

**ATKINSON, NEW HAMPSHIRE,
FIRESERVICE RESOURCE AND STAFFING STUDY**

Prepared by:



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I. INTRODUCTION

The Town of Atkinson 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 methods that 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 Atkinson, and recommendations for appropriate modifications to the delivery systems to provide the desired level of fire services to the Town.

MRI has developed this document containing recommendations for improvements to organizational practices, recruitment and retention efforts, infrastructure, quick reaction 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 Atkinson 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.

The goal of the study is to review and analyze the current resources and staffing, forecast future demands for service, and make recommendations regarding the future need of current resources, staffing, and rank structure to fulfill the Department's mission. Part of the objective is to conduct a comprehensive analysis of the operation of the Atkinson Fire Department (Atkinson Fire Department), with an emphasis on defining the expected service level of the community and identifying the impact of current on-call response participation levels, demographics and projected growth within the response area. The results of this study will be to inform the Town of Atkinson of realistic recommendations for managing and operating the Fire Department efficiently and effectively.

To accomplish that goal, this management letter is divided into fourteen sections as detailed below:

- | | |
|-------------------------------|--|
| I: Overview | VIII: Facility |
| II: Scope of Work | IX: Apparatus |
| III: Methodology | X: Water Supply |
| IV: Community Risk Assessment | XI: On call Recruitment and retention |
| V: Fire Department | XII: Present and Future staffing |
| VI: Staffing | XIII: Conclusion and implementing change |
| VII: Response Times | XIV: Consolidated recommendations |

TOWN OF ATKINSON, NEW HAMPSHIRE
FIRE SERVICE RESOURCE AND STAFFING
ORGANIZATIONAL ASSESSMENT



Figure 1
Town Seal

I. OVERVIEW

The Town of Atkinson covers 11.4 square miles in the Southern part of Rockingham County of New Hampshire. All of the Community resides within the Merrimack River Watershed. The Town is comprised of 11.2 square miles of land and has .2 square miles (1.42%) of water. There are approximately 2,413 housing units with a density of 218.5 per square mile. According to the 2018 census, the Town has a resident population of 7,015, with a median age of 46.7 years. The population density is 627.5 people per square mile. The age population is broken down as follows:

Age	%
Under 18	22.5%
19 to 24	11.0%
25 to 44	27.5%
45 to 64	19.0%
Over 65 1,366	20.0%

Figure 2
Age Demographics

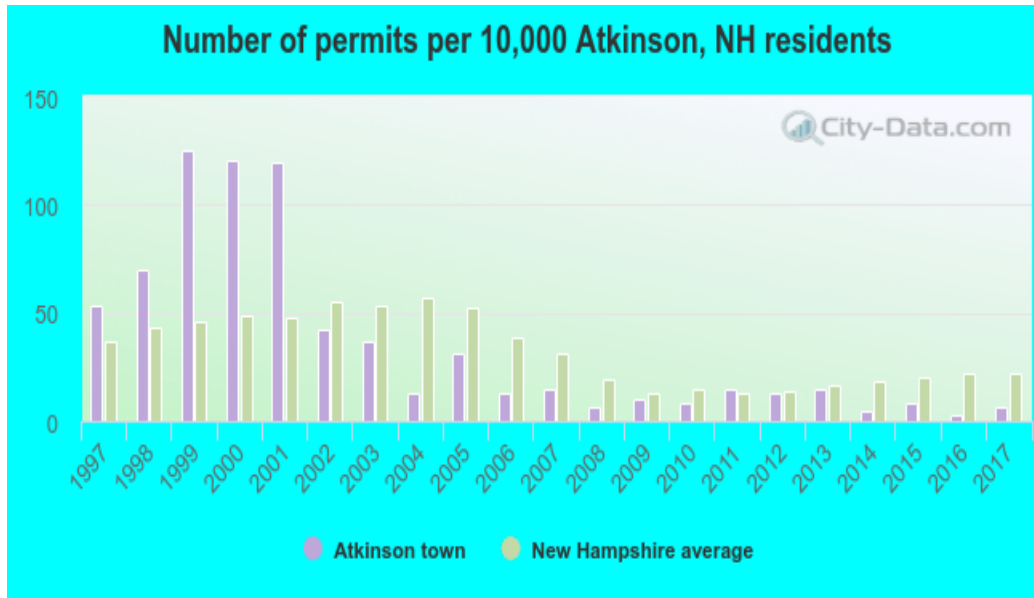


Figure 3
Building Permits by Year

The number of residential units is currently increasing with nine permitted buildings with thirty-two units in each building currently under construction as well as ongoing discussion of the development of a future Assisted Living Center. The available land to construct new buildings seems to be very limited so future large population expansion seems very unlikely.

II. SCOPE OF WORK

This study required intensive involvement within the Fire Department leadership, community and included interviews with the Town Administrator, elected officials, the Fire Chief, 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 Atkinson 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, 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 analyzed the information listed below to evaluate the overall operations of the Atkinson Fire Department to identify what works and what does not work:

- Analyzed resources and equipment;
- Reviewed budget and expenditures;
- Reviewed practices and policies of the Department;
- Analyzed call volume against the availability of resources;
- Reviewed the hours of the Fire Chief;
- Reviewed organizational structure for appropriateness;
- Assessed the Department's 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;

Much of this plan of service was completed through two field visits on site at the fire station and Town Hall. Considering the COVID 19 pandemic, research and interviews were conducted remotely. Interviews were delayed due to participants taking vacations and therefore the report delayed in its development. The project team spent several hours of time on-site; making observations, inspecting facilities, equipment and records, conducting interviews and touring the community to identify target hazards.

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

III. METHODOLOGY

MRI conducted a study of the Town of Atkinson 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 Atkinson 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 Atkinson 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 per diem recruitment and retention efforts within the community.

To accomplish these tasks, MRI used ten work elements involved in this study. The following eight 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;
7. Interviewed the Deputy Fire Chief
8. Interviewed Atkinson Fire Department staff selected at random;
9. Reviewed various fire department documents and budgets
10. Developed study report

IV. COMMUNITY RISK ASSESSMENT

Fire and rescue services protecting all communities generally have a common overall mission; the protection of life and property, but different community profiles in which they operate. These dissimilarities create very different fire and rescue services operational needs based on a unique community risk profile, service demands, and stakeholder expectations.

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 really there. This approach can be costly (i.e., misdirected resources, continued property loss, injuries, or deaths). 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.

Understanding the definition of hazards and risks is critical to the risk assessment process. Hazards are physical sources of danger that can 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 (Figure 4).

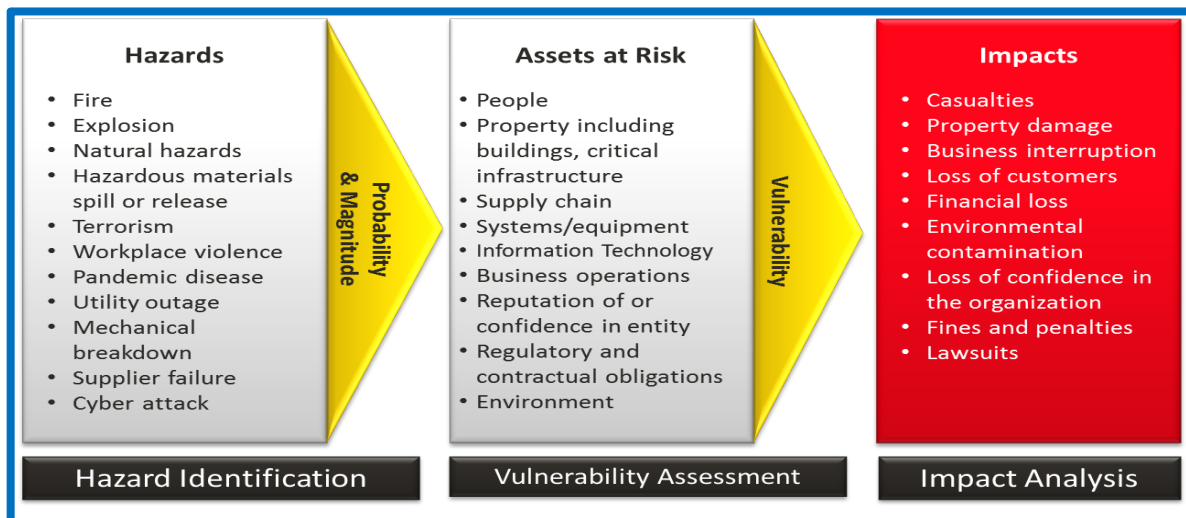


Figure 4
Risk Assessment Process
 Image Credit: www.ready.gov/risk-assessment

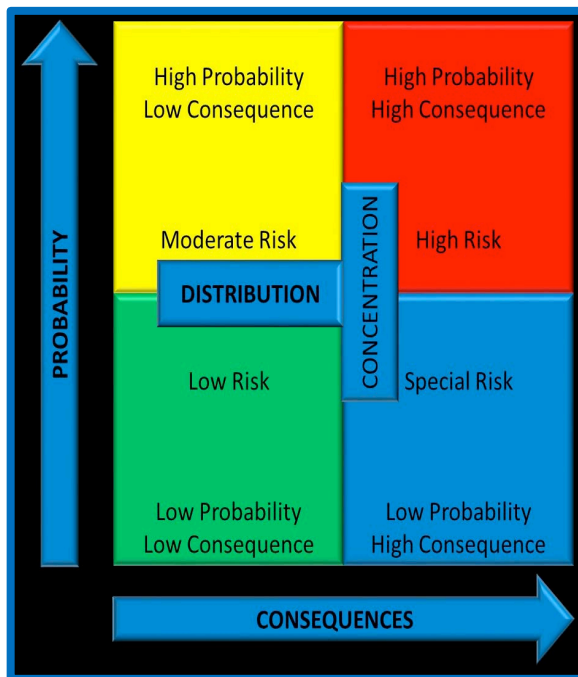


Figure 5
Fire Probability and Consequences Matrix
 Image credit: Commission on Fire Accreditation International

A more focused 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 Fire Department in establishing fire risk/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.¹ The community fire risk assessment may also include determining and defining the differences in fire risk between a detached single-family dwelling, a multi-family dwelling, an industrial building, and a high-rise building by placing each in a separate category.

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

High-hazard occupancies: Schools, hospitals, nursing homes, high-rise buildings, and other high life-hazard or large fire-potential occupancies.

Medium-hazard occupancies: Apartments, offices, 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 occupancies².

The NFPA also identifies a key element of assessing community vulnerability as fire department operational performance which is comprised of three elements: resource availability/reliability, department capability, and operational effectiveness³.

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.⁴

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:

¹ Fire and Emergency Service Self-Assessment Manual, *Eighth Edition*, (Commission on Fire Accreditation International, 2009), p. 49.

² Cote, Grant, Hall & Solomon, eds., *Fire Protection Handbook* (Quincy, MA: National Fire Protection Association, 2008), p. 12.

³ <http://www.nfpa.org/assets/files/pdf/urbanfirevulnerability.pdf>.

⁴ 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 effective⁵ (Figure 6). Strong fire prevention codes have been shown to be an 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.

The target hazard analysis conducted in Atkinson revealed the following; an exceptional seacoast community with:

- A. The expected level of low hazard occupancies including a highly desirable residential base.
- B. A moderate level of medium hazard occupancies.
- C. A disproportionately high level of complex high hazard occupancies.

INSURANCE SERVICES ORGANIZATION (ISO) RATING

The Town currently has an Insurance Services Office (ISO) rating of **06/6X**. The current rating was provided in a report dated December 2019. 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



Figure 6:
Five Es of prevention
in a community risk reduction program.
Image credit: www.beaherosaveahero.org

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

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.

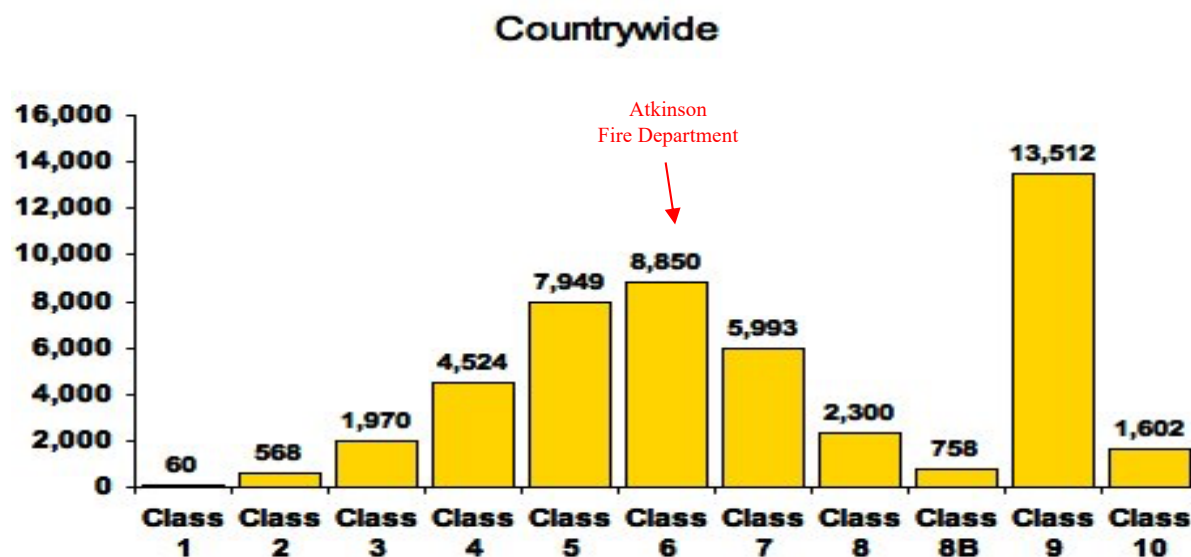


Figure 7
ISO Grading Chart USA
2019

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 .

The chart below is from the ISO Summary report dated December 2019. The individual classifications indicate the score that the Town of Atkinson currently has followed by a maximum point rating allowed. The color coded boxes indicate the priority that the MRI review team feels items should be further investigated for improvement. The red boxes are the suggested top priority items followed by the yellow as secondary items. It should be noted that many of the items will require time and proper funding to improve. Many of the items are referenced within this study along with appropriate recommendations.

ISO Public Protection Classification	Effective April 1, 2020	Atkinson Rating	Max Credit Available
Emergency Communications			
	Emergency Reporting	2.55	3
	Telecommunicators	1.6	4
	Dispatch Circuits	1.5	3
Fire Department			
	Engines	4.1	6
	Reserve Pumps	0	.5
	Pump Capacity	3	3
	Ladder Service	2.81	4
	Reserve Ladder	0	.5
	Deployment analysis	5.68	10
	Company personnel	3.48	15
	Training	.83	9
	Operations	2	2
Water Supply	System	12.41	30
	Hydrants	3.0	3.0
	Inspection and flow test	2.4	7
Divergence	Community Risk Reduction	3.38	5.5
TOTAL		48.60	105.5

Figure 8
ISO Grading Atkinson 2020

Based on a review of this grading, the community has an opportunity to work with the Atkinson Fire Department and design a plan to enhance the scoring associated with the categories color coded in red and orange. The goal of this initiative should be to move the Department from a class six organization to a Class five over five years, and ultimately, a class four over ten years. As ISO bands residential insurance rates, it would be fiscally advantageous for the community to move to a class five. MRI believes that this grade reduction could be accomplished through focusing on training and water supply inspection and flow testing.

