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TOWN OF WILLIAMSTOWN, MASSACHUSETTS

FIRE DISTRICT ORGANIZATIONAL ASSESSMENT

August 2019

I. PROJECT OVERVIEW, PURPOSE, SCOPE, AND METHODOLGY

PROJECT OVERVIEW

The Williamstown Fire District contracted with Municipal Resources, Inc. (MRI) to provide an organizational assessment and review of the manner in which fire and rescue services are provided within the community. Using this as a basis, the MRI team reviewed the manner in which fire services are provided within the District (Town of Williamstown), including a target hazard analysis, review of response metrics, and a review of the current facility and apparatus.

MRI has developed recommendations for improvements that take into consideration the current and future needs of the Williamstown Fire District, and recommendations for appropriate modifications to the delivery systems to provide the desired level of fire services to the Town. Notably, recommendations pertaining to capacity and resources will be utilized to assist in a program, for planning the replacement of the fire station, which will follow the completion of this report. This project will address the following key questions:

1. Is the Fire District able to meet present and future needs of the community and region?
2. What are ways to improve the Department and to position it to meet future needs?
3. What are ways to improve the quality of service to the community as well as the efficiency and cost of such provision?
4. How should current and future needs impact the planning for a replacement facility?

SCOPE OF WORK

This study required intensive involvement within the Fire District leadership, community and included interviews with the Town Manager, elected officials (Prudential Committee), the Fire Chief, fire personnel, Police Chief, and other stakeholders including Williams College Staff.

The study focused on an assessment to determine whether the existing organizational model, staffing, facilities, apparatus, and equipment of the Williamstown Fire District are in line with generally accepted standards and benchmarks, and commensurate with communities of like character. MRI reviewed the background information that impacts the Fire District and performed a comparative analysis of similar communities. Items that were considered as part of this evaluation included:

A. Policies that determine staffing levels and types of staffing used
B. Community population and demographics
C. Target fire hazards (residential, industrial, educational, and municipal features of the community)
D. Property values
E. Services provided
F. Special hazards and risks (i.e., nursing homes, assisted living facilities, lakes, rivers and waterfronts, Williams College, industrial facilities, hotels, road network, and multi-story buildings)
G. Budgets
H. Deployment strategy of manpower and apparatus by type of incident

The MRI project team, evaluated the overall operations of the Department to identify what works and what does not work:

- Analyzed resources and equipment
- Reviewed budget and expenditures
- Reviewed practices and policies of the Department
- Analyzed call volume against the availability of resources
- Reviewed the hours of the Fire Chief
- Reviewed organizational structure for appropriateness
- Assessed the Department's on-call staffing, and recruitment and retention efforts that exist within the community
- Identified major issues and concerns of the community regarding the operations of the Fire Department.
- Achieved an understanding and appreciation of the values and "personality" of the community and the local government
- Formed an understanding of the community's needs, wants, and desires with regard to fire services in the future
- Discussed planning for a strong partnership between the community and the Fire Department into the future
- Identified potential areas of risk/liability and made recommendations to reduce those exposures

Much of this plan of service was done face-to-face, during the on-site visit by MRI's project team. The project team spent eight hours of time on-site; making observations, inspecting facilities, equipment and records and conducting interviews.

The current Fire Department facility was evaluated for the requirements necessary to accommodate current and future staffing, as well as facility maintenance, isolation of protective clothing, decontamination areas for protective clothing and EMS equipment, and the general overall condition of the building.

The project team also conducted a review of the current organizational structure, the leadership group of fire officer's, and solicited input from department members to obtain further information on current operations of the Williamstown Fire District, in order to make recommendations for the future success of the organization. The overall goal of the review MRI conducted was to perform an analysis of the Department to identify current issues and challenges, as well as potential threats that could impact the Department's success in the years to come.

METHODOLOGY

Upon completion of its review, MRI has made recommendations for improvements that take into consideration the current and future sustainability and needs of the Fire District and region, appropriate modifications to the delivery systems to provide optimum response time and service to the entire town, how current and future needs will impact the location and/or expansion of physical facilities and equipment, and whether the current fire and rescue staffing is appropriate or should be modified.

Specific items addressed, included but were not limited to, the following:

A. Identified service needs, based on the characteristics of the community, statutory and regulatory requirements for response and delivery, and comparison with current ability to fulfill the needs and expectations.

B. Identified the public safety risks and prioritize the level of risk that must be covered based on the data and operations of the fire and EMS operations. The type, frequency, distribution, response times, mutual aid and/or contractor provided services, staffing policies, reporting of emergency and routine responses to all services was included.

C. Assessed the current staffing plan for deploying the required number of fire officers and supervisors, along with vehicles and apparatus used and recommended cost-effective alternatives based on the type of incident. Evaluated

whether there were recommended changes to improve efficiency and delivery of service.

D. Evaluated the response of personnel, including appropriate operational staffing, supervisors, management, and support staff, starting with the initial call for routine or emergency services, through generating the incident report and findings, and any subsequent proceedings such as court appearances, legal action, or insurance resolution or inspection.

E. Identified the required staffing levels that meet the needs of the community in the most cost-effective and complete manner including operating costs, personnel impact, and impact on the delivery of service and workload.

F. Evaluated the current fire facility to determine if it is a functional platform for the Williamstown Fire Department. Identified facility needs in terms of critical operational components. Identified the viability of the facility to provide an effective base of operations for the next five years. Reviewed a previous facility study completed in 2008 to evaluate its current validity to current needs.

G. An evaluation of departmental policies and procedures that impact the efficient operations of the Fire District. Included possible recommendations that may improve the current policies, procedures, training, and delivery of services in the most cost-effective manner.

H. Reviewed and commented on on-call recruitment and retention efforts within the community.

To accomplish these tasks, MRI used ten work elements involved in this study. The following methodologies were employed:

1. Reviewed pertinent service demand data
2. Conducted a review of response activity
3. Toured the community and reviewed target hazards
4. Evaluated fire service facilities and equipment
5. Interviewed the Town Manager
6. Interviewed the Police Chief and Fire Chief
7. Interviewed fire officers and firefighters and several other members of the Fire District
8. Interviewed the Prudential Committee
9. Reviewed various fire department documents and budgets
10. Developed study report.

II. COMMUNITY RISK ASSESSMENT

OVERVIEW

The Town of Williamstown covers 46.8 square miles of land and 0.1 square miles of water within Berkshire County in the furthest northwest corner of Massachusetts. Williamstown shares a border with Vermont to the north and New York to the west. According to the 2010 census, the Town has a resident population of 7,754 residents with a population density of 166 persons per square mile. Williamstown is home of Williams College, a private liberal art college.

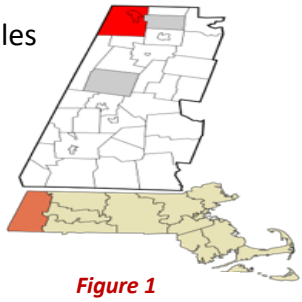

Figure 1
Williamstown *MA*

The Town of Williamstown has a median family income of $103,690. Non-family income has a median of $44,643. The median age of Williamstown residents is 29.9 years old. The largest percentage of residents by age category are those in the 16 to 21 years of age range at 87.3 %. Residents in the age range of 65 to 74 years of age make up the highest percentage of amongst the 55 + group of residents at 8.7%.[1]

The Williamstown Fire Department provides various fire and rescue services. These include firefighting and rescue such as vehicle extrication and limited technical rescue. First responder medical service is provided by the Fire Department with transportation and Advanced Life Support care (ALS) through a contract with Northern Berkshire EMS (formally North Adams Ambulance).

The existing Fire Headquarters is located at 34 Water Street in Williamstown and sits on the north bank of the green river. Fire Headquarters has frontage on Water Street, the Green River to the south, and a right of way on the north. The single-story fire station has approximately 4,325 square feet of working space on the first floor, and 736 square feet of area in the basement. The gross square footage of the station is 5,060 square feet. The fire station holds four pieces of fire apparatus. The facility was constructed in 1950 and has undergone one apparatus bay expansion and minor improvements and modifications.

The Fire Department consists of 22 firefighters all of which serve on a paid-on-call basis, with the exception of the Fire Chief who is the only fulltime employee. There is one fire station from which firefighters respond. The Fire Department serves the Town in all areas of fire suppression including residential, commercial, and woodland properties.

[1] *U.S. Census Bureau Fact Finder ACS Demographic and Housing Estimates 2013-2017*

Figure 2
Williamstown Fire District
Aerial View
Williamstown Fire Station

Figure 3
Williamstown Fire Station
34 Water Street
Williamstown Mass

Figure 4
Aerial View from
Tower 1

COMMUNITY RISK ASSESSMENT

Figure 5
Williamstown Fire Station

Fire and rescue services generally have a common overall mission - the protection of life and property - but fire service organizations operate in communities with differing risk profiles. Each individual fire service organization has very different fire and rescue service operational needs, based upon a unique community risk profile, service demands, and stakeholder expectations present in the community.

A community risk assessment is a comprehensive process to identify the hazards, risks, fire and life safety problems and the demographic characteristics of those at risk in a community. In each community there are numerous hazards and risks to consider. For each hazard there are many possible scenarios and potential incidents that could be encountered depending on timing, magnitude, and location of the hazard or incident. A thorough risk analysis provides insight into the worst fire and life safety problems and the people who are affected. The analysis results create the foundation for developing risk-reduction and community education programs.

Conducting a community risk analysis is the first step toward deciding which fire or injury problem needs to be addressed. Risk analysis is a planned process that must be ongoing, as communities and people are constantly changing. Too often, an objective and systematic

community risk analysis is a step that is overlooked in the community education process. Many emergency service organizations address risks based on a perceived need for service that isn't there. This approach can be costly (i.e., misdirected resources, continued property loss, injuries or deaths)[2]. In short, a good community risk assessment will produce a picture of what the hazards and potentials for incidents are, identify who is at risk, and attempt to quantify the expected impacts (Figure 6).

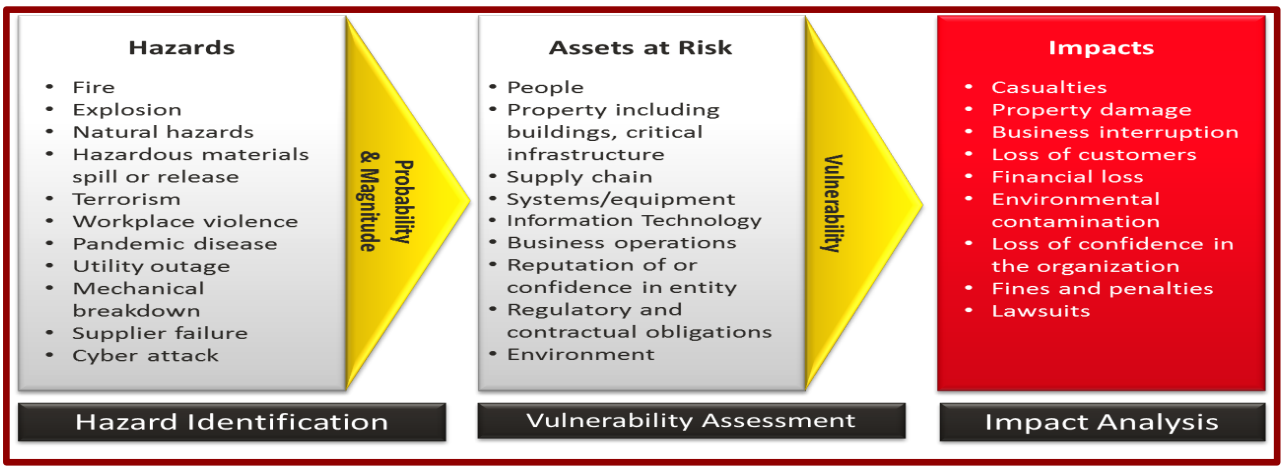

Figure 6:
Risk Assessment Process
Image credit: www.ready.gov/risk-assessment

Understanding the definition of hazards and risk is critical to the risk assessment process. Hazards are physical sources of danger that create emergency events. Hazards can be items such as buildings, roadways, weather events, fires, etc. Risk relates to the probability of a loss due to exposure to a hazard. People and property can be at risk. Consequences to the community are also factors to consider. Each of these factors is assessed during the community risk process.

A fire risk assessment is performed by assessing such factors as the needed fire flow, probability of an incident, consequences of an incident, and occupancy risk. The "score" established is then utilized to categorize the area…or even individual properties…as one of low, moderate, or high/maximum-risk. This categorization can assist the Department with establishing fire risk and demand areas or zones. Having this information readily available provides the community and the Fire Department with a better understanding of how fire stations, response run cards, and staffing patterns can be used to provide a higher concentration of resources for higher risk scenarios or, conversely, fewer resources for lower levels of risk.[3] The community fire risk assessment may also include determining and defining the differences in fire risk between a

[2] https://www.usfa.fema.gov/downloads/pdf/coffee-break/fm/fm_2014_2.pdf February 5, 2016
[3] *Fire and Emergency Service Self-Assessment Manual, Eighth Edition, (Center for Public Safety Excellence, 2009), p. 49.*

detached single-family dwelling, a multifamily dwelling, an industrial building, and a high-rise building by placing each in separate category.

The community risk and vulnerability assessment evaluates the community as a whole, and measures all property and the risk associated with that property and then classifies the property as either a high, medium, or low hazard.

According to the NFPA Fire Protection Handbook, these hazards are defined as:

High-hazard occupancies: Schools (including post-secondary schools), hospitals, nursing homes, explosives plants, refineries, high-rise buildings, and other high life-hazard or large fire-potential occupancies.

Medium-hazard occupancies: Apartments, offices, and mercantile and industrial occupancies not normally requiring extensive rescue by firefighting forces.

Low-hazard occupancies: One-, two-, or three-family dwellings and scattered small business and industrial occupancies[4].

The NFPA also identifies a key element of assessing community vulnerability as fire department operational performance which is comprised of three elements: resource availability and reliability, department capability, and operational effectiveness[5].

Resource availability/reliability: The degree to which the resources are ready and available to respond.

Department capability: The ability of the resources deployed to manage an incident.

Operational effectiveness: The product of availability and capability. It is the outcome achieved by the deployed resources or a measure of the ability to match resources deployed to the risk level to which they are responding.[6]

The implementation of successful community risk reduction strategies after completion of a community risk assessment are linked directly to prevention of civilian and firefighter line of duty deaths and injuries. In fact, they directly address goals found in firefighter Life Safety Initiatives

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[4] *Cote, Grant, Hall & Solomon, eds., Fire Protection Handbook (Quincy, MA: National Fire Protection Association, 2008), p. 12.*

[5] *http://www.nfpa.org/assets/files/pdf/urbanfirevulnerability.pdf.*

[6] *National Fire Service Data Summit Proceedings, U.S. Department of Commerce, NIST Tech Note 1698, May 2011.*

14 and 15. Virtually every risk reduction program in the fire and emergency services will have elements of what are called "The 5 Es of Prevention". These include:

Education ▪ Enforcement ▪ Engineering
Economic Incentives ▪ Emergency Response

Figure 7:
Five Es of prevention
in a community risk reduction program.
Image credit: www.beaherosaveahero.org

Understanding and addressing only one element will not lead to a successful program. All five "Es" must be integrated into every program for it to be effective[7] (Figure 7). Strong fire prevention codes have been shown to be extremely effective means to reduce risk in a community. Fire alarm and sprinkler systems mandates for not only commercial buildings but all occupancies including single family dwellings dramatically reduces fire risk and increases life safety. Code implementation that doesn't require these creates an increased risk. Strong code provisions and enforcement have demonstrated a greater ability to decrease fire problems than continuing to acquire more traditional fire department resources.

INSURANCE SERVICES ORGANIZATION (ISO) *RATING*

The Town currently has an Insurance Services Office (ISO) rating of **04/4X**. ISO is an independent risk company that services insurance companies, communities, fire departments, insurance regulators, and others by providing information about the risk. ISO's expert staff collects information about municipal fire suppression efforts in communities throughout the United States. In each of those communities, ISO analyzes the relevant data and assigns a Public Protection Classification – a number from 1 to 10. Williamstown is one of 7,033 communities that is classified as a Class 4 community. This Class rating places the community on the higher end of having a commendable fire suppression program for its size. A Class 1 community represents an exemplary fire suppression program, and Class 10 indicates that the area's fire suppression program does not meet ISO's minimum criteria.

The Public Protection Classification (PPC) program provides objective countrywide criteria that may prove helpful in connection with fire departments and communities planning and budgeting for facilities, equipment and training. When companies have fewer or lower claims to pay, the premiums they collect can be lower. Therefore, by recognizing the potential effect of improved fire suppression on fire insurance losses, in that respect, the PPC program can often serve as an

[7] http://www.beaherosaveahero.org/2013/10/community-risk-reduction-crr-overview/ February 5, 2016

objective mechanism that can help recognize communities that choose to maintain and improve their firefighting services.

PPC can also be an important factor in overall community resilience and provides a consistent measurement tool that can help in these efforts, from the structural fire response perspective. Given the potential effect on fire insurance rates, the PPC could also be a factor considered by some businesses and developers to determine where to make investments.

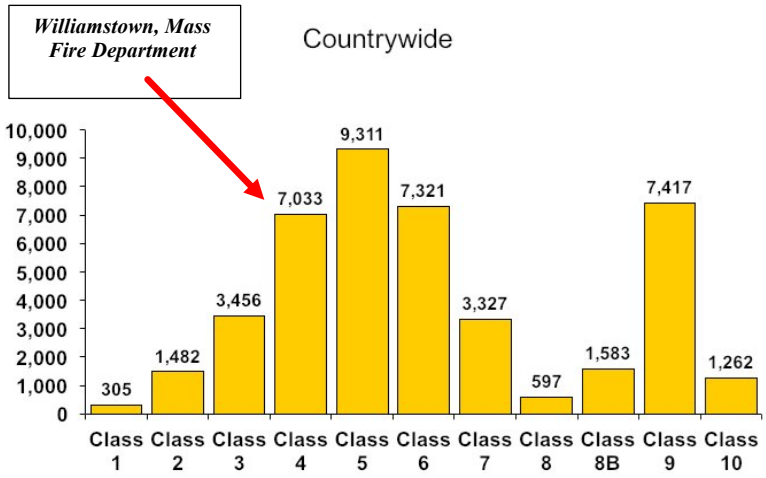


Figure 8
ISO Grading Chart USA
2017

While ISO's primary focus is to measure the effectiveness of a community's ability to respond to structure fires for insurance purposes, there are many derivative benefits. These include providing a statistically-proven method of measuring performance; a methodology that can help as part of planning, budgeting for and making improvements; a tool that can be used to further the concept of community resilience; and a metric that can help encourage investment in a community. Among the largest and most prominent buildings in Williamstown are the buildings on the campus of Williams College. Williams College is private, residential, and liberal arts, with graduate programs in the history of art and in development economics. The undergraduate enrollment is approximately 2,000 students. The student-faculty ratio is 7:1.

