REPORT

FIRE AND RESCUE DEPARTMENT STUDY

DEERING, NH

NOVEMBER 2015

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CHAPTER 1

SCOPE OF WORK AND METHODOLOGY

Municipal Resources, Inc. (MRI) was retained by the Town of Deering, New Hampshire, to perform a comprehensive analysis and assessment of operations, facilities, budget, organizational structure, management policies/rules/regulations, and operational preparedness of the Deering Fire and Rescue Department in order to identify specific recommendations to improve the efficiency and effectiveness of the department.

This study provides the town with a comprehensive review of the manner in which fire and emergency medical services are provided within the community. MRI has made recommendations for improvements that take into consideration the current and future financial ability of the community, appropriate modifications to the delivery systems to provide optimum service to the entire community, adequacy of physical facilities and equipment, efficient use of resources, and whether the current organizational structure is appropriate or should be modified.

SCOPE OF WORK

In performing this study, MRI has focused on the following aspects of fire department operations:

1. Identified service needs for Deering 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.

2. Identified the public safety risks and prioritized the level of risk that must be covered based on the data and operations of the fire and EMS operations.

3. Reviewed the type, frequency, distribution, response times, and mutual aid provided services.

4. Reviewed staffing, reporting of emergency responses, and routine responses to all services.

5. Defined services performed by the Deering Fire and Rescue Department, including any duplication of services, and services that are not currently provided, but are needed.

6. Reviewed the current dispatch operation, including the current organization (Capital Area).

7. Assessed the current plan for deploying the required number of fire and EMS officers and supervisors, along with vehicles/apparatus used, and recommend cost-effective alternatives based on the type of incident for each department. Evaluated whether there are recommended changes to improve efficiency and delivery of service.

8. Evaluated the response of personnel, including appropriate operational staffing, supervisors, management, and support staff to respond from the initial call for routine and emergency services, through to generating the incident report and findings. Identified the response and staffing levels to meet the needs of the community within the current fire department budget and the town's financial ability.

9. Evaluated feasible options for fire and EMS services and delivery to determine whether services can be effectively shared with other public and/or private entities. Evaluate needs for service back-ups. Reviewed the possibilities and cost implications of contracted services versus staffing in each department.

10. Evaluated current and planned vehicle/apparatus configuration/acquisition/ replacement, maintenance, and assignment practices to determine whether the existing operations are the most effective implementation.

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11. Evaluated departmental policies and procedures that impact the efficient operations of the fire and EMS departments.

12. Reviewed education and training requirements for department personnel in regards to required certifications and standards.

13. Reviewed the current policies, procedures, training, and delivery of services in the most cost-effective manner.

14. Reviewed the EMS service provided by the town and evaluation of feasible options that would enhance public safety.

15. Reviewed the Mutual Aid Agreements.

16. Reviewed the system of water supply for fire suppression.

METHODOLOGY

This report was developed through meetings and/or conversations with the Board of selectman, the town administrator, the Deering fire chief, members of the Deering fire command staff, fire chiefs, and EMS administrators in the region, along with tours of the Deering fire stations, review of all apparatus, vehicles, and equipment, as well as a review of department and town data and related documents in order to allow the MRI team a complete overview of the fire department and its operations.

During this project, the MRI study team made four field visits to the town and conducted the following activities:

- Interviews with key community stakeholders, including the town administrator, and members of the board of selectmen
- Interviews and meetings with the interim fire chief
- Interview and station visitations with Deputy Chief Anderson and Captain Murdough
- Group interview with members of the fire department leadership
- Conducted phone interview with chief of the Capital Area Mutual Aid Fire Compact

- Conducted phone interview with EMS Coordinator at Concord Hospital
- Interview with Chief Stafford from the Hillsborough Fire Department
- Reviewed existing department policies, procedures, and practices
- Evaluated fire department facilities, apparatus, and equipment
- Reviewed training and fire prevention/inspection records
- Reviewed the fire department incident reporting system and EMS patient care reporting system
- Reviewed mutual aid capabilities and agreements
- Tour of the town to evaluate risks

After our field visit, members of the study team conducted the following activities:

- Conducted phone interviews with the three members of the board of selectmen
- Reviewed numerous documents, including fire department budgets, as well as a number of other documents provided to the team by both the fire department and members of the town
- Analysis of response times, travel distances, and staffing levels for fire, rescue, and EMS incidents in the town

MRI understands the realities of today's economic, regulatory, and political environments. This report will provide Deering with our perspective on the issues presented, and assist the town and its decision makers with recommendations to improve the efficiency and effectiveness of essential fire, rescue, and emergency medical services. Municipal Resources, Inc. developed this report to meet the specific needs of Deering, and focused their efforts on providing innovative and creative solutions to the problems and issues that are facing the Town of Deering.

The MRI team that worked on this project is experienced in the operations of local government and fire/EMS services.

OVERVIEW

The mission performed by the fire department is one of the fundamental functions of government: to ensure the safety and protection of its residents and visitors. The expectations for the quality and quantity of fire, rescue, and EMS services must come from its residents and other taxpayers. There is no "right" amount of fire protection and EMS delivery. It is a constantly changing level based on the expressed needs of the community. It is the responsibility of elected officials to determine the level of risk that is acceptable to their respective community. They must then translate community needs, along with that level of acceptable risk, into reality through direction, oversight, and the budgetary process. It is their unenviable task to maximize fire, EMS, and other services within the reality of the community's ability and willingness to pay, particularly in today's economic environment. It is also their responsibility to clearly articulate the vision, goals, and objectives, not only of the town as a whole, but their expectations regarding the individual departments that are components of the town government.

The Deering Fire and Rescue Department and its members have a strong history of community service and have attempted to provide adequate fire and EMS services. It is apparent that from an administration standpoint there are shortcomings, and in the recent past, the department has struggled with management and administrative responsibilities. Recently, the department has struggled to maintain an active response force and is not always capable of adequately staffing and responding to medical and emergency incidents. Changes in department leadership and management during the past few years have left a void that must be filled on a permanent basis.

The department is well respected by many Deering residents, but there are obvious struggles with providing a consistent level of service 24/7. This situation, as well as some recent legal issues with some members of the department, has changed the perception of the department and its leadership, by at least a percentage of the residents of the community it protects.

The role of MRI is to identify immediate and/or potential problem areas and make recommendations for improvement. Our intent is not to embarrass the department or any individuals, but rather to point the way for progress to be made. The hope and expectations that come with the delivery of a report of this nature are that with time and direction, many of the recommendations will be adopted, and result in a much better functioning organization, providing better service to the community. In the case of this report, restoring public confidence in the fire department, across the entire cross-section of both internal and external stakeholders, will be the major challenge.

ISSUES IDENTIFIED

The major issues that we identified as the result of our analysis of the Deering Fire and Rescue Department include:

1. Concerns by members of the community over the department's management and administration, consistent levels of service, and accountability.

2. The lack of adequate staffing to meet recommended levels within specified time frames. A significant companion issue to this is the number of times the department fails to respond at all to dispatches for EMS/medical aid calls.

3. The condition, adequacy, and location of the town's three fire stations.

4. The ability to have an adequate water resource for fire suppression.

The recommendations that have been proposed in this report are consistent with nationally recognized standards, guidelines, and best practices, such as those that have been promulgated by the National Fire Protection Association (NFPA), Insurance Services Office (ISO), Commission on Fire Accreditation International (CFAI), Commission on Accreditation of Ambulance Services (CAAS), US Department of Homeland Security (DHS), and the statutes and regulations of the State of New Hampshire.

The MRI study team believes that if the Deering Fire and Rescue Department recognizes their deficits and applies the recommendations of this report, they can continue to be a valuable asset and well respected by the community. There will be challenges to achieving some of the recommendations, but these challenges are shared by many communities similar to Deering throughout the Northeast. They should also determine a reasonable timeline and plan for adopting the recommendations that have been proposed by the MRI study team.

In spite of the issues identified in this report, the citizens of Deering should feel confident that the Deering Fire and Rescue Department and its members are hard working dedicated individuals that are doing their best to provide a critical service to the community. The issues that we identified with respect to staffing and response times are similar to challenges that face nearly every call/volunteer fire department in our nation. The issue regarding administrative responsibilities and authorities needs to be addressed so that the governing body, town administration, and the fire department can all work toward providing an effective and appropriate level of emergency service. We commend the board of selectmen for their willingness to address these issues in an open and positive manner.

It is our goal to provide the community with a roadmap and template for strengthening the level of fire, rescue, and emergency medical services delivered in Deering. As with any public

safety organization, there is always room for improvement, but we believe that with cooperation and coordination, the Deering Fire and Rescue Department can improve their delivery of fire and EMS services, and increase the public support that they have always enjoyed. Every community has unique characteristics, challenges, and resource limitations; our recommendations are *specifically designed* to address the immediate and long-term needs of the Town of Deering.

The report should be studied in its entirety to gain a complete picture of MRI's recommendations. Town and fire department leaders should develop their own priorities and modify our recommendations, as necessary, based on the ever-changing needs of the town and the fire department. However, it is critically important that they closely coordinate solutions with each other based on time, personnel, and fiscal realities. There must be very clear and open lines of communications between the town level of government and the fire department. It must also be emphasized as strongly as possible that the lines of authority regarding vision, goals, objectives, and solutions commence with the board of selectmen, go through the town administrator, and finally arrive at the fire department.

To address the recommendations that have been identified in this report, the town and the fire department should cooperatively:

1. Approach them strategically and systematically.

2. Use them to develop a long-term strategic plan for change and improvement.

3. Break them down into reasonably sized components.

4. Categorize them as short-term and long-term goals, i.e., items that can be accomplished within existing resources, and items that will require additional funding and/or time to accomplish in the coming years.

5. Refer to them when making recommendations, check them off as they are accomplished, and most importantly, recognize the positive achievements publically.

The MRI study team would like to thank Chairman of the Board of Selectmen Aaron Gill, the entire board of selectmen, Town Administrator Russell McAllister, Interim Fire Chief Doug Connors, and the members of the Deering Fire and Rescue Department for their cooperation and assistance in preparing this report. It is our sincere hope that this report will be used by the town, the fire department leadership, and its membership as a road map for improving the delivery of fire and emergency medical services in the community.

CHAPTER 2

DEMOGRAPHICS AND COMMUNITY RISK

Deering is similar to many long-established New England towns and faces many of the same problems and concerns regarding what the appropriate level of fire and EMS services is they should be providing, and the cost of doing so. Deering is a rural community of approximately 1,800 people, situated in Hillsborough County. Deering is approximately 31 square miles in size and has one state-owned road running through it; Route 149. There are approximately 60 miles of roads, of which two-thirds are unpaved. Deering is comprised of 30.6 square miles of land area and 0.7 square miles of inland water. According to the US Census Bureau, the population density of Deering in 2013 was approximately 57.0 persons per square mile of land area.

The 2013 Census estimate for Deering was 1,743 residents, which ranked 149th among New Hampshire's incorporated cities and towns. Although growth during the past ten years has been non-existent, and, in fact, there has been some contraction, the population increased significantly over the past 53 years, from 345 in 1960, to 1,743 in 2013, an increase of 1,398. The largest decennial percent change was an 80 percent increase between 1970 and 1980, which followed a 68 percent increase over the previous decade. Like most of the communities in New England, the average age of its citizens continues to age. Based on data from New Hampshire state reports, the population in 2013 was 1,743, in 2010 it was 1,912, and in 2000 it was 1,985. This is consistent with decreases in the Hillsborough County population. The reason is most likely related to changes in demographics throughout the northeast, as well as recent economic conditions. This situation is compounded by the fact that there are minimal employment opportunities for residents in Deering, and many residents have to travel for employment opportunities.

This greatly impacts communities that rely on its residents to volunteer for the fire department. This has become evident in Deering. Interviews with the fire chief and department staff related their concerns to the MRI team, stating that it was becoming more difficult to retain current members and recruit future members to join the fire department. The situation is compounded during the daytime when the department must rely on their members who work in town, are self-employed, or those members who work evening or night shifts.

The housing stock in Deering is comprised of a total of 921 units. This includes 734 single family dwellings, 43 condo/rental types of units comprised of two to four units, five multi-family occupancies of five or more units, and 130 mobile homes and other housing units.

Residents of this community include a mix of both lower income and wealthy residents/property owners. There are greater summer and weekend populations due to the influx of part-time residents because of its quiet and peaceful environment and lakeside homes and cottages. There are a number of large residential homes in the town.

The fire problem in Deering is similar to many communities throughout New Hampshire. It is primarily a rural residential community, and about 85 percent of all fires occur in the home. These fires are fueled by new "lightweight" construction and more flammable home contents. The time to escape a house fire has dwindled from 17 minutes 20 years ago, to three minutes today. This poses a severe risk to firefighters as they now have less time to do their job and save residents' lives and property. Other reasons that rural communities struggle with fire protection is the separation of communities from one another or the separation of residents from one another.

