



## **TOWN OF NEWINGTON, NEW HAMPSHIRE**

### **FIRE SERVICE PLANNING**

### **ORGANIZATIONAL ASSESSMENT**

#### **I. PROJECT OVERVIEW, PURPOSE, SCOPE, AND METHODOLOGY**

##### **PROJECT OVERVIEW**

The Town of Newington 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 community 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 Town of Newington, and recommendations for appropriate modifications to the delivery systems to provide the desired level of fire services to the Town. The profiles of the team members from MRI can be found beginning on page 60 of this document.

MRI has developed this report containing recommendations for improvements to organizational practices, recruitment and retention efforts, infrastructure, and on-call staffing. The project team has developed a narrative recommending appropriate modifications to the fire and rescue delivery systems to provide optimum service to the entire community. It has also evaluated the efficient use of resources, and whether the current organizational structure is appropriate or should be modified.

A key component of the basis of this report is that the Town of Newington is seeking to evaluate the current operations of the Fire Department, to identify the present and future fire service needs of the community and to provide recommendations that will assist the community with decision making for resource allocation and operational planning report. This project will address the following key questions

1. Is the Fire Department able to meet present and future needs of the community and the 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 facility improvement or replacement?

### **SCOPE OF WORK**

This study required intensive involvement within the Fire Department leadership, community and included interviews with the Town Manager, elected officials, the Fire Chief, fire personnel, and other stakeholders.

The study focused on an assessment to determine whether the existing organizational model, staffing, facilities, apparatus, and equipment of the Town of Newington 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 Department 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, educational, 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 and Assistant Fire Chief

- Reviewed organizational structure for appropriateness
- Assessed the Department’s part time 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

Specifically, the Town of Newington outlined the following six items to be addressed in the review:

- 1) Review of Fire and Rescue service data and operations including but not limited to response times, on call participation levels and capabilities.
- 2) Review of emergency incident volumes and trends, community demographics and target hazards.
- 3) Identify emergency vs non-emergency call volume.
- 4) Conduct a spatial needs analysis considering the current and future needs of the organization.
- 5) Review apparatus, develop an ideal apparatus set for the Town of Newington, develop a proposed capital plan that will meet the needs of the organization
- 6) Recommend a future staffing plan for the Newington Fire Department.

Much of this plan of service was done on site at the fire station, and with the COVID 19 pandemic, research and interviews were conducted remotely. The project team spent several hours of time on-site; making observations, inspecting facilities, equipment and records and conducting interviews.

The current Newington Fire Department facility and the planned building addition 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, and solicited input from department members to obtain further information on current operations of the department, 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**

MRI conducted a study of the Town of Newington followed by the development of this report. 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 Department 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 Newington 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.
- G. An evaluation of departmental policies and procedures that impact the efficient operations of the Fire Department. 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 the depth of per diem staff and per diem recruitment and retention efforts within the Department.

To accomplish these tasks, MRI used ten work elements involved in this study. The following Nine 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 Administrator
6. Interviewed the Fire Chief and Assistant Fire Chief
7. Reviewed various fire department documents and budgets
8. Developed study report.

## II. **COMMUNITY RISK ASSESSMENT**

### **OVERVIEW**

The Town of Newington is in Rockingham County along the Seacoast of Southern New Hampshire. The Town covers 8.2 square miles of land and 4.2 square miles of water. According to the 2010 census, the Town has a resident population of 775 residents with a population density of 92.7 persons per square mile.

The Town of Newington has a median family income of \$128,333. The median age of Newington residents is 54 years old. It is important to also note that the residential makeup

of the community is 20%, with Utility/Industrial making up the majority at 48% commercial at 23% and industrial at 9%. The potential for the tax base to increase could be realized if the actual land and buildings in the old base were taken back by the Town of Newington thru proper legislation. The public safety in Newington should be able to handle the response to the area and should be receiving the tax base for it.

<b>Commercial</b>		\$245,089,880
<b>Residential</b>		\$209,284,220
<b>Industrial</b>		\$100,836,253
<b>Utility-Industrial</b>		\$505,863,900
<b>TOTAL 2019 Tax Valuation</b>		<b>\$1,061,074,253</b>

**Figure 1**  
**Age make up of Community**

The population by age group is as follows:

Age group	Percent
19 and under	13%
20-34	14%
35-54	25%
55-64	23.5%
Over 65	24.5%

**Figure 2**  
**Age make up of Community**

The Newington Fire Department (NFD) provides a full complement of fire and rescue services. These include and are not limited to 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) operating at the Advanced EMT level. The Department also has a response area in and around the waterways of the coast.

The existing Fire Headquarters is located at 80 Fox Point Road in Newington and sits at the intersection of Nimble Hill Road and Fox Point Road. This facility was previously utilized as a public safety complex until approximately 1989 when it became a dedicated fire service facility when the Police Department moved to another location. The portion of the building which housed the Newington Police Department remains under-utilized. The single-story fire station

houses 2 engines, a tower truck, one ambulance, one brush truck. The department also has 3 support vehicles and a state of the art marine unit.

The Fire Department consists of eleven full time staff, eight part time staff members and one part time administrative person. The operations of the department are overseen by a Board of Fire Engineers. 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.

## **COMMUNITY RISK ASSESSMENT**

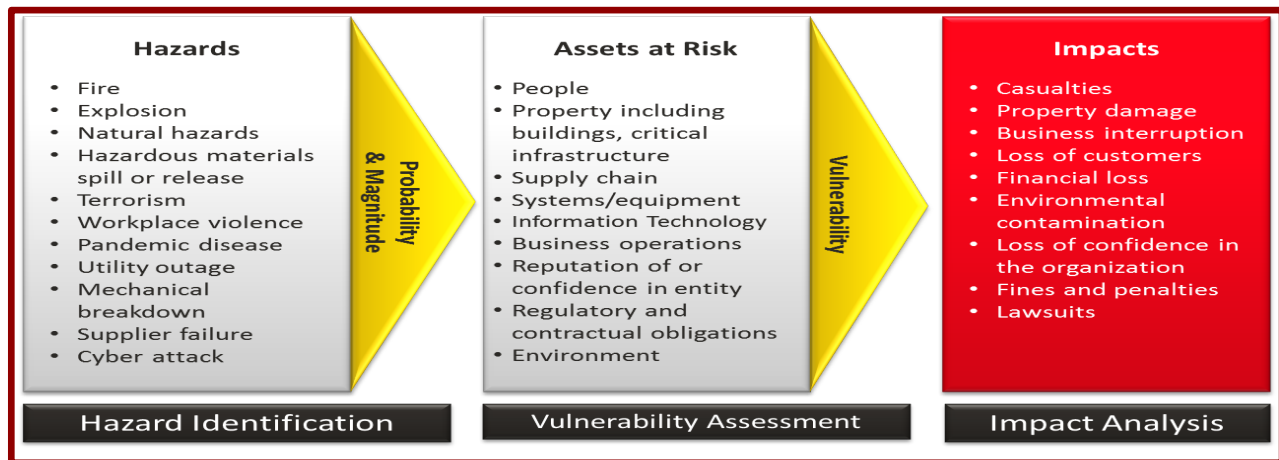
Fire and rescue services generally have a common overall mission - the protection of life and property - but fire service organizations operate in communities with differing risk profiles. Each individual fire service organization has very different fire and rescue service operational needs, based upon 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)<sup>1</sup>. 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 3).

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<sup>1</sup> [https://www.usfa.fema.gov/downloads/pdf/coffee-break/fm/fm\\_2014\\_2.pdf](https://www.usfa.fema.gov/downloads/pdf/coffee-break/fm/fm_2014_2.pdf) February 5, 2016



**Figure 3**  
**Risk Assessment Process**  
 Image credit: [www.ready.gov/risk-assessment](http://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.<sup>2</sup> The community fire risk assessment may also include determining and defining the differences in fire risk between a 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 evaluate the community as a whole, and regarding property, measures all property and the risk associated with that property and then segregates the property as either a high, medium, or low hazard.

<sup>2</sup> *Fire and Emergency Service Self-Assessment Manual, Eighth Edition, (Center for Public Safety Excellence, 2009), p. 49.*



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<sup>3</sup>.

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<sup>4</sup>.

**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.<sup>5</sup>

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 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:

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<sup>3</sup> Cote, Grant, Hall & Solomon, eds., *Fire Protection Handbook* (Quincy, MA: National Fire Protection Association, 2008), p. 12.

<sup>4</sup> <http://www.nfpa.org/assets/files/pdf/urbanfirevulnerability.pdf>.

<sup>5</sup> *National Fire Service Data Summit Proceedings, U.S. Department of Commerce, NIST Tech Note 1698, May 2011.*

## Education ▪ Enforcement ▪ Engineering Economic Incentives ▪ Emergency Response

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<sup>6</sup> (Figure 3). 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.



**Figure 4:**  
**Five Es of prevention**  
**in a community risk reduction program.**  
Image credit: [www.beaherosaveahero.org](http://www.beaherosaveahero.org)

The target hazard analysis conducted in Newington revealed an exceptional seacoast community with the following characteristics:

1. The expected level of low hazard occupancies including a highly desirable residential base.
2. A moderate level of medium hazard occupancies.
3. A disproportionately high level of complex high hazard occupancies.

