.¹⁹

ISO

The Insurance Services Office (ISO) is a for-profit organization that assesses the risk associated with municipal fire protection efforts. The company evaluates the elements of a municipality’s fire protection system, such as emergency communications and the fire department, and assigns the municipality a score. That score affects insurance ratings within the municipality.

The maximum ISO score is 105.5, and 50 of the points are based on the local fire department. ISO evaluates fire department equipment and preparedness, including the number of firefighters who participate in training, and

¹⁸ International Fire Service Accreditation Congress. *About IFSAC*. Accessed May 18, 2017.

<https://ifsac.org/about>.

¹⁹ To limit costs for firefighters with many certifications, the maximum amount a firefighter pays for a certification period is \$75. If a firefighter is certified and licensed, they would pay up to \$75 for certification, and the full cost for licensure.

the types of training provided.²⁰ Departments need to document their training efforts to do well on ISO ratings. Although departments are not legally required to obtain minimum ISO scores, there is a financial incentive to the community to receive higher scores, and there may be pressure on fire departments to perform well from local governments, businesses, and residents.

Fire departments

Fire chiefs ultimately bear responsibility for deciding the types and amount of training to offer their firefighters, and for ensuring their firefighters meet federal and state training requirements. Many departments have a training officer who is responsible for planning and sometimes conducting training.

Policy and oversight findings

Departments like local control, and some want additional state guidance

In general, respondents had few complaints about the current model where the state provides funding and some oversight, but local departments ultimately choose which training they receive from which providers. They feel this allows them to make training decisions based on local needs.

In the modern era, the MBFTE delivers a lot more flexibility in what's reimbursable, which gets back to jurisdictions know best what they need to be trained on and who should be delivering it. They let the locals decide what that's gonna look like.

Particularly in listening sessions, respondents appreciated the state's training guidance, including the 11 core elements. They said this document helped them decide what to train on. Some respondents requested even more guidance from the state, particularly for topics beyond NFPA 1001. They asked for suggested training tracks to inform their training decisions. Most firefighters do not advance vertically into leadership, respondents explained, so they need options to grow horizontally through different skills, courses, and certifications.

Maybe creating tracks like leadership or hands-on tracks which create certification and kind of build a resume so to speak. After all those initial classes, then what? How do you stay engaged in continuing education over the course of your career? You can't keep going to the same class. We have this baseline, and we've gotta keep people learning basics, but also how do we keep advanced tracks to build that succession plan, the resume?

Training requirements

Requirements have increased over time

Respondents explained that training requirements for firefighters have increased over time. In the survey of chiefs and training officers, 71 percent of respondents chose "increased training requirements" as one of the top

²⁰ Insurance Services Office. *Fire Suppression Rating Schedule Overview*. Accessed May 18, 2017. <https://www.isomitigation.com/fhrs/fire-suppression-rating-schedule-fhrs-overview.html>.

three trends that have most affected their department in the past ten years; only “more difficult to recruit and retain” ranked higher.

We’re seeing the requirements that are coming down are moving at a faster rate than our budget to keep up with them. With what the NFPA wants, the certification, codes, and that’s gotten to be a big part of our job. To round it up, we need to do more jobs with less money and less people. The requirements are going up. It seems like everything that pops up that’s a requirement for a business or a city seems to get dumped on the fire department. We just did two days of fire codes. I don’t think I’ve done that in my career before.

Although some respondents discussed the increased number of ongoing training requirements, such as refreshers mandated by OSHA, most highlighted the number of initial training requirements. Respondents agreed that the hours of initial training have increased substantially in the past few decades.²¹ Completing NFPA 1001 takes different amounts of time based on the particular course, but in general it takes more than 100 hours, all of which must be completed within one year to receive MBFTE reimbursement. Departments that offer EMS must also train their firefighters for medical calls, which can require another 40 or more hours of training.

You come into our department and we say you have to deal with 33-40% of calls, make training two times a month and a monthly meeting after that, so that’s a minimum of three nights a month, and the first year you have 140 hours of Firefighter 1 and 2 and Hazmat Operations, and first responder is another 40 hours, so that’s 200 hours—how would you like to come volunteer?

Requirements are onerous, especially for new recruits and volunteers

The increased number of training requirements, both initial and ongoing, has had noticeable effects on departments. With the number of requirements out there, and the level of time commitment firefighters are currently willing to give, some departments are struggling to meet training requirements.

If you’re a rural department, you only train once a month, twice if you’re lucky, and you have so many requirements to meet and so little resources to do that, so they’re not gonna get all that stuff. So regardless of what’s dictated, they’ll train what they’re gonna train to.

Respondents explained that the amount of requirements is a lot to expect of firefighters, especially people who receive little or no compensation for their time. Departments across the state offered many examples of how the initial training expectations are making it harder to recruit and retain firefighters. Because it is tied to the staffing issue, respondents saw this as a key challenge for the near future. The survey of chiefs and training

²¹ Although no entity legally requires NFPA 1001 for firefighters, the course does cover many of the topics the federal and state governments require for firefighters to serve. Many respondents spoke of NFPA 1001 as if it were a requirement.

officers asked what the most significant issue facing Minnesota's fire service in the next ten years would be, and the number of training requirements was the second most-mentioned topic.

We are seeing guys and gals leave because it is their time, but the initial requirements are much, much greater today than they were in the past. We have lost out on a few potentially good firefighters because of the initial training requirements. We do need well trained firefighters, but at what point are we going too far? At some point we are not going to be able to best serve our residents if we can't fill our member needs. The rural departments will see the greatest impact first. If there isn't enough population to recruit from and the standards are too much to entice people to join, ultimately something will have to give.

While the time commitment to complete NFPA 1001 is significant, almost no respondents said that the course was unnecessary for new firefighters. The amount of information in these courses has increased over time, but respondents who discussed this all agreed that the skills and content of NFPA 1001 largely provide what firefighters need to do their jobs safely and effectively.

Mixed feelings on whether current requirements should change

Many respondents offered their thoughts on how they thought current training requirements should change, but their opinions varied widely.

The majority of these respondents expressed interest in finding a way either to decrease requirements, or to at least make them less burdensome. Most commonly, they requested fewer hours of initial training classes, or having more time to complete NFPA 1001 and still be eligible for MBFTE reimbursement. Some acknowledged that there would be drawbacks and benefits to this change. For example, decreasing the amount of initial training might help with recruiting efforts, but it would make firefighters less prepared to deal with the challenges of the job, and make it harder for departments to fully utilize new firefighters.

We will need to lessen the requirements. Training won't matter if we can't get people to join. If we can get a more attainable initial training, I believe we will get more interest to move on and grow. What we have been noticing is that our new members are getting burnt out through the initial training. Though they are well trained, morale will inevitably decline. Everyone already has burnt out disgruntled pessimistic veteran firefighters; none of us need burnt out disgruntled pessimistic rookies also.

Some of those training things you could probably split out and do one thing a year. Spreading it out will help, but the flip side problem is let's say it's three years before you get your medical training. Then you're no good to me for medical calls when you haven't had the training. It's a tough fine line there to have to do that training, and how quick you have to do it. As people get harder to find, I need people here to be able to do everything, to go to all those different kinds of calls. It's a tough thing to manage.

Many respondents, usually from rural areas, stressed the need for firefighters to be required to learn only about topics relevant to their geographic area. For instance, a notable number of respondents did not believe

firefighters from rural departments should be required to learn about high-rise buildings in NFPA 1001.²² They advocated for standards that are more tailored to their local needs.

Maybe some rural departments need to do more wetland and less high-rise—but not less overall. We do training twice a month. We're low-frequency, high-risk. Maybe we need a little focus on the local area. For someone that farms 1,000 acres, the training is too much. If I want to volunteer in northwest Minnesota, I have to do 140 hours of stuff that's irrelevant, like where do you hook up to the firefighter connection—you don't. Where do you get the hydrant—you don't.

A small number of respondents explicitly did not want certification to become required for firefighters, usually because they thought that would significantly harm recruitment and retention efforts.

In contrast, other respondent advocated for more requirements. Some supported a minimum requirement like completing or being certified for NFPA 1001, while others believed NFPA 1001 is an insufficient minimum for a firefighter to be safely and adequately trained. Many of these respondents acknowledged that raising minimum requirements would negatively affect non-career departments' ability to recruit and retain staff. To address that issue, a small number recommended creating different requirements for rural and urban departments. Respondents at listening sessions discussed how requiring more qualifications may serve as a retention tool if firefighters receive incentives for reaching different statuses.

They're not trained to level they should be at. All we require is 160 hours of training for Firefighter 1 and 2 certification. That's ridiculously low. Some will disagree. For 160 hours, we'll put them out there and expect them to make life and death decisions. It's tough, though, because to ask more has been unsuccessful because people won't volunteer then. How do we deliver this training in a way to get the hours and experience in without hurting the recruitment and retention piece?

Firefighters want alignment or merger of certification and licensure

In interviews and listening sessions, many respondents requested either a merger of certification and licensing, or at least that the two programs become closer aligned. A significant number of respondents did not see value in having two systems with two sets of requirements and two sets of costs. They advocated for a simpler system, or one where the requirements are much more similar between the two programs. Relatively few respondents pushed for the two programs to stay as they are.

I think that it's either one or the other. If you have a license, to me the fact that I gotta pay a license fee and maintain a level of training and education that allows me to maintain my license, then to me I shouldn't also have to pay a certification fee as well. Having to pay both licensing and certification fee I think is redundant and I think it's punitive. Maybe you could argue after the first year, getting firefighters graduated you have to do that, but in the long term people like me who spend another 10-15 years on this job, that's money I'm

²² In the curriculum, a high-rise building is defined as any building with three or more stories.

spending just to pay some certification revenue stream and licensing—are we gonna be licensed or certified? We need to decide. Why am I paying fees to both people? That’s where it’s broken.

Firefighters have some concerns about certification

Most respondents appreciated that certification exists as an option; it offers third-party proof that firefighters have learned material, and it helps firefighters move more easily between departments. However, many respondents expressed dissatisfaction with different elements of certification.

Some respondents mentioned that the cost of certification is an issue, usually that they dislike having to pay an ongoing cost for recertification. For smaller departments in particular, those costs are often not worth the small benefit of having their firefighters certified. They did not see much value in paying to recertify when the department does all the tracking and paperwork, and only receives a piece of paper in return.

Similarly, respondents explained that there is no auditing process, which affects the integrity of certification. A few respondents said they knew chiefs that had signed off on recertification for their firefighters even when they had not met the minimum training hours.

Finally, some respondents discussed different issues with certification testing. They expressed concern over test content and location.

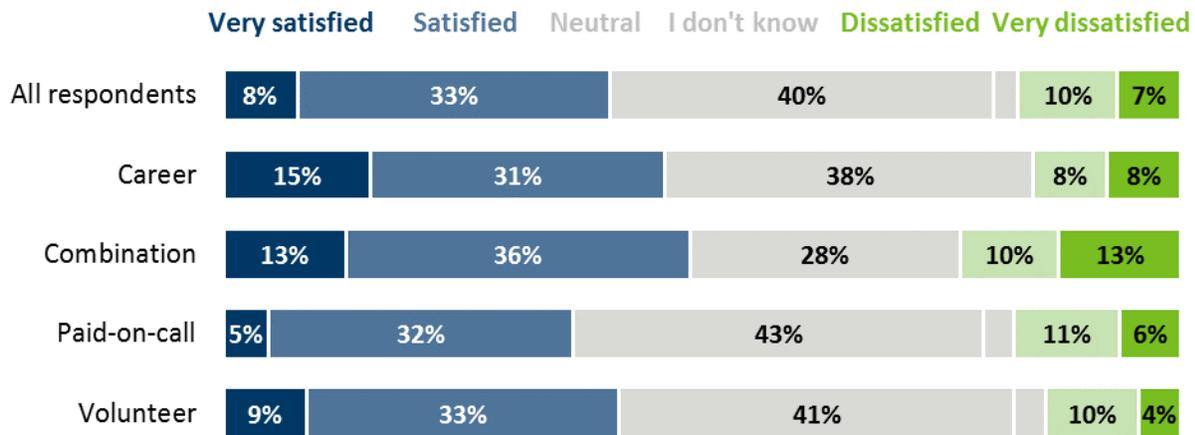
Firefighters are somewhat dissatisfied with firefighter licensure

Compared to certification, respondents much less often discussed licensure. This was not surprising given that a small percentage of Minnesota’s firefighters are currently licensed, and that only career firefighters are required to maintain licensure. The positive comments mentioned that licensure brings the fire service more in line with law enforcement, and that it brings credibility to firefighters.

On the survey question asking them to rate their satisfaction with different elements of the MBFTE, chiefs and training officers were the most dissatisfied with firefighter licensing; 17 percent of chiefs and training officers said they were dissatisfied or very dissatisfied, and 41 percent of chiefs and training officers were satisfied or very satisfied with licensing. However, a nearly equal number (40 percent) said they were neutral.

Figure 4 shows that satisfaction with licensing varied only slightly based on department type. Combination departments were the least neutral: they were both more satisfied and dissatisfied with licensure than other department types.

Figure 4: Chief and training officer satisfaction with firefighter licensing by department type



In interviews and listening sessions, respondents most often expressed interest in merging or aligning certification and licensure, as discussed earlier. Beyond that issue, a minority of respondents did not see large benefits to licensure. They explained that departments must do their own tracking and paperwork, and then pay an ongoing cost for little output in return.

Training delivery and usage

In this report, training delivery refers to the ways in which firefighters receive training: where the training occurs, how the training occurs, and who provides the training. This section discusses where departments receive training from, how readily available training is, whether training available is of a high quality, and how well trained firefighters are.

Training delivery and usage background

Training options

Firefighters now have more training options than in the past. Training takes place in different locations, through different methods, from different sources:

- **Location:** Training can occur within a fire department’s facilities (in-house), as well as at technical colleges, the state-run Camp Ripley, the Minnesota Department of Natural Resources Wildfire Academy, fire association conferences, and more.
- **Method:** Training may be delivered in-person, online, or through other materials and methods.
- **Source:** Training may be provided by instructors from technical colleges, private training companies, the SFMD, Homeland Security and Emergency Management (HSEM), or other sources.

Technical colleges and private providers offer both credit-based courses and customized training. Technical colleges also provide “sectional fire schools,” where firefighters receive training on multiple topics within a longer timeframe than a typical class (for example, a day of different classes). The MBFTE directly offers a

leadership development course. For the past four years, it offered mass and gross decontamination training and incident safety officer training, but those programs have now ended.

Minnesota department training sources

Departments typically rely on a mix of training providers and locations. Table 1 compares the results of the matching questions from the 1998 and 2017 surveys sent to fire chiefs:

- What were the sources of training for these firefighters in 1996 (check all that apply and indicate percentage of the total hours)?
- What were the sources of training for your firefighters in calendar year 2016? Estimate the percentage of total training hours from each source.

Table 1: Training sources for Minnesota fire departments²³

Source of training - 1996	Source of training - 2016	Avg. percent of training from source - 1996	Avg. percent of training from source - 2016
In-house training by in-house instructors	In-house training by in-house instructors	54%	51%
In-house training by technical college instructors	In-house training by public training providers	16%	21%
In-house training by free-lance/contract instructors	In-house training by private training providers	3%	12%
Other in-house training	Other in-house training	5%	5%
Technical college training at technical colleges	Technical college training at technical colleges	4%	4%
Sectional fire training	Sectional fire school	6%	4%
Other training	Other training	2%	3%
Regional fire training	Regional fire training	2%	2%
State Fire School training	--	3%	--
Industry-provided training	--	1%	--
Fire/EMS center training ²⁴	--	1%	--

²³ MAD revised the training source options for 2017 based on conversations with the SFMD and MBFTE to reflect modern terminology and availability.

²⁴ Metropolitan State University used to run a fire/EMS center, but the center no longer exists.

Overall, most training continues to be provided in-house, largely from in-house providers. In both 1996 and 2016, fire departments relied on in-house instructors for more than 50 percent of their training (54 percent in 1996 and 51 percent in 2016).

Although in-house instruction by in-house trainers was the most common source, it was rarely the only source. Only 14 departments indicated that more than 90 percent of their training came from in-house instructors.

Career departments more often used in-house instructors than paid-on-call and volunteer departments; they used in-house instructors for an average of 74 percent of their training, compared to slightly less than 50 percent for paid-on-call and volunteer departments.

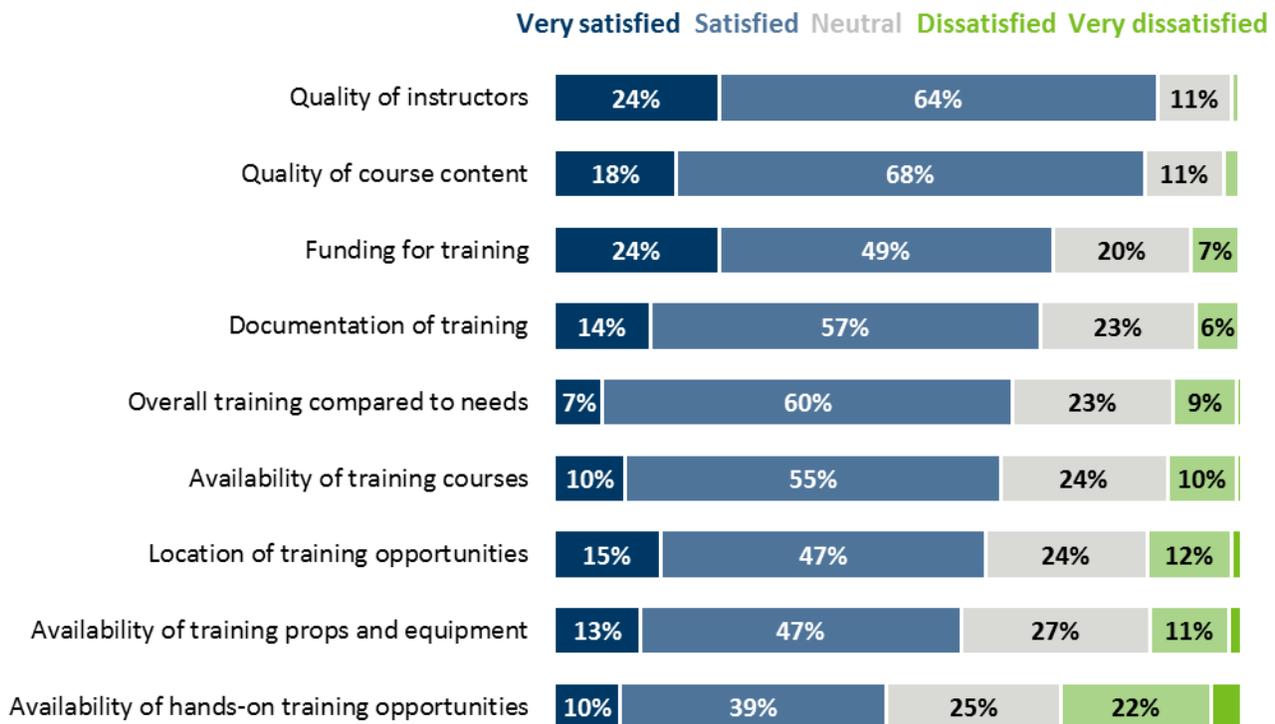
Training delivery and usage findings

In general, respondents were largely satisfied with firefighter training. This section presents overall satisfaction findings from one of the surveys, and then analyzes these and other aspects of training delivery and usage in more detail.

Figure 5 shows chief and training officer satisfaction with nine elements of training. Departments were most satisfied with the quality of instructors and course content; 88 percent of respondents were satisfied or very satisfied with instructor quality, and 86 percent rated the same for course content quality. In contrast, respondents were most dissatisfied with the availability of hands-on training opportunities (26 percent dissatisfied or very dissatisfied).

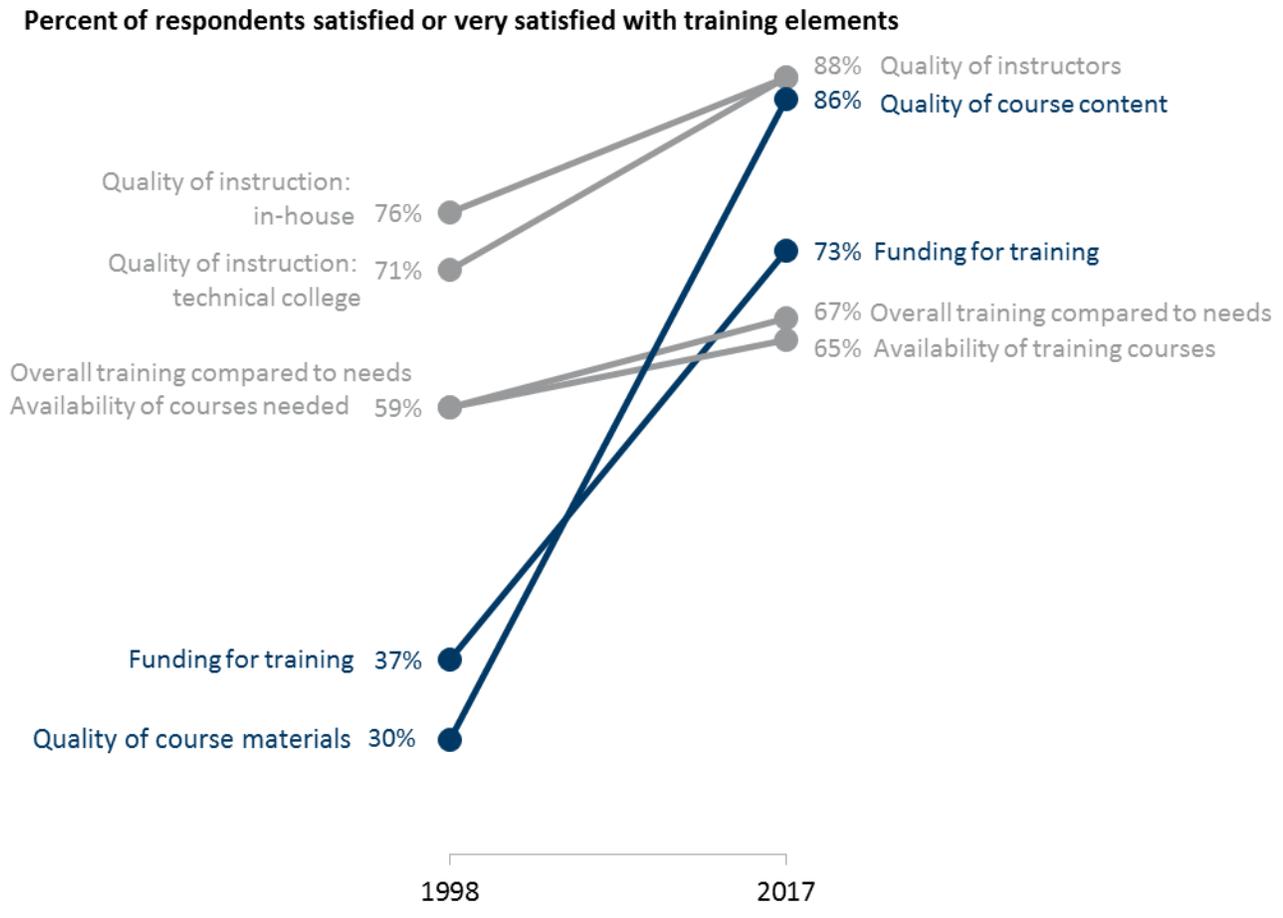
Figure 5: Chief and training officer satisfaction with elements of training

How satisfied are you with these components of training for your department?



Some of the satisfaction results differ greatly from past findings. The 1998 fire chief survey asked a similar question with fewer and slightly different options, and Figure 6 compares the two years of results. The left part of the chart shows the results for the 1998 survey, while the right shows the results from 2017.

Figure 6: Changes in department training satisfaction, 1998–2017



Overall, respondents were more satisfied with training elements in 2017 than they were in 1998. The largest changes were in course quality and funding.

Training availability

For the purposes of this study, training availability refers to whether training opportunities exist, as well as their location, time, and delivery method.

Availability has improved overall

Respondents broadly agreed that the general availability of training has improved over time. In the chief and training officer survey, 65 percent of respondents were satisfied or very satisfied with availability of training courses, an increase from 59 percent in 1998.

Respondents explained that there are now more courses available on many more topics, and with more state funding, departments said they can now bring in trainers and speakers they would not have been able to afford before. As one respondent put it, “If there is a class I need, I can find it.”

Respondents partially attributed improved availability to the advent of MBFTE funding: with more money available to pay for training, more training has been developed. Departments have also had more options to choose from since private companies began offering firefighter training within the past 20 years.

The number of trainings available—it used to be limited to bigger cities, places that had state colleges offering trainings throughout the year. Or they have a lot of sectional schools in spring or fall. Now there’s a lot more of training coming to the local regions. Especially in smaller places, so they don’t have to travel. I think that’s increased greatly. That has brought up the quality of the training. 98% of it is from the MBFTE because they’re funding it. The regional things that are coming—those things happened in the metro before but not that often because of the expense. So the MBFTE has driven in that whole bus of bringing trainings around the state.

While the overall availability of training appears to have increased, not all areas of the state have equal access to options. About a quarter of interviewees said that departments in rural parts of the state do not have as many options to choose from, and that the options they do have are further away. Likewise, 39 percent of surveyed chiefs identified “location of training opportunities” as one of their top three barriers that prevent their firefighters from being trained to ideal standards.

Even if a rural department is willing to send a firefighter to a distant class, and they can get the MBFTE to cover tuition, departments often cannot afford the travel expenses like hotels and mileage reimbursements.

A good example is the PTSD—I have seen four or five classes in the metro area. It’s getting to be a very real thing, and we’ve had some small departments around us that have really struggled with things—some of our own people have really struggled—and we watch closely for them. They continually have very good speakers down in the Minneapolis area that I’m sure that would be the place to have them because they can blanket so many people in an area like that, but if we can send somebody to it, it’s one to two guys at a cost that almost hurts our training program.

In all data collection areas, respondents suggested training areas for improved availability. Frequently suggested areas included more training on safety and physical and emotional health, refresher courses on basics for experienced firefighters, and more training for leadership on topics like administrative skills.

Departments are receiving more in-house training by external providers

The survey of chiefs and training officers showed that compared to the 1998 study, in-house instruction by external providers has increased.

In particular, training by private providers has grown significantly. In-house instruction from private providers now represents an average of 12 percent of a department’s training, compared to three percent in the 1998

study. Departments also reported receiving more in-house training by public providers; they received 21 percent of their training in-house from public providers in 2017, compared to 16 percent in 1998.

Hands-on opportunities are limited

Although overall training availability has improved, access to hands-on training remains a challenge for some departments. In the chief survey, 26 percent of respondents were dissatisfied or very dissatisfied with the availability of hands-on training opportunities, including live burns; it was the element of training where chiefs were most dissatisfied. Survey respondents also answered that this is a key challenge affecting their firefighter preparedness: 34 percent identified “availability of hands-on training opportunities (for example, live burns)” as one of their top three barriers that prevents their firefighters from being trained to their ideal standards.

The listening sessions and interviews further confirmed this issue, and highlighted that access to training props is a particular challenge in Greater Minnesota. Respondents suggested a variety of solutions: they requested better access to training trailers, more mobile training props, and additional funding to pay for their own props.

Respondents across methods discussed how critical practicing skills is to having effective firefighters. Even if firefighters attend training, they explained, they may not be effective at something until they have a chance to practice the skill in a hands-on way.

You need to chop with an axe. Some providers kill it with a PowerPoint and push them through the hands-on and they don't retain the cognitive function of how to do it. You gotta get muscle memory and repetition.

Within hands-on training, respondents most often discussed how difficult it has become to complete live burn exercises. The cost and amount of paperwork to burn a building or a vehicle has grown over time. Some respondents would like there to be fewer requirements to conduct live burns, and others asked the state to provide live burn opportunities (including trailers or live burn training centers around the state).

NFPA covers live fire training and made it stricter, mostly due to the MPCA, on doing vehicle fires. We have to strip a vehicle to nothing and the cost is expensive. It's back and forth on regulatory versus budget and what requirements to do. Live burns are awesome training but our ability to get houses to burn is extremely more difficult than ever before. Homeowners are hesitant because every house needs an asbestos inspection, and the cost can be \$200 to more than \$1,000. They'd rather just let it sit there and waste away than spend money on something they will destroy.

Training needs to be easier to complete

Another common theme across input methods was the call for training to be more flexible and easier to complete. With firefighters committing less time to the fire service, training needs to be made as flexible to their needs as possible to encourage them to train properly. If the training is not nearby and convenient, firefighters will be less inclined to attend.

The primary suggestions for making training easier to complete included:

- Offer more online training.
- Bring training closer to firefighters.
- Share more training between departments.
- Offer more flexible class options.

Offer more online training

Many respondents discussed the need for more online training options. Online training allows firefighters to complete training at a time and place that is convenient for them, which respondents believe will improve recruitment and retention. Some respondents did mention, however, that rural internet access may be a barrier to expanding online training. Respondents also invariably stressed that online training is only appropriate for certain types of content, and that in many areas it needs to be blended with a hands-on component to be effective.

Create more on-line training to meet the needs of today's volunteer firefighters. It is very important for the new generation of firefighters to balance time with the department and their young families. I recently hired 10 new firefighters and have already lost two of them to the time commitment of training.

On the chief survey in particular, some respondents encouraged the state to offer an online training system to all departments. They pointed out this would also help with documentation of training.

A state-provided solution for approved curriculum and documentation (like Target Solutions), supported with Instructor Training for the hands-on components would be AWESOME!

Bring training closer to firefighters

Many respondents requested training that was closer to their location; they were typically from departments in more rural parts of the state. They suggested both facilities located closer to them, such as regionalized fire officer schools or live burn centers, and equipment and training opportunities that would travel around the state.

These ideas had broad support. In the survey of chiefs, 85 percent of respondents supported or strongly supported the idea to “provide more state-funded rotating training opportunities around the state.” Similarly, 65 percent supported or supported the concept of state-funded regional training centers. Respondents at listening sessions and in interviews also strongly supported these ideas.

Regional course offerings for hazmat BBP, OSHA—with multiple opportunities in each area. It's silly we waste local training time doing these annual refreshers.

If there were ways to get some of the props or things that are out there—try and get them set up so they went through the state. Even if they went through on a rotation, or you just knew every quarter in your region that training was going to be coming. You might have to travel an hour and a half to get it but it would still be available.

Share more training between departments

Another common theme was the need for departments to share more training with their neighbors. Respondents discussed different ways for their departments either to conduct joint training or to better coordinate training, which they believed would make it easier for firefighters to attend. For example, departments in an area might agree on one topic for a month, and ensure that their individual trainings on it occurred at different times and dates; that way a firefighter who missed their own department’s training might be able to attend another department’s similar training.

Some respondents discussed how to share more information about training. They asked for a regional training officer networking group, the ability to share training programs regionally or statewide, a list of trainings put on by other departments, and a list of existing courses and providers.

Offer more flexible class options

With firefighters’ decreasing time availability, respondents saw a need for different course options. For example, some said training needs to be offered during the day and at night, in shorter periods of time that can fit into busy schedules, and in different learning methods. This topic came up in different areas, but was most pronounced in the listening sessions and listening session survey. More flexible training options would make it more feasible for firefighters to participate.

It needs to be made simpler to get trained. If you only get that volunteer for a little bit of time, for him to have to travel four counties to take Firefighter 1 or a seminar that only is in Hibbing or Minneapolis—do more local training. The volunteer could give you four hours this week but not two days. So make that as available as possible.

Many departments do not use online training

More trainings are being offered online, but many departments still do not use any online education. The survey asked chiefs and training officers, “Did your firefighters take any online training in calendar year 2016?” More than half (57 percent) answered no. Table 2 shows the full results.

Table 2: Departments whose firefighters took online training in 2016

Response	Departments	Percent
No	164	57%
Yes	107	37%
I don't know	15	5%
Total	286	100%

Online training usage varied based on department type. About 30 percent of volunteer and paid-on-call departments responded that their firefighters had received online training in 2016, compared to 71 percent of combination departments and 77 percent of career departments.

Training quality

In this study, training quality includes the quality of the content of the training, and the quality of the instructors providing it.

Content quality has improved significantly

Compared to the other challenges in fire service training from 1998, quality of training content has come the furthest. In the survey of chiefs, 86 percent said they were satisfied or very satisfied with the quality of course content; only 30 percent said the same in the 1998 survey, representing a 56 percentage point increase. Similarly, only seven percent of respondents chose “quality of course content” as one of their three top barriers to firefighters being trained to their ideal standards.

Respondents across methods supported this finding. They attributed the increase in quality to the standardized curricula set by the MBFTE, improvements in fire science, and better access to information with the internet. They also said that new technology allows instructors to utilize a wider variety of teaching methods in their courses than they used to. For instance, courses used to rely on overhead transparencies and “war stories,” but now there are more videos and hands-on props.

The quality of props, computerized course delivery was very good, the hands-on course delivery is much better. I don't have to go in and talk about forcible entry. I can hire a prop where people can actually force a door. The live burns are much better than they ever have been. They're safer than they were before because they're following NFPA guidelines.

Although overall quality has improved, quality is still not equal across the state. Rural departments may only have access to a few providers, if that, and they are dependent on the quality of those options. The quality of technical college programs varies from school to school, depending on who works there and their curriculum.

A minority of respondents discussed issues with differences in courses across providers. They explained that although curricula have been largely standardized, not all instructors teach the topic as thoroughly as others. Others commented that classes have become too much about teaching to certification tests.

I don't know how one group can run a Firefighter 1 class for 24 hours and another for 42 hours. They both meet NFPA standards in their interpretation.

In the listening sessions and listening session survey in particular, respondents stressed the need for training to adapt to new developments in technology and science. They discussed the benefits of simulations and virtual reality, among others. Some also mentioned the need for course methods that teach to people's different learning styles.

Instructor quality varies

Instructor quality was a common topic throughout the different data collection methods, but the responses were varied and complex. When the survey asked chiefs to rate their satisfaction of all training elements, instructor quality came out on top: 88 percent of chiefs and training officers marked satisfied or very satisfied.

This was an increase from the ratings in 1998, when 71 percent rated the same of technical college instructors, and 76 percent of in-house instructors.

Despite the overwhelmingly satisfied survey data, and some very satisfied respondents in interviews, many people discussed issues with instructor quality. Taken as a whole, input seems to indicate that instructor quality in general has improved. Respondents suggested that it has improved because of increased access to learning materials and information online, the additional funding available for training, and increased competition.

Departments are more willing to spend it because the dollars are available. In the past they had to pay x for a class directly out of their budget; today they pay y, it doesn't matter because it's paid for. But with that I think organizations like ours have beefed up the caliber of instructors. The reason we can do that is we're successful, and the dollars are available.

However, input also suggested that there is still wide variability in the quality of individual instructors. The MBFTE has a qualified instructor list, but on the whole respondents did not believe it provides enough oversight. They agreed that while there are good instructors on the list, there is simply not enough rigor in the system to weed out ineffective ones. Respondents said there is no way to know from the list which topics someone is qualified to teach, or whether someone on the list is even still teaching.

I know at colleges in Wisconsin, instructors they all have to be certified Fire Instructor 1. Not in Minnesota. There's no third-party validation of credentials, no ongoing continuing education. There's a blind trust of what this individual is teaching. Is it relevant? Is it applicable? Where is quality control in Minnesota? I've heard horror stories where someone is bored to death, where they teach outdated content. Statewide, we need a better focus on credentialing of subjects, and minimum requirements for different subjects.

Check that instructor list. Make sure the instructor list is current and that they truly meet qualifications. If they're teaching hazmat-technician level classes, and they're only certified Firefighter 1, they're kind of teaching above paygrade. They may not understand it.