The United States Fire Administration (USFA) states that "Ultimately, separation makes it more costly to conduct business in rural communities, impacting the economy, and residents are more likely to be on the lower end of the economic scale." Further, the USFA finds that income levels were found to be the most significant factor driving the higher fire risk in rural America. Less income means potentially fewer resources. While rural populations have a greater need for fire safety, they have a reduced ability to fill that need without outside help. Though there are no specific remedies that a rural community can provide to eliminate the fire problem in their town, they can recognize it is there and attempt to minimize its impact. Providing fire protection and prevention through the local fire department is the primary method that rural communities use.

CHAPTER 3

FIRE AND EMS OPERATIONS

OVERVIEW

Fire, and in many cases, rescue, and emergency medical services (EMS) incidents, and the fire department's ability to respond to, manage, and mitigate them effectively, efficiently, and safely, are mission critical components of the overall emergency services delivery system. Together with the delivery of law enforcement, they form the backbone of the community's overall public safety life net. In fact, fire, and again in many cases, rescue and EMS operations, provide the primary, and certainly most important, basis for the very existence of the fire department. Ensuring that the department is operationally prepared; necessary equipment is provided, tested, inspected, and maintained; and that adequate funding is allocated to ensure that the department can fulfill its core mission, are basic responsibilities of the governing body of the municipality that it serves. Utilization of an incident command system and adherence to safety procedures are also important pieces of the system.

EMS operations are an important component of the comprehensive emergency services delivery system in any community, and in many cases such as Deering, are operated as part of the fire department.

In addition to structural and other types of firefighting operations, and emergency medical incidents, the fire department is tasked with responding to, and managing, a broad spectrum of other types of emergencies, including, but not limited to, vehicle crashes, building collapse, water and ice rescue, wildland search and rescue, and weather related emergencies. Some of these types of incidents require specialized equipment and training, and in small communities, are frequently handled by a regional team, or by a larger, more capable neighbor. In all types of emergency responses, an incident command system (ICS) should be utilized that conforms to the National Incident Management System (NIMS) guidelines that have been promulgated by the US Department of Homeland Security. While firefighter safety is a primary focus throughout all operations, a formal component of the ICS program includes the consistent designation and use of an on-scene safety officer when appropriate.

It is crucial for call fire departments to make every effort to turn out for every call in the shortest amount of time possible. These firefighters respond from work or home to answer the calls; driving to the nearest fire facility to obtain the needed equipment to handle the incident, or may respond from work or home, directly to the scene. Strong leadership, and retention of a suitably sized roster of truly active members who regularly respond to emergency incidents, are key ingredients for a modern volunteer or on-call fire department to be successful.

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 important measuring instrument to determine how well a fire and EMS department is currently performing particularly for emergency medical incidents. It is not just a cliché that during critical life threatening situations, minutes, and even seconds, truly do count. Heart attack and stroke victims require rapid intervention, 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. 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 emergency services provider.

As a percentage of overall incidents responded to, it could be argued that EMS incidents constitute the greatest number of "true" emergencies, where intervention by trained personnel does truly make a difference, sometimes literally between life and death. Heart attack and stroke victims require rapid intervention, 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.

Structural firefighting has become far more challenging and dangerous in the last thirty years with the introduction of significant quantities of plastic and foam based products into homes and businesses (*e.g.*, furnishings, mattresses, bedding, plumbing and electrical components, home and business electronics, decorative materials, insulation, and structural components). These materials ignite and burn quickly, and produce extreme heat and toxic smoke. Fires can 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 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 trapped civilian, or firefighter, can face, and is not survivable for either. When a flashover occurs, initial firefighting forces are generally overwhelmed and will require significantly more resources to affect fire control and extinguishment. The challenges are even more significant in a community such as Deering, where there is no municipal water system, and firefighters must obtain this vital firefighting resource by other means.

One of the best ways to get a broad overview picture of an emergency services provider is to look at and analyze their emergency response/incident statistics. Looking at statistical data

that is compiled from incident reports that should be generated for each and every emergency response, and/or request for assistance, will assist with determining the adequacy of current operations, as well as identify trends in responses, i.e., increasing versus decreasing, changing types of incident requests, increasing response times, frequency of simultaneous incidents, etc. Utilizing current trends to help predict future ones, while not an exact science, can be helpful to communities and fire departments in predicting and planning for future operational needs. However, as with any other type of statistical analysis, the information that is analyzed is only as good and/or reliable as the data that was originally entered and has been provided for evaluation.

National Fire Protection Association (NFPA) Standard 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), is the nationally recognized consensus standard on staffing and deployment by volunteer/call, and primarily volunteer/call fire departments. It establishes strategic objectives for the organization and operation of fire departments and EMS agencies with primarily volunteer or on-call memberships. It is the benchmark standard that the United States Department of Homeland Security utilizes when evaluating applications for staffing grants under the Staffing for Adequate Fire and Emergency Response (SAFER) grant program.

Some of the key provisions of NFPA 1720 are as follows:

- Paragraph 4.3.1 on *Staffing and Deployment* states that the fire department shall identify minimum staffing requirements to ensure that a sufficient number of members are available to operate safely and effectively.

- Paragraph 4.3.2 on *Staffing and Deployment* states that Table 4.3.2 (Figure 3.1) shall be used by the authority having jurisdiction (AHJ) to determine staffing and response time objectives for structural firefighting, based on a low hazard occupancy such as a 2,000 square foot, two-story, single-family residential occupancy without basement or exposures.

Figure 3.1: Staffing and Response Timetable from NFPA 1720

Table 4.3.2, Staffing and Response Time				
Demand Zone	Demographics[1]	Minimum Staff to Respond	Response Time[2] (minutes)	Meets Objective (% of time)
Special risks	AHJ	AHJ	AHJ	90 %
Urban	>1000 people/mi.^{2}	15	9	90 %
Suburban	500-1000 people/mi.^{2}	10	10	80 %
Rural	< 500 people/mi.^{2}	6	14	80 %
Remote*	Travel dist. > 8 mi.	4	Dependent upon travel distance	90 %

[1]Deering is a rural community by definition, with an average of just 61 residents per square mile.
[2]Response time begins at the completion of dispatch notification and ends at the time interval shown in the table.

It is important to understand that these numbers reflect personnel needs for a fire involving several rooms in the same 2,000 square foot, one-family, residential occupancy described in Paragraph 4.3.2 of NFPA 1720. These are the proverbial "bread and butter" structural fire incidents that fire departments respond to, and are by far the most common type of structure fire, accounting for around 70% of those types of incidents (in a community such as Deering the number is probably close to 100%). However, the reality is that six personnel will be able to perform only limited operations at the scene of a fire, not launch an aggressive and coordinated attack that would be possible with the higher numbers of personnel recommended for less rural communities. NFPA 1720 permits fire departments to use established automatic aid and mutual aid agreements to comply with these staffing and response requirements. These types of agreements will be mission critical to the Deering Fire and Rescue Department being able to handle even basic single-family dwelling fires, and attempt to gain compliance with NFPA 1720.

Note: *While NFPA standards are nationally recognized consensus standards, it is still the responsibility of the local jurisdiction to determine the acceptable level of risk and corresponding fire protection/EMS services. When applying any standard, including the NFPA standards, it is important to apply the document in its entirety. One should not selectively extract requirements to the exclusion of others or take a requirement out of context.*

Some of the other provisions of NFPA 1720 include:

- Paragraph 4.3.3 on *Staffing and Deployment* states that upon assembling the necessary resources at the emergency scene, the fire department should have

the capability to safely commence an initial attack within 2 minutes, 90 percent of the time.

- Paragraph 4.6.1 *Initial Firefighting Operations* states that initial firefighting operations shall be organized to ensure that at least four members are assembled before interior fire suppression operations are initiated in a hazardous area.

- Paragraph 4.7.1 *Sustained Firefighting Operations* states that the fire department shall have the capability for sustained operations, including fire suppression; engagement in search and rescue, forcible entry, ventilation, and preservation of property; accountability of personnel; the deployment of a dedicated rapid intervention crew (RIC); and the provision of support activities for those situations which are beyond the capabilities of the initial attack.

- Paragraph 4.7.2 *Sustained Firefighting Operations* states that the capability to sustain operations shall include sufficient personnel, equipment, and resources to effectively, efficiently, and safely conduct the appropriate operations.

Beyond the NFPA standard(s), which as standards do not normally carry the weight of regulation or law unless they have been formally adopted by statute, regulation, or reference, is the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard CFR 1910.134, which does carry the weight and force of regulation, thus making compliance mandatory. 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. 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 is assembled.

The EMS component of the emergency services delivery system is more heavily regulated than the fire side. In addition to NFPA 1720, NFPA 450, *Guidelines for Emergency Medical Services (EMS) and Systems*, 2009 edition (National Fire Protection Association, Quincy, MA), provides a

template for local stakeholders to evaluate an EMS system and to make improvements based on that evaluation. The Commission on Accreditation of Ambulance Services (CAAS)[1] also promulgates standards that are applicable to their accreditation process for ambulance services. The State of New Hampshire regulates EMS agencies, and certain federal Medicare regulations are also applicable.

Nationally, the standard of care based on stroke and cardiac arrest protocols is to have an emergency response unit on scene at a medical emergency within six minutes. Section 4.9 of NFPA 1720 on Emergency Medical Services is silent on required on-scene response times. However, paragraph 4.1.2.1(4) of NFPA 1710[2] recommends that for EMS incidents, a unit with first responder or higher level trained personnel, and equipped with an AED, should arrive on scene within six minutes of the receipt of the emergency call (at the dispatch center), and an advanced life support (ALS) unit should arrive on scene within ten minutes. CAAS recommends that an ambulance arrive on scene within eight minutes, fifty-nine seconds (8:59) of dispatch.

OBSERVATIONS

The Deering Fire and Rescue Department is a call department, currently comprised of 21 or 22 members, both firefighters and officers. As a call department, personnel do not normally staff the stations on regular shifts or on a consistent basis. Rather they respond to emergency calls from wherever they may be when an incident is dispatched or "toned out." Once the incident has been dispatched, responding personnel normally drive to the nearest fire station to obtain the apparatus necessary to successfully handle the emergency. This could be a pumper, water tender/tanker, or the ambulance. Due to the additional travel time necessary for personnel to respond to the station, which obviously increases with distance, responses by volunteer and call emergency services providers inherently tend to be longer. The leadership of these types of departments should take steps to minimize the lengthier response times.

The Deering Fire and Rescue Department is fortunate to have a dedicated membership who strives to provide the best possible services to the community given the limitations and constraints, primarily from a time commitment standpoint, of a call fire department. As is the case in most small communities, the members of the Deering Fire and Rescue Department invest of a lot of their own time and money into their fire department and its operations. The

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

[2] 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.

firefighters are very proud of their long history and tradition of service to the Town of Deering and the time that they invest in that avocation for which they are only minimally compensated. The organizational structure of any entity, whether public or private, establishes and illustrates the important hierarchical relationships between various personnel, supervisors/subordinates, levels, divisions, and bureaus within the organization that allows it to function properly, and operate effectively and efficiently in its daily operations, or the pursuit of its mission. 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.

At the time of this assessment, the Deering Fire and Rescue Department was being led by Chief Doug Connor, who was serving in an interim capacity. The town administrator informed the MRI study team that the fire chief reports directly to the board of selectman, and works with the town administrator for routine town business matters. This is different than another organizational chart provided to the team by the fire chief. The chief is assisted by an assistant chief (currently the assistant chief is serving as the interim fire chief), a deputy fire chief, three captains, and four lieutenants. There are currently vacancies in some of these positions for a number of reasons. The town's organizational chart (Figure3.2) appears very linear in nature that tends not to be very efficient and is more susceptible to communication breakdowns. The hierarchical relationships in the fire department are not as well defined as the organizational chart presented in the fire department/town documents. In addition, the fire chief reporting directly to the board of selectmen, rather than the town administrator creates the very real potential for ambiguous or conflicting priorities and directions, and certainly compromises the integrity of the town's administrative chain of command.

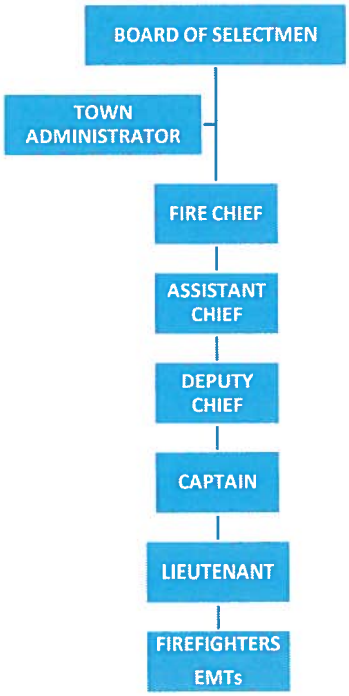

Figure 3.2: Fire Department Organizational Chart provided by the Town of Deering and town administrator

In either case, we believe that the organizational structure is probably one that has been in place and not revised for many years. It does not appear to be conducive to the needs of an evolving department. As the department moves forward, it is our opinion that the organizational structure of the department should be streamlined to provide more effective and efficient management and supervision throughout the department and to provide an increased level of accountability at all ranks.