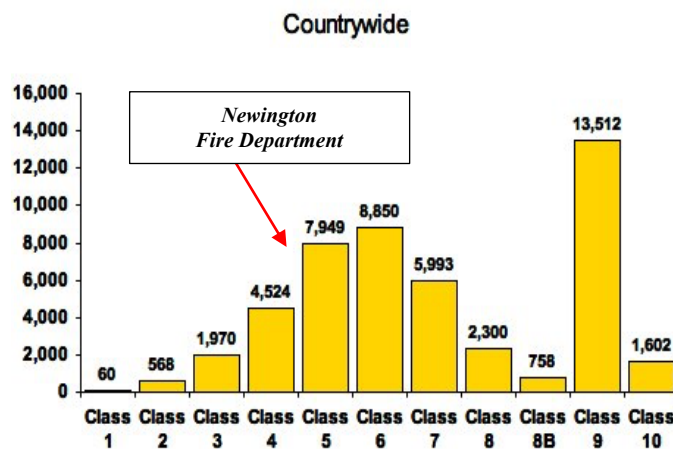
<sup>6</sup> <http://www.beaherosaveahero.org/2013/10/community-risk-reduction-crr-overview/> February 5, 2016

## INSURANCE SERVICES ORGANIZATION (ISO) RATING

The Town currently has an Insurance Services Office (ISO) rating of **05/5X**. The current rating was provided in a report dated November 2014. 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. This Class rating places the community in the middle 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 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 5**  
**ISO Grading Chart USA**  
**2018**

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. Based on the tax payer listing among the largest and most prominent property/buildings in Newington are the E.P. Newington, GSP Newington LLC, SBAF Running Fox, Inc., Fox Run Joint Venture. Other properties in the top ten include, Public Service of New Hampshire, Sprague Operating Resources LLC, Tyco Integrated Cable Systems, Sea-3, Maritimes & Northeast Pipeline, and Georgia Pacific Gypsum, LLC.

**NEWINGTON FIRE DEPARTMENT**



**Figure 6**  
**Fire Department Patch**

The Town of Newington is currently staffed with the following personnel:

- one (1) Fire Chief
- one (1) Assistant Fire Chief
- four (4) fulltime Lieutenants
- four (4) Fulltime Firefighters
- eight (8) part time firefighters
- one part time administrative assistant

Given the size of the community this configuration and staffing pattern is unusual as most communities of this size would be served by a predominantly on-call fire service agency. Considering the delivery of transport Emergency Medical Services (EMS) and the unique hazard profile of the community the current staffing model has evolved to meet the service expectations

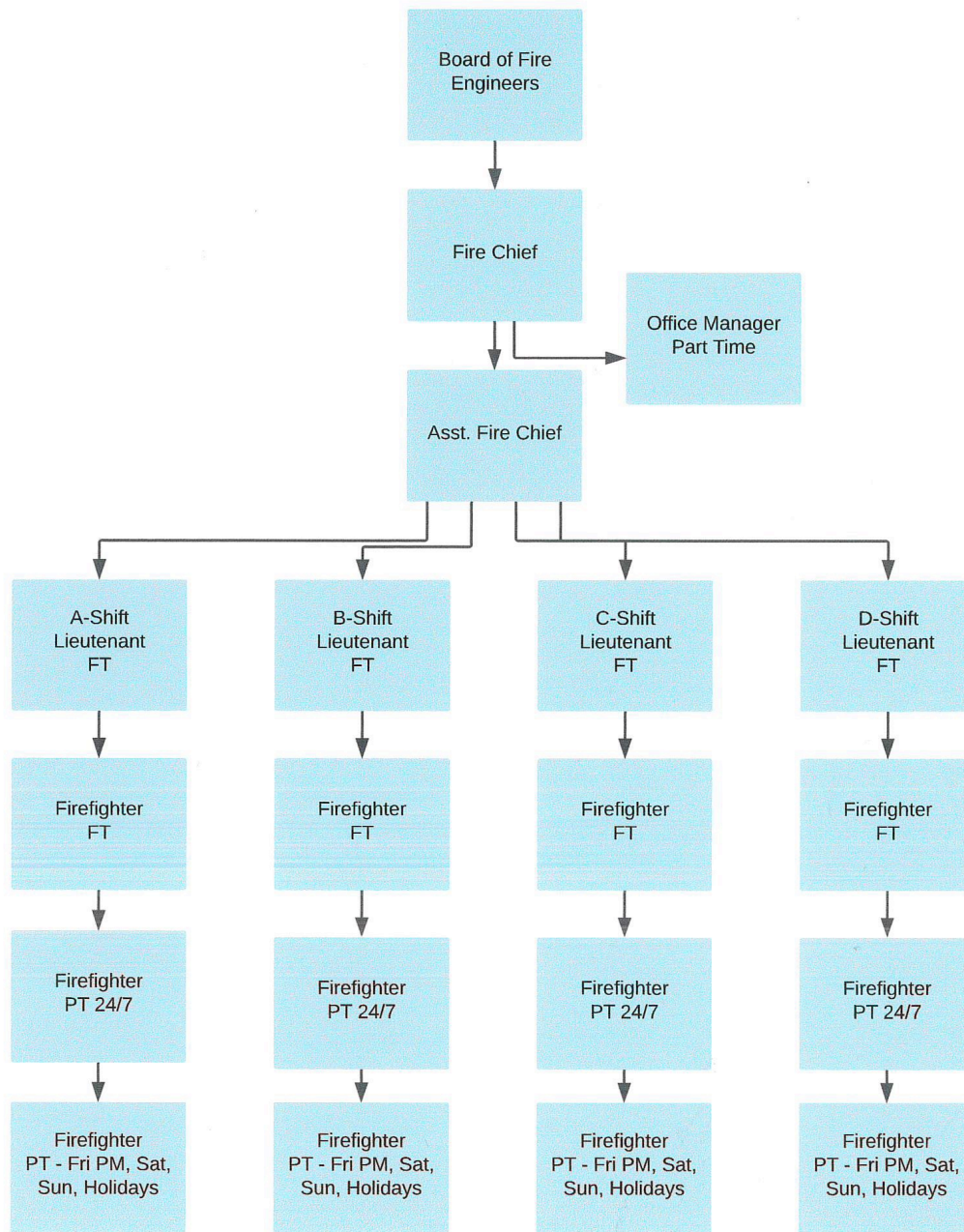
of the community. This staffing configuration was also driven by the limited availability of potential on-call firefighters that would be viable to be fully trained as certified firefighter/EMTs. We do believe that Newington is well positioned to develop a non-traditional cadre of support based personnel.

Pursuing this non-traditional strategy which is the development of a fire/rescue based emergency response team (similar to a Community Emergency response Team) would produce the following benefits:

- Increased community involvement and support;
- Providing an entry point for those interested in becoming firefighters;
- Provide a response resource to augment limited staffing;
- Provide a resource to address fire service support functions.

Dispatching is done for all public safety departments in Newington by the Rockingham County Sheriff's Department. The typical daytime call is handled by three on duty staff. The Chief and the Assistant Chief work a schedule that allows one of them to be on duty six days a week. Part time staff does not operate the apparatus and as such they will need to rely on full time call back personnel to respond with additional apparatus. Current statistics indicate that on average two people come back to duty when called. It has been noted that typically there is a great deal of hardship getting people back to the station during the week day hours. The Department is governed by a Board of Fire Engineers that by Charter has authority over the Department. In addition, the Department obtains fiscal resources by working with the Selectmen who oversee the budget and all building improvements.

**NEWINGTON FIRE & RESCUE  
ORGANIZATIONAL CHART**



**Figure 7  
Department Organizational structure  
2020**

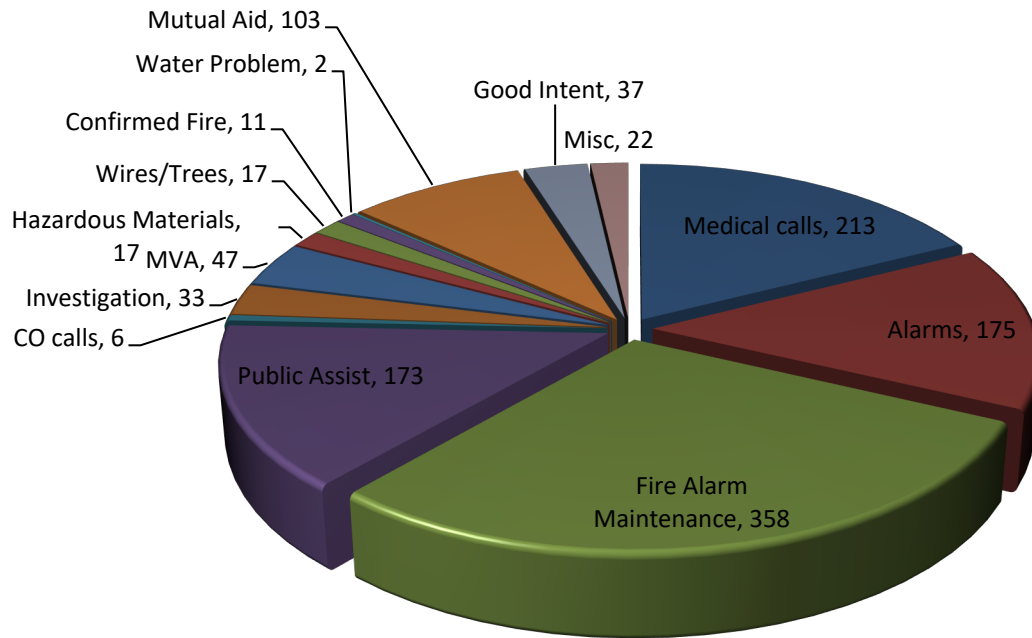
In addition, it should be expected that the roster of members continually fluctuates due to hirings, transfers and resignations. There is a growing nationwide gap in a community's ability to recruit and retain paid-on-call firefighters. Much of the gap is due to the heavy demands placed on on-call firefighters 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. Typically, we recommend that fire service organizations enhance recruitment strategies. In Newington it is clear that an on-call model is not a viable option.

### **INCIDENT-CALL VOLUME**

For the year ending 2019, Town of Newington Fire Department responded to 1214 calls for service and conducted 295 inspections. There were 11 confirmed fires and 209 Medical aid calls during the year. The largest category of calls, 358 was related to fire systems being taken in and out of service for maintenance or repair. Although this is not an emergency it does indicate the wide variety of services that the Department provides to the community and the actual amount of work the staff does. The chart on the following page indicates the type and number of each type of call in the count.