The survey data supports the qualitative data to some degree. In the survey, 63 percent of chiefs and training officers said they were satisfied or very satisfied with the MBFTE instructor list. A full 30 percent, though, chose neutral. This indicates some general satisfaction, but also highlights the mixed feelings about instructor quality.

It's a real mixed bag. There's some really great ones out there. There are some people that—maybe because of relationships they have with certain training institutions, private or public—just with the demand for training, there are certain people that really shouldn't be doing it because they're not up on modern fire stuff or they're just simply not great at delivering training. There's a real wide spectrum of those people but I think for the most part it's gotten a lot better than when I started.

Although instructor quality was a common topic in the interviews and listening sessions, the survey data suggest it is not the most pressing issue facing the fire service. In the survey question asking chiefs and training officers to choose the top three barriers keeping their firefighters from being better trained, instructor quality was the least-selected option, chosen by only six percent of respondents.

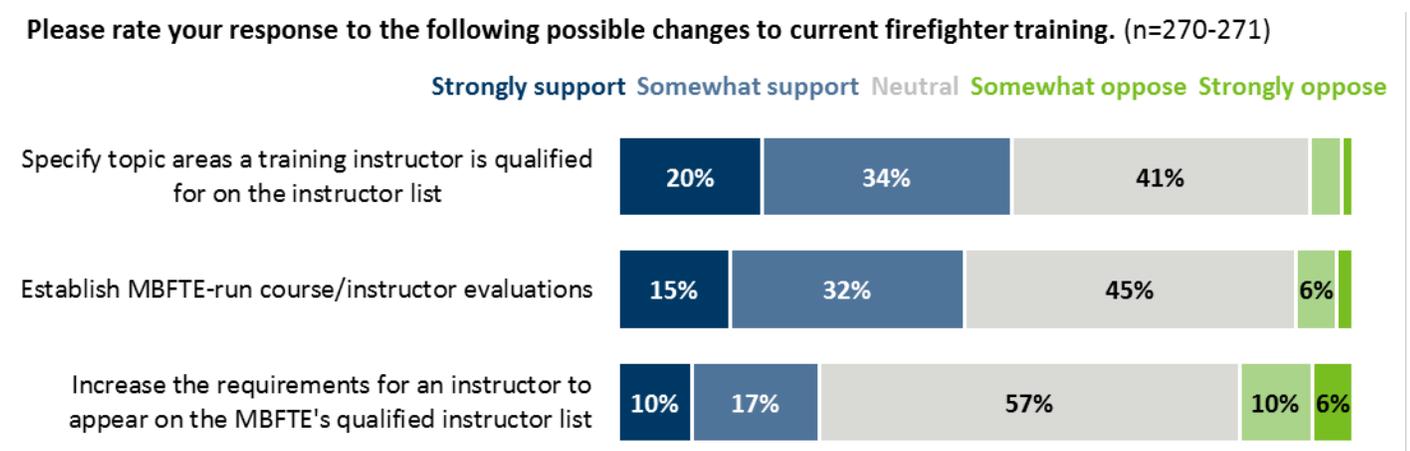
Mixed feelings on additional instructor oversight

Respondents at listening sessions and in interviews suggested different ways to increase instructor oversight. Among other things, they suggested:

- Raising the minimum requirements to be on the list.
- Specifying which topics an instructor is qualified to teach.
- Requiring ongoing education for instructors.
- Credentialing instructors.
- Providing consistent evaluations of providers.
- Creating an instructor-rating website like Yelp.

In accordance with the feedback from early interviews, the chief survey asked respondents to weigh in on potential changes to increase instructor oversight. Despite the many comments in interviews and listening sessions, though, chiefs and training officers did not heavily support the ideas. Figure 7 shows their ratings of three oversight options, two of which were supported by less than half of respondents. The least-supported option was increasing the requirements for an instructor to appear on the qualified instructor list; only 27 percent supported or strongly supported the change, and 16 percent opposed or strongly opposed the idea. While overall support for these ideas was tepid, the most popular category for all three options was neutral.

Figure 7: Chief and training officer support for potential changes to instructor oversight



Among all the mixed responses on instructor quality, and the ideas for additional oversight, some respondents pointed out a potential barrier: the MBFTE may not have the staff capacity at present to provide rigorous levels of oversight.

Firefighter preparedness

Unclear if firefighters are better trained than in the past

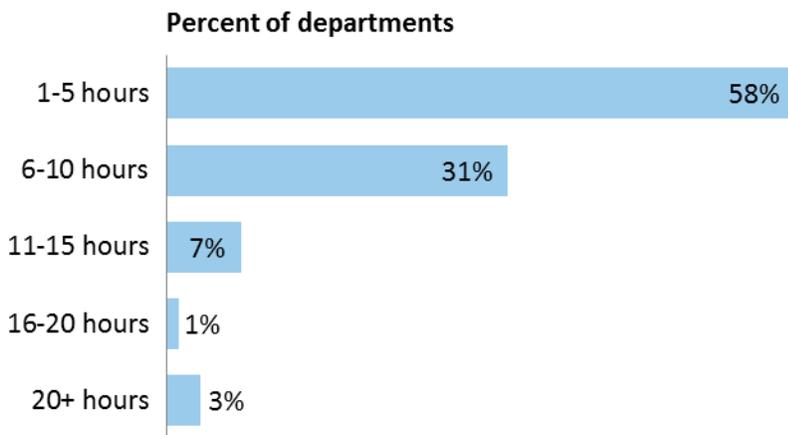
The ideal outcome of the MBFTE's existence would be that firefighters are now better trained, and therefore better prepared to do their jobs effectively. In practice, however, it is difficult to measure those types of changes.

One way to assess whether firefighters are better trained is to examine how many hours they train. Firefighters who receive more training should, in theory and to a point, be better prepared to do their jobs.

To that end, the survey of chiefs and training officers asked the average number of training hours a firefighter in their department receives. Figure 8 shows that in the majority of responding departments (58 percent), a firefighter receives an average of five or fewer hours per month. Only ten percent of departments reported that their firefighters receive more than ten hours of training per month.

Figure 8: Firefighter's average number of training hours

On average, how many hours of training per month does a firefighter in your department receive? (n=265)



Unsurprisingly, firefighters in career departments receive more training; career departments average 16.2 hours per month, while volunteer departments average 4.7 hours. The overall average came out to 6.5 hours per month. This number is almost identical to the 1998 study, which found an average of 6.6 hours.²⁵

Comparing those two numbers alone would suggest that firefighters are not training more than in the past. However, this may not be an accurate conclusion. The similar results to the 1998 study might suggest that respondents interpreted the question as how many ongoing hours of training a firefighter receives, excluding basic training. The number of initial hours has increased significantly over time, meaning the average number of training hours per month is typically higher than 6.5 hours per month for the first year or two of a firefighter's career.

Although the average ongoing number of hours of training occurring may not have significantly increased, it seems likely that a higher percentage of new firefighters have completed NFPA 1001 since the MBFTE began reimbursing departments for it. Table 3 shows that the MBFTE has funded NFPA 1001 for more than 5,800

²⁵ The 1998 study surveyed firefighters separately from fire chiefs. The firefighter survey asked how many hours of training they had taken in the past 12 months, and the average was 79 hours. Dividing 79 by 12 yields 6.6 hours per month.

students in the past five fiscal years. This is likely a higher number of firefighters who received NFPA 1001 than if the MBFTE had not offered reimbursement; however, hard data are not available to support that conclusion.

Table 3: Number of students who received NFPA 1001 reimbursement from the MBFTE, FY 2013–2017²⁶

Fiscal year	NFPA 1001 students
2013	1,609
2014	961
2015	994
2016	1,045
2017	1,200
Total	5,809

Anecdotally, respondents said that they are receiving more training than they used to as a result of the MBFTE. Departments have had the funds to complete training they would never have been able to do without supplemental funding, including both basic and more specialized trainings. They cited specific examples of trainings they were able to pay for because of the MBFTE, including live burns, specialty courses, and leadership courses. When listening session attendees were asked what was working well in fire training, MBFTE funding for NFPA 1001 was often one of the first items mentioned.

A lot of departments got training that they wouldn't have previously gotten because of the MBFTE. Or they got content experts where departments would've tried to do it themselves and half-assed it. It's led to collaboration and opened up training. There's grant money for conferences or putting on training. The MBFTE has allowed things to happen that wouldn't have happened without it, including NFPA 1001.

Funding from the MBFTE is the only reason we're able to do a lot of our trainings. The old way before that was you picked live fire training one year, then the next year auto extrication, then the next year swift water rescue. We did one expensive one a year and one cheaper. We did two trainings a year. Now, last month we did the hazmat course. This month, we have three Mondays where we're doing different courses that are funded. We're able to do more to be better trained because of that program.

The qualitative data suggest that firefighters may receive more training than in the past, but given the structure of MBFTE funding, it would be likely that the most gains have been made with the number of firefighters receiving NFPA 1001. Small, volunteer departments may not have had the funding to pay for those classes prior to the MBFTE, but again, there are no hard data to support that conclusion.

²⁶ Data provided by the MBFTE. Because the fiscal year had not ended before this report was finished, the 2017 number is a close estimate of the actual students who will receive NFPA 1001 reimbursement.

Besides hours spent in training, the effectiveness of training could be measured by how well prepared firefighters are to do their jobs effectively. However, there is no reliable metric available. In interviews, respondents offered mixed assessments of the preparedness of Minnesota's firefighters. About a third of interviewees said they believe firefighters are better trained than they used to be, and that they can respond to calls effectively. The clear trend in improved quality of training, and in the improvement in props, may also suggest that firefighters are better prepared than in the past.

The outcomes of that call—that's where you can see that training has gotten better. Saved property, quicker extrication in an auto accident, better care in a medical call. Those things in the last 15 years have gotten a lot better. Fire service as a whole has seen people step up their game.

I think your volunteer fire department that was maybe picked on 30 years ago—you're finding the quality of volunteers are up to the standard of career firefighters because they have to have same training. When a department shows up, they can't show up as fast maybe, but when they do show up their equipment and training and quality of service has improved drastically.

More than a third of interviewees, though, had more moderate responses. These interviewees thought that some departments were not as prepared as they should be. Notably, only a couple said that of their own department; most expressed concerns about surrounding departments.

I would say we do a good job of training firefighters. My career department—it comes down to resources. My department is larger: we have an ambulance, we have a bigger pie to dedicate to training, and we have a lot of different functions in one office. We have the resources, but East Overshoe doesn't.

A few interviewees had strong concerns about the preparedness of firefighters in Minnesota. They said firefighters are simply not getting enough training, or are not getting the quality of training they need to do their jobs effectively.

They're not trained to level they should be at. All we require is 160 hours of training for Firefighter 1 and 2 certification. That's ridiculously low. Some will disagree. For 160 hours, we'll put them out there and expect them to make life and death decisions. It's tough though because to ask more has been unsuccessful because people won't volunteer then. How do we deliver this training in a way to get the hours and experience in without hurting the recruitment and retention piece?

If you come up a highway in our area and get in a car wreck, our department that does the extrication and gets you out of the car, our department is really good at doing that. We have equipment, and you can be assured that you and your family are protected in our jurisdiction. Other departments around us don't have that commitment to training and don't have that type of protection afforded to you. When I was traveling I would assist departments and it's like, I'm not gonna come this way anymore. Having standards for car fire or accidents where departments are involved with extrication and patient care should

be standard. You can be sure in most areas that ambulance service is mostly equal. They have standards, EMTs and things, but fire departments are kind of lacking in that.

In summary, the data do not exist to show that the MBFTE has led to firefighters receiving more training, or being better prepared to do their jobs. The information collected for this study somewhat suggests that firefighters are not receiving much more ongoing training than they used to; as a few respondents pointed out, it may be misguided to conclude that firefighters have received more ongoing training as a result of the MBFTE because firefighters have not had additional time to commit to training. It does seem somewhat probable that more firefighters have received NFPA 1001 because of the MBFTE’s specific reimbursement for that course.

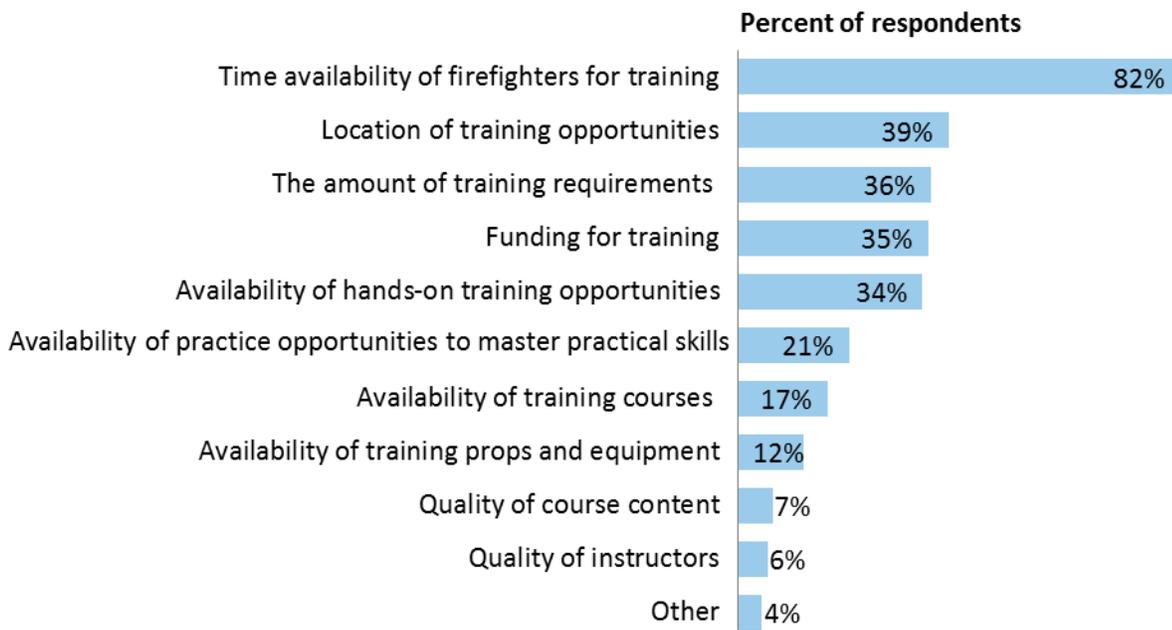
In general, though, whether firefighters are better trained because of the MBFTE likely comes down to the commitment of the department’s chief and training officer, who ultimately make all training decisions for their firefighters. Some are more committed to training, and to leveraging MBFTE support, while others do not request any reimbursement funds.

Limited time availability keeps firefighters from being better trained

Almost unanimously, respondents across data sources cited limited time availability as the biggest barrier keeping firefighters from being better trained. The survey asked fire chiefs and training officers about what was keeping their firefighters from being trained to their ideal standards, and allowed them to choose up to three of nine options. Figure 9 illustrates that respondents overwhelmingly identified “time availability of firefighters for training” as a barrier to additional training (82 percent of respondents).

Figure 9: Barriers to additional firefighter training

Please select the top three barriers that prevent your department’s firefighters from being trained to your ideal standards. (n=271)



Besides firefighter time commitment, the data show a clear grouping of top concerns. The following four barriers were all chosen by 34 to 39 percent of respondents: location of training opportunities; amount of training requirements; funding for training; and availability of hands-on training opportunities.

Interviewees likewise explained that even if departments could afford to put on more training, their staff would still not be better trained because firefighters did not want to spend additional time on training.

The question is how do we get people to train more? We have to be able to convince them they want to train more because right now people don't want to. They're willing to come to drill night but if you put on a Saturday drill, you'll only have a handful of people coming. A year ago, I knew the MBFTE had all that money coming and every single department I talked to about the additional money—the thought of having to have an additional drill night or throw a Saturday in here or there was just out of the question. Unless it was like a house fire, that's different. But to utilize money like they should, providing additional opportunities, to get guys where they'd like them to be, it's just foreign to them. They were almost upset that we asked to take more of their family or work time.

There is some support for a statewide training tracking system

Tracking was not one of the most common topics in conversations with stakeholders. The feedback they did provide in interviews largely suggested that they were satisfied with their current tracking mechanisms, and the survey supported that finding; 71 percent of chiefs and training officers were satisfied or mostly satisfied with their training documentation. In another question, though, 60 percent supported or strongly supported the idea to “create state-provided opportunities for online tracking/documentation of firefighter training.” Another 33 percent said they were neutral about the idea.

Similarly, many listening session attendees discussed the need to have better software to keep track of training because it affects ISO ratings and OSHA evaluations. They often asked the MBFTE to offer a system.

Funding

Funding background

Fire departments can draw on a variety of sources to pay for firefighter training. They largely rely on MBFTE and local municipal funds, but can also receive federal, other state, and private funding.

MBFTE funding

MBFTE funding comes from the Fire Safety Account. In 2006, the Minnesota legislature established a surcharge on homeowner and certain commercial insurance policies. The surcharge generates approximately \$13 million annually. The legislation also created the Fire Safety Account to hold the revenue, and the Fire Services Advisory Committee (FSAC) to make recommendations to the Commissioner of Public Safety on how to spend the funds. The funds can only be spent on the MBFTE, SFMD programs and staff, regional response team programs, and fire service programs with the potential for statewide impact.

The amount of money available to the MBFTE varies from year to year based on how much the surcharge collects, how much the legislature authorizes the FSAC to spend, and how much the FSAC allocates to the MBFTE. Table 4 shows the amount of money the MBFTE received for the past five fiscal years, which has varied between less than \$1.5 million to more than \$8 million.

Table 4: MBFTE funds and per-firefighter award amounts, FY 2013–2017²⁷

Fiscal year	Funds allocated to MBFTE	MBFTE per-firefighter award to departments
2013	\$1,470,000	\$105
2014	\$2,700,000	\$80
2015	\$2,700,000	\$97
2016	\$5,918,217	\$160
2017	\$8,089,000	\$200

In the past two years, the MBFTE received additional appropriations in addition to its usual funding.²⁸ The additional funding came from money that had not been appropriated from the Fire Safety Account, and from a fund balance that had been returned to the Fire Safety Account from a previous budget cycle. The additional funding is not expected to continue in future years.

The MBFTE spends its funds in a variety of ways. One is by allocating a certain amount of funds per firefighter: in FY 2017, for example, departments could submit for up to \$200 per firefighter for training expenses. Table 4 also shows the amount of the per-firefighter award for the last five fiscal years. The MBFTE only offered \$80 per firefighter in FY 2014, but was able to offer \$200 per firefighter in FY 2017. Departments are usually notified of the per-firefighter award shortly after the fiscal year has begun, which is after most departments have already had to make their budget for the year. In FY 2016, 82 percent of departments applied for and received their per-firefighter award.

Table 5 highlights some of the other activities funded by the MBFTE in FY 2016. For NFPA 1001, conference, and live burn awards, departments must apply to receive reimbursement.

²⁷ Data are from the Department of Public Safety Fire Safety Account Financial Reports.

²⁸ In 2016, the MBFTE received \$2,773,217 as a one-time appropriation. In 2017, it received \$4,287,000 as a one-time appropriation.

Table 5: MBFTE-funded activities in FY 2016

Activity	Outcome	MBFTE funding
NFPA 1001 training	1,088 firefighters trained	\$1,500,000
Live burn training	106 live burn trainings funded	\$150,000
Conference, seminar, and symposium awards	19 training opportunities funded	\$75,700
Fire Service Leadership Development training	Two 32-hour courses funded	\$39,000
Incident Safety Officer training	96 classes delivered	\$38,400

The MBFTE will reimburse departments for the cost of certain classes, as discussed in the Policy and Oversight section, as well as select other expenses. Appendix J contains the full list of reimbursable expenses. Some of the non-tuition, reimbursable expenses include:

- Backfill and overtime expenses associated with MBFTE-approved training.
- In-house instructor wages, if the instructor is on the MBFTE qualified instructor list.
- Initial certifications associated with an NFPA standard.
- Registration costs related to fire/EMS conferences, schools, and/or seminars.

After all departments have submitted their initial per-firefighter award reimbursements, the MBFTE typically has unspent funds remaining. At that point, departments are eligible to receive a redistribution of remaining funds based on the amount of expenses they submitted and the amount of reimbursement funds that remain.

Other funding sources

Municipal governments often contribute funding to local fire departments to pay for training. Besides municipal governments and the MBFTE, departments might also receive training funding from the following sources, among others:

- **DNR:** The Minnesota Department of Natural Resources has some funding available for departments, including the rural fire department assistance program.
- **EMSRB:** The Emergency Medical Services Regulatory Board will pay for fire departments to receive EMS training. However, the EMSRB receives funding from seatbelt violations, which they report are on the decline.
- **FEMA:** The Federal Emergency Management Agency has various grant programs available for fire departments, including the Assistance to Firefighters Grant program. It also runs the National Fire Academy, which provides training courses and programs to approved applicants.
- **HSEM:** The Minnesota Division of Homeland Security and Emergency Management offers different grants and training opportunities to fire departments, including the Hazardous Materials Emergency Preparedness Grant and oil spill response training.

- **NJPA:** The National Joint Purchasing Alliance uses a portion of the administration fees collected through its vendor contracts to fund training for firefighters in NJPA region five.²⁹ The fund provides approximately \$125 annually for each firefighter to use toward MBFTE-approved classes.
- **Private companies:** They occasionally pay for training for their local fire departments. For example, railroad companies have funded training for fire departments along their railways.

Funding findings

MBFTE funding has become a large percentage of departments' training budgets

Departments use a variety of funding sources to cover training expenses. To better understand how departments fund training, the survey of chiefs and training asked:

- In calendar year 2016, how much funding did your department receive for firefighter training (excluding equipment and personnel costs)? Estimate the total dollars received from each funding source.

Table 6 shows how departments funded training in 2016.³⁰ Although local governments still provided the bulk of firefighter training dollars (50 percent of all dollars reported), only about two-thirds of departments reported using local funds. In contrast, nearly every department (98 percent) reported using MBFTE funds.

²⁹ The NJPA is a self-funded governmental unit that, among other things, provides national cooperative contract purchasing services to government, education, and non-profit organizations. Region five is comprised of Cass, Crow Wing, Morrison, Todd, and Wadena counties. The MBFTE administers the fund; when region five departments submit for MBFTE per-firefighter reimbursement, the MBFTE exhausts NJPA funds before using state funds.

³⁰ Not all responding departments provided funding information. The percentages in the analysis are all percent of departments who shared budget information, not the percent of all departments who took the survey. Some departments' budget information was unusable and was excluded.

Table 6: Training funding sources in 2016³¹

Funding source	Depts. who received funds	Percent of depts.	Average dollars	Median dollars
Local government funding	162	66%	\$12,957	\$4,000
State government funding—MBFTE	241	98%	\$5,248	\$4,000
State government funding—other than MBFTE (for example, HSEM)	30	12%	\$10,581	\$1,500
Federal grants or other federal sources	9	4%	\$1,155 ³²	\$1,100
Industry funding (for example, railroad companies have paid for training for some departments)	26	11%	\$1,601 ³³	\$675
Other sources	16	6%	\$2,555	\$1,000
Total	247³⁴	--	\$16,950	\$6,000

The data reveal that funding sources have changed significantly over time. In the past, many departments used only local government funding for their training expenses. The 2016 data show this is no longer the case. While 63 percent of departments in 1998 used only local funds for training, just three departments reported the same in 2016.³⁵ All other departments reported a mix of funding sources.

The change in funding sources did not come from increased reliance on federal or industry funds. In fact, fewer departments reported federal funding in 2016 than in 1996 (four percent in 2016, compared to 11 percent in 1996), and the same percent of departments reported industry funds in both years (11 percent).

The change has instead come from an increase in state fund usage, almost all of which comes from the MBFTE. Fewer departments used to receive any state funds for training, and the money they did receive represented a small portion of their funding. In 1996, 32 percent of departments received state funding for training; of those, only 11 departments reported that the state provided ten percent or more of their training funds. However, departments can now receive funding from the MBFTE, and it is often a large part of their funding. In 2016, the

³¹ One department reported millions in local funding; this figure and department has been excluded from the analyses where they would dramatically skew the data.

³² This figure excludes one department that listed several hundred thousand dollars in federal funding. When included, the average becomes \$41,027.

³³ This figure includes one department that listed tens of thousands of dollars in industry-provided funding. When included, the average becomes \$3,463.

³⁴ Represents the number of departments that provided funding information, and not the sum of the column.

³⁵ The 1998 survey asked fire chiefs about their 1996 training budgets. Accurately comparing the two years of data is challenging because of a change in the question methodology. Specifically, the 1998 report noted that: “The great variety of responses indicated that, unfortunately, [chiefs] had many interpretations of the budget question. For example, it was not clear in many cases if payroll or equipment costs were included.” Learning from this, the 2017 question asked departments to exclude equipment and personnel costs.

average department received 63 percent of its training funding from the MBFTE, compared to 32 percent from local government.

Table 7 examines the MBFTE as a percent of departments’ 2016 training funding, and further demonstrates how large a role the MBFTE plays in department budgets. In 61 percent of departments, the MBFTE supplied more than half of their reported training funds. Even more notably, the MBFTE supplied the entire training budget for 28 percent of departments.

Table 7: MBFTE as a percent of departments’ total training funding in 2016

Percent of dept.’s training budget funded by MBFTE	Departments	Percent
0-25%	34	14%
26-50%	61	25%
51-75%	59	24%
76-99%	24	10%
100%	68	28%
Total	246	100%

Interviewees also commented on this trend. Several respondents discussed how rather than strictly treating MBFTE funding as a supplement, some municipalities and fire departments decreased municipal contributions as state contributions increased.

I remind departments that you shouldn’t negate your budget because you’re getting the reimbursement because it’s not always the same, and it may not always be there. I think that’s the primary thing. Quite a few do spend over and above the amount awarded by the MBFTE, but it seems to hold pretty true that most are right around that amount. For instance, if they get \$2,500 from the MBFTE, that’s about what they’ll spend on training. They won’t spend additional money.

Departments may not be spending more total money on training than in the past

While trends in funding sources are clear, the trends in funding amounts are more difficult to track. Based on departments’ reported funding, and the number of firefighters in each department, departments spent an average of \$428 per firefighter in 2016.³⁶ By contrast, the 1998 study calculated an average of \$335 dollars per firefighter.³⁷ Adjusted for inflation, \$335 in 1997 would have the same buying power as \$501 in 2016.³⁸ This would suggest, without great accuracy, a decrease in per-firefighter funding since 1998. However, the 1998

³⁶ This average excludes some departments that provided unusable data.

³⁷ The 1998 study used a different method to calculate their average. That study asked fire chiefs about their total budget and the average number of firefighters in their department for 1997.

³⁸ Calculated using the Bureau of Labor Statistics Consumer Price Index Inflation Calculator.

study had a less clear budget question, and some departments included personnel and equipment costs.³⁹ This may explain some of the difference in average spending between the two studies.

Departments are more satisfied with funding than before, but still want more

Respondents in all areas expressed gratitude for MBFTE funding. One of the listening sessions' questions was "What is working well and should be continued with firefighter training?" and respondents always mentioned MBFTE funding. Likewise, more than half of listening session survey respondents mentioned state funding in response to the same question.

The enthusiasm for state funding also came across strongly in the chief survey, where 73 percent of respondents were satisfied or very satisfied with funding for training. This represented a substantial increase from 1998, when only 37 percent of chiefs were satisfied or very satisfied.

The training dollars need to stay!! For small towns with little to no training budget, this helps out tremendously!!! Between paying for 1001 class and other trainings that are not able to be completed in house, the budget gets hit hard and it makes it difficult to give our guys adequate training.

Respondents across input methods not only encouraged the state to continue to provide funding, but to offer additional funds. They appreciated the funding they already receive, but they would like even more to better train their firefighters.

Despite greater funding availability now, many still said money is a problem for them. On the survey, 35 percent of chiefs and training officers chose funding as one of the top three barriers keeping their firefighters from being trained to their ideal standards. Some respondents cited a study that ranked Minnesota near the bottom of a list of how much states pay per household for firefighter training.⁴⁰

I think what needs to happen is state of Minnesota and policymakers both at state and local levels need to invest more and make commitment to invest more in firefighter training, i.e., their wellbeing. An example: according to the Minnesota Center for Fiscal Excellence, their most recent data shows that total investment at all levels of government, we rank 47th in nation in fire spending. Even though we rank 21st in population.

We need more training money—we need more dedicated funds for the MBFTE. The MBFTE has gone a long way, I know it's getting better, but I chew up MBFTE funding and I still could be using more.

³⁹ See footnote 35 for further information.

⁴⁰ Minnesota Center for Fiscal Excellence. *How Does Minnesota Compare? State Rankings of State and Local Government Revenues and Spending*. February 2016.

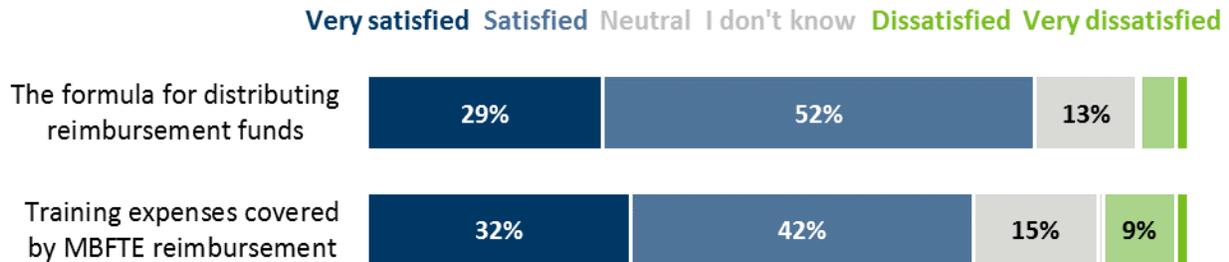
Departments are largely satisfied with MBFTE reimbursements

Across input methods, respondents were extremely satisfied with the MBFTE reimbursement process. No respondent criticized the current reimbursement process; they said it is clear what they can spend money on, and called the process streamlined, seamless, and simple. Respondents also appreciated how flexible the MBFTE has been on deciding what is reimbursable.

Although everyone praised the process, a minority expressed some dissatisfaction with the types of expenses the MBFTE will pay for. The survey of chiefs and training officers showed that 81 percent were satisfied or very satisfied with the formula for distributing reimbursement funds; 75 percent said the same of training expenses covered by MBFTE reimbursement. However, ten percent were dissatisfied or very dissatisfied with the training expenses covered. Figure 10 illustrates these figures.

Figure 10: Chief and training officer satisfaction with MBFTE funding elements

Please rate your satisfaction with the following aspects of the MBFTE. (n=269-271)



Most of the respondents who were dissatisfied were rural departments that wished that the MBFTE would pay for training travel expenses. They explained that the MBFTE will cover tuition for a course, but that the larger expense is the hotel and mileage cost of sending a firefighter to a distant class.

For people getting out of town and going to a class, the grant has helped us, but the smallest cost of going is the price of the class. If we could send two people to Minneapolis, if there was some way that we could access some of the dollars for the cost of maybe part of the room or part of the mileage—that’s what keeps us from going. I don’t expect 100% reimbursement, but if we’re going 350 miles, if the MBFTE could say, “We will pick up the cost, or anything over 100 or 150 miles we will pay mileage on. We will allow \$75 for a hotel room for someone go to a class.” And if it costs you \$100, \$120, you aren’t blowing a lot. That’s the biggest thing that holds us back from hitting a lot of these things that would really be nice to go to.

A minority of respondents also requested the MBFTE pay for backfill and overtime while staff attend training, but the MBFTE already reimburses departments for those costs if the training is MBFTE-approved.

The instability of MBFTE funding is a challenge for departments

Because of the way the originating fund is structured, departments cannot rely on a steady amount of MBFTE money from year to year. The MBFTE cannot predict how much money they will receive, and therefore neither can departments. This presents a challenge to departments, who cannot plan their own budgets to account for those fluctuations, and who may not be able to make up the funds if their MBFTE amount decreases more than expected. Departments would prefer a more reliable, predictable stream of funds.

I think the MBFTE needs to provide a steadier flow of funding. Right now we're at a high water mark. There's a lot of money flowing in. Unless there's a different strategy with how they collect and divide it up, this year will be high water, and next year it'll be right back to middle water mark. It's hard to ramp the training up and then not see those resources again for some period of time and plan your training around it. While I really appreciate the money coming in, it's a really hard way to manage long-term planning.

Overall model findings

This section provides findings related to the fire service model and fire training model. Overall, this study found that:

- The fire service model is affecting training.
- Volunteer departments face ongoing staffing shortages.
- Fire departments are integrating EMS into their identity.
- Elected department leadership may be affecting training quality.
- The training model serves the goals of the MBFTE.
- The training model serves the needs of firefighters.
- The training model is positioned to serve the future service model.

Fire service model is affecting training

During this study of firefighter training, most respondents discussed issues with the fire service model as a whole, and how it intersected with training.

Volunteer departments face ongoing staffing shortages

Respondents frequently expressed concern that the state relies on so many non-career firefighters, and that there are so many fire departments within the state. Some did not see the current blend of those two factors as sustainable in the long-term.

With as many departments as the state has, respondents said there will be too few volunteers willing to work for free or low pay in a position that requires significant amounts of time, particularly with the amount of training in the first couple of years. Respondents said that departments are closing down or struggling to maintain the staffing levels they need. They predicted that the state would need to shift away from the volunteer model over time.

Minnesota is number two or three in the amount of volunteers per capita. With this recruitment retention issue, we're feeling it pretty heavily. We have fire departments shutting their doors because they can't get volunteers. We're not figuring out the solutions. Some of it is getting newer guys to get in, or maybe getting away from volunteers. Where you have a call and no one shows up. It's gotta be biggest issue in the next 5 to 10 years. My fire department in 1995, there was a 40 member fire department with a three-year waiting list. I'm fortunate right now that I'm up to 20 total. And I'm the exception—most other departments are struggling for the 10 minimum to keep their doors open.

How many departments do we really need? When you look at police department numbers, a lot of smaller townships contract with the sheriff. Compare that to fire departments. Why do they all need a ladder truck or two to three engines? A lot of departments are going to a part-time staffing model—a lot of people are working for two to three departments but each department has gear, and has to pay for a physical for that firefighter. You put 10 grand into a firefighter who works 20 hours in each department—why not just let them share equipment among departments or make some people full-time?

Many respondents believed that more departments will need to share more services, hire more paid staff, and/or consolidate. They explained that the staffing challenge and the expansion of roles will mean departments have to start working together more to provide the level of service that their communities expect.

Other respondents had suggestions around creating different types of firefighters or departments to help address staffing challenges. By setting different expectations for different groups, respondents hoped to maintain the current volunteer model.

I've been approached by a local department and he said I have some firefighters in the 1001 program now, but I've got people that would be on our fire department that want to just run the pump or whatever. They don't want to climb a ladder or go into a fire. I need them in the daytime but I can't put them on because the minimum level of training is the 100 some hours. They're not interested in taking that volume of training. We've talked about the potential for supplying a more basic firefighting course which may be less hours. It wouldn't cover 1001 but would still let them participate on the fire ground, where they could do everything up to the point of going into a fire. They can set a ladder, but are not wearing SCVAs, not going into burning buildings or onto roofs. And in outstate Minnesota that might be what's needed in certain cases.

Regardless of their suggestions for how to address it, most respondents agreed that the current volunteer-heavy fire service model is not going to last long as it is.

Fire departments are integrating EMS into their identity

Respondents often spoke about how fire departments spend much more time on medical calls than on fire calls, a trend that the data show very clearly. Not all fire departments provide emergency medical services, but for

those that do, adjusting their identity and structure and training to incorporate EMS is an ongoing challenge. Fire department training and equipment was largely designed for fighting fires, but as one respondent put it:

Firefighter is almost kind of a misnomer when you break down what we actually do every day. We hang onto that term but fire is actually one of the smallest categories of what we go through.