In a fire department such as Deering's, it is difficult for a call fire chief to perform the wide range of duties that are required in a modern fire and EMS department today outside of emergency responses and required town and department meetings. There is a reasonable expectation that a fire chief will be responsible to manage the department's personnel, develop and manage the department budget, provide reports, develop short- and long-term department goals and plans, coordinate training, and attend meetings. Shortcomings in administrative responsibilities were evident to the MRI team during this project. In discussions with the fire chief, he explained that work schedules and personnel matters made it difficult to perform the duties that were expected of the position. This is not a new situation with the department, and it appears that the organization has been struggling for the past few years with the fire chief fulfilling the administrative duties of the position. Many communities have supported hiring a part-time fire chief that can provide the expected services to the town. These fire chiefs typically have the skills and time to provide management and administration for the department, perform inspection services and fire prevention activities, coordinate with the other town departments, and provide critical and guaranteed emergency response when

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the fire chief is on duty. The additional costs associated with this employee must be considered when developing the position. However, many communities have found the decrease in response times during daytime hours, and the increased efficiency in the department's management, have been worth the investment.

The Deering Fire and Rescue Department responds to emergencies from three small stations located in different areas of the town. While nominally referred to as stations because they house the department's apparatus and are the deployment locations, in reality, these facilities are little more than garages that have been built to be able to accept fire apparatus. They contain only the barest of necessities, and only one has a room capable of being utilized for meetings or training. The stations are discussed in more detail in Chapter 5, *Facilities, Apparatus, and Equipment*.

One of the best ways to get a broad overview picture of an emergency services provider is to look at and analyze their emergency response/incident statistics. Looking at statistical data that is compiled from incident reports which are generated for each and every emergency response and/or request for assistance, will assist with determining the adequacy of current operations, as well as identify trends in responses, i.e., increasing versus decreasing, changing types of incident requests, increasing response times, frequency of simultaneous incidents, etc. Utilizing current trends to help predict future ones, while not an exact science, can be helpful to communities and fire departments in predicting and planning for future operational needs. However, as with any other type of statistical analysis, the information that is analyzed is only as good, and/or reliable as the data that was originally entered, and has been provided for evaluation.

According to the reports provided to us by the fire department, during the three-year period from January 1, 2012, through December 31, 2014, the Deering Fire and Rescue Department responded to a total of 637 emergency requests for assistance, an average of 212 per year, or .58 per day. Although the data from these years did not show a definitive pattern, nationwide statistics suggest that incidents may continue to gradually increase from year to year.

At the time of this assessment, the Deering Fire and Rescue Department is dispatched by the Concord Fire Department's regional communications center. In 2013, the department responded to a total of 240 calls for service, an average of 4.6 per week, or .66 per day. Of these incidents 145 (60.4%) were EMS incidents. They responded to 187 calls for service, an average of 3.6 per week, or .51 per day in 2014, a 22% decrease from the previous year. The 2014 incidents included 118 (63%) for EMS, a decrease of 27 incidents from the previous year. The percentage of EMS incidents relative to the overall total increased just slightly by 2.6%.

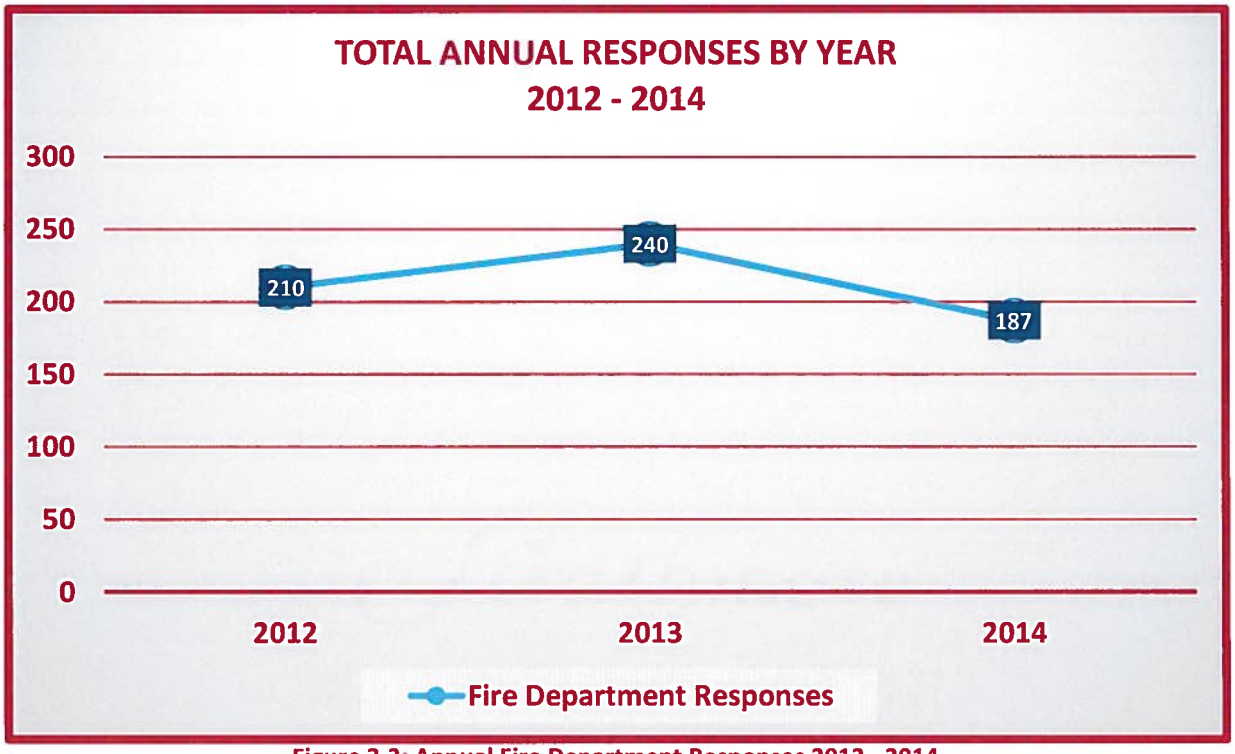

Figure 3.3: Annual Fire Department Responses 2012 - 2014

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TYPE OF FIRE/RESCUE INCIDENT	2012	% OF INCIDENTS	2013	% OF INCIDENTS	2014	% OF INCIDENTS	2015 (thru 9/28/15)
FIRE							
2nd Alarm Building Fire	1		2		2		5
2nd Alarm Brush	1		0		1		2
3rd Alarm Brush	0		0		1		1
Appliance Fire	0		1		0		1
Brush/Grass Fire	1		1		1		1
Building Fire	12		9		19		10
Chimney Fire	3		1		5		1
Dumpster Fire	1		0		0		0
Electrical Fire	1		1		0		0
Fire with Exposure	0		0		0		1
Lightning Strikes	0		1		0		0
Miscellaneous Fire	0		1		2		0
Outside Fires	5		4		3		5
Outside Smoke Investigation	1		0		5		1
Smoke Odor or Seen in Building	0		2		0		1
Vehicle Fire	1		0		0		0
TOTAL	27	12.9%	23	9.6%	39	20.9%	29

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RESCUE							
Elevator Rescue	0		1		1		1
C/O Detector with Medical Response	1		4		0		0
C/O Detector No Medical Response	3		2		0		1
Gas in Building	0		1		0		1
Gas outside Building	2		1		2		1
Hazardous Condition	0		2		1		0
Lift assist	1		3		1		1
Miscellaneous Rescue Call	0		1		0		0
MVA	15		17		10		9
MVA with Extrication	0		3		0		1
Odor Problem	0		1		0		0
Search	1		1		0		0
Service Calls	0		3		1		7
Spill Under 25 Gallons	0		0		0		1
Water/Ice Rescue	0		0		1		0
Water Problems	1		0		0		0
Wires Down	4		9		5		2
TOTAL	28	13.3%	49	20.4%	22	11.8%	25

Figure 3.4 Deering Fire and Rescue Incidents by Call Type 2012-2015 ytd

For the actual fire incidents, the statistical sample is quite small. However, that would not be unexpected in a smaller community such as Deering. It is very important to note that per National Fire Incident Reporting System (NFIRS) protocols, the category for "Fire Incident" must be an actual fire situation that in many, but not all, situations caused some type of damage. Many of the incidents that are classified under other types of incidents were probably initially dispatched as some type of fire incident, but ultimately were classified otherwise for reporting purposes, based upon the situation actually found at the scene. From 2012 through 2014, the department responded to a total of 89 actual fire incidents, an average of 29.7 per year, or a little more than one every other week. Actual fires accounted for 14.0% of the department's total responses during these years and ranged from 9.6% in 2013, to 20.9% in 2014.

TYPE OF FIRE/RESCUE INCIDENT	2012	% OF INCIDENTS	2013	% OF INCIDENTS	2014	% OF INCIDENTS	2015 (thru 9/28/15)
MUTUAL AID							
Cover Trucks (Mutual Aid)	7		6		3		3
TOTAL	7	3.3%	6	2.5%	3	1.6%	3
FALSE CALLS							
Fire Alarm Activation	11		15		5		3
Fire Alarm Troubles	0		0		0		0
Mistake Incident	1		1		0		1
Test Building Fire	0		0		0		2
No Case	0		1		0		0
TOTAL	12	5.7%	17	7.1%	5	2.7%	6
EMS							
Medical Aid Alarms	4		8		8		10
EMS – Alpha	30		34		23		26
EMD – Beta	6		17		16		7
EMS – Charley	20		21		17		32
EMS – Delta	24		27		23		30
EMS – Echo	5		9		4		5
EMS – No Determination	5		3		8		3
Med. Aid Omega	1		2		0		1
Medical Aid	34		23		18		11
Paramedic Intercept	7		1		1		0
TOTAL	136	64.8%	145	60.4%	118	63.1%	125
TOTAL RESPONSES	210		240		187		188

Figure 3.5 Deering Fire and EMS Incidents 2012-2015 YTD

Fire departments also respond to many other types of incidents that may or may not be fire related. These types of incidents frequently constitute the largest number of fire department responses, and each must be treated as an emergency. In the case of automatic fire alarm systems, the incident must be treated as an actual potential fire until a trained and qualified emergency responder arrives on the scene and determines otherwise. Other incidents, such as

fuel or chemical spills, create other dangers and hazards to people, property, and the environment unless they are properly mitigated.