The greatest fire safety concern throughout Atkinson 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. The time to escape a house fire has dwindled from about 17 minutes, 20 years ago, to three to five 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 currently not prominent in Atkinson, buildings more than three stories in height pose a special risk in an emergency. Fire on higher floors may require the use of ladder trucks to provide an exterior standpipe to be able to deliver water into a building that does not have a system in place. For victims trapped on higher floors, a ladder truck may be their only option for escape. Buildings six or more floors in height present even more challenges to the Fire Department. Aerial ladder trucks often cannot reach beyond the sixth to the eighth floor (and never higher than the 10th floor) depending upon setbacks, obstructions to placement, etc. Thus rescue and firefighting activities must be conducted strictly from the interior stairwells. This requires additional personnel to transport equipment up to higher floors. Large area buildings sometimes referred to as horizontal high-rises, such as warehouses, malls, and large “big box” stores often require greater volumes of water for firefighting and require more firefighters to advance hose lines long distances into the building. They also present challenges for ventilation and smoke removal.

Although it is not clear how many commercial and residential sprinkler systems there are in Atkinson, it is known 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 extinguish the fire, or, at a minimum holds it in check and prevents flashover, until the arrival of the Fire Department.

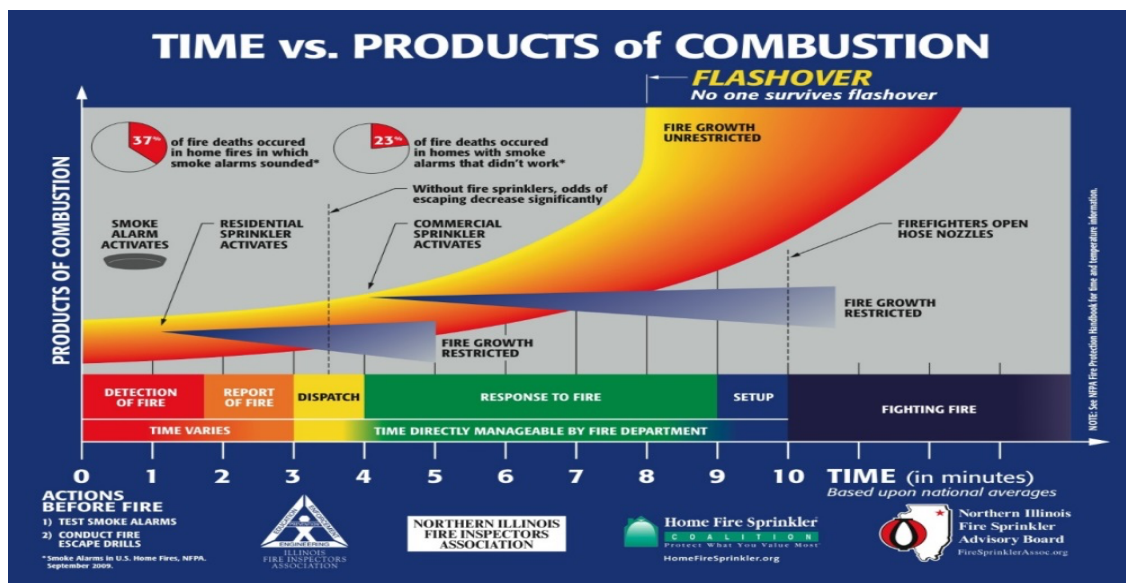


Figure 9
Time versus products of combustion curve showing activation times and effectiveness of residential sprinklers (approximately 1 minute), commercial sprinklers (4 minutes), flashover (8 to 10 minutes) and firefighters applying first water to the fire after notification, dispatch, response and 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 time⁶. 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 sprinklers⁷. **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, Atkinson has various types of housing that is older, although still well maintained. Most of these older residential occupancies are wood frame houses. 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.

⁶ U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.

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

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 Atkinson 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.

Overall, it is the project team's assessment that the Town's current relative **basic** fire and life risk translates to Figure 10.

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

Figure 10
Town of Atkinson 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 Atkinson area enjoys a moderate climate typical of the New England region. Thunderstorms, strong wind storms, and significant rain events happen several times in an average year. Tropical storms and hurricanes also occasionally impact the area. Snowfall is experienced annually, and occasionally in amounts that paralyzes the region.

The above information is intended to provide a community "snapshot" of Atkinson. 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 risk assessment should:

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

Looking ahead, the Town of Atkinson 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 Atkinson 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.

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 the community. The assessment of each factor and hazard as listed below took into consideration the likelihood of the event, the impact on the Town itself, and the impact on Community's fire and EMS providers ability to deliver emergency services, which includes automatic aid capabilities as well. The list is not all inclusive but includes categories most common or that may present to the community as a whole.

Low Risk:

- ***Automatic Fire/False Alarms***
- ***Single patient/non-life threatening BLS EMS Incidents***
- ***Minor Flooding with thunderstorms***
- ***Good Intent/Hazard/Public Service***
- ***Minor fire incidents (fire flow less than 250 gallons per minute) with no life safety exposure***
- ***Minor rescues***
- ***Outside fires such as grass, rubbish, dumpster, vehicle with no structural/life safety exposure***
- ***Small fuel spills***

Moderate Risk:

- ***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) where fire and/or smoke is visible indicating a working fire.***
- ***Life threatening ALS medical emergencies***
- ***Motor Vehicle Accident (MVA)***
- ***MVA with entrapment of passengers***
- ***Hazardous materials emergencies requiring specialized skills and equipment but not involving a life hazard***
- ***Technical rescues involving specialized skills and equipment (such as low angle rescue involving ropes and rope rescue equipment and resources***
- ***Larger brush and outside fires, particularly if structures are exposed***

- *Suspicious Substance Investigation involving multiple fire companies and law enforcement agencies*
- *Surface Water Rescue*
- *Good Intent/Hazard/Public Service fire incidents with life safety exposure*

High Risk:

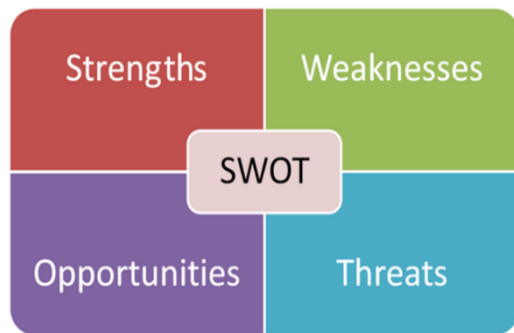
- *Fires in larger commercial properties and target hazards with a sustained attack (fire flows more than 1,000 gallons per minute)*
- *Cardiac/respiratory arrest*
- *Multiple patient medical/mass casualty incidents with more than 10 but less than 25 patients*
- *Major releases of hazardous materials that causes exposure to persons or threatens life safety*
- *High-risk technical rescues*
 - *Confined Space Rescue*
 - *Structural Collapse involving life safety exposure*
 - *High Angle Rescue involving ropes and rope rescue equipment*
 - *Trench Rescue*
 - *Explosion in a building that causes exposure to persons or Threatens life safety or outside of a building*
- *Suspicious Substance incident with injuries*
 - *Weather event that creates widespread flooding, building damage, and/or life safety exposure*

Special Risk:

- *Working Fire in a structure greater than three (3) floors*
- *Fire at an industrial building or complex with hazardous materials*
- *Mass Casualty Incident over 25 patients*
- *Rail or transportation incident that causes life safety exposure or threatens life safety through the release of hazardous smoke or materials*

Aggressive enforcement of fire and building codes in both new and existing facilities will continue to be a critical factor in managing risk throughout Atkinson. Communications regarding major projects need to be kept open and frequent. Any new development projects that are proposed should be sent to the Fire Department for review and input on fire protection needs and concerns. Unfortunately, some municipalities do not welcome fire department input nearly as readily as others do. In addition, ensuring that existing buildings continue to maintain code compliance is an important component of an overall community's fire protection system.

FIRE AND EMS SYSTEM S.W.O.T. PROFILE



A SWOT analysis is a business term utilized to identify the strengths, weaknesses, opportunities, and threats present within an agency's operating environment. This type of analysis involves specifying the objective or mission of an organization and identifying the internal and external factors that are favorable and unfavorable to achieve that objective.

Figure 11
SWOT Analysis

1. **Strengths:** Characteristics of the agency that allow it to meet its mission, work toward achieving its vision, or provide exceptional service to a community.
2. **Weaknesses:** Characteristics of the agency that may create internal conflict, dysfunction, and/or frustrate organizational performance thus creating a disadvantage to the organization in its efforts to meet the goals established by its mission statement.
3. **Opportunities:** Elements that the organization could pursue or develop to its advantage.
4. **Threats:** Elements in the environment that could create organizational instability or reduce the ability of an agency to fulfill its mission and/or achieve its vision.

A SWOT analysis aims to identify the key internal and external factors seen as important to achieving an organizational objective. SWOT analysis generally groups key pieces of information into two main categories:

1. **Internal factors:** The strengths and weaknesses internal to the organization.
2. **External factors:** The opportunities and threats presented by the environment external to the organization.

Analysis may view the internal factors as strengths or as weaknesses depending upon their effect on the organization's objectives. What may represent strengths with respect to one objective may be weaknesses (distractions) for another objective.

A SWOT analysis can be used to:

- A. Explore new solutions to problems.
- B. Identify barriers that will limit goals/objectives.
- C. Decide on direction that will be most effective.
- D. Reveal possibilities and limitations for change.
- E. To revise plans to refocus on an organization's mission statement.
- F. As a brainstorming and recording device as a means of communication.
- G. Creating a series of recommendations in the context of an organizational study.

The SWOT analysis in public safety framework is beneficial because it helps organizations decide whether an objective is obtainable; therefore, enables agencies to set achievable goals, objectives, and steps to further the change, or enhance organizational development. It enables organizers to take visions and produce practical and efficient outcomes that effect long-lasting change. It also helps organizations gather meaningful information to maximize their potential. Completing a SWOT analysis is a useful process regarding the consideration of key organizational priorities.

This process undertaken by the MRI study included an evaluation of both the external environment, as well as, the Atkinson Fire and EMS services internal factors and the interrelationship between the two. This was accomplished through virtual interviews, along with the analysis of data obtained from various sources. By approaching the SWOT analysis in this way, the process continues to reinforce a primarily – but not entirely - stakeholder-driven perspective.

Strengths:

- Passion and dedication of Atkinson fire and EMS personnel – they care and strive to provide excellent service;
- A high degree of mission buy-in and ownership;
- A high regard for the customer;
- High quality apparatus and equipment that is well distributed throughout the County;
- Strong support from the Town Administrator;
- Strong support from the public;
- Excellent training programs;
- Exceptional centralized resources for training and coordination of effort;
- Best practice centralized resource coordination and deployment dispatch system;
- Recognition of current and potential challenges;
- Recognition that there is no one solution;
- High level of engagement in this study.

Weaknesses:

- Societal change, and generational differences have changed the value of on-call participation;
- Many active members are aging out;
- An overall reduction in active personnel and response staffing;
- The American fire and EMS services have an increasing risk profile such as cancer, active shooter incidents, and more recently, COVID-19, which may change the level of interest of traditional candidates;
- Increasing training requirements consumes more leisure time;
- Increasing economic pressure on potential responders;
- Shifting concepts of who is responsible for cost;
- Political change in an increasingly divisive society;
- A large gap by the municipal governments in developing a thorough knowledge of what emergency services are delivered to their community;
- Lack of adequate financial support from municipalities relative to the true costs of providing services;
- Although well intentioned, recruitment and retention effort that has had only marginal success;
- Increasing response metrics;
- Lack of education of the public and local officials regarding all facets – including financial – of the fire and EMS delivery systems;
- Continued primary use of traditional response practices for on-call fire response.

Opportunities:

- Use of legislative processes to secure funding at both the local, regional, state, and federal levels;
- The ability to work with the community to identify the current level of service and set realistic service level/cost expectations;
- Development of an enhanced Department of Emergency Services that delivers more than the current support services;
- Increase in regional collaborations and endeavors within the county;
- Implementation of a Mobile Integrated Health (MIH) Care program at the community level;
- Create QRF (quick reaction force) model with regional deployment staffed by on-calls paid as per diems as an interim staffing measure;
- Development of more intensive local recruitment and retention efforts;
- Development of dual role positions to bolster daytime response;
- Address recruitment and retention county-wide, by consolidation of efforts;
- Demonstrate problem solving abilities through programs and by providing a model approach to the declining on-call crisis;
- Explore new forms of outreach and marketing to inform the community of the challenges ahead;
- Marketing and communicating the social identity and benefits of being an on-call firefighter in the Atkinson Fire Department;
- Identify and harness the best practices from across the nation relative to the further development of recruitment and retention strategies;
- Develop new support roles for on-call personnel (tech, social media, marketing, etc.)

Threats:

- The fire services' ability to improvise and get a mission accomplished despite the absence of appropriate financial resources;
- The inability to provide a timely response to multiple overlapping emergency calls;
- The projection of a problem that does not exist, described as "a crises without evidence" The Atkinson Fire Department sees the service gaps but the public sees and accepts a level of service continuity that goes against the description of the problem;
- Continued decline of on-call firefighters across the county part of an overall nationwide reduction in volunteerism;
- Continued exodus of younger, trained on-call personnel to career job opportunities;
- The financial costs to communities who will be required to take over the delivery of fire and/or EMS delivery in municipalities due to the closing of providers;
- The fiscal and operational impact of the Covid-19 pandemic which may significantly impact on-call participation;

- Fire and EMS agencies that resist being transparent about their finances even as they request additional public funding;
- Reduction in operational safety based on staffing trends;
- Aging on-call personnel who in many cases keep the lights on and the apparatus responding;
- Generational and cultural differences in the emergency services that is not always as inclusive as they should be;
- Cost of housing in Atkinson making it prohibitive for many young people to purchase homes.

Looking ahead, the Town of Atkinson stakeholders should use the SWOT analysis to further define the most critical issues and service gaps facing the fire and EMS services. These service gaps and critical issues will then be utilized as the framework for establishing the priority for implementation of goals and recommendations in this strategic planning document.

Recommendations

IV-1: The Town and the Atkinson Fire Department should develop a five-year plan to enhance training, documentation and water supply inspection, and flow testing to move toward reclassifying the Atkinson Fire Department as a Class 5 fire service organization.

IV-2: The Town and the Atkinson Fire Department should develop a ten-year plan to enhance training, documentation, water supply inspection, flow testing, and emergency telecommunications operations to move toward reclassifying the Atkinson Fire Department as a Class 4 fire service organization.

IV-3: The Atkinson Fire Department should review and expand on the SWOT analysis provided. Over the next year, plan should be developed to utilizes strengths to pursue opportunities and address weaknesses while mitigating threats. This should be an ongoing process that has member involvement and is moved forward by the officer core.

V. FIRE DEPARTMENT

The Atkinson Fire Department was established in 1944 and 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 was a complete volunteer department until 2002 when the members began to be paid to respond. The Department works out of one station that was constructed in 2000. An evaluation of the station has been done and is referenced in section 8 of this report. Overall, the team found the Department is very well managed and no obvious problems or concerns were found.