Medical calls now comprise most of a fire department's responses. In response to this, the MBFTE recently began reimbursing departments for medical training courses that have been approved by the Emergency Medical Services Regulatory Board (EMSRB). The EMSRB also pays for departments to receive EMS training, but their funding comes from seatbelt violations, which staff say are on the decline.

As medical calls become an even more prominent role for firefighters, departments will need to learn how to staff and equip themselves accordingly. These decisions will in turn affect the training needs and decisions they will make.

Currently we require any department wanting full reimbursement for sending their new members through an established Firefighter 1/Firefighter 2/Hazmat Operations class to spend nearly 5 months in class to learn curriculum that is grossly outdated when compared to the actual call volume of today's fire departments. We fight very few fires!! However, this is the primary issue that we consistently throw at these new members. By the time they're done with class, they think they are riding "Ladder 49" and on their way to the "Big One," but the next pager tones to drop are to simply go help grandma get up from the floor she has found herself on.... I'm proposing instead of Firefighter 1/Firefighter 2/Hazmat Operations that it should be Firefighter 1/Firefighter 2/Emergency Responder. Emergency medical responses vastly outnumber all other calls combined. And yet our current curriculum spends approximately 15 minutes covering the subject.

How do we keep our relevancy as a fire department in our community with the changes that are happening in EMS? People are serving our community in EMS, which we've always done, but someone else is now doing it. So what's the purpose of the fire department? Fires are 10% of what we do. I don't need 50 people or two stations to manage the occasional fire. We have to get into this conversation and find out how we are part of the non-911 world. We gotta figure out a way to advance the conversation around EMS in our state so at a legislative level that we're all looking to build a solution that defends and reinforces the relevancy of the fire service in the community.

Elected department leadership may be affecting training quality

Many respondents explained that many departments still elect their leaders, including their chief and training officer. They expressed concern over this selection process because they believed it sometimes results in someone unqualified becoming responsible for training decisions. Several respondents gave examples of firefighters who had become training officers simply because they had missed the election meeting, and were given an unwanted duty that they may or may not have been well suited or well qualified for.

A big problem in volunteer departments is the chiefs are voted in by members of the fire department. What company has the staff vote for the CEO? Who is going to vote for the chief that requires more training? Or vote to lessen the training requirements and make the beer less costly? There should be a fire board or outside entity that selects the chief.

Training model serves the goals of the MBFTE

MBFTE Mission Statement: *The mission of the Minnesota Board of Firefighter Training and Education is to promote excellence in the fire service by funding standardized training and through the licensing of firefighters in Minnesota.*

MBFTE Vision: *The Minnesota Board of Firefighter Training and Education supports every firefighter's training and preparation to perform at the highest level in service to their communities.*

The training model seems to be meeting the goals of the MBFTE. The structure allows the MBFTE to recommend and fund what it views as a safe amount of initial and ongoing training for all firefighters to promote excellence in the fire service.

Not all firefighters are trained the ideal amount. However, this is because of issues with the non-career fire service model, and not because of issues in the training model itself. The most significant barrier to firefighters receiving more training is a lack of sufficient time for firefighters to dedicate to training. With its current role, the MBFTE cannot directly influence that problem.

Respondents often identified insufficient funding as another barrier keeping departments from reaching their ideal training goals; when departments cannot reach their training goals, the MBFTE is not reaching its goal of supporting firefighter training to perform at the highest level of service. Providing more funding would theoretically allow more training to occur, and would therefore help firefighters provide better service. Even if the MBFTE increased its funding, though, many non-career departments would struggle to train more because of limited firefighter time availability.

Training model serves the needs of firefighters

The existing training model—local decision making that is partially guided and funded by the state—generally seems to meet the current needs of Minnesota's fire service. Across input methods, most respondents did not want an overhaul of the model. Some respondents suggested that the state take over firefighter training more fully, but they comprised a small minority. Most respondents instead recommended smaller-scale changes to the existing model.

The largest area of conflict between fire service needs and the fire training model is the amount of initial training recommended by the MBFTE. The hours to complete NFPA 1001 do not match the amount of time many potential firefighters are willing to offer in exchange for low or no pay. This lack of alignment in the model is making it difficult for departments to maintain appropriate staffing levels, and is therefore not meeting departments' needs.

However, the initial training seems to be serving the preparedness needs of firefighters. NFPA 1001 is a nationally-recognized standard used by many fire departments and by other states (see Appendix G), and most respondents largely supported NFPA 1001 as the standard. Although a significant percent of rural respondents said there is too much of a focus on urban tactics in the course, the majority believed that 1001 otherwise covers the material needed to become a firefighter. Respondents most often took issue with the number of hours to complete 1001, and not the overall content of the course.

The current model requirements may conflict with departments' staffing needs, but it aligns with firefighters' preparedness and safety needs.

Training model is positioned to serve the future service model

Respondents explained that the amount of training requirements has increased over time. Given current trends, it seems likely that requirements and expectations will continue to increase. Medical calls will probably become an even larger proportion of calls as fire prevention improves and the population ages. Rapid advances in building, vehicle, and other technology will require ongoing refresher training for firefighters to learn how to incorporate new science and technology into their tactics. An increasing awareness and dedication to safety and wellness will require more training to keep firefighters informed, and the number of new roles added within the past two decades makes it seem probable that fire departments will be expected to serve more roles in the future.

The training model is well-structured to continue to support departments as requirements and expectations change. State funding and guidance will help departments meet their training needs, while allowing departments to decide for themselves how to reach their goals.

As training needs accelerate and evolve, the time requirements for training will increase. Study participants made it clear that the time availability of non-career firefighters will almost certainly not. This continued conflict between the supply and demand of firefighter time will likely contribute to a shift away from the current fire service model. Some of the study participants said their departments have already begun to share more services with each other, to consolidate, and to switch to more paid staff.

The existing training model is well-positioned to align with those future service models. The existing training model is flexible enough to adapt to the changing fire service model.

MBFTE accomplishments and remaining challenges

The MBFTE was created to address some of the challenges discovered in the 1998 report. The key challenges in 1998 included:

- Insufficient local-level funding.
- Inadequate curriculum standards.
- Inconsistent quality of instruction.

- Unclear accountability for the uses of current funding.
- Inadequate access to needed training: funding, travel distance, availability of classes.

The MBFTE’s statutory duties include:

1. Review fire service training needs and make recommendations on training to Minnesota fire service organizations.
2. Establish standards for educational programs for the fire service and develop procedures for continuing oversight of the programs.
3. Establish qualifications for fire service training instructors in programs.
4. Establish standards under which reimbursement will be provided for training and education.

This section reviews how well the MBFTE has addressed the challenges from 1998, and which challenges remain. It also explores the existing strategic plan of the MBFTE.

Departments are generally extremely satisfied with the MBFTE

Respondents were effusive in their praise for the MBFTE. They were generally very satisfied with different elements of the MBFTE: the ease of the reimbursement process, the training guidance offered by the state, the curriculum standards, and more. Their largest areas of dissatisfaction involved which expenses are reimbursable, and the effectiveness of the qualified instructor list.

In different areas, respondents requested that the MBFTE offer even more support than they currently do. They wanted more funding, more guidance, and in some cases, more oversight. However, respondents also realized that the MBFTE has limited funding and staff capacity. The fact that those were their concerns speaks well of the MBFTE’s effectiveness to date.

I think MBFTE is one of most efficient programs in government. They turn around reimbursement within a couple of days. And they’re super receptive. Their recordkeeping is stellar.

Communication is always key but the Fire Marshal and MBFTE are doing a great job. We’re leaps and bounds ahead of where it used to be when I just started. They’ve improved annually.

Quality of course content has improved

The study results show that respondents are significantly more satisfied with course content than in the past. In particular, the survey results showed that this was the area of greatest improvement since the 1998 study. Respondents agreed the MBFTE’s curriculum standards helped address this issue.

Availability of training has improved

The results of this study show that overall availability of courses has improved. More classes are available through more methods than before. Some respondents attributed this to the amounts of money made available by the MBFTE, and the logic seems plausible.

A convenient training location has long been an issue, particularly for rural departments. The MBFTE did not directly encourage providers to offer more training in more remote areas, but it did begin offering reimbursements for departments to bring external providers to their stations. The data show that departments receive more in-house training from external providers than in the past, which is likely due in part to the MBFTE reimbursing departments for these costs. While the location issue may be less significant than in the past, respondents agreed that it is still a key barrier to getting firefighters better trained.

Firefighters may be training somewhat more than in the past

In interviews, respondents mostly agreed that firefighters receive more training than in the past because of the MBFTE's financial assistance. They offered specific examples of ways their departments had increased their training. However, the survey data do not show an overall increase in the average number of hours a firefighter receives per month. The data also show that firefighter time commitment is the top issue limiting training hours. Overall, it is difficult to conclude that firefighters receive more ongoing training than in the past.

The data do not exist to show that more firefighters have received NFPA 1001 than in the past, but it does seem safe to assume that this is the case.

State share of training costs has increased

The 1998 study recommended the following: "Increase the state share of costs for firefighter training through funding of the firefighter training cost reimbursement program and board operation." The results of this study show that this has definitely occurred. Nearly every department in the state requests MBFTE funding, and state funding has become the largest or only source of training funding for many departments.

Some respondents questioned whether the ratio has changed too much; several said that MBFTE funding should only supplant local funds, not replace them. They expressed concern that this puts departments at risk of having insufficient funding for their training needs, given the unstable amount of MBFTE funding from year to year.

Funding satisfaction has improved, but is still a key issue

Department satisfaction with funding improved significantly between 1998 and 2017. Given the responses provided by stakeholders, this was almost entirely due to the advent of MBFTE funding. Respondents did not

mention they receive more funding from other sources, nor did the survey data show that that was the case. Furthermore, departments are now very clear on which expenses are reimbursable with state funds.

While satisfaction has improved, it is still one of the key barriers preventing firefighters from being better trained.

Instructor quality is still an issue

Although the MBFTE created a qualified instructor list, respondents said that the list has had a limited effect on ensuring instructor quality. Respondents agreed there while there are quality instructors currently teaching, there is wide variability. However, this does not appear to be one of the more significant issues affecting how well firefighters are trained.

Access to hands-on training is a growing issue

Respondents stressed how critical hands-on training is for effective firefighter training. Although new props are available to help firefighters train, they are too expensive for most departments to purchase themselves. Similarly, conducting live burns has become more costly and time consuming. Some called on the MBFTE to help departments with this issue.

Instability of MBFTE funding is a new challenge

The current changes in funding amounts from year to year makes planning training and budgets difficult for departments. Because departments are now much more reliant on state funds than in the past, an unexpected decline in MBFTE funding could limit the amount of training departments can afford to conduct.

Other considerations

Within the last year, both the MBFTE and the SFMD have revised their strategic plans. Strategic plans set a course of action for three to five years to build upon and improve organizational effectiveness. The results of this study and the strategic plans should be considered in future fire service training conversations.

MBFTE strategic plan

The MBFTE revised their strategic plan in September 2016. The result is a list of seven strategic initiatives that will be used to guide the work of the Board and strengthen firefighter training in the future.

Seven Strategic Initiatives⁴¹

- Move toward 100 percent of Minnesota firefighters trained to level of NFPA 1001.
- Improve access to funding for all fire departments.
- Maintain high standards for instructor and course quality.
- Promote leadership development in the Minnesota fire service.
- Improve two-way communication with the Minnesota fire service.
- Increase the number of licensed firefighters in the state.
- Prepare and support MBFTE Board members to enable them to serve effectively.

The MBFTE Board sees the expansion of NFPA 1001 training to all firefighters as one of its top budgetary priorities, but they recognize barriers to getting there. One barrier is the difficulty in communicating to all fire departments about the availability of training dollars. Their focus will be to create plan that encourages multiple avenues for communication. The second barrier is the same issue many of the study participants identified: the amount of time training takes and the difficulty to attend classroom courses, especially if it competes with personal time.

The MBFTE will focus on instructor quality by developing a process for assessing the qualified instructor list and by instituting parameters to maintain qualified instructor status. They are also considering ways to collect course evaluation information or to establish an online survey tool.

The MBFTE is looking to increase the opportunities for leadership development within Minnesota's fire service. They intend to grow the current MBFTE leadership program, and to turn the MBFTE into a communication hub for other leadership development opportunities.

The MBFTE will also focus on expanding the number of licensed firefighters in the state. The board members believe there are benefits to being a licensed firefighter such as increasing job mobility, conveying a professional image, and limiting liability. They acknowledge there is confusion about licensure and certification and that they will take an active role to clarify the differences.

Finally, the MBFTE will create and provide materials to orient new board members to the board mission and membership roles and responsibilities. They will provide data to indicate progress on the seven strategic initiatives and criteria to prioritize initiative funding.

SFMD strategic plan

The State Fire Marshal Division finalized their latest strategic plan in August 2016.⁴² The planning process included an online survey of agencies and organizations that use SFMD services, interviews of elected fire service organization leaders, and SFMD employee and manager interviews and working sessions.

⁴¹ Minnesota Board of Firefighter Training and Education. *MBFTE Strategic Plan 2016*. Accessed on May 25, 2017. <http://www.mbfte.org/forms/StrategicPlan2016.pdf>.

⁴² Minnesota State Fire Marshal Division. *2017–2020 Strategic Plan*. Martin Scheerer and Charles A. Weinstein, Ethical Leaders in Action. August 15, 2016.

The SFMD mission is “to protect lives and property by fostering a fire-safe environment through investigation, enforcement, regulation, data collection and public education.”

Four strategic recommendations and opportunities were identified as a result of the strategic planning process:

1. Internal staff development.
2. Investigations and interface with criminal enforcement.
3. Solidifying role supporting Minnesota’s fire service.
4. Considered policy leadership.

Of the four recommendations and opportunities, the third has implications for the SFMD’s role in firefighter training. The following key actions and opportunities require more investigation before expanding the role of the SFMD to support Minnesota’s fire service:

- Expanding fire suppression and rescue training; becoming a premier provider of training services;
- Coordinating with Minnesota State Colleges and Universities (MnSCU) and other agencies that train firefighters;
- Evaluating the need for and possibly creating a state fire academy or a Firefighter 1 and 2 fire academy;
- Providing a clearinghouse for utilization of the various trailers, props, and other assets operated by state and regional organizations; and
- Evaluating the impact of combining or otherwise aligning firefighter licensure and certification operations to reduce total expenditure of public resources without reducing the level of service to stakeholders or the level of firefighter preparedness that is assured by sound testing.

Recommendations

Given the findings highlighted in this report, MAD provides the following policy and oversight recommendations to the MBFTE and the SFMD.

Policy and oversight recommendations

Continue to encourage baseline training

The MBFTE should continue to encourage new firefighters to complete standard training; currently the MBFTE suggests NFPA 1001, which is a national standard often recommended by other states. The most common content complaint from respondents about NFPA 1001 was that it focuses too much on urban tactics, but many usually referenced high-rise tactics, which actually apply to any building three stories or taller. The MBFTE could also encourage fire departments to participate in NFPA standards setting, and vote to include the rural chapter in NFPA 1001.

Some respondents suggested reducing initial training requirements to better align with non-career firefighter time availability. Ideas like giving firefighters more time to complete NFPA 1001 and still receive MBFTE reimbursement, or developing a new model of exterior-only firefighters would better align training standards

with non-career firefighter time availability. Without the entirety of NFPA 1001, though, firefighters cannot serve many of the roles that a department needs. In addition, with fewer non-career firefighters responding to calls, each firefighter needs to be able to play as many roles as they can to be flexible on the scene.

With a few exceptions, respondents did not believe that the amount of content in NFPA 1001 is inappropriate or excessive; they mostly thought that NFPA 1001 has the information firefighters need to do their job safely. Reducing requirements might help with recruitment, but it would not ultimately address the key staffing challenge: departments need to have enough firefighters to respond to any call at any time, and effectively serve the needs of that call.

Provide additional training guidance

The MBFTE should consider providing additional guidance to departments on training. Respondents appreciated the suggested 11 core elements, but the MBFTE could develop suggested training tracks for leadership development, and for general firefighter development beyond NFPA 1001.

The MBFTE could also better promote and advertise the guidance they already offer. For example, the MBFTE provides a list of minimum federal and state training requirements, but some respondents to this study did not know it existed; they requested a document exactly like the MBFTE's list.

Continue with plans to improve instructor oversight

Although instructor quality is not the most pressing issue identified by respondents, improving oversight would be relatively easy to accomplish, and may not require large amounts of additional funding. Potential oversight changes proposed on the chief and training officer survey did not receive overwhelming support, but they did not receive overwhelming opposition either. In other participation methods, respondents encouraged the MBFTE to make changes to ensure instructor quality.

The MBFTE 2016 strategic plan contained several potential ways to improve instructor oversight. The ideas discussed included:

- “Review and update qualified instructor list. Establish recurring process for maintaining list integrity.
- Review and update qualified class list. Use NFPA standards and EMSRB approval as review criteria.
- Use course evaluations as one standard. Establish online survey tool?
- Training committee must establish parameters for instructors. E.g., how recently has the instructor taught the course? Continuing education requirement?
- Establish appropriate due process for instructor eligibility determinations.”

The MBFTE could also explore using or developing a Yelp or Rate My Professor type system for instructors that would allow course attendees to provide comments on instructor quality.⁴³ Regardless of the specific method

⁴³ On Yelp, any individual can rate a restaurant or other venue and provide public comments. Other users can then see an average score for the venue and read others' comments. Rate My Professor allows students to rate their professors on different criteria and to provide public comments for others to view.

used, the MBFTE should continue its work on improving oversight to improve instructor quality. Evaluations could also help show whether or not training is improving firefighter skills.

Training delivery and usage recommendations

Offer a statewide, online training and tracking system

The MBFTE should offer an online training and tracking system to all Minnesota fire departments. Although most respondents agreed that more online training would help with current recruitment and retention efforts, access to these tools is still limited. More than half of surveyed chiefs and training officers said their firefighters received no online training in 2016. While many departments likely want to offer some online training, smaller departments likely cannot afford some of the more comprehensive systems. By offering the system statewide, the MBFTE could dramatically increase the number of departments able to offer online training, and also continue to standardize curricula.

Because online training often needs to be combined with hands-on components, the online system could also offer training ideas for drills, scenarios, and more. It could also allow fire departments to upload their own training materials for others to view and use. As firefighters have less time to dedicate to the fire service and to training, including fire leaders, statewide guidance and a shared training repository could make providing in-house training easier and more standardized.

Implementing a statewide online training system would also help the state and departments better track their training. The state would have better metrics on training and the MBFTE's impact, and departments would have a central place to track their training, which would help them with their ISO and OSHA evaluations.

Purchasing or developing a system would be a significant expense, but it would also have a significant, positive impact on many firefighters and departments. The MBFTE should engage chiefs as they explore options to ensure they understand the needs of the fire service, and should offer training to departments on how to use any new system. The MBFTE could consider a phased-in approach, and/or piloting the system with a limited number of departments.

One challenge with this solution would be limited internet access in parts of Minnesota; Appendix K shows a map of broadband internet access across the state. Not all firefighters have access to strong internet connections at home, or have the tools to access online training.

Offer more props and hands-on opportunities

The SFMD and MBFTE should offer more props and hands-on training opportunities around the state. Like online training, many types of props and equipment are too expensive for departments to acquire themselves. The types of opportunities and props could be coordinated with the types of training offered in the online system, giving departments blended learning experiences. In deciding which types of props to obtain and opportunities to create, the MBFTE should engage fire departments to learn more about their specific needs.

Explore ways to make live burns more feasible

The MBFTE should explore ways to make it easier for firefighters to participate in live burns. Respondents explained that live burns are both one of the best learning opportunities for firefighters, and are a requirement for a firefighter to receive initial firefighter certification. The MBFTE already provides a packet and checklist of the steps of creating a live burn opportunity, which it should continue to offer and update.

Although many respondents asked for fewer live burn regulations, the MBFTE would likely face significant barriers in attempting to reduce requirements. Instead the MBFTE could explore other options to make live burns more feasible, including:

- Change budget priorities to offer additional funding for live burns.
- Assist departments with the paperwork to complete live burns, or offer guidance on completing the administrative work.
- Try to negotiate with state agencies for a shorter version of the forms for live burns.
- Encourage municipalities to fund shared, regional live burn opportunities.

Encourage and support shared training

Departments often acknowledged they need to do more shared training with their neighbors. Although this is best organized at the local level, the MBFTE could explore ways to encourage and support shared training. It could offer best practices and/or ideas for shared training.

The MBFTE could also further develop and promote its existing training calendar. The more departments that use the calendar, the more useful the calendar will become, which highlights the need for the MBFTE to better advertise the calendar. The MBFTE could make it easier for departments to add their own events to the calendar, and to receive updates. Currently departments must go check the calendar for new events. The MBFTE could explore ways to let departments receive email updates on trainings added in their area or on certain topics.

Continue to support safety-focused training

The MBFTE already funds regional training opportunities on physical and emotional health. Given the growing focus and concerns about safety and wellness, the MBFTE should continue to offer these opportunities, and could encourage providers to offer more safety-oriented classes.

Funding recommendations

Explore methods to stabilize MBFTE per-firefighter awards

The MBFTE should explore ways to stabilize the per-firefighter awards from year to year. Guaranteeing a set amount to fire departments each year would be a challenge because of the rules governing the Fire Safety

Account, but, if possible, the MBFTE should find a way to offer a consistent amount. This would make it easier for fire departments to plan their own budgets and training goals.

Overall recommendations

Continue to support shared services

In general, the SFMD and MBFTE should support more shared services between departments. The Training Delivery and Usage Recommendations section described ways to encourage shared training specifically, but the SFMD should promote any form of shared services. Sharing services is one way for fire departments to address their current challenges, including the dominant staffing challenge. The SFMD already offers the service planning grant program, formerly called the shared services grant; it should continue to offer both the grant program and guidance to departments who are considering sharing services.

Explore ways to measure training effectiveness

The MBFTE funds and provides many different types of training. However, there is little research available that examines the ultimate impact of some of those trainings, or how much better prepared firefighters are as a result of attending a given training. The MBFTE should explore ways to measure the impact of training to ensure that the trainings it funds have an impact. Offering training evaluations and a statewide online training system would make it easier to track these metrics. The MBFTE could also consider using a Results-Based Accountability (RBA) approach to identify relevant performance measures.⁴⁴

Adapt to the changing fire service model

Training needs are based on the fire service model needs. To that end, the MBFTE should continue to assess how the fire service model is changing, and how to best serve the training needs of firefighters. For example, as fire departments respond to more medical than fire calls, the MBFTE could offer or fund more medically focused training. As departments have fewer responders on the scene, the MBFTE could promote courses that teach tactics based on these scenarios. These are not specifically recommended options, but rather illustrations on how training and the MBFTE may need to adapt to changes in the fire service.

Respondents said that the MBFTE has become a trusted, valued partner for fire departments. The fire service is changing, and the MBFTE and SFMD can and should help departments with their training during the transition.

⁴⁴ In the RBA framework, the important questions about any service's or program's performance are: *How much did we do? How well did we do it? Is anyone better off?* Source: Friedman, Mark. *Trying hard is not good enough: How to produce measurable improvements for customers and communities*. Santa Fe, NM: FPSI Publishing, 2005.

Provider recommendations

Some of the findings point to recommendations not for the SFMD or MBFTE, but for fire service training providers. The following list contains a brief summary of some of the more common training-related requests from respondents during this study:

- **Flexible options:** Respondents often talked about the need for courses at different times of the day or week. For example, not all of their firefighters can attend daytime classes.
- **Hands-on activities:** Respondents stressed how critical it is to have hands-on activities. This is both more interesting for firefighters, and often an important part of learning a skill.
- **Safety and wellness classes:** Firefighters are increasingly concerned with their safety and wellness. Respondents said that they are not always dutiful about learning about these topics, but that they need to receive more training on them.
- **Options that incorporate new technology and science:** Respondents often mentioned how critical it is for trainings to stay up to date on the latest technologies and fire science.
- **Options for experienced firefighters:** Respondents suggested courses oriented at experienced firefighters, for instance a Firefighter 1 and 2 refresher course. Experienced firefighters may not want to attend the entirety of Firefighter 1 and 2, but would like to learn about updated tactics and be reminded of firefighter basics.
- **Encourage shared training among departments:** During work with departments, providers should encourage them to share training opportunities with their neighbors. For example, a provider could offer the same course on different nights of the same week at different departments; this would allow firefighters to attend another department's training if they missed their own.
- **Methods for different learning styles:** Respondents discussed how courses need teaching approaches that can accommodate firefighters' different learning styles.

Acronyms

Acronym	Meaning
DNR	Department of Natural Resources
EMS	Emergency Medical Services
EMSRB	Emergency Medical Services Regulatory Board
EMT	Emergency Medical Technician
EMR	Emergency Medical Responder
FEMA	Federal Emergency Management Agency
FSAC	Fire Service Advisory Committee
HSEM	Homeland Security and Emergency Management
IFSAC	International Fire Service Accreditation Congress
ISO	Insurance Services Office
MAD	Management Analysis and Development
MBFTE	Minnesota Board of Firefighter Training and Education
MFSCB	Minnesota Fire Service Certification Board
NFPA	National Fire Protection Association
NJPA	National Joint Powers Alliance
OSHA	Occupational Safety and Health Administration
SFMD	State Fire Marshal Division

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Appendix A: 1998 Fire Training Report

executive summary

The following is the executive summary from the "Report on Firefighter Training to the 1998 Legislature" by the Firefighter Training Study Committee:

The 1997 Minnesota Legislature created the Firefighter Training Study Committee [Laws 1997, Ch. 239, Art. 2, Sec. 9] to study firefighter training needs and options and to report findings and recommendations, including any changes in statutes required to implement the committee's recommendations. The committee was to consider funding of training, the current delivery system, selection and evaluation of instructors, levels of service and any need for standardized training, federal and state laws that affect firefighter training, a system for reimbursing local jurisdictions for training programs, and need for centralized administrative direction of training programs. This report summarizes the data gathering efforts and processes used by the committee as well as the findings and recommendations.

The committee conducted five public meetings during October and November in Redwood Falls, Grand Rapids, Detroit Lakes, St. Cloud, and Rosemount. The public meetings were attended by representatives from 102 fire departments. Two questionnaires (Fire Chief Questionnaire and Firefighter Questionnaire) were sent to fire departments statewide, asking about the status of their training and sense of need and preferences for changes. About one of every four departments (204 of 795) responded to the Fire Chief Questionnaire, and about one of every eight firefighters (2,365 of 19,500) responded to the Firefighter Questionnaire. Additional contacts were made with fire service organizations, city and township officials, insurance industry representatives, education providers, and others. A draft report was circulated for public comment for three weeks in December and January, with a copy sent to every fire department and a copy posted on the Internet. Each committee member received a copy of all public comments. The committee met to discuss the public comments and made decisions about changes to the draft report based on the comments. The committee's decisions are reflected in this final report.

The committee heard that current firefighter training works well in some respects. In parts of the state there is general satisfaction with training quality and availability, notably some technical college training and most in-house training. However, in many parts of the state, consistent quality, adequate funding, and access to needed training are not present.

A strong conclusion from the study is that fire service personnel favor continued local determination of the types of training needed based on local needs. There also is a clear preference for consistently high-quality and appropriate in-house training because most training now is in-house and travel distance and related costs are minimized. The importance of accessible, quality training is further apparent considering that about 90 percent of firefighters are volunteers - firefighting is not their full-time employment - and recruitment and retention of volunteers are regarded as a continuing problem.

Inconsistent quality of instruction, inadequate curriculum standards, unclear accountability for the uses of some current funding, and under-funding were frequently mentioned during this study as key problems with current firefighter training. Awareness of and compliance with existing base-line training requirements for all fire

departments, such as those in Minnesota OSHA standards, were noted as sometimes lacking. Many firefighters and fire chiefs noted their current needs for training and refresher training in basic firefighting skills and knowledge ("live burn" training, breathing apparatus, pumpers, hoses, hazardous materials, blood-borne pathogens, and others) and areas of specialized training for fire and emergency response (fire service leadership, vehicle extrication, confined space rescue, high angle rescue, terrorism response, and others).

Local-level funding deficiencies for firefighter training were noted more often than other concerns by fire chiefs who returned surveys and fire personnel who attended public meetings. Fire training funding is mostly local. However, other sources of training are provided with state funding. For example, some specialized training is provided at no or low cost by state agencies such as the Department of Public Safety (State Fire Marshal Division, Bureau of Criminal Apprehension, and Division of Emergency Management) and the Department of Natural Resources (Forestry Division). The Minnesota State Colleges and Universities (MnSCU) system, through technical colleges and the Metropolitan State University's Fire/EMS Center, provides firefighter training paid by local governments with a state funded subsidy to the technical colleges. Technical college fire training programs and the Fire/EMS Center have the benefit of the firefighter training subsidy and dedicated firefighter training funds.

Deficiencies in training would come to light, for example, if Minnesota OSHA made an inspection, if a firefighter was critically injured, or if a lawsuit brought out the training issue. In the 10-year period ending in 1992, fire departments were inspected under a special emphasis inspection program at a rate of at least 40 per year. However, since the expiration of the program in 1993, the number of inspections of fire departments by MnOSHA has declined to an average of seven inspections (less than 1 percent of departments) annually. This change is due to MnOSHA's concentration of enforcement activities in other high-hazard industries with high injury and illness incidence rates.

Training records for firefighters and fire departments are maintained in each department. Each municipality and fire chief is required to keep records to demonstrate that adequate training is provided. Some training providers, notably the MnSCU system institutions, maintain records of firefighter training they provide, but the records are for internal purposes and pertain only to classes taught by MnSCU instructors. Individual departments must ensure training completeness and quality as well as maintain appropriate records.

Fire service personnel who participate in a voluntary certification program of the Minnesota Fire Service Certification Board (a private, nonprofit organization) must pass written and practical tests to be certified or recertified. However, a large number of firefighters were "grandfathered" into certification when the program began. In this program, firefighters are not required to produce training records to obtain certification or recertification (fire chiefs notify the certification board that a firefighter should be certified or recertified) but would be required to make records available if an audit was requested.

Even if individual department training records reflect that training hours were provided in appropriate topics, the other above-noted areas of concern—consistent instructor and training delivery quality, consistent curriculum content, and completeness for local needs—have no reliable means for quality assurance. The study committee concluded that municipalities, fire service personnel, and fire departments can benefit from state-level funding administered through a reimbursement program tied to documented quality training; improvements to ensure instructor quality and consistent curriculum content; and oversight of these functions by a board of firefighter training made up of fire service, municipal, education, public safety, and public members.

Recommendations

The committee's principal recommendations are that the Legislature:

1. Create an independent board of firefighter training. The board would be independent but associated with an existing state agency for administrative support to save costs. The 16 board members would include representatives from:
 - Volunteer firefighters (8 members representing the 15 regional fire districts on a rotating basis)
 - Minnesota State Fire Chiefs Association (one member)
 - Minnesota Professional Firefighters Association (one member)
 - the Commissioner of Public Safety or the Commissioner's designee
 - the Chancellor of MnSCU or the Chancellor's designee
 - the League of Minnesota Cities
 - the Minnesota Association of Townships and
 - the public (two members who are not engaged in fire service professions or industries).
2. Provide the board with these powers and duties: (a) to establish and administer a training reimbursement program; (b) to establish curriculum, policies, and procedures for qualifying funded firefighter training programs; (c) to establish qualifications for instructors; (d) to establish procedures for handling complaints and standards for disqualification of instructors; and (e) to adopt rules necessary to carry out the duties. Powers not provided to the board are firefighter certification and establishment of statewide minimum training requirements. The board oversees all non-credit-based firefighter training (that is, training other than two-year and four-year degree programs).
3. Direct that the board administer a firefighter training reimbursement program on the following principles: (a) training reimbursement program funds will be paid directly to municipalities, fire departments, or MnSCU institutions; (b) municipalities or departments can choose whether to participate in the program and the extent of their participation; (c) the board will reimburse the local government for part or all of the costs of training based on the number of training hours successfully completed in accordance with rules set by the board; (d) the board will determine the amount of reimbursement for each hour of qualified training; (e) an instructor must be deemed qualified by the board before offering the training for which reimbursement is sought; and (f) before issuing a training reimbursement, the board will determine that the training was conducted by a qualified instructor and met the standards set by the board and will require verification of the costs associated with the training and the number of training hours.
4. Increase the state share of costs for firefighter training through funding of the firefighter training cost reimbursement program and board operation. Funding would come from a combination of sources including extension of existing emergency-response-related user fees and redirection of certain existing dedicated firefighter training funds. The committee determined that it would not submit a bill to the Legislature based on its recommendations. Other interested parties may use the committee's work and recommendations as they see fit to promote legislation.

Appendix B: Minnesota Statute creating MBFTE

CHAPTER 299N

FIREFIGHTER TRAINING AND EDUCATION

299N.01	DEFINITIONS.	299N.04	FIREFIGHTER CERTIFICATION.
299N.02	BOARD OF FIREFIGHTER TRAINING AND EDUCATION.	299N.05	LICENSE REQUIRED.
299N.03	DEFINITIONS.		

299N.01 DEFINITIONS.

Subdivision 1. **Scope.** The terms used in this chapter have the meanings given them in this section.

Subd. 2. **Fire department.** "Fire department" means a regularly organized fire department, fire protection district, or fire company, as defined in the State Fire Code adopted under section 326B.02, subdivision 6, regularly charged with the responsibility of providing fire protection to the state or a local government and includes a private nonprofit fire department directly serving a local government. It does not include industrial fire brigades.

Subd. 3. **Firefighter.** "Firefighter" means a volunteer, paid on-call, part-time, or career firefighter serving a general population within the boundaries of the state.

History: 2000 c 344 s 1,4; 2005 c 110 s 1; 2005 c 136 art 9 s 14; 2007 c 140 art 3 s 6; art 13 s 4

299N.02 BOARD OF FIREFIGHTER TRAINING AND EDUCATION.

Subdivision 1. **Membership.** Notwithstanding any provision of chapter 15 to the contrary, the Board of Firefighter Training and Education consists of the following members:

(1) five members representing the Minnesota State Fire Department Association, four of whom must be volunteer firefighters and one of whom may be a career firefighter, appointed by the governor;

(2) two members representing the Minnesota State Fire Chiefs Association, one of whom must be a volunteer fire chief, appointed by the governor;

(3) two members representing the Minnesota Professional Firefighters Association, appointed by the governor;

(4) two members representing Minnesota home rule charter and statutory cities, appointed by the governor;

(5) two members representing Minnesota towns, appointed by the governor;

(6) the commissioner of public safety or the commissioner's designee; and

(7) one public member not affiliated or associated with any member or interest represented in clauses (1) to (6), appointed by the governor.

The Minnesota State Fire Department Association shall recommend five persons to be the members described in clause (1), the Minnesota State Fire Chiefs Association shall recommend two persons to be the members described in clause (2), the Minnesota Professional Firefighters Association shall recommend two persons to be the members described in clause (3), the League of Minnesota Cities shall recommend two persons to be the members described in clause (4), and the Minnesota Association of Townships shall recommend two persons to be the

members described in clause (5). In making the appointments the governor shall try to achieve representation from all geographic areas of the state.

Subd. 2. **Terms; chair; compensation.** Members of the board shall serve for terms of four years and annually elect a chair from among the members. Terms and filling of vacancies are subject to section 15.0575, subdivisions 2, 4, and 5. Members serve without compensation.

Subd. 3. **Powers and duties.** (a) The board shall:

(1) review fire service training needs and make recommendations on training to Minnesota fire service organizations;

(2) establish standards for educational programs for the fire service and develop procedures for continuing oversight of the programs;

(3) establish qualifications for fire service training instructors in programs established under clause (2); and

(4) license full-time firefighters and volunteer firefighters under this chapter.