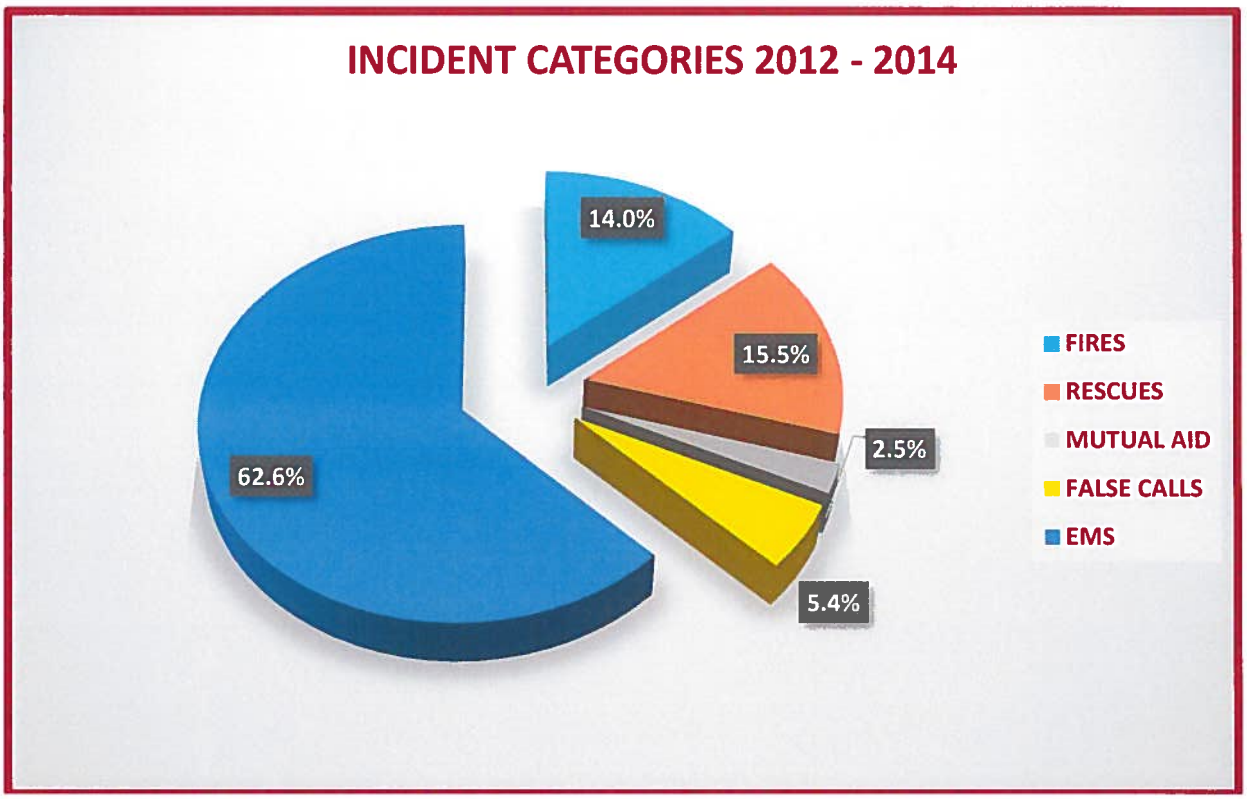
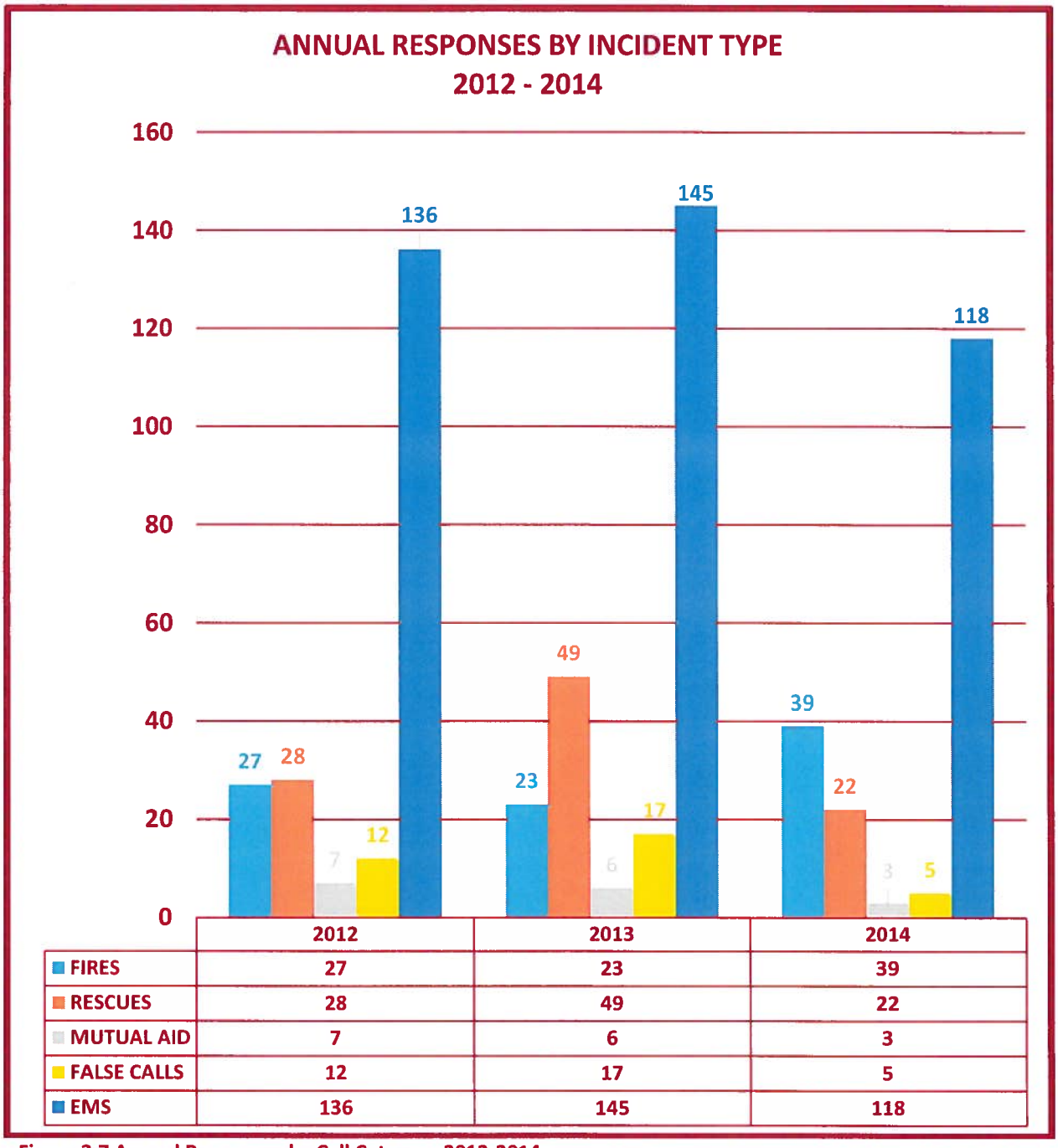


Figure 3.6 Percentage of Incidents by Categories



	2012	2013	2014
FIRES	27	23	39
RESCUES	28	49	22
MUTUAL AID	7	6	3
FALSE CALLS	12	17	5
EMS	136	145	118

Figure 3.7 Annual Responses by Call Category 2012-2014

Response time is another important measuring instrument to determine how well a fire department 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.

Despite repeated attempts to obtain necessary data and statistical information from both the Deering Fire and Rescue Department and the CAMAFC, the MRI study team never received any information that could be used to analyze the department's response times and, by extension, how well they are achieving response time benchmarks set out by several different organizations such as NFPA and CAAS. The lack of availability of this data is a major shortcoming in the town's ability to evaluate the service levels the fire department is providing to the citizens. The type of analysis that we would have liked to have been able to provide the Town of Deering had we received the necessary data for the previous three years includes:

- Average 1st unit on scene response time - Fire
- Average 1st unit on scene response time - EMS
- Average 1st unit on scene response time - Overall
- Average response time for a chief officer to arrive on scene
- Average full 1st alarm assignment (structure fire) response time
- Average time for six personnel on scene
- Percent of time department has at least six personnel on scene of a structure fire within 14 minutes.
- Number of times the department fails to respond to a call
- Average number of personnel per call - Fire
- Average number of personnel per call - EMS
- Average number of personnel - Overall

The Deering Fire and Rescue Department could not provide the study team with any statistics or data regarding how well it complies with even the very low staffing requirement of six personnel on scene of a structure fire within fourteen minutes, as recommended by NFPA 1720. It is important to note that based upon the facts cited above the structural firefighting operations in rural areas are frequently restricted to limited defensive operations due to an inadequate number of available personnel. This fact, coupled with the ready availability of additional resources in neighboring communities, should result in the Town of Deering taking

the necessary steps to improve staffing levels and response times, resulting in the fire department being able to provide the community with a higher level of protection than may be currently available.

What the study team was able to examine and which provides a snapshot of the staffing and response challenges facing the department is found in the response averages for members of the department regarding response to incidents. The average response percentage for all 22 personnel listed in 2014 was just 23.1%, which means that the average member responded to less than one out of four calls. Individual response percentages ranged from 1.1% to 83.4%. Of the 22 members listed, seven (31.8%) responded to at least 25% of the incidents, while just three (13.6%) turned out for 50% or more of the calls. Conversely, eight members (36.4%), a little more than one-third of the members, responded to 10% or less of the dispatches.

In 2013, PRIMEX was asked to evaluate the Deering Fire and Rescue Department and provided them with a Risk Management Plan that included recommendations for increased safety and efficiency during operations at emergency incidents. The plan included a number of recommended action items including:

- Establishing rapid intervention teams (RIT) on fires. Ensuring personnel accountability of on-scene personnel at all emergency incidents
- Assigning a safety officer when necessary as required under the incident management system
- Providing the chief officers with a command vehicle

During the MRI study, team site visits, and subsequent interviews with department members, it is unclear if any of the action Items have been completed or even begun. As such, incident management, incident staffing, and operations were not sufficiently evaluated.

Deering utilizes a six-alarm box alarm/run card system (Appendix A) that specifies the initial dispatch of a certain number of resources at the time of the first dispatch. However, the number of apparatus and personnel who respond initially would be determined solely by the number of call firefighters who were available at that time and who responded. The decision on whether to request additional resources to respond is made on a case by case basis by the highest ranking officer responding, predicated upon information they may be receiving while en route and/or upon conditions encountered upon their arrival on the scene. This procedure is a concern as it results in delays in the dispatch and response of additional needed mutual aid resources that may also be faced with the realities of limited staffing, extended travel distance, and as a result, longer response time.

At the time of this assessment, Deering does not have any minimum staffing requirements for their apparatus so vehicles can respond with just one or two personnel rather than a much more desirable minimum of three or the four recommended. In fact, several of Deering's major apparatus have only two riding positions. It is our opinion that Deering, with their current personnel resources, will rarely be able to get either sufficient apparatus or firefighters to the scene of an incident without turning to their neighboring departments for assistance. This is common practice in both career and on-call fire departments throughout the country and should not be viewed negatively in any way. Paragraph 4.7.3 of NFPA 1720 states, "the fire department shall be allowed to use established automatic aid or mutual aid agreements to comply with the requirements of Section 4.7, *Sustained Firefighting Operations*". Paragraph 4.3.5, *Staffing and Deployment* states, "standard response assignments and procedures, including mutual aid response and mutual aid agreements predetermined by the location and nature of the reported incident, shall regulate the dispatch of companies, response groups, and command officers to fires and other emergency incidents."

The Deering Fire and Rescue Department does have an Incident Management System (IMS) in place; the MRI study team was unable to evaluate its appropriateness and use. Use of an IMS is mandated by federal regulations, as well as numerous other regulations and standards. It is imperative that the Incident Commander (IC) exercise overall command and control to ensure the proper coordination of incident operations, which prevents freelancing, and/or competing/dangerous strategies and tactics being employed. A shortage of qualified personnel in Deering to fill some ICS roles and responsibilities was mentioned by persons interviewed for this report. Incident Command System (ICS) operations in Deering are also more challenging for the chief officers by virtue of the fact that they do not have an appropriate command vehicle to utilize for the management of any significant incident. This was a recommendation in the 2013 PRIMEX report.

A critical component of ICS is the establishment of the role of safety officer to monitor conditions at an incident scene to ensure that appropriate safety procedures are being followed. It is unclear whether the position of safety officer is filled on a regular basis, or if the department has and utilizes a personnel accountability system.

Being able to develop an adequate water supply for firefighting purposes is perhaps the most critical, non-safety, aspect of firefighting operations. Quite simply, if an adequate water supply cannot be established and maintained quickly, effective firefighting operations will not be possible. The Town of Deering does not have a water system requiring the fire department to establish, and then maintain, an adequate supply of water to fight the fire. The establishment of rural a water supply operation requires significant resources, both personnel and equipment, all part of a closely coordinated effort. Portable tanks are set up near the fire scene to supply engines operating to attack the fire. Water tenders or tankers transport water from supply sources located throughout the area to the dump tanks near the incident. The size of the fire, and the distance from the fire to the closest source(s) of water, will both directly impact the

size and complexity of this type of operation. At an absolute minimum, three rated Class A pumpers are required to maintain a rural water supply operation, along with an adequate number of tenders/tankers.

The purpose of a fire pre-planning program is to allow firefighters to become familiar with buildings and/or facilities within their response area prior to an emergency, alert them to on-site hazards and risks, and develop a detailed fire response plan for them that includes specific tactics that will be required to mitigate fires or other emergencies. Information collected for pre-fire/incident plans includes, but is certainly not limited to, data such as:

- the occupancy type
- floor plans/layouts
- building construction type and features
- fire protection systems (sprinkler system, standpipe systems, etc.)
- utility locations
- hazards to firefighters and/or firefighting operations
- special conditions in the building
- apparatus placement plan
- fire flow requirements and/or water supply plan
- forcible entry and ventilation plan

The information contained in pre-fire/incident plans allows firefighters and officers to have a familiarity with the building/facility, its features, characteristics, operations, and hazards; thus enabling them to more effectively, efficiently, and safely, conduct firefighting and other emergency operations. Pre-fire/incident plans should be reviewed regularly and tested by periodic table-top exercises and on-site drills. As a community which is rural in nature and lacks a municipal water supply system, the Deering Fire Department should develop a comprehensive list of water source locations from where water can be obtained for firefighting operations throughout the community. There currently is no data source or maps showing where any water sources are available in town or in surrounding towns. Thus, this information is passed on to department members through historic methods, and mutual aid departments must rely on directions from Deering whenever they respond.

The Deering Fire and Rescue Department provides the town's emergency medical services at the advanced life support (ALS) level. They also provide service on a mutual aid basis to several surrounding communities. The department operates a single ALS equipped ambulance. Currently, the department has thirteen members that are certified Emergency Medical Technicians (EMTs). However, of these, only one is certified paramedic at the ALS level.

One of the major concern's that was expressed to the MRI study team by the town administration is that the ambulance is frequently unable to respond, or is delayed in its response, requiring the response of mutual aid with a corresponding delay in getting assistance to the 9-1-1 caller. This situation is of particular concern when the incident is a more serious incident which would fit ALS treatment criterion, thus adding increased urgency to the emergency. As has been previously noted, but important enough to warrant repeating here, heart attack and stroke victims require rapid intervention, 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.