Figure 12
Fire Patch

The Atkinson Fire Department is a full-service fire/rescue organization which provides fire, rescue; such as vehicle extrication, hazardous materials response, and has the ability to provide emergency medical services at the advanced life support level (ALS) to the community. It currently has an Insurance Services Office (ISO) rating of 6/6Y, which is slightly above the mid-point of the scale and commendable for a small community with a portion of the Town with no public water supply. Although, this rating could be improved with the development of a strategic plan over the next five years. The Fire Department's annual operating budget for the past three years has averaged approximately \$384,038; with a current fiscal year operating budget of \$466,690. This is in line with similar departments in the region and should be recognized as a cost-efficient operation that provides a great value to the community.

The organizational structure of any organization or entity, whether public or private, establishes and illustrates the important heirarcial relationships between various personnel and supervisors/subordinates within the organization; that allows it to function properly, operate effectively, and efficiently in its daily operations and the pursuit of its mission. It also helps to

clearly define the organizational chain of command from top to bottom, an especially important consideration in a quasi-military public safety organization, such as the Fire Department where everyone from the highest rank to the lowest is subject to receiving orders and with the exception of the lowest rank, also issues them. Effective communications in any organization, but especially public safety agencies, are essential; and a cohesive chain of command allows everyone to know exactly who they report to and/or who reports to them.

Traditionally, and in most fire service organizations, company level officers (captains and lieutenants) are working supervisors. They form an integral part of their company, apparatus, or unit, and it is often necessary for them to assume hands-on involvement in operations while simultaneously providing oversight and direction to their personnel. During structure fires and other dangerous technical operations, it is imperative that these officers accompany, and operate with their crew to monitor conditions, provides situation reports, and assess progress toward incident mitigation. During structure fires, they must be capable of operating inside of the fire building with their crews, the most dangerous place on the incident scene. It is imperative that they are highly qualified and experienced, and can command the confidence of their personnel. It is also important that personnel who are serving as chief level officers fully understand and are experienced at these skills and tasks before assuming greater responsibility. While MRI is cognizant that any type of organizational hierarchy is not always going to line up perfectly on emergency incidents, the project team believes that the organizational structure that is being recommend, will provide increased operational effectiveness, safety, and improved accountability.

VI. STAFFING

At the time that this assessment was completed, the Atkinson Fire Department's call firefighter roster listed 25 active personnel. This includes a Fire Chief (part time), 2 full-time staff members (daytime coverage) and 22 on -call firefighters. This organizational makeup is represented in the chart below:

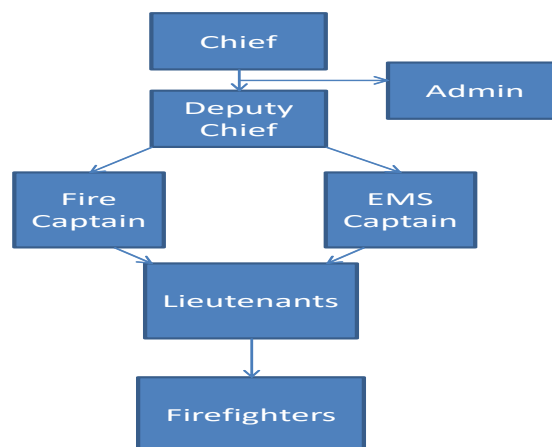


Figure 13
Organizational Chart 2020

The current staffing model indicates the Chief works an average of 25 hours per week with office hours Monday thru Friday. We believe that based on the Chiefs workload the hours for the position of Fire Chief should be increased to 32 hours per week. There are two full-time firefighters who work weekdays from 0800 to 1600. Overnight coverage is assigned from 2200 to 0600 to on-call firefighters. The coverage is assigned to one officer and two firefighters to guarantee availability and response during these hours. Since the COVID 19 pandemic started, the Department has been staffing the station on weekends mirroring the weekday schedule. This so far has been well received by the members and the community. Based on the evaluation of service expectation MRI recommends that this practice continue after the pandemic has abated. These shifts should be offered to on-call members before any per diem staff is hired or considered for this coverage.

Even in a small town such as Atkinson, the size of the Department from a call personnel perspective is not going to be adequate to handle the expected emergency work load. In addition, in almost any on-call emergency services organization, there is going to be a percentage of members whose names still appear on the “active” roster, yet they no longer truly are, or are minimally so, for a variety of reasons. Factor in that most members of the Department have a primary job, other than the Fire Department, that probably limits their availability to respond mostly during normal business hours, and the current staffing picture becomes much more of a concern.

In order to first look at the current staffing model it is important to look at the overall credentials the staff are certified to operate within. The charts below show the number of staff within the Fire and EMS groups as well as the operational level that currently exists. The Department is well served by the current staff with all except two probationary firefighters certified, and the majority at the Firefighter 2 level.

Fire	
Total Staff	25
Firefighter 1	4 (16%)
Firefighter 2	14 (56%)
Firefighter 3	1 (4%)
Probationary	2 (8%)
Career Certified	4 (16%)

EMS	
Total Staff	25
Basic EMT	12 (48%)
Advanced EMT	6 (24%)
Paramedic	1 (4%)
None	6 (24%)

Figure 14
Staff Certifications

The age of the Department staff is an important statistic to look at; as the Department's ability to maintain a strong physical workforce is critical, to assuring the service demands can be met. Although age is not the only factor to be considered, the actual health and physical ability of each individual plays a significant role regardless of the age.

Age Bracket	Number of staff	%
18-25	1	4 %
26-35	5	20 %
36-45	5	20 %
46-55	4	16 %
56-65	5	20 %
66-75	5	20 %

Figure 15
Current Staffing age

Having a number of people listed on a roster may give a false sense of security. Their participation in training and actual response to incidents shows the real numbers and the level of service the Department can actually deliver. The table below indicates the overall participation for 2019. The table reflects the age of the Firefighter and the percentage of calls the individual responded to during the year. The third column indicates the percentage of response for the age group.

The data reflects exactly what the fire service throughout the country is seeing for a trend. The younger group (22-39-year old) has the lowest participation rates, and the older (over 61 years of age) have the highest. The obvious concern is that the older people who have the highest activity rate will be aging out and may no longer be able to physically meet the demands that firefighting requires. Presently in Atkinson, there are a total of 11 (44%) of the firefighters that are age 55 and older.

AGE	CALL RESPONSE	AVERAGE FOR AGE GROUP
22	2.43%	
32	New	
32	3.03%	
34	17.91%	22 to 39 year old
35	22.61%	
35	29.74%	16.51%
36	22.61%	
38	14.87%	
38	16.08%	
39	19.27%	

45	8.65%	
47	22.76%	
53	25.49%	45 to 60 year old
53	17.30%	
55	3.03%	19.68%
59	17.75%	
60	42.79%	
62	10.32%	
62	40.82%	61 to 74 year old
65	39.30%	
70	38.09%	35.88%
71	64.14%	
71	55.84%	
72	9.41%	
74	29.14%	
Green bar indicates a rank officer		

Note: The new Firefighter was not used in calculations

Figure 16
2019 Participation
By age

THE VANISHING ON-CALL / VOLUNTEER FIREFIGHTER

Note: Much of the following section is inserted as a best practice examples staffing and recruitment/retention strategies in other jurisdictions. Based on these examples and the experience of the project team, Atkinson is not alone in confronting these issues.

The Town of Atkinson has expressed a desire to retain a strong on-call firefighting force. The project team concurs, and believes that goal is realistic and achievable for the foreseeable future, albeit with changes in traditional operational procedures, and the introduction of a larger career force to supplement the call force. However, achieving this goal will require the implementation of program(s) to recruit; and then perhaps more importantly, retain personnel. This will take strong commitment from the fire company, the municipality and the county; along with strong leadership in the fire company.

In March 2004, the International Association of Fire Chiefs (IAFC) issued a report by the Volunteer and Combination Officers Section, entitled ***“A Call for Action: Preserving and Improving the Future of the Volunteer Fire Service”***. Among other things, the report highlighted the fact that the ranks of on-call firefighters nationwide are declining due at least in part, due to an increasing demand for services. There are also various other factors that are prevalent to the reduction in the number of on-call firefighters in communities such as Atkinson. Among them is that the demographics of many communities today do not support a sufficient number of the type of person who is attracted to the fire service in the 21st century - someone with time to dedicate to public service, or a young person who wants to make a career of it.

As a reflection of this problem Pennsylvania recently published the SR 6 report, which notes that the average age of an on-call firefighter in Pennsylvania is 48 years old. In addition, this document notes that in many cases those who are looking for a fire service career leave the county as soon as they are offered a job, which is often in other nearby states. This level of attrition of qualified personnel has occurred in Atkinson and is representative of a nationwide trend.

MRI has found that on average, for every five on-call firefighters recruited, two or three will remain active after a period of about 48 months has elapsed. This fact alone can frustrate recruitment efforts, which in and of themselves are a time intensive endeavor. The task of recruitment and retention is further complicated if the fire company and/or the municipalities it serves lacks a true commitment (whether real or perceived) to the on-call firefighters.

Making the challenge even greater, in 2020 the average citizen does not want to spend a great deal of personal time dedicated to the fire and emergency services, especially when family commitments take priority. Other reasons for difficulty recruiting and retaining members include:

- A. An overall reduction in leisure time.;
- B. Employment obligations and the common need to maintain more than one job;
- C. The virtual elimination of employers understanding and flexibility relating to this form of community service;
- D. Increased family demands;
- E. Generational differences;
- F. Increasing training requirements;
- G. The cost of housing in many affluent communities;
(This is reported to be a growing problem in Atkinson as many young people cannot afford homes in the community)
- H. Organizational culture;
- I. Internal respect;
- J. Recognition of personnel;
- K. Internal communication;
- L. Department leadership styles and commitments;
- M. Severe lack of funding;
- N. Outdated service delivery models;
- O. Political polarization.

In November 2005, the IAFC Volunteer and Combination Officer's Section released a second report, called ***"Lighting the Path of Evolution: Leading the Transition in Volunteer and Combination Fire Departments"***. This report further expanded on issues and strategies for maintaining high service levels to the community, and safety for emergency response personnel while simultaneously keeping costs down. One prominent question asked in the report was ***"How can fire departments ensure the delivery of services are reliable?"*** The answer was the development of a list of "indicators for change", where fire department

managers and local government leaders need to be cognizant of warning signs pointing to potential problems and “prepare for change before it is forced upon them by external circumstances”. These “indicators” of change include:

Community Growth: Generally speaking, the larger the community, the larger the call volume and higher level of service people expect.

Community Aging: Maintaining an appropriate level of service depends on the fire department’s ability to recruit new and younger members. This appears to be a major issue in Atkinson as many long time, senior members are nearing retirement or are faced with health problems (even before COVID-19) that limited their availability.

Missed Calls: A critical issue because it is a failure that is highly visible to the public and there is an over-reliance on mutual aid for coverage.

Extended response times: A reliability problem as the public is not provided the appropriate service.

Reduced staffing: A serious problem as it puts citizens and first responder safety at a greater risk.

Most of these issues appear to have growing applicability to Atkinson and its fire service delivery system as a whole. These warning indicators are not necessarily an indictment of anything wrong in Atkinson; the same problems are facing on-call fire companies and departments across the state and the entire country. The challenge is finding ways to preserve and improve the fire service in Atkinson for the foreseeable future.

There has been much research done by several fire departments on the effects of various staffing levels. One constant that has emerged is that company efficiency and effectiveness decrease substantially, while injuries increase when staffing falls below four personnel. A recent comprehensive yet scientifically conducted, verified, and validated study titled ***Multi-Phase Study on Firefighter Safety and the Deployment of Resources***, was performed by the National Institute of Standards and Technology (NIST) and Worcester Polytechnic Institute (WPI), in conjunction with the International Association of Fire Chiefs, the International Association of Fire Fighters, and the Center for Public Safety Excellence. This landmark study researched residential fires, where most of the fires, injuries, and fatalities occur. The study concluded that the size of firefighter crews has a substantial effect on The Fire Department’s ability to protect lives and property in residential fires and occupancies.

Several key findings of the study include:

1. Four-person firefighting crews were able to complete 22 essential firefighting and rescue tasks in a typical residential structure 30% faster than two-person crews, and 25% faster than three-person crews.

2. The four-person crews were able to deliver water to a similarly sized fire 15% faster than the two-person crews, and 6% faster than three-person crews, steps that help to reduce property damage and reduce danger/risks to firefighters.
3. Four-person crews were able to complete critical search and rescue operations 30% faster than two-person crews and 5% faster than three-person crews.

The United States Fire Administration, part of the Federal Emergency Management Agency in the Department of Homeland Security, recommends that a minimum of four firefighters respond to each incident. In its respected textbook ***Managing Fire Services***, the International City/County Management Association (ICMA) states, *“that at least 4 and often 8 or more firefighters under the supervision of an officer should respond to fire suppression operations”*. They further state, *“If about 16 firefighters are not operating at the scene of a working fire within the critical time period then dollar loss and injuries are significantly increased, as is fire spread”*.

Beyond the NFPA standard(s), which as standards do not carry the weight of regulation or law, is the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard, CFR 1910.134, which carries the weight and force of regulation, thus making compliance mandatory. Although New Hampshire is not an OSHA state this standard represents industry best practice. One key provision of the Respiratory Protection Standard that is directly applicable to fire department staffing is known as the *“Two-In/Two-Out”* rule. In brief, this regulation specifies that anytime firefighters operate in an environment/atmosphere that is “immediately dangerous to life and health” (IDLH), whenever two members enter the IDLH area together/as a team, they must maintain visual or voice communication with two additional firefighters who must remain outside of the IDLH atmosphere, prepared to render immediate emergency assistance to those inside (Figure 17). The OSHA rule does provide an exception, however, which states that the rule does not apply in emergency rescue situations where a person is visible and in need of immediate rescue, or there is credible and reasonable information that potentially viable victims are still in need of rescue.

To comply with the *“Two-In/Two-Out”* rule, a team of four firefighters must be assembled before an interior fire attack can be made when the fire has progressed beyond the incipient stage, except in an imminent life-threatening situation when immediate action could prevent the loss of life or serious injury before the team of four firefighters are assembled. The serious concern of the MRI study team is that the OSHA *“Two-In/Two-Out”* rule permits an exception for life hazard or rescue situations. The reality is that in one of the most serious life hazard fire situations that can be encountered; trapped civilians, a firefighter may need to place himself/herself in extreme danger by entering the structure alone.