(b) The board may:

(1) hire or contract for technical or professional services according to section 15.061;

(2) pay expenses necessary to carry out its duties;

(3) apply for, receive, and accept grants, gifts, devises, and endowments that any entity may make to the board for the purposes of this chapter and may use any money given to it consistent with the terms and conditions under which the money was received and for the purposes stated;

(4) make recommendations to the legislature to improve the quality of firefighter training;

(5) collect and provide data, subject to section 13.03;

(6) conduct studies and surveys and make reports; and

(7) conduct other activities necessary to carry out its duties.

History: 2000 c 344 s 2,4; 2001 c 7 s 63; 2005 c 110 s 1; 2007 c 54 art 7 s 20; 2009 c 153 s 1

299N.03 DEFINITIONS.

Subdivision 1. **Scope.** The terms used in sections 299N.04 and 299N.05 have the meanings given them in this section.

Subd. 2. **Board.** "Board" means the Board of Firefighter Training and Education established under section 299N.02.

Subd. 3. **Chief firefighting officer.** "Chief firefighting officer" means the highest ranking employee or appointed official of a fire department.

Subd. 4. **Fire department.** "Fire department" has the meaning given it in section 299F.092, subdivision 6. For purposes of sections 299N.04 and 299N.05, fire department also includes a division of a state agency, regularly charged with the responsibility of providing fire protection to the state or a local government, to include a private, nonprofit fire department directly serving a local government, but does not include an industrial fire brigade.

Subd. 5. **Full-time firefighter.** A "full-time firefighter" means a person who is employed and charged with the prevention and suppression of fires within the boundaries of the state on a full-time, salaried basis and who is directly engaged in the hazards of firefighting or is in charge of a designated fire company or companies that are directly engaged in the hazards of firefighting. Full-time firefighter does not include a volunteer, part-time or paid, on-call firefighter.

Subd. 6. **Licensed firefighter.** "Licensed firefighter" means a full-time firefighter, to include a fire department employee, member, supervisor, or appointed official, who is licensed by the board and who is charged with the prevention or suppression of fires within the boundaries of the state. Licensed firefighter may also include a volunteer firefighter.

Subd. 7. **Volunteer firefighter.** A "volunteer firefighter" means a person who is charged with the prevention or suppression of fires within the boundaries of the state on a volunteer, part-time or paid, on-call basis. Volunteer firefighter does not include a full-time firefighter.

History: 2009 c 153 s 2; 2010 c 229 s 1

299N.04 FIREFIGHTER CERTIFICATION.

Subdivision 1. **Certification examination; requirements.** (a) The board must appoint an organization that is accredited by the International Fire Service Accreditation Congress to prepare and administer firefighter certification examinations. Firefighter certification examinations shall be designed to ensure competency in at least the following areas:

- (1) fire prevention;
- (2) fire suppression; and
- (3) hazardous materials operations.

(b) To receive a certificate, an individual must demonstrate competency in fire prevention and fire suppression.

(c) Nothing in this section shall be construed to prohibit any requirement imposed by a local fire department for more comprehensive training.

Subd. 2. **Eligibility for certification examination.** Except as provided in subdivision 3, any person may take the firefighter certification examination who has successfully completed the following:

- (1)(i) a firefighter course from a postsecondary educational institution, an accredited institution of higher learning, or another entity that teaches a course that has been approved by the board; or (ii) an apprenticeship or cadet program maintained by a fire department employing the person that has been approved by the board; and
- (2) a skills-oriented basic training course.

Subd. 3. **Certain baccalaureate or associate degree holders eligible to take certification examination.** A person with a baccalaureate degree, or with an associate degree in applied fire science technology, from an accredited college or university who has successfully completed the skills-oriented basic training course under subdivision 2, clause (2), is eligible to take the firefighter certification examination notwithstanding the requirements of subdivision 2, clause (1).

History: 2009 c 153 s 3

299N.05 LICENSE REQUIRED.

Subdivision 1. **Licensure requirement.** A full-time firefighter employed on or after July 1, 2011, by a fire department is not eligible for permanent employment without being licensed as a firefighter by the board.

Subd. 2. **Optional licensing.** A volunteer firefighter may receive or apply for licensure under this section and section 299N.04 under the same terms as full-time firefighters.

Subd. 3. **Prior appointment.** A full-time firefighter or a volunteer firefighter who has received a permanent appointment with a fire department prior to July 1, 2011, shall be licensed by the board at the request of the firefighter upon providing the board with a statement signed by the chief firefighting officer of the fire department that employs the full-time or volunteer firefighter.

Subd. 4. **Newly employed firefighters.** Any full-time firefighter employed by a fire department on or after July 1, 2011, must obtain a license from the board. To obtain a license, an individual not covered by subdivision 3 must provide the board with a statement signed by the chief firefighting officer of the fire department that employs the full-time firefighter that the individual has met the certification requirements of section 299N.04.

Subd. 5. **Issuance of license.** The board shall license any individual who meets the requirements of subdivision 3 or 4. A license is valid for three years from the date of issuance, and the fee for the license is \$75.

Subd. 6. **License renewal.** A license shall be renewed so long as the firefighter and the chief firefighting officer provide evidence to the board that the licensed firefighter has had at least 72 hours of firefighting training in the previous three-year period. The fee for renewing a firefighter license is \$75, and the license is valid for an additional three years.

Subd. 7. **Duties of chief firefighting officer.** It shall be the duty of every chief firefighting officer to ensure that all full-time firefighters have a license from the board beginning July 1, 2011. Each full-time firefighter, volunteer firefighter, and chief firefighting officer may apply for licensure after January 1, 2011.

Subd. 8. **Revocation; suspension; denial.** The board may revoke, suspend, or deny a license issued or applied for under this section to a firefighter or applicant if the firefighter or applicant has been convicted of a felony recognized by the board as a crime that would disqualify the licensee from participating in the profession of firefighting.

Subd. 9. **Fees; appropriation.** Fees collected under this section must be deposited in the state treasury and credited to a special account and are appropriated to the board to pay costs incurred under sections 299N.04 and 299N.05.

History: 2009 c 153 s 4

Appendix C: Fire chief conference questionnaire

Methodology

MAD designed and distributed a fire service training questionnaire during the Minnesota State Fire Chiefs Association Annual Conference that took place from October 26–29, 2016. The questionnaire was handed out during the conference welcome session and made available at the MBFTE booth located in the Vendor Hall. Twelve individuals submitted questionnaires by the end of the conference. MAD used this information to develop interview and survey questions.

The fire chiefs were asked to answer the following three questions:

1. What are your top three challenges as a fire chief or training officer with respect to fire service training?
2. List three ways fire service training could be improved to anticipate needs for the next five years.
3. What advice do you have for the researchers as they complete this study?

Their responses are summarized below under each question.

Responses

What are your top three challenges as a fire chief or training officer with respect to fire service training?

Time

Many of the fire chiefs listed time as one of their top challenges. Mostly they said it is difficult for volunteer firefighters to commit and attend all the required trainings, especially when they are offered during business hours. One fire chief remarked that the time to get everyone through all the training is a hardship.

Money

Some of the fire chiefs believe that money is one of their top challenges. Specifically, they discussed how the current reimbursement system does not allow for reimbursement of overtime, backfill, or other training based on local needs.

Interest

Some of the fire chiefs believe that keeping the training fresh and engaging is one of their top challenges.

Access

Some of the fire chiefs said making training more accessible is a top need for their department. They described needing geographically-closer training opportunities, more online training opportunities, more types of training such as officer development training, and gaining access to a regional training tower.

Requirements

A few mentioned too many training requirements as one of their top three challenges. One of the chiefs commented on the inability of a NFPA 1001 certified firefighter to gain access to a hydrant.

List three ways fire service training could be improved to anticipate needs for the next five years.

Money

Many of the fire chiefs would like to build on the current funding and reimbursement allocation. Some would like to see money awarded based on shared regional training while another would like to see the annual allocation based on number of fire departments rather than a per-firefighter amount. Others commented on keeping the current funding approach available for training, including live burns.

Stay current

A few believed that it is important that firefighter training keep current by pushing the new National Institute for Occupational Safety and Health (NIOSH) studies and to address changing EMS roles.

Joint training

A few chiefs would like to see a greater emphasis on joint training with cities or regional associations as a way to improve access through sharing training resources.

More oversight

A few chiefs would like to see more state oversight in training, licensing/certification, provider accountability, and establishing training standards. One would like to see a state list of mandatory required training. Another would like to see a coordinated training schedule.

Time

A couple of chiefs would like to see a change in the amount of time it takes to receive training. One would like to extend the timeframe to get through Firefighter 1 and 2, and the other would like to see shorter classes.

Use technology

One of the chiefs would like to see more training being delivered through technology and online options.

What advice do you have for the researchers as they complete this study?

- *Seek many opinions.*
- *MBFTE should remain focused on training. Don't get into funding equipment like washers and extractors.*
- *Keep up the good work!*
- *Focus on best practices rather than "the way we have always done it." Look at data! Compare where we are performance wise to national standard.*
- *We need more on-line and in home training options to accommodate firefighters busy lifestyles.*
- *Please seek as much information as you can from the departments and all members from new firefighters to veterans. These are volunteer firefighters or Paid-on-Call (POC) and their time matters to them.*
- *Listen to suggestions from small departments. Especially hear what they have to say about content and the ability of the instructor to hold their interest.*

Appendix D: Fire service interviews

Methodology

During the winter of 2017, MAD interviewed 53 individuals about firefighter training. The SFMD and MBFTE provided names and contact information for individuals. The interviewees included:

- Five members of the MBFTE Training and Executive Committees
- Seven members of the Fire Service Advisory Committee
- 19 fire chiefs and training officers from 11 of the state's 15 fire districts
- 15 training providers from public organizations
- Four training providers from private organizations
- One individual from the Minnesota Fire Service Certification Board
- One individual from the Minnesota Department of Natural Resources (DNR) Wildfire Academy
- One regional coordinator for the Emergency Medical Services Regulatory Board (EMSRB)

Most interviews were only with the identified person, but some chiefs also included their training officer or other staff in the interview. Interviews were conducted on the phone or in person.

Given the variety of interviewee types, MAD developed three primary questionnaires for these interviews. They created one for MBFTE/FSAC members; one for chiefs and training officers; and one for training providers. MAD developed separate questions for the DNR and EMSRB interviews. The primary sets of interview questions can be found at the end of this appendix. Interviewers used the questions for all interviews, but let conversations flow freely, asking follow-up questions based on how the interview progressed.

MAD has adopted two conventions in the interview analysis:

- The text uses terms like *most*, *several*, or *a few* instead of reporting specific frequencies or percentages of responses.
- Select statements from interviewees are included in *italics*. The statements reflect the interviewee's sentiment and content, but MAD may have edited them for clarity and length. These statements should not be viewed as direct quotations attributable to individuals.

The following analysis provides summaries of interview results for these main topic areas:

- Trends in Community
- Trends in Fire Service
- The State of Fire Training
- MBFTE Impacts
- Certification and Licensure
- Fire Training and Service Models
- Praise for the MBFTE and SFMD

The analysis does not include the DNR and EMSRB interviews because those interviewees mostly provided contextual and background information.

Analysis

Community trends

More than a quarter of interviewees mentioned demographic and economic changes in their communities. Several of them highlighted the increasing diversity of the population, and how that can create new demands on the fire service. Firefighters must communicate with people who speak more languages, and immigrants who come from countries with different cultural norms.

We created a video a few years ago on a grant for rental units—there were a lot of cigarettes and cooking fires. We found the top four populations of immigrants, but there are like 21 dialects of Somali, so which one do you pick to do the video in? There’s a huge challenge with that.

Several respondents discussed how their regions had growing or shrinking populations, and how that was tied into the economic vitality of the community. The young adults that firefighters want to attract for their departments may not find work in more rural communities.

In addition to these demographic changes, respondents also explained that community expectations of the fire service have grown over time. A few specifically mentioned the growing expectation around fire departments providing medical support, but they also brought up smaller programs and roles, like providing home safety inspections and fitting bike helmets.

Over the last 20 years, the role of the firefighter ends up being that catch-all. All of a sudden we’re doing hazmat and medical and we start doing things like lift assists. Some of those things are as the population changes and our role ever evolves, and it’s not by our choice. It becomes a community expectations thing, especially in the metro, where we have a community on either side with full-time people. Average Joe Citizen says, “That department does that—why don’t you?”

Fire service trends and challenges

Interviewees discussed how the fire service has changed over time, and what challenges the service will face within the next ten years.

Time commitment

By far the most common trend mentioned was a change in firefighter time commitment. More than half of interviewees said that firefighters, particularly non-career ones, simply have less time to provide to the fire service. This issue came up both within the context of recruiting and retaining staff, and within the context of training firefighters. For example, interviewees explained that even if departments could afford to put on more training, their staff would still not be better trained because firefighters did not want to spend additional time on training.

The question is how do we get people to train more? We have to be able to convince them they want to train more because right now people don't want to. They're willing to come to drill night but if you put on a Saturday drill, you'll only have a handful of people coming. A year ago, I knew the MBFTE had all that money coming and every single department I talked to about the additional money—the thought of having to have an additional drill night or throw a Saturday in here or there was just out of the question. Unless it was like a house fire, that's different. But to utilize money like they should, providing additional opportunities, to get guys where they'd like them to be, it's just foreign to them. They were almost upset that we asked to take more of their family or work time.

The other downfall of training is, when I grew up, we didn't start sports until high school. Now my guys have elementary kids in sports, and nowadays it's hard to get a Saturday. They all have sporting events. Let alone get two nights in a row for training. We're blessed for the first Monday of month on training. But to try to get another night or weekend, there are church or school events, it's hard to get there. Families are just busier now.

For some of these departments, they go on 50 runs a year. You put them through 200 hours of Firefighter 1 and 2, maybe EMT too, and by the time they get all that training, that's like how many hours per call have they trained? Versus a busier department that's doing 2,000 runs a year—the firefighter maybe can see the nexus between training and utilization of the training than if you're going to three to four calls a month in the department and you're actually going to one. That's one of the challenges we have in the predominantly non-career service we rely on.

Staffing challenges

Because firefighters have less time available, they not only do not train as much as they could, they are also hesitant to join or stay in the fire service at all. The most common thread throughout all interviews was the staffing issue, commonly called the recruitment and retention problem. About three-quarters of interviewees mentioned that many departments are currently struggling to meet their staffing needs. The issue appears to be more pronounced for non-career departments, but career departments also reported having a harder time finding and keeping recruits. The issue was brought up both as a current trend in the fire service and as a challenge in the next ten years.

Interviewees mostly cited time commitment as the root challenge, but others also brought up cancer and suicide rates as turnoffs for potential recruits, as well as community trends. For example, one interviewee estimated that 90 percent of area firefighters did not live in the communities where they worked, which made it difficult for them to respond to calls and be on the department.

When we say we're hiring and would like to have some daytime personnel, we can't get anyone to apply for the job that works in town. Everyone works out of the city. At night we can get 30 people there—in the daytime we have the same 12 and they're getting pretty old. I don't have anyone on my department available during the day with less than 15 years of service.

As the effects of firefighting become known, such as cancer and depression, we will have a harder time to engage others in joining this profession. You have to work with an unhappy child, burned bodies, and it can be hard emotionally. We have to help by providing support, you can't dismiss it—it affects people.

Several respondents explained that they expect more full-time and duty crew staffing models in the next ten years to account for staffing challenges. They anticipate that the volunteer model will not be able to sustain itself at current levels, and a few commented on losing experience through retirements.

Changing roles for the fire service

About half of interviewees explained that there are now more roles for the fire service to play than in the past, and about a quarter discussed how they now respond to fewer fires.

The decline in fire calls has been a trend, but not a problem. As one interviewee explained, fire departments will be successful if they put themselves out of business and prevent all fires. However, it does make it difficult to have well trained firefighters because they have fewer opportunities to practice their firefighting skills.

My biggest challenge is kind of threefold: budget, technology, and public participation. We need more and more firefighters that handle medical and more volunteers to handle structure fires. We responded to hundreds of calls this year, and if you take out medical and cars, the small amount of structure fires—firefighters are not enthused enough to train and stay ready for that small number of fires.

Some trainings seem a little extreme. But at the same time I see that a lot of what we do is not even a standard house fire. We don't get a lot but when we do, they're very dangerous and high skill. Low-frequency, high-risk calls are a lot of what we get, and that's the standard. We know how to operate trucks, pumps, ladders, hoses—even though we don't do them often, we have to be proficient.

The largest role change cited has been an increasing reliance on the fire service to answer medical calls. Not all departments offer emergency medical services, but the ones who do must now receive more medical training. In addition, departments are now expected to respond to, and therefore train on, many different topics, including hazardous materials, terrorism, and active shooter events. Interviewees also explained that departments now do more community outreach and community programming than in the past.

Fire training traditionally has been looked at "firefighting." But I think the part about all of this that is being missed is that you are a first responder or an employee. It should encompass the entire job we do: firefighting, safety, industrial safety, and EMS. We are responding—that is beyond "fire."

The expectation from our community is that if it's not illegal and it's two in the morning, we go fix it, whether that's a leaky toilet or a cat stuck wherever. They rely on the fire department to fix their problems. We fix the toilet or find someone who will or shut off the water. We have to be trained broad enough to fix problems and understand issues.

Several respondents identified this trend as a future challenge. With a growing number of roles to play, departments must train and be prepared for a growing number of events and calls.

Changes in fires and tactics

Interviewees explained how firefighting itself has changed over time, and how that affects training needs. Most often they discussed how fires have changed over time, often citing changes in building materials. About a quarter of respondents explained that buildings are now made of more lightweight materials that burn more quickly than older construction materials.

Firefighters need to adapt their techniques and therefore their training to these different circumstances. For instance, one interviewee explained that changes in construction methods and materials mean that buildings will collapse faster in a fire, which requires a different firefighting strategy than other types of buildings.

A new construction house has a very limited time from when the fire starts to when structural integrity is compromised. Now as homeowners or different buildings get solar panels, that's added weight to roofs that was not there before, that weren't built for that. Once you have a fire, the impingement system will fail a lot sooner with that weight on it. You say a fire is a fire, it's not. There are so many different factors these days. You have building joints that in ten minutes of burning are going to fail. You need to learn all that. You need hands-on fire training to survive. We need a lot of book-learned fire training to learn fire characteristics, construction, etc.

Several interviewees added that advances in fire science and their challenges with staffing have also affected the way that they fight fires. Scientists are learning more about which techniques are most effective for fighting fires, and firefighters must adapt their ingrained techniques to new information.

One of the biggest things that has come into service in last years is Underwriter Laboratories. They're doing fire studies science and publishing for free—we've been finding out a lot of the so-called science we used as gospel forever turned out not to be true. A lot of these studies are getting incorporated heavily into programs.

Firefighters also must adapt to having fewer people on a fire ground. With the current staffing challenges, one interviewee explained, departments have to train on different approaches that assume they will have three to four people initially on a scene, instead of the 20 they used to rely on.

Other trends and challenges

Interviewees brought up many other changes in the fire service. Several discussed changes in fire service culture, often mentioning that the service is now a more serious endeavor. A few specifically explained that “it’s not the good old boys club anymore.”

Besides meeting minimum requirements, I think they honestly are doing more training. Many departments I've talked to over the years, 15-20 years ago they did one kind of a drill a month, and then broke out the beer and started drinking. That doesn't happen anymore.

Very few even allow alcohol in the department. It's not a social call, it's getting down to working.

While many things in the fire service are changing, some trends have been steadier over time. For example, several interviewees noted that leadership positions are still elected. They said that this means the most popular people become leaders, instead of the most qualified. They also explained that finding people willing to take on leadership positions can be difficult, with the result that someone ends up in charge simply because they are willing to do the job.

Other trends mentioned by respondents included:

- Increase in shared services and consolidation between departments.
- Greater awareness of mental and physical health concerns for firefighters.
- Growing need to attract more diverse recruits.
- More common for firefighters to receive some form of compensation.

Training sessions are being held together. We know how we all work together. The past five years everyone is training and working together. The driver is we realize we can't handle some of the bigger incidents by ourselves. It is good to have more people, equipment, etc.

A few interviewees discussed the challenge of promoting firefighter safety and wellness. The fire service is becoming more aware of the physical and mental impact of the profession on firefighters, and needs to train people on how to work as safely as possible. Among other things, interviewees brought up cancer awareness and prevention, physical safety of firefighters during fires, and post-traumatic stress disorder.

Topics mentioned by a few other respondents each included funding and the availability of live burn opportunities.

State of fire training

The bulk of interviews was spent discussing the state of firefighter training, including training requirements, availability, and quality. Interviewees also discussed firefighter preparedness, training funding, and other training topics.

Training requirements

More than three-quarters of respondents discussed training requirements in some way. Some explained what their departments required, some gave opinions on the number of requirements, and some discussed what should be required.

What departments require

The departments interviewed all have unique training requirements for their firefighters. Generally, they require NFPA 1001, even if they are a non-career department. Depending on the department's role in EMS, they may require emergency medical training. After initial training, they usually expect firefighters to come to some

minimum number of training events within a particular timeframe, and have different methods for enforcing that.

We're paid-on-call. We do have some full-time but we require Firefighter 1 and 2 for everybody. We have two monthly drills, so six drills in a quarter, and they can only miss two drills. We do offer make-ups. They have to make 66% of the drills in a quarter and if they don't, they lose their service time credit, which impacts their relief association.

Interviewees have somewhat different training expectations of career versus non-career firefighters, whether those expectations are for their own firefighters or for firefighters in general. Some combination departments interviewed do not require different amounts of training for non-career and career firefighters. As a few respondents put it, "A fire's a fire." Some departments do require additional training for their career firefighters, and have higher training and performance expectations of them compared to their non-career firefighters.

We don't have different standards because they ride together in the same truck. When you look at a career vs. part-time, the difference is skill requirements. There are minimum standards that have to be maintained by both sides. The difference in training can come in, not on topic or the task part of it, but truly the careers who do it tons of hours a year, vs. a part-timer. It's the difference between competency and mastery. Careers have mastery. A part-timer gets to high levels of competency. You can't expect in the few number of hours to reach same proficiency and mastery as career guy who does it every single day.

Amount of requirements

About half of respondents offered feedback on the amount of training requirements. Half of these said that training requirements and expectations have increased over time, while the other half discussed how there are too many requirements and expectations.

Respondents explained that the number of training requirements for firefighters have increased over time, in particular the requirements for new firefighters.⁴⁵ Respondents agreed that the hours of initial training have increased substantially in the past few decades. They also commented that classes have become longer in some instances.

You come into our department and we say you have to deal with 33-40% of calls, make training two times a month and a monthly meeting after that, so that's a minimum of three nights a month, and the first year you have 140 hours of Firefighter 1 and 2 and Hazmat Operations, and first responder is another 40 hours, so that's 200 hours—how would you like to come volunteer?

We're seeing the requirements that are coming down are moving at a faster rate than our budget to keep up with them. With what the NFPA wants, the certification, codes, and

⁴⁵ Attending NFPA 1001 is not legally required for firefighters, but many respondents spoke as though it were a requirement. It may be treated as a requirement by some departments given that the MBFTE reimburses that course for any new firefighter, and because it covers many of the federal and state training requirements.

that's gotten to be a big part of our job. To round it up, we need to do more jobs with less money and less people. The requirements are going up. It seems like everything that pops up that's a requirement for a business or a city seems to get dumped on the fire department. We just did two days of fire codes. I don't think I've done that in my career before.

Interviewees also said that the number of ongoing training requirements for departments has increased, or at least that the requirements are being enforced more now.

The minimum requirements—we had so many classes that we recommend as annual refreshers, at least six, but what's so different about this from 15-20 years ago? Then we were required but didn't follow up. Now OSHA is checking up and local regulatory agencies have been peeking a lot more behind the curtain seeing what's going on. Volunteer departments used to get away with it because they were volunteers, but now the standard is held higher so the requirements are there.

A quarter of respondents commented that the amount of topics to get trained on is a lot to expect of people, especially people who are minimally or not compensated. They tied this issue back to the staffing challenges departments have been encountering. Interviewees said the expectations for initial training are making it harder to recruit firefighters, and that the ongoing requirements affect their ability to retain them. With the number of requirements, and the level of time commitment their firefighters are currently willing to give, some departments are not meeting requirements.

In the rural area we can't get the young people. We have five new families that moved in. The gentlemen all came to meetings, found out how much training it would take, and said we don't have time to do it—they all quit.

If you're a rural department, you only train once a month, twice if you're lucky, and you have so many requirements to meet and so little resources to do that, so they're not gonna get all that stuff. So regardless of what's dictated, they'll train what they're gonna train to.

What should be required

More than half of respondents discussed some facet of what they think should or should not be required for firefighter training.

In more than fifty interviews, no interviewee said that basic firefighter training was unnecessary. Although the amount of information in these courses has increased over time, respondents who discussed this all agreed that the skills and content of NFPA 1001 largely provide what firefighters need to do their jobs safely and effectively.

The trainings I guess like Firefighter 1 and 2 have gotten longer since I got on. But I don't think they're a waste of time or too long.

Firefighter 1 and 2 and Hazmat Operations contain a lot of different types of information, most of which respondents valued. However, several cited certain pieces that they did not see as relevant to their fire

departments, and advocated for standards that are more tailored to their local needs. Firefighters in rural areas, for example, did not see value in being taught techniques specific to urban areas.

Maybe some rural departments need to do more wetland and less high-rise—but not less overall. We do training twice a month. We're low-frequency, high-risk. Maybe we need a little focus on the local area. For someone that farms 1,000 acres, the training is too much. If I want to volunteer in northwest Minnesota, I have to do 140 hours of stuff that's irrelevant, like where do you hook up to the firefighter connection—you don't. Where do you get the hydrant—you don't.

The state requires we do a minimum on certain items. For instance, there's a requirement to do a Hazmat refresher. I think in the time I've been on this department, I've responded to two to three calls total that would even resemble a Hazmat call. And all those instances we either did not follow the guidelines of what training requires because it was not to a degree that we have to call in an assessment or FEMA or anything. We've done rail training, and it's interesting and good information, but the honest truth is if a train derailed and starts spilling chemicals, we will have little to do with it because we don't have the equipment or personnel. Some trainings seem a little extreme.

Interviewees had mixed opinions on whether there should be a minimum training requirement for non-career firefighters (career firefighters must currently be licensed). About a quarter of respondents supported a minimum requirement like NFPA 1001, but many also acknowledged that it would negatively affect non-career departments' ability to recruit and retain staff. A few respondents explicitly did not support requiring certification for firefighters, and wanted lower initial training requirements to make recruiting easier.

You have in outstate Minnesota very small fire departments that answer maybe 23 calls. As valuable and necessary as those basics are, it's hard to maintain those for that organization. Compare that to a fire station that does 23 runs in a day. As much as I think it should all be the same, I don't know how you could, or if it is appropriate to do that from a time commitment perspective.

Several respondents discussed ways to make getting basic training easier, but no method came without drawbacks. For example, decreasing the amount of initial training might help with recruiting efforts, but it would make firefighters less prepared to deal with the challenges of the job.

Some of those training things you could probably split out and do one thing a year. Spreading it out will help, but the flip side problem is let's say it's three years before you get your medical training. Then you're no good to me for medical calls when you haven't had the training. It's a tough fine line there to have to do that training, and how quick you have to do it. As people get harder to find, I need people here to be able to do everything, to go to all those different kinds of calls. It's a tough thing to manage.

Interview discussions around what should be required largely centered around whether or not to require the existing NFPA 1001 standards or certification. A few respondents, though, pushed further, and would like there

to be even more training required of firefighters than NFPA 1001. However, they also brought up how infeasible it would be to implement that.

They're not trained to level they should be at. All we require is 160 hours of training for Firefighter 1 and 2 certification. That's ridiculously low. Some will disagree. For 160 hours, we'll put them out there and expect them to make life and death decisions. It's tough, though, because to ask more has been unsuccessful because people won't volunteer then. How do we deliver this training in a way to get the hours and experience in without hurting the recruitment and retention piece?

Training availability

About three-quarters of respondents discussed the availability of fire training.

About a quarter of respondents said that the general availability of training has improved over time. There are now more courses available on many more topics, and with more state funding, departments can now bring in trainers and speakers they would not have been able to afford before. As one respondent put it, "If there is a class I need I can find it." Departments have also had more options to choose from since private companies began offering firefighter training within the past 20 years.

While the overall availability of training appears to have increased, not all areas of the state have equal access to options. About a quarter of respondents said that departments in rural parts of the state do not have as many options to choose from, and that the options they do have are far away. Even if a rural department is willing to send a firefighter a few hours away to another class, and they can get the MBFTE to cover tuition, the department budgets often cannot afford the travel expenses like hotels and mileage reimbursements.

A good example is the PTSD—I have seen four or five classes in the metro area. It's getting to be a very real thing, and we've had some small departments around us that have really struggled with things—some of our own people have really struggled—and we watch closely for them. They continually have very good speakers down in the Minneapolis area that I'm sure that would be the place to have them because they can blanket so many people in an area like that, but if we can send somebody to it, it's one to two guys at a cost that almost hurts our training program.

This issue again connects with firefighter time commitment: if the training is not nearby and convenient, firefighters will be less inclined to attend. Departments can pay trainers to come to them, but as one provider explained, it can be difficult to make those visits cost effective given the travel time and expenses.

For providers, travel gets to be a challenge. We do the class for the same price even though we're traveling. I have been charging my customer the same and I pay my instructor to go there so my net profit goes down on that cost.

About a quarter of respondents specifically discussed the availability of hands-on training. A few said that the availability in general has improved, especially with more training props available, but several explained how much harder it has become to put on live burn activities. The cost and amount of paperwork to burn a building

or a vehicle has grown over time. Respondents explained this is challenging because hands-on trainings like live burns are the best ways for firefighters to learn; they said practicing skills and building muscle memory is critical to good firefighting.

NFPA covers live fire training and made it stricter, mostly due to the MPCA, on doing vehicle fires. We have to strip a vehicle to nothing and the cost is expensive. The truth of it is we get more vehicle fires than house. It's back and forth on regulatory versus budget and what requirements to do. Live burns are awesome training but our ability to get houses to burn is extremely more difficult than ever before. This has been the worst year I've ever had for finding them. All the students I run are required to do a live burn before they're certified. I have out of 100 students, half haven't had a live burn because I don't have a half a million dollars for a prop and I can't get the houses. From my department, I would love to get more houses in my area for people to donate that we could do a live burn and get that practice in. But homeowners are hesitant because every house needs an asbestos inspection, and the cost can be \$200 to more than \$1,000. They'd rather just let it sit there and waste away than spend money on something they will destroy.

Training quality

More than three-quarters of interviewees commented on the quality of training available.

General quality

In terms of general quality, about a quarter of respondents said that training has improved. A few even specifically said it has improved visibly within the last five years. They cited the internet as one of the reasons training has improved: providers now have access to a broader array of modern information.

I don't really recall any disagreements about what's needed training and is it good training. The courses that are taught at Firefighter 1 and 2 and additional specialties, what's available and who offers it, whether it's community colleges or whoever, it's good. I've seen solid consensus on what's good training. Now the debates about training are over whether you have to take test and get certified, but I don't see any issues frankly as to—is there quality training available? Yes. Is it readily available? Yes. What you have in training to do effective firefighting, do we know what that is? Yes.

While most respondents who discussed general quality said it has improved, several mentioned that the quality is not equal across the state. Rural departments may only have access to a few providers, if that, and they are dependent on the quality of those options. A few interviewees explained that the quality of technical college programs varies from school to school, depending on who was working there and the curriculum.

The college system on the custom side of the program is really doing well in a lot of areas of the state, but it was virtually not much of anything here in our area. So some of the area chiefs met with leaders at the school and talked to them about the fact that our program sucks. I've seen a couple things come out of that discussion.

Although one respondent said, “The quality is there but not the quantity,” a few interviewers thought that quality had declined.

I think that there are too many opportunities for people to be training. There is a standard – OSHA and NFPA—but there are too many versions and interpretations about what training should look like. We are doing quantity not quality.

Course content and method quality

About a quarter discussed the quality of course content and methods. Several said that providers are now teaching more evidence-based practices, and utilize a wider variety of teaching methods in their courses. A few discussed how courses used to rely on overhead transparencies and “war stories,” but there are now more videos and hands-on props to show students.

Whereas now the studies, they take away the arguments and put science to the fact of use water stream patterns or how to use ventilation—it’s changed a lot over the years. We’re going to evidence-based now where before it was experience-based.

The quality of props, computerized course delivery was very good, the hands-on course delivery is much better. I don’t have to go in and talk about forcible entry. I can hire a prop where people can actually force a door. The live burns are much better than they ever have been. They’re safer than they were before because they’re following NFPA guidelines.

A few respondents expressed dissatisfaction with the way some classes are being taught, most often discussing Firefighter 1 and 2 and the particular way their firefighters experienced the classes. A few others commented that classes have become too much about teaching to the certification tests.

I haven’t been happy with the type of training. A new recruit went through Firefighter 1 and 2, but during a fire with the department was the first time he had to hook up to a hydrant and he said I’ve never done that before. I was like, you went through the class and they didn’t teach basic stuff? So I am not happy with the delivery. I think they’re more time-driven than actually quality-driven. I mean they advertise the class is three hours a night and I have guys that drive to the class and are returning before three hours are up. If they’re going two nights a week, can we drop one a week and make better quality use of our time?

I see a kind of horrible trend that we are starting to teach to pass the test. We kind of have certification coming in and I know a lot of classes emphasize these things to pass the test. They spend several days to pass the test but their time would be better spent operating nozzles and pumps. The instructors are good but their emphasis or what’s expected of them is 100% passing the certification test. I know this because I am a fire instructor and we’re measured once in a while to teach to the test. Technology is changing, the book is old, new things come along, so it may not be relevant but they’re forced to learn it to pass the test.

Instructor quality

Although half of respondents discussed instructor quality, their opinions varied.

About a quarter of interviewees had only positive things to say about instructors. They largely thought quality had improved over time and cited a variety of reasons, including improved information and resources, additional funding, and increased competition.

I look back again at the late '70s and '80s and being the training officer—I was putting on some of this material, getting it from the colleges, and I was not truly a qualified instructor until later. Now what you're seeing as the change is experienced, qualified people presenting material that is proven to be effective.

Departments are more willing to spend it because the dollars are available. In the past they had to pay x for a class directly out of their budget; today they pay y, and it doesn't matter because it's paid for. But with that I think organizations have beefed up the caliber of instructors. The reason we can do that is we're successful, and the dollars are available.

Another quarter of respondents had more moderate opinions on instructor quality. They often said that while there are many good instructors out there, there are also many less effective ones teaching courses. Several commented on how little oversight there is for instructors, which allows less effective instructors to continue teaching.

There are good instructors but I think there's some that are have a full-time job and come in here for an evening and then they've had a bad day, which all of us have, but I just think some should be checked up on. They have to be wanting to make sure the students know everything. If they can't interact and have some hands-on stuff with what they're doing, if just coming to read PowerPoints... But there are some very, very good instructors.

It's a real mixed bag. There's some really great ones out there. There are some people that maybe because of relationships they have with certain training institutions, private or public, and they can just—with the demand for training, there are certain people that really shouldn't be doing it because they're not up on modern fire stuff or they're just simply not great at delivering training. There's a real wide spectrum of those people but I think for the most part it's gotten a lot better than when I started.

In contrast, several respondents were mostly critical of instructor quality. They attributed it to the amount of money in the system and the lack of instructor oversight.

I haven't sat in the classes but I've heard from some guys that they're not that great. I think it goes to the college but we've had instructors not show up on time, they're ten minutes late. We're their customer but yet they're getting paid from the state. I just feel like customer service is lacking.

Firefighter preparedness

About three-quarters of interviewees discussed whether firefighters are trained enough to do their jobs effectively. About a third of respondents answered almost entirely positively: they believed firefighters are better trained than they used to be, and that they can respond to calls effectively.

The outcomes of that call—that's where you can see that training has gotten better. Saved property, quicker extrication in an auto accident, better care in a medical call. Those things in the last 15 years have gotten a lot better. Fire service as a whole has seen people step up their game.