Developing a cost-effective solution to this problem will not be easy. The location, population, demographics, and topography of the Town of Deering will provide challenges for any of the most frequently considered options: hiring staff, regionalization, consolidation, or contracting out for services. However, that does not mean that they are not feasible or should not be explored. It is our belief that the most viable option for Deering would be to enter into discussions with a number of their surrounding communities to explore the possibility of forming a regional EMS agency that serves several communities. Although travel distances and the corresponding response times may prove challenging, particularly if only a single ambulance were staffed and deployed at any given time, at least there would be a guaranteed response with a quicker response time than currently occurs if the ambulance initially fails to respond and mutual aid must be requested. If enough communities were to join this regional endeavor, the call volume might support staffing multiple units simultaneously and deploying them from various locations.

A second option that may be feasible for Deering is for the town to host a regional or shared service endeavor to provide EMS to several surrounding communities. Under this scenario, Deering could use the career fire chief that is being recommended in this report, and by staffing the ambulance with one additional person, particularly during the day when call personnel are less available, provide a guaranteed ambulance response not only to Deering, but to other communities as well. The participating communities would be charged an annual assessment based upon a formula of the population protected and percentage of calls for service that occur within their jurisdiction. Deering would perform third party billing and keep the revenue collected to help offset expenses. We would recommend that if this option were selected that

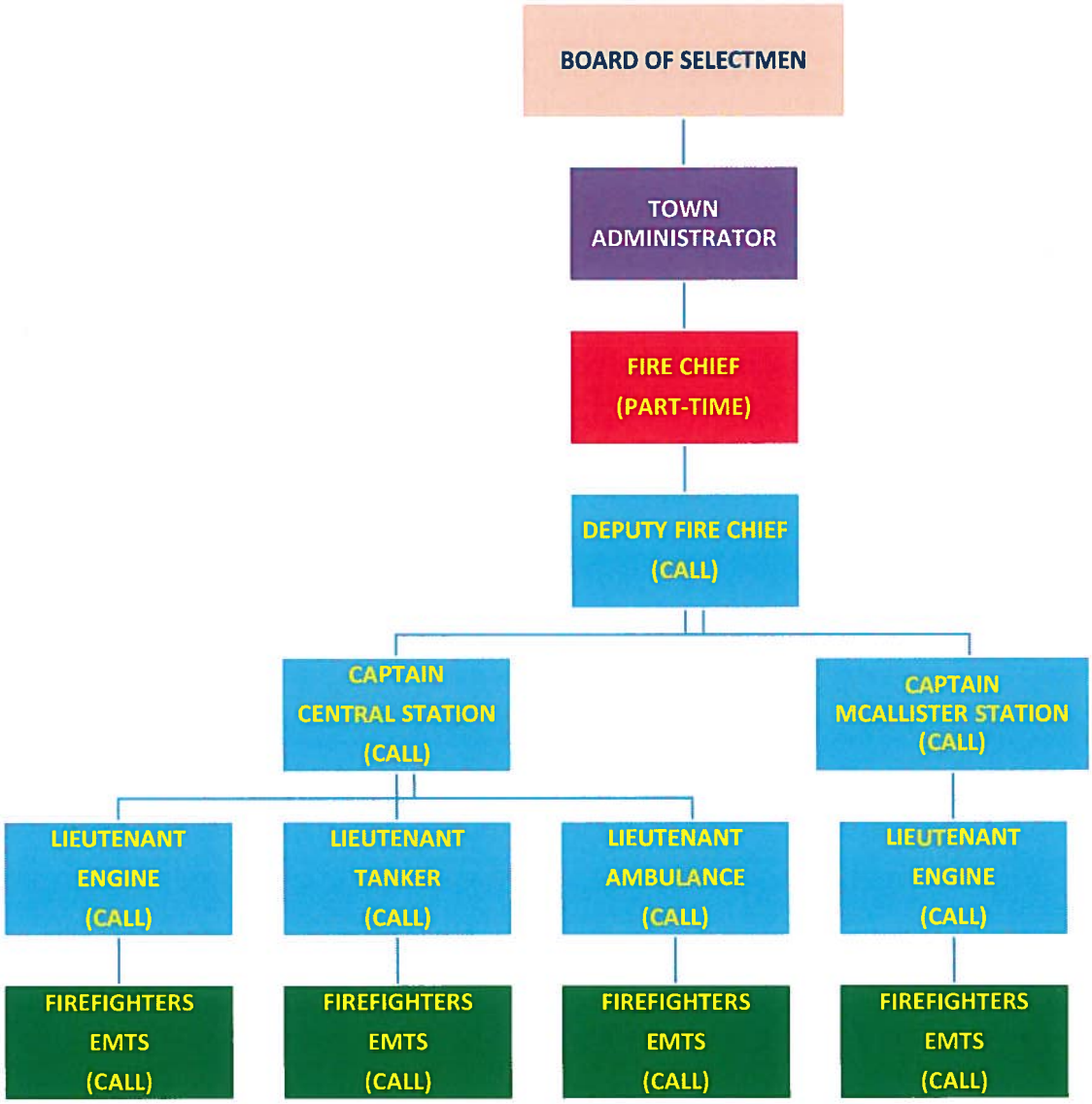
with the exception of the chief the personnel who are used to provide staffing, all be on a part-time, per diem basis, so the town does not need to pay benefits, pension costs, etc.

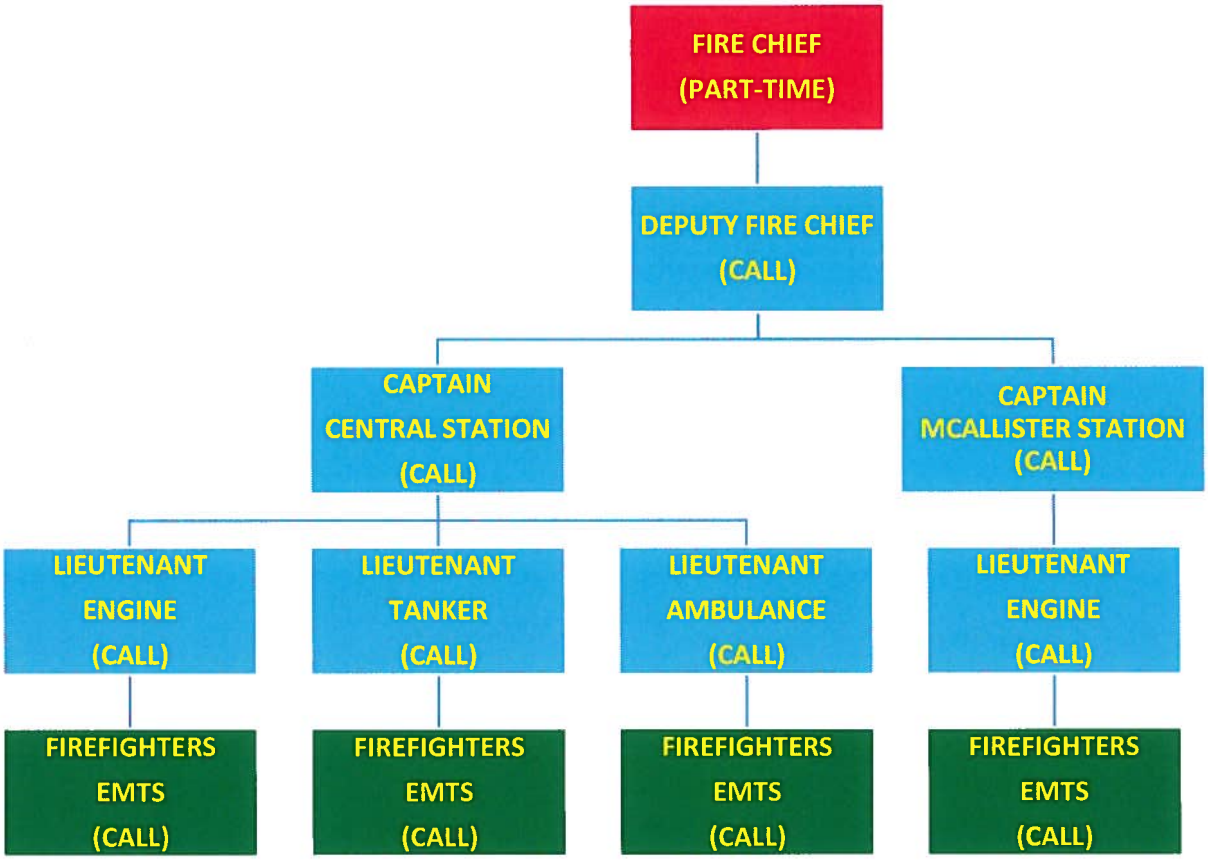
Although beyond the scope of this study, it is possible that a neighboring town would be interested in being the host for this type of regional shared service should Deering decide that taking the lead is not in their best interest. Deering could then contract with that community for service.

Many communities throughout New England have successfully contracted with private ambulance companies to provide the EMS services in their community, sometimes at little to no cost to the municipality. However, we do not believe that this is a feasible, or cost-effective, option for Deering. Due to the somewhat remote location of the town, coupled with the relatively low volume of calls, it is extremely unlikely that any private ambulance company would provide a dedicated EMS in Deering, or the general area, without significant financial expense to the town to fund the service. If a unit was not dedicated to the community, or at the very minimum, stationed within a reasonable distance, the town would end up paying for a service that still has extended, and probably unacceptable, response times. Communities such as Deering also need to be wary of introductory offers that from a financial standpoint seem too good to be true. Towns frequently find their costs increasing exponentially after the initial contract period.

RECOMMENDATIONS

3.1 The MRI study team recommends that building upon our recommendations in Chapter 5, *Facilities, Apparatus and Equipment,* for a consolidation of facilities and rightsizing of its apparatus fleet, that the Town of Deering and Deering Fire and Rescue Department adopt the following revised organizational chart:


BOARD OF SELECTMEN
TOWN ADMINISTRATOR
FIRE CHIEF (PART-TIME)
DEPUTY FIRE CHIEF (CALL)
CAPTAIN CENTRAL STATION (CALL)
CAPTAIN MCALLISTER STATION (CALL)
LIEUTENANT ENGINE (CALL)
LIEUTENANT TANKER (CALL)
LIEUTENANT AMBULANCE (CALL)
LIEUTENANT ENGINE (CALL)
FIREFIGHTERS EMTS (CALL)
FIREFIGHTERS EMTS (CALL)
FIREFIGHTERS EMTS (CALL)
FIREFIGHTERS EMTS (CALL)



3.2 The MRI study team recommends that building upon our recommendations *in* Chapter 9, *Policies, Rules and Regulations, and Standard Operating Guidelines,* that the Town of Deering adopt the provision of New Hampshire RSA 154: 1-(I)b which will allow the board of selectman to not only appoint the fire chief, but would allow them to appoint any firefighters upon recommendation of the town administrator and the fire chief. This hiring practice would be consistent with all personnel policies adopted by the town.

3.3 The MRI study team recommends that the Deering Fire and Rescue Department should work with the CAMAFC dispatch to collaboratively develop consistent response time statistics to determine compliance with the provisions of NFPA 1720.

3.4 The MRI study team recommends that the Deering Fire and Rescue Department should establish a formal pre-incident planning program with the goal of having an up-to-date pre-plan for every business and commercial occupancy (including summer camp facilities). The purpose of a pre-incident planning program is to develop a fire/emergency response plan for buildings in the town. A pre-fire/incident plan includes data such as the occupancy type, floor plans, construction type, hazards to

firefighting, special conditions in the building, apparatus placement plan, water supply plan, forcible entry, and ventilation plan. Pre-planning will improve the firefighter's knowledge of the specific tactics needed to handle a fire or other emergency at a facility and will alert them to on-site hazards and risks. Pre-fire/incident plans should be reviewed regularly and tested by periodic table-top exercises and on-site drills.

3.5 The MRI study team recommends that when there is a report of a structure fire, or smoke in a structure, a full structural response should be automatically initiated. This would include the immediate and automatic response of several departments with additional water tenders/tankers.

3.6 The MRI study team recommends that, although more stringent than the requirements found in Table 4.3.2 of NFPA 1720 for rural communities, through the utilization of automatic mutual aid agreements with neighboring communities, the Deering Fire and Rescue Department should attempt to achieve a goal of having a minimum of 16 personnel on the scene of any reported structure fire, within 14 minutes or less.

3.7 The MRI study team recommends that the Deering Fire and Rescue Department should attempt to improve its initial unit on scene response times AND reduce the number of times that the department is unable to respond to emergency incidents, particularly EMS incidents requiring the ambulance.

3.8 The MRI study team recommends that the Deering Fire and Rescue Department establish a formal fireground/incident safety officer program. All department officers should receive safety officer training, obtain safety officer certification, and an operational procedure should be implemented that results in a guaranteed response of at least one Deering (preferably two including a mutual aid) additional chief officer on every working/all hands incident.