A review of this data indicates following:

- 57% of workload involves the response to emergencies calls including 213 emergency medical calls and 470 fire related calls.
- 43% of workload involves the response to non-emergency calls including providing public assistance and alarm system management.



**Figure 8**  
2019 Call Types

As part of the Seacoast Chief Officers Mutual Aid District the town gives and receives mutual aid in an organized fashion. In 2019 the department provided aid 108 times with 35 of these being for medical emergencies which, in turn brings revenue back to the community. An additional 67 incidents were to provide staffing and equipment for fire related incidents.

From the perspective of effective emergency response, there are three main factors that are used to help determine the deployment of resources: response time, travel distance, and call volume. Response time is the most critical factor; an important measuring instrument to determine how well a fire department or EMS provider is currently performing, to help identify response trends, and to predict future operational needs. Getting emergency assistance to the scene of a 9-1-1 caller in the quickest time possible may be critical to the survival of the patient and/or successful mitigation of the incident. Achieving the quickest and safest response times possible should be a fundamental goal of every fire department and EMS provider. It is not just a cliché that during critical life threatening situations, minutes and even seconds truly do count.

Structural firefighting has become far more challenging and dangerous in the last thirty years. A fire can easily at least double in size and intensity every 30 seconds. If firefighters cannot arrive in



a timely manner and attack the fire quickly, a strong possibility exists that a dangerous flashover (simultaneous ignition of the all combustible materials in a room) will occur. Flashover can occur within five to seven minutes of fire ignition, and is one of the most dangerous events that a firefighter, or trapped civilians, can face. When a flashover occurs, initial firefighting forces are generally overwhelmed and will require significantly more resources to effect fire control and extinguishment.

Heart attack and stroke victims require rapid intervention and care, and transport to a medical facility. The longer the time duration without care, the less likely the patient is to fully recover. Numerous studies have shown that irreversible brain damage can occur if the brain is deprived of oxygen for more than four minutes. In addition, the potential for successful resuscitation during cardiac arrest decreases exponentially with each passing minute that cardio-pulmonary resuscitation (CPR) or cardiac defibrillation is delayed. The true key to success in the chain of survival is the education and early access to the 9-1-1 system by civilians. The early notification coupled with the added skills of properly trained EMS staff that can arrive quickly and transport at the appropriate level of care are all key factors in a positive outcome of patients.

For EMS incidents, nationally the standard of care based on stroke and cardiac arrest protocols is to have a unit on scene at a medical emergency within six minutes from receipt of the 9-1-1 call. Paragraph 4.1.2.1(4) of NFPA 1710, which would be applicable to Newington Fire Department EMS operations since they are primarily provided by in station, per diem staff, recommends that for EMS incidents, a unit with first responder or higher level trained personnel and equipped with an AED, should arrive within four minutes of response (five minutes of dispatch of the call), and an Advanced Life Support (ALS) unit should arrive on scene within eight minutes (ten minutes of call receipt. Paragraph 4.1.2.2 recommends the establishment of a 90% performance objective for these response times. The Commission on the Accreditation of Ambulance Services (CAAS) recommends that an ambulance arrive on scene within eight minutes, fifty-nine seconds (00:08:59) of dispatch.

The response time is calculated from the time of dispatch to the time of arrival of the first piece of fire/EMS apparatus. As the chart below indicates response times from 2014 to 2019 were compared. Overall the average response time has improved in 2019 largely due to having staff in the station 24 hours a day since July. It is also important to keep in mind that there are many possible variables to actual response times such as weather, physical location of the incident compared to the location of the station (travel distance) and other simultaneous calls that may be happening.

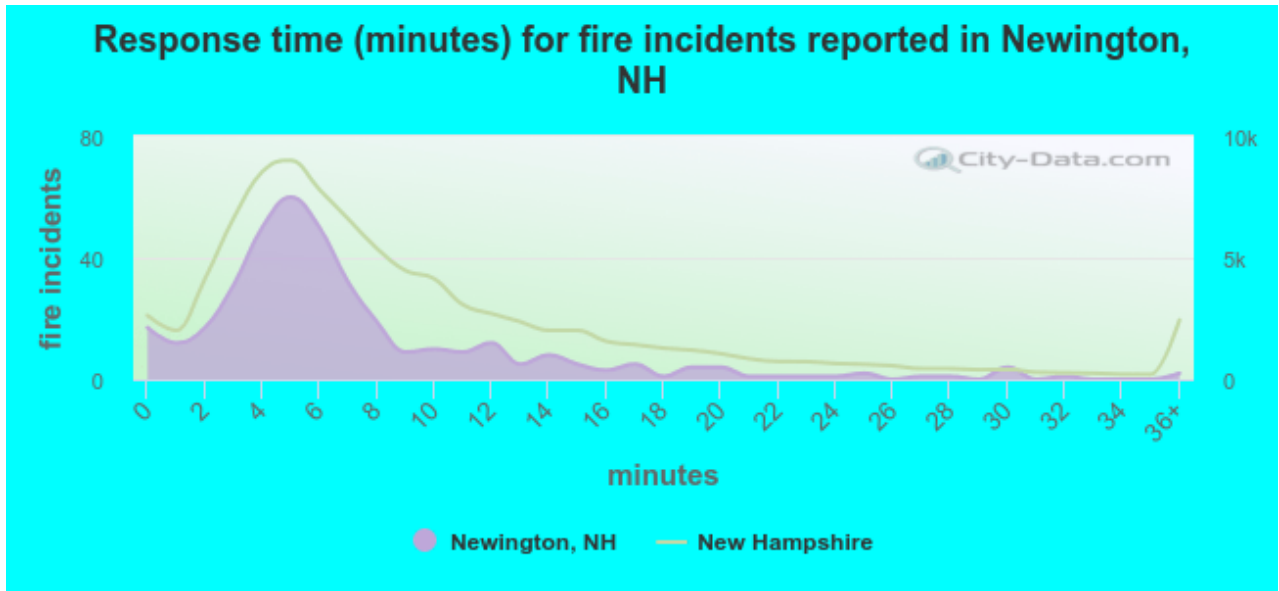


Figure 9  
City Data Response times

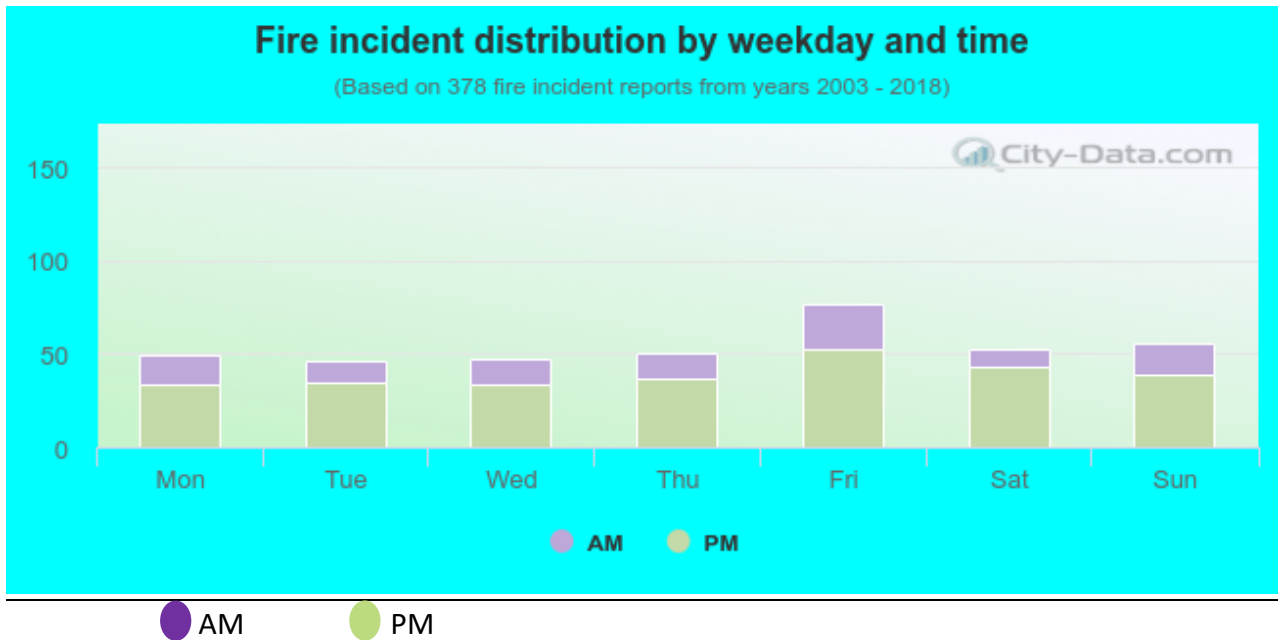


Figure 10  
City Data Incidents by day of the week

## **OBSERVATIONS**

The MRI project team conducted a basic fire safety risk assessment of the Town of Newington. 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. Newington provides an interesting mix of challenges and hazards that must be protected by its Fire Department. According to City-Data.com there are 268 single family homes, 23 two family homes, 2 mobile homes and 10 homes with 3 or more units. Newington also has a large commercial, industrial and utility base, that the Fire Department is responsible for protecting.

Although it is not clear how many commercial and residential sprinkler systems there are in Newington, we do know that 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 Town of Newington promotes and takes upon every opportunity to advocate for the installation of fire sprinklers in both residential and commercial structures.