Further information on the ISO rating system is located at: https://www.isomitigation.com/ppc/fsrs/.

WILLIAMSTOWN FIRE DISTRICT

Figure 9
WFD Patch

The Williamstown Fire District is currently staffed with one (1) Fire Chief, four (4) paid on-call Assistant Fire Chiefs, and seventeen (17) on-call Firefighters. This brings the total of Williamstown Fire Department personnel to 22 members. The Williamstown Fire Department Fire Chief is the only fulltime employee. Within the ranks of call fire departments often the case is, only about one-half to one-quarter of these personnel are truly active and respond. Willi Williamstown is not immune to this fire service wide challenge.

In Addition, it should be expected that the roster of members continually fluctuates due to hirings and resignations. There is a growing nationwide gap in a community's ability to recruit and retain paid-on-call firefighters. Much of the gap is due to the heavy demands placed on on-call firefighters to balance their full-time career, family, and the rigorous and time-consuming requirements for certification as a firefighter. This growing dilemma is expected to continue leaving communities without the ability to provide adequate fire and emergency medical services to the community. This is quantified by the statistics analyzed and the results of the current low response to fire and EMS emergencies. This area of concern is discussed in detail later in this report.

For the year ending July 2018, Williamstown Fire District Responded to 196 calls for service. There were 3 classified structure fires and 13 other types of fires during the year. The largest category of calls was related to fire alarms to which the Fire District responded to approximately 99 calls. Given the number of facilities at Williams College and other businesses, this number of calls for fire alarms are consistent with what would be expected in a community of this size. To the Fire Districts credit and their strong working relationship with the college; a procedure has been put in place to address fire alarm activations that originated from the college campus, which reduces the number of responses from Williamstown Fire District after the fire alarm has been determined to be accidental or from a system's malfunction.

The three-year period from 2016 to 2018 reveals an average of 209 calls for service per year. Upon further evaluation of false alarm responses there were 230 unintentional fire alarms and 116 fire alarm system malfunctions. The Fire District operations budget for June 30, 2018 was approximately $492,792.70.

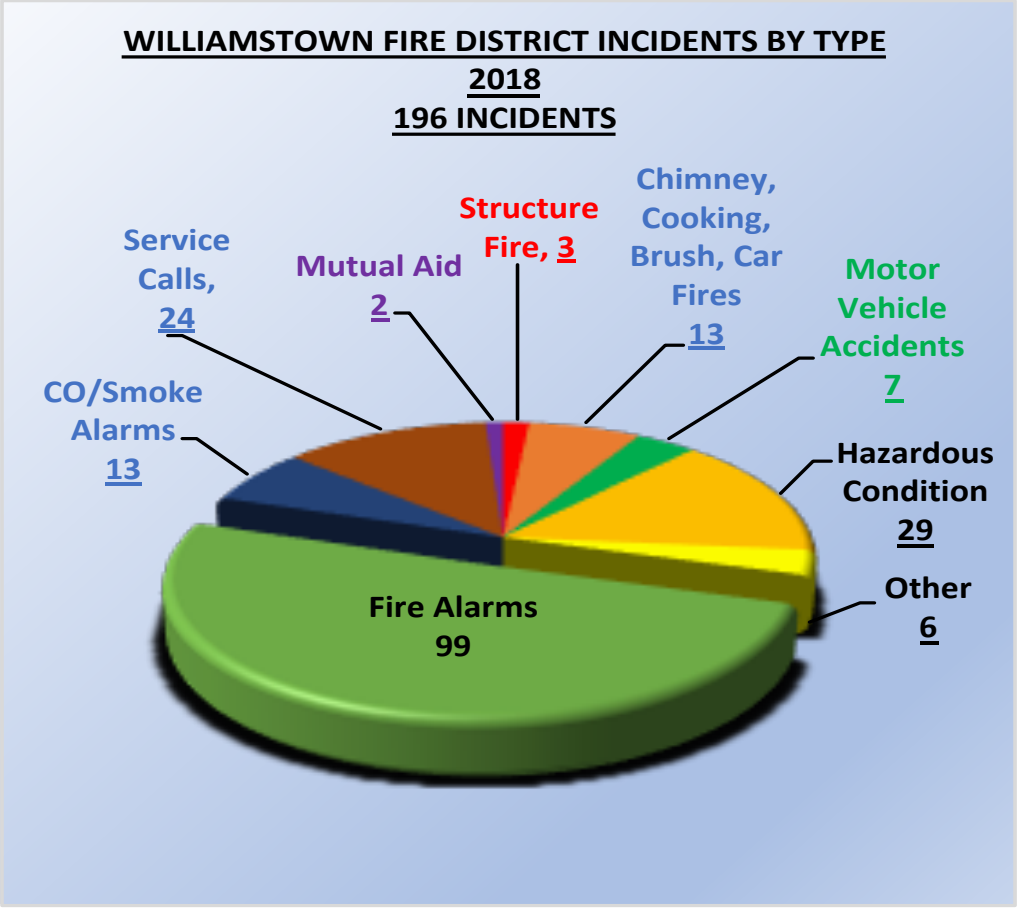


Figure 10
Williamstown Incidents by Type 2018

OBSERVATIONS

The MRI project team conducted a basic fire safety risk assessment of the Town of Williamstown. The greatest fire safety concern is the potential life loss in fires that occur in non-sprinklered, single and multi-family residential dwellings during sleeping hours, which is consistent with national trends. These fires are fueled by new "lightweight" construction and more flammable home contents. In a series of studies conducted by Underwriters Laboratories (UL) researchers suggested that the time to escape a house fire has dwindled from about 17 minutes, 20 years ago, to 3 to 5 minutes today. This poses a severe risk not only to occupants but also to firefighters as they now have less time to do their job and save residents' lives and property.

Although the Town is a community that was at one time rural in nature it is transitioning into more of a suburban nature. Williamstown provides an interesting mix of challenges and hazards that must be protected by its Fire Department. There are 2,192 total housing units, of which, 1,880 are single family detached, 95 two family, 26 three family units, and 20 parcels containing four or more units. There are 289 seasonal or second homes in the community. There is also 114

commercial parcels and 15 industrial parcels. Although it remains primarily residential in nature, it does have an increasing number of other developments within its borders as well as, the Williams College Campus. Williamstown also has limited light industrial operations, railroad transportation, that the Fire Department is responsible for protecting.

Figure 11
Main Street
Williamstown, MA

Figure 12
Mount Greylock

Figure 13
Hoosac Water Treatment Plant

Figure 14
Train Route Target Hazard

Among the largest and most prominent buildings in Williamstown are the buildings on the campus of Williams College. Williams College is a is a private, residential, and liberal arts college, with graduate programs in the history of art and in development economics. The undergraduate enrollment is approximately 2,000 students. There are dormitories of various size and capacity. These include 40 student residences and 71 rental units. In addition, there are a variety of science labs and commercial buildings that support the institution.

The College also has historic and cultural buildings of various architectural design.

Figure 15
Currier Hall (Dorm)

Figure 16
Franklin Carter House (Dorm)

Figure 17
Agard House (Dorm)

Figure 18
Williams College
Museum of Art

Figure 19
Williams College Campus

Figure 20
Williams College
Main and Spring Street

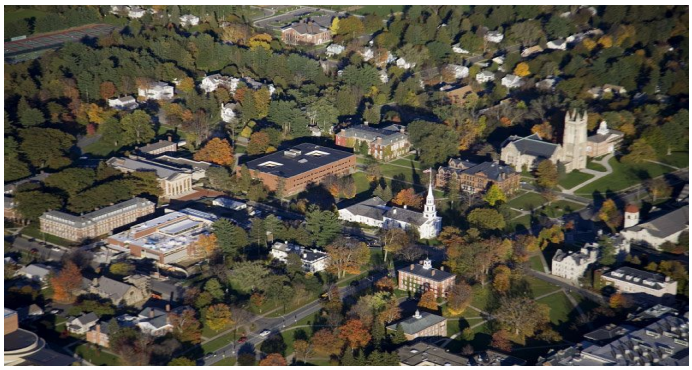


Figure 21
Williams College Aerial view

Figure 22
Thompson Memorial Chapel

The campus also houses Science Labs (North and South) and Research Buildings which add to additional target hazards.

Figure 23
78.000 Square Foot Science Building 2018

Williamstown also has a number of hotels and motels of various age and style. Modern hotels in Williamstown are sprinkled and meet all National Fire Protection Association (NFPA) Life Safety Standards.

Figure 24
Fairfield Inn and Suites

Figure 25
Williams Inn

Figure 26
1896 House Country Inn

Figure 27
Ide/Phillips House Williamstown, MA

Automatic sprinklers are highly effective elements of total system designs for fire protection in buildings. They save lives and property, producing large reductions in the number of deaths per thousand fires, and average direct property damage per fire, especially in the likelihood of a fire with large loss of life or large property loss. They do so, much quicker, and often more effectively and with less damage than firefighting operations. No fire safety improvement strategy has as much documented life safety effectiveness as fire sprinklers because they actually extinguish the fire, or, at a minimum holds it in check and prevents flashover, until the arrival of the fire department. The Williamstown Fire District should promote and takes upon every opportunity to advocate for the installation of fire sprinklers in both residential and commercial structures.

Studies from 2007 to 2011 of fires in all types of structures, show that when sprinklers were present in the fire area of a fire that was large enough to activate the sprinklers in a building not under construction, sprinklers operated 91% of the time[8]. When they operated, they were effective 96% of the time, resulting in a combined performance of operating effectively in 87% of reported fires where sprinklers were present in the fire area and fire was large enough to activate sprinklers[9]. **In homes (including apartments), wet-pipe sprinklers operated effectively 92% of the time. When wet-pipe sprinklers were present in the fire area in homes that were not under construction, the fire death rate per 1,000 reported structure fires was lower by 82%, and the rate of property damage per reported home structure fire was lower by 68%[10].** In all structures, not just *h*omes, when sprinklers of any type failed to operate, the reason most often given (64% of failures) was due to shutoff of the system before fire began[11].

[8] *U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.*

[9] *U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.*

[10] *U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.*

[11] *U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.*

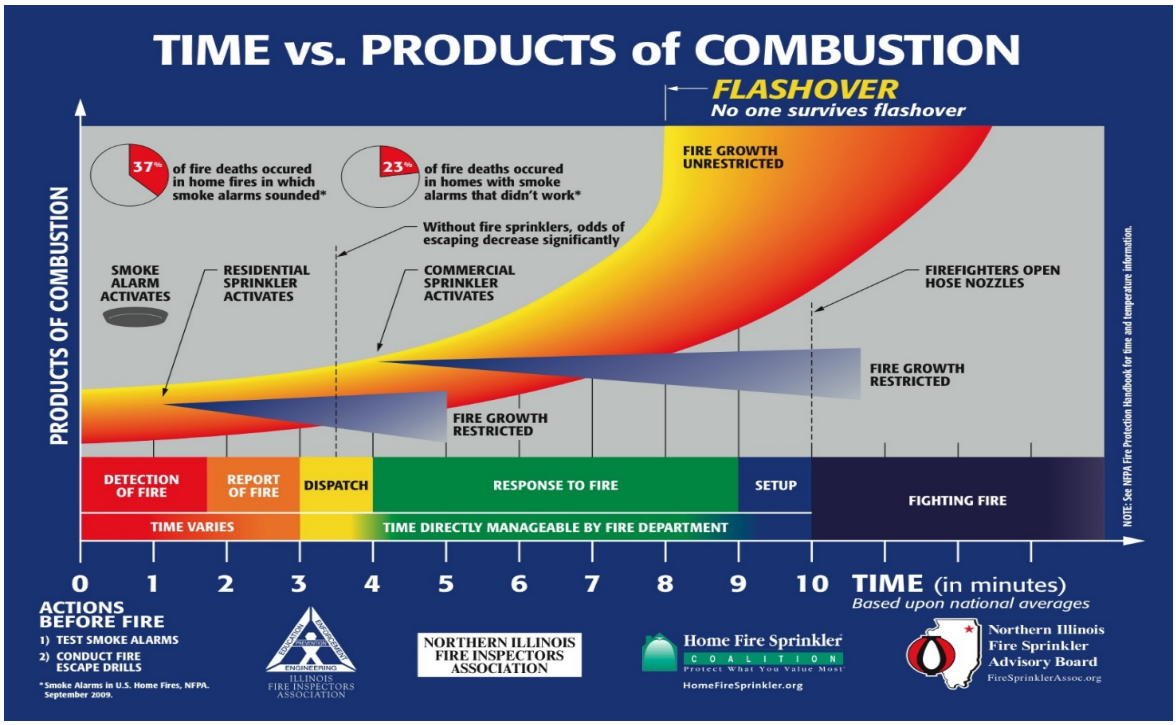


Figure *28*
Time versus products of combustion curve showing activation times and effectiveness of residential sprinklers (approximately 1 minute), commercial sprinklers (4 minutes), flashover (8 to 10 minutes) and firefighters applying first water to the fire after notification, dispatch, response and set up (10 minutes).
Image credit: Northern Illinois Fire Sprinkler Advisory Board http://firesprinklerassoc.org/images/newflashoverchart.jpg

Like most communities, Williamstown has various types of housing that is older, although still well maintained. Both single family residents and multi-unit apartment buildings can be found in Williamstown. Most of these older residential occupancies are wood frame houses. There are also renovated mill spaces into apartments available for rent in Williamstown.

Figure 29
Spring Meadow Apartments
Williamstown

Figure 30
Cable Mills Apartments Williamstown

There are a number of retirement, assisted living, and nursing homes in Williamstown. The Services include independent and assisted living services, personal care, crises intervention, and skilled nursing. The building facilities are equipped with both fire alarm and fire suppression systems. These systems greatly improve fire safety for both residents and staff, and significantly reduce the life safety risk during a fire. However, as demonstrated in the November 2017 fire in West Chester, PA, even complete fire suppression systems cannot eliminate the possibility of a serious fire 100%. This is particularly true if the sprinkler systems are not designed to protect non-living areas such as building attics. While the fire risk for a facility like this may be relatively low, the potential consequences should one occur, are high.

Figure 31
16 Water Street Williamstown
Taxpayer Business/Apartment

Figure 32
SweetWood Independent Living Community

Figure 33
Williamstown Common Nursing and Rehabilitation Center

Williamstown is served by an excellent water supply system. However, there are some areas that are not protected by the municipal water supply system. Being able to develop an adequate water supply for firefighting purposes is perhaps the most critical, non-safety aspect of firefighting operations. If an adequate water supply cannot be established quickly and maintained, effective firefighting operations will simply not be possible. Rural communities that do not have a municipal pressurized water supply must supply their needs from other sources. Sometimes static water sources (lakes, rivers, ponds, cisterns) are drafted out of manually or with dry hydrants, to achieve the needed water supply to fight a fire. In cases where static water sources are not readily available and often even if they are, fire departments must utilize water tankers/tenders to carry or shuttle the needed water supply from the source to the incident scene. In communities without staffed fire stations such as Williamstown, there is an inherent delay in the response to a building fire. This delay is due to the fire department members having to respond to the station to staff and respond with the apparatus. This inherent delay allows the fire to increase in size before the arrival of the fire department. This situation can exacerbate the need for an adequate and sustainable water supply.

As an alternative to extending the municipal water supply system to additional areas of the community, several Massachusetts communities that have developing areas that are not served by the municipal water supply system use automatic fire suppression systems, or, a water supply cistern to hold water necessary for fire suppression operations be installed in the development. The requirements for these systems are detailed in several NFPA standards. This is an important fire and life safety initiative for the rural areas of a community (figure 34).

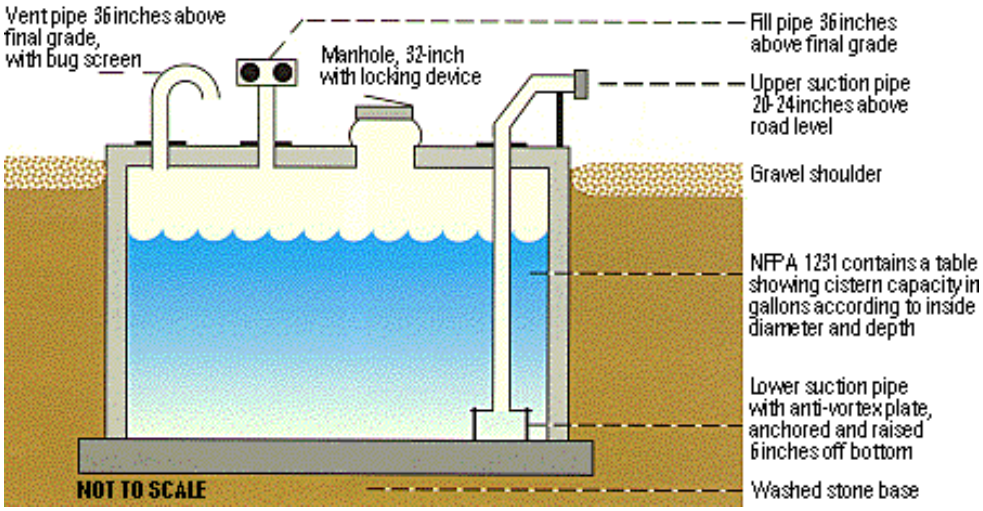


Figure 34
Cistern

The fire department should encourage the installation of residential sprinklers with developers/builders/owners and discuss the benefits of these systems. There are several publications that the fire department can use as resources to market the benefits of residential

fire suppression systems including the National Fire Protection Association (NFPA), which has developed the standards for their design and installation.

The fire service further assesses the relative risk of properties based on a number of factors. Properties with high fire and life risk often require greater numbers of personnel and apparatus to effectively mitigate a fire emergency. Staffing and deployment decisions should be made with consideration of the level of risk within each area of a community.

Low Risk: Minor incidents involving small fires (fire flow less than 250 gallons per minute), single patient non-life-threatening medical incidents, minor rescues, small fuel spills, and small brush or outside fires.