I think your volunteer fire department that was maybe picked on 30 years ago—you're finding the quality of volunteers are up to the standard of career firefighters because they have to have same training. When a department shows up, they can't show up as fast maybe, but when they do show up their equipment and training and quality of service has improved drastically.

More than a third of respondents had more tepid responses. These interviewees thought that some departments were not as prepared as they should be, although only a few said that of their own department. They cited finances and time as barriers keeping firefighters from being as trained as they should be. For instance, several chiefs mentioned that their departments have the resources to support strong training programs, but they expressed concern about other departments that did not have as many training resources available. A few also discussed how firefighters should probably have more training, but that they do not have the time commitment to work on it.

I would say we do have a good job of training firefighters. My career department—it comes down to resources. My department is larger: we have an ambulance, we have a bigger pie to dedicate to training, and we have a lot of different functions in one office. We have the resources, but East Overshoe doesn't.

When there's new guy on the department, the amount of training they're trying to do—with the MBFTE able to reimburse, that's great. However, to get those firefighters to go and do that training is very challenging. For instance, our county has about 400 firefighters. We applied for a grant to pay for up to 12 people to get Hazmat technical certified. There were only three people who wanted to attend so it got canceled. It was 40 hours and the travel distance wasn't far. We asked them to give up time to take the course but then there's also reading and workbook time beyond that. It's probably 72-80 hours of time to get that certification.

A few respondents had strong concerns about the preparedness of firefighters in Minnesota. They said firefighters are simply not getting enough training, or are not getting the quality of training they need to do their jobs effectively.

If you come up a highway in our area and get in a car wreck, our department that does the extrication and gets you out of the car, our department is really good at doing that. We have equipment, and you can be assured that you and your family are protected in our jurisdiction. Other departments around us don't have that commitment to training and don't have that type of protection afforded to you. When I was traveling I would assist departments and it's like, I'm not gonna come this way anymore. Having standards for car fire or accidents where departments are involved with extrication and patient care should be standard. You can be sure in most areas that ambulance service is mostly equal. They have standards, EMTs and things, but fire departments are kind of lacking in that.

Almost a quarter of interviewees discussed how critical practicing skills is to having effective firefighters. Even if firefighters attend training, they explained, they may not be effective at something until they have a chance to practice the skill in a hands-on way.

You need to chop with an axe. Some providers kill it with a PowerPoint and push them through the hands-on and they don't retain the cognitive function of how to do it. You gotta get muscle memory and repetition.

If I went through basic law enforcement school and used my handgun through basic school and never had repetitions training during 29 years in law enforcement, what is my expertise in using that handgun after 25 years? Repetition, doing the simple things. If we don't put up a ladder, do things with hoses before we do entry, that's when we lose and hurt firefighters.

Funding availability

Although only one version of the interview questionnaire specifically asked about funding, the topic came up in many conversations. Some of the funding discussion will be presented in the MBFTE Funding section later in this appendix. This section will focus on comments about general funding availability, a topic mentioned by three-quarters of respondents.

Several interviewees discussed how much funding is available now, and several others commented that the amount of funding has improved over time. MBFTE funds have become a vital source of funding for departments, and the sheer amount of money available has helped change the landscape of firefighter training.

The direct cost of fire training in Minnesota has gone down because of the MBFTE. When we started off, money came from department coffers. Now there's the reimbursement and grant money and all this money is being thrown at us. There's no excuse not to do training anymore because you can't afford it.

While funding has increased as a result of the MBFTE, one-quarter of respondents said that they still need more training funding. They appreciated the funding they already receive, but they would like more to better train their firefighters. A few cited a study that ranked Minnesota near the bottom of a list of how much states pay for

firefighter training.⁴⁶ A few others stressed the need to educate law- and policy-makers about the need not only to not dip into fire training funds for other purposes, but also for additional training resources.

One of the things that needs to happen is there needs to be—the FSA that is funded by tax dollars to serve the SFMD and task force teams—that first of all there needs to be an acceptance of that as being an untouchable thing. Every year we have to go back and fight to keep that from being raided by, depending on which party is in power and what the budget looks like. That’s not a surplus, that’s a reserve that’s already underfunded. Just because there a few dollars in it now doesn’t mean that it’s there and available. Legislators have to stop asking whether we’re gonna use that. Not just that but they need to see we need like \$8 million more.

I think what needs to happen is state of Minnesota and policymakers both at state and local levels need to invest more and make commitment to invest more in firefighter training, i.e., their wellbeing. An example: according to the Minnesota Center for Fiscal Excellence, their most recent data shows that total investment at all levels of government, we rank 47th in the nation in fire spending. Even though we rank 21st in population.

Suggested training changes

Three-quarters of interviewees discussed ways they would like to see training change in the future. Many of the comments centered around making training easier for firefighters to complete, whether that was by increasing online, shared, or other types of training.

Online training

Almost half of respondents brought up online training, most of them in favor of using it more. Interviewees stressed that it is only appropriate for certain types of content, and that in many areas it needs to be blended with a hands-on component to be effective. They explained that online training allows firefighters to complete training at a time and place that is convenient for them.

For some of the classroom lecture stuff, every six months we allow some of that to be done online. Whether it’s me standing in front of the group, or they’re watching a video or being dragged through a PowerPoint or a process through Target Solutions. The thing you can’t do independent study for is the hands-on. You hear people say do it online—we’re not generating English majors here. It’s a real, highly-charged dynamic, lots-of-unknowns type of thing. Your job is to bring order from chaos. That online piece is important and to be a safety valve, but there’s only so much of that you can do.

⁴⁶ Minnesota Center for Fiscal Excellence. *How Does Minnesota Compare? State Rankings of State and Local Government Revenues and Spending*. February 2016.

Respondents offered mixed feedback from their firefighters: some liked online options, while others would prefer not to do any training online. Several added that rural internet access may be a barrier to expanding online training.

Shared training

More than a quarter of respondents talked about the need to do more shared training. They talked about how departments need to either train more together or coordinate their trainings better, so that firefighters can attend trainings from other departments. A few asked the state to provide more regional trainings, for example by paying for props or out-of-state speakers to travel around the state. A few requested regional facilities.

If there was ways to get some of the props or things that are out there—try and get them set up so they went through the state. Even if they went through on a rotation, or you just knew every quarter in your region that training was going to be coming. You might have to travel an hour and a half to get it but it would still be available.

Other

Several respondents discussed additional ways to make training more convenient. A few highlighted the need to have training occur closer to firefighters. A few others said it just needs to be more flexible, for instance by offering training at different times.

It needs to be made simpler to get trained. If you only get that volunteer for a little bit of time, for him to have to travel four counties to take Firefighter 1 or a seminar that only is in Hibbing or Minneapolis—do more local training. The volunteer could give you four hours this week but not two days. So make that as available as possible. Therefore have more instructors to deliver at home station rather than have people travel. If volunteers only have so many hours per month, let's not spend a lot of them traveling.

Several interviewees did not focus on how to make training easier, but instead talked about content changes they wanted to see. A few requested more localized content, and a few others requested an increased focus on basic firefighting skills or on health and wellness.

Tailor it more locally is the solution. Find some way to analyze fire calls and runs and start with that. The chief can say this is what we have for risks, and this is the type of training that we require. Rather than having same book for every firefighter in the state.

A few of respondents would like the state to provide more guidance or tracks for firefighters beyond the basic NFPA 1001 track.

Maybe creating tracks like leadership or hands-on tracks which create certification and kind of build a resume so to speak. After all those initial classes, then what? How do you stay engaged in continuing education over the course of your career? You can't keep going to the same class. We have this baseline, and we've gotta keep people learning basics, but also how do we keep advanced tracks to build that succession plan, the resume?

Other

Interviewees also discussed the state of training costs and tracking.

Cost

About a quarter of respondents discussed the cost of training. Most of them said that costs have gone up, but their explanations for why varied. A few cited inflation as the main driver. A few others attributed it to either public or private providers increasing their prices, and the other provider type raising prices to match.

A few respondents said that training costs are higher for rural departments. Either providers must pay to travel a long distance to the department, or the department must pay travel costs for their firefighters to attend the training.

Around here, training is available. Outstate? Is it available, yeah, but what will it cost you?

Tracking

Almost a third of respondents discussed tracking of firefighter training, mostly in the context of how they track within their department. Larger departments more often explained that they use a special software like Firehouse or Target Solutions to track their firefighters' training. Others relied on providers, Excel, or existing state systems to track training. While a few noted that tracking is important because it affects ISO ratings and OSHA evaluations, they explained that it can be difficult to set aside the time for it.

It's documented. What's changed drastically is the quality of documentation. At the college that was one of our selling points because it's third-party certification, you needed a transcript or certificate or whatever we had them, but with the technology out there, just in the Minnesota fire report itself, ImageTrend, and some of other softwares. Documentation is much better and that's been pushed hard. I've talked to departments who got tagged by OSHA and they always seem to get tagged on documentation.

MBFTE impacts and feedback

Interviewees discussed the impacts the MBFTE has had, and provided feedback on the MBFTE's structure and services.

Impacts

Training availability and usage

More than a third of respondents said more training is available and occurring directly as a result of the MBFTE. Because of the MBFTE's funding and work, departments have been able to complete training they would never have been able to do without supplemental funding, including both basic and more specialized trainings. They cited specific examples of trainings they were able to pay for because of the MBFTE, including live burns, specialty courses, and leadership courses. One said that departments around them never used to do training,

but now they do with MBFTE funds. Another highlighted that the MBFTE has specifically helped departments in Greater Minnesota obtain more training.

A lot of departments got training that they wouldn't have previously gotten because of the MBFTE. Or they got content experts where departments would've tried to do it themselves and half-assed it. It's led to collaboration and opened up training. There's grant money for conferences or putting on training. The MBFTE has allowed things to happen that wouldn't have happened without it, including NFPA 1001.

Funding from the MBFTE is the only reason we're able to do a lot of our trainings. The old way before that was you picked live fire training one year, then the next year auto extrication, then the next year swift water rescue. We did one expensive one a year and one cheaper. We did two trainings a year. Now, last month we did the Hazmat course. This month, we have three Mondays where we're doing different courses that are funded. We're able to do more to be better trained because of that program. I am truly appreciative of what's offered by that training board. The frustrations I have are very, very minor compared to my satisfaction with the program.

Interviewees explained that the MBFTE has brought more stability to their training budgets, and widened the amount of services some of their departments can provide. They also said that because departments can afford to do more training, providers have begun offering more courses and higher quality courses.

The money from MBFTE is great to have for basic training. Additional training gets caught up in the politics of local budget decisions. Sometimes we have it, sometimes we do not.

The number of trainings available—it used to be limited to bigger cities, places that had state colleges offering trainings throughout the year. Or they have a lot of sectional schools in spring or fall. Now there's a lot more of training coming to the local regions. Especially in smaller places, so they don't have to travel. I think that's increased greatly. That has brought up the quality of the training. 98% of it is from the MBFTE because they're funding it. The regional things that are coming—those things happened in the metro before but not that often because of the expense. So the MBFTE has driven in that whole bus of bringing trainings around the state.

We've added a lot of things like state fire officer school up in Alexandria—that's something new we never had before. I think it's basically due to MBFTE funding that. We never had a good path, so to speak, for people that want to be fire officers, so that's been a good thing. The MBFTE has helped too that they fund other things, like going to the state fire chiefs conference, or fire departments conference, some of those programs like when bringing nationwide speakers that you're normally not able to see that. That has gotten that much better with funding from MBFTE that we never had before.

A few interviewees said that they did not think firefighters were training any more than they did in the past, despite MBFTE financial support. One cautioned that if the amount of MBFTE funding decreased in the future that departments would do less training.

The reality of service in Minnesota is we aren't training more. I struggle with that in my area. People don't have additional time to train. What we've seen is providers are just upping their prices. They get the same amount of training—quality or not—and the difference is prices double and tripled. Now there's a push from cities, who know their fire department gets funds, to use their funds. Fire departments are not doing more training.

Training quality and consistency

A quarter of respondents mentioned that the quality and consistency of training has improved in large part because of the MBFTE's curriculum standards; adopting NFPA as the curriculum standard has brought up quality and consistency across providers.

I think we're good on curriculum. All the certifications offered, there is a curriculum for each. I think that's all been passed because we follow NFPA standards.

I can go to the training institutions around here, or I can also go to a private institute, but they teach to the same standard. There are some differences, but they're not vastly different. They're very close.

However, several respondents said there is too much variation in the way providers teach standard curricula.

I don't know how one group can run a Firefighter 1 class for 24 hours and another for 42 hours. They both meet NFPA standards in their interpretation.

Unintended impacts

The creation of the MBFTE has had several unintended impacts on the fire service.

The most commonly cited issue was a change in how departments fund training. Several respondents discussed how rather than strictly treating MBFTE funding as a supplement, some municipalities decreased municipal contributions as state contributions increased. A few respondents said requiring a local match for MBFTE funds may help address that issue.

I remind departments that you shouldn't negate your budget because you're getting the reimbursement because it's not always the same, and it may not always be there. I think that's the primary thing. Quite a few do spend over and above the amount awarded by the MBFTE, but it seems to hold pretty true that most are right around that amount. For instance, if they get \$2,500 from the MBFTE, that's about what they'll spend on training. They won't spend additional money.

Several respondents brought up other impacts of the MBFTE funding. Among other things, a few respondents each mentioned the following impacts as a result of the sheer amount of MBFTE funding now available:

- Fear that the government will take back unspent funds, which creates pressure for people to spend all the MBFTE money available.
- An increase in the number of unqualified instructors and reduced training quality because there is money to be made in this arena.
- An increase in training prices because the funding is available.

I think competition in the state is so brutal right now. It's so dog eat dog that it diminishes the potency of some of the good programs. I get phone calls from departments to bid on a class, and I say here's the price and I hear that another college is giving the same price, because we're pretty consistent on that, and then I hear that another agency has conducted the training. Oftentimes we get called to clean up the problem on the back end. For example, one organization put on a training session that did not meet expectations and we've been called in to give the class again. Right now Minnesota has a reputation outside of our borders of an easy state to get private contract work and they pay well here. That's not a good reputation to have.

The following impacts were also brought up by respondents, but less often than the previous three items:

- Instructors burning out because departments scramble to use unspent funds at the same time.
- Departments fixating more about how to spend the money than on how to train firefighters effectively.
- Providers canceling classes because of low enrollment; having more course options means less funneling of firefighters into a few classes.
- Departments training firefighters on topics because funds are available for it, and not because they need it.

I don't mind competing as a provider but with the lack of oversight in that system there's a lot of crap training out there. Great, there's lots of money, but MBFTE's job is to get the money out. If we don't spend it, we lose it, so I think MBFTE is in the same boat as a lot of other government agencies that way. They have to get money out of the coffers into providers or we're never gonna get that money again if we don't show the need. Part of that has unfortunately shown you can't oversee all that. You push it out faster than you can account for it. You have providers that are willing to cut corners and provide subpar training.

Qualified instructor list

About a quarter of interviewees discussed the impact of the MBFTE qualified instructor list. Their ideas about improving instructor quality were covered in the Suggested Training Changes section. This section covers what impact respondents thought the list has had.

Nearly all of these respondents did not believe the qualified instructor list was doing a highly effective job at ensuring instructor quality. They agreed that while there are good instructors on the list, there is simply not enough rigor in the system to weed out ineffective ones. Respondents said there is no way to know from the list which topics someone is qualified to teach, or whether someone on the list is even still teaching.

What they have for oversight—they have the approved instructor list. People who are approved to deliver this training. I know personally that for me to put an instructor on there, I just send in a piece of paper to them. There's no real oversight. The state puts it back on me that I put an instructor on that list. It's supposed to be checking quality of instructor but it's broken. The MBFTE doesn't have the resources to verify all this stuff. I want to say each provider is doing work that would toe the line and provide high quality products, but I think you'll find that's just not occurring.

Check that instructor list. Make sure the instructor list is current and that they truly meet qualifications. If they're teaching hazmat technician level classes, and they're only certified Firefighter 1, they're kind of teaching above paygrade. They may not understand it.

A few respondents offered more positive feedback on the list. They had had good experiences with list instructors, and appreciated that the model allows them to make their own choices about who should teach their firefighters.

Funding feedback

About half of respondents discussed MBFTE funding in some way. One quarter praised the MBFTE funding process and structure. Several said it is clear what departments may spend the funds on, and several others were complimentary of how easy it is to get reimbursed these days. They called the process streamlined, seamless, and simple.

Several other respondents commented on the instability of MBFTE funding. Because of the way the originating fund is structured, departments cannot rely on a steady amount of money from year to year. The MBFTE cannot predict how much money they will receive, and therefore neither can departments. This presents a challenge to departments, who cannot plan their own budgets to account for those fluctuations, and who may not be able to make up the funds if their MBFTE amount decreases more than expected.

I think the MBFTE needs to provide a steadier flow of funding. Right now we're at a high water mark. There's a lot of money flowing in. Unless there's a different strategy with how they collect and divide it up, this year will be high water, and next year it'll be right back to middle water mark. It's hard to ramp the training up and then not see those resources again for some period of time and plan your training around it. While I really appreciate the money coming in, it's a really hard way to manage long-term planning.

Several respondents would like to use MBFTE funds to pay for a variety of expenses that are currently not reimbursable. A few brought up travel expenses for training, and a few others requested live burn coverage. Other suggestions for covered expenses included:

- More classes tailored to departments' needs.
- Inspections.
- A part-time training coordinator.
- Time spent on tracking and administering training.

The remaining comments on MBFTE funding varied widely and did not present clear themes. A few took issue with the way funds are sometimes distributed to providers for classes; they preferred that the state give money to departments directly.

The only thing I'd say is on the 1001 front is they allocate a number of seats and give them to providers and not departments. Colleges and providers have 20 funded seats so the first 20 to register are free and the rest have to pay or do an application by fire departments or they get a subsidy at 75%. I get a little quirky about when we put money in training providers' hands. I don't mean to get cynical. We had a request for funds for colleges and universities to provide fire apparatus operator training and ventilation training because they have trailers and want to bring them around the state to departments. But the departments are just random, who they thought they should go to. I might not need ventilation but I need other training I could use that money for. Put money in local departments' hands and don't have providers prescribe training to local departments.

Praise for the MBFTE and SFMD

About a quarter of respondents mentioned praised the MBFTE and the SFMD. Some of their comments included:

Can't say enough good stuff about the MBFTE funding, and the people are amazing.

I think MBFTE is one of most efficient programs in government. They turn around reimbursement within a couple of days. And they're super receptive. Their recordkeeping is stellar.

MBFTE staff have been responsive—they have a "go get it" model.

Communication is always key but the Fire Marshal and MBFTE are doing a great job. We're leaps and bounds ahead of where it used to be when I just started. They've improved annually.

The Fire Marshal staff are a central player in fire issues. Just quality, top-level, committed professionals who stay on top of the office. They have been that. We need to make sure that that office is functioning and has the tools and resources to play that central role.

Certification and licensure

About three-quarters of respondents discussed firefighter certification and licensure, although they had much more to say on certification than on licensing.

Working well

Nearly half of interviewees discussed aspects of certification that are working well. Most of their feedback generally supported the option for firefighters to prove their skills and knowledge, with several explaining that third-party testing adds credibility to training and to the fire service. They also praised certification because it:

- Follows national standards.
- Is voluntary.
- Helps firefighters move between departments.
- Can be used in risk management and liability issues.
- Helps prove firefighters have received training when applying for federal grants.

Several respondents had positive feedback about firefighter licensing. They believed it has brought the fire service more in line with law enforcement, and that it brings credibility to firefighters. A few appreciated that there is some accountability in the program because the program can audit whether firefighters received the training the chief signed off on, but they also wanted additional oversight.

Areas of dissatisfaction

Certification—cost

Nearly a third of respondents commented on the cost of certifications. They did not like that they have to keep paying for recertification, when most states do not require that, or that firefighters must pay to keep lower-level certifications to qualify for more advanced certifications. For smaller departments in particular, those costs are often not worth the small benefit to the department of having their firefighters certified. They did not see much value in paying to recertify when the department does all the tracking and paperwork, and only receives a piece of paper in return. A few added that they were frustrated that they have to pay for both certification and licensure for some of the same firefighters. Others commented that the money used for certification could be better spent on actual training.

We're one of only three states that requires recertification. Are we that much smarter than anyone else? Or maybe we have a model where we're trying to drive revenue. I can tell you right now, no one's ever come here to test proficiency. I sign a paper every three years and send a check in. That doesn't seem like a process to me, it seems like a money machine.

The training board will cover the initial fee, but for us, I think it's foolish that the training board has to pay for the fees because we're never gonna utilize it. You take the \$20 or \$25 or whatever, you take that money for a fireman when you run it through the program, that's money I could spend on other trainings. I can put on a four hour training on a different topic for that \$500.

Certification—testing

Several interviewees brought up issues in certification testing. Several mentioned issues with the tests themselves: that the content is outdated, that the tests are not rigorous enough, and that the exams are inconsistent across the state.

There needs to be work on the certification test. Some teach to test, and the test is in a lot of places irrelevant. The certification for fire officer is ludicrous, the material covered in that exam. It's totally irrelevant—the coursework is old, not up to date, talks about items that went away in the '70s. 800 MHz radio systems and funding budgeting and things that are not part of the curriculum. It's one of the worst I've seen.

A few discussed some of the ways that instructors can game the system to ensure that their students pass the test. A few others reported they have struggled to bring certification testing to an area near them.

We have so many providers that just teach to the test because they know what it is going to be. I can go online to the Minnesota certification website and pull up the Firefighter 1 standard—if I know who the lead evaluator is, I can tell you what their go-to test stations are. That means I can prep my students to focus on those. I could cut out the other topics, and cut the staff time to increase the payout.

To get that certification test done out here is almost impossible.

Certification—accountability

Several respondents commented on the lack of accountability for certification. Respondents explained that there is no auditing process, and a few said they knew chiefs that had signed off on recertification for their firefighters even when they had not met the minimum training hours.

When it comes to the end of year and you get the paper from the certification board, has the firefighter completed 24 hours of training? The chief gets out his pencil and he signs his name and he says yes. Even the department that I used to work with, I've trained over 50% of that department since 2006 and I know that over 50% of the department is new guys. I trained them and I know this department has not put on 12 hours of qualified training in a 24 month period.

Licensing

Almost a third of respondents discussed some issues with firefighter licensing. Most of them wanted further alignment between certification or licensure, or to condense down to one system, but respondents provided other feedback as well. Specifically, several remarked they did not see large benefits to licensure. They explained that departments must do their own tracking and paperwork and pay an ongoing cost for little output in return. As one respondent put it, the public expects the same service regardless of whether a firefighter is licensed. Another added that the bar is not very high for licensure, and a few commented on the lack of licensure reciprocity between states.

Again, being in the budget seat, you get this ongoing charge for it and I'm not sure I totally understand that because we track all the training and we do all the work and it's basically send in a check again to keep the licensing up. In the same token, I imagine you need a baseline somewhere.

Suggestions for Improvement

Structural changes

Several respondents pushed for further alignment between certification and licensure, or a complete combination of the two systems. A few specifically mentioned that certification and licensure “should be joined at the hip.” Respondents did not see value in having two systems with two sets of requirements and two sets of costs. A few pointed out Minnesota is the only state to have both systems.

I think that it's either one or the other. If you have a license, to me the fact that I gotta pay a license fee and maintain a level of training and education that allows me to maintain my license, then to me I shouldn't also have to pay a certification fee as well. Having to pay both licensing and certification fee I think is redundant and I think it's punitive. Maybe you could argue after the first year, getting firefighters graduated you have to do that, but in the long term people like me who spend another 10-15 years on this job, that's money I'm spending just to pay some certification revenue stream and licensing—are we gonna be licensed or certified? We need to decide. Why am I paying fees to both people? That's where it's broken.

Almost a quarter of respondents weighed in on whether the certification board should be placed in the SFMD. They believed that would simplify things and create more effective delivery of service. A few did not like that individuals are profiting off of certification, and saw the SFMD as a more neutral party.

I don't like to see government getting bigger but I don't know if it's something that be done by the SFMD. They have employees, and that would I think help with that percentile of how much money is in fire service. They could start proving at the legislative level that there are all these people that are doing these jobs, volunteering, or these ones that are paid or paid-on-call. You have two entities doing somewhat of the same job. Or maybe it should just be through the SFMD, where an RFP is put out for someone to do this job and manage it and track it.

A few of respondents opposed putting the certification board in the SFMD. They thought keeping the certification board as a private entity allows it to be cost effective.

Testing changes

Several respondents had ideas on how testing should change:

- Prohibit evaluators from testing students that they taught.
- Do not require testing.
- Establish regional testing sites.
- Make the tests more rigorous and more similar to real life situations.

Other changes

Other changes suggested by respondents included:

- Do not require formal recertification; allow firefighters to keep up certification if they are an active firefighter.
- Provide better tracking of certification and training.
- Reduce the number of certifications available to reduce costs.

Models

The interview questions asked respondents about the current model. Most of them discussed the fire training model, but several also brought up the model of the fire service as a whole.

Fire training model

Benefits and drawbacks

Several interviewees praised the current training model. They appreciated that the state provides funding and some oversight, but that local departments ultimately choose which training they receive from which providers. They can tailor their training decisions to local needs.

In the modern era, the MBFTE delivers a lot more flexibility in what's reimbursable, which gets back to jurisdictions know best what they need to be trained on and who should be delivering it. They let the locals decide what that's gonna look like.

I think people in areas understand where quality is coming from. They choose their suit. Whereas if they were stuck with one training provider or suit, in my opinion that would lead to gaps.

This interview analysis has already covered some of the existing drawbacks of the current model. These include:

- The state does not provide strong oversight of training providers.
- MBFTE funds are not a stable amount for departments from year to year.
- The amount of funding may have inadvertently created some variations in training quality.

In addition to those issues, a few respondents also brought up the potential for conflicts of interest within the model. For instance, the governing members of the MBFTE are not prohibited from also financially benefitting from MBFTE decisions. SFMD employees who oversee training programs may also work for those same programs, which may present the potential for conflicts of interest.

Instructors have a dangerous model going on because we have so much money. Each department has some training dollars. The easiest way to get all their training dollars: I befriend a chief or training officer and make them an instructor for me. I give them a sweater, and now they're locked in. I get all that department's money. The money is coming back to me but the guy isn't a qualified instructor. That's a big model and I see it all the time. The quality of instructors is not always very good.

Future options

Respondents had a variety of opinions on how the training model should change. Some suggested relatively small adjustments to the model, while others wished for a complete overhaul.

Instructor oversight

About a quarter of interviewees discussed potential changes about instructors, and most of them suggested more oversight and requirements. The MBFTE does provide a qualified instructor list that departments must choose from if they want MBFTE reimbursement for a course, but respondents wanted the MBFTE to play a larger oversight role.

I know at colleges in Wisconsin, instructors they all have to be certified Fire Instructor 1. Not in Minnesota. There's no third-party validation of credentials, no ongoing continuing education. There's a blind trust of what this individual is teaching. Is it relevant? Is it applicable? Where is quality control in Minnesota? I've heard horror stories where someone is bored to death, where they teach outdated content. Statewide, we need a better focus on credentialing of subjects, and minimum requirements for different subjects.

Interviewees suggested setting stricter standards for who can be an instructor, ensuring that instructors are qualified to teach the classes they offer, requiring continuing education for instructors, and allowing the MBFTE to audit classes. A few requested a way to better audit and rate instructors, including a Yelp-type crowdsourced rating system. However, a few did note that the MBFTE may not have the capacity to provide much more additional oversight.

We need opportunities for instructors to get different levels of instructors. We need new higher standards. Just because you teach Firefighter 1 doesn't mean you should teach Firefighter 1. But the MBFTE can't provide that oversight.

Expanded state role

A few respondents expressed interest in a larger role for state government beyond instructor oversight. Ideas included a state-provided online learning system for departments to use, and state training officers assigned to local regions to help them with training.

A few respondents pushed for a more regional approach to training, including a few requests for regional training facilities.

A regional approach is needed for delivery of training and funding and coordination. I see leadership for this coming from rank and file because the chiefs are worried about consolidation and losing their positions and authorities. Not all of them, but some of them.

Structural alignment

A few suggested restructuring some of the entities to better align training standards and practices. The Certification and Licensure section discussed changes to the certification board, but beyond that, respondents

also wanted more integration. A few also supported prohibiting MBFTE members from governing if they would also potentially profit from MBFTE decisions.

What would it take for one entity to be responsible for it all? Maybe all of the board folks have the responsibility. Like the Minnesota Board for Peace Officer Standards and Training.

The thing that works well here is we have the training board under the SFMD. We have the SFMD and we have the certification board. I think all of that's good but there needs to be a way to make sure that that's all integrated. That it's "either/or" or "and this." There needs to be one standard. And that standard needs to maybe pull from all of those facets.

Public-only model

More than a quarter of respondents discussed the benefits and drawbacks of a training model that only used public providers. To a few that meant using the Minnesota State system, while to others it meant the SFMD would control and organize firefighter training for the state.

Most of the interviewees who discussed a public-only model supported it. They pointed to other states like Illinois that have state-run programs, and praised them for removing some of the opportunities for conflicts of interest. They believed a state-run system would ensure consistent quality and content, and that it would be simpler than the existing system.

Other states like Wisconsin, Michigan, Illinois, Texas, Florida—they have very defined standards statewide based on hours of time spent in a classroom. We are behind. The good news is we could just look at other states. We don't have to reinvent the wheel. We need one entity that has power over all the other training entities.

I'd like to see one training thing for the state of Minnesota. I think the more training institutions that we have, public and private, I think it dilutes the overall program. And I think there should be one state fire training sanctioned group and training dollars should go to that agency and they should be spent accordingly. Politically I think it'd be really tough to do. But once the decision is made and the dust settles, I think it'd be the right way to go. That way it solves some of consistency issues, some of the certification issues, it solves a number of those things. Simple sometimes is better. There can be other providers out there but they don't get state dollars.

A lot of other programs get funding directly from state programs managed by the Fire Marshal or technical colleges directly and that's how training is provided. Then departments don't pay for it. I would think down the road that some kind of model of that type would make more sense. Either the Fire Marshal takes over training or the colleges get out of the business and we all go private and compete for money fairly. All I know is the money is out there but I don't have a budget that can support the area I cover. I can't provide the quality of training that other programs can even though it should be equal status because we're state institutions.

A few of respondents thought it would be an ideal model, but did not believe it would be feasible. A few others noted that they did not want only one physical academy in the state.

In contrast, a few mentioned that they opposed a public-only model. They worried about accountability and quality under that model.

There are other models where the fire marshal runs all training—I'm hesitant when one organization runs all that training. Where's the accountability? I prefer where departments get to choose. Although we have a great fire marshal today, that's a job appointed by the governor and that could change in a heartbeat.

Fire service model

Several respondents discussed some issues with the current fire service model as a whole.

A few mentioned that many departments still elect their leaders, including their chief and training officer. This means the individuals responsible for coordinating training may not always be the most qualified individuals.

A big problem in volunteer departments is the chiefs are voted in by members of the fire department. What company has the staff vote for the CEO? Who is going to vote for the chief that requires more training? Or vote to lessen the training requirements and make the beer less costly? There should be a fire board or outside entity that selects the chief.

At a broader level, commenters expressed concern that the state mostly relies on non-career firefighters to provide this service, and that there are so many fire departments within the state. They did not see the current blend of those two factors as sustainable in the long-term. A few pointed out that the number of departments is not based on how many firefighters the state actually needs.

Interviewees explained that with as many departments as the state has, there are simply too few volunteers willing to work for free in a position that requires significant amounts of time, particularly with the amount of training in the first couple of years. Respondents said that departments are closing down or struggling to maintain the staffing levels they need. They predicted that the state would need to shift away from the volunteer model over time.

Minnesota is number two or three in the amount of volunteers per capita. With this recruitment retention issue, we're feeling it pretty heavily. We have fire departments shutting their doors because they can't get volunteers. We're not figuring out the solutions. Some is of is get newer guys to get in, or maybe getting away from volunteers. Where you have a call and no one shows up. It's gotta be biggest issue in the next five to ten years. My fire department in 1995, there was a 40 member fire department with a three-year waiting list. I'm fortunate right now that I'm up to 20 total. And I'm the exception—most other departments are struggling for the ten minimum to keep their doors open.

How many departments do we really need? When you look at police department numbers, a lot of smaller townships contract with the sheriff. Compare that to fire departments. Why

do they all need a ladder truck or two to three engines? A lot of departments are going to a part-time staffing model—a lot of people are working for two to three departments but each department has gear, and has to pay for a physical for that firefighter. You put ten grand into a firefighter who works 20 hours in each department—why not just let them share equipment among departments or make some people full-time? Obviously there are cost implications.

A few respondents thought more departments would need to share more services, hire more paid staff, and/or consolidate. They saw a role for state government in helping with that process, but did not have clear directives for what the state should do. One suggested a statewide study, while another brought up current legislative efforts to allow fire taxing districts.

A few other respondents had suggestions around creating different types of firefighters or departments to help address staffing challenges. By setting different expectations for different groups, respondents hoped to maintain the current volunteer model.

I've been approached by a local department and he said I have some firefighters in the 1001 program now, but I've got people that would be on our fire department that want to just run the pump or whatever. They don't want to climb a ladder or go into a fire. I need them in the daytime but I can't put them on because the minimum level of training is the 100 some hours. They're not interested in taking that volume of training. We've talked about the potential for supplying a more basic firefighting course which may be less hours. It wouldn't cover 1001 but would still let them participate on the fire ground, where they could do everything up to the point of going into a fire. They can set a ladder, but are not wearing SCVAs, not going into burning buildings or onto roofs. And in outstate Minnesota that might be what's needed in certain cases.

Interview questions

Fire chiefs

1. Tell me who you are, how long you have been involved in fire service, and how long you have been a chief?
2. Over your career, what major changes have you seen in the communities you have and continue to serve?
 - What implications have these changes and trends had on the delivery of fire service training in MN generally and your community specifically?
3. I'd like to talk to you about the capabilities and training of your fire fighters and yourself, focusing on: a) types of available training; b) training instructors and materials; c) training payment and verification.
 - Do you feel that you and your fire fighters are trained enough to do their jobs effectively?
 - What's your opinion about the types of training available to you and your fire fighters (e.g., is it current, relevant, accessible)? How could this be improved?
 - What's your opinion about the availability and quality of fire service instructors? How could this be improved?

- How is training determined and paid for in your department? Has this changed? How could this be improved?
 - Is tracking of training important to you?
4. What types of training do you require of your volunteer firefighters? Your professional firefighters? If different, why?
 5. If you project ahead ten years, what are the most significant challenges facing your fire department? How will that impact the type of training or how training is delivered?
 6. Help me understand the difference between certification and licensure.
 - Is tracking of licensure and/or certification important to you? Why? Is this need being met? If not, what else could be done about it?
 - Is Minnesota on the right track when it comes to certification? Why?
 - How about licensure? Why?
 7. What actions could be taken to improve statewide firefighter training, certification and licensure now and in the near-term?
 8. Are there any people you think I should make sure to interview?
 9. What question should I have asked that I missed? Or, do you have anything else to add?

MBFTE and FSAC

1. Tell me about yourself: who you are, how long you have been involved in fire service, and your involvement with fire service training.
2. In your experience, how well trained do firefighters think they are in Minnesota? Do fire chiefs think their staff are trained enough?
3. The 1998 study highlighted several different challenges in firefighting training.
 - Inconsistent quality of instruction
 - Inadequate access to needed training
 - Inadequate curriculum standards
 - Unclear accountability for the uses of funding
 - Underfunding
 For each:
 - How far has Minnesota come in addressing these challenges? What role has the MBFTE played?
 - What else could be done to further address these challenges?
4. What other challenges exist in fire service training today besides the ones we just touched on?
5. Over your career, what major changes have you seen in the communities you serve? What trends are on the horizon?
 - How have any of these changes impacted fire service training?
6. If you project ahead ten years, what do you see as the most significant issues facing Minnesota's fire service and its 780 fire departments in general?
 - What training will be needed in the future? How will it need to be different than current training?
7. Minnesota's model does not involve a central training facility or authority; we have a central group that provides reimbursements and instructor/curriculum approval.
 - Besides the challenges we discussed earlier, what other impacts has the MBFTE had on fire service in Minnesota?
 - What's worked well about the MBFTE model? What have been some of the challenges of the MBFTE model?