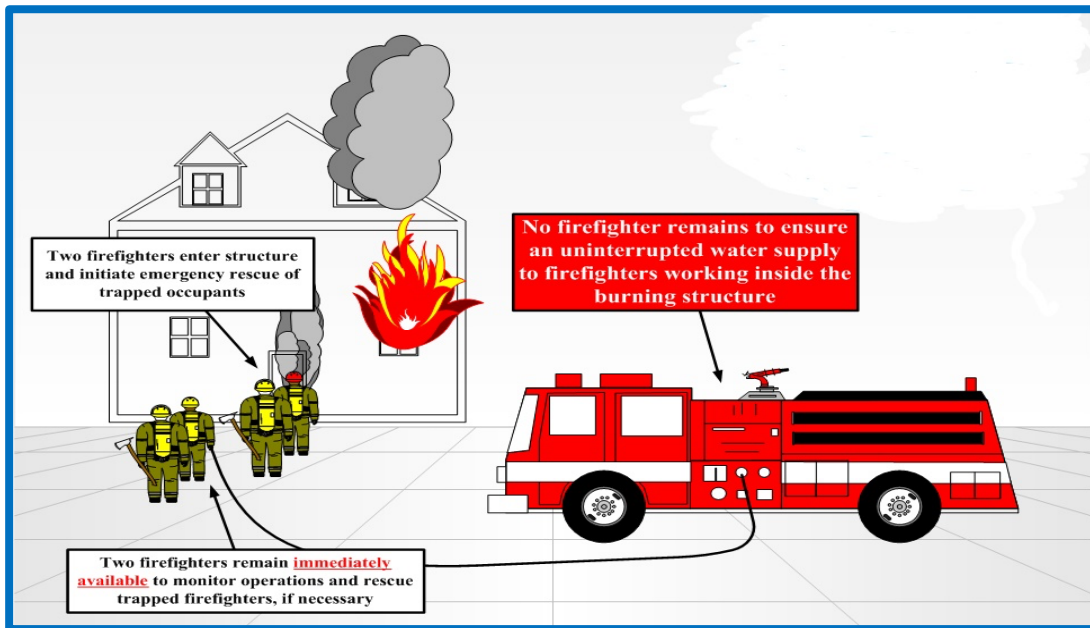


Figure 17
TWO-IN/TWO-OUT
Image Credit: IAFF 266

Although Atkinson Fire Department faces emerging operational staffing challenges, the project team believes that the Department can remain a successful, primarily on-call organization, with reduce response times, and meeting OSHA “Two-in/Two-out” for at least the next decade.

However, continuing the on-call composition of the Atkinson Fire Department will requires a concerted effort and the deployment of several best practices, and non-traditional strategies. Although the Department is open to new members, a new level of effort needs to be directed toward recruitment and retention initiatives.

While police and fire personnel often have no interest in the other public safety profession; which is often the source a failure of forced public safety pilot programs, encouraging police officers to consider serving the community as on-call firefighters when off duty, should be considered as best practice. It must be recognized that should a full-time police officer that lives in the immediate area become an on-call firefighter he/she would be paid at their Police overtime rate for all additional hours based upon the restrictions of the Fair Labor Standards act (FLSA).

Another best practice is to enhance the daytime availability of personnel, is to provide preference when hiring Department of Public Works (DPW) Laborers to existing on-call firefighters. In the alternative if no on-call personnel are interested or qualified, the new DPW hire could have the requirement to become and remain active as an on-call firefighter. This strategy has worked in several communities to enhance daytime coverage during the work week when on-call personnel are often least available. An example of this practice was in Hopkinton Massachusetts where at one time several members of the DPW staff were on-call firefighters, and would deploy to

emergencies if they were not involved in a critical DPW activity. In that community, each DPW utility vehicle had both an emergency and non-emergency lighting package to enable a rapid response and support DPW operations.

This best practice is ideal for Atkinson as there is current discussion relative to adding a DPW laborer. However, it should be recognized for what it is; in that this program could provide one or two personnel for daytime response, and may produce an additional active on-call firefighter during the evenings. While this is a positive step, it is not the sole solution to the fire service staffing issues facing the Town. Once again, it must be recognized that should a DPW laborer become an on-call firefighter, he/she would be paid at their DPW overtime rate for all additional hours, based upon the restrictions of the Fair Labor Standards act (FLSA). The Town Administrator needs to manage the collaboration between the Highway Department and the Fire Department.

Although these strategies are attractive and recommended, the need to pay the overtime rate should be considered by the community, as it could produce a situation where individuals are paid at different rates. This inequity may create some internal concern that should be recognized and addressed before these ideas are implemented.

SEVEN MOST SIGNIFICANT CHALLENGES FACING ATKINSON FIRE AND EMS SERVICES

Based upon the findings and analysis of the team, the most significant challenges facing the fire and EMS services in Atkinson are:

1. Rapidly diminishing staffing pool for fire operations, part of a nationwide trend. The cost associated with addressing this issue will be the biggest challenge ahead for all the stakeholders, both internal and external.
2. Emerging generational differences that often produce a lack of understanding on both sides.
3. The time commitment required for certifications and continued training.
4. Tapping into the high school aged students and the ability to market the fire service.
5. What level of EMS service will the providers need to maintain in the future.
6. The skill set required in today's high-tech environment will need to be adapted to.
7. The need to train in new work force prior to the active members aging out.

IMPLICATIONS OF NOT TAKING ACTION

The challenges that are facing the fire and EMS services in Atkinson have sometimes been referred to as, “a crisis without evidence”. The MRI study team heard this multiple times during interviews. But make no mistake, there is a crisis that is slowly building, and has been for a considerable period. The reason that many stakeholders – municipal leaders and the general public – do not see “evidence” is the long tradition in both the fire and EMS services of “getting the job done”. It has long been known that when people have a problem they don’t know how to deal with, they call the Fire Department because two things are certain when they do: 1) the Fire Department will come, and 2) they will figure out how to deal with the problem or find someone that can/will.

Looking ahead, the implications of not taking action will be quite simple: service levels will begin to diminish, some companies and EMS agencies may fold under financial pressures, and fewer and fewer most likely aging members will be trying to respond to an ever-increasing number of requests for service. On the EMS side, quite possibly a smaller number of service providers will be left to manage a steadily increasing workload.

In the end, **ALL** of the various stakeholders need to engage in open, frank, and honest dialogues regarding the fire and EMS delivery systems. There will need to be increased funding allocated or funding can be re-appropriated. Priority should be given to innovative solutions to the recruitment and retention of on-call personnel which will have costs associated with it, but, it will be money wisely invested. Even with success there, the reality is that the fire and EMS services in the county are going to evolve into more of a combination system with the need for an increasing number of career personnel to supplement on-call personnel. This too will come with an increase cost. However, this cost will be reasonable, and be money well invested, to help support what remains a quality fire and EMS delivery system. ***“If we lose our on-call fire and EMS personnel the taxpayers will face a very steep price tag.”*** That could eventually be the ultimate implication of not taking action.

Recommendations

VI-1: The Atkinson Fire Department should require its career personnel, and strongly encourage its call officers, to obtain a certain level of fire officer certification as a job requirement, such as Fire Officer I for lieutenant, Fire Officer III for Deputy Fire Chief, and Fire Officer Level IV for the Fire Chief.

VI-2: The Atkinson Fire Department should require that all officers be certified as Incident Safety Officers (ISO). Additional personnel who may be interested should be encouraged to take this training and obtain this important firefighter safety certification.

- VI-3:** *As part of the succession planning process, the next Fire Chief should work to implement a professional development program to ensure that all officers can perform their superior's duties, as well as identify the core future leaders of the Department.*
- VI-4:** *The Department should continue to foster and support any member to be trained and certified to the Firefighter 1 and preferably the Firefighter 2 level.*
- VI-5:** *Working with the training officer more training should be planned delivered and documented. In an effort to keep members interested in training the Department should be creative and offer training that is outside the normal programs. Making programs fresh, fun and to some degree competitive, may increase the participation by members. If it's the same old training, people will lose interest. Make it so they want to participate and at the same time meet training goals.*
- VI-6:** *In consultation and cooperation with its neighboring departments, the Atkinson Fire Department should enter into formal automatic aid agreements that specifies the number and types of resources that should be dispatched immediately to various types of reported emergencies, such as structure fires. These recommendations should be based upon a community-wide risk management process and/or pre-fire/incident plan.*
- VI-7:** *Although more stringent than the requirements found in Table 4.3.2 of NFPA 1720 for rural communities, through the utilization of automatic aid agreements with neighboring communities, the Atkinson Fire Department should consider the adoption of an SOC with the goal of attempting to have at least 16 personnel on the scene of any reported structure fire within 14 minutes.*
- VI-8:** *The Atkinson Fire Department should make it a priority to improve its first unit on scene response times, including the adoption of a SOC, for the Town. The SOC should be based upon a hybrid of the NFPA 1710/1720 and Commission on the Accreditation of Ambulance Services (CAAS) recommendations.*
- VI-9:** *With Atkinson covering 11.3 square miles, the Atkinson Fire Department should review standards of cover benchmarks, to have the first unit responding to emergency incidents within one minute of dispatch (staffed station), and have the first unit on scene within eight minutes after responding to all types of calls, 90% of the time. With the current staffing model in place and no other calls in progress, this is something that can be met, if the staff in the station is properly qualified with the appropriate level of training and qualifications. A closer look at simultaneous calls and calls that run back to back (ambulance is transporting, and a second call comes in) should be looked at. At the time of this evaluation the program of having per diem staff in the station was still in its infancy, and it is not known if the station was sufficiently covered while this crew was committed to the first call.*

- VI-10:** *The Atkinson Fire Department should work with the communities listed on each of the “run cards” to assure the number and qualification of staffing, that will be sent on the assignments. In order to be able to meet a safe level of on scene staffing, it will be important to know not only what the department will be receiving and how long it will take, but also to outline what Atkinson will be sending, when these communities request resources from them.*
- VI-11:** *Review the Department roster and look to the members with low participation and find out what can be done to increase their involvement. Work with these members to increase their participation within a pre-determined time frame.*
- VI-12:** *The Atkinson Fire Department should set a minimum criterion for members to remain in active status. This criterion should include both minimum training and response to incidents for a determined time period (one year). This criterion should also allow for people to go into an inactive status for a period of time due to approved circumstances. It would be important for inactive-status people to make up any important training prior to being put back on active status.*
- VI-13:** *The Town should consider encouraging members of the Atkinson Police Department that live in the area to become on-call firefighters.*
- VI-14:** *The Town and the Atkinson Fire Department should work with the Road Agent to ensure that on-call firefighters are given preference when DPW personnel are hired. If on-call members are not interested and or qualified the Town should hire personnel that are willing to become an on-call firefighter as a condition of employment.*
- VI-15:** *Unless critical Highway operations are underway, Highway personnel that are on-call firefighters should respond to emergencies to supplement daytime staffing and assist in meeting the OSHA Two in Two Out Standard.*
- VI-16:** *The current utilization of call staff working weekends in the station that began as part of the pandemic, should be continued into the future.*
- VI-17:** *The hours for the position of Fire Chief should be increased to 32 hours per week.*

It should be mentioned that the Atkinson EMS Captain has been working since 2019 on a number of the recruitment and retention projects that are mentioned above with some already in action and yielding a small increase in the on-call staffing. As this project has progressed these efforts have continued. Our purpose in reiterating some of these ideas is that to be successful recruitment and retention has to be an ongoing effort and a primary focus of the organization.

VII. INCIDENT RESPONSE TYPES AND TIMES

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. For most evaluations, 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.

In this section two important factors have been reviewed. The first is the type of incidents as classified National Fire Incident Reporting System. The second is a series of data that looks at the call volume by day of the week, times of day and response time.

An analysis of the type of incidents the Department responded to from 2017 to 2019 was completed. The table below shows the types of incidents and an average of the number of responses to each over the 3 year period. The incidents are broken up by type following the National Fire Incident Reporting System standards. Not surprising is that the highest value of the incidents were for reported medical emergencies. The balances of the incidents are typical types and volumes for a community and department of this size in New England.

	2017	2018	2019
100 Series Fires	11 (2%)	9 (1%)	8 (1%)
200 Series Explosions	0	0	1
300 Series Rescues and EMS	403 (65%)	460 (71%)	427 (65%)
400 Series Hazardous Conditions (no Fire)	31 (5%)	17 (3%)	27 (4%)
500 Series Service Calls	63 (10%)	66 (10%)	91 (14%)
600 Series Good Intent Calls	19 (3%)	8 (1%)	71%)
700 Series False Alarms & False Call	90 (15%)	90 (14%)	98 (15%)
TOTAL Incidents	617	650	659

Figure 18
Atkinson Fire Department Three Year Call Analysis

With the 300 Series being the highest volume over all three years, the types within the series have been further broken down; to understand the types of incidents within the series. Once again, the project team followed the National Fire Incident Reporting System standards.

	2017	2018	2019
300- Rescue EMS other	33 (8%)	27 (6%)	22 (5%)
311- Assist EMS Crew	338 (84%)	393 (85%)	379 (89%)
322-MVA with Injury	12 (3%)	20 (4%)	10 (2%)
324- MVA no injury	19 (5%)	20 (4%)	16 (4%)
356- High Angle Rescue	1	0	0
TOTAL	403	460	427

Figure 19
Atkinson Fire Department Three-year EMS Call Analysis

Incidents by day of the week and time of day were also analyzed. The outcome of the data looked at, is very comparable to other departments that have been looked at over the past few years. There is no one day of the week or set of hours that may benefit from not having in station coverage and still be able to provide the level of service the community desires.

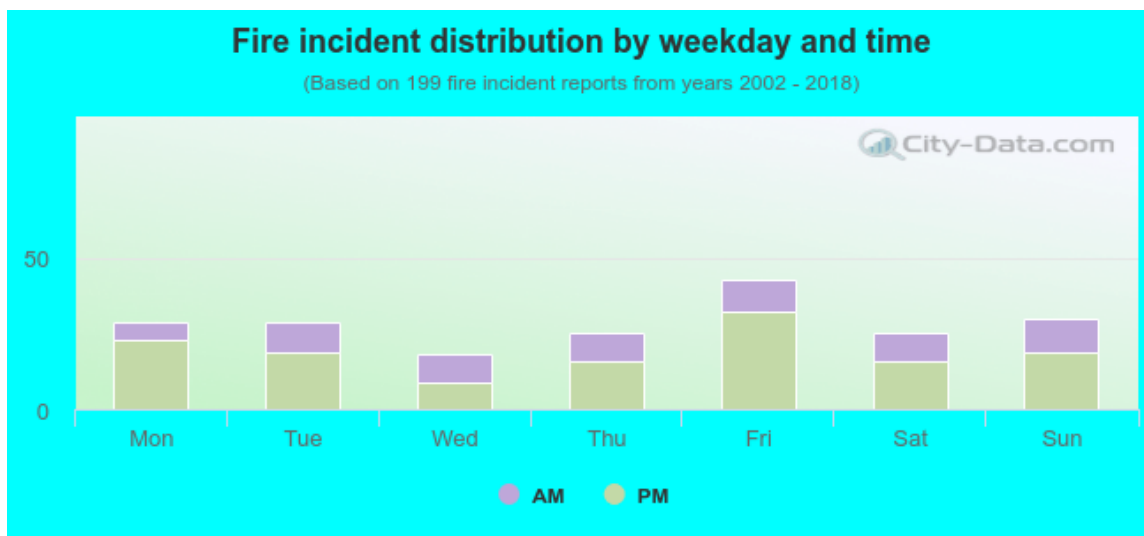


Figure 20
Call Volume by day of the week

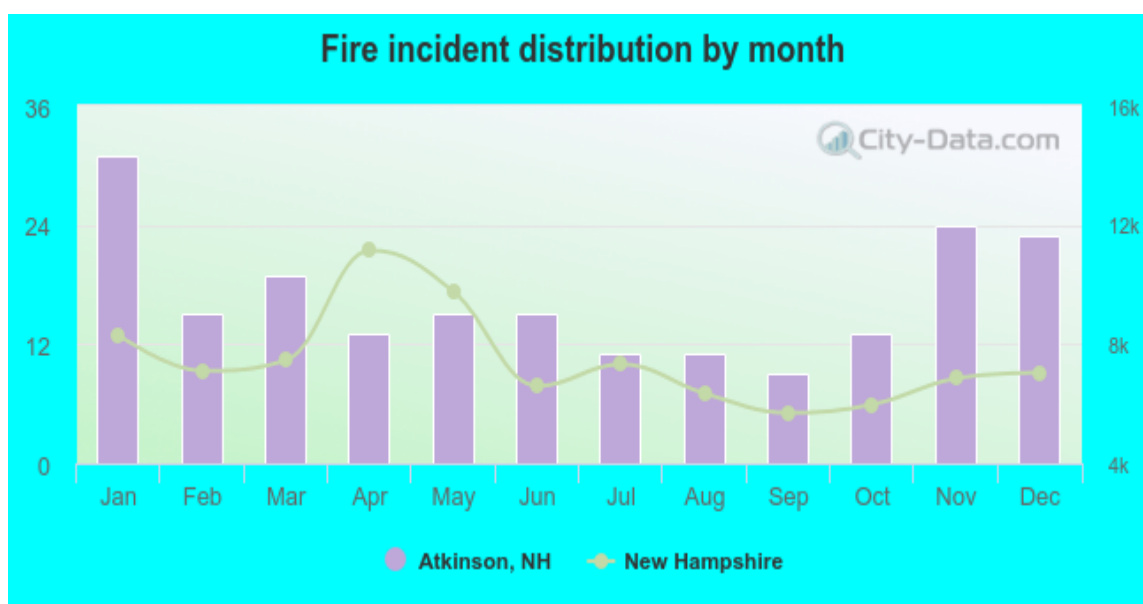


Figure 21
Call Volume by month

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 affect 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 911 system by civilians. The early notification coupled with the added skills of properly trained EMS staff that 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 1710⁸, which would be applicable to Atkinson 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. CAAS⁹ 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 in 2019 were acceptable with the average response time of just under eight minutes (7.83). 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.