Moderate Risk: Moderate risk incidents involving fires in single-family dwellings and equivalently sized commercial office properties (needed fire flow generally between 250 gallons per minute to 1,000 gallons per minute), life threatening medical emergencies, hazardous materials emergencies requiring specialized skills and equipment, technical rescues involving specialized skills and equipment, and larger brush and outside fires particularly if structures are exposed.

High Risk: High risk incidents involving fires in larger commercial properties with sustained attack (fire flows more than 1,000 gallons per minute), multiple patient medical incidents, major releases of hazardous materials, and high-risk technical rescues.

The potential emergency risks present in the Town of Williamstown are not limited to just residential or commercial structural fire incidents. Weather, Transportation, Hazardous Materials, and man-made disasters all add to the overall risk in the community.

The weather a community experiences can impact the fire department's ability to respond. Snow, ice, and other conditions can slow response. Major storms can create emergency situations that can overwhelm local emergency response forces. The Williamstown area enjoys a moderate climate typical of the New England region. Thunderstorms, strong wind storms, and significant rain events happen several times in an average year. Tropical storms and hurricanes also occasionally impact the area. Snowfall is experienced annually and occasionally in amounts that paralyzes the region. Although rare, tornadoes have occasionally touched down in Massachusetts.

Overall it is the project team's assessment that the town's current relative **basic** fire and life risk translates to (Figure 35):

OCCUPANCY DESCRIPTION	RISK
Single Family Residential (unsprinkled)	*Moderate*
Multi-Family Residential (sprinkled)	*Moderate*
Multi-Family Residential (unsprinkled)	*High*
Institutional-Educational	*High*
Commercial (Retail and Office) (sprinkled)	*Moderate*
Commercial (Retail and Office) (unsprinkled))	*High*
Industrial	*Moderate/High*
Open Space	*Low*
Transportation Incident	*Moderate*
Research Library Incident	*Moderate*

Figure 35
Town of Williamstown Fire and Life Safety Risk Levels.

The above information is intended to provide a community "snapshot" of Williamstown. It is not intended to be all-inclusive or comprehensive. For the Fire District and first responders it serves to put the town, and its associated hazards and risks, into some context as the Fire Department works to carry out the recommendations of this study. A moderate to high risk designation should not infer that the risks are eminent safety concerns. The risk designations present themselves based on a number of factors including what is the potential risk to people based on the factors specific to the target hazard in question.

Ultimately, a comprehensive risk assessment should:

- Clearly identify and classify the Town's current risks,
- Place the risks in context with the Fire Department's current operational capabilities and procedures,
- Reflect what the Prudential Committee and Select Board feels is an acceptable level of risk for the Town of Williamstown.

Looking ahead, the Town of Williamstown will continue to experience an increase in growth and development, although probably not high levels. While this development will have a definitive impact on the Town's emergency services, the exact amount is difficult to quantitatively and accurately predict. Increased development of any type will mean an increase in the number of people living, working, and traveling within the area. Each of these will reasonably be expected to result in an increased number of requests for services from the Williamstown Fire District. They can also impact response times through increased traffic and congestion.

It is likely, the most significant increase in requests for emergency services will be EMS related. More people simply increase the number of medical emergencies that occur. It would not be unreasonable to expect that the increase in EMS incidents would be proportional to the increase in population; however, that is not always the case. Although a number of factors can ultimately impact the requests for service, such as ages or socio-economic status of new residents, or an aging population, it could reasonably be anticipated that an increase in population, along with potential increases in employment from any significant commercial development, would translate into an increase in emergency medical incidents. While the Williamstown Fire District does not currently provide emergency medical transport or Emergency Medical Services (EMS), MRI recommends the District include emergency medical services training in their discussion when conducting strategic planning for the future.

RECOMMENDATIONS

II-1 MRI recommends that the Williamstown Fire District develop and implement an internal risk management plan following the recommendations of NFPA 1500, Standard for a Fire Department Occupational Safety and Health Program, and, NFPA 1250, Recommended Practice in Fire and Emergency Services Organization Risk Management.

II-2 The Fire District has a moderate to high level of risk based on the cursory review and assessment of the community. MRI recommends the Fire District focus its future planning goals towards that risk and develop staffing, facility, and apparatus needs based on that assessment. To further define and identify definitive risks within the community the District will need to conduct a comprehensive risk assessment and incorporate the findings into a strategic plan for the future.

II-3 MRI recommends that the Williamstown Fire District should develop a compelling public education program that includes educating and discussing the benefits of installing residential fire sprinklers in new one- and two-family dwellings.

II-4 MRI recommends The Town of Williamstown should work with Developers/Builders/Owners to consider the installation of automatic fire suppression systems, or, fire water supply cisterns in new developments or in areas of the Town that are not covered by the municipal water supply system.

PRUDENTIAL COMMITTEE DEFINED

For the benefit of the general public who may review this report, MRI has included a short segment on the governance of the Williamstown Fire District. The Williamstown Fire District was first named and organized in 1912 after an iteration of the Williamstown Volunteer Fire Company (later named the Gale Hose Company) that was the first organized fire company in the Town of Williamstown in 1895.

Title VII Chapter 48: FIRES; FIRE DEPARTMENTS AND FIRE DISTRICTS of the General Laws of the Commonwealth of Massachusetts provides the authority and governance structure of Fire Districts. Section 60 to 80 of Chapter 48 provides specific details on requirements and authority of Fire Districts. Members of the Fire District Governing Body known as the Prudential Committee will increase from three (3) to five (5) members pending approval of the legislature and then through a special election.

The district was established pursuant to a special act of the Legislature. The District is an independent entity not subject to the authority of the Select Board or the Town. It conducts its own annual district meeting at which appropriations and other matters are approved.

Although many of its duties established in the special legislative act seem dated, the Committee's major responsibility is to expend the money the district meeting appropriates through a treasurer previously elected, and now appointed by the District.

Section 73 of G.L. c. 48 establishes a limited relationship between the Town and the District. Under s.73, the District clerk will periodically certify to the Town assessors the amount of taxes necessary to be raised, and in turn, the assessors presumably add this total to the Town tax bills.

Section 73 provides that: the assessors, treasurer and collector of a town in which such district is organized shall have the same powers and perform the same duties relative to the assessment and collection of the money voted by the Fire District as they have exercised relative to the assessment, collection and abatement of town taxes. In effect, these town officers act as the agent of the District in the collection and assessment of taxes.

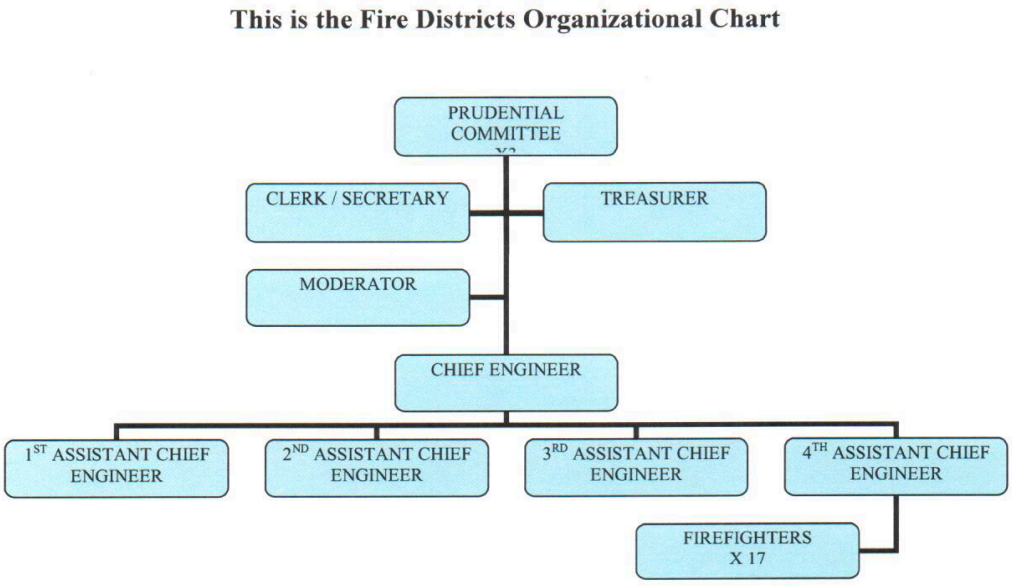


Figure 36
Williamstown, MA Fire District
Organizational Chart

III. STAKEHOLDER COMMUNICATIONS AND DIALOUGE

Critical to future initiatives taken on by the Fire District is the ability to engage in effective communications and dialog with stakeholders in any organization, but especially for public safety agencies it is essential. During interviews MRI noted that a cordial and respectful relationship exists between the Williamstown Fire District and the Town of Williamstown. In an interview with Town Manager Jason Hoch, the project team was informed that the relationship between the Town and Fire District has always been one of cooperation with each other. It was clear that the Town is willing to assist the Fire District to assure that effective fire services are delivered to the Citizens. Mr. Hoch also informed the project team that the Town has the ability to assist the Fire District with some of their administrative tasks such as finance and building services, if the district expressed the need. Conversations with the Prudential Committee also showed a cooperative relationship with the Town. Both groups also suggested that they could do better in communicating their specific needs and initiatives to each other.

Having been recognized as a Fire District under Massachusetts Law, the Fire District is granted powers to raise and appropriate money for fire protection services as well as act as the Governing Body over the Fire District. When Fire Districts are named the Governing Body within a town or municipality it is sometimes perceived that their autonomy seperates them from the municipality. When this could lead to miscommunications between the Fire District and Town

resulting in communication between them to wane. While the project team did not observe this during its visit, this serves as a reminder to the Town and Fire District to engage in continual efforts to communicate and provide updates on ongoing inititatives and activities.

MRI conducted an interview with the Police Chief and his command staff. The Chief described the Fire District's work in the community as "worth their weight in gold." The working relationship between the two agencies is cooperative and professional. When asked if there were any challenges between the agencies the Police Chief acknowledged that one of the challenges between many public safety agencies is understanding each others mission and understanding how each entity operates. An example is a car accident. The goal of the Police Department is to treat the injured, clear the roadway, and investigate the accident. Conversely, the goal of the Fire Department is to treat the injured, secure any fire or spill hazards, and protect the crews working at the scene by the placement of apparatus between firefighters and moving traffic. The two agencies' operations can conflict with each others attempt to mitigate the emergency. Without an Incident Scene Protocol developed jointly between the Fire Department and Police Department there will be continued challenges in managing accident and incident scenes.

Another area that challenges each agency is dispatch communications. Dispatchers are responsible for both police and fire communications and often need to multitask when both agencies are working incidents at the same time. Having a clear understanding of the challenges the dispatchers work with is an important part of collaboration between both agencies. The Police Chief also suggested that the creation of incident specific "run" cards which detail what apparatus should respond to certain incidents would assist Dispatchers. MRI recommends that both public safety agencies develop an orientation and training program for all personnel relative to the operation of the dispatch center to gain a better understanding of how the dispatch center operates. Frequent dialog between the Police Chief and Fire Chief would help to alleviate concerns between the agencies. Monthly or Quarterly meetings would allow the ability to develop effective communication protocols for each agency.

MRI recommends that both the Select Board and Williamstown Fire District broaden their knowledge of each others short and long term goals and planning efforts for the Town and Fire District. This recommendation in no part suggests that anything other than a cooperative relationship is present, but serves as a reminder for the need to continually communicate with each others status on projects or budget planning. This would best be accomplished by scheduling quarterly or semi-annual workshops to exchange information. In addition, if members of the Select Board have not toured the fire station facilities, a tour should be arranged, to gain a first hand perspective of the condition and status of this facility. This will provide a stronger understanding of current activities within the fire department and what is needed by the district to meet the mission of the Fire Department. In turn, the Williamstown Fire District leadership team and members should focus efforts on building a stronger working relationship with the Select Board, Finance Committee, and Town Manager in order that everyone remains informed

on current and future operational needs. This is most often accomplished by educating the Select Board on the Department's mission, goals, and objectives.

During one of MRI's interviews, post site visit, one suggestion from a person with public relations and a public information background was the need for the Fire Department to develop a strong and continual marketing plan in order to introduce the needs of the organization to the taxpayers of the Town. Meetings with local groups, organizations, stakeholders, community leaders, state and federal representatives, visibility at local community events, tours of the fire station and apparatus, and inclusion of representatives of key organizations in planning efforts were also suggestions made which would assist with the Districts future plans. MRI recommends that the Williamstown Fire Department seek out marketing and public relations volunteers to assist with the development of any presentations for infrastructure, apparatus, equipment or other capital projects.

IV. PRESENT AND FUTURE NEEDS FACING THE WILLIAMSTOWN FIRE DISTRICT

The community and the Governing Body of the Williamstown Fire District ultimately determines the level of emergency service delivery that is desired. This is often accomplished through the efforts of the Fire Chief and Prudential Committee expressing their needs, and in turn the taxpayers express their expectations during public meetings and also through the approval of the Districts operating budget. A review of the service levels provided by the Williamstown Fire Department revealed that the residents of the Town of Williamstown expect an initial timely response of fire suppression and rescue resources on a 24/7 basis.

A balance of effective and efficient emergency services delivery, and the need to maintain a fiscally responsible Fire District tax rate for the citizens is often the primary driving force in the delivery of emergency services. The basic tenant of emergency service in Williamstown includes the provisions of basic fire protection, fire suppression, and rescue services. Emergency Medical Service (EMS) including Basic Life Support (BLS) and Advanced Life Support (ALS) care is provided through a third-party service, Northern Berkshire EMS. Northern Berkshire EMS has a satellite location behind the Williamstown Fire Station on Water Street. The Williamstown Fire Department and Northern Berkshire Ambulance have a strong working relationship which serves the Town of Williamstown effectively.

Additionally, the Williamstown Fire Department provides basic rescue services, including vehicle extrication, water rescue, and hazardous materials response. On occasion if requested the Williamstown Fire Department will assist Berkshire EMS.

ORGANIZATIONAL STRUCTURE

The structure of any organization or entity, whether public or private, establishes and illustrates the important hierarchical relationships necessary between various personnel and supervisors/subordinates within the organization that allow it to function properly, operate effectively, and efficiently in its daily operations or the pursuit of its mission. Critical to the organizational structure is the leadership team that moves the organization forward. Currently the leadership team of fire officers of the Williamstown Fire Department bring forth a significant amount of service time and dedication to the organization. The fire officers of the Williamstown Fire Department have service time which ranges from 28 years to 40+ years. This is a commendable service history for an organization of this size.

However, with that amount of experience is the observation that these fire officers are all within a few years of retiring from the Williamstown Fire Department due to age. This will certainly leave a leadership gap that should be addressed now rather than after the retirement of these members. Some of the younger members of the organization expressed concern with this gap not only in leadership, but also in fireground experience. MRI noted that there was no officer ranking below the Assistant Fire Chiefs. Having a rank structure which allows for movement within the organization with increasing responsibilities and which provides a succession ranking should someone leave the organization, is critical in maintaining the chain of command. The Williamstown Fire District must prepare now to remain consistent in its leadership team.

The Williamstown Fire District has served the community with distinction over the decades. They have been able to meet the needs of the town given the resources and spirit of volunteerism from their members. They have also contributed greatly through their regional partnership as a member of the Commonwealth of Massachusetts Region 4, Fire District 12 mutual aid system. These Statewide Fire Districts are established by Fire Departments and local governmental entities that have entered into an agreement to work together for the provision of fire, EMS, and related services. Districts are groups of agencies within a geographical area working together to provide mutual assistance to one another on a routine basis. The agencies within a District share a common Mutual Aid Control Center for the coordination of Mutual Aid resources in that geographic area. A District Coordinator is appointed for each District and is responsible for maintaining a current listing of available fire service resources within their respective District.

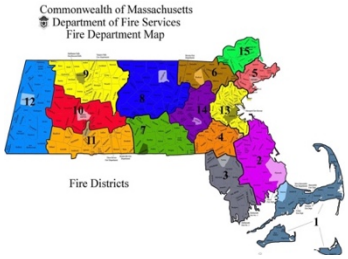


Figure 37
Massachusetts
Fire District Map

Common within fire service organizations and over time the organization develops its functionality through its perception of its ingrained traditional mission. It is a normal sense of one's duty, responsibility, and service, that provides the hallmark for fire and emergency services, and drives a sense of community pride and involvement, both proud traditions. However, because of the changing dynamics of today's fire service, organizations are looking

to explore various alternatives to the traditional model of fire service delivery. These alternatives include broader sharing of resources through automatic mutual aid agreements, establishing regional partnerships in applying for federal grant funding, and developing economies of scale, through shared purchasing initiatives. In order to meet its organizational goals, there are three fundamental areas of focus that the Williamstown Fire District needs to channel in order to be successful. Those areas include personnel, recruitment and retention of on-call personnel, facilities, and apparatus and equipment. The Williamstown Fire District should participate in discussions and initiatives that will assist them to accomplish these goals both locally and regionally.

Recruitment and retention will need to be a priority now and in the future. The decline in the number of on call firefighters is likely to continue and may change the operational structure currently in place at the Williamstown Fire Department. Like many communities across the United States, the growth in population, an increase in the aging population requiring emergency medical services, and a decline in the recruitment, retention, and availability of paid on-call first responders is not sustainable. The once always available, effective group of paid-on-call first responders has been in a steady decline in recent years. Fulltime work mandates, family commitments, stringent training requirements and certifications, and other competing interests has diminished the availability of responders that is affecting a timely response to emergencies. Williamstown is not immune to this dilemma and is part of a nationwide problem in the part-time fire service.

Figure 38
Recruitment Poster

The Williamstown Fire District like many smaller Town Fire Districts is at a crossroads. For decades the Williamstown Fire Department has used the dedication and service of volunteers and as time progressed, paid-on-call personnel to meet the needs of the community. Many of the day to day activities (emergency responses, fire inspections, permits, reports, checking apparatus, cleaning the station and equipment) required of the Fire District would be completed when personnel had time to complete them. Volunteer and paid-on-call personnel often worked in town and could leave their place of employment to complete Fire Department tasks or respond to emergencies. While this still exists today in Williamstown for a small group of four Firefighters who work for Williams College, the length of time this benefit will be available is unknown given the potential for all of those employees to retire in the near future. Today, the expanded role that the Fire Department plays in the community and with paid-on-call members working outside of the community, a shortage of available responders has been increasing. Consequently, it is not unusual to have a limited number of first responders in the Town of Williamstown during the weekday hours. This shortage of available first responders is the most prominent issue that will face the Fire District in the coming years.