- What other models do you know about from other states? What are the pros and cons of those other models?
8. In your ideal world, what would fire service training look like? How much training would firefighters have, who would have provided and paid for it, etc.?
 - What's keeping Minnesota from reaching that ideal world?
 9. What other actions could be taken to improve statewide firefighter training, certification, and licensure now and in the near-term?
 10. What question should I have asked that I missed? Or, do you have anything else to add?
 11. Are there any other people I should make sure to interview?

Training providers

1. Tell me who you are, how long you have been involved in fire service, and how long you have been an instructor?
 - How did you become an instructor?
 - Who are your students?
 - What training do you provide?
2. Over your career, what major changes have you seen in the types of fire service training offered to fire fighters? The quality? The cost?
 - What implications have these changes and trends had on your delivery of fire service training?
3. I'd like to talk to you about the capabilities and training of fire chiefs and fire fighters, focusing on: a) types of available training; b) training instructors and materials; c) training payment and verification.
 - Do you feel that fire chiefs and fire fighters are trained enough to do their jobs effectively?
 - What's your opinion about the types of training available to chiefs and fire fighters (e.g., is it current, relevant, accessible)? How could this be improved?
 - What's your opinion about the availability and quality of fire service instructors? How could this be improved?
 - Who determines what training is needed and how is it typically paid for? Has this changed over your career? How could this be improved?
4. What types of training should be required for volunteer firefighters? Professional firefighters? If different, why?
5. If you project ahead ten years, what do you see as the most significant issues facing Minnesota's fire service and its 780 fire departments -- generally first, and specifically related to training?
6. Is tracking of licensure and/or certification important? Why? Is this need being met?
 - Is Minnesota on the right track when it comes to certification? Why?
 - How about licensing? Why?
7. What actions could be taken to improve statewide firefighter training, certification and licensure now and in the near-term?
8. Are there any people you think I should make sure to interview?
9. What question should I have asked that I missed? Or, do you have anything else to add?

Appendix E: Survey of chiefs and training officers

Methodology

MAD conducted an online survey of fire chiefs and training officers in February 2016. The MBFTE provided email addresses for 912 individuals at 780 fire departments.⁴⁷ Some departments had multiple email addresses for the chief, and some had email addresses for both the chief and the training chief/officer. As instructed by the survey, none of the departments submitted more than one response.

Individuals from 290 departments responded to the survey, for a response rate of 37 percent. For comparison, the 1998 fire chief survey received 204 responses, for a response rate of about 25 percent. The 1998 study also surveyed firefighters, and received 2,365 responses (out of an estimated 19,500 firefighters).

For the open-ended questions, MAD categorized comments based on different themes that emerged from the responses. MAD applied multiple category labels to answers that fit into more than one theme. Responses such as “N/A,” “I don’t know,” or “No comment” were not tallied in the number of responses to a question. Select responses are included in *italics*; MAD lightly edited some responses for spelling and grammar.

The full survey instrument is included at the end of this appendix.

Results

Department demographics

Although only 38 percent of departments responded to the survey, the departments that did respond generally reflected statewide department demographics. On average, responding departments had 28 firefighters in their department, compared to a statewide average of 26.⁴⁸ Most departments that responded (79 percent) had 30 or fewer firefighters; statewide, 84 percent of departments are of that size. Responding fire departments represented all 15 fire regions of the state.

Table 8 shows the number of departments responding from each region, and Figure 11 shows a map of the regions.

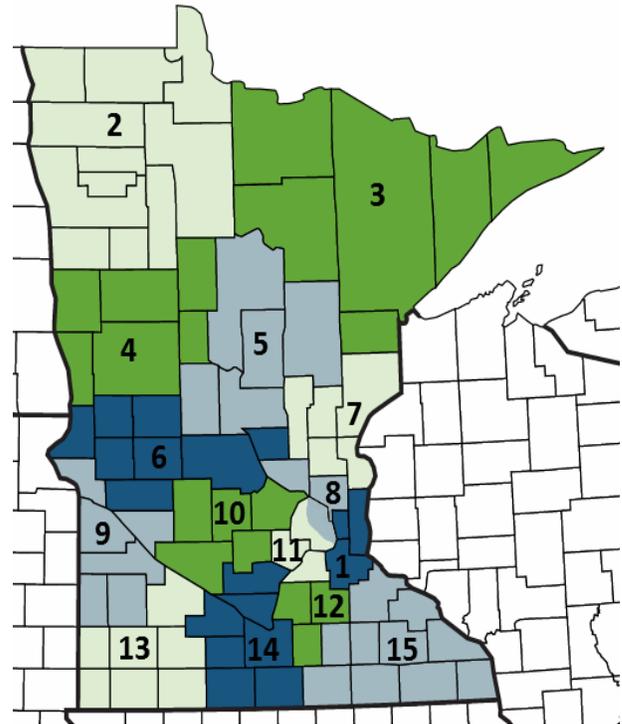
⁴⁷ Some departments do not have an email address on file with the MBFTE.

⁴⁸ The MBFTE provided MAD with the number of firefighters per department. The data are as accurate as the MBFTE database.

Table 8: Responding departments by fire department region

Region	Respondents
1-Capitol City Region	20
2-Northern Region	21
3-Arrowhead Region	33
4-Northwest Region	20
5-Cuyuna Region	14
6-Lake Region	27
7-St. Croix Valley Region	13
8-North Suburban Region	16
9-West Central Region	17
10-Central Region	13
11-United Region	18
12-MN Valley Region	9
13-Southwest Region	19
14-South Central Region	19
15-Southeast Region	31
Total	290

Figure 11: Minnesota fire department regions



The proportion of department types among respondents generally reflected the statewide proportion, as shown in Table 9. Volunteer departments were somewhat underrepresented in the survey results; volunteer departments represent 43 percent of all state departments, but only represented 34 percent of survey respondents.

Table 9: Responding departments by department type

Dept. type	Number of respondents	Percent of respondents	Percent of all MN depts.
Volunteer	100	34%	43%
Paid-on-call	136	47%	44%
Combination	41	14%	11%
Career	13	4%	2%
Total	290	100%	100%

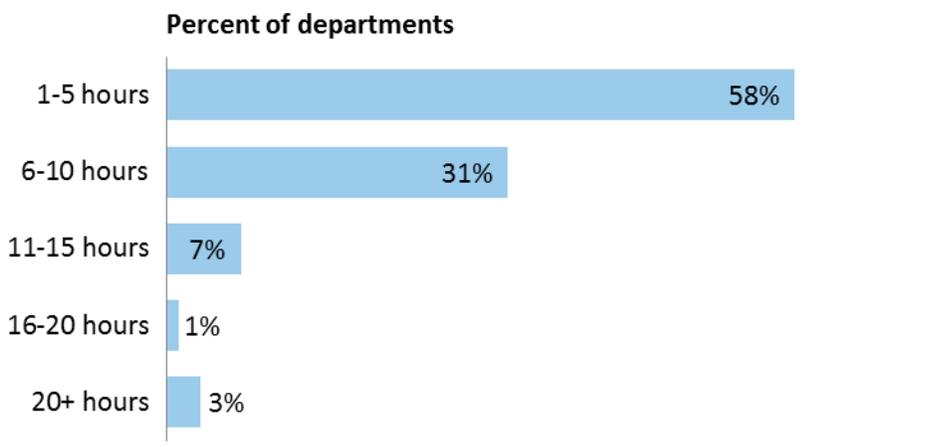
Training amounts and sources

Training amounts

Departments vary in how many training hours their firefighters receive. Figure 12 explores the number of training hours per month across responding departments. In the majority of responding departments (58 percent), a firefighter receives an average of five or fewer hours per month. Only ten percent of departments reported that their firefighters receive more than ten hours of training per month.

Figure 12: Firefighter's average number of training hours

On average, how many hours of training per month does a firefighter in your department receive? (n=265)



In responding departments, a firefighter receives an average of 6.5 hours per month. This number is almost identical to the 1998 study, which found an average of 6.6 hours.⁴⁹ Unsurprisingly, firefighters in career departments receive more training; career departments average 16.2 hours per month, while volunteer departments average 4.7 hours.

Training sources

Across the state, departments rely on various types of training providers. Table 10 compares the results of the matching questions from the 1998 and 2017 surveys:

- What were the sources of training for these firefighters in 1996 (check all that apply and indicate percentage of the total hours)?
- What were the sources of training for your firefighters in calendar year 2016? Estimate the percentage of total training hours from each source.

⁴⁹ The 1998 study surveyed firefighters separately from fire chiefs. The firefighter survey asked how many hours of training they had taken in the past 12 months, and the average was 79 hours. Dividing 79 by 12 yields 6.6 hours per month.

Overall, most training continues to be provided in-house, largely from in-house providers. In both 1996 and 2016, fire departments relied on in-house instructors for more than 50 percent of their training (54 percent in 1996 and 51 percent in 2016). The largest change was in the percent of training from private providers, which grew to 12 percent from 3 percent. The amount of in-house training from public providers also increased to 21 percent from 16 percent.

Table 10: Training sources for Minnesota fire departments⁵⁰

Source of training - 1996	Source of training - 2016	Avg. percent of training from source - 1996	Avg. percent of training from source - 2016
In-house training by in-house instructors	In-house training by in-house instructors	54%	51%
In-house training by technical college instructors	In-house training by public training providers	16%	21%
In-house training by free-lance/contract instructors	In-house training by private training providers	3%	12%
Other in-house training	Other in-house training	5%	5%
Technical college training at technical colleges	Technical college training at technical colleges	4%	4%
Sectional fire training	Sectional fire school	6%	4%
Other training	Other training	2%	3%
Regional fire training	Regional fire training	2%	2%
State Fire School training	--	3%	--
Industry-provided training	--	1%	--
Fire/EMS Center training	--	1%	--

Although in-house instruction by in-house trainers was the most common source, it was rarely the only source. Only 14 departments indicated that more than 90 percent of their training came from in-house instructors.

Career departments more often used in-house instructors than paid-on-call and volunteer departments; they used in-house instructors for an average of 74 percent of their training, compared to slightly less than 50 percent for paid-on-call and volunteer.

⁵⁰ MAD revised the training source options based on conversations with the SFMD and MBFTE to reflect modern terminology and availability.

Online training

The MBFTE and study interviewees explained that more trainings are being offered online. To learn more about this, the survey asked respondents, “Did your firefighters take any online training in calendar year 2016?” More than one-third of respondents (37 percent) answered yes. Table 11 shows the full results.

Table 11: Departments whose firefighters took online training in 2016

Response	Departments	Percent
No	164	57%
Yes	107	37%
I don't know	15	5%
Total	286	100%

Online training usage varied based on department type. About 30 percent of volunteer and paid-on-call departments responded that their firefighters had received online training in 2016, compared to 71 percent of combination departments and 77 percent of career departments.

The 107 respondents who answered that their firefighters took online training in 2016 were asked a follow-up question: “What percentage of your in-house training is provided online?” Table 12 shows the results. The vast majority of departments (86 percent) provide 1-25 percent of their in-house training online. No departments offer more than 50 percent of their in-house training online.

Table 12: In-house online training availability

Percent of in-house training provided online	Departments	Percent
0%	6	6%
1-25%	92	86%
26-50%	9	8%
51-75%	0	0%
76-100%	0	0%
Total	107	100%

Training funding

Departments use a variety of funding sources to cover training expenses. To better understand how departments fund training, the survey asked:

- In calendar year 2016, how much funding did your department receive for firefighter training (excluding equipment and personnel costs)? Estimate the total dollars received from each funding source.

Table 13 shows how departments funded training in 2016. Although local governments still provided the bulk of firefighter training dollars (50 percent of all dollars reported), only about two-thirds of departments reported using local funds. In contrast, nearly every department (98 percent) reported using MBFTE funds.

Table 13: Training funding sources in 2016⁵¹

Funding source	Depts. who received funds	Percent of depts.	Average dollars	Median dollars
Local government funding	162	66%	\$12,957	\$4,000
State government funding – MBFTE	241	98%	\$5,248	\$4,000
State government funding – other than MBFTE (for example, HSEM)	30	12%	\$10,581	\$1,500
Federal grants or other federal sources	9	4%	\$1,155 ⁵²	\$1,100
Industry funding (for example, railroad companies have paid for training for some departments)	26	11%	\$1,601 ⁵³	\$675
Other sources	16	6%	\$2,555	\$1,000
Total	247⁵⁴	-	\$16,950	\$6,000

The data reveal that funding sources have changed significantly over time. In the past, many departments used only local government funding for their training expenses. The 2016 data show this is no longer the case. While 63 percent of departments in 1998 used only local funds for training, just three departments reported the same in 2016.⁵⁵ All other departments reported a mix of funding sources.

The change in funding sources did not come from increased reliance on federal or industry funds. In fact, fewer departments reported federal funding in 2016 than in 1996 (four percent in 2016, compared to 11 percent in 1996), and the same percent of departments reported industry funds in both years (11 percent).

⁵¹ One department reported millions in local funding; this figure and department has been excluded from the analyses where they would dramatically skew the data.

⁵² This figure excludes one department that listed several hundred thousand dollars in federal funding. When included, the average becomes \$41,027.

⁵³ This figure includes one department that listed tens of thousands of dollars in industry-provided funding. When included, the average becomes \$3,463.

⁵⁴ Represents the total number of departments that provided funding information, and not the sum of the column.

⁵⁵ The 1998 survey asked fire chiefs about their 1996 training budgets. Accurately comparing the two years of data is challenging because of a change in the question methodology. Specifically, the 1998 report noted, “The great variety of responses indicated that, unfortunately, [chiefs] had many interpretations of the budget question. For example, it was not clear in many cases if payroll or equipment costs were included.” Learning from this, the 2017 question asked departments to exclude equipment and personnel costs.

The change has instead come from an increase in state fund usage, almost all of which comes from the MBFTE. Fewer departments used to receive any state funds for training, and the money they did receive represented a small portion of their funding. In 1996, 32 percent of departments received state funding for training; of those, only 11 departments reported that the state provided ten percent or more of their training funds. However, departments can now receive funding from the MBFTE, and it is often a large part of their funding. In 2016, the average department received 63 percent of its training funding from the MBFTE, compared to 32 percent from local government.

Table 14 examines the MBFTE as a percent of departments’ 2016 training funding, and further demonstrates how large a role the MBFTE plays in department budgets. In 61 percent of departments, the MBFTE supplied more than half of their reported training funds. Even more notably, the MBFTE supplied the entire training budget for 28 percent of departments.

Table 14: MBFTE as a percent of departments’ total training funding in 2016

Percent of dept.’s training budget funded by MBFTE	Departments	Percent
0-25%	34	14%
26-50%	61	25%
51-75%	59	24%
76-99%	24	10%
100%	68	28%
Total	246	100%

While trends in funding sources are clear, the trends in funding amounts are more difficult to track. Based on departments’ reported funding, and the number of firefighters in each department, departments spent an average of \$428 per firefighter in 2016.⁵⁶ By contrast, the 1998 study calculated an average of \$335 dollars per firefighter.⁵⁷ Adjusted for inflation, \$335 in 1997 would have the same buying power as \$501 in 2016.⁵⁸ This would suggest, without great accuracy, a decrease in per-firefighter funding since 1998. However, the 1998 study had a less clear budget question, and some departments included personnel and equipment costs.⁵⁹ This may explain some of the difference in average spending between the two studies.

All departments in the state are eligible for MBFTE funds, but a few choose not to pursue it. The MBFTE wanted to know more about why they did not request funds. To that end, the survey prompted respondents that did not list any funds from the MBFTE with the question, “Why didn’t your department use MBFTE funds in calendar

⁵⁶ This average excludes some departments that provided unusable data.

⁵⁷ The 1998 study used a different method to calculate their average. That study asked fire chiefs about their total budget and the average number of firefighters in their department for 1997.

⁵⁸ Calculated using the Bureau of Labor Statistics Consumer Price Index Inflation Calculator.

⁵⁹ See footnote 55 for further information.

year 2016? Select all that apply.” Table 15 lists the results. Most often, departments marked that they had in fact used MBFTE funds, but had not listed it in their budget in the previous question.

Table 15: Reasons departments did not use MBFTE funds in 2016 (n=22)

Reason for not using MBFTE funds	Departments
We did use funds, but I didn't list the amount on the previous page	8
We didn't have firefighters who need the training funded by the MBFTE	4
Other	4
I didn't know about it	4
We didn't need additional funding	2

The reasons given for “other” were:

- *The former Fire Chief did not use the funding, but as the new Fire Chief I intend use the funding for training.*
- *I told my training officer to send in the proper paper work but not sure if they did.*
- *Need to be better at using it and plan on it this year.*
- *We are a small department from a small town. Although the funding is appreciated, training gets to be very expensive and some years we just can't afford it.*

Training satisfaction and improvement

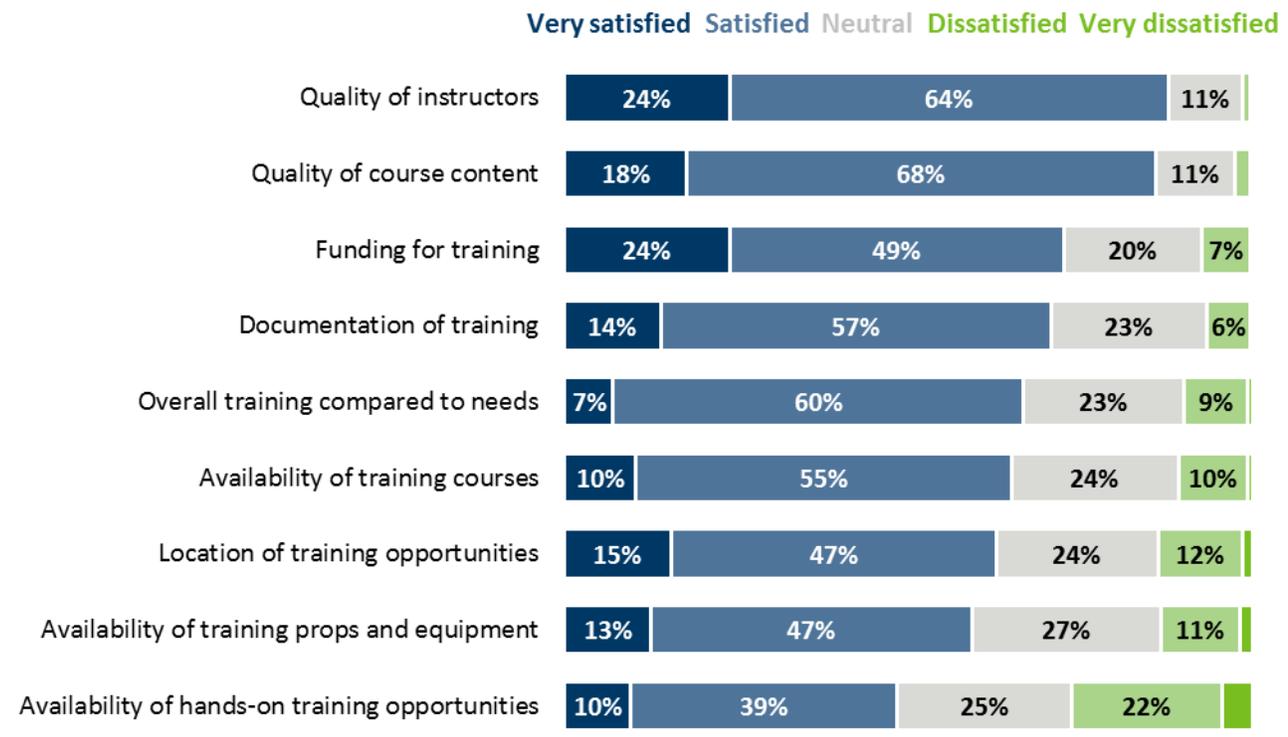
The next section of the survey asked respondents about their satisfaction with firefighter training, and how they would like to see training change.

Satisfaction

Overall, departments were largely satisfied with firefighter training. Figure 13 shows their satisfaction with nine components of training. Departments were most satisfied with the quality of instructors and course content; 88 percent of respondents were satisfied or very satisfied with instructor quality, and 86 percent rated the same for course content quality. In contrast, respondents were most dissatisfied with the availability of hands-on training opportunities (26 percent dissatisfied or very dissatisfied).

Figure 13: Department satisfaction with components of training

How satisfied are you with these components of training for your department?

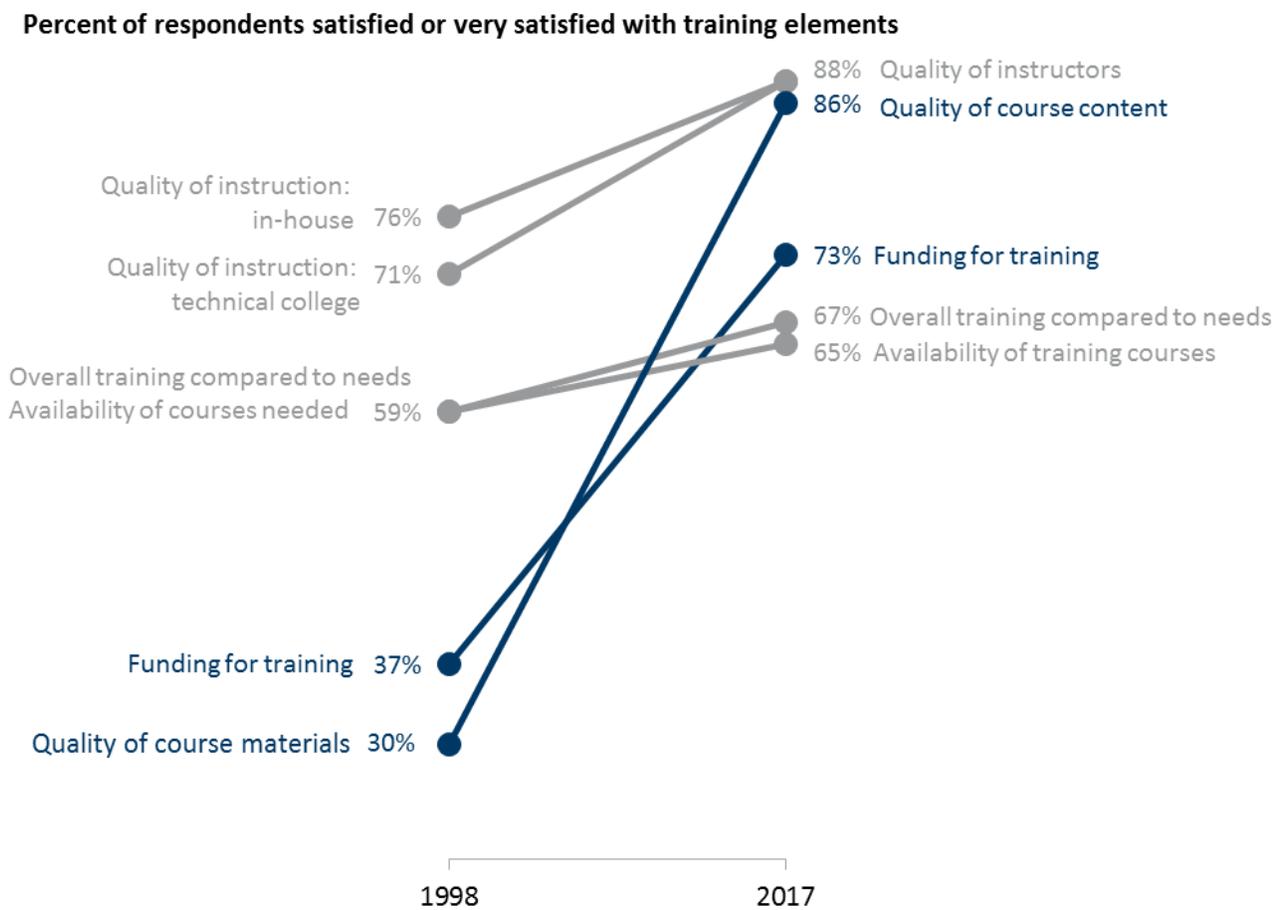


Satisfaction was largely similar across department types with the exception of funding. Only 13 percent of career departments were satisfied or very satisfied with training funding, compared to 78 percent of volunteer departments, 75 percent of paid on call departments, and 67 percent of combination departments. Comparisons between career departments and others types should be interpreted carefully, considering career departments only represent two percent of all state departments.

Regions often had drastically different satisfaction levels with components of training, but with so many regions and therefore relatively few respondents per region, it is difficult to draw specific conclusions.⁶⁰ Generally, departments in more rural regions of the state tended to be less satisfied with training components, although even departments in metro regions were sometimes among the least satisfied with some components of training.

Some of the satisfaction results differ greatly from past findings. The 1998 fire chief survey asked a similar question with fewer and slightly different options, and Figure 14 compares the two years of results. The left part of the chart shows the option language for the 1998 survey, while the right shows similar language used in the 2017 survey.

Figure 14: Changes in department training satisfaction between 1998 and 2017



⁶⁰ For example, 92 percent of respondents in the Cuyuna Region were satisfied or very satisfied with overall training compared to needs, but this was true for only 31 percent of respondents in the St. Croix Valley Region. While this might seem like a drastic difference, the true numerical difference amounts to 12 versus four respondents being satisfied or very satisfied because each region only had 13 respondents.

Overall, respondents were more satisfied with training components in 2017 than they were in 1998. The largest changes were in course quality and funding. In 1998, 30 percent of respondents were satisfied or very satisfied with the quality of course materials; in 2017, 86 percent rated the same for quality of course content, a 56 percentage point increase. Likewise, the percent of respondents satisfied or very satisfied with funding for training increased to 73 percent from 37 percent.

Barriers

To learn about current challenges, the survey asked fire chiefs and training officers about what was keeping their firefighters from being trained to their ideal standards. The question allowed them to choose up to three of nine options, and Figure 15 illustrates the results. Overwhelmingly, respondents identified “time availability of firefighters for training” as a barrier to additional training (82 percent of respondents).

Figure 15: Barriers to additional firefighter training

Please select the top three barriers that prevent your department’s firefighters from being trained to your ideal standards. (n=271)



Besides firefighter time commitment, the data show a clear grouping of top concerns. The following four barriers were all chosen by 34-39 percent of respondents: location of training opportunities; amount of training requirements; funding for training; and availability of hands-on training opportunities.

The least commonly chosen barriers were quality of instructors and quality of course content (six and four percent of respondents, respectively).

The barriers did not vary significantly among department types. The largest difference was in funding for training; 77 percent of career departments identified funding as a barrier, compared to about 30 percent for paid-on-call and volunteer departments.

Those who selected “other” were asked to elaborate on their response. The responses given were:

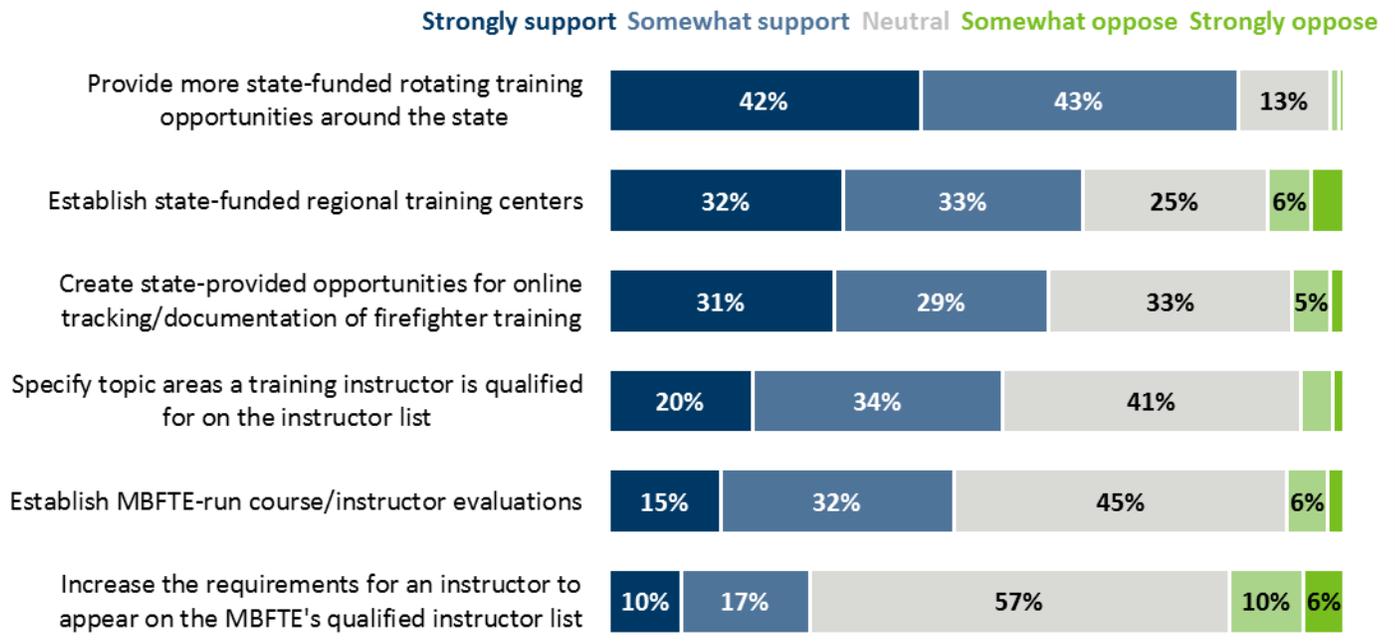
- *Lack of instructors to give classes.*
- *Funding for paying the firefighters for taking training.*
- *Not enough time in a month, versus amount required.*
- *Training requirements in general are an issue. As Training Officer, I would like to be able to have assistance in determining training needs, as well as "best practices" of how to set those up.*
- *Job – we have don't have time off. Night shifts conflict.*
- *I think the opportunities are endless if you can put the time in.*
- *Our average age of the department and years of service limit interest in training.*
- *Volunteer dept. – hard to get everyone to do training when we set it up because of their full-time jobs.*
- *Too much training for 100% volunteers - we need to ease up on training requirements.*
- *My firefighters' commitment to fire training.*
- *Changing of props.*

Potential changes

MAD, the SFMD, and the MBFTE generated a list of six possible changes to firefighter training based on interviews with fire chiefs and training providers, and the survey asked respondents about the ideas. Figure 16 shows respondents’ support and opposition to the potential changes. Of the six options, the most supported option was “Provide more state-funded rotating training opportunities around the state”—86 percent of respondents somewhat or strongly supported that option.

Figure 16: Support for potential training changes

Please rate your response to the following possible changes to current firefighter training. (n=270-271)



In general, respondents did not often oppose the changes. Respondents usually supported the options or were neutral. The idea that received the most opposition was “Increase the requirements for an instructor to appear on the MBFTE’s qualified instructor list” (16 percent somewhat or strongly opposed). Only 27 percent of respondents supported that change.

The three least-supported changes related to instructors. This aligns with the results from previous questions: departments were most satisfied with instructor quality of all training components, and instructor quality was the least commonly selected barrier to additional training.

Support for the potential changes did not vary significantly by department type.

Other topics

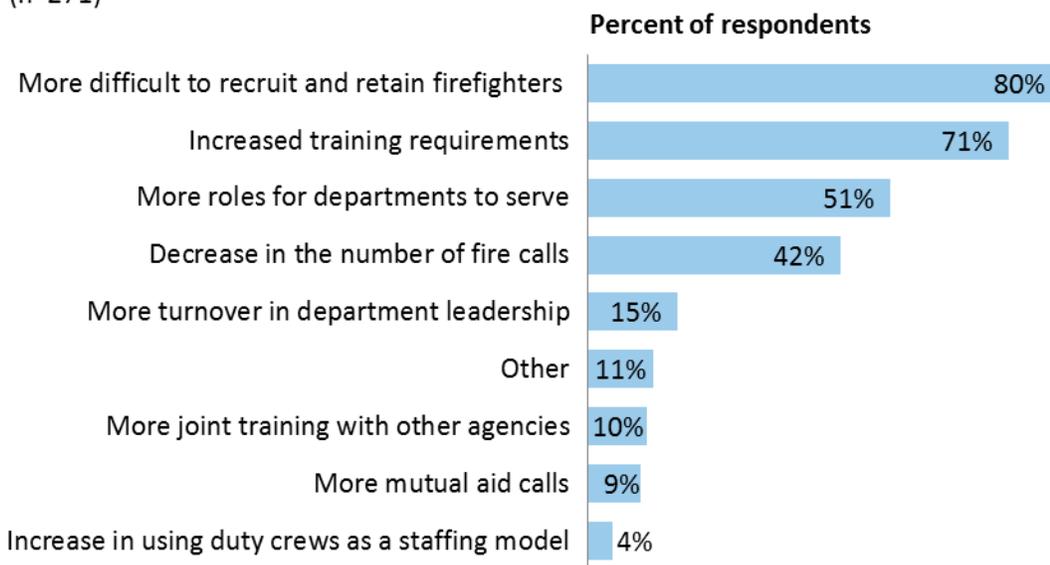
The survey included additional questions about trends in the fire service, and about satisfaction with the MBFTE.

Fire service trends

Based on fire chief and training provider interviews, MAD, the SFMD, and the MBFTE created a list of trends that have affected departments within the past ten years. The survey asked respondents to choose up to three trends that had most affected their department during the past ten years, and Figure 17 shows the results.

Figure 17: Fire service trends affecting departments

Which three of the following trends have most affected your department during the past 10 years?
(n=271)



Most often, respondents chose “More difficult to recruit and retain firefighters” (80 percent) and “Increased training requirements” (71 percent). Forty to 50 percent of respondents chose “More roles for departments to serve” and “Decrease in the number of fire calls.” The least commonly selected trends involved duty crews, mutual aid calls, and joint training.

Responses differed somewhat by department type. Compared to the three other department types, career departments much less often identified “recruit and retain” as a trend; they did, however, select “more roles” at a much higher rate than volunteer departments. Career and combination departments less often chose “decrease in the number of fire calls” relative to paid-on-call and volunteer departments. The proportion of respondents who selected “training requirements” was very similar across department types.

If the respondent selected other, the survey prompted them to elaborate on their response. Of the 30 who selected other, 17 filled out the field. Their responses mostly fell into a few categories:

- Recruitment/retention and firefighter time commitment (6 comments).
- Cost of equipment (5 comments).
- Funding (3 comments).
- Call volume/increased roles for fire departments (3 comments).