3.9 The MRI study team recommends that the Deering Fire and Rescue Department should acquire a vehicle (possibly a 4X4 SUV or pick-up truck) for use by the department's chief officers as a command vehicle to facilitate more effective, efficient, and safe, incident management/command operations on all types of emergency incidents, and allow the establishment of formal command posts on the scene. This vehicle would be used daily for inspections, responses, and administrative duties if a part-time fire chief is employed.

3.10 The MRI study team recommends that the Deering Fire and Rescue Department should apply for a federal SAFER grant for on-call firefighter recruitment and retention. This grant should be utilized to develop a comprehensive marketing program to attract new members, and provide incentives for the retention of those personnel, such as tuition reimbursement, health care benefits, tax abatements, etc.

3.11 The MRI study team recommends that the Deering Fire and Rescue Department make it a priority to develop an active on-call recruitment program led by a chief officer. At a minimum, this program should concentrate on recruiting personnel from within Deering and consist of:

- Developing a recruitment brochure and mailing it to all residents
- Performing public outreach through the local media
- Contacting community and service groups
- Developing an eye-catching banner on the town's website
- Placing signs recruiting call/volunteer personnel at the main entrances to town
- Placing signs call/recruiting volunteer in local businesses particularly high volume locations
- Although time-consuming, consideration should also be given to conducting a door-to-door recruitment campaign of every residence in the town. Increasing the number of personnel in the department should result in an enhancement of the number of personnel responding to incidents and assist with reducing response times.

3.12 The MRI study team recommends that the Deering Fire and Rescue Department should work to develop statistics that indicate the frequency with which the department is able to comply with the requirements of NFPA 1720, and also the average number of call personnel who respond to each incident. These statistics should be further broken down by weekday/daytime (normal working hours 7:00 AM to 6:00 PM), weekday/night time (6:00 PM to 7:00 AM), and weekends.

3.13 The MRI study team recommends that as a primarily call organization where personnel respond from various locations upon receipt of an emergency incident dispatch, the Deering Fire and Rescue Department (or Concord Fire Dispatch) should purchase and implement a system to track members who are responding to the incident such as the *"I Am Responding"* system. These systems let you know who is responding to the dispatches, where they are responding from, and when they will be responding or arriving. These web-based products can save critical time, and reduce response times, for fire departments and EMS agencies. They will let the dispatcher and/or on duty officer in town know when personnel are on the way, or if they need to page additional

personnel. It can also allow the officer to know who is responding to the station, scene, or any other location.

CHAPTER 4

MUTUAL AID

OVERVIEW

Generally speaking, mutual aid is a system that is in place where neighboring departments respond to assist each other with incidents. They may be requested to provide basic resources such as engines, or more specialized resources that a specific community doesn't have, such as an aerial ladder, or water tankers/tenders.

With mutual aid, the incident commander (IC) of an incident will request either predetermined resources, or may indicate specialized resources required to successfully mitigate the incident he/she is commanding. Since they all rely on and benefit from the system, mutual aid is usually always reciprocal between the participating communities.

Mutual Aid is a widely used and accepted model for providing fire and EMS services within a community in the case of multiple alarm fires, mass casualty incidents (MCIs), or large-scale hazardous material incidents. The municipality where the emergency is occurring may call in resources from surrounding towns to either respond directly to the scene or take up quarters in their fire and EMS stations and respond to other incidents in that city or town when local crews are handling a protracted incident.

In many towns, local crews are capable of handling small incidents themselves, but in the case of larger incidents, surrounding municipalities will be called in along with the local resources upon initial dispatch. For instance, local fire and EMS departments will typically handle fire alarm activations and automobile crashes, while reports of structure fires will cause the automatic dispatch (automatic aid) of surrounding towns. Where a town has no resources of its own, it will contract with a surrounding town or towns, or private EMS, to provide fire and EMS coverage.

Such calls for mutual aid are the results of incident escalations as determined by the incident commander. The responses required from other towns are usually predefined, so all the dispatcher has to do is dispatch the designated resources as determined by the "run card" for such an incident.

Automatic aid operates under the same concept as mutual aid. The main difference is that with automatic aid the additional resources are dispatched automatically and immediately, at the time the incident is initially dispatched, to the community in which the incident is located in. There is no delay in waiting for the additional resources to be requested. Automatic aid is assistance provided 24 hours a day, 365 days a year, and is dispatched automatically by contractual or mutual agreement between two communities or fire districts to all first alarm

structural fires or to respond to a specific area of a town due to difficulty in responding to that area due to time restraints. Unlike mutual aid, automatic aid must be dispatched to reported structure fires on the initial alarm. In order for automatic aid to be effective, it must be prearranged and should be in a written agreement for first-alarm response according to a definite plan.

In acknowledgement of these facts, NFPA 1720 recommends that a unit with first responder or higher level training, and equipped with an AED, should also be on scene within six minutes of the receipt of the medical emergency call (four minutes after conclusion of dispatch) and an ALS unit (if necessary) be on scene within eight minutes. For fire incidents, the first unit should arrive on location within six minutes after receipt of the call and four minutes after the conclusion of the dispatch.

OBSERVATIONS

The Deering Fire and Rescue Department participates in the Capital Area Mutual Aid Fire Compact (CAMAFC). This compact is coordinated through the Concord Fire Department Fire Communications Division. The Concord Fire Department Communications Center receives notification of an emergency through E911 and retransmits the emergency communications for the CAMAFC and participating regional agencies. The Concord Fire Department's Communications Center began operations as a regional center for the CAMAFC in the early 1970s, dispatching for the Concord Fire Department and four additional communities. There are currently twenty communities and three additional emergency services providers that are members of the CAMAFC who are dispatched and coordinated through the communications center. This process is an effective manner to coordinate region-wide resources and utilize both automatic and mutual aid. When a major incident occurs, the chief coordinator for the CAMAFC will be dispatched and respond to the incident to assist the incident commander and coordinate resources responding to and at those at the scene.

CAMAFC provides the following services and activities:

- Centralized communications control center for mutual aid activities
- Operation of a multi-channel radio system for dispatch and coordination of firefighting apparatus and emergency medical units
- Mobile command and communications vehicle for complex operations
- Six alarm running card system for coordination and deployment of apparatus, personnel, and other resources
- Regional hazardous materials response team

- Mobile air supply unit for refilling self-contained breathing apparatus at incidents

- Critical incident debriefing team

The dispatching of resources to Deering is done through the use of "run cards" (Appendix A) that the fire department has developed in conjunction with CAMAFC. These cards are reviewed and updated as may be required due to changes in resources to better meet the evolving needs of the department and community. These "run cards" have predetermined mutual aid fire department resources that should be dispatched based on the type of incident. The number and types of apparatus which respond initially would be determined by the run cards that have been developed in conjunction with the Deering Fire and Rescue Department and CAMAFC. However, since most fire departments in the region rely on volunteer or paid on-call firefighters, the number of firefighters who might respond and the time it takes to do so is determined by who might be available at that specific time.

The incident commander may request additional or specific resources as he/she deems necessary based on the conditions present or knowledge of the incident. If the incident exceeds the capabilities of those resources and additional assistance is required, a second alarm is transmitted. The second alarm brings additional surrounding volunteer departments. Deering also has the ability to transmit a request for water supply which brings additional water tankers/tenders to the incident to move the water necessary for firefighting to the scene.

Based on the type of call, the response run cards may dictate the response from the multi-jurisdiction pre-determined mutual aid. This does not prohibit the incident commander or the highest ranking officer responding from requesting additional resources based upon information they may be receiving while en route and/or upon conditions encountered upon their arrival on the scene. This situation can result in not only extended response times for Deering units and personnel, but also results in delays in the dispatch and response of additional needed mutual aid resources. The result is that Deering has little chance of achieving NFPA 1720 compliance with the recommended number of personnel on scene within a predetermined period of time, and from a more practical operational stand point it, can significantly impact the ability of the department to quickly mitigate the incident resulting in potentially increased fire damage and loss.

The Deering Fire and Rescue Department participates in the Central New Hampshire HazMat Team, which responds to hazardous material incidents throughout the region and allows the fire department to participate in hazardous material incident training.

The Deering Fire and Rescue Department has adopted a Standard Operating Guideline (SOG) regarding providing mutual aid to surrounding communities that take into consideration

maintaining the ability to respond in Deering. All members of Deering Fire and Rescue are required to follow the SOG unless otherwise directed by the incident commander, senior officer, or senior member present or on the air. Members will respond to their respective stations for all fire calls, regardless of the mutual aid assignment. Apparatus not responding on the initial call may be requested as the call progresses. Apparatus that does not respond remains staffed and standing by in Deering. Personnel who do not make the apparatus will make every effort to carpool with other members to join up with the crew if they are needed on scene. In order to provide coverage in town whenever possible, one Deering engine will remain in town at its assigned station. Personnel staffing apparatus in Deering are released at the discretion of the senior officers. The senior officer responding with the apparatus notifies the senior officer remaining in Deering of the need for additional manpower to complete the mutual aid assignment. It is the responsibility of the senior officer remaining in Deering to redirect manpower, as required, to fill the mutual aid assignment, as well as to provide resources for continued fire and ambulance coverage for the Town of Deering. It is the responsibility of the senior officer remaining in Deering to contact the other stations by phone to determine the remaining manpower.

A review of incidents that occurred in Deering over the past few years shows a growing reliance on mutual aid, especially during the weekday hours. This is especially true for medical emergencies, though this is not an unusual occurrence for a town the size and population of Deering. However, it is a concern that the town should be aware of.

Structure fire incidents will automatically begin the response from neighboring communities (see Appendix A Run Cards), but for rescue and medical calls, the Concord Dispatch Center will initially dispatch Deering alone and then place a second call (re-tone) for response if no Deering apparatus or ambulance signs on to the air within the prescribed time period. This is occurring more frequently in the past few years. In just the first nine months of 2015, the Hillsborough Fire Department has been required to respond in Deering 35 times for EMS incidents. This is 28% of all the EMS incidents that occurred during this time period. This situation delays the arrival of medical care and attention that may be needed and can have serious consequences for the patient. During one of our site visits, the MRI study team witnessed a medical call that the Deering fire/ambulance was unable to respond to since there was only one person available, and he was not medically certified for the incident. This required Hillsborough fire to be dispatched and respond, but resulted in a delay in getting care to the patient.

The MRI team had requested information that would allow the comparison of mutual aid and automatic aid given by the Deering Fire and Rescue and the mutual aid and automatic aid received during the past three years. Unfortunately, this information was incomplete and not available. This data would be important to determine the equity of services rendered and received from Antrim, Bennington, Francestown, Henniker, Hillsborough, Hopkinton, Washington, and Weare. Specifically, the data would be helpful in determining the days of

the week, time of day, and types of calls, including paramedic intercept services that required mutual aid.

The Town of Deering is fortunate to participate in an active and robust mutual aid compact. This regional response model has worked effectively for many years. The Deering Fire and Rescue Department relies on mutual aid as does every community in the region. Based on the data received and evaluated, we were unable to determine if Deering uses more mutual aid by percentage of calls dispatched to, as compared to all other departments in the region. We believe that the Deering Fire and Rescue does receive more mutual aid than it provides to all other fire departments. This is especially true with the Hillsborough Fire Department. Though the data was incomplete, anecdotally the MRI team was told by members of the Deering department and other departments that the department was relying more often on mutual aid during the daytime.

The Deering Fire and Rescue Department, through the Capital Area Mutual Aid Fire Compact, is able of providing adequate fire protection to the community 24/7. CAMAFC provides a system that can respond resources, firefighters, and an incident command support to incidents in Deering, even when there are limited Deering fire personnel available to respond. However, this mutual aid program is not as effective for EMS and emergency transport services as it is for fire incidents due to the fact that other towns have some of the same issues with EMS responses.

RECOMMENDATIONS

4.1 The MRI study team recommends that the Deering Fire and Rescue Department continue as a member of the Capital Area Mutual Aid Fire Compact. CAMAFC has worked well for the town and has provided necessary resources for fire and EMS services when Deering is unable to respond or when they need additional resources.

4.2 The MRI study team recommends that the Deering Fire and Rescue Department evaluate the current automatic aid areas of town and consider expanding the size of these areas. The town and the department should give consideration to entering into agreements for expanded automatic aid with communities that are willing and capable of providing these services, especially during daytime hours when Deering's staffing is limited. This will allow other departments that might respond to a specific area in Deering to initiate their response more rapidly.

4.3 The MRI study team recommends that data for mutual and automatic aid both given and received be recorded and analyzed regularly in order to determine what strains are being put on the regional mutual aid system and allow for better response planning for the department.

CHAPTER 5

FIRE DEPARTMENT FACILITIES, APPARATUS AND EQUIPMENT

OVERVIEW

Fire and EMS/rescue stations are critical community assets. The station facilities of modern fire departments and emergency medical services providers are designed to do much more than simply provide a garage for apparatus or vehicles and a place for personnel to respond to or to wait for a call. Well-designed fire and EMS facilities enable staff to perform their duties effectively, efficiently, and safely. As facilities age, they may no longer meet the needs of an evolving department and/or community, thus negatively affecting morale, efficiency, safety, security, technology, and overall efforts to provide quality fire, rescue, and emergency medical services. Older and/or obsolete facilities are also expensive to maintain due to inefficient energy systems.