The important role that paid-on-call members contribute to the Williamstown Fire Department will not change, however as the number of available personnel are unable to respond increases a contingency plan must be in place to address these shortages to assure emergency services are met for the community. A number of fire departments throughout New England are adapting to this growing problem by adding fulltime firefighters or per-diem firefighter coverage during the daytime to fill the gaps from lower numbers of call firefighters. This model of staffing lessens the amount of time needed to respond to calls, assures a response during the day when call members are out of town, allows paid on-call members to focus their availability to respond nights and weekends, and assures that the community receives a consistent response force to emergencies.

Further contributing to the current staffing issue is the difficulty in recruiting and retaining skilled, and certified fire and emergency medical responders. This is a nationwide issue that has been evolving and recognized as an increasing problem as far back as 2004. The Department is under an increasing level of scrutiny based on the ability of the Department to meet its stated mission.

It is clear that the Department will be challenged meeting the expectations of the community, and if unchecked and in fact not quickly reversed, the Department will soon cease to be a viable emergency response organization providing consistent and equal levels of service.

The Town of Williamstown has expressed a desire to retain a strong call firefighting force and MRI concurs, however it may become necessary to introduce a different staffing model which will provide consistency in service delivered to the public. This will take a commitment from the Town, community, and strong leadership in the Fire District.

The National Volunteer Fire Council (NVFC) www.nvfc.org issued a fact sheet https://www.nvfc.org/wp-content/uploads/2019/04/NVFC-Fact-Sheet-2019.pdf that provides the current status of today's Volunteer Firefighter statistics.

Among other things, the fact sheet highlights the fact that the ranks of volunteer/call firefighters nationwide are declining, due at least in part, to an increasing demand for services. There are also various other factors that are prevalent in the reduction in the number of volunteer and on-call firefighters in communities such as Williamstown. Among them is that the demographics of many communities today do not support a sufficient number of the type of people who are attracted to the fire service in the 21st century; someone with time to dedicate to public service or a young person who wants to make a career of it. MRI has found that on average, for every five on-call firefighters recruited, two will remain active after a period of 48 months has elapsed.

For both career and volunteer fire departments, the nature of their service is changing dramatically from a fire-based service to a medical-based service.[12] As seen in Figure 39, the total number of fire department emergency responses, has increased to more than 31 million from its 1980s figure of just fewer than 11 million. This is the case in spite of the fact that the actual number of fires and mutual-aid responses has decreased from 3,262,000 in 1980 to 2,538,000 by 2013.

However, nationwide the number of medical calls has dramatically increased from just over five million in 1980 to more than 21 million by 2013. As a result, medical emergencies now account for 68 percent of emergencies that fire departments respond to and now are a fire department's primary responsibility. While the Williamstown Fire District currently does not provide Emergency Medical Services (EMS) to the community they should include any future strategic planning to at a minimum considering including EMS Certification at the First Responder or EMT Level as part of a position description for Firefighter.

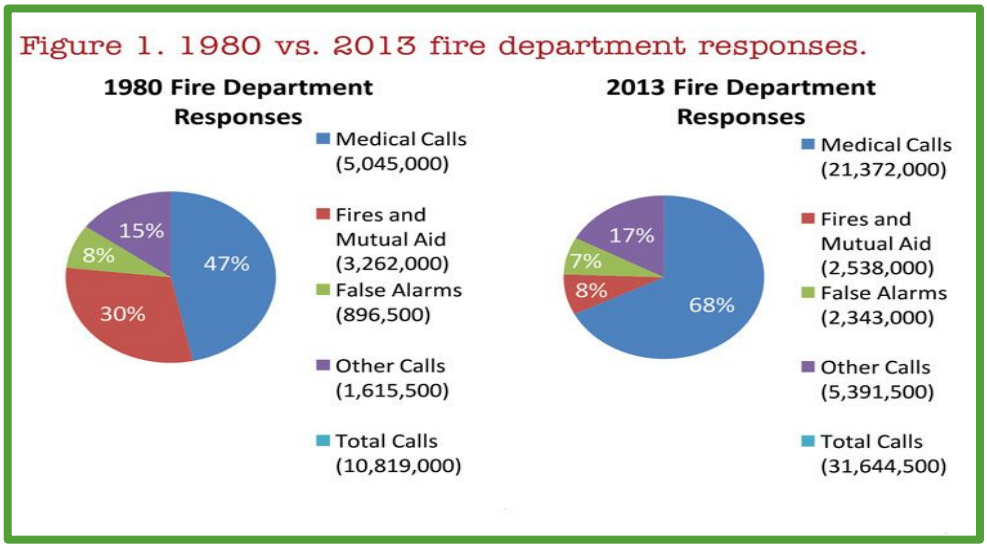


Figure 39
Fire Department Responses 1980 vs 2013

The reasons for this shift in job responsibility are numerous. First, fires are becoming much less common. Second, over the past 50 years, fire departments have gradually been expanding their role as medical providers. This evolution began largely as a result of the 1966 paper entitled "Accidental Death and Disability: The Neglected Disease of Modern Society," which highlights the fact that accidents, especially automobile accidents, are the leading cause of death among

[12] *SalterMitchell Inc. (2015) "Volunteer Firefighter Recruitment and Retention Formative Research Results" prepared for the National Volunteer Fire Council.*

persons under the age of 38. This report highlights the dismal state of emergency first aid and recommends training firefighters in emergency medical services.

Presently, the Williamstown Fire Department has approximately twenty-two (22) on-call members on its roster. On its own, this number would appear sufficient to provide an adequate level of emergency services to the Town. However, in almost any call/volunteer emergency service organization, there are going to be a percentage of members whose names still appear on the "active" roster, yet they no longer are, or are minimally so, for a variety of reasons. The fact is that most members of the Department have a primary job, other than the Fire Department, that probably limits their availability to respond, mostly during normal business hours, and the current personnel picture becomes much more of a concern.

Based upon this analysis, only a small number of the on-call personnel are available to respond to incidents during daytime working hours on a regular basis.

Even if a change in the staffing model were to come about, there still also needs to be a proactive effort towards recruitment and retention of on-call personnel. Although Williamstown is far from alone in dealing with this reduction in on-call staff, it is essential that addressing this situation is clearly identified as a top priority and adopted as a shared mission of the entire department. This goal, along with recommendations for future staffing will become the start of long-term sustainment of the Williamstown Fire District. MRI clearly believes and supports that the Williamstown Fire District will always be predominantly paid on-call firefighters, supplemented by a small group of per-diem personnel. The number and type of employment (fulltime or per-diem) is a decision made at the Fire District level.

The Williamstown Fire District conducts passive recruiting efforts; however, they do not have a formal recruitment and retention program for paid on-call fire and EMS personnel. Most recruitment is by word of mouth or are "walk-ins". There is limited use of the Department's website or social networking pages on the Town or Fire Department's websites or social network pages. Recruitment advertising should be frequently displayed very prominently on the websites of call/volunteer departments.

Figure 40
Fire Department Recruitment Poster

Recruitment efforts should be an ongoing activity within the Williamstown Fire Department. The use of internal fire officers and personnel as a "recruitment team" should be considered. It fosters a sense of participation in making the organization successful and assures that the recruitment efforts obtain the attention needed to meet staffing goals.

Even if the recruitment obstacles can be overcome, hurdles remain before a new member is a productive member of the Department. Once an individual becomes interested in becoming an

on-call firefighter, they must achieve a level of ever-increasing specialized skills that is time-consuming. Often exit interviews reveal that the training commitment alone is daunting and one of the primary reasons that on-call personnel resign. It is also costly to the Department. To become a certified firefighter takes several hundred hours. Once certified, there are the dozens of hours training annually spent maintaining firefighter skills and certifications. Unfortunately, in 2018, the average citizen does not want to spend a great deal of personal time dedicated to the fire and emergency services, especially when family commitments take priority.
Other reasons for difficulty in recruiting and retaining members include:

- An overall reduction in leisure time
- Employment obligations and the common need to maintain more than one job
- The virtual elimination of employers understanding and flexibility relating to this form of community service
- Increased family demands
- Generational differences
- Increasing training requirements
- The cost of housing in many affluent communities
- Organizational culture
- Internal respect
- Recognition of personnel
- Internal communication
- Department leadership styles and commitment

March 2015 Report – Salter-Mitchell Inc
Volunteer Firefighter Recruitment and Retention
Formative Research Results

The number of volunteer firefighters and emergency responders in the United States is declining at approximately 12 percent in just the past three decades – leaving nearly half of U.S. communities at increased risk during emergencies.[13] This declining number of volunteers coincides with an increased call volume that has tripled in that time and an increased public expectation for more and better-quality fire and rescue services. The interest in volunteer firefighter opportunities has declined considerably.

It is easy to believe that increasing the number of on-call firefighters, can be a cure-all to resolve staffing, and thus response problems, however in 2019, it is clear to MRI that the current staffing model in place must be changed to a model which assures consistent and equal services. Regardless of the need to consider various staffing models, the on-call firefighters within the

[13] *SalterMitchell Inc. (2015) "Volunteer Firefighter Recruitment and Retention Formative Research Results" prepared for the National Volunteer Fire Council.*

Town of Williamstown are the foundation of and will remain the primary response force into the future. The future staffing model may look different but the long history of dedication and public service by paid on-call members to the Town of Williamstown is a value not to be overlooked by those changes. A paid-on-call response component should always be considered as part of the Williamstown Fire District response force.

There is a grant from the federal government titled the **Staffing for Fire and Emergency Response (SAFER)** grant program (https://www.fema.gov/staffing-adequate-fire-emergency-response-grants). This grant program provides funding for staffing and also to assist in the recruitment and retainment of volunteer and on-call firefighters. It provides competitively awarded funds to municipalities to recruit and maintain on-call and volunteer firefighters. The grant funds pay for expenses, such as recruitment campaigns, tuition for college curriculums in fire science, EMT and paramedic training, health insurance for call members, physical fitness programs, uniforms, and various tax incentives offered to attract new candidates to join the Fire Department, and then stay for an extended period of time.

MRI recommends that the Williamstown Fire District should apply to secure a SAFER grant. This grant should note the staffing issue that currently exists and indicate that the grant would be an attempt to meet the NFPA 1720 fire response standard.

There are no easy or guaranteed solutions to the staffing needs of Williamstown and many other communities throughout the country. It is also important to stress that what may work in one community with regards to staffing and call/volunteer recruitment and retention may not work in another community. Each community must individually determine what programs, incentives, and motivations will work, and be most effective in their community.

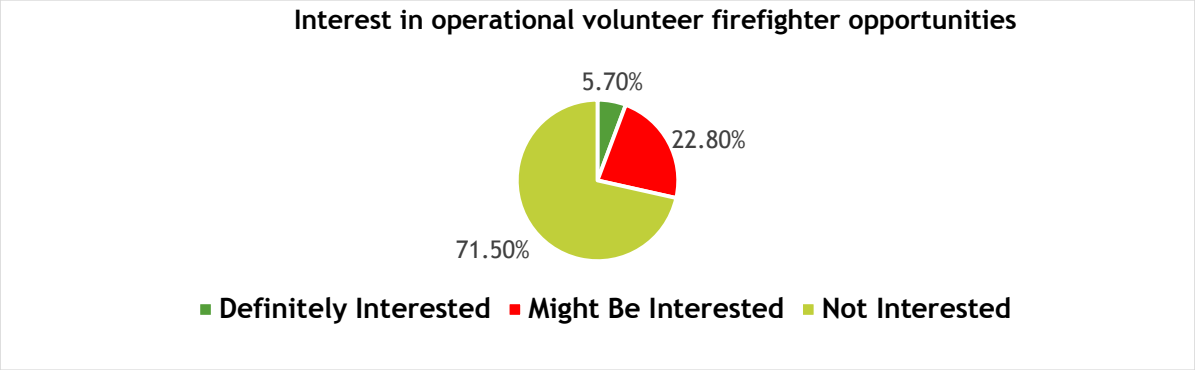


Figure 41
Interest in becoming a Call Firefighter

MRI is confident that by proactively working on this issue now, the Town will avoid costly steps in the future. The project team believes a continued decline in personnel available to provide coverage for fire emergencies during the day and evening hours will continue to be a challenge, and recommends the Town consider a transition into a staffing model which would meet current and future needs. The staffing model to consider should consist of either fulltime Firefighter or part-time assigned per-diem Firefighter. The specific classification of employee (fulltime or per diem) is a decision that should be determined by the recommendation of the Fire Chief and Prudential Committee and may require voter approval. MRI also recommends that paid on-call personnel currently on the Williamstown Fire Department roster, who meet the qualifications of positions for fulltime or per diem positions, be given consideration first before offering positions outside of the organization.

MRI has created some staffing models for consideration. These staffing models would provide fulltime coverage or per diem coverage, supplemented by the paid-on-call firefighters. Paid on-call Firefighters would also continue to respond during daytime hours when available. These are some examples and would be dependent on available funding and could require implementation over different budgeting cycles:

1. Hire 2 part-time firefighter/EMTs (assigned shifts) or per-diem firefighter (open day shifts) to work Monday through Friday to provide fire coverage from 6 am to 4 pm. The call firefighters would continue to respond when available including nights and weekends.

2. Increase budget funding to provide on-call personnel standby coverage during weekday hours, weekends, special events, or during peak emergency call periods. This provides needed coverage while at the same time keeping personnel costs low, due to not having to include benefits cost such as medical and other typical benefits.

There are a number of various funding sources which could be investigated, to help offset the cost of building a career staff of personnel to meet emergency needs. These include:

- Operating Budget
- Tax Revenue
- SAFER GRANT
- Other State and Federal Grants

RECOMMENDATIONS

IV-1 The Fire District organizational rank structure utilizes Assistant Chief Engineers as part of the command staff of the Williamstown Fire Department. There are not any other officer ranks below that level, as detailed in the organizational chart. MRI recommends that a review of the current organizational rank structure of the Williamstown Fire Department be conducted in order to assess the need to add to the current rank structure within the Fire District by creating mid-level Company Fire Officer positions at the rank level of Captain and Lieutenant. The addition of these ranks will provide greater opportunities for individual growth within the organization, maintains an effective span of control throughout the organization, and provides an incentive and opportunity for individuals within the organization that desire to seek higher levels of responsibility through a company officer position. The addition of Company Fire Officer positions is also an excellent tool for recruitment and retention of personnel.

IV-2 MRI observed that within the group of the Assistant Fire Chief Engineers that there is a long history of service to the Williamstown Fire District and a majority of the Assistant Fire Chief Engineers will soon consider retiring from the Williamstown Fire District. The Assistant Fire Chief Engineer positions provide the Fire Chief with his leadership team in the operation of the Fire District. In interviews with firefighters it was identified as a concern for them also having a potential leadership gap in the near future. MRI recommends that the District develop an officer training program or sponsor individuals at the Massachusetts Fire Academy Fire Officer Courses for those who are interested in becoming a Fire Officer in the future. Concurrent with the development of interested personnel the Fire District should establish qualifications and job descriptions for the Fire Officer positions. This planning should also include succession planning for the Fire Chief's position.

IV-3 MRI recommends that the Prudential Committee and the Fire Chief consider the creation of daytime hourly positions for per diem Firefighters, or increase funding for on-call firefighters to provide standby coverage during weekdays and weekends in order to assure adequate response to emergencies is maintained. Initiation of this staffing alternative can be implemented over future budget cycles in order to reduce tax increases on Fire District taxpayers. This staffing change will assure the initial response to requests for emergency services is maintained into the future without changes to the current on-call staffing model in place. The staffing model change also prepares the Fire District to meet the community's expectations should recruitment and retention efforts decline.

IV-4 The Williamstown Fire District should apply for a federal SAFER grant for funding positions for per diem or paid on-call members, and for paid on-call recruitment and retention. This grant should be utilized to develop a comprehensive marketing program

to attract new members and provide incentives for the retention of those personnel currently in the Fire Department. The grant also may be used for equipment and personnel costs related to the hiring of new members.

IV-5 MRI recommends that the Police Chief and Fire Chief jointly develop a training class for all public safety personnel that provides training on the operations, procedures, and guidelines to follow when communicating with the Dispatch Center. Part of the training class should include a tour of the dispatch facility.

IV-6 MRI recommends that the Fire District review and update all run cards which specifically details which apparatus should respond to specific incidents. A review of current dispatch documents reveals they have not been reviewed recently. Once reviewed and updated the run cards should be presented to the dispatch center for input and implementation.

IV-7 MRI recommends that the Fire Department and Police Department meet to develop a joint incident scene "operations" protocol to minimize blocking the flow of traffic while also being able to provide appropriate safety for personnel working at an incident. These protocols should also address protocols for first responders who respond to incident scenes in private vehicles. The protocol should detail parking at incident scenes for fire apparatus and private first responder vehicles. This will help to alleviate the Police Department's concerns of congested emergency scenes.

IV-8 MRI recommends that Select Board, Town Manager, Prudential Committee, Fire Chief, and Police Chief engage in further collaboration and communication initiatives in order to gain a strong understanding of the Fire Departments mission, current needs, and future strategic planning efforts. The Fire Department leaderships should provide regular updates to the Select Board through the Town Manager or meet often throughout the year with the Select Board as needed to discuss department issues, budget planning for the upcoming fiscal year. In addition, meeting with the Finance Committee at least annually to discuss District strategic and capital improvement planning to understand its impact on taxes would provide better clarity for all.

IV-9 MRI recommends that Williamstown Fire District convene a focus group, to determine what concepts and recruitment and retention strategies are feasible and most attractive to potential candidates. The group should also bring forth recommendations on incentives and strategies to recommend to the Prudential Committee.

IV-10 MRI recommends that the Williamstown Fire District should make it a priority to develop an active on-call recruitment team led by a company officer. At a minimum, this program should consist of:

- **Developing a recruitment brochure and mailing it to all residents**
- **Holding periodic open houses at the fire station**
- **Performing public out-reach through the local media**
- **Contacting community and service groups including Williams College resources**
- **Developing an eye-catching banner on the Town's and Fire Department's websites and conducting radio and media advertisements**
- **Placing signs recruiting call/volunteer personnel at the main entrances to town**
- **Placing signs for call/recruiting volunteers in local businesses, particularly high-volume locations**
- **Implementing or enhancing a fire explorer program**

IV-11 MRI Recommends that Williamstown Fire District should obtain membership and seek assistance from the Massachusetts Call and Volunteer Firefighters Association (MCVFA) and Fire Chiefs Association of Massachusetts (FCAM) relative to enhancing recruitment and retention efforts in Williamstown.