Understanding the Atkinson Fire Department does not respond to the lower level calls for EMS service (in the 911 dispatch system those are referred to as Alpha, Bravo, and Charlie levels) the actual incidents responded to were reviewed.

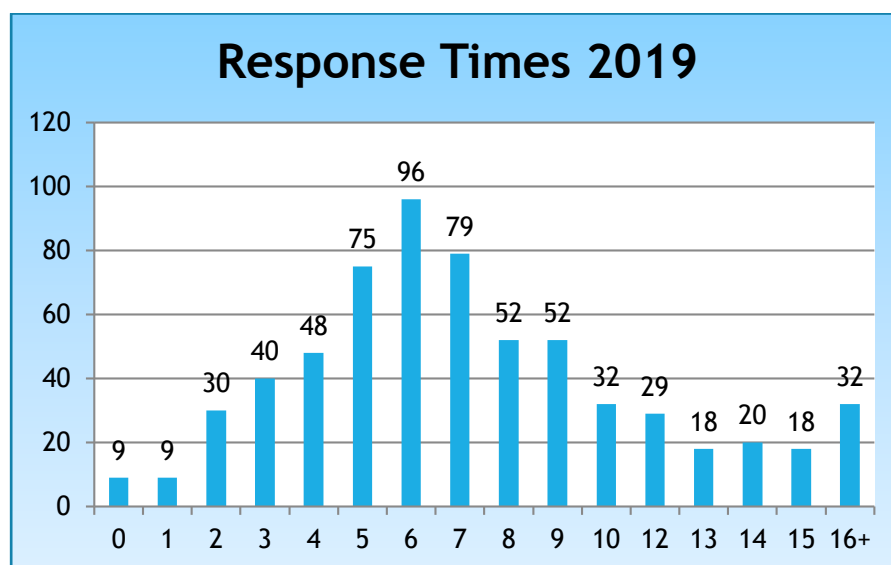


Figure 22
Response Times

⁸ NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Career Fire Departments, 2014 edition (National Fire Protection Association, Quincy, MA), outlines organization and deployment of operations by career and primarily career fire departments.

⁹ The Commission on Accreditation of Ambulance Services (CAAS) is an independent commission that established a comprehensive series of standards for the ambulance service industry.

Paragraph 4.1, **Fire Suppression Organization** in NFPA 1720¹⁰ states, fire suppression operations shall be organized to ensure that the Fire Department's fire suppression capability includes sufficient personnel, equipment, and other resources to deploy fire suppression resources effectively, efficiently, and safely. Paragraph 4.2.2, *Community Risk Management*, states the number and types of units assigned to respond to a reported incident shall be determined by risk analysis and/or pre-fire planning.

The operations necessary to successfully extinguish a structure fire, and do so effectively, efficiently, and safely, requires a carefully coordinated, and controlled, plan of action, where certain operations, such as venting ahead of the advancing interior hose line(s), must be carried out with a high degree of precision and timing. Multiple operations, frequently where seconds count, such as search and rescue operations and trying to cut off a rapidly advancing fire, must also be conducted simultaneously. If there are not enough personnel on the incident initially to perform all the critical tasks, some will, out of necessity, be delayed. This can result in an increased risk of serious injury, or death, to building occupants and firefighters, and increased property damage. It is important that Atkinson give and receive mutual aid to fires with appropriate staffing of at least 4 personnel one of which should be an officer.

To address this concern the community will need to make a conscious choice relative to service level through budgetary appropriation. Assuming that additional funding is provided to develop a 24/7 quick response force (QRF), The project team does not recommend adding additional career personnel unless all other coverage options have been exhausted. When working with a successful on-call organization such as the Atkinson Fire Department the focus is to develop and support on-call operations. The rapid introduction of career staff on a 24/7 basis changes the on-call function and relegates on-call personnel to secondary responders often serving as support personnel and tends to rapidly diminish participation.

Instead of adding additional career personnel over the next three years, MRI suggests scheduling and compensating two on-call personnel that are on the assigned duty crew to provide coverage from the station at night, to initiate a rapid response, reduce response times and preserve the primary response role of on-call personnel. A program of this type has worked well in many New Hampshire Communities. If on-call personnel are not able to fill all of the shifts per diem personnel could be hired, but that should only be once all efforts to schedule on-call members has not produced sufficient coverage. On-call members should have preference to cover these shifts.

In an effort to show the cost impact to the Community, the table below indicates the options that may be looked at as well as what the estimated cost would be. It is important to note that the hourly wages used are an estimate of what the current market had as of the date of this document and that a fluctuation will no doubt need to be reviewed at the time of consideration.

¹⁰ NFPA 1720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments, 2014 edition (National Fire Protection Association, Quincy, MA) outlines organization and deployment of operations by volunteer/call, and primarily volunteer/call fire departments.

For the calculation on the chart a constant \$18.00 per hour was used regardless of part time or fulltime. Items not considered in the overall calculations are uniforms, physicals, shift coverage (over time), workmen's compensation as well as any cost associated with any building operations. Once an employee was considered full time then a 40% increase was added to indicate a benefit package.

Option			
1	2 part time staff week nights	6 PM to 6 AM (Mon to Fri) to augment the current full time	120 hrs x \$18.00 = 2,160.00 WK x 52 weeks = \$112,320.00
2	2 part time staff weekends 24 shifts	6 AM Sat to 6AM Mon	48 hours x \$18.00 = \$1728.00 x 52 weeks = \$ 89,856.00
3	Combination of 1 &2		\$202,176.00
4	8 fulltime 24X7 staff (this would include the <u>2 staff currently</u> <u>working</u>)	24 hour shift (48 hours a week)	384 hours x \$18.00 = 6912.00 wk X 52 weeks \$359,424.00 plus 40% benefits of,143,770.00 – Total estimated budget of \$503,193.00

**Figure 23 –
Coverage Level and Projected Fiscal Impact on the Town of Atkinson**

Recommendations

VII-1: The Town of Atkinson should be asked to select an appropriate service level and if that requires the rapid response of a single unit, the Town should appropriate sufficient funding to schedule a two person on-call shift to provide in station coverage on a 24/7 basis.

VII-2: The Atkinson Fire Department Should give preference to on-call personnel to fill these Quick response shifts. In the event that on-call personnel cannot meet this need per diem staff should be utilized.

VII-3: Every effort should be made to preserve the primary responder role of on-call personnel within the Atkinson Fire Department.

VIII. FACILITY



Figure 24
Fire Station

Fire and EMS stations are a critical community asset. The station facilities of a modern fire and EMS department are designed to do much more than simply provide a garage for apparatus and a place for firefighters and EMS personnel to wait for a call. Well-designed fire and EMS facilities enable staff to perform their duties effectively, efficiently, and safely.

The current Atkinson fire station was completed in 2000 and is in excellent shape and will be sufficient for the community for many years to come.

The building is equipped with an emergency generator. It is also outfitted with a source capture vehicle exhaust extraction system.

Although the MRI team believes that the current facility does, and can continue, to meet the needs of the Department for many years. Like any other building in town there needs to be funds that are made available on a regular basis to continue to keep the building in the current condition. The Town of Atkinson should have a capital improvement plan to include paint for both interior and exterior, carpet, as well as infrastructure upgrades and replacements on systems such as heating, ventilation, and air conditioning.



Figure 25
General Office



Figure 26
Gear Room



Figure 27
Eating Area



Figure 28
Chiefs Office



Figure 29
Training Room



Figure 30
Radio Room



Figure 31
Day Room



Figure 32
Bunk Room



Figure 33
Kitchen



Figure 34
Officers' Office



Figure 35
Clean Room



Figure 36
Work Room

IX. APPARATUS

The geography, infrastructure, hazards, and construction features within the community all play a major role in determining the composition of each department's unique and individualized apparatus fleet and equipment inventory. Atkinson is primarily a rural community with the expected limited fire potential such communities usually present. However, new single family dwellings are nearly all built utilizing lightweight construction which presents many safety hazards to firefighters. These factors, as well as projected future needs, must be taken into consideration when specifying and purchasing apparatus and equipment. Every effort should be made to make new apparatus as versatile and multi-functional/capable as is possible and practical.

A review of the Atkinson Fire Department's apparatus fleet in terms of age, condition, and capabilities finds an average to newer fleet that overall appears to be well maintained and in good condition. Fire and EMS apparatus and equipment comes with a very high price tag. The Town of Atkinson like most all communities, are seeing more and more competition for Capital improvement projects from all town departments. The amount of money for Capital Reserves in future years will need to be increase in order to keep up with the cost of the equipment. This can be down in slow increments over the next few years and will need to be monitored to assure the funds are there for the expenditure.

Name	Year	Miles	Hours	Manufacture	Tank	Pump
Ambulance	2008	21,800	U/K	Osage	N/A	N/A
Car1	2011	32,000	N/A	Ford	N/A	N/A
Engine 1	1992	22,085	2,553	Central States	1000	1500
Engine 2	2004	13,590	1128	HME	650	2000
Engine3	2013	4,740	355	HME	1750	1500
Tanker 1	2013	5,285	386	4 Brothers	3000	1000
Support 1	2018	3,350	U/K	Ford	300	500
Trailer 1	2010	U/K	U/K	U/K	N/A	N/A
Utility 1	1999	U/K	U/K	U/K	N/A	N/A

Figure 37
Apparatus Inventory



Figure 38
Ambulance 1



Figure 39
Engine 1



Figure 40
Car 1



Figure 41
Engine 2



Figure 42
Utility 1



Figure 43
Engine 3



Figure 44
Ambulance 1



Figure 45
Special Hazards Trailer



Figure 46
Support 1

The charts below are what the current Capital Improvement Plan (CIP) is for the Atkinson Fire Department. Although the planned replacements do not line up with the recommended standard according to the National Fire Protection Association, it is up to the educated community on what to fund and when. The National Fire Protection Association recommends that a department replace a vehicle at 20/25 years and the department is doing so at 30 years. If the safety of the firefighters and the community is in no way compromised by age, condition, and being able to pass annual pump test, ladder test and state DOT inspections then the vehicles can be used.

The Town of Atkinson has a capital reserve funding plan that is also shown below. This plan needs to be revisited each year and the appropriate cost for each item will need to be adjusted. The current reserve plan indicates a short fall of \$411,952.00 for the replacement of engine three in the year 2031. The MRI review team suggests that the Fire Department look for and apply for an equipment grant that would help with some of the cost of the equipment. Another recommendation would be for the Town to look at lease purchase program that is available with most manufactures of equipment. In New Hampshire it is required to have the lease voted on annually and should the vote not pass then the vehicle gets returned.

<u>FUNCTION</u>	<u>CURRENT</u>	<u>YEAR</u>	<u>AGE</u>	<u>REFURBISH</u>	<u>Refurb Cost</u>	<u>REPLACE</u>	<u>Replace Cost</u>
<u>ATTACK PUMPER</u>							
1st Responding Attack	57E3	2016	2	2031	tbd	2046	tbd
2nd Attack, and Ladder Support	57E2 (Quint)	2005	13	2024	30,000	2035	tbd
Rescue Pumper	57E1	1992	26	2006	NA	2022	600,000
<u>WATER SUPPLY</u>							
	57T1	2013	5	2027	20,000	2043	tbd
<u>RESCUE/AMBULANCE</u>							
	57A1	2008	10	NA		2028	180,000
	57R1	1989	29	NA	Reserve	NA	
<u>UTILITY/SUPPORT</u>							
Utility/Forestry	57U1	1994	24	NA		?	?
	57R1	2019	0	NA		?	?
Command	57C1	2011	7	NA		2026	50,000
<u>PROT. GEAR</u> (10 Year Life)	30 sets	2013	5	NA		2023	60,000
<u>SCBAs</u> (15 Year life)	20 sets	2015	3	NA		2030	160,000

Figure 47
Capital Improvement Plan

YEAR	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Expend			New Eng. 1	Prot. Gear	E2 Refurb		Command	T1 Refurb	Ambulance		SCBAs	New E3
Annual Exp			600,000	60,000	30,000		50,000	20,000	180,000		160,000	800,00
Proposed Capital Reserve	120,000	120,000	120,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,00
Est. Interest @ .4%	3,798	6,485	9,229	-986	-140	1,376	3,576	4,739	6,577	4,984	7,262	6,11
Est. Net Fund Ending	298,828	425,313	-45,458	-6,444	63,416	164,792	218,368	303,106	229,684	334,668	281,930	-411,95

Figure 48
Capital Improvement Plan with funding

Recommendations

- IX-1:** *The Town of Atkinson 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.*
- IX-2:** *The Town of Atkinson 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.*
- IX-3:** *The Town of Atkinson 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.*
- IX-4:** *The Town of Atkinson 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.*
- IX-5** *The Town of Atkinson needs to address the noted financial deficit in the existing capital plan.*

X. WATER SUPPLY

The Town of Atkinson is partially served by the Hampstead Area Water Company. The map below indicates a wide section of town that does not have municipal water and will rely on trucks to bring water to the scene of a fire. The Department currently pays the water company \$17,600.00 per year for hydrant use and is budgeted for an additional \$3,000.00, for hydrant maintenance. There are some commercial sites within the Town that have private onsite water storage such as Lewis Builders who maintain a 400K tank. The community should be developing a plan to bring water to all areas of town. The Insurance Service Office report indicates 17.81 points out of a total of 40 points available for water supply. In October of 2019 six hydrants were flow tested that resulted in a range of available flow ranging from 300 to 1600 gallons per minute. The needed flow was from 500 to 3000 gallons per minute. This sample test indicates a concerned shortage of available flow and pressure in the system. During the Summer of 2020 an additional 1-million-gallon water storage tank was put online on Winslow Drive. This will enhance the amount of available water in the system.