National best practices, such as guidance provided by the National Fire Protection Association (NFPA) and the Federal Emergency Management Agency (FEMA), recommend that the following features be included in fire station capabilities:

- Automatic fire sprinkler system and smoke detection system
- Carbon monoxide detectors
- Vehicle exhaust extraction system
- Capability to decontaminate, launder, and dry personal protective equipment and station uniforms (if necessary)
- Seismic-resistant construction (based on local risk assessment)
- Flood hazard protection (based on local all-hazards risk assessment facility security)
- Emergency power supply
- Training area
- Compliance with the Americans with Disabilities Act (ADA)
- Compliance with current fire and building codes

- Adequate storage for supplies and equipment, including emergency medical and disaster supplies
- Adequate parking
- Capability for future expansion

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. The fire department's current fire risk 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.

The tools and equipment that a fire department utilizes cover a wide assortment of resources necessary to effectively, efficiently, and safely, respond to, and mitigate, a wide range of emergency incidents. These resources include, but are certainly not limited to, the firefighters personal protective equipment (PPE), self-contained breathing apparatus (SCBA), hose, nozzles, adapters, master stream appliances[3], ground ladders, radios, hydraulic rescue tools and equipment, and various hand and power tools. The technology and standards for fire department equipment are constantly evolving to improve the effectiveness, efficiency, and safety of firefighters.

Fire station facilities and major apparatus purchases should be an important component of a municipal capital improvement plan (CIP). A long-term plan should be in place that takes into consideration the anticipated life expectancy of a facility, space needs, technology needs, and location requirements, based on response times, travel distance, changes in community development patterns, and regional fire protection capabilities. The construction or renovation of fire stations is a costly proposition that should be planned well in advance in order to balance other community needs for capital projects. Although to a lesser extent, many of the same considerations are necessary for the purchase of major apparatus. Frequency of use and maintenance of vehicles can be key indicators of the need to replace apparatus. However, any apparatus that is more than 25 to 30 years old is probably nearing the end of its useful service life.

[3] "Master streams" are large capacity nozzles that can be placed on the ground or are affixed to aerial devices.

OBSERVATIONS

Fire Stations

At the time of this assessment, the Deering Fire and Rescue Department was operating from three stations situated in different locations throughout the town. Each of the stations is little more than a large two-bay garage that has been modified to allow for the storage of fire apparatus. These stations are:

Donovan Station is located on Deering Center Road (NH State Highway 149), the main road through town. It is the closest station to the center of town and the town hall. Engine 2 and the boat are assigned to this station. The station itself, which was built in 1990, is a two bay station of unprotected wood-frame construction. The first-floor apparatus area is very crowded, and there is virtually no storage space. The station has a gravel parking lot.

Figure 5.1 Donovan Station

The Donovan station is considered to be the department's "headquarters" as it is the only current facility that is more than just a basic garage. This station has a small second floor with a room that is utilized for training, meetings, and other gatherings. However, it can only comfortably hold about 12 to 15 people, so its suitability even for training functions is very limited. Although this station is the department's "headquarters", it does not have any office or administrative space. It is also not handicap accessible or ADA compliant. Storage is little more than a small area on the apparatus floor and some closet space. The building does appear to be adequately maintained by the members of the fire department.

McAllister Station is located on 2nd New Hampshire Turnpike in West Deering. It is located on the other side of Hedgehog Mountain, and can be isolated when the Contoocook River floods, which it has done several times over the past decade.

Figure 5.2 McAllister Station

It is the closest station to the small airport in town, and by far the closest to the high hazard traumatic brain injury private rehabilitation facility in town, Robin Hill Farm. Engine 1 and Tanker 1 are deployed from this facility. The station itself was built in 1981 and is a two bay garage of unprotected wood-frame construction. The station is very crowded, and clearances for the apparatus are very tight. In fact, the station had to be modified to be able to accommodate newer, larger apparatus. There is virtually no storage space other than a small closet. The station has a gravel parking lot. The building does appear to be adequately maintained by the members of the fire department.

Murdough Station is located on Old County Road at Bowen School Road. Engine 3 and the ambulance respond from this station. The department's air compressor for refilling their breathing apparatus is located in this station.

Figure 5.3 Murdough Station

The station itself was built in 1974, making it the oldest of the stations. As with the other stations, it is little more than a two bay garage of unprotected wood-frame construction. There is an open, but very small, work office area located in the rear of the station. The station is very crowded, and clearances for the apparatus are very tight. There is virtually no storage space other than a small closet. The station has a gravel parking lot. The building does appear to be adequately maintained by the members of the fire department.

Although they are equipped with basic smoke detectors, the MRI study team noted all of the stations lack any automatic fire alarm system that would detect a fire in the station, particularly when it is not occupied. They also lack carbon monoxide detectors and vehicle exhaust emissions removal systems, both major health and safety concerns. None of the stations are equipped with emergency back-up generators to allow the facilities to remain operational in the event of interruption of the power supply, particularly one that was of lengthy duration. It was reported to the study team by several stakeholders that other than basic, necessary repairs, the Town of Deering has not made any significant capital investment or improvement in its fire stations since they were constructed; the most recent being 25 years ago.

As firefighter cancer rates continue to increase due to exposure to carcinogens in the workplace, attention must be paid to preventative measures to limit that exposure. At the time of this study, members of the Deering Fire and Rescue Department are being exposed unnecessarily to the many carcinogens in diesel exhaust. It has permeated their entire space in the fire stations. Their turnout gear is stored by hanging on wall hooks in the apparatus bay. This means that even their protective clothing is absorbing carcinogens including Carbon Monoxide, Hydrogen Sulfide, Acetic Acid, Phosgene, Ethylene, Benzene, Ammonia, Formaldehyde, Benzopyrene, and Chloromethane both while at fires, and inside the stations.

Vehicle exhaust emission systems are designed to enable apparatus operators to attach a large flexible hose to the exhaust pipe before backing into the station. The system fan automatically discharges vehicle exhaust to the outside atmosphere. When the vehicle is driven out of the station, the discharge hose is automatically released once the apparatus clears the station. As a result of the lack of this type of system, the department's personnel are exposed on a regular basis to the harmful effects of breathing in both diesel and gasoline engine exhaust emissions. This exposure occurs during the response to, and return from, emergency responses, during training exercises, routine vehicle inspections, and any other time that any vehicle in the station must be started and driven either out of, or backed into, the station. In addition, the members' personal protective equipment (PPE), which is stored in the apparatus bays, is continuously exposed to deposits of soot and other exhaust emission products that are released every time a vehicle is started in the station, resulting in a secondary exposure hazard to personnel as they perform their emergency response duties. Over the long-term, exposure to these fumes may increase the risk of lung cancer and possibly bladder and other cancers. There is additional evidence that the fine particles found in diesel emissions, particularly the soot, can aggravate heart problems and respiratory illnesses such as asthma.

While many small communities of Deering's size and population rely on a single fire station for protection, the geography and topography of the Town of Deering may be contraindicative of this deployment model. Though the McCallister Station could remain active as a facility if a single centralized fire station was built, the McCallister would, in all probability, be used for storage of some equipment and opened and staffed during times that that portion of town might be cut off by flooding or during severe weather events. If a single centralized facility were utilized for all of the department's operations, efficiencies would certainly be recognized. This would improve the department's strategic deployment, which would result in improved operational effectiveness and efficiency.

The Town of Deering will probably need to maintain the three existing fire stations, at least for the immediate and short-term future. The MRI study team believes that the town should immediately commence planning to fund and then construct a new, modern, green headquarters fire station that will be located near the center of town. This central (headquarters) fire station will consolidate the Murdough and Donovan stations into a single facility. As with any new station, it should be large enough to house the department's current needed apparatus fleet (as well as support vehicles) and be able to accommodate future needs. This would indicate the need for at least four, and possibly five, drive through bays. It should be big enough to accommodate areas for department offices/administration, training and meetings, gear and equipment storage, decontamination areas for both equipment and personnel, and EMS equipment storage (clean area, out of the apparatus bay). Consideration should also be given to including bunk/locker and shower facilities for when personnel may need to remain at the station for extended periods of time, as well as, kitchen and day room areas. An at-source vehicle exhaust removal system, complete fire alarm, and fire suppression

(sprinkler) system should be installed, along with an emergency back-up generator. The central fire station should be built to accommodate the Deering Fire and Rescue Department of today, and any possible expansion for at least the next fifty years.

Due in large part to the fact that personnel must traverse Hedgehog Mountain, and the Contoocook River (which is prone to flooding) to get from one side of town to the other, the McAllister Station in West Deering will need to be maintained. Because of this necessity, the town will need to make significant investment to upgrade and consider some expansion of this facility. Priority improvements include the installation of a fire detection/alarm system, CO detectors, a vehicle exhaust emission system, and an emergency generator. Longer term upgrades should include consideration of the addition of facilities such as showers, locker room, eating, and sleeping areas for crew members who may need to remain in the station for extended periods.

Fire Apparatus

A review of the Deering Fire and Rescue Department's apparatus in terms of age, condition, and capabilities finds an aging fleet whose condition ranges from very good to fair. In general, the apparatus fleet appears to be in decent shape and well cared for. The department's pumpers are nine, sixteen, and twenty-nine years old. The water tender/tanker is nineteen years old. Surprisingly, while the town is very rural heavily wooded, the department does not have any brush or forestry unit.

Vehicle	Make	Year	Miles (6/1/15)	Hours (6/1/15)	Pump Capacity (GPM)	Tank Capacity (gallons)	Condition
Engine 1	International	2006	10835	911	1,250	1,000	Very Good
Engine 2	Freightliner	1999	13960	1330	1,250	1,000	Good
Engine 3	International	1986	23345	2528	750	450	Fair
Tanker 1	International	1996	11601	1363	750	1,750	Good
Tanker 2	International	1987	OOS	OOS	Unknown	1,500	OOS
Ambulance 1	Ford	2013	12805	-------	N/A	N/A	Very Good

Table 5.1 Apparatus Inventory

The newest pieces of apparatus, Engine 1 (2006) and Engine 2 (1999), are the department's two primary firefighting units. Engine 1 is a 2006 International, four door cab, with a KME apparatus

body. It is equipped with a 1,250-gallon per minute fire pump and a 1,000-gallon water tank. Engine 1 has seating for a total of five personnel and is assigned to the McAllister station. It appears to be well-maintained and cared for, and is in very good condition. It is fairly well equipped with a wide variety of tools and equipment that appear to meet national standards commensurate with its age.

Figure 5.4 Engine 1 at McAllister Station 1

Engine 2 responds from the Donovan station. It is a 1999 Freightliner pumper, equipped with a 1,250-gallon per minute fire pump and a 1,000-gallon water tank. Engine 2 has seating for just three personnel, which can limit the number of personnel responding with it. It also appears to be well-maintained and cared for, and is in relatively good condition. It is fairly well equipped with a variety of tools and equipment, and appears to be well-maintained and is in very good condition. It is fairly well equipped with a wide variety of tools and equipment that appear to meet national standards commensurate with its age.

Figure 5.5 Engine 2 at Donovan Station

Municipal Resources

Engine 3, which operates from the Murdough Station, serves as the department's rescue truck. It is a 1986 International, with a 750-gallon per minute fire pump, and 450-gallon water tank. This vehicle is in fair condition at best and is equipped with a manual transmission. It also has seating for just two personnel, which severely limits the number of personnel who can respond with it. At twenty-nine years old, and considering its other negative attributes (small pump and water tank, manual transmission), this unit has probably reached the end of its useful service life and should be replaced.

Figure 5.6 Engine 3 at Murdough Station

Tanker 1 is the department's sole water supply vehicle. It is a 1996 International, with a 750-gallon per minute, front mounted, fire pump, and a 1,750-gallon water tank. It appears to be in relatively good condition. It too has seating for just two personnel. While not as well equipped as the primary engines, it still appears to meet minimal national standards commensurate with its age. The department previously had a second tanker; however, it was badly damaged in a fatal motor vehicle accident in May 2014 and, as a result, was removed from service.

Figure 5.7 Tanker 1 at McAllister Station

Ambulance 1 operates out of the Murdough Station. It is a 2013 Ford, which is in good condition. The ambulance is equipped with the appropriate equipment to operate and respond as an Advanced Life Support vehicle. Records indicate it has been successfully inspected and approved for operations by the State of New Hampshire Department of Safety EMS Division.

Figure 5.7 Ambulance 1 at Murdough Station

The department's rescue boat is housed at Donovan station. It is a small, rigid hull, inflatable craft, with a 2006 Mercury motor.