IV-12 MRI Recommends that the Fire Chief should obtain membership and seek assistance from the International Association of Fire Chiefs (IAFC) and the Volunteer Combination Officers Section (VCOS) within the IAFC to gain further information and education on best practices in leading a call firefighter organization such as the Williamstown Fire District, as well as enhancing recruitment and retention efforts in Williamstown. Additionally, the Fire Chief should attend the annual VCOS symposium sponsored by the IAFC organization, in order to be able to network and gain unique ideas and perspectives from other chief officers related to combination fire departments. This is one of the largest symposiums which specifically addresses call and combination fire organizational needs.

IV-13 MRI recommends that Williamstown Fire District seek membership with the National Volunteer Fire Council (NVFC) www.nvfc.org to obtain recruiting and retention suggestions and reports to support the recruitment and retention efforts of the District.

IV-14 During one of MRIs interviews post site visit, one suggestion from a person with public relations and a public information background, was the need for the Williamstown Fire Department to develop a strong and continual marketing plan in order to introduce the needs of the organization to the taxpayers of the Town. Meetings with local groups, organizations, stakeholders, community leaders, state and federal representatives, visibility at local community events, tours of the fire station and apparatus, and inclusion of representatives of key organizations in planning efforts were also suggestions made which would assist with the Districts future plans. MRI recommends that the Williamstown Fire Department seek out marketing and public relations volunteer to assist with the development of any presentations for infrastructure,

apparatus, equipment or other capital projects. The Fire Chief or his designated representative should also continue to utilize social media and to involve other members of the Department in providing updated news, activities, and fire prevention tips and information to enhance the community's knowledge about the Williamstown Fire Department.

V. FIRE STATION, APPARATUS, EQUIPMENT

Part of MR'Is Scope of Work was to establish how the Fire District's current and future needs impact planning for a replacement facility.

Fire Station facilities support the overall mission of the organization in providing public safety services. Modern, well-designed, and maintained fire station facilities enable staff to perform their duties effectively, efficiently, and safely.

Figure 42
Modern Fire Apparatus at Water Street Fire Station

For the taxpayer, a modern facility that is energy efficient, low cost to maintain and operate, safe, and built to assimilate with the character of the community is the benchmark for success. A modern fire department and facilities contribute to the image of the community and in many ways contribute to the long-term viability of Williamstown.

The research and efforts over the past years towards a systematic approach focused on replacement of the current facility has reinforced there is a need of a new station. The new fire station should be a top priority not only of the Fire District, but the citizens and support of the Governing Body of the Town of Williamstown. The three requirements needed by a fire department to meet its mission and service to the community is personnel, facilities, and equipment. MRI reviewed the previous Maguire Report and conducted a tour of the current fire station. The project team's observations and conclusions support the need and recommend replacement of the current fire station.

The current Williamstown Fire Department Building was constructed in the 1950s as a three bay, single story building with a partial basement. The existing apparatus bays were expanded towards Water Street by twelve feet, and the overhead doors were modified from three doors at 10-foot-wide to one at 10 feet and the other at 20 feet. The entire structure has a gross square footage of 5,060 sq. ft. The first floor of the facility occupies 4,325 GSF, and 736 GSF on the basement level. The building construction consists of load bearing masonry walls, with a wood framed flat roof. Since the construction of the facility in the 1950s other than the apparatus bay

expansion and minor improvements and modifications, the facility has virtually remained unaltered.[14]

The Water Street Fire Headquarters no longer provides efficient and effective shelter for fire apparatus and equipment. In addition, this facility is inadequate to provide a suitable platform for the Williamstown Fire District to serve the community. The eleven (11) year old Maguire Feasibility Study remains valid in its context and recommendations. Fire apparatus from the earlier days of Williamstown Fire District were smaller and fire stations were designed to accommodate them. Today's fire apparatus is significantly larger, carry more water, and take up larger areas of floor space.

Figure 43
Williamstown Fire Station
Circa 1950s

Modernization and modifications are required in order to accommodate decontamination equipment for protective clothing and EMS equipment. Storage areas for protective clothing, and the ability to move between fire apparatus and equipment so that firefighters will have the tools necessary to respond to a number of different fires and emergencies is a critical necessity. In addition, maintaining a comprehensive apparatus and equipment Capital Replacement Plan that provides the appropriate fire apparatus that is designed for fighting fires relative to the needs of the Williamstown Fire Department rather than designing apparatus to fit in a fire station provides a fiscally sound roadmap to replace apparatus and equipment while also helping to reduce spikes in the tax rate when replacement becomes necessary.

Over the years the addition of modern fire apparatus and equipment has minimized any working space previously available. The fire departments role in Emergency Medical Services and the need to decontaminate equipment and protective clothing after every fire has mandated changes in fire station facilities to reduce exposure to contaminates. In the Williamstown Fire District, there *are no modern adequate areas for decontamination of medical equipment and firefighter protective clothing. Heating, and Ventilation Systems are old and lack energy efficiency.*

[14] *Williamstown Fire Department Feasibility Study, Maguire Group December 22,2008.*

Figure 44
Water Street
View Headquarters

Figure 45
Limitations between Apparatus

Figure 46
Compressed Air Cylinders in
Apparatus Bays

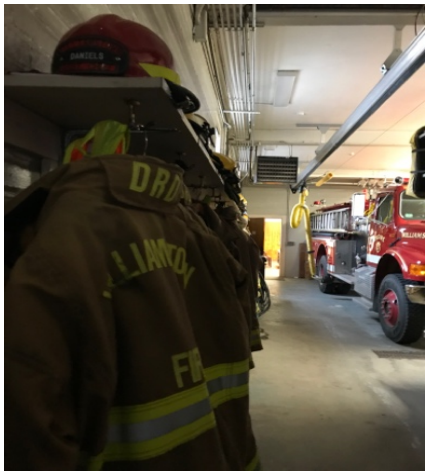


Figure 47
Fire Gear in Apparatus Bays

Figure 48
Lack of Storage Space

Figure 49
Lack of Storage Area

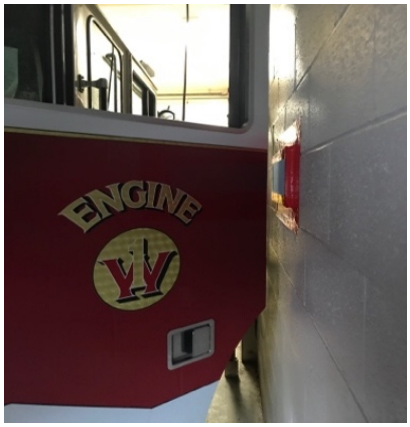


Figure 50
Engine Door to Wall

Figure 51
Front Apparatus in Bay

Figure 52
Fire Chief's Office

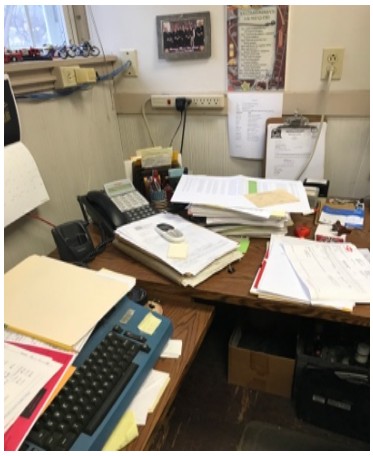


Figure 53
Fire Chief's Office

Figure 54
Fire Chief's Office

Figure 55
Lack of Storage Space

Figure 56
Protective Clothing in Bays

Figure 57
1978 Boiler

Figure 58
Well-McLain Boiler Plate

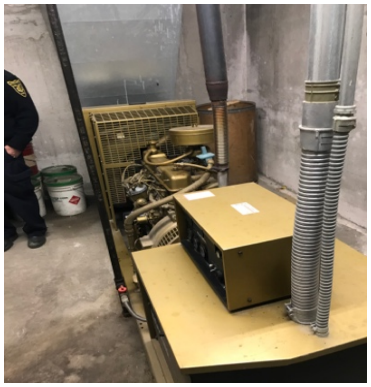


Figure 59
Emergency Standby Generator
Basement Level

Figure 60
60' Era Electric Stove

Figure 61
Kitchen Area

Clearly the current fire station facility does not meet a number of local, state, and federal health and safety standards. MRI believes that to bring the facility up to standards, add additional space to accommodate all of its electrical, plumbing, heating, and ventilation needs within the current foot print of the Water Street Headquarters would not be cost effective to expand, renovate, and modernize. There are three immediate standards that MRI has reviewed and determined the following:

1. The facility is not in compliance with the requirements and recommendations of **NFPA 1500:** Standard on Fire Department Occupational Safety and Health Program (National Fire Protection Association, Quincy, MA, 2013 edition), which provides requirements for facility safety, maintenance, and inspections.

2. The facility is not in compliance with the requirements and recommendations of **NFPA 1581:** Standard on Fire Department Infection Control Program (National Fire Protection Association, Quincy, MA), which has requirements to provide minimum criteria for infection control in the fire station.

3. The facility is not in compliance with the requirements and recommendations of the American with Disabilities Act. These requirements are codified in the Code of Federal Regulations (CFR) at 28 CFR parts 35 (title II) and 36 (title III).

A fire station supports the needs of the Fire Department and the community in which it is located. It must accommodate extremely diverse functions, including housing, recreation, administration, training, community education, equipment and vehicle storage, equipment and vehicle maintenance, and hazardous materials storage. While it is usually only occupied by trained personnel, the facility may also need to accommodate the general public for community education or out-reach programs. Fire stations will vary somewhat in design depending on the specific mission, i.e., the types of emergencies that will be responded to or the types of fires that will be fought. Usually, the facility differences relate to the size of the firefighting apparatus and facility location. The location of the facility is largely driven by the need to minimize response times.

Major fire station functional areas include the following:

- **Apparatus bay(s)**: This is where the firefighting and emergency response vehicles are stored.
- **Apparatus bay support and vehicle maintenance**: These industrial spaces are where the vehicles and other firefighting equipment are cleaned, maintained, and stored.
- **Administrative and training areas**: These include offices, dispatch facilities, and training and conference rooms

- **Residential areas**: These include the dorm rooms, day room/kitchen, and residential support areas such as bathrooms and fitness spaces.

The two primary drivers for facility layout and functional space adjacencies in a fire station are the following:

1. Ensure that internal response times can be met (time for a firefighter to reach the apparatus and be ready to depart).

2. Separate the diverse and sometimes conflicting functions such as industrial maintenance spaces and residential spaces.

APPARATUS BAYS

Sizing the apparatus bay is critical, and it should be designed to accommodate variable vehicle sizes. Typically, the entire room is sized based on the bay size for the largest vehicle in the fleet or the largest anticipated vehicle. Bays also include vehicle exhaust removal systems, compressed air, and power drop lines, and hot and cold water connections. Bay doors must also accommodate the largest vehicle and include a manual means to open, in case of power failure. Ideally, the site will accommodate drive-through bays.

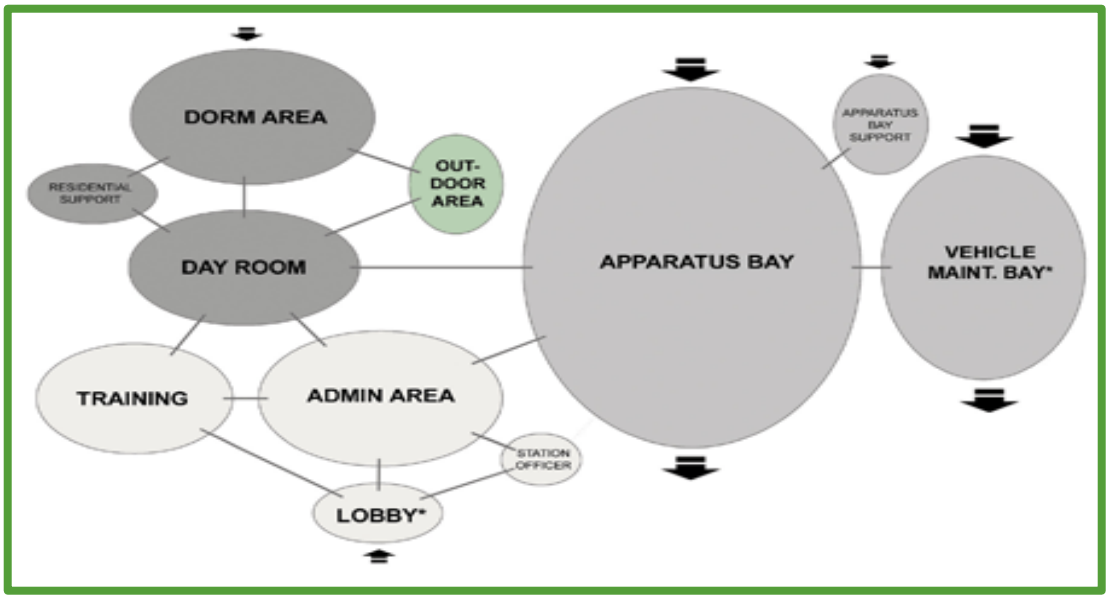


Figure 62
Fire Station Design Sample Functional layout for a fire station
Developed by DMUM Design, Arlington, VA

APPARATUS BAY SUPPORT AND VEHICLE MAINTENANCE

Figure 63
Specialized Washing Machine for Disinfecting Protective Clothing

Apparatus bay support functions include cleaning and maintenance areas for the firefighter's self-contained breathing apparatus (SCBA), protective clothing, fire extinguishers, and other equipment. It also includes storage areas for firefighting gear and equipment and secure storage for medical supplies. Some of these areas are specialized spaces for disinfecting protective equipment and for maintaining and recharging the SCBA in a clean environment. See also Light Industrial space type.

Agent storage is typically provided in a single-story structure separate from the fire station building. It should be located along the drive leading into the apparatus bay for ease of loading and unloading of firefighting agents. In some cases, it may be attached to the main structure. A vehicle maintenance bay may also be included in a fire station. It is a dedicated maintenance area for apparatus.

ADMINISTRATIVE AND TRAINING AREAS

Administrative areas include standard offices and conference and training rooms. The area will also likely include additional specialized spaces such as the Chief's office with sleeping and shower facilities and computer training/testing facilities, for firefighter continuing education. Some stations may include a highly specialized dispatch room for receiving emergency calls from the public.

RESIDENTIAL AREAS

The day room accommodates kitchen, dining, living and recreation functions. It is often separated into subspaces for those three functions, but an open design may also be effective to encourage interaction between the spaces. The dining space may also double as training or meeting space and might include provisions for audiovisual equipment.

When planning for a fire station, consideration should be given to incorporating dorm rooms into the design. Regardless if a fire station is manned fulltime or a volunteer/call fire station there are times when fire station coverage for long periods of time are needed. Prolonged weather events or disasters require long term response activities of fire personnel. Dorm room designs can vary widely from station to station and department to department. Each firefighter is provided with a place to sleep, work, and store personal items. Careful consideration should be given to the location and design of the area to ensure response times can be met. See Emerging Issues below for more information on dorm rooms.

Other residential areas include a laundry room, a physical fitness room, bathrooms and showers, and possible additional recreation spaces such as an outdoor patio and game room.

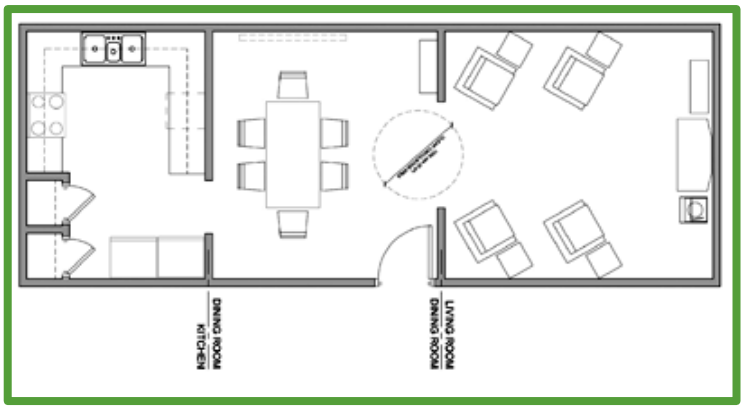


Figure 64
Residential Areas

DESIGN CONSIDERATIONS

Key design goals and considerations for fire stations include the following:

A. PROMOTE OCCUPANT QUALITY OF LIFE

Fire stations may be occupied 24 hours a day, seven days a week by personnel at various times and for various lengths. Therefore, ensuring a comfortable living environment for the firefighters is paramount:

- Provide ample natural light
- Provide individual dorm rooms, if budget allows
- Provide ample recreation areas and separate noisy areas (such as a game room) from quieter areas (such as a television room)
- Avoid institutional and unnatural finishes, textures, and colors

B. MAINTAIN A SAFE AND HEALTHY ENVIRONMENT

As above, due to the continuous occupation of the facility by firefighters and the presence of hazardous materials, special attention must be given to designing the facility to accommodate equipment and operational strategies to both protect the occupants and maintain a healthy environment. Consider the following critical elements:

- Provide a secure facility for both personnel and materials such as controlled medical supplies and hazardous fire suppression agents
- Use non-toxic building materials and improved maintenance practices

- Ensure good indoor air quality and abundant natural light in the residential and administrative areas
- Ensure good ventilation of industrial areas such as the apparatus bay and prevent contamination of clean spaces such as the SCBA maintenance areas
- Ensure that equipment, furnishings, and finishes do not contain asbestos or lead

C. ENSURE FLEXIBILITY

As firefighting technology evolves, fire stations need to evolve as well. Consider the following areas:

- Plan for potential expansion, both in the apparatus bay area and the residential areas
- Ensure appropriate product/systems integration
- Design for the changing nature of work

Figure 65
Three sample dorm room layouts for a fire station
Developed by DMJM Design, Arlington, VA

RECOMMENDATIONS

V-1 **MRI recommends that the Fire District continue to move forward with their efforts for the replacement of the Water Street Fire Station. MRI believes that the Maguire Group Feasibility Study dated December 22, 2008 still contains valid assessments and recommendations for a new fire station. Consideration for future needs beyond 10 years should be included in any future planning for a new facility. An example of this would be including dormitory rooms and office space should the district change over to a different staffing scenario.**

V-2 **Given the eleven years since the Maguire Study, MRI recommends that a review and update of the study be conducted in order to affirm the space needs that were proposed in 2008, determine if there are any fire and life safety codes, building codes, safety systems, and technology that has been updated, improved, or replaced. An updated cost estimate should also be obtained again for the changes in construction costs from 2012 (last update to costs from 2008 estimate) until now.**

V-3 **MRI recommends that in anticipation of the potential for a new facility to be constructed and as a stop gap measure to improve safety, accessibility, and mobility around the current fire station apparatus bays, that any obsolete hose, gear, firefighting appliances, SCBA, or other items no longer in use be disposed of.**

VI. APPARATUS AND EQUIPMENT

MRI conducted a cursory review of the current fire apparatus fleet to determine the average age of vehicles. The average age of the Williamstown Fire District's fleet is 17.4 years. The oldest fire apparatus is Engine 3 at 29 years old. Engine 3 has far exceeded its service life and should be replaced. A detailed apparatus replacement plan should be developed and presented to the Prudential Committee for future planning.