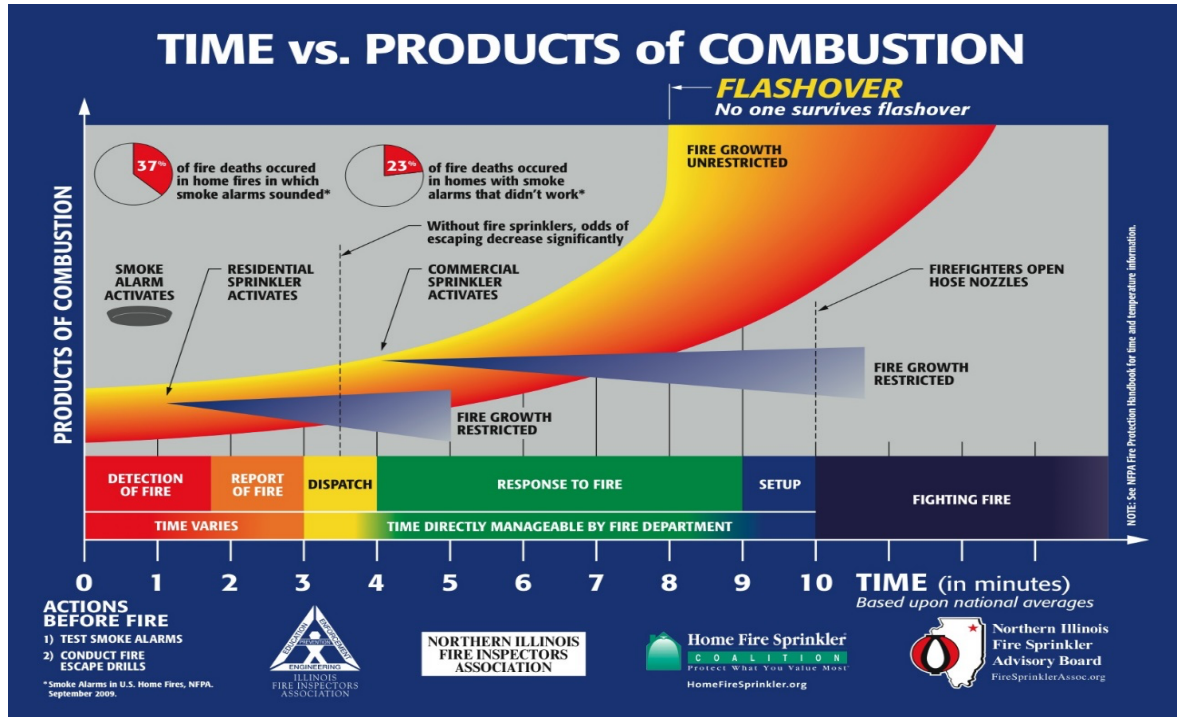


Figure 11

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>

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<sup>7</sup>. 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<sup>8</sup>. **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 of 1,000 reported structure fires was lower by 83% and the rate of property damage per reported home structure fire was lower by 68%**

Like most communities, Newington has various types of housing that is older, although still well maintained. Most of these older residential occupancies are wood frame houses.

<sup>7</sup> U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.

<sup>8</sup> U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.

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 Newington 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.

In 2019 the department response to areas of town is listed in Figure 12. This information provides a perspective on the level of risk for a given year. It should be noted that while the majority of responses are to industrial and commercial areas (68%), this reflects the majority of non-emergency responses to manage the fire alarm systems in these occupancies.

Area Classification	Response Statistics
Industrial and commercial areas	824 Incidents for 68%
Residential areas	276 Incidents for 23%
Out of district areas	103 Incidents for 9%

**Figure 12**  
2019 Responses by type of area



Overall it is the project team’s assessment that the town’s current fire and life risk is above average when compared to comparable communities. This information is outlined in Figure 13.

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

**Figure 13**  
**Town of Newington Fire and Life Safety Risk Levels.**

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 Newington 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 prevents effective response.

The above information is intended to provide a community “snapshot” of Newington. It is not intended to be all-inclusive or comprehensive. For the Fire Department 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 internally developed risk assessment should:

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

Looking ahead, the Town of Newington will continue to experience a small 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 commercial 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 Newington Fire Department. 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.

## **WATER SUPPLY**

Newington is served by an excellent water supply system through the City of Portsmouth with over 8,200 accounts on the system. The system is well supported by eight well sites and five large storage tanks. Hydrants are flushed twice a year and private hydrants are done once per year with owner agreements. All public hydrants are colored coded as shown below while all private hydrants are colored red. There appears to be a great working relationship with the fire department and the water company.



COLOR	CLASS	AVAILABLE FLOW @ 20 psi residual
BLUE	AA	1500 GPM or more
GREEN	A	1000-1499 GPM
ORANGE	B	500-999 GPM
RED	C	Below 500 GPM

Figure 14  
Town of Newington Fire Hydrant color coding (flow)

## **RECOMMENDATIONS**

***Recommendation II-1 The Newington Fire Department should provide the Town with an annual report that clearly identifies emergency and non-emergency workload/service demand.***

***Recommendation II-2 The Newington Fire Department 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.***

***Recommendation II-3 The Fire Department has a moderate to high level of risk based on the review and assessment of the community. MRI recommends the Fire Department 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 Department will need to conduct a comprehensive risk assessment and incorporate the findings into a strategic plan for the future.***

***Recommendation II-4 The Town of Newington 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.***



### **III. STAKEHOLDER COMMUNICATIONS AND DIALOGUE**

Critical to future initiatives taken on by the Newington Fire Department is the ability to engage in effective communications and dialogue with stakeholders. As society changes, effective communication is critical for public safety agencies. During interviews, our team noted that a cordial and respectful relationship exists between the Town of Newington Fire Department and the Town of Newington. In an conversation with Town Administrator Martha Roy, the project team was informed that the relationship between the Town and the department has always been one of cooperation with each other. It was clear that the Town is willing to assist the Fire Department to assure that effective fire services are delivered to the Citizens Both groups also suggested that they could do better in communicating their specific needs and initiatives to each other.

The authority of the Board of Fire Engineers includes, in part, the authority and control over all fireifghters as discussed in NH RSA 154. The authority of the Board of Selectemen includes managing the prudential affairs of the town and adopting writtne formal policies as discussed in NH RSA 41:8. With that in mind, our team recommends that both the Board of Selectmen and Town of Newington broaden their knowledge of each others short and long term goals and planning efforts for the Town and Fire Department. This recommendation does not suggest 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 fiscal planning. This would best be accomplished by scheduling quarterly or semi-annual workshops to exchange information. In addition, if members of the Board of Selectmen 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 Department to meet the mission of the Fire Department. In turn, the Newington Fire Department leadership team and Board of Enginneers should focus efforts on building a stronger working relationship with the Board of Selectmen and Town Administrator in order that everyone remains informed on current and future operational needs. This is most often accomplished by educating the Board of Selectmen on the Department's mission, goals, and objectives.

### **IV. PRESENT AND FUTURE NEEDS FACING THE NEWINGTON FIRE DEPARTMENT**

The community and the governing body of the Town of Newington ultimately determine the level of emergency service delivery that is desired. This is often accomplished through the efforts of the Fire Chief and Budget Committee expressing their needs, and in turn the taxpayers express their expectations during public meetings and also through the approval of the Departments operating budget. A review of the service levels provided by the Newington Fire Department

revealed that the residents of the Town of Newington expect an initial rapid response of at least a single fire suppression or rescue unit on a 24/7 basis.

A balance of effective and efficient emergency services delivery, and the need to maintain a fiscally responsible Fire Department tax rate for the citizens is often the primary driving force in the delivery of emergency services. The basic tenant of emergency service in Newington includes the provisions of basic fire protection, fire suppression, and rescue services. Emergency Medical Service (EMS) including both Basic Life Support (BLS) and Advanced Life Support (ALS) patient care is provided by the Department. Additionally, the Newington Fire Department provides a wide variety of basic rescue services, including vehicle extrication, water rescue, and hazardous materials response.

## **ORGANIZATIONAL STRUCTURE**

The organizational 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 Newington Fire Department bring forth a significant amount of service time and dedication to the organization.

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 Town of Newington 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 Town of Newington should participate in discussions and initiatives that will assist them to accomplish these goals both locally and regionally.



**Figure 15**  
**Example Fire Based CERT Logo**

As stated previously in the document, our team does not believe the development of an on-call force certified for interior operations and licensed to provide patient care is viable given the demographics and experience of the community. We believe that the Department should focus on recruiting part time personnel and develop a pool of on-call emergency response personnel that can provide support services and assist with exterior fire ground operations. This nontraditional concept has proven to be a viable model to enhance response

capability as it allows properly trained and equipped personnel to utilize their skills within environments that are immediately dangerous to life and health (IDLH) while allowing support personnel to provide ancillary services.

The Newington Fire Department should retain the current level of career staffing and strengthen the part time firefighting force, however it may become necessary to introduce a different staffing model which will include a nontraditional limited scope community emergency response on-call component that will assist the Department to provide consistency in the service level delivered to the public. This will take a strong commitment from the Town, community, and strong leadership in the Fire Department.

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.<sup>9</sup> 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 more than 68 percent of emergencies that fire departments respond to and now are a fire department's primary responsibility. Contrary to this nationwide trend, in Newington the number of EMS call equates to 30% of emergency responses. This percentage of workload should be expected to increase steadily over the next decade.

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

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<sup>9</sup> *Salter Mitchell Inc. (2015) "Volunteer Firefighter Recruitment and Retention Formative Research Results" prepared for the National Volunteer Fire Council.*

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 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 Newington Fire Department has approximately eight 8 part time 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 combination 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 obligations, other than the Fire Department, that 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 off duty personnel are available to respond to incidents during daytime working hours on a regular basis. This should be addressed by increasing the depth of per diem staff and development of the fire-based community emergency response concept previously mentioned. This concept will not produce a large quantity of personnel but if given a chance should produce five to seven local people that want to become involved and support the Department.

Although it would be easy to say the development of this concept is not possible in Newington, if it is to succeed, there needs to be a proactive effort towards recruitment and retention of fire-based community emergency response personnel to support the Department during incident response. This goal, along with recommendations for future staffing will become the start of long-term sustainment of the Newington Fire Department. To accomplish this goal, given the demographics of the community, new an nontraditional strategies need to be employed to ensure that the Department can provide the service level expected by the community. We believe and support that the Town of Newington will always be predominantly full time, supplemented by a small group of per-diem and on-call support personnel. The number and type of employment (fulltime or per-diem, on-call support) is a decision made by the Board of Fire Engineers.