The remaining comments did not present common themes. Example comments included:

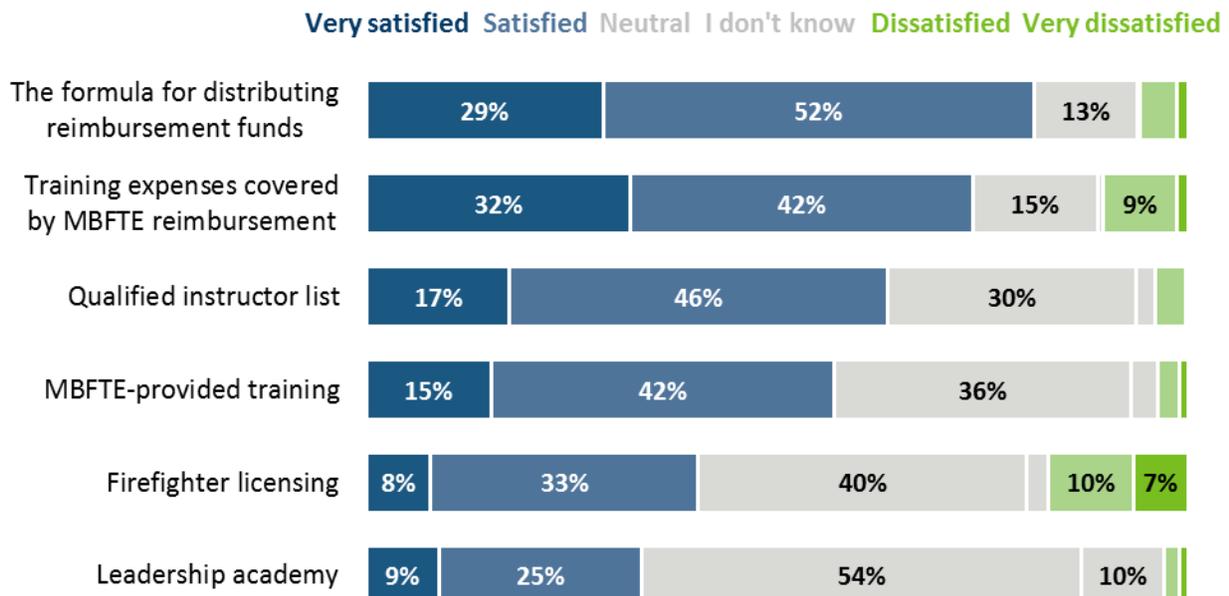
- *No incentive for firefighters to put in the work to train.*
- *Modifying firefighting tactics based on new research.*
- *Dealing with city administration.*

Satisfaction with the MBFTE

Because the MBFTE was formed as a result of the 1998 study, this study asked respondents to rate their satisfaction with elements of the MBFTE. Figure 18 shows the results of the question, “Please rate your satisfaction with the following aspects of the MBFTE.”

Figure 18: Satisfaction with the MBFTE

Please rate your satisfaction with the following aspects of the MBFTE. (n=269-271)



Overall, respondents infrequently selected that they were dissatisfied or very dissatisfied with aspects of the MBFTE. Respondents were most satisfied with the formula for distributing reimbursement funds (81 percent satisfied or very satisfied). They were least satisfied with the leadership academy, but not out of dissatisfaction; 64 percent of respondents marked neutral or “I don’t know.”

Of the options, respondents were most dissatisfied with firefighter licensing (17 percent dissatisfied or very dissatisfied), followed by training expenses covered by MBFTE reimbursement (ten percent).

Satisfaction did not vary significantly based on department type.

Open-ended questions

Four of the survey questions provided open-ended fields for respondents.

Improvements to firefighter training

The survey asked respondents to “List three improvements you would like to see made to firefighter training.” Of the 290 respondents, 160 (55 percent) suggested at least one improvement to firefighter training. In total, they provided 414 suggestions for improvement.

One comment highlighted the general theme of many of the responses: “Finding ways to make it a little friendlier for volunteer firefighters to fit [training] into their schedule.”

Money

A plurality of comments (86) discussed the financial aspects of training. More than a third of the comments simply requested more funding for training—including more per-firefighter money or more money in general—and a slightly lower amount asked for more ways to use state funds. Several wanted to be able to cover travel expenses with MBFTE funds, and a few wanted to be able to pay for props or equipment. Thirteen comments asked for the MBFTE to cover other types of training, including: out of state training; specialized, custom, or in-house training; refresher courses; and medical training.

Lodging is a huge expense on our training budget. We need to be able to use state aid money for these expenses.

Eleven comments simply requested that the MBFTE keep providing funds. As one person put it, “Continue the MBFTE dollar for training. Best thing to happen to firefighter training in a long time.” A few of them requested a steadier stream of funding so they can plan better for the future.

A few comments mentioned that the costs of training are too high, and a few others asked the MBFTE to cover backfill and overtime pay.

Other financial comments included:

- *Carryover of unspent MBFTE funds for 1-2 years.*

- *Consolidation of funding by the MBFTE. Too many options leads to confusion. Maybe just per firefighter awards.*
- *Better funding to implement training procedures for small rural departments.*

Training content and methods

Seventy-two respondents offered 83 comments on training content and methods. The most common theme in this area was the need for more online learning. Several explained that subsequent hands-on pieces would be critical in some areas, but that online options give firefighters more flexibility. Several asked for a statewide online system where they could share and access training.

A state-provided solution for approved curriculum and documentation (like Target Solutions), supported with instructor training for the hands-on components would be AWESOME!

Likewise, 14 comments talked about the need for different timing of courses. The times for classes near them did not always work with their firefighters' schedules. They requested daytime classes, evening classes, and classes that are scheduled during non-peak agricultural times.

Another 15 comments requested more training offerings. Some of their ideas included:

- More classes funded besides NFPA 1001.
- More courses in general.
- More specialized courses for advanced firefighters.
- More fire behavior courses.
- National speakers.
- Shorter refresher courses.
- Mini-courses on specific topics.

The remaining themes had ten or fewer comments each:

- Content and requirements tailored for rural needs.
- More realistic and more hands-on training.
- More consistency and standardization of training.
- Improved quality of training.
- Content that adapts to new technology and science.

Shared training

Forty-three respondents suggested a form of shared or regional training, providing 51 suggestions total. Almost half of their comments requested regional facilities and/or equipment for departments to use. Some generally asked for statewide academies, while others requested more specific options, like a regionalized fire officer schools or live burn centers.

Fourteen commenters discussed the need for more regional training, and eleven commenters talked about how they themselves need to do more joint training with other departments. The specifics of the ideas varied. For example, one respondent asked for state support for local training centers, but did not want the state to run the

center. Others envisioned the same training being repeated in different areas of the state, countywide firefighter academies, and simply doing more training with their mutual aid partners.

*Regional course offerings for hazmat BBP, OSHA - with multiple opportunities in each area.
It's silly we waste local training time doing these annual refreshers.*

Several comments discussed the need to share more information about training. They asked for a regional training officer networking group, the ability to share training programs regionally or statewide, a list of trainings put on by other departments, and a list of existing courses and providers.

More local training

Forty respondents requested training that was closer to them. Of those, three-quarters said they wanted training that was available closer to their location; these were typically from departments in more rural parts of the state. Traveling to existing classes can be too burdensome for volunteers and departments. Relatedly, the remaining quarter of comments on this topic said they wanted reimbursement for instructors to come teach in their own department's facility.

Make it easier to get qualified training instructors locally, and pay them for in house training (Greater Minnesota/non-metro).

Requirements

Twenty-four respondents offered 32 suggestions about training requirements. About half of the comments suggested decreasing training requirements, with most specifying fewer hours in initial training classes. They also wanted less repetitive OSHA trainings, less testing, no requirement for Firefighter 2 and Hazmat Operations, and reduced re-certifications. In the same vein, several respondents asked for more time for firefighters to complete NFPA 1001; they explained the current one-year timeframe to finish the course and be eligible for reimbursement is too much for volunteers.

In contrast, a few respondents suggested increasing training requirements. They thought firefighters should have to complete Firefighter 1 and 2, and complete 24 hours of structural training per year. A few others recommended creating different requirements for rural versus urban departments.

Instructors

Thirty respondents mentioned improvements related to instructors. The most common request was for better quality instructors. A few asked for instructors to be qualified in specific topics, or to generally receive a list of the topics each instructor teaches. Several requested more instructors near them or that are able to go to their department for training, and a few wanted more instructors in general.

A third of the commenters had other suggestions related to instructors, including:

- A state-funded training program.
- More reliance on private providers.
- Consistent evaluations across the state for instructors and programs.

Props and equipment

Eighteen respondents wanted better access to training props and equipment. The methods suggested varied: respondents requested more access to training trailers, more mobile training props, and funding to pay for their own props.

Live burns

Sixteen respondents discussed live burns. Half of them would like to have more opportunities to complete live burn exercises. Relatedly, a few would like there to be fewer requirements to conduct live burns, and a few others asked the state to provide live burn opportunities (including trailers or live burn training centers around the state).

Incentives

Eleven respondents said they would like to offer incentives to firefighters, mostly for attending training but sometimes for serving as a firefighter in general.

Other

The remaining comments did not fall into clear themes. Several respondents criticized the Minnesota State system: they felt the schools should not be competing against each other, that there is poor accountability, and that the colleges are just trying to make money. A few comments suggested a stronger connection, if not a total merger, between the Minnesota Fire Service Certification Board and the MBFTE.

Issues facing Minnesota's fire service

Another question asked respondents, "In the next 10 years, what do you see as the most significant issue facing Minnesota's fire service?" and 234 provided an answer.

Overwhelmingly, respondents said they worried about not having the staff to meet their departments' needs; 80 percent of individuals who answered this question mentioned this topic. Most respondents talked about this problem as the "recruitment and retention" issue. Some framed it a little differently, discussing how they will not have enough daytime responders, or how their firefighters work too far away to respond quickly to calls.

Seventeen percent of respondents to this question mentioned the number of training requirements as an issue, many of whom discussed it as part of the staffing shortage issue. They explained that training requirements have increased over time, and that this discourages people from becoming firefighters, particularly volunteer or paid-on-call ones. They highlighted the initial training requirements as an especially notable issue.

Gaining members. Many of our retired members joined because they wanted to help their community and be a part of something. We are seeing these guys and gals leave because it is their time, but the Initial Requirements are much, much greater today than they were in the past. We do not see teenagers asking to join anymore. We have been fortunate to take on residents new to the area with established families, just not established in our community yet. It is a burden to ask someone new to the area to join and give up such a time commitment to a community that they do not have a connection to yet. We have lost

out on a few potentially good firefighters because of the Initial Training Requirements. We do need well trained firefighters, but at what point are we going too far? At some point we are not going to be able to best serve our residents if we can't fill our member needs. The rural departments will see the greatest impact first. If there isn't enough population to recruit from and the standards are too much to entice people to join, ultimately something will have to give.

Thirteen percent of respondents said they saw funding as a significant issue in the future. About half of the comments on funding discussed general funding, while slightly less specifically mentioned the cost of equipment. A few discussed the cost of training as an issue.

Eight percent of respondents discussed how the fire service model will change in the future. They explained that departments will need to merge, share more services, create more career positions, and/or switch to duty crews.

Decreased funding, which will only heighten the need to allow the local units of government the ability to decide what level of public safety services they want to provide and how they want to provide them; i.e., local control of their EMS primary service area; the ability to create fire taxing districts, etc. With the increase in call volume, combined with the decrease in firefighters that many paid-on-call departments are experiencing will also contribute to the pressure for the local decisions as listed previously...more career firefighter positions are being created in the State and they will need to be funded somehow.

Other issues mentioned by more than five respondents each included:

- Changes in types and frequency of calls.
- Need for quality training.
- Firefighter health and safety.

Needed changes in firefighter training

Next, the survey asked, “How will firefighting training need to change within the next 10 years?” and 206 provided a response.

Respondents suggested many different ways that firefighter training will need to change within the next ten years. One common theme was the need to make firefighter training more flexible and easier to do; 18 percent of respondents mentioned those needs. Relatedly, 15 percent of respondents to this question specifically discussed online and blended learning, which offer more flexibility for firefighters. This ties in to the staffing issue. Respondents believed that making training easier and more flexible was critical to recruiting and retaining staff. Ten percent of respondents to this question mentioned firefighter time commitment and/or recruitment and retention.

Create more on-line training to meet the needs of today's volunteer firefighters. It is very important for the new generation of firefighters to balance time with the department and

their young families. I recently hired 10 new firefighters and have already lost two of them to the time commitment of training.

Respondents also commented on how training will need to stay current, often mentioning the need to stay up to date on vehicle technology (nine percent).

As far as course content and methods, eight percent cited the need for more hands-on training, and five percent mentioned the need for content and requirements tailored for local needs. Five percent also requested different content or methods: breaking the courses into shorter ones, training on cultural norms, training for accomplishing more with fewer firefighters, training on mechanical aptitude, and emphasizing fire behavior. Several also mentioned need to incorporate new technology, like simulations and virtual training.

Fifteen percent of respondents to this question discussed training requirements in some way. Half of those comments said that training requirements should decrease, especially initial firefighter training. Several thought that requirements *will* increase over time, and a few thought requirements *should* increase.

We will need to lessen the requirements. Training won't matter if we can't get people to join. If we can get a more attainable initial training, I believe we will get more interest to move on and grow. What we have been noticing is that our new members are getting burnt out through the initial training. Though they are well trained, morale will inevitably decline. Everyone already has burnt out disgruntled pessimistic veteran firefighters, none of us need burnt out disgruntled pessimistic rookies also.

Seven percent of respondents to this question discussed the need to share services. Most of those explained the need for more joint and/or regional training, and a few requested regional facilities and equipment.

Other themes from the responses included:

- Incentives for firefighters to train and/or serve.
- Training offerings in a more convenient location.
- Funding, usually stating they would need more.
- More live burns/hands-on opportunities/props.

I believe we fall short on hands-on opportunities. We need to have access to better opportunities where folks can go on their own time or as a department, be around other firefighters and train together. Have props where forcing a door exists, live fire, hazmat discussions, ability to share experiences and learn from others.

A few respondents each also mentioned the need for more shared training, more state-funded training, and the staffing issue. One respondent neatly summed up many of the survey themes about the future of fire service as, "More needed, no funding, less people."

Additional comments

Finally, the survey asked, "Please share any additional comments you would like MAD to consider as they make recommendations on firefighter training." Only 89 respondents shared additional thoughts.

Given the question, the topics mentioned varied widely. They largely touched on themes present in earlier questions.

- **Positive comments:** 19 respondents simply offered praise to the SFMD and the MBFTE.
 - *The training funds for fire dept. have been crucial to keeping up with new training opportunities for all smaller communities who otherwise could not fund them. Hopefully the program will continue for many years to maintain the level of well-trained firefighters we have today.*
- **Make training easier:** 13 comments advised making it easier for firefighters to train and/or reducing training requirements.
 - *Make it easier to obtain and not take so long to get. Maybe break it into more segments so the firefighters can do it year by year if needed. Get the basic intro done first and then keep moving on as they can.*
- **Rural/small department concerns:** ten comments reminded MAD, the SFMD, and the MBFTE that the needs of rural and small departments are different from more urban areas. They have a harder time getting the training they need in a local area.
 - *Too much originating out of the Twin Cities area with rules, regulations, requirements. Which from rural standpoint, looking at majority of fire departments are volunteer, by creating more agenda which creates more requirements puts more stress on volunteer time. Which feels like forcing the service to be more paid on call. This will push towards more regionalized departments. Need more rural representation.*

Between three and ten comments touched on each the following topics:

- **Funding:** requests for additional funds and additional ways to spend funds (equipment, live burns, out-of-state training).
- **Regional training resources:** requests for regional training, instructors, facilities, and personnel pools.
- **Certification/licensure:** requests both to combine and not combine them, and to get rid of testing.
- **Instructors:** requests for quality instructors and raised/aligned standards.
- **Incentives:** requests to pay firefighters in general, for training, and via tax abatements on retirement distributions.
- **Live burns:** need to be easier to do, and possibly be state-funded.

Survey instrument

The following sections contain the invitation emails to participate in the survey, as well as the full text of the survey questions.

Notification email from MBFTE

Dear Public Safety Partners,

The Minnesota State Fire Marshal Division (SFMD) is gathering information needed for a study on firefighter training and we need your input.

Next week you should receive an email invitation to participate in an online survey about firefighter training. The survey shouldn't take more than 10-15 minutes to complete. SFMD has retained Management Analysis and Development (MAD) to:

1. Review and evaluate the accomplishments of the Minnesota Board of Firefighting Training and Education (MBFTE).
2. Assess the current status of fire service training.
3. Develop options for the future of fire service training.

Your input is vital to this work. MAD will use your survey feedback to provide analysis and recommendations to the SFMD. Multiple individuals from a department may be invited to take this survey, but they can work together to submit one response per department.

MAD has provided neutral, third-party research and consulting services to the public sector for over 30 years, including many projects for the Department of Public Safety. If you have any questions about the study, please contact Kris Van Amber with MAD at 651.259.3808 or Kristin.Van.Amber@state.mn.us.

Thank you very much for your time and input.

Sincerely,

Steve Flaherty, Executive Director

Minnesota Board of Firefighter Training and Education

Invitation email

You're receiving this survey as a fire chief or fire training officer. Please complete this survey about fire service training by [date]. It should take approximately 10-15 minutes to complete. Multiple individuals from your department may have been invited to take this survey, but you can coordinate with others to submit one response per department.

You can take the survey here: [link]

The Minnesota State Fire Marshal Division (SFMD) has retained Management Analysis and Development (MAD) to:

1. Review and evaluate the accomplishments of the Minnesota Board of Firefighting Training and Education (MBFTE).
2. Assess the current status of fire service training.
3. Develop options for the future of fire service training.

The SFMD would like your input on these topics. MAD will use your feedback to provide recommendations to the SFMD.

Survey text

As the fire chief or fire training officer for your department, please complete this survey about fire service training for the Minnesota State Fire Marshal Division (SFMD). It should take approximately 10-15 minutes to

complete. Multiple individuals from your department may have been invited to take this survey, but you can coordinate with others to submit one response per department.

SFMD has retained Management Analysis and Development (MAD) to:

1. Review and evaluate the accomplishments of the Minnesota Board of Firefighting Training and Education (MBFTE).
2. Assess the current status of fire service training.
3. Develop options for the future of fire service training.

The SFMD would like your input on these topics. MAD will use your feedback to provide analysis and recommendations to the SFMD; they will not tie your responses to your identity or your department in their report. Any private information that you provide is protected under the Minnesota Data Practices Act (Minnesota Statutes §13.64). You do not have to take this survey, but the SFMD appreciates your input.

Thank you for your time!

Department demographics

1. On average, how many hours of training per month does a firefighter in your department receive?
2. What were the sources of training for your firefighters in calendar year 2016? Indicate the percentage of total training hours from each source.
 - In-house training by in-house instructors
 - In-house training by public training providers (for example, technical college, HSEM)
 - In-house training by private training providers
 - Other in-house training
 - Sectional fire school
 - Technical college training at technical colleges (besides sectional courses)
 - Regional fire training (for example, cancer awareness or mental health training, national speakers)
 - Other training
3. Did your firefighters take any online training in calendar year 2016?
 - Yes
 - No
 - I don't know
4. (If Question 3 = yes) What percentage of your in-house training is provided online?
 - 0%
 - 1-25%
 - 26-50%
 - 51-75%
 - 76-100%
5. In calendar year 2016, how much funding did your department receive for firefighter training (excluding equipment and personnel costs)? Estimate the total dollars received from each funding source.
 - Local government funding
 - State government funding - Minnesota Board of Firefighting Training and Education (MBFTE)
 - State government funding – other than MBFTE (for example, HSEM)
 - Federal grants or other federal sources
 - Industry-provided training (for example, railroad companies have paid for training for some departments)
 - Other sources

6. (If they list no funds from MBFTE in Question 5) Why didn't your department use MBFTE funds in calendar year 2016? Select all that apply.
- We didn't have firefighters who need the training funded by the MBFTE
 - We didn't need additional funding
 - I didn't know about it
 - We did use funds, but I didn't list the amount on the previous page
 - Other
- If you chose other, please elaborate.

(If Question 6 = c) If you would like more information on the MBFTE, visit <http://www.mbfte.org/> or email fire-training.board@state.mn.us.

Training needs

7. How satisfied are you with these components of training for your department? (Very satisfied, satisfied, neutral, dissatisfied, very dissatisfied)
- Funding for training
 - Quality of instructors
 - Quality of course content
 - Location of training opportunities
 - Availability of training courses (for example, course frequency)
 - Availability of hands-on training opportunities (for example, live burns)
 - Availability of training props and equipment
 - Documentation of training
 - Overall training compared to needs
8. Please select the top three barriers that prevent your department's firefighters from being trained to your ideal standards.
- Funding for training
 - Quality of instructors
 - Quality of course content
 - Location of training opportunities
 - Availability of training courses (for example, course exists, course frequency)
 - Availability of hands-on training opportunities (for example, live burns)
 - Availability of training props and equipment
 - Availability of practice opportunities to master practical skills
 - Time availability of firefighters for training
 - The amount of training requirements
 - Other
- If you chose other, please elaborate.

Training preferences

9. Please rate your response to the following possible changes to current firefighter training. (Strongly support, somewhat support, neutral, somewhat oppose, strongly oppose)
- Provide more state-funded rotating training opportunities around the state
 - Establish state-funded regional training centers
 - Establish MBFTE-run course/instructor evaluations
 - Increase the requirements for an instructor to appear on the MBFTE's qualified instructor list

- Specify topic areas a training instructor is qualified for on the instructor list (for example, specify that an instructor is qualified to teach hazmat courses)
 - Create state-provided opportunities for online tracking/documentation of firefighter training
10. List three improvements you would like to see made to firefighter training.

Other

11. Which three of the following trends have most affected your department during the past 10 years?
- More difficult to recruit and retain firefighters
 - Decrease in the number of fire calls
 - More roles for departments to serve (for example, emergency management, fire prevention)
 - More turnover in department leadership
 - Increased training requirements
 - More mutual aid calls
 - More joint training with other agencies
 - Increase in using duty crews as a staffing model
 - Other
- If you chose other, please elaborate.
12. Please rate your satisfaction with the following aspects of the Minnesota Board of Firefighting Training and Education (MBFTE). (Very satisfied, satisfied, neutral, dissatisfied, very dissatisfied)
- Training expenses covered by MBFTE reimbursement (for example, it does not cover not travel expenses or per diem)
 - The formula for distributing reimbursement funds (currently allocated on per-firefighter basis)
 - Qualified instructor list
 - Firefighter licensing
 - Leadership academy
 - MBFTE-provided training: mass decon and incident safety officer training
13. In the next 10 years, what do you see as the most significant issue facing Minnesota's fire service?
14. How will firefighting training need to change within the next 10 years?
15. Please share any additional comments you would like MAD to consider as they make recommendations on firefighter training.

Appendix F: Listening sessions and survey

Methodology

During February and March 2017, MAD facilitated 16 listening sessions in eight cities around Minnesota: Inver Grove Heights, Pine City, Rochester, Thief River Falls, Virginia, Wadena, Willmar, and Windom. In each city, MAD hosted an afternoon and an evening session. In total, 149 firefighters and training personnel from 96 departments attended and provided input. A breakdown of the number of participants and departments at each session is included later in this appendix.

Each meeting began with a welcome from the State Fire Marshal or MBFTE director. MAD consultants then facilitated the sessions and asked participants to respond to a series of questions that included:

- What is working well and should be continued with firefighter training?
- What has been a challenge or barrier with firefighter training?
- What should be done to improve firefighter training?
- In the next ten years, what do you see as the most significant issues facing Minnesota's fire service?
- How will firefighting training need to change with the next 10 years?
- Any additional thoughts?

MAD also handed out a worksheet for firefighters to submit additional comments on; the full set of worksheet questions can be found at later in this appendix.

In addition to the 16 listening sessions, MAD posted the five questions from the listening sessions in an online survey for anyone to take; the full survey instrument and a breakdown of respondents by fire region can be found at the end of this appendix. In March 2017, after the final listening session, the SFMD distributed the survey link to its listserv to invite fire service individuals to participate if they had missed the listening sessions. Over three weeks, 143 individuals provided feedback.

Common themes

This section identifies some of the common themes discussed in the listening sessions and survey. To provide more concrete qualitative information, paraphrased statements from participants are included in some instances in *italics*. Though the statements accurately reflect the sentiment and content of comments, they should not be viewed as direct quotations attributable to individuals. Some of the examples provided below are combinations of statements from more than one participant.

Changes in firefighting

The listening session began with everyone introducing themselves and identifying one thing that had changed since they become firefighters. Common responses included:

- A greater awareness of firefighter safety, especially regarding cancer and PTSD.

- The technological changes in equipment for fighting fires and the impact technology has had on fires, including building materials and vehicles.
- The number of calls to respond to fires has decreased while the number of calls for other emergency and medical situations has gone up.
- The competition for firefighters' time has increased, leading to a loss of commitment to the duties and comradery of firefighting.

Working well and should be maintained

Listening session participants and survey recipients were asked what are some of the key parts of firefighter training that work and they do not want to see changed. Comments included:

- Participants noted the value of having consistent state funding for training.
- They stated they like the ease of submitting training costs for reimbursement from the MBFTE.
- Firefighters mentioned the increase and value in joint training between neighboring departments and also the ability to share resources between departments.
- Participants also noted the value of having the 11 core training topic identified so they can work toward meeting those requirements.

What could be done better

Participants and recipients were asked what they thought could be changed to improve firefighter training or what could be done better. Themes included:

- Participants' major concern was the recruitment and retention of firefighters. They mentioned a number of reasons for the issue, including work and family schedules, working out of the community, safety concerns, loss of comradery in the firehouse, excessive requirements including training, a younger generation with different motivations, and a host of other issues that may be keeping people from becoming firefighters.
 - *It is getting tougher to find time to train with family and work requirements/commitments increasing.*
- Firefighters said that the scheduling and offerings of training needs to be more flexible to allow more people to attend the sessions. This could include offering different times during the day, a variety of locations in an area (region or county), and shorter training sessions offered with greater frequency.
- Firefighters mentioned the need for the MBFTE to also cover lodging and travel costs. They noted that while the state pays for the training, these travel costs can be as much if not more than the cost of training. An additional concern mentioned was the need to pay firefighters to attend training.
- A frequently mentioned concern by firefighters was the need for live burn experiences. These are difficult to obtain because of the number of regulations and signoffs needed by state agencies.
 - *Not being able to train on actual burns, like a burning structure with furniture; restrictions make live burns costly to do.*
- Additionally, participants noted that getting props for training in Greater Minnesota was an issue.
 - *We don't have all the props we need; we get them when we can but scheduling them can be problematic; coordination between colleges to get props when they are needed.*
- Firefighters noted that the instability of MBFTE training funding is an issue. It makes it difficult to plan training out over a period of time. The amount from the MBFTE has been inconsistent over the past few years. In addition, some firefighters stated that Minnesota is forty-fifth in the nation on spending for fire

service. They thought this was low for a state that had the population and diverse features of Minnesota.

- Participants also commented on how many firefighters are aging out of department leadership. Some of the leaders and most skilled firefighters are starting to retire. Their expertise needs to be passed on to younger firefighters.
- A few participants mentioned that training instructor quality was not always consistent. Occasionally, an instructor does not have the skill or the experience to handle difficult questions. Additionally, some instructors are not adept in teaching to the unique variety of individuals in the firefighting service.
- Participants noted some issues between certification and licensure. They expressed frustration at having to do both. It seemed to some like there is overlap of the sets of requirements and administrative processes.

Value of current training model

Firefighters were asked their thoughts on the current model for firefighter training. Participants noted that the current level of firefighter training is valuable, but they also had several suggestions on how it could be improved. They included:

- Firefighters said that some level of qualifications or minimum levels for certification for firefighters is needed. Along with the qualifications, there needs to be an incentive for being a volunteer firefighter. Some incentives mentioned but not agreed upon included paid training; a training allowance that includes lodging and travel time; and pay for time off work.
- A few firefighters noted that having horizontal advancement options through coursework or certifications would be something that should be considered. The vertical hierarchy of a fire department provides few options for advancement, and advancement is not necessarily based on training and expertise.
- At a few listening sessions, participants stated a desire to have a fire marshal that focuses on public education and codes. Additionally, they suggested that there should be a state fire chief that focuses on training and everything else. They suggested that both positions report to the deputy commissioner of DPS.

Suggestions to improve firefighter training

Participants identified potential actions that could improve firefighter training. The following are the themes that participants consistently identified through the listening session process:

- Firefighters stated the need to provide consistent state funding for firefighter training so departments can plan who gets trained on what skills, when, etc.
- Participants said that there should be a variety of ways training is offered. These include online, classroom, hands-on, etc. Additionally, they noted there should be greater flexibility in training options, including greater frequency of courses, and shorter classes offered at a variety of times so firefighters with “unique” schedules can attend. They noted the value of learning firefighting concepts online, and then learning to perform those skills proficiently with hands-on training options.
- Participants suggested getting training closer to communities. This would include regional training options, instructors traveling to departments to train firefighters, etc. Along with this they mentioned the value of sharing training between department in regions, counties, and/or fire districts. The

combination of the two provides an economy of scale that may be able to provide higher quality training throughout the state.

- Firefighters said they needed to consider different actions for recruitment and retention. They noted the use of social media by recruits. Additionally they noted the “younger generation” does things differently, so fire departments will have to consider new and different ways to recruit and retain firefighters from the local community.
- Participants noted that having both licensure and certification is confusing and that they are closely related enough that they should be merged. This would provide a more direct and understandable level of credentialing for firefighters in Minnesota.
- Participants said they wanted more training for senior firefighters. The training suggestions ranged from refreshing or updating skills, sharing experiences, identifying and using the learning styles of recruits, and administrative skills like keeping track of their firefighters’ training and development.
- Firefighters noted they would like to see standardized instructor credentials. They explained this would provide more professional and higher-quality training instruction.
 - *Instruction needs to be consistent between classes, keep up with newer tactics, need standardized credentials and a review or evaluation each year.*

Future challenges or opportunities face firefighters

Participants then focused on the future of firefighter training. They were asked, “If you project ahead ten years, what are the most significant challenges and/or opportunities facing firefighters?” Their responses included:

- Participants stated that safety awareness and training will be even greater in the future. They noted they increased awareness of cancer issues and PTSD, and a greater focus on cleaning equipment and gear. They also noted the need for additional gear so they can have clean gear if runs come before they have time to do the cleaning.
 - *Concerns of physical and psychological effects on firefighters; need better awareness and protection of firefighters.*
- Firefighters noted the rising call volume and the variety of non-fire issues, as well as the reduced number of firefighters who can respond. The concern was with the overall reduction of firefighters for the ever-increasing need, but also the specialized needs depending on the call. They noted that the recruitment and retention issue would continue to affect their ability to maintain strong, stable fire departments in the future. Numerous ideas were raised to address the recruitment and retention issue, including marketing firefighting differently or to different audiences. This included various aspects of social media and a range of technology that could provide training in multiple ways to new recruits or firefighters.
- Participants said that having additional or consistent funding for training is critical. They said that having consistent funding would give departments and firefighters lead time to plan and develop their skillsets.
- Participants noted that the concept of “three/four guys and a truck” may be the reality in ten years. They noted that the local fire department could have a small number of highly trained people skilled in a variety of firefighter tasks. This small group, along with a fire truck, could get to the scene of the fire/accident, assess the situation, and call for back up if needed. The backup could come from another firehouse, a fire district, or a county or regional fire service. The group could address the issue as needed or do a triage for what is needed and then contact those services as appropriate. The smaller service would not need as many firefighters but would need enough to have a rotation on call 24/7/365.
- Firefighters stated that there would be a greater sharing of fire services in the future. They talked of consolidation of services to mutual aid districts to counties. They noted the county service could rely on a stronger, countywide tax base.

- *Now it is time to look for ways to regionalize services; start joint powers or shared services agreements between smaller/rural departments.*
- Participants noted that technology will become both an aid and an issue in the future. As an aid, technology will help with firefighting equipment and techniques. It will also provide a variety of training options to firefighters from virtual reality to thermal imaging. As an issue, new building materials and battery powered cars were commonly mentioned as concerns in creating toxic gasses or burning at higher temperatures.
- Firefighters stated the need for minimum standards across the state for advancement. They noted that statewide standards would establish a basic knowledge and skill level that all firefighters would need.
- Participants noted that instructors will need to identify and address learning challenges. They said that not everyone learns the same way and that instructors will need to teach to the variety of learning styles.
- Firefighters said that communities need to identify firefighting needs, work with fire chief/leaders to identify needs and then structure fire department to meet those needs. They noted that anticipated training will be a large component in matching needs and skills.
- Participants stated that something needed in the future was communication on the event to which they were responding. The first responders need to be better at describing the situation so additional units know what they are getting into and what to bring.

How training can impact those concerns

Participants were asked how training could impact the challenges and opportunities they identified for ten years into the future. Their responses included:

- Participants noted that joint training with other fire departments will be more common in the future. They noted the joint training will be able to bring in better, more nationally-known trainers. Additionally, they stated it would spread the cost over a larger base.
- Firefighters said they need more and/or additional training on safety. They also noted the need to keep updating as more information becomes available. They suggested that trainers develop a focus on PTSD – people do not want to talk about it, but firefighters are affected. They said training needs to focus on the physical, mental, and emotional aspects of firefighting.
- Participants said that in the future training events will be updated with more blended training that includes online, classroom, and hands-on components. Furthermore, they noted that there will be more use of technology in training and the way training is provided.
- Participants suggested the use of different training techniques to match learning styles of the recruits and firefighters.
 - *Better identify learning challenges people have; we lose potentially good firefighters because we don't help look at how they learn. Help them stay in instead of washing out.*
- Participants said that training options need to match the needs of the community, and that the community needs to discuss and identify their firefighting needs and/or expectations.
- Firefighters noted the need for additional training for leaders and officers. They suggested additional training on the tools to lead and manage the department better, including software to keep track of department training.
- Firefighters said better training for trainers would be valuable in the future. They mentioned especially the need to keep current and teach to a variety of skills and learning styles of firefighters.
- Participants mentioned the value of communication training (how to communicate clearly and succinctly via radio). They stated it is critical to provide an accurate and clear description of the scene.

How training will be delivered in the future

Firefighters were asked, “Looking into the future ten years, what type of training do you envision? What will it cover? How will it be delivered?” Response themes included:

- Participants stated that in the future technology will be used to enhance and provide training. Some of the examples they mentioned included: virtual reality, online, hands-on, scenario options, video games, and the use of thermal imaging.
- Participants noted the need for training on changes in technology (vehicle safety, building materials, etc.).
- Firefighters mentioned their interaction with training in the aspect of more or frequent offerings to small groups in a variety of formats. They said participants can then choose which way they want to gain the information and prove back their competency.
- Firefighters noted the continuous need for specialty training or training that would match with the standards needed by firefighter to advance.
- Firefighters noted the desire for regional or shared training options so more people can attend and more nationally-known instructors can be brought in to teach.

Listening session worksheet

Location/Community:

Name (optional):

1. What is working well and should be continued with firefighter training?
 - What made that training valuable?
2. What has been a challenge or barrier with firefighter training?
 - What could be done better?
3. What should be done to improve firefighter training?
 - Which of these improvements is most critical to you?
4. In the next ten years, what do you see as the most significant issues facing Minnesota’s fire service?
5. How will firefighting training need to change with the next ten years?
6. Any additional thoughts?

Survey instrument

If you are a firefighter who was unable to attend one of the Minnesota State Fire Marshal Division's (SFMD) listening sessions, you can complete this brief survey to share your opinions.

The SFMD has retained Management Analysis and Development (MAD) to:

1. Review and evaluate the accomplishments of the Minnesota Board of Firefighting Training and Education (MBFTE).
2. Assess the current status of fire service training.
3. Develop options for the future of fire service training.

The SFMD would like your input on these topics. MAD will use listening session, survey, and other feedback to provide analysis and recommendations to the SFMD. You’re not being asked to provide your name or any

information that might identify you as an individual. Any private information that you do provide is protected under the Minnesota Data Practices Act (Minnesota Statutes §13.64). You do not have to take this survey, but the SFMD appreciates your input.

Thank you for your time!

1. What is working well and should be continued with firefighter training?
2. What has been a challenge or barrier in firefighter training?
3. What should be done to improve firefighter training?
4. In the next ten years, what do you see as the most significant issue facing Minnesota's fire service?
5. How will firefighting training need to change within the next ten years?
6. Which region is your fire department located in?

Listening session and survey participation

Table 16 shows how many respondents participated in the listening session survey from each of the SFMD's fire districts.