Despite the lack of clear guidance in the various NFPA standards, there is a significant body of knowledge that suggests that fire apparatus definitely has a finite lifespan. The reasonable serviceable lifespan of fire apparatus will depend on a number of variables such as the level of use, local environment, and operating conditions, and very importantly, the scope of preventative maintenance. It is generally accepted that lower use fire apparatus, such as units serving communities that are suburban in nature, might still be mechanically sound after twenty years or more, due to their lower frequency of use. However, after twenty years, technical and functional obsolescence may make the apparatus less desirable to use even if mechanically sound and serviceable. Nevertheless, that does not mean that it will still not be serviceable as a spare or reserve apparatus.

One of the biggest factors that can impact the serviceable life of the apparatus is the level of preventative maintenance that is received. NFPA 1911: *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus* (2012 edition) provides guidance on this important aspect of fire department support operations. Apparatus manufacturers also identify suggested programs and procedures to be performed at various intervals. As apparatus ages, it is reasonable to expect that parts will wear out and need to be replaced. It follows then that maintenance costs and overall operating expenses will increase. As a result, cost history and projected costs for the future must be considered as a factor in determining when to replace or refurbish a fire apparatus. In addition, the reliability of the apparatus must be considered. Experiencing low downtime and high parts availability are critical factors for emergency equipment maintenance and serviceability. A pro-active preventative maintenance program can assist with holding costs to an acceptable level.

Overall, the Williamstown Fire District fleet appears to be reasonably well-maintained and in serviceable condition despite its increasing age. However, one of the departments engines is 29 years old and probably nearing the end of its serviceable life span. Comparative to other similar size on-call fire service agencies, Williamstown appears to have and older and more utilitarian fleet than apparatus sets in other similar communities. Moving forward the community will need to invest and replace aging apparatus with more capable vehicles that better support the response effort.

A white paper developed by the Fire Apparatus Manufacturer's Association (FAMA) suggests that the front-line lifespan of active duty fire apparatus in a suburban setting ranges from 16 to 19 years, with the possibility of an additional 9 to 10 years in a reserve, or spare status. The International City/County Management Association (ICMA) suggests that the lifespan of a fire pumper should be 20 years, and the lifespan of an aerial ladder should be 25 years. The National Fire Protection Association suggests 15 years in front line service with an additional five in reserve status.

One common recommended practice is to purchase one major piece of fire apparatus every 5 years. The goal of this strategy is to spread major purchases out over time in an effort to allow the governmental entity to maintain a consistent level of debt service. Regardless, the decision is left to each locality and represents a balancing of numerous factors: fire department activity levels, maintenance costs and history, individual vehicle reliability, funding availability, technological changes, firefighter safety, and vehicle use. Fire apparatus must be replaced before it becomes unreliable, but it must be held in service for as long as practical to maximize the benefit of the large initial investment from the community.

As the value of the apparatus or vehicle depreciates, the maintenance costs are evaluated along with the age, mileage, and engine hours so that expected maintenance costs do not exceed the value of the apparatus or vehicle. When considering apparatus usage, hours on the engine and pump must be taken into consideration. Fire apparatus typically spend more time idling while at

the scene of emergencies, or when operating the fire pump at a fire. A rule of thumb that can be used is that each hour on the motor is the equivalent of 30 - 35 miles of actual driving mileage.

As newer technological improvements are introduced that increase safety and efficiency for the Department, the capital replacement plan should be evaluated in an ongoing manner, and these other factors should be considered as a component in scheduling replacement apparatus. An important component of the plan is that it allows front-line apparatus to be replaced before it is no longer serviceable due to safety or efficiency issues, but still be usable as a reserve or backup unit.

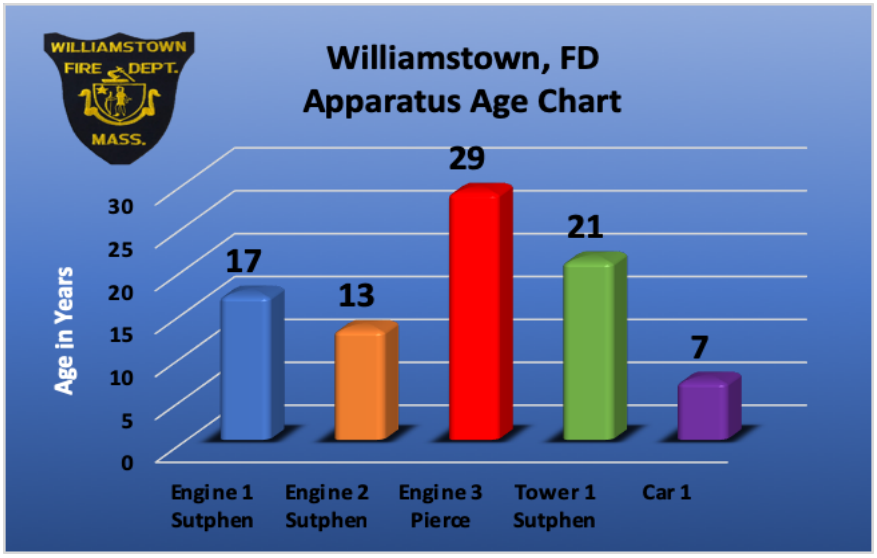


Figure 66
Williamstown Fire District Apparatus Age Chart

Apparatus	Model	Delivery Year	Age	Mileage	Hours on Diesel Engine
Engine 1	**Sutphen**	**2002**	**17**	**17,390**	**1,734**
Engine 2	**Sutphen**	**2006**	**13**	**19,911**	**1,694**
Engine 3	**Pierce**	**1990**	**29**	**10,577**	**N/A**
Tower 1	**Sutphen**	**1998**	**21**	**14,109**	**7,628**
Fire Chief's Car	**Ford**	**2012**	**7**	**71,375**	**N/A**
		Average Age	**17.4**	**N/A**	**N/A**

Figure 67
Williamstown Apparatus Age/Mileage Table

CURRENT APPARATUS AND EQUIPMENT STATUS

An apparatus and equipment status table to detail the current status of fire apparatus and equipment was created. The chart provides a summary of apparatus mileage. While this table provides a snapshot of the fire departments apparatus a detailed comprehensive apparatus replacement program plan should be established and adopted by the Williamstown Fire Department. Williamstown Fire Department should continue to apply for Assistance to Firefighters Grants (AFG) for apparatus and equipment each year as the program becomes available.

Figure 68
WFD Engine 1

Figure 69
WFD Engine 2

Figure 70
WFD Engine 3

Figure 71
WFD Tower 1

Figure 72
WFD Command Vehicle

Figure 73
A Quint such as this one in service in Springfield and equipped with a 1500 gallon per minute pump, 500-gallon water tank and 75' aerial will more than adequately meet the Williamstown Fire District's operational needs and provide the community with a versatile, multi-function vehicle particularly in limited staffing conditions and when responding as the first out unit and "engine" to many incidents.
(Photo: Mass Fire Trucks)

RECOMENDATIONS

VI-1 MRI recommends the Williamstown Fire District should develop a comprehensive apparatus replacement plan that spans a 20-year period. The plan should include detailed specifications, cost, projected replacement date and any other information that will provide a cyclical road map of the replacement schedule.

VI-2 MRI recommends that Williamstown Fire District consider the replacement of the engine or tower with a "quint" (Figure 48). Fire Departments that have limited manpower to operate apparatus are considering replacing their Engine, Ladders, and Towers with "Quint" fire apparatus.[15]

VI-3 The Williamstown Fire District should ensure that all fire apparatus pumps are serviced, inspected, and tested at intervals no greater than 12 months apart, in accordance with

[15] *A "quint" serves the dual purpose of an engine and a ladder truck. The name quint refers to the five functions that a quint provides: pump, water tank, fire hose, aerial device and ground ladders.*

NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented.

VI-4 The Williamstown Fire District should ensure all department aerial and ground ladders are serviced, inspected and tested at intervals no greater than 12 months apart, in accordance with NFPA standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented.

VI-5 The Williamstown Fire District should ensure that all department hose is inspected and tested, at intervals no greater than 12 months, in accordance with NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented.

VI-6 The Williamstown Fire District should develop a complete inventory of all department equipment, review compliance with NFPA criteria (including the proper organization and mounting and securing of equipment in crew cabs and compartments) and assess the Department's own operational and equipment needs. The inventory should be updated at least annually to ensure that it is current.

VI-7 The Williamstown Fire District should adopt a policy of purchasing new NFPA 1901 compliant equipment when new apparatus is purchased. This policy will ensure that equipment is the most technologically up-to-date and that it is safe and functional. It will also make it possible to keep reserve apparatus fully equipped for immediate use.

VI-8 The Williamstown Fire District should establish a formal replacement plan for equipment. The regular replacement of large cost items such as hose and SCBA on an incremental basis will avoid major one-time increases in the operating budget. The life expectancy of these items can be estimated based on usage and manufacturer's recommendations.

VI-9 The Williamstown Fire District should take advantage of the fire apparatus and ambulance group purchasing system that is sponsored by the Fire Chiefs Association of Massachusetts (FCAM) and the Metropolitan Area Planning Council (MAPC). Municipalities may select a specific design and manufacturer from a pre-determined bid list and are not required to establish their own bid process. It is estimated that this group purchasing system will save approximately five to ten percent of the cost of a fire truck (see www.mapc.org).

VI-10 The procurement of most of Williamstown's future apparatus needs will normally be funded at the annual town meeting. However, in any given year, a federal Assistance to Firefighters Grant (AFG or Fire Act) could also be pursued as a way to obtain funding. This is particularly true if the requested apparatus is going to replace more than one

unit. If the AFG grant application is successful, then any already capital project funding can be cancelled.

VII. FISCAL FORECASTING & CAPITAL PLANNING

Emergency services budgets are more than the dollar amount allocated for the operation of the Department. The budget is a document that reflects the goals and objectives that the Fire Department established for delivery of services to the community. The budget should be used as a planning tool by the Department, and its members, and should represent the needs of the Department to properly and safely serve the public.

Budget preparation and management must be an ongoing process in every aspect of the Department. Before one budget cycle is completed, the next must already be in process. The Fire Chief along with his/her other officers, must continuously monitor their department and their ongoing needs, as well as anticipate the demands that will be placed upon them in the future.

Most funds for the Fire Department budget come from property taxes and the rates charged to property owners. Some funds also come from a wide variety of fees for services, grants, and other sources. Some long-term capital funding may be included as part of a bond issue that will be paid back over a number of years. Some departments are using leases, and lease purchase programs, to assist with replacing undependable or unsafe apparatus and equipment. Contracting to provide shared services, such as for dispatching, has proven to assist with generating funds in some departments, or conversely, reducing expenses by joining another community.

While a comparative study can evaluate the level of effort and ability of residents to fund services, it cannot measure residents' willingness to pay over the long run. Caution should be used if looking for hard and fast answers using statistical comparisons on their face value alone. Every emergency services provider, and every town, has developed creative methods for service delivery, and cost labeling, based on specific needs. Additionally, the information that might be obtained from various municipalities could vary to some degree as to how they report expenses such as employee benefits or vehicle maintenance.

Each year at the start of the budget process the Prudential Committee provides basic direction to the Town departments regarding their expectations for the upcoming budget year such as no increase, or an increase no greater than 1.5%, etc. In the fire department, the Chief prepares the budget in conjunction with the Prudential Committee. The Chief prepares a budget message and narrative to explain and/or defend his requests for increased line item funding, or the need for capital equipment purchases. The Prudential Committee meets with the Chief to discuss the budget, then accepts the budget as submitted, or revises it. The budget is then ultimately voted on at the district meeting.

The MRI project team reviewed the budget documents provided by the Fire District. The operating budgets appear to meet the current needs of the Department in order to maintain the existing levels of service, as a call fire department.

The Williamstown Fire District generates revenue each year which is derived from tax revenue, inspection and permit fees, other income, donations and interest income. Figure 74 breaks down the revenue categories.

Williamstown Fire District Budget	Revenue
Tax Revenue	$528,151.00
Other Income	$ 28,500.00
Interest Income	$9,600.00
Inspection and Permit Fees	$6,000.00
Donations	$500.00
Williamstown Fire District FY2019	**$ 572,751.00**

FIGURE 74
Williamstown Fire District
FY2019 Revenue

CAPITAL PLANNING

A Capital Improvement Plan (Program), or CIP, is a plan of varying duration, in government, usually five to ten years, which identifies major (capital) projects and equipment purchases, organizes long term projects, provides a planning schedule and identifies options for financing the plan. The plan serves as a mechanism for decision-making, to identify priorities early, to allow for more deliberate planning of financial resources, to provide a link to the Williamstown Fire District's long-range strategic plan, and to communicate those long-range plans and needs to the community.

Capital infrastructure is essential to all communities. Streets, bridges, water and sewer systems, and public buildings help shape the local economy affecting the flow of goods, business location decisions, and prospects for future development. The quality of life for a community's residents depends on the reliability of its transportation, the quality of its water and sewer systems, the efficiency of its waste disposal, and the accessibility of many other essential public services. Service quality can only be maintained if governments are committed to keeping their capital in good condition.

Budgetary pressures often divert government resources away from capital renewal. At a time when many governments are challenged by citizen demands for additional or improved services and taxpayer resistance to higher tax levies to pay for these services, the capital budget is often

the first to be cut in an effort to balance the budget. Careful planning is required to ensure that capital needs receive the full attention and commitment of government officials. A well-planned capital improvement program is a crucial tool to systematically plan for and manage capital needs. On-going service delivery can be assured only if adequate consideration is given to capital needs. If facilities and infrastructure are not maintained, they will deteriorate until costly maintenance is required, services are threatened, and community growth stagnates or declines. It appears that the Williamstown Fire District is in relatively sound financial condition. This is a result of sound financial management, as well as the continued growth and development that the Town is experiencing. The continued growth of the Town, along with projections for the next several decades makes it imperative that the Town continues to maintain its services, and appropriately fund needed capital projects in an ongoing manner. It is unclear whether the Williamstown Fire District has a long-range capital plan. The aging apparatus fleet and the need for capital improvements would suggest not.

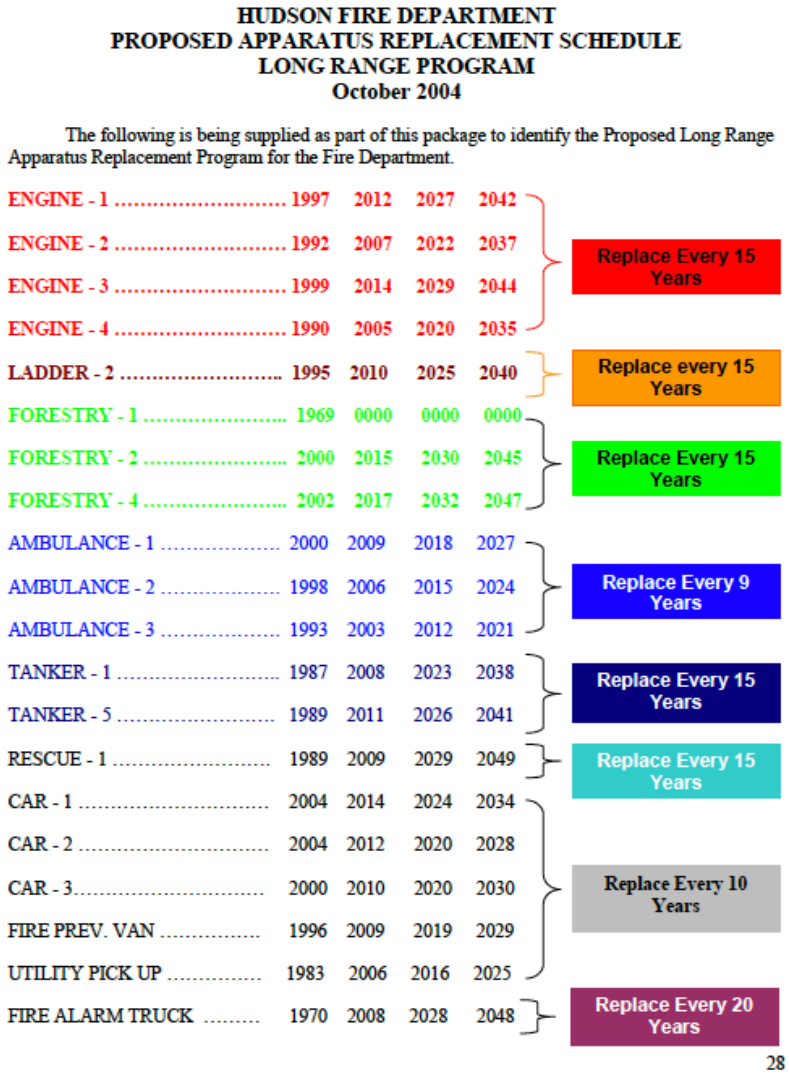
As noted previously, MRI believes that an Apparatus Replacement Plan should be developed and followed by the Fire District relative to the Fire District's apparatus fleet. An apparatus replacement plan that forecasts out as far as 20 years will help in determining long term capital financing needs as well as maintaining stable tax rates for the taxpayer rather than spikes in the taxes every few years due to the need to replace apparatus.