Recruitment efforts should be an ongoing activity within the Newington 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.

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. This program could be utilized to develop the support based on-call component that we have outlined above.

We recommend that the Town of Newington 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 Newington and many other communities throughout the country. However, based on the size of the community we believe that initial efforts to bolster staffing be focused on increasing the depth of per diem staff and developing a small on-call support force. We recognize the target hazards but considering the population a of the community the further expansion of the career force does not appear to be viable and should only be pursued if the other recommendations are genuinely embraced by the Department and fail to produce sufficient personnel.

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.

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, the Selectmen, and Budget Committee that may require voter approval. MRI also recommends that paid on-call personnel currently on the Newington 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.

## **RECOMMENDATIONS**

***Recommendation IV-1 The Town of Newington should apply for a federal SAFER grant for funding positions for per diem or on-call support members, and for support based 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.***

***Recommendation IV-2 The Newington Fire Department review and update all run cards which specifically details which apparatus should respond to specific incidents. Once reviewed and updated the run cards should be presented to the dispatch center for input and implementation.***

***Recommendation IV-3 The Newington Fire Department should ensure that once a structure fire is reported that automatic aid is utilized to produce an NFPA 1710 compliant response.***

***Recommendation IV-4 The Newington Fire Department should ensure that all interior firefighting personnel are trained and other than in the instance of the need to perform a visible rescue adhere to the OSHA 2 in 2 out guideline.***

***Recommendation IV-5 The Newington Fire and Police Department s should 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.***

***Recommendation IV-6 MRI recommends that Board of Selectmen, Town Administrator, Budget 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 Board of Selectmen (at a minimum quarterly), to discuss department issues, budget planning for the upcoming fiscal year, and strategic and capital improvement planning.***

***Recommendation IV-7 The Town of Newington should 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 Budget Committee.***

***Recommendation IV-8 The Town of Newington should make it a priority to develop an active support based 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**
- **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**

***Recommendation IV-9 The Newington 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 Newington Fire, as well as enhancing recruitment and retention efforts in Newington. 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.***

***Recommendation IV-10 MRI recommends that Town of Newington seek membership with the National Volunteer Fire Council (NVFC) [www.nvfc.org](http://www.nvfc.org) to obtain recruiting and retention suggestions and reports to support the recruitment and retention efforts of the Department.***

***Recommendation IV-11 The Newington Fire Department should 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 Departments future plans. MRI recommends that the Newington 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 Newington Fire Department.***

***Recommendation IV-12 The Newington Fire Department should collaborate to broaden the sharing of resources with the surrounding area departments. This collaboration should include applying for federal grant funding, and developing economies of scale, through shared purchasing initiatives.***

## V. FIRE STATION, APPARATUS, EQUIPMENT

Part of MR's Scope of Work was to establish how the Fire Departments 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. 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 Newington.

The three requirements needed by a fire department to meet its mission and service to the community are personnel, facilities, and equipment. 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 Newington Fire Department.

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 contaminants. In Town of Newington there are no modern adequate areas for decontamination of medical equipment and firefighter protective clothing

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

1. The facility is not fully 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. Some examples would include but not be limited to; the division of work areas (clean vs dirty), and having proper designated decontamination areas and equipment.



2. The facility is not fully 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 fully 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).

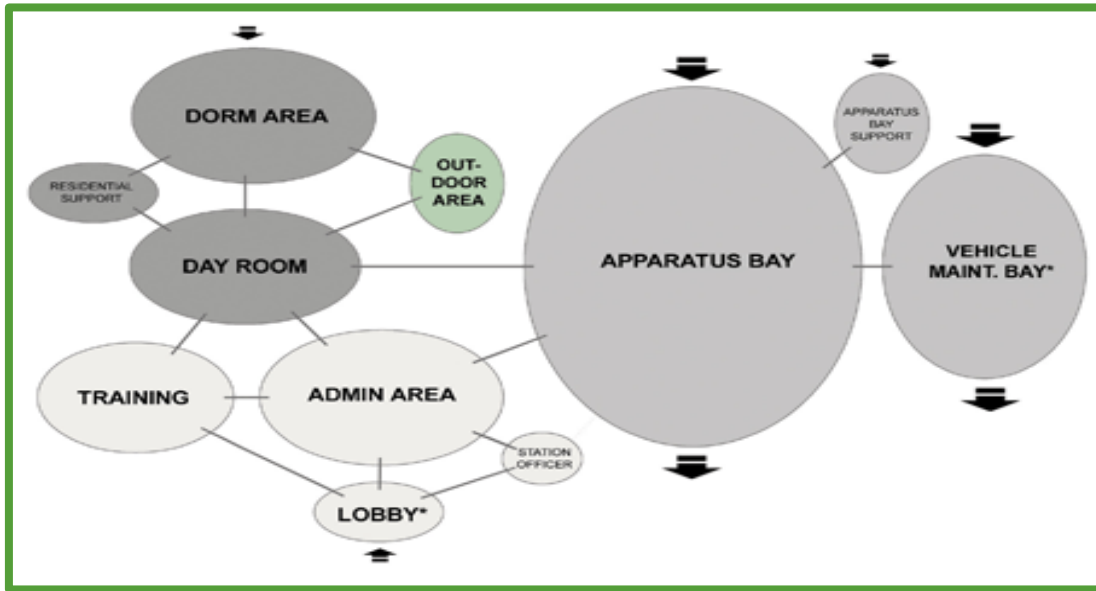
A fire station supports the needs of the Fire Department and the community in which it is located. It must accommodate extremely diverse functions, including housing, recreation, administration, training, community education, equipment and vehicle storage, equipment and vehicle maintenance, and hazardous 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 design 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.



**Figure 16**  
**Fire Station Design Sample Functional layout for a fire station**  
 Developed by DMUM Design, Arlington, VA

**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. In Newington, we found that the bays are tight but adequate and are in fact better than many stations that we have surveyed.



**Figure 17**  
**Apparatus floor mid station looking to street**



**Figure 18**  
**Apparatus floor looking in**



**Figure 19**  
**Apparatus floor with Ambulance compartment open**



**Figure 20**  
**Apparatus floor with gear storage**

### **APPARATUS BAY SUPPORT AND VEHICLE MAINTENANCE**

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. Newington Fire should move as much equipment from the apparatus floor to the new clean areas. Moving of this equipment will need to be done to allow for a second ambulance to be housed in the future.

## 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.



**Figure 21**  
**Office and radio room**



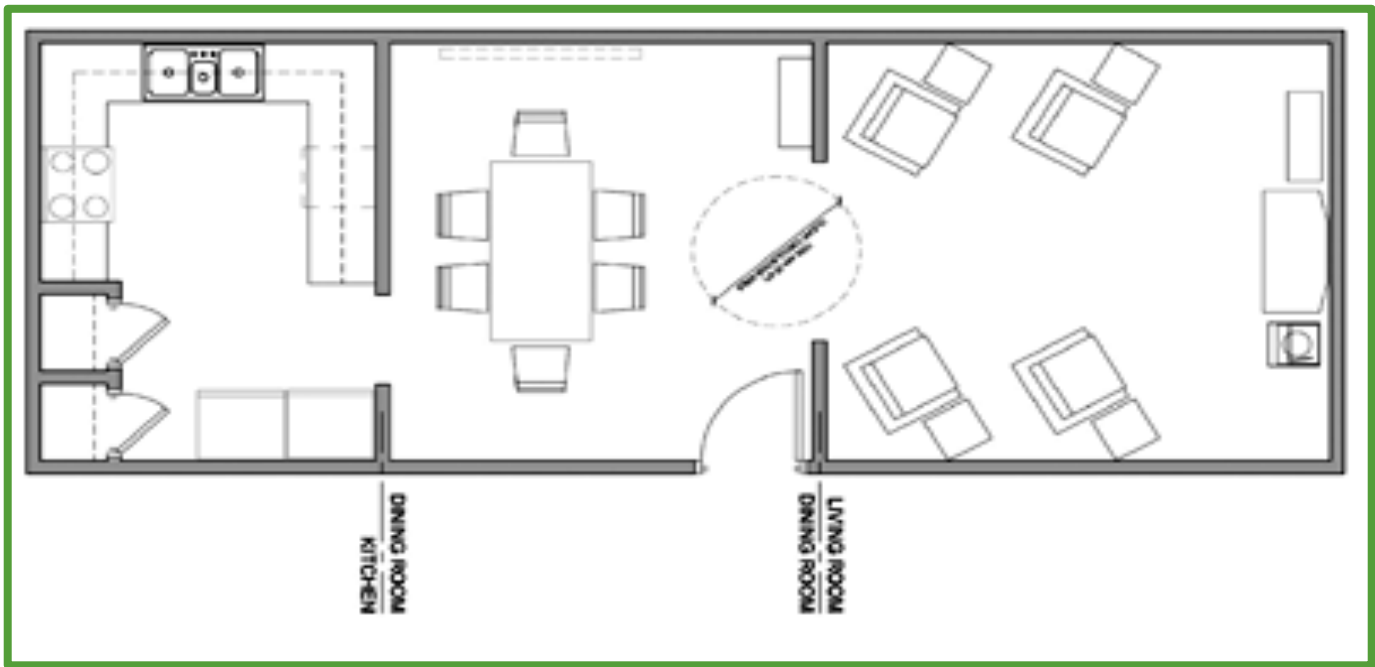
**Figure 22**  
**Office and radio room**

## 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 remodeling addition, or 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 23**  
**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:

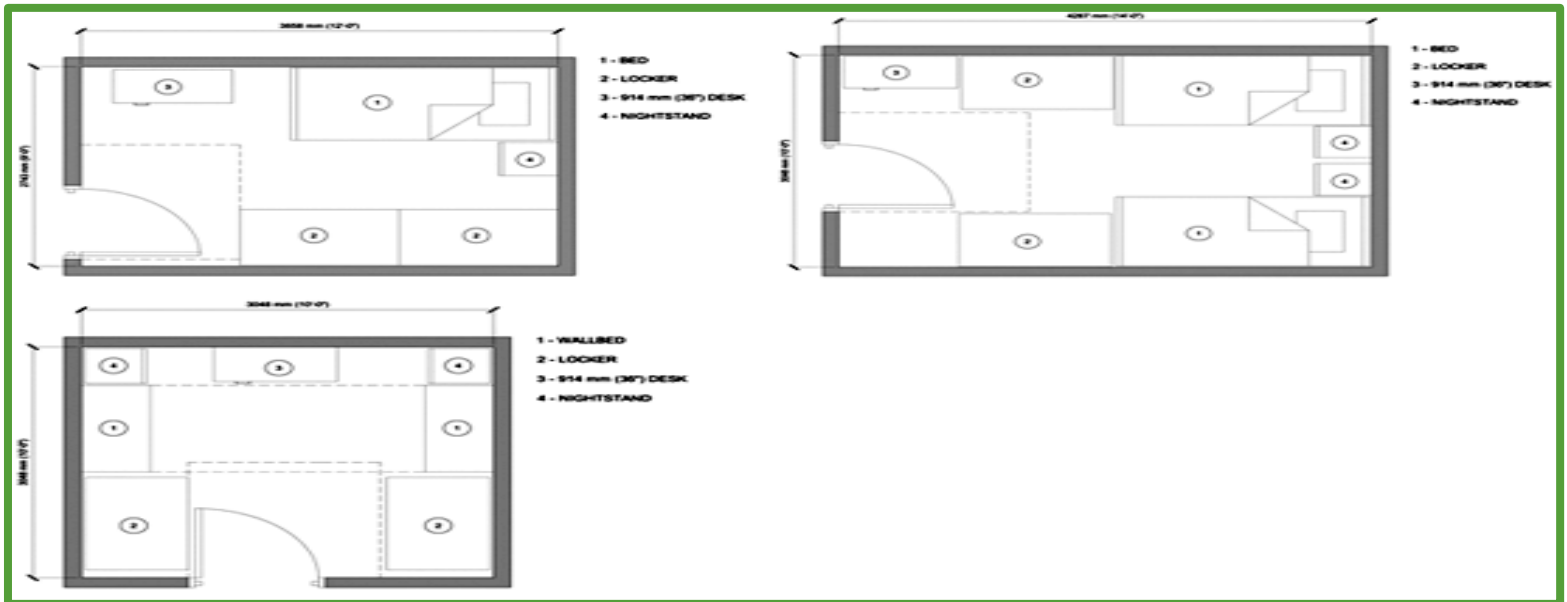
- Provide a secure facility for both personnel and materials such as controlled medical supplies and hazardous fire suppression agents

- 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



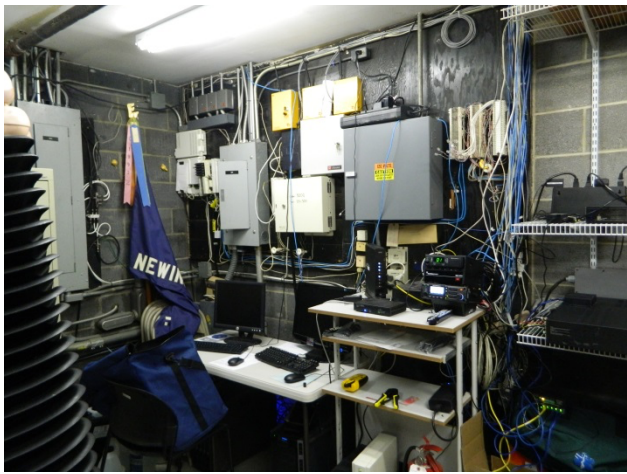
**Figure 24**  
**Three sample dorm room layouts for a fire station**  
 Developed by DMJM Design, Arlington, VA



**Figure 25**  
**Kitchen**



**Figure 26**  
**Kitchen**



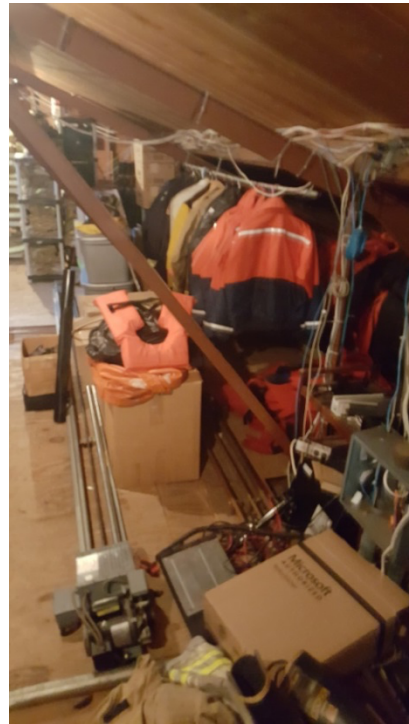
**Figure 27**  
**Electrical and IT room**



**Figure 28**  
**EMS and chair Storage in electrical room**



**Figure 29**  
**Apparatus floor with Physical fitness equipment**



**Figure 30**  
**Storage in attic space over admin area**



**Figure 31**  
**Rear Bay with mezzanine storage**



**Figure 32**  
**Typical Bunk Room**





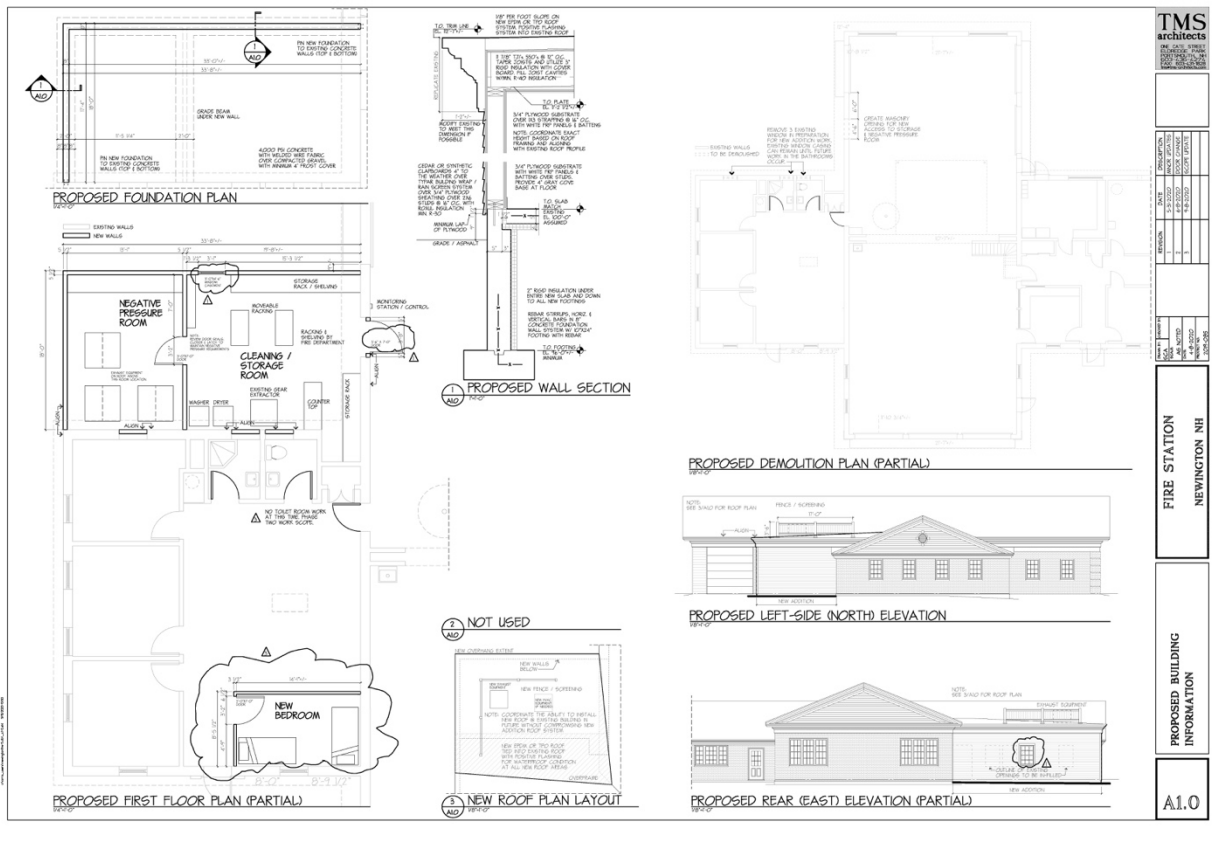
**Figure 33**  
**Storage around electrical in attic space over admin area**



**Figure 34**  
**Unsafe floor in attic over admin area**

In the Fall of 2020, (after our station review) the Town moved forward with a one-story addition to the rear of the facility. The MRI review team has reviewed this project and feels it will be a well worth project to be taking on. This addition will take many of the concerns for safety and cleanliness that we have outlined and address them.

Our team believes that the kitchen should be moved to the rear left of the new addition. At this point it is strongly recommended that the space referred to as “Negative Pressure Room”, be used to for appropriate storage of personal protective equipment (PPE) and the many items in the area not designed for storage over the administration area, as well as some of the items that are on the apparatus floor. The apparatus floor is extremely filled and with the moving of some of the equipment will make it safer for staff to conduct their daily business.



**Figure 35**  
**Current fire station addition plans**  
**Developed by TMS Architects**

Even with this addition it is our recommendation that the town consider a phased in approach to continuing to improve the operation and longevity of the structure. Based on our interviews, it was clear that the town does not have the willingness to fund and build a new facility and therefore we would recommend the following items. Providing an objective perspective, our team believes that the current station could be renovated to be a suitable platform for service to the community for more than the next decade.