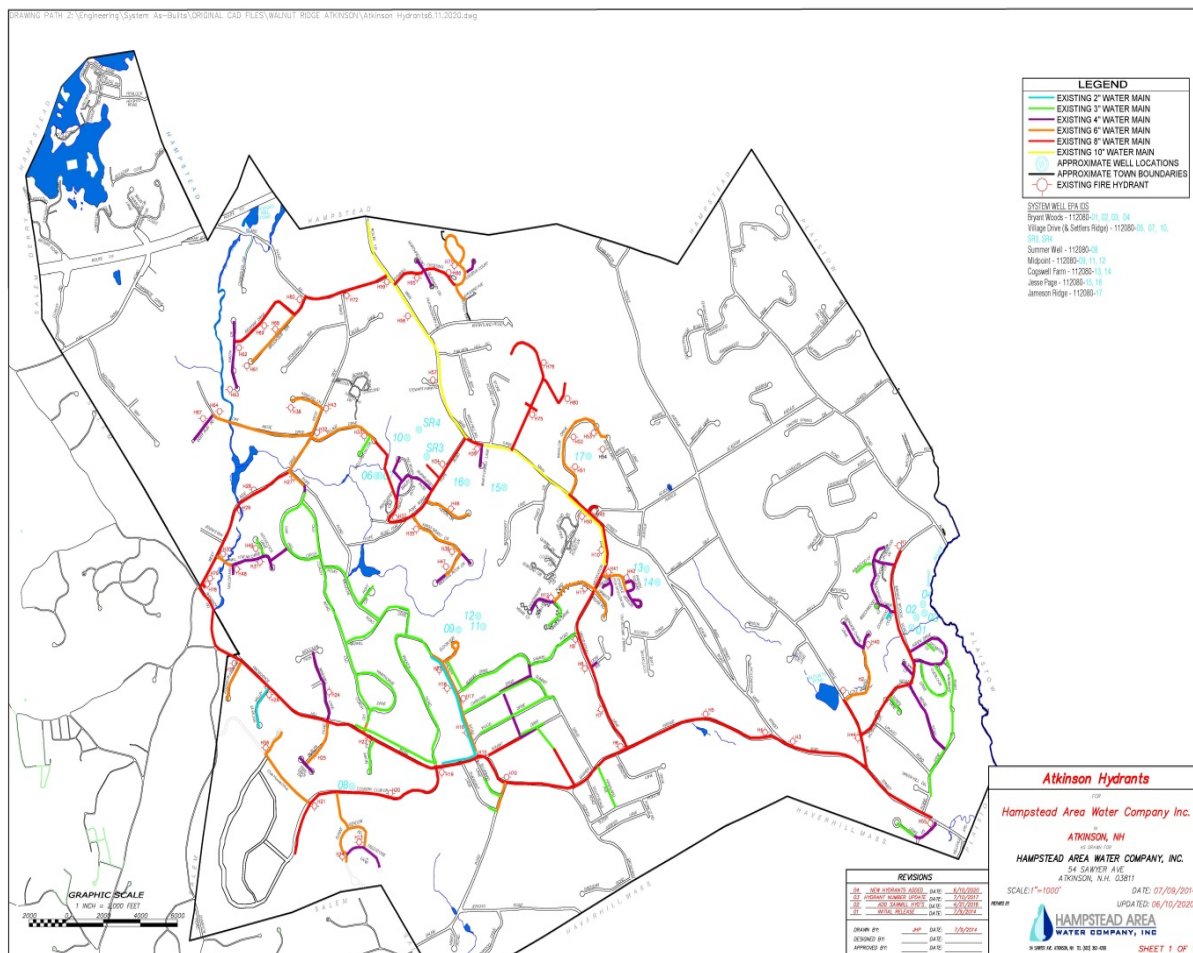


Figure 49
Water Distribution Map

Recommendations

- X-1:** *The Town should have an independent study done on the water distribution system and compare it to the needed fire flow.*
- X-2:** *The Town should develop a plan to provide fire service water to all areas in the community. This can be done by adding to the existing water distribution system, adding fire ponds and or cisterns.*
- X-3** *The Town should work with the water District to require annual hydrant inspection, periodic flow testing and documentation of these activities.*

XI. ON CALL RECUITMENT AND RETENTION

The Town of Atkinson has expressed a desire to retain a strong call firefighting force. MRI concurs and believes that goal is realistic and achievable for the foreseeable future. However, it will require the implementation of program(s) to recruit and then retain personnel; a strong commitment from the Town; and strong leadership in the Fire Department.

As was described in the section titled “***The Vanishing Volunteer***”, the number of on-call firefighters across the country is rapidly declining, a trend that has been occurring for several decades (Figure 44). To illustrate this point, the project team utilized Pennsylvania as an example. According to the Pennsylvania Fire and Emergency Services Institute, the number of on-call firefighters in Pennsylvania have declined from around 300,000 in the 1970’s, to about 60,000 in the early 2000’s. and to 38,000 in 2018. It should be noted also that Pennsylvania has one of the strongest and proudest traditions of on-call firefighters in the United States, and, has more on-call fire companies than any other state.

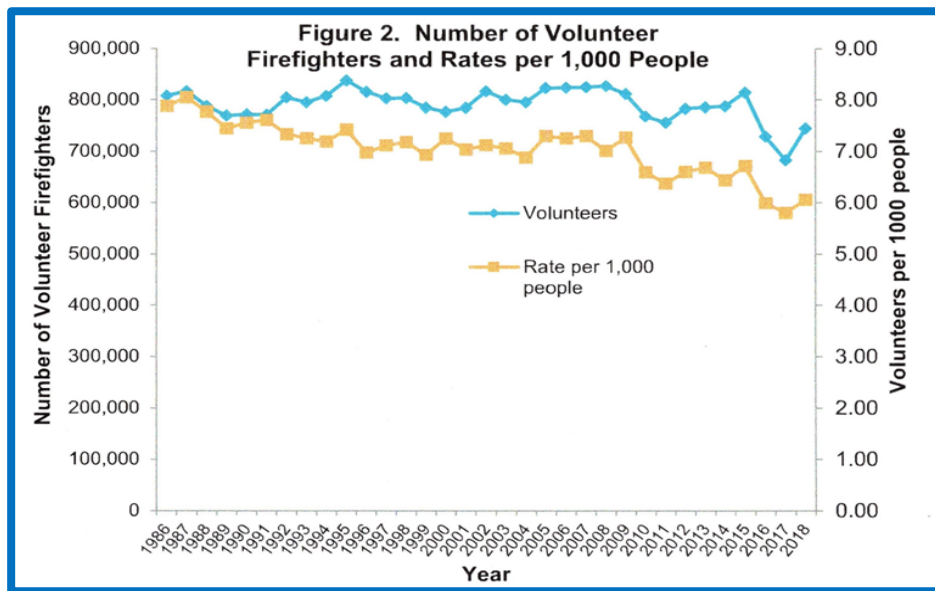


Figure 50
NUMBER AND RATES OF VOLUNTEER FIREFIGHTERS: 1986 – 2018

In March 2004, the International Association of Fire Chiefs (IAFC) issued a report by the Volunteer and Combination Officers Section, entitled ***A Call for Action: Preserving and Improving the Future of the Volunteer Fire Service***. Among other things, the report highlighted the fact that the ranks of on-call firefighters nationwide are declining due, at least in part, to an increasing demand for services. There are also various other factors that are prevalent to the reduction in the number of on-call firefighters in communities such as Atkinson. Among them is that the demographics of many communities today do not support a sufficient number of the types of person who is attracted to the fire service in the 21st century - someone with time to dedicate to public service, or a young person who wants to make a career of it. The project team has found that on average, for every five on-call firefighters recruited, two will remain active after a period of 48 months has elapsed. The task of recruitment and retention is further complicated when the Department lacks leadership and a true commitment (whether real or perceived) to the on-call force.

Presently, the Atkinson Fire Department has approximately twenty-five members on its roster. On its own, this number may look to be sufficient for the activity level. However, in almost any on-call emergency services organization there is going to be a percentage of members whose names still appear on the “active” roster, yet they no longer truly are, or are minimally so, for a variety of reasons. Factor in that most members of the Department have a primary job, other than the Fire Department, that probably limits their availability to respond, mostly during normal business hours, and the current personnel picture becomes much more of a concern. Based upon the analysis only about three or four of the on-call personnel respond to incidents on a regular basis.

With many members of the Department “aging out” in the next three to five years, a significant effort will need to be put forth towards recruitment and retention of on-call personnel. Although Atkinson is far from alone in dealing with this reduction in on-call staff, it is essential that addressing this situation is clearly identified as a top priority of the Fire Chief and be adopted as a shared mission of the entire department.

The Atkinson Fire Department also does not have a formal recruitment and retention program for call personnel and has only very infrequently actively recruited for new members. The MRI study team was informed that most new members of the Department are recruited by word of mouth or are “walk ins”. There is no mention of the need for additional members on the Town or fire department’s websites, or even a person to contact if someone is interested in joining the Department. This is something that is frequently displayed very prominently on the websites of many on-call departments.

It is easy to believe that increasing the number of on-call firefighters can be a cure all to eliminate all staffing, and thus response problems. Unfortunately, in 2020, this is an increasingly difficult problem to overcome. However, there still appears to be a small town feel to Atkinson, and perhaps more importantly, still a sense of community. These are key attributes that may increase the likelihood of success for any call firefighter recruitment and retention program. Some studies and reports prepared by various entities have noted that many on-call fire departments serving small to medium sized communities anticipate that about one percent of its year-round population, will be members of the Fire Department.

In the smaller government, anti-taxes, and benefits climate of today, many of these benefits can be controversial. However, after considering these strategies, the project team has focused on developing innovative strategies for the Town of Atkinson. One example of an unconventional and innovative best practice that would work in Atkinson is to provide a health insurance package for self-employed, year-round residents, provided they complete training, certification, and provide the Town with a high level of immediate response. Typically, this type of program attracts electricians, plumbers, painters, and other trades, as well as self-employed professionals that would be beneficial to the organizations.

In August 2017, a fire chiefs association was awarded a SAFER grant for \$381,000 for volunteer recruitment and retention. In June 2019, the MRI study team had the opportunity to be present at a committee meeting which was attended by five members, consisting of two fire chiefs, two firefighters, and a vendor who is providing marketing services. Some of the obstacles to recruitment that have been identified include:

1. Prospective members sometimes have difficulty connecting with local fire departments and feeling welcomed to the organization.
2. Websites often do not market properly. A random sampling of fire department and municipal websites by the MRI study team found that almost none have the need for call firefighters and EMS personnel displayed prominently in a pinned or

scrolling heading, on the home page of their websites. Many have a tab, but they are often in with the website's other tabs.

2. Recruitment itself is a very involved, time consuming and labor-intensive endeavor. It needs to be conducted almost continuously and to be successful it has to have to follow through and a true commitment to put in the effort.
3. A growing problem in Atkinson is that as the area grows a strong real estate market makes the community so expensive to live in that potential on-call members – particularly younger ones – are forced to live in other areas.

It was also noted that the Fire Chief needs to be number one advocate for their organization and be an active participant in recruiting efforts. The chief must also quickly respond to and answer inquiries from prospective members.

An example advertising and marketing campaign called Help Fight Fire (Figure 50). A website dedicated to this effort is located at <https://www.helpfightfire.com/>. A campaign such as the example depicted could be a valuable resource to the Atkinson Fire Department.



Figure 51
HELP FIGHT FIRE WEBSITE HEADER



Figure 52
Chester County fire and other emergency responders
operate at an incident under a billboard for the Help Fight
Fire initiative

Even if the recruitment obstacles can be overcome; hurdles remain, before a new member is a productive member of the Fire Department. Once an individual becomes interested in becoming an on-call firefighter, they must achieve a level of ever-increasing specialized skill that is time-consuming. Often exit interviews reveal that the training commitment alone is daunting and one of the primary reasons that on-call personnel resign. It is also costly to the fire company. To become a certified firefighter takes several hundred hours. Once certified, there are dozens of hours training annually, maintaining firefighter and possibly EMT or paramedic skills and certifications. Younger on-call firefighters frequently use their training and opportunities as a steppingstone to seek employment as full-time firefighters, which often results in their loss to the community.

As most suburban communities across the United States are dealing with the reduction of on-call staff, trying to reverse this trend has become a common issue in many places. When compared to the ever-increasing costs of employing additional full-time career personnel, many communities have concluded that investing in on-call personnel is the best and more cost-effective practice and, to that end, they have pursued some of the following strategies:

1. Placing a prominent banner or link on the home page of each fire company and municipal website and along with on all social media platforms. This should be done as a priority that can be accomplished for little to no cost.
2. Conducting a recruitment mailing to all residential properties in each municipality with information about the fire company and recruiting new members.

3. Placement of temporary signboards at various locations throughout the community in addition to the billboards from Help Fight Fire. At least one fire company does this in their response area.
4. Placement of a recruitment message on the signboard at the various municipal buildings and fire stations.
5. Working with local businesses in an attempt to form partnerships that would allow employees to leave work to respond to emergency incidents when needed.
6. Appoint an on-call firefighter “Recruitment and Retention Coordinator” to develop, implement, and coordinate these activities. This should be undertaken as a county endeavor.
7. Provide a reduction in property taxes, or a tax abatement incentive, for von-call service.
8. Provide on-call firefighters with community-based benefits such as free dump stickers, etc.
9. Provide community-based awards and recognitions such as implementing an incentive for members that attain a level of more than 25% response. An example would be to provide gift certificates for local restaurants, concerts, or other entertainment as a reward for attaining a high level of response.
10. Distribute posters to convenience stores, gas stations, restaurants, and other high traffic locations seeking to recruit new members.



Figure 53
On-call recruitment poster from Recruit
NY volunteer recruitment program



Figure 54
Recruitment poster from a fire
department in Massachusetts

One of the challenges that many on-call organizations face today is that the motivation of newer members is much different than the older, long-time members. The newer members tend to need to receive something tangible to show that their service is appreciated. An associated concern that the MRI study team often hears is the need for better communications within the fire company. This is usually not referring to the company's formal communications system, but more so, the interpersonal levels of communication that occurs within the company and at the station level. This is frequently an area of concern in on-call organizations as the cultures and ideas of the older members, who have served the company for many years, often clash with those of the younger, newer members. These intergenerational differences can be even more problematic if those older members, who often no longer respond to calls, are perceived as having an excessive say in company operations. Conversely, there is a perception that the younger members do not take things seriously and show the proper respect for the company and the experience of the senior members. Handling this situation is often a delicate balancing act that the company leadership will need to be able to navigate, if they want to maximize the participation of their most important resource, the active firefighters. Portraying a unified and welcoming environment as part of the recruitment and retention strategy of the fire company is an important component necessary for those efforts to be successful.