Vehicles/Apparatus	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Car 1 / 2004 Tahoe									Car 1			
Car 2 / 2004 Tahoe (Red)							Car 2					
Car 3 / 2000 Crown Vic					Car 3							
Engine 1 / 1997 Emergency One							Engine 1					
Engine 2 / 1992 KME		Engine 2										
Engine 3 / 1999 Emergency One									Engine 3			
Engine 4 / 1990 KME	Engine 4											
Tanker 1 / 1987			Tanker 1									
Tanker 5 / 1989						Tanker 5						
Ambulance 1 / 2004 Road Rescue								Amb 1				
Ambulance 2 / 1998 Road Rescue		Amb2										
Ambulance 3 / 2000 Road Rescue				Amb 3								
Rescue 1 / 1989				Rescue 1								
Ladder 2 / 1995 Smeal					Ladder 2							
Forestry 1 / 1969												
Forestry 2 / 2000										Forestry 2		
Forestry 4 / 2002												Forestry 4
Fire Alarm Truck / 1970			F/Alarm Truck									
Fire Prevention Van / 1996				Prev Van								
Utility Pick Up / 1983	Utility Pickup										Utility Pickup	

Figure 75
Sample Long Range Vehicle/Apparatus Replacement Plan

30

Additionally, there are a number of various lease-purchase programs or financing options to assist with funding these capital projects.



HUDSON FIRE DEPARTMENT
PROPOSED APPARATUS REPLACEMENT SCHEDULE
LONG RANGE PROGRAM
October 2004

The following is being supplied as part of this package to identify the Proposed Long Range Apparatus Replacement Program for the Fire Department.

ENGINE - 1	1997	2012	2027	2042	Replace Every 15 Years
ENGINE - 2	1992	2007	2022	2037	
ENGINE - 3	1999	2014	2029	2044	
ENGINE - 4	1990	2005	2020	2035	
LADDER - 2	1995	2010	2025	2040	Replace every 15 Years
FORESTRY - 1	1969	0000	0000	0000	Replace Every 15 Years
FORESTRY - 2	2000	2015	2030	2045	
FORESTRY - 4	2002	2017	2032	2047	
AMBULANCE - 1	2000	2009	2018	2027	Replace Every 9 Years
AMBULANCE - 2	1998	2006	2015	2024	
AMBULANCE - 3	1993	2003	2012	2021	
TANKER - 1	1987	2008	2023	2038	Replace Every 15 Years
TANKER - 5	1989	2011	2026	2041	
RESCUE - 1	1989	2009	2029	2049	Replace Every 15 Years
CAR - 1	2004	2014	2024	2034	Replace Every 10 Years
CAR - 2	2004	2012	2020	2028	
CAR - 3	2000	2010	2020	2030	
FIRE PREV. VAN	1996	2009	2019	2029	
UTILITY PICK UP	1983	2006	2016	2025	
FIRE ALARM TRUCK	1970	2008	2028	2048	Replace Every 20 Years

28

Figure 76
Sample Table for Apparatus Replacement Plan

GRANTS

There are a number of federal, state, and private grants available for fire departments and communities to consider for supplementing their budgets. If successful in receiving a grant award, most departments can acquire equipment, training, and programs that they would not be able to achieve through the normal budget process. Though the process can be difficult, and time consuming, the outcomes can be very beneficial to the Fire Department.

Figure 77
FEMA Logo

While the economic challenges of the last decade have had an impact on grants from private entities and foundations, fortunately, the federal grant programs targeted to the fire service, the Assistance to Fire Firefighters Grants for equipment (AFG), the Staffing for Adequate Fire and Emergency Response Grants (SAFER) for personnel, and the Fire Prevention and Safety Grants (FP&S) for fire prevention and public fire education programs, continue to be funded, although not anywhere near their authorized levels.

Figure 78
AFG Grant Logo

The AFG program provides financial assistance directly to fire departments to enhance their capabilities with respect to fire and fire-related hazards. The AFG supports fire departments that lack the tools and resources necessary to more effectively protect the life and safety of the public, and their emergency response personnel with respect to fire and all other hazards. Since 2001, AFG has helped firefighters and other first responders to obtain critically needed equipment, protective gear, emergency vehicles, training, and other resources, needed to protect the public, and emergency personnel, from fire and related hazards.

The goal of the SAFER grants is to enhance the fire departments' ability to comply with staffing, response, and operational standards, established by NFPA and OSHA (NFPA 1720 and OSHA 1910.134). Specifically, SAFER funds assist the Fire Department to increase their staffing and deployment capabilities in order to respond to emergencies whenever they may occur. SAFER grants are awarded to departments for both hiring of career personnel, and recruitment and retention of volunteer/call personnel. However, a department cannot apply for both categories of grant in the same year.

Figure 79
SAFER Logo

FP&S grants support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to target high-risk populations and mitigate high incidences of death and injury.

There are several other grants available to fire departments for various purposes. Some grants that may be available to the Williamstown Fire District are the Fireman's Fund Heritage Grants,

Factory Mutual grants for fire investigation, and Wal-Mart community grants. Other large chains, such as Home Depot and Lowes, are frequently willing to provide funding, and/or enter into partnerships for specific projects. The key to success at this level is finding grants for which the Department may be eligible, and, ensuring that the application is tailored to the grant program's priorities.

Like most fire departments, Williamstown has had a limited record of success regarding grants they have applied for. One of the shortcomings in the AFG program is that departments which submit grant applications that are ultimately not successful are notified to that fact, however, they are not informed as to why. Typically, only about 8% of all grant applications submitted are approved and funded. Nearly 50% of the applications fail to make it past the initial computer review where statistical aspects of the application are reviewed to determine their compatibility with the established grant criterion/ priorities. This explanation is not, in any way, meant to cast a negative light on Williamstown applications. It is included to illustrate the long odds of successfully obtaining a grant even with a strong application.

SOURCES OF ADDITIONAL FUNDING

In this era of extremely tight budgets, where every governmental entity is looking for alternative revenue streams to offset declining tax receipts, there are several other sources of potential revenue for the Fire Department that the Williamstown Fire District may want to explore and consider implementing. Among these are increased fire prevention business registration, inspection, and permit fees; billing insurance companies for response to motor vehicle accidents; registration fees for fire alarm systems; and the issuance of penalties for those whose systems generate repeat false alarms.

RECOMMENDATIONS

Throughout this report, the MRI project team has made several recommendations that could, if adopted, increase expenditures in the Williamstown Fire District. MRI believes that these recommendations are essential for the effective, efficient, and safe operation of the Fire Department. Other recommendations are intended to reduce overall financial risk and liability, or will have the effect of smoothing expenditure rates, and minimizing one-time spikes in the budget. Ideally, emergency services expenditures should result in programs that are well-justified and cost-effective, and that have measurable outcomes that result in an improved level of safety and protection for the citizens of Williamstown and those who are visiting the town.

VII-1 The Williamstown Fire District should review all fees on an annual basis for possible increases in accordance with state law.

VII-2 The Williamstown Fire District should explore additional potential ways to generate revenue to offset the fire department's operating costs. Consideration could be given

to billing insurance companies for response to motor vehicle accidents; registration fees for fire alarm systems; and, implementing fines for repeat false alarms.

VII-3 The Williamstown Fire District should identify and prioritize its most critical equipment, training and/or operational needs, and apply annually to the Assistance to Firefighters Grant (AFG) program. This should include making applications for apparatus capital replacement projects that will otherwise be funded through the Town's capital budget and at town meeting.

VII-4 The Williamstown Fire District should apply for a federal SAFER grant in 2020 for the purpose of staffing and the recruitment and retention of current personnel.

VII-5 The Williamstown Fire District should prioritize its fire prevention and public fire education needs and apply annually to the Fire Prevention and Safety Grant (FP&SG) program.

VII-6 The Williamstown Fire District should actively search for other grant opportunities. Grants for fire protection, fire safety, fire prevention, domestic and emergency preparedness, and homeland security may be available from federal, state, corporate, and foundation sources.

VII-7 The Williamstown Fire District should actively seek out businesses that may be interested in establishing public/private partnerships that could provide, or assist with, funding for various programs, projects, or initiatives.

VII-8 The Williamstown Fire District should establish a formal replacement plan for equipment. The regular replacement of large cost items such as hose, ladders, PPE, portable radios, AEDs, and even SCBA on an incremental basis will avoid major one-time increases in the annual operating budget where such purchases should be funded. For instance, the hose and ladders on one vehicle can be replaced in one fiscal year, another the following year, etc. The life expectancy of these items can be estimated based on usage and manufacturer's recommendations. Items such as hose and ladders can remain in service indefinitely, provided they continue to successfully pass their annual tests.

VIII. FIRE PREVENTION

OVERVIEW

The core service that a fire department provides to the public it serves begins with fire prevention. Fire prevention activities are one of the most important missions of a modern-day fire department. A comprehensive municipal fire protection system should include, at a minimum, the key functions of fire prevention, code enforcement, inspections, and public education. Preventing fires before they occur, and limiting the impact of those that do, should be priority objectives of every fire department. Educating the public about fire safety and teaching them appropriate behaviors on how to react should they be confronted with a fire is also an important life safety responsibility of the fire department. At some level, fire prevention efforts should involve all members of the Department, or in call departments such as Williamstown, as many personnel as possible.

Fire prevention activities in a municipal fire department typically include fire safety inspections; fire code enforcement; issuance and oversight of permits; review of construction plans for new buildings and the renovation of existing buildings; and public fire safety education programs. Since fire prevention should be approached in a truly systematic manner, and many community stakeholders have a vested interest and/or responsibility in these efforts, various activities such as plan reviews, permits, and inspections should be coordinated with similar activities in the municipal building inspection department and/or planning departments in each community.

Inspection and code enforcement procedures and policies must conform to the Commonwealth of Massachusetts statutory requirements, and the regulations and the policies of the Massachusetts Department of Fire Services, Office of the State Fire Marshal. The local fire chief, or his/her designee, is authorized to enforce 527 CMR (Code of Massachusetts Regulations), Board of Fire Prevention Regulations, also known as the Massachusetts Comprehensive Fire Safety Code. Investigation of the origin and cause of fires also generally falls under the responsibility of the fire prevention bureau in a fire department. Although based on relative and frequency of events, Williamstown should pursue this as a regional effort.

OBSERVATIONS

From strictly a fire prevention perspective, the Chief's duties include:

- plan reviews for new construction and renovations including fire sprinkler systems and fire alarm systems;
- in progress inspections of various construction and renovation projects;
- signing off on certificates of occupancy for new and renovated buildings;
- issuing permits and conducting various permit-related inspections;

- conducting quarterly school inspections;
- conducting annual liquor license inspections;
- performing change of ownership smoke detector/carbon monoxide detector inspections in residential occupancies;
- observing acceptance tests of fire protection systems (fire alarm systems, automatic fire sprinkler systems and fire extinguishing systems);
- supervising underground tank removals;
- performing oil burner inspections;
- conducting public fire education programs; and
- responding to citizen inquiries and complaints

The Commonwealth of Massachusetts has implemented 3 levels of fire prevention credentialing. Level 1; allows personnel to perform basic company level inspections. Level 2; provides more advanced knowledge and understanding of the code and administrative procedures. Level 3; is for fire prevention administration and management. It is important to remember that performing fire prevention inspections is a life safety specialty. Using people who are not properly credentialed will present a significant liability to the Town.

The Commonwealth of Massachusetts requires that the Fire Department and the Building Department work together to enforce their respective codes/regulations. There is significant overlap in their respective responsibilities, particularly in restaurants, assembly occupancies and educational uses, and in some areas, they share joint jurisdiction. Both departments need to sign off annually that required fire and life safety inspections have been satisfactorily completed as required for businesses that hold a liquor license and some place of assembly uses. Assertion; the authority for the issuance of permits and licenses is pursuant to Massachusetts General Law (MGL) Chapter 148, or 527 CMR. The authority to charge fees is derived from MGL Chapter 148, section 10A. Most of the fees are established by the commonwealth and individual towns cannot charge more than the state maximum. It is unknown if periodic financial audits are conducted regarding this aspect of operations; however, a comprehensive audit of fire prevention revenues should be conducted at least annually.

If necessary, for larger and/or more complex projects the Department can utilize outside consultants to assist with plan review and/or inspections. This outside assistance can include fire protection engineers and personnel from the state fire marshal's Office of Code Enforcement. At the time of this assessment, Williamstown does not have a false alarm billing bylaw, as permitted under MGL, to use as a tool against locations from which repeated false alarms are received. Under model bylaws, after 3 false alarms, a letter is sent to the facility/owner directing them to repair the system to proper working order. If compliance is not achieved, subsequent false alarms result in the levying of fines/penalties. Most communities only include commercial occupancies in their bylaw. Residential occupancies are exempt. MRI noted in the review of calls that there are approximately 99 fire alarm responses a year. Determining which of those alarms

are frequently false should be reviewed and communications with the property owner to resolve the false alarms should be accomplished.

Investigation of the basic origin and cause of fires also generally falls under the responsibility of the fire prevention bureau in a fire department. The Williamstown Fire District does not have a formal written procedure in place regarding the investigation of fires. Generally, for any fire that results in property damage the Fire Chief will conduct an initial investigation to provide fire cause and origin determination. Investigators from the state fire marshal's office are requested to assist with large or complex fire investigations, if the fire is deemed to be suspicious or incendiary, or when specialized investigative resources are required (such as an accelerant detection dog), which is typical for communities the size of Williamstown. The state fire marshal's office is also called in for fires that result in a fatality.

Fire prevention should be promoted as a key component of the vision of the Williamstown Fire District and should be a major aspect of its primary mission. Aggressive fire prevention programs are the most efficient and cost-effective way to reduce fire risks, fire loss, and fire deaths and injuries in the community. Fire prevention is a key responsibility of every member of the Fire Department and to the extent practical, every member of the Department should have a responsibility for fire prevention.

RECOMMENDATIONS

VIII-1 The Williamstown Fire District should encourage and support training and professional development activities for department members in the fire prevention and fire inspection areas. This can include, among other endeavors, attendance at the Fire Prevention Association of Massachusetts, and Massachusetts Firefighting Academy. At minimum full-time personnel should be required, to possess/obtain Fire Inspector Level I credentialing as a condition of employment. Call personnel should be encouraged to obtain this training/certification as well.

VIII-2 Should the Williamstown Fire District decide to staff personnel on a per-diem or standby status, the Williamstown Fire District should establish a formal in-service fire safety inspection program. The on-duty personnel can be assigned with the responsibility for "in-service" inspections to identify and mitigate fire hazards in buildings and to familiarize firefighters with the layout of buildings, identify risks that may be encountered during firefighting operations, and to develop pre-fire plans. On-duty personnel in many departments are assigned responsibility for permit inspections and public fire safety education activities. In order to establish an in-service inspection program, it will be necessary to:

- **Train personnel on proper procedures (all personnel should be credentialed at least to the Fire Inspector I level recommended above);**

- **Develop standard operating guidelines for in-service inspections;**
- **Establish inspection schedules;**
- **Establish a system for documenting inspections and notifying property owners of fire hazards;**
- **Establish a follow-up inspection system to ensure that hazards have been mitigated; and**
- **Require on-duty personnel to conduct regular in-service inspections of all building construction sites in the Town.**

VIII-3 The Williamstown Fire District should continue to update its website on a regular basis to provide its customers, and other interested parties, as much information as possible on fire safety, fire prevention, and the Department as a whole. The Department should also work actively to make on-line permitting, inspection scheduling, etc. a reality.

VIII-4 The Williamstown Fire District should consider the adoption of a bylaw as permitted under MGL to allow enforcement action, including the issuing of fines/penalties for repeat false fire alarm activations.

VIII-5 The Williamstown Fire District should make the delivery of year-round public fire safety education programs, in the schools, and throughout the community a top priority since this is the area where the fire service is most effective at preventing fires, injuries, and deaths. Personnel should be encouraged to obtain the Fire and Life Safety Educator certification issued by the state fire marshal's office.

VIII-6 The Williamstown Fire District should continue to maintain and enhance its library of fire prevention reference materials, including maintaining online subscriptions such as NFPA and its professional subscriptions.

VIII-7 The Williamstown Fire District should consider participating in the red and blue joint fire investigation team program in a collaborative endeavor with other local fire departments and the Williamstown Police Department. This would allow routine fire cause and origin investigations to be conducted by local area public safety personnel. In most cases the "red" component, fire personnel, are a regional resource, while the "blue" component, police personnel, are from the local jurisdiction. When necessary, the State Fire Marshal can still be requested to assist with large or complex fire investigations or when specialized investigative resources are required (such as an accelerant detection dog). The State Fire Marshal's Office is also automatically called in for fires that result in a fatality.

IX. CONCLUSIONS AND IMPLEMENTING CHANGE

Based upon this analysis of the organization and operations of the Williamstown Fire District, MRI concludes that there are four areas that should be a priority and need to be addressed. They are as follows:

1. Facility replacement
2. Staffing model change to meet changing emergency service demands
3. Apparatus and Equipment Capital Improvement Plan (CIP)
4. Strategic Plan roadmap looking at three, five, and ten-year organization

The future stability and longevity of the Williamstown Fire District is dependent on its modernization and preparation for moving forward in the future years. A facility replacement is key to this initiative. The current facility has far outlived its functional ability to effectively and efficiently deliver emergency services to the community. It's lack of space for apparatus and equipment alone limits the ability of the district to replace it's apparatus and equipment needs without having to modify the specifications in order to have the apparatus fit in the apparatus bays designed for apparatus in the 1950's. These modifications add costs to the purchase of these apparatus and equipment purchases. Additionally, obsolete HVAC equipment, lack of meeting space, office space, decontamination equipment, and general building site restrictions complicates the district's ability to keep up with current needs.

A challenge in the recruitment and retention of firefighters, which is growing not only in Williamstown, but also statewide, regionally, and nationwide will require the district to begin preparing to change staffing models in the future to deliver the emergency services the community desires. This transition will take a number of years and must be started in the near future.

The district lacks any type of long-range or strategic plan that charts its projected path to the future. A strategic plan should be developed jointly in collaboration with stakeholders in the Town of Williamstown in order to establish goals and objectives that will assist the Department's roadmap over the next three, five, and ten years.

The Williamstown Fire District has a number of positive attributes, most notably its dedication and commitment by WFD members. An Insurance Services Rating (ISO) of 04/4x is commendable for the organization and shows the organization has the ability to build upon its successes. The Williamstown Fire District must engage in innovative strategies to address these priorities.

Despite these challenges, MRI clearly acknowledges and recognizes that when staffing positions are filled, the personnel of the Williamstown Fire District together as a team, is moving the organization forward.