**RECOMMENDATIONS**

**Recommendation V-1** *The Town should create, fund and maintain an ongoing facility maintenance program. There are many areas of window and building trim that are in need of repair and or replacement. A solid ongoing program would prevent the need to make these types of routine repairs.*

***Recommendation V-2 The Town should consult with the architect relative to the potential of adding a second story onto the left side of the building including the newly added space. We will refer to this as the “living side” of the station. We would recommend the second floor have the bunk rooms, bathrooms with showers, physical fitness area and storage rooms. This will allow the first floor to have a kitchen living/training space, restroom, storage of clean equipment and an office space for the shift officer as well as a report writing area for firefighters.***

***Recommendation V-3 As part of this renovation and once the addition of a second level is complete, then the right side of the building should be updated to accommodate all of the administration functions of the department. Due to the nature and the need for access for the public this space must meet all ADA requirements in place at the time of the work. It is felt that with some reconfiguring of the existing space there should be ample room for offices, file storage, conference room, dispatch area and a single person restroom.***

***Recommendation V-4 The Department should do a complete validation and compliance check using the National Fire Protection Association Standard 1500 and 1581.***

## **VI. APPARATUS AND EQUIPMENT**

MRI conducted a cursory review of the current fire apparatus fleet to determine the average age of vehicles. The overall average age of the Newington Fire fleet is 9.3 years. The oldest fire apparatus is Engine 5 at 24 years old. Engine 5 has far exceeded its service life and should be replaced. A detailed apparatus replacement plan should be developed and presented to the Budgeting 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 Town of Newington fleet appears to be reasonably well-maintained and in serviceable condition despite its increasing age. However, one of the department's engines is 24 years old and probably nearing the end of its serviceable life span. Comparative to other similar size on-call fire service agencies, Newington appears to have an 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. The review team feels that the Town of Newington should maintain 2 engines (primary and back up), 1 Aerial (Quint), 1 brush truck and 2 ambulances.

**CURRENT APPARATUS AND EQUIPMENT STATUS**

An apparatus and equipment inventory 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 Newington Fire Department. Newington Fire Department should continue to apply for Assistance to Firefighters Grants (AFG) for apparatus and equipment each year as the program becomes available.

Name	Year	Manufacture	Pump	Miles	Hours	Replacement year	Projected cost
Engine 2	2012	Smeal	2000 gpm	55,711	3877	2032	950K
Tower 3 95 foot	2019	E-One	2000 gpm	20,773	2785	2028	1.725 M
Engine 5	1996	Seagrave	2000 gpm	43,557	3590	2021	650K
Utility 1	2013	Chevy	NA	29,019	NA	2023	45K
Admin 2	2011	Ford	NA	Very high	NA		40K
Admin 1	2010	Chevy	NA	126,742	NA	2021	65K
Forestry	2002	Military		13,438	NA	Unknown	unknown
Ambulance 1	2014	Ford	NA	47,101	3343	2023	360K
Marine	2019	Silver Ships	NA			unknown	175K

**Figure 36**  
**Newington Fire Apparatus Age Chart**





**Figure 37**  
**Engine 2**



**Figure 38**  
**Tower 3**



**Figure 39**  
**Engine 5**



**Figure 40**  
**Utility 1**



**Figure 41**  
**Assistant Chiefs Car**



**Figure 42**  
**Chiefs Command Car**



**Figure 43**  
**Forestry Unit**



**Figure 44**  
**Ambulance 1**



**Figure 45**  
**Marine Unit**

## **RECOMENDATIONS**

***Recommendation VI-1 The Town of Newington 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.***

***Recommendation VI-2 The Town of Newington increase the capability on the Marine Unit for firefighting capabilities. This is a single unit that can and should provide a resource to the water area in and around the community as a mutual aid resource.***

***Recommendation VI-3 The Board of Fire Engineers 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.***

***Recommendation VI-4 The Newington Fire Department should have the Assistant Chiefs vehicle marked and outfitted with a full emergency response lighting package.***

***Recommendation VI-5 The Board of Fire Engineers 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.***

***Recommendation VI-6 The Board of Fire Engineers should continue to 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. This can be done by firefighters or can be contracted to an outside vendor.***

***Recommendation VI-7 The Board of Fire Engineers 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.***

***Recommendation VI-8 The Board of Fire Engineers and the Town of Newington 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.***

***Recommendation VI-9 The Town of Newington in conjunction with the Board of Fire Engineers 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.***

***Recommendation VI-10 The procurement of most of Newington'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.***

***Recommendation VI-11 The capital plan should be updated to reflect 20 years of expected service life for and Engine and 25 years from a piece of aerial apparatus.***

***Recommendation VI-12 The capital plan should space major purchases of apparatus by at least five years.***

***Recommendation VI-13 The replacement of the ambulance should be moved up and the current unit should be retained as a secondary response and mechanical backup unit. Each ambulance should serve five years of frontline ne service and five years of backup service.***

***Recommendation VI-14 Considering the projected costs of fire apparatus, the Town should make an annual appropriation into a capital funding account for the future purchase of this equipment.***

**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 Selectmen 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 in conjunction with the Engineers prepare the budget. The budget is then presented to the Selectmen who in turn present a final town wide recommendation to the Budget 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 Budget Committee meets with the Chief to discuss the budget, then accepts the budget as submitted, or revises it. The budget is then ultimately is voted on at the Budget Committee Public Hearing.

The MRI project team reviewed the budget documents provided by the Fire Department. 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 Town of Newington generates revenue each year which is derived from tax revenue, inspection and permit fees, other income, donations and interest income. In the year 2019 this revenue stream generated \$ 142,472.80.

## **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 Newington Fire Department'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 Town of Newington 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.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Engine		X								X
Ambulance			X (1)				X			
Chiefs Car	X									
Assistant Chief Car	X									
Utility			X							
Forestry						X				
Marine Unit Upgrade				X (2)						
Tower								X		
Station Upgrade		X (3)		X						

**Figure 46**  
**Sample Long Range Vehicle/Apparatus Replacement Plan**

- (1) MRI Recommends that when the current ambulance is replaced that the current unit be evaluated and kept as a back up to the primary ambulance.
- (2) The marine unit upgrade should include adding some firefighting capabilities to the unit.
- (3) Suggested station upgrades are addressed within this document.



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

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**Figure 47  
Sample Table for Apparatus Replacement Plan**

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.

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 48  
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.

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 Town of Newington 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.



Figure 49  
SAFER Logo

Like most fire departments, Newington 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 Newington 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 Town of Newington 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 Newington Fire Department. 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 Newington and those who are visiting the town.

***Recommendation VII-1 The Town of Newington should review all fees on an annual basis for possible increases in accordance with state law.***

***Recommendation VII-2 The Town of Newington Fire Engineers 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.***

***Recommendation VII-3 The Town of Newington 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.***

***Recommendation VII-4 The Town of Newington should apply for a federal SAFER grant in 2021 for the purpose of staffing and the recruitment and retention of current personnel.***

***Recommendation VII-5 The Town of Newington 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.*

*Recommendation VII-6 The Town of Newington 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.*

*Recommendation VII-7 The Town of Newington 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 by a certified third party.*

*Recommendation VII-8 The Town of Newington 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 New Hampshire 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.*

*Recommendation VII-9 Should the Town of Newington decide to staff personnel on a per-diem or standby status, the Town of Newington 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.*



***Recommendation VII-10 The Town of Newington 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.***

***Recommendation VII-11 The Town of Newington Fire Engineers and the Selectmen should consider the adoption of a bylaw as permitted under New Hampshire Laws to allow enforcement action, including the issuing of fines/penalties for repeat false fire alarm activations.***

***Recommendation VII-12 The Town of Newington 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.***

***Recommendation VII-13 The Town of Newington 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. CONCLUSIONS AND IMPLEMENTING CHANGE**

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

1. Facility upgrades and renovation
2. Staffing model change to meet changing emergency service demands
3. Development of a revised Apparatus and Equipment Capital Improvement Plan (CIP)
4. Internal development and presentation of a strategic plan/roadmap looking at three, five, and ten-year organization

A challenge in the recruitment and retention of firefighters, which is growing not only in Newington, but also statewide, regionally, and nationwide will require the Department 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 Department 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 Newington in order to establish goals and objectives that will assist the Department's roadmap over the next three, five, and ten years.

The Town of Newington has a number of positive attributes, most notably its dedication and commitment by Fire Department members. An Insurance Services Rating (ISO) of 05/5x is commendable for the organization and shows the organization has the ability to build upon its successes. The Town of Newington 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 Town of Newington 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**

***Recommendation VIII-1 The Town of Newington and the Board of Fire Engineers 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.***

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. Our team is confident that the members of the Newington Fire Department strive to meet that function. The real issue facing the Newington Fire Department, and the Town of Newington, 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 and the Board of Selectmen will ultimately need to make.

**Note: We are aware that some of the identified challenges identified in this document are in the process of being addressed (or resolved). This document serves as a document that can be used in the future to provide a record of past history therefore those areas are identified.**

**IX. TEAM PROFILES**

**Director of Fire Services**

**Brian P. Duggan** retired from the Fire Department in Northampton, Massachusetts, where he instituted substantial changes to modernize and restructure the entire department including equipment, facilities, personnel, and training. In conjunction with his staff, Brian integrated Emergency Medical Services (EMS) into the organization and created a regional Advanced Life Support (ALS) Program that currently serves 18 communities within the Northampton Area. He formerly commanded the Northborough, Massachusetts, Fire Department, and has significant experience with the Massachusetts Department of Fire Services where over three decades, he held several key positions. Following his retirement, Brian has continued his active fire service involvement by serving as both a volunteer chief fire officer and through continuing to develop training and certification programs as a program Coordinator for the Massachusetts Department of Fire Services.