As Rockingham County and the surrounding areas becomes more diverse, the Fire Departments in the area will need to adjust accordingly to be more inclusive and welcome in new members from different cultures. This is a changing dynamic that the fire companies will need to maintain awareness of as they try to determine the most effective focus of their recruitment, and perhaps more importantly, retention efforts. One of the most important keys to the latter, is that the fire

company presents a positive and inclusive atmosphere and there is a sense that the leadership is competent. In addition, disciplined, policy driven on-call organizations are often more successful than those where there is little to no discipline and the attitude is, “we’re only on-call, so leave us alone”.

Many fire companies that serve communities where there are one or more residential college, have found that implementing a live-in firefighter program can be an excellent way to bolster their available staffing. Well-managed, live-in firefighter programs provide a ready source of staffing to assist with emergency response provided the live-ins spend significant time in the station. These programs are ideal for college students who are interested in the emergency services and are looking for alternative housing accommodations. Live-in programs provide a set of standards to which the member must agree in exchange for a place to reside. If the firehouse environment is attractive to a potential live-in member, that person will spend most of his/her day at the firehouse if it provides a positive atmosphere, sufficient privacy, and adequate quarters.

Some other on-call recruitment and retention programs that have been implemented elsewhere and might be considered in Atkinson include:

- A. Connecticut has a property tax relief program in the form of a \$1,000 per year abatement on property taxes for on-call emergency services personnel.
- B. A program in Wisconsin brings together fire departments, high schools, and a college working to target future on-call firefighters as a recruitment and retention tool. The program, called “Start College Now”, brings together area high schools and fire departments to provide training using firefighting equipment to certify students in firefighting, as well as to get them college credits.
- C. In Illinois, a recently enacted law creates a hiring preference for career fire service applicants with at least 600 hours of fire suppression work within the previous 12 months in a certified apprenticeship program. Program participants can have up to 20 points added onto their eligibility list scores. Several community colleges are working to develop three-year apprenticeship programs.
- D. North Carolina provides free hunting licenses to on-call firefighters, a benefit that may have significant appeal in New Hampshire.
- E. Ocean City, Maryland Fire Department gives preference to, and almost exclusively hires members of the on-call fire department for public works and related positions with the city.

In the smaller government, anti-taxes, and benefits climate of today, the awarding of free “benefits” even to on-call personnel can be controversial. However, it is imperative that MRI stresses that having an on-call fire service, particularly a top tier one such as what is continued to

be seen in much of Rockingham County, does not mean that fire protection is free. There are still significant operating costs that need to be properly funded to keep the organization functioning. This is true even with on-call recruitment and retention initiatives. Successful programs require an investment of both money and that valuable commodity; time from personnel. However, the importance of these efforts suggest that they should be made a priority.

One example of an unconventional and innovative best practice that may work in Atkinson, is to provide a health insurance package for self-employed year-round residents, provided they complete and participate in all required training, obtain certifications, and provide the fire company with a high level of immediate response. Typically, this type of program attracts electricians, plumbers, painters, and other trades as well as self-employed professionals that would be beneficial to the organizations.

An example of this best practice has worked successfully in the Town of Holliston, Massachusetts for several years. Viewed as costly and unconventional, this program has retained a high-level of active personnel that provides an immediate response on a 24/7 basis. This strategy to invest in the on-call force avoided the need for career personnel, and compared to a smaller neighboring community, produced an overall cost (including health insurance) of 50% of what the neighboring community pays for fire protection. MRI believes a program of this nature could be a good fit for the Town of Atkinson and should be considered.

During the project team's research for several previous studies in similar communities, a member of the project team visited Chief Michael Cassidy in Holliston and conducted an interview pertaining to this concept. An overview of that interview has been inserted below:

Holliston is a community of approximately 14,500 residents. It has a call firefighting force of 50, with an additional call EMS force of approximately 28 persons. Chief Cassidy is the only full-time employee, other than a few hourly workers who provide dispatch services. All these personnel are eligible to participate in the Town's health insurance program. Chief Cassidy reports that turnout at all incidents regularly exceeds NFPA 1720 standards. A recent structure fire that occurred midweek, midday, drew a response of 32 call firefighting personnel to the incident.

All call firefighters are required to be certified at least to the level of firefighter I/II, the roster is currently full at the authorized strength and Chief Cassidy reports a waiting list of approximately 15 to 20 persons. He stated that the health insurance benefit offered to his call firefighters is most definitely the driving factor in his ability to maintain such a robust and adequately trained call firefighting force. Below is a breakdown of some of the numbers:

- 1. Chief Cassidy stated that approximately 55% of the current membership elects to take the health insurance benefit. Additional compensation is provided to the call firefighter should he or she elect not to participate in the benefit group.***

- 2. Chief Cassidy stated that most all the members that participated were self-employed tradesmen. Many of those who elect not to participate are young adults who might still be on their parents' health insurance. Since members can become call firefighters at age 18, and the Department also has a very active Explorer post, which acts as a feeder pool for the Department, a sizable number of the current call force are within the 18 to 26-year-old category, and may still participate in their parents' health insurance program.**
- 3. All call firefighting personnel must first successfully complete firefighter I/II training, no compensation is provided until after successful completion. If selected for employment, the call firefighter has the option of participating in the Town's health insurance program.**
- 4. Those that elect to enroll in an HMO program have 60% of their expenses covered by the employer (family or individual plan). Members that prefer a PPO style plan have 50% of that cost paid by the employer.**
- 5. Holliston call firefighters also enjoy a very generous compensation program. Active members receive a base retainer, as well as hourly compensation for time spent working at incidents. Recently, the compensation package was expanded to provide a flat fee of \$75 per month for those who regularly attend the bi-monthly training session.**

MRI asked Chief Cassidy if the rising cost of healthcare had caused local government officials any concern in providing these benefits to such a sizable number of part-time employees. He responded by saying that the trade-off was considered minimal, in that the community enjoyed a consistent professional response by its call firefighters and EMTs without the cost of a full-time, unionized workgroup.

Obviously, health insurance is expensive, and costs seem to escalate on an annual basis. However, landscapers, tradespeople, stay at home parents, and self-employed professionals that work from home are also confronted with this cost. The ability to join a municipality's insurance may reduce their cost. Furthermore, the municipality could develop a sliding scale that would pay a percentage of the health insurance cost equal to the level of response and training provided by the responding firefighter (Figure 54). The project team suggests rate cost sharing as follows:

PERCENTAGE OF TRAINING AND INCIDENT RESPONSE	PERCENTAGE OF HEALTH CARE EXPENSE PAID BY THE TOWN
90% or greater participation	50%
70% - 89% participation	40%
50% – 69% participation	30%
33% – 49% participation	25%
25% - 33% participation	Eligible to enroll at the employee's cost
Under 25% participation	Not eligible to enroll

**FIGURE 55
PROPOSED HEALTH INSURANCE
PERCENTAGES**

The concept of providing health insurance as a retention strategy may or may not work in Atkinson. However, during some of our interviews there was sentiment that establishing some sort of a deferred compensation plan may be a concept that would be attractive to members and generate community support. This idea should be explored if the concept of health insurance is not viable.

The National Volunteer Fire Council has excellent resources on the recruitment of new volunteer personnel. They can be found at <https://www.nvfc.org/make-me-a-firefighter-six-steps-to-recruitment-success-2/>. The International Association of Firefighter also has resources that can be found at <https://www.iafc.org/topics-and-tools/resources/resource/guide-to-best-practices-in-volunteer-firefighter-recruitment-and-retention>.

Some of the critical steps to ensuring engagement with potential members during the recruitment process include:

- Keeping prospective members engaged throughout the entire recruitment process with emails and phone calls;
- Clearly articulate expectations;
- Providing them with a clear point of contact if they have any question, concerns or issues that may arise during the recruitment process, or, if they just want additional information or to stay in the loop;
- Invite them to department events, meetings, training sessions, work details, or even just to ride along (if permitted by department policy and insurance regulations).

Once the recruit is accepted into full; or at least probationary membership of the fire company the focus should now shift to ensuring *their* success:

- A. Consider pairing them with a mentor, an experienced (and positive) member who can help guide them through their fire experience in the fire/EMS service and start to teach them how to do the “job”.

- B. Implement a tracking program to follow the member's progress through their probationary period. Are they engaged and showing interest? Are they hitting the right marks? Where do they need help? Any number of programs can also to help track key certifications, schedule duty shifts, hold emergency contact information and more.
- C. Create a "New Member Guide" with various checklists, progression information, copies of primary response maps, key forms and other critical details they'll need to know as a member of the fire company. Solicit the **"what"** for the document from both the Department's longstanding members (what do they wish new members knew sooner?) and the newer members (what do they wish they had known faster when they first joined?)

The new member making a connection with, and feeling welcomed into the company is going to be a major driver in their success and level of involvement with the fire company. If they are successful, the company will be also; as they gain another important asset. To that end, one of the things the Brighton Fire Department near Rochester, New York did to improve their recruitment and retention efforts, was to engage with an executive coach from the business community (without fire service experience) to mentor their officers, and to create and facilitate an advisory team to collect input on big issues and decisions from across the membership; while bringing the key leadership team members together on "organizational culture improvement." Changing the long-standing culture of many on-call fire departments in acknowledgement of the diversification of society, will be critical to the long-term survival of the on-call fire service.

There are no easy or guaranteed solutions to the declining number of on-call firefighters and the related staffing quandary facing Atkinson and many other communities throughout the country. It is also important to stress that what may work in one community or fire company with regards to staffing and on-call recruitment and retention, may not work in another nearby community or the fire company next door. Each community and fire company must individually determine what programs, incentives, and motivations will work, and be most effective in their community or company. It is also very important to advise the stakeholders in the Atkinson Fire Department that should they decide to transition from a mostly on-call fire service, to a more combination service, the process may be difficult. However, this situation is one that many fire companies/departments and communities experience during the time of their evolution, and growing pains would not be unique at all to Atkinson.

One huge unknown for the fire and EMS services is the long-term implications of COVID-19 from a personnel standpoint. The implications here could be particularly acute to the on-call services. In New Jersey, as well as other states, several on-call EMS organizations were forced to suspend operations due to a lack of personnel to provide coverage and response to calls. The on-call emergency services are aging (in Atkinson 44% of firefighters are currently age 55 and older), so a significant percentage of on-call responders are going to be at, or close to, being higher risk just based upon their age, without factoring in any other underlying health issues. These personnel may decide it is time to take a well-earned retirement. Younger members with families may find themselves reassessing the risks involved in providing on-call services and conclude that it is too

great and step away. The pandemic is also certain to impact future recruitment efforts. The Atkinson Fire Department needs to monitor this situation and be prepared for whatever the results ultimately are on their membership.

The federal government has a version of the Staffing for Fire and Emergency Response (SAFER) grant program that pertains strictly to on-call firefighters. It provides competitively awarded funds to municipalities to recruit and retain on-call firefighters. The grant funds 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.

We believe that the town/department should attempt to secure a SAFER grant to recruit and retain on-call members. 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. The goal of developing a viable call force of twenty-five total on-call firefighters, would also be a goal to articulate in the grant application. It is quite possible that a portion of the health care program cost described above may be eligible for incorporating in a SAFER grant.

Recommendations

XI-1: The Atkinson Fire Department with the support of the Town, should attempt to secure a SAFER grant to recruit and retain on-call members.

XII. PRESENT AND FUTURE STAFFING

The Town of Atkinson will need to decide what level of service it desires based on a Risk Assessment being conducted. The current staffing model today seems to be working fairly well, but may not be sustainable for the near future.

There are many variables that need to be considered in Atkinson prior to settling on any one model. The first thing to be mindful of, is that of the zero-based EMS service that is currently being provided to the Town. The review team has seen other departments in the state that have had little time to decide the future of EMS, as the private contractors' proposal to remain, had a substantial cost.

Fire Based EMS

The Atkinson Fire Department currently is in good shape, should the private EMS agency pull out of town. The Fire Department already has in place an Advanced Life Support ambulance and some full-time weekday staff ready to go. In the event this scenario happens in Atkinson, then a

program would need to be developed and ready to implement with little notice. The Town may go out and solicit bids for a private ambulance provider and continue with the current staffing model. Fire based EMS is very strong in New England and has a very good track record. If Atkinson decides to take on EMS, there will be a need for additional staff. This staff may be added to the current staff in the form of part-time or additional full-time, and should function in both the fire and EMS duties of the Department.

Current or Future Town Employees

As discussed within the staffing section (Chapter VI), during the project team's time in Atkinson it was mentioned that there may be a possible way to use current town employees as first responders with both fire and EMS. While this at first seems like a great idea after speaking with many people during interviews, this idea has some reservations. First was if we pull a current employee away from their duties to answer a fire or EMS call while working, who takes care of their work when they are out? If we have someone plowing snow do they stop to go on a fire call? The police department would not be able to transport a patient from many calls as they have law enforcement duties to take care of and many times that is at the same incident. One question that was raised was that of pay. If someone works more than 40 hours a week, do they get overtime? Is that rate higher than the firefighters that have been with the Town for many years? What about training time and training costs? It is the review team's thoughts that this type of plan would have more of a negative effect on the Town and the Department, and if moved forward must be done so in a very cautious manner.

MRI would recommend proceeding cautiously, but pursue the recommendations discussed and listed in Chapter VI. The need to pay overtime rates required by FLSA should be clearly understood, and the inequity that that may create should be addressed up front.

During field visits and interviews there was discussion on the concept of creating dual role municipal positions to provide increased staffing for emergency response. Although some communities such as Aiken, South Carolina have employed public safety officers where police officers are trained and serve as firefighters; this is a relatively uncommon venture in the Northeast and several pilot programs have failed. Talking with the Atkinson Police Chief revealed that there would be little capacity for on-duty police officers to provide fire response when on duty, based on limited staffing and other essential functions that occur during fire and EMS emergencies, as well as the current workload within the Police Department.

While Police and fire personnel often have no interest in the other public safety profession; which is often the source a failure of forced public safety pilot programs, encouraging police officers to consider serving the community as on-call firefighters when off duty, should be considered best practice. It must be recognized that should a full-time police officer that lives in the immediate area become an on-call firefighter he/she would be paid at their Police overtime rate for all additional hours based upon the restrictions of the Fair Labor Standards act (FLSA).

Another best practice is to enhance the daytime availability of personnel, is to provide preference when hiring Department of Public Works (DPW) Laborers to existing on-call firefighters. In the alternative if no on-call personnel are interested or qualified, the new DPW hire could have the requirement to become and remain active as an on-call firefighter. This strategy has worked in several communities to enhance daytime coverage during the work week when on-call personnel are often least available. An example of this practice was in Hopkinton Massachusetts where at one time several members of the DPW staff were on-call firefighters and would deploy to emergencies if they were not involved in a critical DPW activity. In that community, each DPW utility vehicle had both an emergency and non-emergency lighting package to enable a rapid response and support DPW operations.