To that end, MRI proposes the following objectives as a roadmap for initiating change and moving forward with delivery of exceptional emergency services to the community.

RECOMMENDATIONS

IX-1 **Williamstown should enter into discussions with the municipal administrations, governing bodies, and fire department leadership of its adjacent communities, for the purposes of identifying possible future opportunities for shared services and explore the feasibility of a more regional approach to fire protection and EMS delivery systems.**

IX-2 **MRI recognizes and is aware that some of the identified challenges identified in this management letter are being addressed (or resolved). This management letter serves as a document that can be used in the future to provide a record of past history therefore those areas are identified.**

In conclusion, local governments missions performed by its Fire Department are some of the most basic and fundamental functions of government; that is to ensure the safety and protection of its residents and visitors. MRI is confident that the members of the Williamstown Fire Department strive to meet that function.

The real issue facing the Williamstown Fire Department, and the Town of Williamstown, as it is for every community, is to determine an acceptable level of risk and then define an appropriate level of service for the community. There is no "right" amount of fire protection or EMS delivery. It is a constantly changing level based upon the expressed needs of the community. Determining the appropriate level of service also involves deciding upon the municipalities' fiscal ability, and willingness, to pay for the desired level of service. These are decisions that the citizens of the Town, the Prudential Committee, Select Board, and Town Manager will ultimately need to make.

MRI would like to take this opportunity to express its appreciation for the cooperation received through all levels of the Town of Williamstown for its role in the completion of this study.

Consolidated List of Recommendations

COMMUNITY RISK ASSESSMENT

II-1 **MRI recommends that the Williamstown Fire District develop and implement an internal risk management plan following the recommendations of NFPA 1500, Standard for a Fire Department Occupational Safety and Health Program, and, NFPA 1250, Recommended Practice in Fire and Emergency Services Organization Risk Management.**

II-2 **The Fire District has a moderate to high level of risk based on the cursory review and assessment of the community. MRI recommends the Fire District focus its future planning goals towards that risk and develop staffing, facility, and apparatus needs based on that assessment. To further define and identify definitive risks within the community the District will need to conduct a comprehensive risk assessment and incorporate the findings into a strategic plan for the future.**

II-3 **MRI recommends that the Williamstown Fire District should develop a compelling public education program that includes educating and discussing the benefits of installing residential fire sprinklers in new one- and two-family dwellings.**

II-4 **MRI recommends The Town of Williamstown should strongly consider adopting a municipal bylaw, requiring the installation of automatic fire suppression systems, or, fire water supply cisterns in any new development consisting of three or more homes or, for any individual home of larger than a designated square footage, in the areas of the Town that are not covered by the municipal water supply system.**
community the District will need to conduct a comprehensive risk assessment and incorporate the findings into a strategic plan for the future.

PRESENT AND FUTURE NEEDS OF THE WILLIAMSTOWN FIRE DISTRICT

IV-1 **The Fire District organizational rank structure utilizes Assistant Chief Engineers as part of the command staff of the Williamstown Fire Department. There are not any other officer ranks below that level, as detailed in the organizational chart. MRI recommends that a review of the current organizational rank structure of the Williamstown Fire Department be conducted in order to assess the need to add to the current rank structure within the Fire District by creating Company Fire Officer positions at the rank level of Captain and Lieutenant. The addition of these ranks will provide greater opportunities for individual growth within the organization, maintains an effective span of control throughout the organization, and provides an incentive and opportunity for individuals within the organization that desire to seek higher levels of responsibility**

through a company officer position. The addition of Company Fire Officer positions is also an excellent tool for recruitment and retention of personnel.

IV-2 MRI observed that within the group of the Assistant Fire Chief Engineers that there is a long history of service to the Williamstown Fire District and a majority of the Assistant Fire Chief Engineers will soon consider retiring from the Williamstown Fire District. The Assistant Fire Chief Engineer positions provide the Fire Chief with his leadership team in the operation of the Fire District. In interviews with firefighters it was identified as a concern for them also having a potential leadership gap in the near future. MRI recommends that the District develop an officer training program or sponsor individuals at the Massachusetts Fire Academy Fire Officer Courses for those who are interested in becoming a Fire Officer in the future. Concurrent with the development of interested personnel the Fire District should establish qualifications and job descriptions for the Fire Officer positions. This planning should also include succession planning for the Fire Chief's position.

IV-3 MRI recommends that the Prudential Committee and the Fire Chief consider the creation of daytime hourly positions for per diem Firefighters, or increase funding for on-call firefighters to provide standby coverage during weekdays and weekends in order to assure adequate response to emergencies is maintained. Initiation of this staffing alternative can be implemented over future budget cycles in order to reduce tax increases on Fire District taxpayers. This staffing change will assure the initial response to requests for emergency services is maintained into the future without changes to the current on-call staffing model in place. The staffing model change also prepares the Fire District to meet the community's expectations should recruitment and retention efforts decline.

IV-4 The Williamstown Fire District should apply for a federal SAFER grant for funding positions for per diem or paid on-call members, and for paid on-call recruitment and retention. This grant should be utilized to develop a comprehensive marketing program to attract new members and provide incentives for the retention of those personnel currently in the Fire Department. The grant also may be used for equipment and personnel costs related to the hiring of new members.

IV-5 MRI recommends that the Police Chief and Fire Chief jointly develop a training class for all public safety personnel that provides training on the operations, procedures, and guidelines to follow when communicating with the Dispatch Center. Part of the training class should include a tour of the dispatch facility.

IV-6 MRI recommends that the Fire District review and update all run cards which specifically details which apparatus should respond to specific incidents. A review of current dispatch documents reveals they have not been reviewed recently. Once reviewed and

updated the run cards should be presented to the dispatch center for input and implementation.

IV-7 MRI recommends that the Fire Department and Police Department meet to develop a joint incident scene "operations" protocol to minimize blocking the flow of traffic while also being able to provide appropriate safety for personnel working at an incident. These protocols should also address protocols for first responders who respond to incident scenes in private vehicles. The protocol should detail parking at incident scenes for fire apparatus and private first responder vehicles. This will help to alleviate the Police Department's concerns of congested emergency scenes.

IV-8 MRI recommends that the Select Board, Town Manager, Prudential Committee, Fire Chief, and Police Chief engage in further collaboration and communication initiatives in order to gain a strong understanding of the Fire Departments mission, current needs, and future strategic planning efforts. In turn, at a minimum, the Fire Department leaderships should meet often throughout the year with the Select Board (at a minimum quarterly), to discuss department issues, budget planning for the upcoming fiscal year, and strategic and capital improvement planning.

IV-9 MRI recommends that Williamstown Fire District convene a focus group, to determine what concepts and recruitment and retention strategies are feasible and most attractive to potential candidates. The group should also bring forth recommendations on incentives and strategies to recommend to the Prudential Committee.

IV-10 MRI recommends that the Williamstown Fire District should make it a priority to develop an active on-call recruitment team led by a company officer. At a minimum, this program should consist of:

- **Developing a recruitment brochure and mailing it to all residents**
- **Holding periodic open houses at the fire station**
- **Performing public out-reach through the local media**
- **Contacting community and service groups including Williams College resources**
- **Developing an eye-catching banner on the Town's and Fire Department's websites and conducting radio and media advertisements**
- **Placing signs recruiting call/volunteer personnel at the main entrances to town**
- **Placing signs for call/recruiting volunteers in local businesses, particularly high-volume locations**
- **Implementing or enhancing a fire explorer program**

IV-11 MRI Recommends that Williamstown Fire District should obtain membership and seek assistance from the Massachusetts Call and Volunteer Firefighters Association (MCVFA)

and Fire Chiefs Association of Massachusetts (FCAM) relative to enhancing recruitment and retention efforts in Williamstown.

IV-12 MRI Recommends that the Fire Chief should obtain membership and seek assistance from the International Association of Fire Chiefs (IAFC) and the Volunteer Combination Officers Section (VCOS) within the IAFC to gain further information and education on best practices in leading a call firefighter organization such as the Williamstown Fire District, as well as enhancing recruitment and retention efforts in Williamstown. Additionally, the Fire Chief should attend the annual VCOS symposium sponsored by the IAFC organization, in order to be able to network and gain unique ideas and perspectives from other chief officers related to combination fire departments. This is one of the largest symposiums which specifically addresses call and combination fire organizational needs.

IV-13 MRI recommends that Williamstown Fire District seek membership with the National Volunteer Fire Council (NVFC) www.nvfc.org to obtain recruiting and retention suggestions and reports to support the recruitment and retention efforts of the District.

IV-14 During one of MRIs interviews post site visit, one suggestion from a person with public relations and a public information background, was the need for the Williamstown Fire District to develop a strong and continual marketing plan in order to introduce the needs of the organization to the taxpayers of the Town. Meetings with local groups, organizations, stakeholders, community leaders, state and federal representatives, visibility at local community events, tours of the fire station and apparatus, and inclusion of representatives of key organizations in planning efforts were also suggestions made which would assist with the Districts future plans. MRI recommends that the Williamstown Fire District seek out marketing and public relations volunteer to assist with the development of any presentations for infrastructure, apparatus, equipment or other capital projects. The Fire Chief or his designated representative should also continue to utilize social media and to involve other members of the Department in providing updated news, activities, and fire prevention tips and information to enhance the community's knowledge about the Williamstown Fire Department.

FIRE STATION, APPARATUS, EQUIPMENT RECOMMENDATIONS

V-1 **MRI recommends that the Fire District continue to move forward with their efforts for the replacement of the Water Street Fire Station. MRI believes that the Maguire Group Feasibility Study dated December 22, 2008 still contains valid assessments and recommendations for a new fire station. Consideration for future needs beyond 10 years should be included in any future planning for a new facility. An example of this**

would be including dormitory rooms and office space should the district change over to a different staffing scenario.

V-2 **Given the eleven years since the Maguire Study, MRI recommends that a review and update of the study be conducted in order to affirm the space needs that were proposed in 2008, determine if there are any fire and life safety codes, building codes, safety systems, and technology that has been updated, improved, or replaced. An updated cost estimate should also be obtained again for the changes in construction costs from 2012 (last update to costs from 2008 estimate) until now.**

V-3 **MRI recommends that in anticipation of the potential for a new facility to be constructed and as a stop gap measure to improve safety, accessibility, and mobility around the current fire station apparatus bays, that any obsolete hose, gear, firefighting appliances, SCBA, or other items no longer in use be disposed of.**

APPARATUS AND EUQUIPMENT

VI-1 **MRI recommends the Williamstown Fire District should develop a comprehensive apparatus replacement plan that spans a 20-year period. The plan should include detailed specifications, cost, projected replacement date and any other information that will provide a cyclical road map of the replacement schedule.**

VI-2 **MRI recommends that Williamstown Fire District consider the replacement of the engine or tower with a "quint" (Figure 48). Fire Departments that have limited manpower to operate apparatus are considering replacing their Engine, Ladders, and Towers with "Quint" fire apparatus.[16]**

VI-3 **The Williamstown Fire District should ensure that all fire apparatus pumps are serviced, inspected, and tested at intervals no greater than 12 months apart, in accordance with NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented.**

VI-4 **The Williamstown Fire District should ensure all department aerial and ground ladders are serviced, inspected and tested at intervals no greater than 12 months apart, in accordance with NFPA standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented.**

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[16] *A "quint" serves the dual purpose of an engine and a ladder truck. The name quint refers to the five functions that a quint provides: pump, water tank, fire hose, aerial device and ground ladders.*

VI-5 **The Williamstown Fire District should ensure that all department hose is inspected and tested, at intervals no greater than 12 months, in accordance with NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented.**

VI-6 **The Williamstown Fire District should develop a complete inventory of all department equipment, review compliance with NFPA criteria (including the proper organization and mounting and securing of equipment in crew cabs and compartments) and assess the Department's own operational and equipment needs. The inventory should be updated at least annually to ensure that it is current.**

VI-7 **The Williamstown Fire District should adopt a policy of purchasing new NFPA 1901 compliant equipment when new apparatus is purchased. This policy will ensure that equipment is the most technologically up-to-date and that it is safe and functional. It will also make it possible to keep reserve apparatus fully equipped for immediate use.**

VI-8 **The Williamstown Fire District should establish a formal replacement plan for equipment. The regular replacement of large cost items such as hose and SCBA on an incremental basis will avoid major one-time increases in the operating budget. The life expectancy of these items can be estimated based on usage and manufacturer's recommendations.**

VI-9 **The Williamstown Fire District should take advantage of the fire apparatus and ambulance group purchasing system that is sponsored by the Fire Chiefs Association of Massachusetts (FCAM) and the Metropolitan Area Planning Council (MAPC). Municipalities may select a specific design and manufacturer from a pre-determined bid list and are not required to establish their own bid process. It is estimated that this group purchasing system will save approximately five to ten percent of the cost of a fire truck (see www.mapc.org).**

VI-10 **The procurement of most of Williamstown's future apparatus needs will normally be funded at the annual town meeting. However, in any given year, a federal Assistance to Firefighters Grant (AFG or Fire Act) could also be pursued as a way to obtain funding. This is particularly true if the requested apparatus is going to replace more than one unit. If the AFG grant application is successful, then any already capital project funding can be cancelled.**

FISCAL FORECASTING & CAPITAL PLANNING

VII-1 The Williamstown Fire District should review all fees on an annual basis for possible increases in accordance with state law.

VII-2 The Williamstown Fire District should explore additional potential ways to generate revenue to offset the fire department's operating costs. Consideration could be given to billing insurance companies for response to motor vehicle accidents; registration fees for fire alarm systems; and, implementing fines for repeat false alarms.

VII-3 The Williamstown Fire District should identify and prioritize its most critical equipment, training and/or operational needs, and apply annually to the Assistance to Firefighters Grant (AFG) program. This should include making applications for apparatus capital replacement projects that will otherwise be funded through the Town's capital budget and at town meeting.

VII-4 The Williamstown Fire District should apply for a federal SAFER grant in 2020 for the purpose of staffing and the recruitment and retention of current personnel.

VII-5 The Williamstown Fire District should prioritize its fire prevention and public fire education needs and apply annually to the Fire Prevention and Safety Grant (FP&SG) program.

VII-6 The Williamstown Fire District should actively search for other grant opportunities. Grants for fire protection, fire safety, fire prevention, domestic and emergency preparedness, and homeland security may be available from federal, state, corporate, and foundation sources.

VII-7 The Williamstown Fire District should actively seek out businesses that may be interested in establishing public/private partnerships that could provide, or assist with, funding for various programs, projects, or initiatives.

VII-8 The Williamstown Fire District should establish a formal replacement plan for equipment. The regular replacement of large cost items such as hose, ladders, PPE, portable radios, AEDs, and even SCBA on an incremental basis will avoid major one-time increases in the annual operating budget where such purchases should be funded. For instance, the hose and ladders on one vehicle can be replaced in one fiscal year, another the following year, etc. The life expectancy of these items can be estimated based on usage and manufacturer's recommendations. Items such as hose and ladders can remain in service indefinitely, provided they continue to successfully pass their annual tests.

FIRE PREVENTION

VIII-1 VIII-1 The Williamstown Fire District should encourage and support training and professional development activities for department members in the fire prevention and fire inspection areas. This can include, among other endeavors, attendance at the Fire Prevention Association of Massachusetts, and Massachusetts Firefighting Academy. At minimum full-time personnel should be required, to possess/obtain Fire Inspector Level I credentialing as a condition of employment. Call personnel should be encouraged to obtain this training/certification as well.

VIII-2 Should the Williamstown Fire District decide to staff personnel on a per-diem or standby status, the Williamstown Fire District should establish a formal in-service fire safety inspection program. The on-duty personnel can be assigned with the responsibility for "in-service" inspections to identify and mitigate fire hazards in buildings and to familiarize firefighters with the layout of buildings, identify risks that may be encountered during firefighting operations, and to develop pre-fire plans. On-duty personnel in many departments are assigned responsibility for permit inspections and public fire safety education activities. In order to establish an in-service inspection program, it will be necessary to:

- **Train personnel on proper procedures (all personnel should be credentialed at least to the Fire Inspector I level recommended above);**
- **Develop standard operating guidelines for in-service inspections;**
- **Establish inspection schedules;**
- **Establish a system for documenting inspections and notifying property owners of fire hazards;**
- **Establish a follow-up inspection system to ensure that hazards have been mitigated; and**
- **Require on-duty personnel to conduct regular in-service inspections of all building construction sites in the Town.**

VIII-3 The Williamstown Fire District should continue to update its website on a regular basis to provide its customers, and other interested parties, as much information as possible on fire safety, fire prevention, and the Department as a whole. The Department should also work actively to make on-line permitting, inspection scheduling, etc. a reality.

VIII-4 The Williamstown Fire District should consider the adoption of a bylaw as permitted under MGL to allow enforcement action, including the issuing of fines/penalties for repeat false fire alarm activations.

VIII-5 The Williamstown Fire District should make the delivery of year-round public fire safety education programs, in the schools, and throughout the community a top priority since this is the area where the fire service is most effective at preventing fires, injuries, and deaths. Personnel should be encouraged to obtain the Fire and Life Safety Educator certification issued by the state fire marshal's office.

VIII-6 The Williamstown Fire District should continue to maintain and enhance its library of fire prevention reference materials, including maintaining online subscriptions such as NFPA and its professional subscriptions.

VIII-7 The Williamstown Fire District should consider participating in the red and blue joint fire investigation team program in a collaborative endeavor with other local fire departments and the Williamstown Police Department. This would allow routine fire cause and origin investigations to be conducted by local area public safety personnel. In most cases the "red" component, fire personnel, are a regional resource, while the "blue" component, police personnel, are from the local jurisdiction. When necessary, the State Fire Marshal can still be requested to assist with large or complex fire investigations or when specialized investigative resources are required (such as an accelerant detection dog). The State Fire Marshal's Office is also automatically called in for fires that result in a fatality.

CONCLUSIONS AND IMPLEMENTING CHANGE

IX-1 **Williamstown should enter into discussions with the municipal administrations, governing bodies, and fire department leadership of its adjacent communities, for the purposes of identifying possible future opportunities for shared services and explore the feasibility of a more regional approach to fire protection and EMS delivery systems.**

IX-2 MRI recognizes and is aware that some of the identified challenges identified in this management letter are being addressed (or resolved). This management letter serves as a document that can be used in the future to provide a record of past history therefore those areas are identified.