Mr. Duggan developed and directed the Graduate and Undergraduate Fire Science Programs at Anna Maria College in Paxton Massachusetts from 1995 - 2003. Mr. Duggan has a Business Management/Fire Science degree from Providence College and a Master’s Degree of Business Administration (MBA) from Nichols College in Dudley, Massachusetts. He is also a graduate of the National Fire Academy Executive Fire Officer Program and the Senior Executive Program for State and Local Leaders at Harvard University. In December 2012, Mr. Duggan received a Master’s Degree in Homeland Security through the Naval Post Graduate School based in Monterey, California, where his thesis entitled “*Enhancing Decision-making during the First Operational Period of Surge Events*” was selected as an outstanding thesis. He was one of the first fire service professionals to be designated as a Chief Fire Officer by the Commission on Fire Accreditation International.

Brian led the Massachusetts fire service through his affiliation as Chairman of the Fire Chief Association of Massachusetts Technology Committee and as a Regional Director on the Massachusetts State Fire Mobilization Committee. Mr. Duggan has authored several publications, inclusive of writing Section 7, Chapter 3, Fire Department Information Systems, in the Nineteenth and Twentieth Editions of the National Fire Protection Association’s Fire Protection Handbook. Chief Duggan has been affiliated with MRI as a subject matter advisor since 2002 and he has served as Director of Fire Services since 2015. Currently, Mr. Duggan is regarded as an expert specific to fire service response to photovoltaic and battery energy storage system (BESS) emergencies. He has developed several nationwide training programs providing first responders with new insight on these emerging challenges.



**Project Lead Consultant**

**David Houghton** is a devoted fire and emergency management professional who has recently retired from the Wayland Massachusetts Fire Department after a distinctive 38-year career from being a call firefighter and rising through the ranks to Fire Chief. Along with dedicating his service to the Town of Wayland, he continues to work for the Massachusetts Department of Fire Services as both an instructor and in the Special Operations Division doing special projects. In 1999 he was given the challenge by the State Fire Marshal to develop and implement what today is known as Special Operations. This development included designing, building and implementing specialized equipment and staffing to respond to Emergency and planned incidents throughout the Commonwealth. This program was a shared vision between David and the Fire Marshal and today has been shared in whole or in part in other areas of the country. David has a B.S. degree in Fire Science, an A.S. Degree in Fire Science and Technology, and has completed a Local Government and Management program with Suffolk University and the Massachusetts Municipal Association. David has a diverse background Firefighting, EMS (ALS and BLS), Dispatch, Fire Prevention, Emergency Management and operations. He is a nationally certified Firefighter, Fire instructor, Fire Inspector, Fire Officer. He is a certified Emergency Medical Technician both at the National Level and in the Commonwealth of Massachusetts. David has most recently continued his fire service career by being appointed as a call firefighter with the Town of Moultonborough Fire Rescue, and is a certified New Hampshire Emergency Medical Technician. He continues to be active with the Commonwealth of Massachusetts Fire and Ambulance Mobilization team in the continuous updating and redevelopment of the program. Prior to his retirement as Fire Chief, David was an active member in the Massachusetts Fire District 14 where he was a driving force behind the creation of the District Operational budget, an operations manual and the formalizing of the various specialized teams within the district. David was also selected as the Chief overseeing the Fire District communications team and equipment as well as serving on several other progressive programs within the district. He is a member of the Fire Chiefs Association of Massachusetts, and the International Association of Fire Chiefs.

**X. Consolidated List of Recommendations**

This document contains 48 recommendations which are listed below:

**Chapter II**



***Recommendation II-1 The Newington Fire Department should provide the Town with an annual report that clearly identifies emergency and non-emergency workload/service demand.***

***Recommendation II-2 The Town of Newington 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.***

***Recommendation II-3 The Fire Department has a moderate to high level of risk based on the review and assessment of the community. MRI recommends the Fire Department 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 Department will need to conduct a comprehensive risk assessment and incorporate the findings into a strategic plan for the future.***

***Recommendation II-4 The Town of Newington 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.***

#### **Chapter IV**

***Recommendation IV-1 The Town of Newington should apply for a federal SAFER grant for funding positions for per diem or on-call support members, and for support based 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.***

***Recommendation IV-2 The Newington Fire Department review and update all run cards which specifically details which apparatus should respond to specific incidents. Once reviewed and updated the run cards should be presented to the dispatch center for input and implementation.***

***Recommendation IV-3 The Newington Fire Department should ensure that once a structure fire is reported that automatic aid is utilized to produce an NFPA 1710 compliant response.***

***Recommendation IV-4 The Newington Fire Department should ensure that all interior firefighting personnel are trained and other than in the instance of the need to perform a visible rescue adhere to the OSHA 2 in 2 out guideline.***

***Recommendation IV-5 The Newington Fire and Police Department s should 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.***

***Recommendation IV-6 MRI recommends that Board of Selectmen, Town Administrator, Budget 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 Board of Selectmen (at a minimum quarterly), to discuss department issues, budget planning for the upcoming fiscal year, and strategic and capital improvement planning.***

***Recommendation IV-7 The Town of Newington should 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 Budget Committee.***

***Recommendation IV-8 The Town of Newington should make it a priority to develop an active support based 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***
- ***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***

***Recommendation IV-9 The Newington 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 Newington Fire, as well as enhancing recruitment and retention efforts in Newington. 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.**

**Recommendation IV-10 MRI recommends that Town of Newington seek membership with the National Volunteer Fire Council (NVFC) [www.nvfc.org](http://www.nvfc.org) to obtain recruiting and retention suggestions and reports to support the recruitment and retention efforts of the Department.**

**Recommendation IV-11 The Newington Fire Department should 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 Departments future plans. MRI recommends that the Newington 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 Newington Fire Department.**

**Recommendation IV-12 The Newington Fire Department should collaborate to broaden the sharing of resources with the surrounding area departments. This collaboration should include applying for federal grant funding, and developing economies of scale, through shared purchasing initiatives.**

## **Chapter V**

**Recommendation V-1 The Town should create, fund and maintain an ongoing facility maintenance program. There are many areas of window and building trim that are in need of repair and or replacement. A solid ongoing program would prevent the need to make these types of routine repairs.**

**Recommendation V-2 The Town should consult with the architect relative to the potential of adding a second story onto the left side of the building including the newly added space. We will refer to this as the "living side" of the station. We would recommend the second floor have the bunk rooms, bathrooms with showers, physical fitness area and storage rooms. This will allow the first floor to have a kitchen living/training space, restroom, storage of clean equipment and an office space for the shift officer as well as a report writing area for firefighters.**

**Recommendation V-3 As part of this renovation and once the addition of a second level is complete, then the right side of the building should be updated to accommodate all of the**

***administration functions of the department. Due to the nature and the need for access for the public this space must meet all ADA requirements in place at the time of the work. It is felt that with some reconfiguring of the existing space there should be ample room for offices, file storage, conference room, dispatch area and a single person restroom.***

***Recommendation V-4 The Department should do a complete validation and compliance check using the National Fire Protection Association Standard 1500 and 1581.***

#### **Chapter VI**

***Recommendation VI-1 The Town of Newington 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.***

***Recommendation VI-2 The Town of Newington increase the capability on the Marine Unit for firefighting capabilities. This is a single unit that can and should provide a resource to the water area in and around the community as a mutual aid resource.***

***Recommendation VI-3 The Board of Fire Engineers 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.***

***Recommendation VI-4 The Newington Fire Department should have the Assistant Chiefs vehicle marked and outfitted with a full emergency response lighting package.***

***Recommendation VI-5 The Board of Fire Engineers 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.***

***Recommendation VI-6 The Board of Fire Engineers should continue to 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.***

***Recommendation VI-7 The Board of Fire Engineers 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.***



***Recommendation VI-8 The Board of Fire Engineers and the Town of Newington 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.***

***Recommendation VI-9 The Town of Newington in conjunction with the Board of Fire Engineers 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.***

***Recommendation VI-10 The procurement of most of Newington'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.***

***Recommendation VI-11 The capital plan should be updated to reflect 20 years of expected service life from and Engine and 25 years from a piece of aerial apparatus.***

***Recommendation VI-12 The capital plan should space major purchases of apparatus by at least five years.***

***Recommendation VI-13 The replacement of the ambulance should be moved up and the current unit should be retained as a secondary response and mechanical backup unit. Each ambulance should serve five years of frontline service and five years of backup service.***

***Recommendation VI-14 Considering the projected costs of fire apparatus, the Town should make an annual appropriation into a capital funding account for the future purchase of this equipment.***

## **Chapter VII**

***Recommendation VII-1 The Town of Newington should review all fees on an annual basis for possible increases in accordance with state law.***

***Recommendation VII-2 The Town of Newington 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.***

***Recommendation VII-3 The Town of Newington 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.***

***Recommendation VII-4 The Town of Newington should apply for a federal SAFER grant in 2021 for the purpose of staffing and the recruitment and retention of current personnel.***

***Recommendation VII-5 The Town of Newington 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.***

***Recommendation VII-6 The Town of Newington 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.***

***Recommendation VII-7 The Town of Newington 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.***

***Recommendation VII-8 The Town of Newington 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 New Hampshire 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.***

***Recommendation VII-9 Should the Town of Newington decide to staff personnel on a per-diem or standby status, the Town of Newington 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.*

*Recommendation VII-10 The Town of Newington 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.*

*Recommendation VII-11 The Town of Newington Fire Engineers and the Selectmen should consider the adoption of a bylaw as permitted under New Hampshire Laws to allow enforcement action, including the issuing of fines/penalties for repeat false fire alarm activations.*

*Recommendation VII-12 The Town of Newington 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.*

*Recommendation VII-13 The Town of Newington should continue to maintain and enhance its library of fire prevention reference materials, including maintaining online subscriptions such as NFPA and its professional subscriptions.*

### **Chapter VIII**

*Recommendation VIII-1 The Town of Newington and the Board of Fire Engineers 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.*