This best practice is ideal for Atkinson as there is current discussion relative to adding a DPW laborer. However, it should be recognized for what it is; in that this program could provide one or two personnel for daytime response, and may produce an additional active on-call firefighter during the evenings. While this is a positive step, it is not the sole solution to the fire service staffing issues facing the Town. Once again, it must be recognized that should a DPW laborer become an on-call firefighter he/she would be paid at their DPW overtime rate for all additional hours based upon the restrictions of the Fair Labor Standards act (FLSA).

Although these strategies are attractive and recommended the need to pay the overtime rate should be considered by the community as that will produce a situation where select individuals are paid at a different rate. This inequity may create some internal concern that should be recognized and addressed before these ideas are implemented.

Start Small and Grow Over Time

Currently the staffing model seems to be working well. With the volume of work both administrative and operational, the next Chief should be full-time and be available during normal business hours. The current model of having the station staffed weekend days should continue. This has been in place since COVID 19 began and has a lot of positive elements with it. First is that it keeps the current staff engaged by having them work shifts. Having them train and become more familiar with the equipment while working is a benefit to all. Having people in the station reduces the response time for calls and ultimately reduces the potential damage to structures and property.

As discussed in Chapter VIII, the expected level of service within the community should drive the need to provide more in-station shifts. The review team projects the long term need to expand the existing base of career personnel and revisit staffing, over the next eight to ten years, based on current trends that Atkinson and the surrounding area are seeing.

The level of service that the Atkinson Fire Department provides is acceptable within the scope of NFPA 1720. However, as revealed by concerns over the response to a recent structure fire, the communities' expectation relative to a level of service has shifted from the response of on-call resources in a reasonable amount of time, to the rapid response of at least a single unit, and then

the response of other units as personnel become available. This level of expectation is unattainable considering the staffing challenges facing the organization.

To address this concern the community will need to make a conscious choice relative to service level through budgetary appropriation. Assuming that additional funding is provided to develop a 24/7 quick response force (QRF), MRI does not recommend adding additional career personnel unless all other coverage options have been exhausted. When working with a successful on-call organization such as the Atkinson Fire Department the focus is to develop and support on-call operations. The rapid introduction of career staff on a 24/7 basis changes the on-call function, and relegates on-call personnel to secondary responders; often serving as support personnel and tends to rapidly diminish participation.

Instead of adding additional career personnel over the next three years, MRI suggests scheduling and compensating two on-call personnel that are on the assigned duty crew, to provide coverage from the station at night, to initiate a rapid response, reduce response times and preserve the primary response role of on-call personnel. A program of this type has worked well in many New Hampshire Communities. If on-call personnel are not able to fill all the shifts, per diem personnel could be hired, but that should only be once all efforts to schedule on-call members has not produced sufficient coverage. On-call members should have preference to cover these shifts.

XIII. CONCLUSIONS AND IMPLEMENTING CHANGE

Based upon the analysis of the current day operations of the Atkinson Fire Department, MRI finds a department that is well managed and has a good structure for apparatus and equipment replacement.

Having a sense of common vision is important in any organization to ensure that the organization and its personnel are moving in unison toward a common goal(s). Having a common vision is not only about making sure that all parties are aware that they are in the same boat and rowing, but even more importantly, that they are rowing in the same direction. The impact of not sharing a common vision will be very noticeable in the quality and quantity of work performed, but also with the spirit and passion that the work of the organization is accomplished.

The Department lacks any type of long-range or strategic plan that charts its projected path to the future. To the best of the project team's knowledge, the Department does not have a mission statement. A mission statement, if carefully developed and truly accurate, should provide the very foundation for the Atkinson Fire Department and why it exists. The mission statement should be providing the broad direction, that everything else the Fire Department does will be built upon. The Fire Department also does not currently have any formal vision statement, nor has it developed any core values that will help to drive the organization forward.

Looking ahead, the Fire Department possesses some definitive positive attributes, most notably the dedication of its core membership group. The most recent ISO evaluation conducted, earned a rating of 6/6Y which is commendable for a primarily call fire department in a small town, with a very limited water supply system. This shows there is a strong foundation upon which to build.

However, the Department is also facing serious challenges both today, and looking toward the future. With volunteerism declining and the ranks of call emergency services personnel dwindling nationwide, the Town of Atkinson faces the dual challenges of attempting to balance a credible emergency response system, staffed primarily with call members, while simultaneously facing a slowly increasing number of requests for service, both emergency and non-emergency.

To that end, MRI proposes the following objectives as a roadmap for initiating the significant change and major rebuilding that needs to be done to the Department.

1. The Fire Chief and the Town of Atkinson should review and approve job descriptions for all ranks within the Fire Department.
2. The Fire Chief should form a membership/management committee as soon as possible. This committee is designed to enhance communication, construct more positive relationships, and provide a mechanism for members to have an active voice within the organization and begin setting the direction for the future. This committee should consist of as many stakeholders as wish to participate. The chief should hold two meetings per month for the first six months to a year, and then meet monthly for the foreseeable future. Minutes of these meetings should be developed, shared with the Department, the Board of Selectmen, and the Town Administrator, as an attachment to the chief's monthly report. If necessary, outside professional assistance is available to assist with facilitating this endeavor.
3. The Fire Chief should immediately begin providing a weekly e-mail update to all members of the Atkinson Fire Department. This regular update, should be designed to enhance communications and help to foster a more collaborative group of members.
4. The Atkinson Fire Department should develop a mission statement, vision statement, and a list of core values that guide the Department's overall mission and operations.
5. The Atkinson Fire Department's mission statement should be prominently displayed in the station, along with the vision statement and core values.
6. The Town of Atkinson should complete driving records and background checks on all current members of the Fire Department to ensure that they are eligible to be firefighters.

7. Conduct a comprehensive review of existing training records. The Fire Chief should meet individually with each member to review the training file and develop a prescriptive training plan.
8. The Fire Chief should begin to identify members of the Department who could possibly possess the skills to be developed into officers, and begin to mentor them and provide appropriate additional training. Part of this development process could include the delegation of certain assignments to these personnel.
9. The Fire Chief should form a committee for the purpose of putting together an aggressive and wide-ranging program for recruitment and retention of call personnel. While a long-term strategy to address this issue needs to be developed, there are also short-term actions that can be taken, to try to immediately recruit additional personnel.
10. The Fire Chief should work with the Town of Atkinson to address the deficiencies, particularly those associated with life safety.
11. The Fire Chief should begin work, assisted by a committee of department stakeholders, to develop a comprehensive and up-to-date rules and regulations document. After approval, the document should then be distributed to, and signed for, by each member of the Department. It could then provide an orientation overview, and indoctrination to the Department's behavioral expectations for new personnel.
12. The Fire Chief, assisted by a committee comprised of a cross-section of department stakeholders, should begin to update the Department's standard operations procedures or guidelines (SOP/SOG) manual, starting with mission critical procedures such as, but not limited to: basic engine company and truck company operations, dwelling fires, commercial structures, rapid intervention team operations, personnel accountability, gas leaks, hazardous materials incidents, ice rescue, vehicle extrication operations, thermal imaging camera use, and automatic external defibrillator use. The committee should be given whatever support is necessary to complete at least a basic manual within one year.
13. Based upon the foundation that currently exists and building upon the results of the recommendations contained in this letter, the Town of Atkinson and the Atkinson Fire Department should develop a formal process for implementing a long-term vision for the Department and developing a strategic plan.
14. Atkinson should enter into discussions with the municipal administrations, and fire department leaderships of its adjacent communities, for the purposes of

identifying possible opportunities for shared services, and long-term explore the feasibility of a more regional approach to fire protection and EMS delivery systems.

15. The culture of the fire service is very resistant to change. This is not something new and certainly not just with the Atkinson Fire Department. Whatever changes are made to the Department they need to be implemented at a reasonable pace, and most importantly communicated to all members ahead of time.

In conclusion, the missions performed by the Fire Department are some of the most basic and fundamental functions of government; to ensure the safety and protection of its residents and visitors. The real issue facing the Atkinson Fire Department and the Town of Atkinson then, 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. It is the opinion of the assessment team that having a combination of a call department and a core group of per diem staff, is appropriate for the number of incidents and type of calls they respond to. The per diem program will need to be evaluated for effectiveness on an annual basis for at least the first three years. There is no “right” amount of fire protection or EMS delivery in any community. 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.

It is important that the Town continue to support the Department and to help meet the needs in staffing and equipment, so they may continue to protect and serve when they are called to do so. The Town of Atkinson is very fortunate to have a great core of dedicated members in its Fire and EMS Department. With some strong work the Chief Officers can lead this group forward to a common set of goals, while letting the “past be the past”.

APPENDIX A CONSOLIDATED RECOMMENDATIONS

This document contains 31 recommendations which are detailed in the following four pages:

IV. COMMUNITY RISK ASSESMENT

- IV-1:** *The Town and the Atkinson Fire Department should develop a five-year plan to enhance training, documentation and water supply inspection, and flow testing to move toward reclassifying the Atkinson Fire Department as a Class 5 fire service organization.*
- IV-2:** *The Town and the Atkinson Fire Department should develop a ten-year plan to enhance training, documentation, water supply inspection, flow testing, and emergency telecommunications operations to move toward reclassifying the Atkinson Fire Department as a Class 4 fire service organization.*
- IV-3:** *The Atkinson Fire Department should review and expand on the SWOT analysis provided. Over the next year, plan should be developed to utilizes strengths to pursue opportunities and address weaknesses while mitigating threats. This should be an ongoing process that has member involvement and is moved forward by the officer core.*

VI. STAFFING

- VI-1:** *The Atkinson Fire Department should require its career personnel, and strongly encourage its call officers, to obtain a certain level of fire officer certification as a job requirement, such as Fire Officer I for lieutenant, Fire Officer III for Deputy Fire Chief, and Fire Officer Level IV for the Fire Chief.*
- VI-2:** *The Atkinson Fire Department should require that all officers be certified as Incident Safety Officers (ISO). Additional personnel who may be interested should be encouraged to take this training and obtain this important firefighter safety certification.*
- VI-3:** *As part of the succession planning process, the next Fire Chief should work to implement a professional development program to ensure that all officers can perform their superior's duties, as well as identify the core future leaders of the Department.*
- VI-4:** *The Department should continue to foster and support any member to be trained and certified to the Firefighter 1 and preferably the Firefighter 2 level.*
- VI-5:** *Working with the training officer more training should be planned delivered and documented. In an effort to keep members interested in training the Department should be creative and offer training that is outside the normal programs. Making programs fresh, fun and to some degree competitive, may increase the participation by*

members. If it's the same old training, people will lose interest. Make it so they want to participate and at the same time meet training goals.

- VI-6:** *In consultation and cooperation with its neighboring departments, the Atkinson Fire Department should enter into formal automatic aid agreements that specifies the number and types of resources that should be dispatched immediately to various types of reported emergencies, such as structure fires. These recommendations should be based upon a community-wide risk management process and/or pre-fire/incident plan.*
- VI-7:** *Although more stringent than the requirements found in Table 4.3.2 of NFPA 1720 for rural communities, through the utilization of automatic aid agreements with neighboring communities, the Atkinson Fire Department should consider the adoption of an SOC with the goal of attempting to have at least 16 personnel on the scene of any reported structure fire within 14 minutes.*
- VI-8:** *The Atkinson Fire Department should make it a priority to improve its first unit on scene response times, including the adoption of a SOC, for the Town. The SOC should be based upon a hybrid of the NFPA 1710/1720 and Commission on the Accreditation of Ambulance Services (CAAS) recommendations.*
- VI-9:** *With Atkinson covering 11.3 square miles, the Atkinson Fire Department should review standards of cover benchmarks, to have the first unit responding to emergency incidents within one minute of dispatch (staffed station), and have the first unit on scene within eight minutes after responding to all types of calls, 90% of the time. With the current staffing model in place and no other calls in progress, this is something that can be met, if the staff in the station is properly qualified with the appropriate level of training and qualifications. A closer look at simultaneous calls and calls that run back to back (ambulance is transporting, and a second call comes in) should be looked at. At the time of this evaluation the program of having per diem staff in the station was still in its infancy, and it is not known if the station was sufficiently covered while this crew was committed to the first call.*
- VI-10:** *The Atkinson Fire Department should work with the communities listed on each of the "run cards" to assure the number and qualification of staffing, that will be sent on the assignments. In order to be able to meet a safe level of on scene staffing, it will be important to know not only what the department will be receiving and how long it will take, but also to outline what Atkinson will be sending, when these communities request resources from them.*
- VI-11:** *Review the Department roster and look to the members with low participation and find out what can be done to increase their involvement. Work with these members to increase their participation within a pre-determined time frame.*

- VI-12:** *The Atkinson Fire Department should set a minimum criterion for members to remain in active status. This criterion should include both minimum training and response to incidents for a determined time period (one year). This criterion should also allow for people to go into an inactive status for a period of time due to approved circumstances. It would be important for inactive-status people to make up any important training prior to being put back on active status.*
- VI-13:** *The Town should consider encouraging members of the Atkinson Police Department that live in the area to become on-call firefighters.*
- VI-14:** *The Town and the Atkinson Fire Department should work with the Road Agent to ensure that on-call firefighters are given preference when DPW personnel are hired. If on-call members are not interested and or qualified the Town should hire personnel that are willing to become an on-call firefighter as a condition of employment.*
- VI-15:** *Unless critical Highway operations are underway, Highway personnel that are on-call firefighters should respond to emergencies to supplement daytime staffing and assist in meeting the OSHA Two in Two Out Standard.*
- VI-16:** *The current utilization of call staff working weekends in the station that began as part of the pandemic, should be continued into the future.*
- VI-17:** *The hours for the position of Fire Chief should be increased to 32 hours per week.*

VII. INCIDENT RESPONSE TYPES AND TIMES

- VII-1:** *The Town of Atkinson should be asked to select an appropriate service level and if that requires the rapid response of a single unit, the Town should appropriate sufficient funding to schedule a two person on-call shift to provide in station coverage on a 24/7 basis.*
- VII-2:** *The Atkinson Fire Department Should give preference to on-call personnel to fill these Quick response shifts. In the event that on-call personnel cannot meet this need per diem staff should be utilized.*
- VII-3:** *Every effort should be made to preserve the primary responder role of on-call personnel within the Atkinson Fire Department.*

IX. APPARATUS

- IX-1:** *The Town of Atkinson 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.*

- IX-2:** *The Town of Atkinson 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.*
- IX-3:** *The Town of Atkinson 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.*
- IX-4:** *The Town of Atkinson 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.*
- IX-5** *The Town of Atkinson needs to address the noted financial deficit in the existing capital plan.*

X. WATER SUPPLY

- X-1:** *The Town should have an independent study done on the water distribution system and compare it to the needed fire flow.*
- X-2:** *The Town should develop a plan to provide fire service water to all areas in the community. This can be done by adding to the existing water distribution system, adding fire ponds and or cisterns.*
- X-3** *The Town should work with the water District to require annual hydrant inspection, periodic flow testing and documentation of these activities.*

XI. ON CALL RECUITMENT AND RETENTION

- XI-1:** *The Atkinson Fire Department with the support of the Town, should attempt to secure a SAFER grant to recruit and retain on-call members.*

APPENDIX B 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.