Table 16: Number of listening session survey respondents by fire district region

Fire District	Respondents
1-Capitol City Region	12
2-Northern Region	6
3-Arrowhead Region	22
4-Northwest Region	14
5-Cuyuna Region	6
6-Lake Region	8
7-St. Croix Valley Region	1
8-North Suburban Region	20
9-West Central Region	1
10-Central Region	14
11-United Region	16
12-MN Valley Region	2
13-Southwest Region	3
14-South Central Region	6
15-Southeast Region	12
Total	143

Table 17 displays the number of listening session participants and departments at each listening session location. MAD held two sessions in each location on the same day, and the numbers for the two sessions have been aggregated in the table.

Table 17: Number of listening session participants and departments by location

Location	Departments	Participants
Inver Grove Heights	20	36
Pine City	11	16
Rochester	9	15
Thief River Falls	7	15
Virginia	15	19
Wadena	12	16
Willmar	12	20
Windom	10	12
Total	96	149

Appendix G: Other states' fire training models

Methodology

Based on research early in the project, MAD anticipated that respondents would want to know more about training models that involved a more state-centric approach. The MBFTE and SFMD suggested that MAD research six states that had models with stronger state involvement: Kansas, Illinois, Indiana, Iowa, Maryland, and Ohio. In the fall of 2016 and the spring of 2017, MAD conducted online research and phone interviews to learn more about these other models.

This appendix organizes the research on other states' training models by model component: policy and oversight, training delivery, and funding.

Policy and oversight

Kansas

Kansas has the Fire and Rescue Training Institute, which is designated by the state legislature to manage and deliver training and certification programs. It is located within and delivers training through Kansas University, and has accreditation from IFSAC and from the National Board on Fire Service Professional Qualifications (Pro Board). The Kansas Fire Service Training Commission provides oversight and guidance to the Fire and Rescue Training Institute. Firefighter certification is voluntary, and is tied to NFPA standards.

Illinois

Illinois has five regional fire academies and ten colleges located throughout the state. Each regional fire academy is an intergovernmental agency comprised of municipalities, fire protection districts, and other organizations. The State Fire Marshal's Division of Personnel Standards and Education sets the standards and certification requirements for public safety training; certification is often tied to NFPA standards. Although there are no requirements for a firefighter to attend a class or receive certification, departments can and often do set their own training standards and provide in-house training.

Indiana

The Indiana Department of Homeland Security houses the Division of Training, which includes the Fire and Public Safety Academy Training System. The Board of Firefighting Personnel Standards and Education adopts standards for certification, and selects a book/training curriculum. The selected training curriculum is used for training across the state.

Certification is voluntary and is tied to NFPA standards. State legislation mandates that career fire fighters be trained to level two within one year of being hired.

The state academy offers coaching to instructors that teach core classes like Firefighter 1 and 2. Coaches contact instructors to ensure they have the current curriculum, check the syllabus, and approve the overall curriculum prior to a course occurring. For the past five years, coaches have audited about 10 percent of courses on skills days to ensure the quality and fidelity of training delivery. Switching to this coaching system has increased the course pass rate by more than 10 percent.

Iowa

The Fire Service Training Bureau is Iowa's designated state fire academy, and is housed within the State Fire Marshal Division. IFSAC and Pro Board have accredited the program. State legislation requires that a firefighter must have completed NFPA Firefighter 1 before engaging in structural firefighting, but does not require that they obtain certification. The training can be provided by the Fire Service Training Bureau, community colleges, regional fire training facilities, or a local fire department. Firefighters must participate in at least 24 hours of training each year.

Maryland

Maryland's Fire-Rescue Education and Training Commission (MFRETC) is the state's legislatively mandated coordinating agency for fire training. It oversees the Maryland Fire and Rescue Training Institute (MFRI), as well as the Maryland Institute for Emergency Medical Services Systems, county and municipal fire academies, fire departments, and rescue squads. MFRI is an entity of the University of Maryland.

Departments set their own minimum training standards for firefighter training, and the Maryland Fire Service Personnel Qualifications Board oversees voluntary firefighter certification for the state. It has IFSAC and Pro Board accreditation, and accredits all fire-rescue training academies and institutions.

MFRETC sets minimum standards for certification of fire/rescue instructors; instructors are certified by either the Maryland Instructor Certification Review Board or the Maryland Institute of Emergency Medical Services Systems.

Ohio

Ohio has consolidated firefighter and emergency medical services oversight under the Ohio Department of Public Safety – Emergency Medical Services. The unit is responsible for chartering training facilities and instructors, maintaining firefighter and emergency medical service training standards, and managing training documentation.

State law requires that firefighters receive the appropriate certificate issued by the executive director of the Division of Emergency Medical Services to provide firefighting or fire safety inspector services. The Division mostly offers certificates that meet NFPA standards, but also offers a volunteer firefighter certificate; to receive it, firefighters must attend 36 hours of training that do not meet a full NFPA standard. All certifications are valid for three years, and the EMS office audits 10 percent of submissions to confirm compliance. Failure to accurately document training during the audit can result in continuing education, fines, and/or suspensions. The division also issues different levels of instructor certificates.

Training delivery

Kansas

The Kansas Fire and Rescue Training Institute provides training through its mobile fire academy, where staff members travel around the state to serve training to fire departments. The institute also offers regional fire schools and seminars, and has mobile props to bring to departments. It offers an online-classroom blended learning program for Fire Instructor 1 and for Intro to Technical Rescue. Departments and other associations also offer training.

Illinois

The five regional academies and ten colleges provide firefighter training to member departments.

Indiana

The Indiana Fire and Public Safety Academy provides about half of the trainings in the state; larger cities train their own firefighters. The academy offers blended learning that involves online components (videos, chapter tests, presentations, online homework submission, etc.) combined with in-person training across the state. It does offer a few online-only courses on specific topics like autism.

Indiana uses ACDIS Envisage to track firefighter certifications, but not training records. The state is developing the ability to track career firefighter training records.

Iowa

The Fire Service Training Bureau conducts the Annual State Fire School and supports six regional fire schools operated by local community colleges. The bureau also partners with all 15 community colleges in Iowa to deliver basic firefighter training.

Legislation requires each fire department to maintain training records for each member of the department who participates in emergency incidents; this should include all training completed, who provided the training, dates of training, location of training, and a description of the contents.

Maryland

The Maryland Fire and Rescue Institute provides training at six regional training centers, and offers site-specific mobile training. It offers some online training, and the institute's strategic plan indicates they plan to invest in a comprehensive learning management system.

Ohio

The Ohio Department of Public Safety – Emergency Medical Services charters fire training facilities based on resources and demand. Fire departments, career centers, universities, and the Ohio Fire Academy apply to conduct training. Chartered organizations are eligible to receive state funds and provide Firefighter 1 and 2 at no cost to firefighters. Career departments are responsible for conducting and paying for in-house training.

The Ohio Fire Academy provides reduced-price memberships for departments to an online training management system. Each online course has been approved by the academy.

Funding

Kansas

The Kansas Fire and Rescue Training Institute receives funding from Fire Insurance Premium funds; training and other program fees; general use fund application; and grants. Kansas firefighters can take some classes free of charge.

Illinois

Illinois academies and training programs receive different funding streams unique to their situations. For example, the Northeastern Illinois Public Safety Training Academy secures and provides funding to its trainees through the combined energies and resources of municipalities, fire protection districts, and other organizations in the Chicago area.

The State Fire Marshal's Division of Personnel Standards and Education also manages a program that provides reimbursement funding to fire departments that agree to train according to the Illinois Administrative Code. The percentage is determined by computing the total dollars of claims submitted divided into the amount of the grant. The amount of the grant is determined by the legislature every year during the budgeting process. The division does not reimburse for a certification level received, but for the actual training hours and costs associated for the level.

Indiana

The Fire and Public Safety Academy Training System is primarily funded through a public safety tax on fireworks, which generates up to \$2 million per year for firefighter training.

Iowa

The Fire Service Training Bureau receives staff salary and benefit funding from the State Fire Marshal. Other sources that fund firefighter training and equipment include an annual appropriation to fund firefighter training, a memorial safety training fund funded by a specialty license plate, and a firefighting equipment revolving loan fund.

Maryland

The Maryland Fire and Rescue Training Institute offers courses at no charge to students affiliated with a Maryland emergency services agency. Part of the institute's funding comes from the State Emergency Medical Services Operating Fund. The institute charges fees for some of its consulting and training services, and receives building, housekeeping, and other services directly from the university. It has also received funding from the federal Assistance to Firefighters Grant Program.

Ohio

Funding for Volunteer and Firefighter 1 training is provided by the Bureau of Workers Compensation and from fire insurance fund. These funds are paid to the chartered fire training facilities. Fire departments are responsible for paying for Firefighter 2 training.

Grants for low or no-cost training are also made available by the National Fire Academy and are administered by the Ohio Fire Academy to support select NFA courses in four categories.

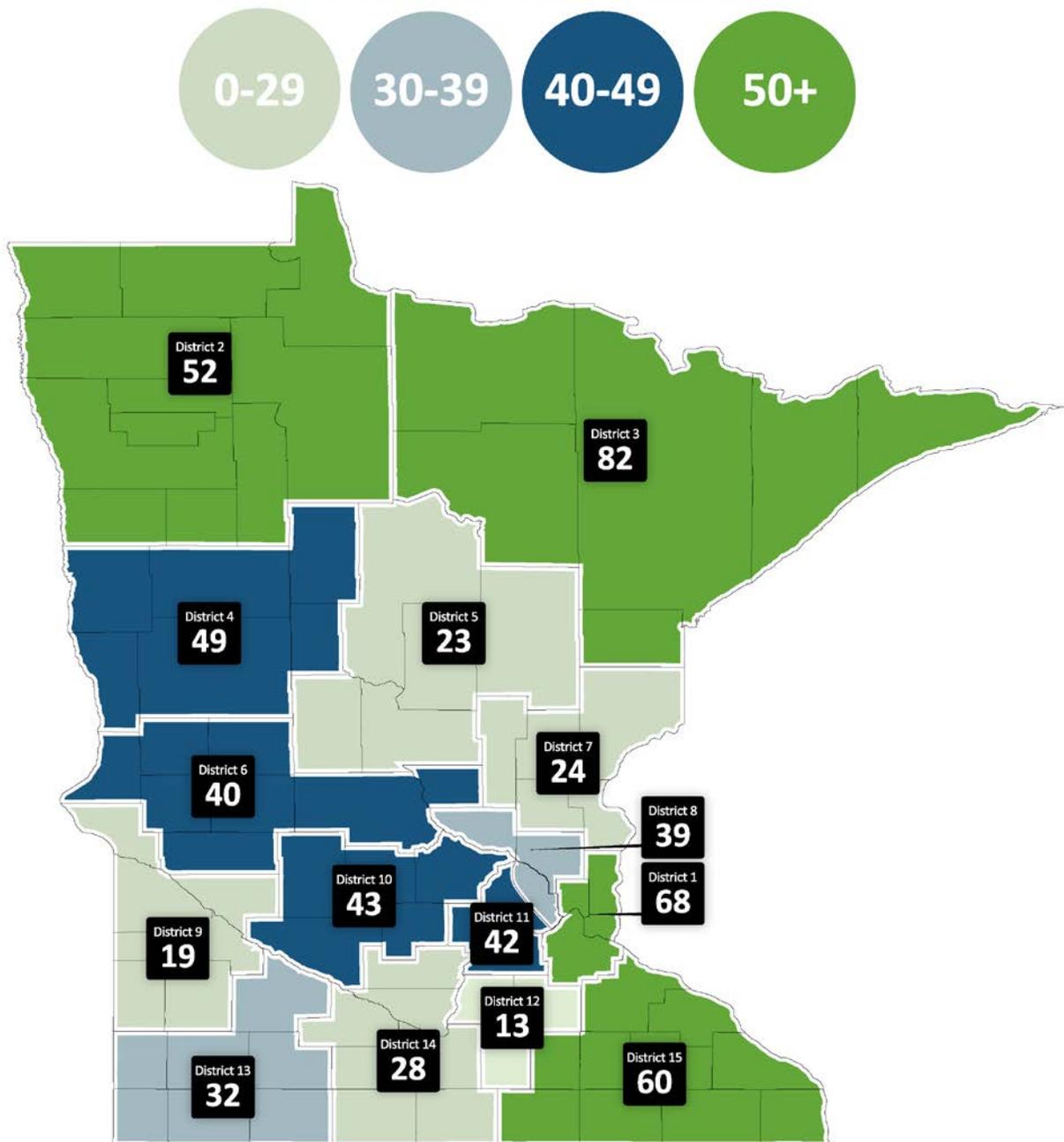
The U.S. Department of Agriculture's Rural Community Financial Assistance is a matching program to cover the cost of tuition and lodging at the Ohio Fire Academy. Recipients are responsible for travel, meals, and other expenses. Only firefighters from communities serving a population of less than 10,000 qualify.

Appendix H: Participation map

Firefighter Participation By Region

Informant interviews, chief questionnaire, chief/training coordinator survey,
listening sessions and listening session mini-survey

The total number of firefighters participating in the study was 616.



Appendix I: MBFTE guide to training requirements



MINNESOTA BOARD OF FIREFIGHTER TRAINING AND EDUCATION
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Minnesota Board of Firefighter Training and Education Best Practices Training Plan

Minimum Training for Minnesota Firefighters to Meet Federal and State Requirements

In response to numerous requests for information regarding minimum training standards to be a firefighter in the state of Minnesota, the Minnesota Board of Firefighter Training and Education (MBFTE) Training Committee has spent the past year reviewing documentation, laws, statutes and have had discussions with many key players in order to meet the desires and needs of the fire service of Minnesota.

The creation of the following “Best Practices Training Plan” is the result of the many hours devoted to this plan. The plan provides information regarding the Federal, State and OSHA requirements, for both initial training and annual refresher training for firefighters. Additionally, the “Best Practice Training Plan” introduces what are called the “11 Core Elements” as a resource or tool for departments to use as a guideline for their monthly and annual training drills. These “11 Core Elements” play a key role in designing training drills for firefighters that are intended to meet the 72 hour Continuing Education Units (CEU) requirement for Minnesota Firefighter Licensing.

The MBFTE Training Committee would like to point out that the state of Minnesota OSHA requirements are department-dependent, based upon the department’s level of service provided within their communities. While the “Best Practices Training Plan” may not be for every department, the goal is to provide a document that will provide the basics for all Minnesota fire departments.

The “Best Practices Training Plan” is formatted to present initial training that meet the Federal, State and OSHA requirements for new firefighters first, and then presents the annual refresher training for current firefighters. The MBFTE recommends reading the “15 Most Commonly Cited OSHA Violations Written to Minnesota Fire Departments” also. It is on our website under the training tab.

The MBFTE recognizes the inherent danger that firefighters face each day. The MBFTE’s desire is that fire departments will use this “Best Practices Training Plan” and the “11 Core Elements” as a resource to develop training drills that will in turn reduce the dangers facing today’s firefighters and ultimately, increase firefighter safety.

“The vision of the Minnesota Board of Firefighter Training and Education is to reduce fire-related deaths and injuries through excellence in training and education.”

Minimum Training for Minnesota Firefighters to Meet Federal and State Requirements

INITIAL TRAINING

The General Duty Clause

[MN Statute 182.653 Subd. 2]

Each employer shall furnish to each of its employees conditions of employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious injury or harm to its employees.

Hazardous Waste Operations and Emergency Response

[29 CFR 1910.120 (e)(1)(ii)]

Employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility.

Hazardous Materials Awareness (3 hours) and Infectious Disease Control (3 hours)

1. *Hazardous Materials First Responder Awareness Level (3 hours)*
2. *Communicable Disease Risk Exposure and Prevention of the Transmission of Bloodborne and Airborne Pathogens for Emergency Responders (3 hours)*

This orientation course has been developed to assist you in comprehension of the OSHA requirement. It does not supplant the employers' responsibility to provide training necessary to be in full compliance. MN OSHA recommends the "operational level" course for all firefighters who will take action beyond identification of the incident.

[29 CFR 1910.120(q)(6)(i)]

[29 CFR 1910.134(g)]

[29 CFR 1910.1030(g)(2)(i through vi)]

Fire Brigades

[29 CFR 1910.156 (c)(1)]

The employer shall provide training and education for all fire brigade members commensurate with those duties and functions that fire brigade members are expected to perform. Such training and education **shall** be provided to fire brigade members before they perform fire brigade emergency activities.

Confined Space Entry Awareness and Employee Right To Know (3 hours)

1. *Permit-required Confined Space Entry Awareness* – This course is designed to familiarize the student with an understanding of the OSHA requirements. Additional training is needed to comply with Section (k) of 1910.146 and 5207.0300 for construction activities.
2. *Department of Labor and Industry Employee Right To Know Standards Chapter 5206*

This orientation course has been developed to assist you in comprehension of the OSHA requirement. It does not supplant the employers' responsibility to provide training necessary to be in full compliance.

[29 CFR 1910.146(g)(1)]

[MN Rule Chapter 5206.0700(G)(1)(4)]

[29 CFR 1910.1200 (h) (3) (iv) Global Harmonization]

Basic Firefighting Course – NFPA 1001

(This course meets the requirements for Minnesota voluntary certification and/or licensure)

To include, but not limited to, the following subjects from NFPA 1001 standards: Firefighter Personal Protective Equipment and SCBA; Firefighter Orientation and Safety; Implementing ICS; Fire Behavior; Ladders; Forcible Entry Tools and Construction Techniques; Rescue and Extrication; Building Search and Victim Removal; Hose Tools, Appliances, Coupling, Loading, Rolling, Lays, Carries; Advancing Water Fire Streams; Ventilation; Fire Control Classes; Vehicle and Wildland Fire Control: Live Burn; Salvage and Overhaul; Firefighter Survival, and RIT.

[29 CFR 1910.156(c)(1)]

[29 CFR 1910.134(e)(5)]

[29 CFR 1910.157(g)(1)]

[29 CFR 1910.132]

First Responder Operational Level (24 hours)

1. *Hazardous Materials for the First Responder (24 hours)*

Any firefighter who remains at the scene and is allowed to take minimal defensive action during an incident involving hazardous materials MUST be trained to this level.

[29 CFR 1910.120(q)(3)(ii)] as per [29 CFR 1910.120(q)(3)(i)]

[29 CFR 1910.120(q)(6)(ii)] as per [29 CFR 1910.120(q)(6)(v)]

Respiratory Protection

[29 CFR 1910.134 (a)(2)]

A respirator shall be provided to each employee when such equipment is necessary to protect the health of such employee. The employer shall provide the respirators which are applicable and suitable for the purpose intended. The employer shall be responsible for the establishment and maintenance of a respiratory protection program, which shall include the requirements outlined in paragraph (c) of this section. The program shall cover each employee required by this section to use a respirator.

Practices for Respirator Protection

[ANSI Z88.2-1992]

Sec. 8.2 Training frequency

Each respirator wearer shall be trained upon initial assignment and be retrained once every 12 months.

Employee Right to Know

[MN Statute 182.653 Subd. 4b]

- (a) Prior to an employee's initial assignment to a workplace where the employee may be routinely exposed to a hazardous substance or harmful physical agent, the employer shall provide training concerning the hazardous substance or harmful physical agent. The employer shall provide additional instruction whenever the employee may be routinely exposed to any additional hazardous substance or harmful physical agent. The term "routinely exposed" includes the exposure of an employee to a hazardous substance when assigned to work in an area where a hazardous substance has been spilled.

- (d) **Training to update the information required to be provided under this subdivision shall be repeated at intervals no greater than one year.**

INITIAL TRAINING

Bloodborne Pathogens

[29 CFR 1910.1030(g)(2)]

Information and training

(i) The employer shall train each employee with occupational exposure in accordance with the requirements of this section. Such training must be provided at no cost to the employee and during working hours. The employer shall institute a training program and ensure employee participation in the program.

(ii) Training shall be provided as follows:

(A) At the time of initial assignment to tasks where occupational exposure may take place;

(B) At least annually thereafter.

(iv) Annual training for all employees shall be provided within one year of their previous training.

(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

Fire Brigades

[29 CFR 1910.156(c)(2)]

The employer **shall** assure that training and education is conducted frequently enough to assure that each member of the fire brigade is able to perform the member's assigned duties and functions satisfactorily and in a safe manner so as not to endanger fire brigade members or other employees. **All fire brigade members shall be provided with training at least annually. In addition, fire brigade members who are expected to perform interior structural firefighting shall be provided with an education session or training at least quarterly.** (See 11 Core Elements)

Employee Right to Know

[MN Statute 182.653 Subd. 4b]

- (b) Prior to an employee's initial assignment to a workplace where the employee may be routinely exposed to a hazardous substance or harmful physical agent, the employer shall provide training concerning the hazardous substance or harmful physical agent. The employer shall provide additional instruction whenever the employee may be routinely exposed to any additional hazardous substance or harmful physical agent. The term "routinely exposed" includes the exposure of an employee to a hazardous substance when assigned to work in an area where a hazardous substance has been spilled.
- (e) **Training to update the information required to be provided under this subdivision shall be repeated at intervals no greater than one year.**

Employee Right to Know Standards

[MN Rules 5206.0700(G)(4)]

Training updates must be repeated at intervals of not greater than one year. Training updates may be brief summaries of information included in previous training sessions.

Bloodborne Pathogens

[29 CFR 1910.1030(g)(2)]

Information and training

(i) The employer shall train each employee with occupational exposure in accordance with the requirements of this section. Such training must be provided at no cost to the employee and during working hours. The employer shall institute a training program and ensure employee participation in the program.

(ii) Training shall be provided as follows:

(C) At the time of initial assignment to tasks where occupational exposure may take place;

(D) At least annually thereafter.

(iv) Annual training for all employees shall be provided within one year of their previous training.

(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

Practices for Respirator Protection

[ANSI Z88.2-1992]

Sec. 8.2 Training frequency

Each respirator wearer shall be trained upon initial assignment and be retrained once every 12 months.

Respiratory Protection

[29 CFR 1910.134]

(c) Respiratory Protection Program.

This paragraph requires the employer to develop and implement a written respiratory protection program with required worksite-specific procedures and elements for required respirator use. The program must be administered by a suitably trained program administrator. In addition, certain program elements may be required for voluntary use to prevent potential hazards associated with the use of the respirator.

(g) Use of Respirators.

This paragraph requires employers to establish and implement procedures for the proper use of respirators. These requirements include prohibiting conditions that may result in facepiece seal leakage, preventing employees from removing respirators in hazardous environments, taking actions to ensure continued effective respirator operation throughout the work shift, and establishing procedures for the use of respirators in IDLH atmospheres or in interior structural firefighting situations.

(k)(4)

An employer who is able to demonstrate that a new employee has received training within the last 12 months that addresses the elements specified in paragraph (k)(1)(i) through (vii) is not required to repeat such training provided that, as required by paragraph (k)(1), the employee can demonstrate knowledge of those element(s). **Previous training not repeated initially by the employer must be provided no later than 12 months from the date of the previous training.**

Respiratory Protection

[29 CFR 1910.134 App A]

Appendix A to § 1910.134: Fit Testing Procedures (Mandatory)

Part I. OSHA-Accepted Fit Testing Protocols

The employer shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

Hazardous Waste Operations and Emergency Response**[29 CFR 1910.120 (q)]****(6) Training**

Training shall be based on the duties and function to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of this standard, shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident. Employees who participate, or are expected to participate, in emergency response, shall be given training in accordance with the following paragraphs:

(i) First Responder Awareness level

First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency.

(ii) First Responder Operations level

First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight (8) hours of training or have had sufficient experience to objectively demonstrate competency.

(iii) Hazardous Materials Technician

Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least twenty-four (24) hours of training equal to the first responder operations level and in addition have competency.

(iv) Hazardous Materials Specialist

Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local and other government authorities in regards to site activities. Hazardous materials specialists shall have received at least 24 hours of training equal to the technician level and in addition have competency.

(v) On-Scene Incident Commander

Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least twenty-four (24) hours of training equal to the first responder operations level and in addition have competency.

(7) Trainers

Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy, or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.

ANNUAL REFRESHER TRAINING

(8) Refresher Training

- (i) Those employees who are trained in accordance with paragraph (q)(6) of this section shall receive annual refresher training of sufficient content and duration to maintain their competencies, or **shall demonstrate competency in those areas at least yearly**.
- (ii) A statement shall be made of the training or competency, and if a statement of competency is made, the employer shall keep a record of the methodology used to demonstrate competency.

Conclusion

The purpose of this document is to inform and help departments obtain the needed information to keep their firefighters safe and well trained.

All the state OSHA requirements are department-dependent, based upon level of service. The 11 Core Elements will provide 24 hours annually in any combination, according to the department's needs.

Non-traditional classes and/or expenses may be available for reimbursement when the 24 hours of firefighter training has been completed in the 11 Core Elements.

11 Core Elements

These recommendations come from the Minnesota OSHA standards, providing Minnesota fire departments multiple options to design an annual training program that fits their needs and requirements. Twenty-four hours of continuing annual training is recommended in any combination of the following 11 Core Elements.

Each of the recommended 11 Core Elements has been further developed to include subgroups that include:

- 1. Safety and Protective Equipment**
 - a. A culture of a safe working environment
 - b. 16 life safety initiatives
 - c. PPE checks
 - d. Bloodborne pathogens
 - e. Proper PPE for the work place

- 2. Chemistry of Fire and Fire Behavior**
 - a. Fire Behavior
 - b. Building Construction
 - c. Fire Tactics/Strategies
 - d. Thermal imager
 - e. Foam
 - f. Extinguishers

- 3. Self-Contained Breathing Apparatus (SCBA)**
 - a. Checks/ recharge SCBA cylinder
 - b. Donning/doffing
 - c. PASS devices
 - d. Use/Care
 - e. Confidence course

- 4. Fire Streams**
 - a. Attack below grade
 - b. Attack ground grade
 - c. Attack above grade

- 5. Hose**
 - a. Types
 - b. Loads/Lays
 - c. Coupling drill
 - d. Deployment techniques

- 6. Pumping Fire Apparatus**
 - a. Responding (CEVO or Emergency Vehicle Operations)
 - b. Pumping
 - c. Drafting
 - d. Supply to appliances

- 7. Ladders**
 - a. Ladders
 - b. Deployment
 - c. Safety
 - d. Aerials

- 8. Rescue**
 - a. Firefighter
 - i. Search
 - ii. Self-rescue
 - iii. Mayday operations
 - iv. Rapid intervention
 - b. Extrication
 - i. Auto recognition
 - ii. Highway safety
 - iii. Tools
 - iv. Airbags
 - v. Other cutting devices
 - vi. Disentanglement
 - vii. Other machinery
 - viii. Farm equipment or Mining equipment
 - c. Ropes
 - i. Rope types
 - ii. Knots
 - iii. Use
 - d. First Aid
 - i. First Aid
 - ii. CPR

- 9. Forcible Entry**
 - a. Tool Identification
 - b. Forcible entry
 - i. Door
 - ii. Window
 - iii. Wall
 - iv. Other

- 10. Ventilation**
 - a. Horizontal
 - b. Vertical
 - c. Mechanical

- 11. Administrative/Command**
 - a. Professional Development
 - b. Financial Management
 - c. Human Resources
 - d. Incident Command System

Appendix J: Reimbursable expense list

MBFTE FY 2017 (Round 9) Reimbursable Classes

- All National Fire Academy Classes, all Federal FEMA classes involving Incident Command (*i.e. IS 100, 200, 300, etc.*)
- NFPA 472 - Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Incidents (*i.e. Haz-Mat Awareness, Operations, Technician*)
- NFPA 1001 - Standards for Firefighter Professional Qualifications (*i.e. Firefighter I & II classes*)
- NFPA 1002 - Standard for Fire Apparatus Driver/Operator Professional Qualifications (*i.e. Pumping, Driving, Water Supply, Emergency Vehicle Operations Course*)
- NFPA 1003 - Standard for Airport Firefighting Professional Qualifications
- NFPA 1021 - Standard for Fire Officer Professional Qualifications (*i.e. Tactics & Strategies, Command, Leadership*)
- NFPA 1031 - Standard for Professional Qualifications for Fire Inspector & Plan Examiner (*i.e. Building Inspections, Construction*)
- NFPA 1033 - Standard for Professional Qualifications for Fire Investigator (*i.e. Arson classes, Fire Investigation classes, BCA classes*)
- NFPA 1035 - Standard for Professional Qualification for Public Educator & Life Safety Educator
- NFPA 1037 - Standard for Professional Qualifications for Fire Marshal
- NFPA 1041 - Standard for Fire Service Instructor Professional Qualifications
- NFPA 1051 - Standard for Wildland Firefighter Professional Qualifications (*i.e. S-130, S-190*)
- NFPA 1091 - Traffic Control Incident Management Professional Qualifications
- NFPA 1061 - Standard for Professional Qualifications for Public Safety Telecommunicator
- NFPA 1403 - MBFTE Live Burn (maximum \$1,500/burn; Live Burn plan shall be included with request; NFPA 1403 2012 Edition shall be followed; departments shall use MBFTE Qualified Live Burn Instructors)
- NFPA 1405 - Standard for Land-based Fire Departments that Respond to Marine Vessel Fires
- NFPA 1407 - Standard for Fire Service Rapid Intervention Crews (*i.e. RIT training*)
- NFPA 1500 - Standard on Fire Department Occupational Health and Safety Program (*i.e. "Everyone Goes Home"*)
- NFPA 1670 - Standard on Operations and Training for Technical Search & Rescue Incidents. (*i.e. Rope Rescue -high & low angle, Structural Collapse Rescue, Confined Space Rescue, Vehicle Rescue, Water & Ice Rescue, Wilderness Search & Rescue, Trench & Excavation Rescue, Machinery Rescue, Cave Rescue, Mine & Tunnel Rescue, Helicopter Rescue*)
- All OSHA Classes Required (*i.e. Blood-borne Pathogen, Right-to-Know*)
- EMS Courses approved by the EMSRB (*CPR & AED, EMR, EMT, Paramedic*) and not reimbursed by EMS Region.
- Specialist taught course (course outline must be submitted with other required documents and instructor must be a MBFTE Qualified Instructor): _____

MBFTE FY 2017 (Round 9) Other Reimbursable Expenses

- Backfill and overtime expenses associated with MBFTE approved training (if applicable). Supporting documentation from municipality must accompany your Request for Reimbursement Form(s).
- In-house instructor wages (must be listed as an MBFTE Qualified Instructor)
- Books and DVD's associated with an NFPA Standard
- Initial certifications associated with an NFPA Standard
- Basic Animal Rescue Training (B.A.R.T.) -- classroom only
- Registration costs related to Fire/EMS Conferences, Schools, and/or Seminars.
- FAA Part 107 S.U.A. - Drone Usage Training (with documented authorization from Fire Chief)

Examples of training expenses that is NOT reimbursable by the MBFTE

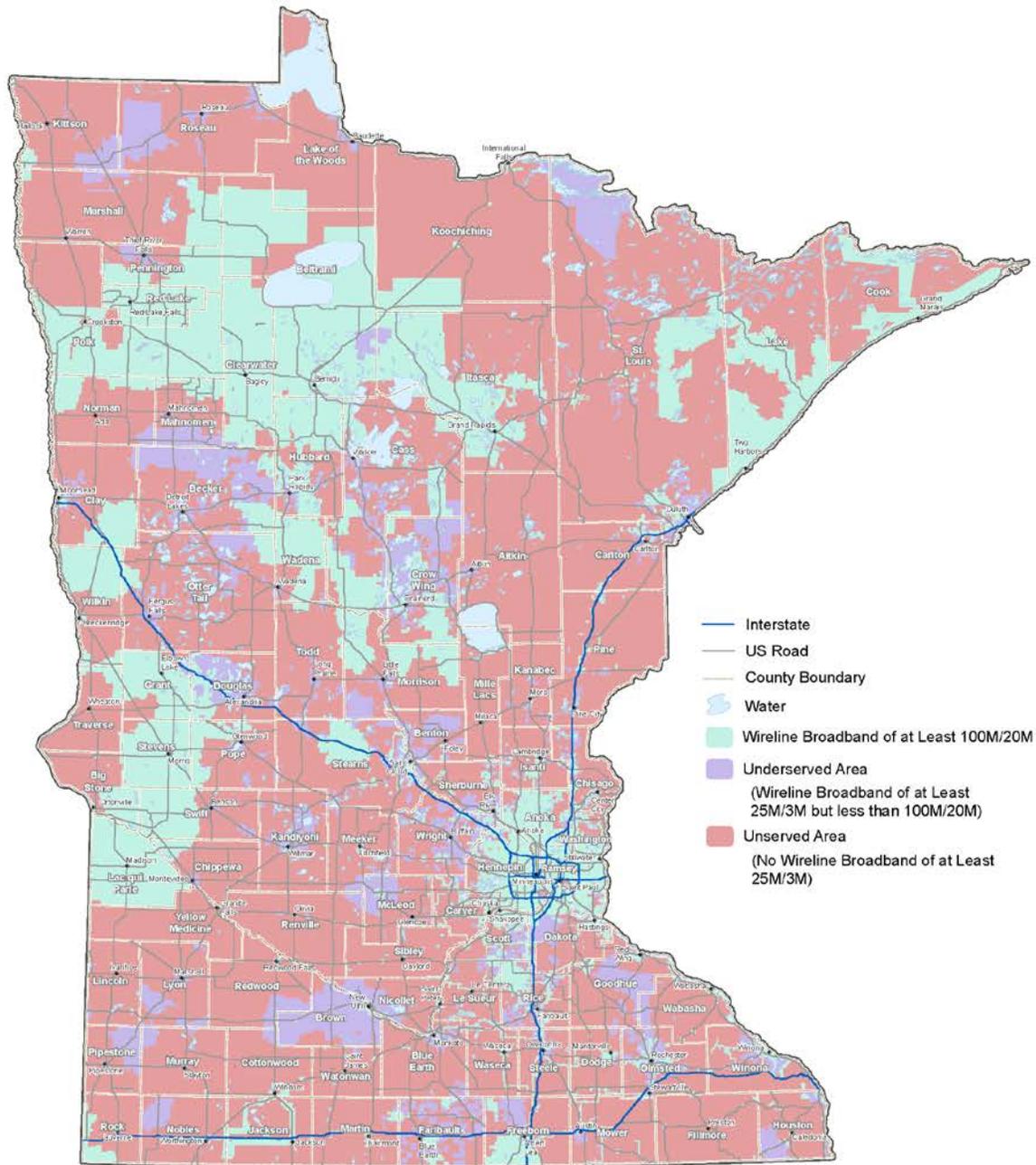
- Mileage, per diem, travel or lodging expenses to attend training or conferences
- Out of state training
- Wages not associated with backfill and/or overtime
- Administrative costs (salaries for training / administrative staff)
- Renewal of certifications
- Licensing costs (initial and renewal)
- Equipment
- Training room supplies (chairs, desks, computers, A/V, etc.)
- EMS training that does not have supporting documentation of proof of payment/non-payment from your Regional EMS Association

Appendix K: Broadband map

2016 Broadband Service Inventory for the State of Minnesota

Border-to-Border Broadband Development Grant Program

Unserved, Underserved and Served Wireline Broadband Areas



- Interstate
- US Road
- County Boundary
- Water
- Wireline Broadband of at Least 100M/20M
- Underserved Area
(Wireline Broadband of at Least 25M/3M but less than 100M/20M)
- Unserved Area
(No Wireline Broadband of at Least 25M/3M)



Submit questions or recommended changes to:
DEED.broadband@state.mn.us

This map was prepared by Connected Nation under contract with the Minnesota Department of Employment and Economic Development. The map represents areas of broadband service availability based on provider data submitted to and analyzed by Connected Nation and modified based on validation tools. The data is current as of December 31, 2015.

Additional maps and data are available at
<http://mn.gov/deed/programs-services/broadband/maps>

Upon request, this information can be made available in alternate formats for people with disabilities by contacting the DEED Office of Broadband Development at 651-259-7610.