Figure 5.8 Rescue Boat at Donovan Station

An up-to-date capital improvement program is an essential planning tool for both the fire department and the town. Future needs should be planned well in advance in order to coordinate major fire apparatus purchases with other capital needs in the community and to avoid excessive spikes in debt service costs. A lead-time of up to five years can be required between the development of fire apparatus specifications and the actual delivery of the vehicle. It is imperative that the town begins to plan for the replacement of apparatus and related equipment, including hoses and nozzles, hand tools, rescue tools (manual and hydraulic), etc.

A white paper developed by the Fire Apparatus Manufacturer's Association (FAMA) suggests that the front line lifespan of active duty fire apparatus in a suburban setting ranges from sixteen to nineteen years, with the possibility of an additional nine to ten years in a reserve or spare status. Apparatus that is operating in a much more rural environment should be expected to have a somewhat longer life expectancy. The International City/County Management Association (ICMA) suggests that the life span of a fire pumper should be twenty years. There is

also an industry guideline that suggests that one major piece of fire apparatus should be purchased every five years. The goal of this strategy is to spread these major purchases out over time in an effort to allow the town to maintain a consistent level of debt service.

For a fire department like Deering, it should be expected to replace engines (pumpers) after twenty to twenty-five years of service although they may be able to serve for a few more years in a reserve status. Some factors to take into consideration include:

- Apparatus age and condition
- Engine hours
- Pump hours
- Technological obsolescence
- Maintenance costs

Because of their much higher frequency of response and use, ambulances in a community the size of Deering often need to be replaced at five to ten-year intervals.

Although the current version of NFPA 1901: *Standard for Automotive Fire Apparatus* was published in 2009[4], the 1991 edition has frequently been referred to as the "benchmark" from which new and improved "modern" apparatus has evolved. The 1991 edition of NFPA 1901 was where a number of significant safety improvements were introduced, such as fully enclosed crew seating areas that today are the industry standard. Beginning with the 2003 edition, NFPA 1901, contains an Appendix D: *Guidelines for First Line and Reserve Fire Apparatus*. The current edition of NFPA 1911 contains this same document, also as Appendix D. This appendix includes a number of recommendations concerning the upgrading and refurbishing of fire apparatus. Most significantly, this document recommends that fire departments should seriously consider the value and risk of keeping pre-1991 fire apparatus in front-line service due to the significant safety improvements found in the 1991 edition of NFPA 1901.

With the consideration of the above in conjunction with the needs of the department and community, the 1986 International Pumper (Engine 3) should be replaced within the next one to two years. Since this apparatus serves as the department's rescue truck, consideration should be given to the purchase of a quick attack/urban interface type rescue engine equipped with a full-size pump, 500-gallon or 750-gallon water tank, and a complete set of rescue tools. This type of apparatus can be quickly and easily be deployed by just one or two firefighters to

[4] The next revision to NFPA 1901, the 2016 edition is scheduled for release on August 28, 2015 with the provisions taking effect on January 1, 2016.

mitigate the majority of incidents the Deering Fire and Rescue Department will be called upon to handle.

When budgeting for new fire apparatus, the purchase of new tools and equipment (including self-contained breathing apparatus, communications equipment, and computer technology) needed for that apparatus to be fully functional should be included. If the FEMA Assistance to Firefighters Grant (AFG) program is still available at that time, the town should consider seeking federal funds to support the purchase of this quick attack fire rescue pumper.

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

The MRI study team noted that the current apparatus fleet appears to be clean and serviceable. The town's highway department performs preventative maintenance and minor repairs on the fire department's apparatus and equipment; however, it appeared that these services were performed strictly upon request as opposed to on a regular schedule. While it was reported to the study team that they may have maintenance and repair records, the fire department has not been provided with copies and had no maintenance records of any type on file. Major repairs are sent out to an apparatus dealer. The department does have a procedure, SOG 31, issued on November 1, 2012, titled *Weekly Apparatus and Equipment Checks that* covers what members are supposed to inspect during weekly apparatus checks. However, it does not appear that this procedure is being followed. There are also no vehicle inspection reports completed or maintained.

The fire department does not perform the annual pump, hose, and ladder tests that are required by NFPA and ISO, and no money has been budgeted for them. In addition to the requirements in these standards, these annual inspections and tests ensure that major pieces of apparatus and vital pieces of equipment are still serviceable and operating as required and designed. They can also identify pending maintenance issues and allow them to be addressed before they become major or costly, or of even greater concern, fail on the emergency scene placing firefighters and civilians at risk of injury and possibly resulting in increased damage from the incident. Ensuring that these annual tests are performed is an important component of an apparatus and equipment preventative maintenance program and a department's overall

safety program. They should be basic components of every fire department's operational readiness efforts. In addition, failure to comply with NFPA standards which are nationally recognized, reasonable consensus standards can expose the town to increased liability should an apparatus or equipment failure occur whether directly connected to these tests or not. Having these tests performed should be made a priority for the Deering Fire and Rescue Department and be allocated appropriate annual funding. Detailed records should be maintained on both the annual tests, as well as any maintenance that is performed as a result of them. These records are maintained for the life of the vehicle or equipment.

According to the annual Fire Department Profile published by the National Fire Protection Association (NFPA), 80.3 percent of fire departments serving communities with less than 2,500 people have just one or two pumpers and operate from a single fire station. These statistics are consistent with the opinion of the MRI study team that, as previously noted, Deering has more fire stations than it needs. It also reinforces our belief that the town's apparatus fleet could be reconfigured into a more operationally diverse fleet that will more effectively serve the needs of the department and the community.

Equipment

National Fire Protection Association (NFPA) 1901, *Standard for Automotive Fire Apparatus* (2009 edition), and ISO provide standards for the minimum compliment of equipment carried on fire apparatus. It is important to recognize that each agency has different requirements for apparatus and equipment. NFPA focuses broadly on the safety and performance of the apparatus, while ISO focuses specifically on the fire suppression capabilities of the apparatus as it potentially can impact the fire insurance rating for a community.

The Deering Fire and Rescue Department's apparatus has a typical selection of portable hand power and service tools and equipment utilized for firefighting and other emergency operations. The fire department equipment appears adequate and well maintained. While no formal inventory lists exist, Engines 1 and 2 were reported to be both NFPA and ISO compliant with regard to equipment carried. The study team's inspection confirmed that they appear to comply.

The Deering Fire and Rescue Department has a total of 18 Scott 4.5 self-contained breathing apparatus (SCBA) that are approximately nine years old. They have the requisite one SCBA for each riding position on every apparatus. They have one rapid intervention team (RIT) pack for use if needed to rescue a trapped or down firefighter. It could not be determined if the department also had one spare cylinder for each SCBA as is required by NFPA standard. The SCBA appeared to be well-maintained and in good condition; however, at nine years of age, they are probably at about the midpoint of their useful service life.

The MRI study team was informed that each member of the fire department has been issued their own facepiece for use with self-contained breathing apparatus. This is an important health and wellness practice that reduces the chance of transmission of disease or sickness from one member to another, and minimizes the chances of cross-contamination. We commend the department for implementing this policy.

While annual flow testing is reported to be performed by IPS, an independent third party contractor, the test records were not available for review by the study team. The department did report that at the time of this study, they were awaiting a quote on getting these tests performed as they were currently overdue. Fit testing of members for proper fit and seal on SCBA masks was performed once in 2006, presumably when the new packs were delivered, but not since then. This is a major safety issue and a major infraction of OSHA regulations. No records were available regarding whether the SCBA cylinders were being hydrostatically tested on a periodic basis as required.

The Deering Fire and Rescue Department utilizes Kenwood brand portable radios for emergency scene communications between personnel. The current radios are reported to be approximately six years old so while still serviceable, have probably surpassed the midpoint of their expected service life. The MRI team did observe that there are not enough portable radios for each member of the department to be issued their own unit, or for each riding position on every apparatus. This is a significant life safety hazard as all firefighters that may enter an Immediately Dangerous to Life and Health (IDLH) atmosphere must have the ability to communicate immediately and effectively with their fellow crew member(s) or the outside supervisor in the event they become trapped or injured. Everyone on the interior team at a structure fire must have a portable radio. One radio per crew is not an acceptable or safe practice.

The department currently has just two thermal imaging cameras (TICs) for use between the three stations. One is assigned to Engine 2 at the Donovan Station, the other to Engine 3 at the Murdough Station. Both are older, earlier generation MSA units, that are not as technologically advanced as new cameras. They are probably nearing the end of their useful service life. In addition, the department should have at least one, preferably two more cameras, one for Engine 1 and one for a backup should a camera be out of service for maintenance or repair.

The Deering Fire and Rescue Department has an older set of Holmatro brand hydraulic rescue tools on Engine 3. They appear to be well maintained and in relatively good condition despite their age. However, the department does not have an annual service contract for them, and no maintenance records were available for review.

The department has only one automatic external defibrillator (AED) which is located on Ambulance 1. This is an inadequate number. With only a single unit, if this AED is out of service for any reason, even the ambulance would be responding without having one of its most

important pieces of critical lifesaving equipment available for immediate use. Beyond that obvious concern is the fact that the accepted standard today is for each major piece or apparatus and vehicle to be outfitted with an AED. This recommendation is not only for the benefit of the public the department serves, but also for the safety and wellbeing of the members of the department. In the stations other than Murdough where there is no ambulance were a member to experience a cardiac event while at the station for work detail, training or returning from an incident, or should someone pull up to the station with a cardiac emergency, the personnel would not have an important piece of equipment that could save a life at their disposal. Even at Murdough, if the ambulance is out, the AED would not be immediately available.

It is not just a cliché that during critical life threatening situations, minutes, and even seconds, truly do count. Heart attack victims require rapid intervention and appropriate care. 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. Being able to quickly convert a heart rhythm back to a normal one in the quickest time possible may be critical to the survival of the patient. Doing so may be impossible without access to an AED. There are a number of grant programs through public and private sources available to get reduced cost and even free AEDs.

The department does not appear to have any combustible or four gas meters for performing atmospheric monitoring. This certainly hinders their ability to safely deal with gas leaks, carbon monoxide emergencies, and other similar emergencies.

RECOMMENDATIONS

5.1 The MRI study team recommends the Town of Deering and Deering Fire and Rescue Department develop a comprehensive capital improvement plan (CIP) for apparatus, major equipment, and capital facility needs. The plan should be incorporated into the town's capital improvement plan. The plan should also take into consideration potential funding strategies, such as bonding, lease-purchase agreements, and grant opportunities.

5.2 The MRI study team recommends the Town of Deering begin a planning process to construct a new, modern, energy-efficient, "green" fire station near the center of the town. The operations of the Donavan and Murdough stations should then be consolidated into this new central (headquarters) facility. Since the new central (headquarters) fire station would consolidate two stations into one, it should be big enough to accommodate the assigned apparatus and support vehicles, as well as training, gear storage, crew quarters (for extended stays), decontamination areas for

both equipment and personnel, EMS equipment storage (clean area, out of the apparatus bay), and an at-source vehicle exhaust removal system.

5.3 The MRI study team recommends the Town of Deering seek funding for the design of the new station recommended in 5.2, after the capital improvement plan has been developed and adopted by the town.

5.4 The MRI study team recommends the McAllister station continue to be maintained due to the geography of the town. Upgrades should include the addition of facilities such as showers, locker room, and eating and sleeping areas for crew members who may need to remain in the station for extended periods. Funding for this project can also be sought after the capital improvement plan has been developed and adopted by the town.

5.5 The MRI study team recommends automatic fire alarm systems with heat and smoke detection be installed in all fire stations. These systems should not only be equipped with both audible and visible warning devices, they should automatically transmit an alarm to either the department's dispatch center or an approved central monitoring station. All stations should also be equipped with CO detectors. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants. The new station should be equipped with a complete automatic fire suppression system.

5.6 The MRI study team recommends all fire stations be equipped with emergency generators to provide back-up power supply in the event of interruption of the electrical service allowing for continuity of operations. Grants may be available through the New Hampshire emergency management agency to assist with this project.

5.7 The MRI study team recommends all stations be equipped with source capture vehicle exhaust emissions systems. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

5.8 The MRI study team recommends the Town of Deering and the Deering Fire and Rescue Department begin the process of replacing twenty-nine-year-old Engine 3, a 1986 International. MRI recommends this apparatus be replaced with a modern, state of the art, quick attack fire rescue pumper equipped with a full-size pump, carrying at least 500 gallons of water and equipped with hydraulic rescue tools. A fire/rescue pumper or squad combines the functions of an engine (pump, hose, water) with vehicle extrication and possibly other basic special hazards/operations (technical rescue/hazardous materials) tools and equipment.

5.9 The procurement of the rescue pumper "squad" recommended in 5.8 could be funded at the fiscal year 2017 town meeting after a federal Assistance to Firefighters Grant (AFG or Fire Act) was applied for during the 2016 grant period, which will open in the spring of that year. If the AFG grant application is successful, then the FY 2017 capital project can be canceled.

5.10 The MRI study team recommends that since the town is heavily wooded, consideration be given to the Deering Fire and Rescue Department acquiring an appropriate forestry vehicle that can not only be used for wildland fire operations, but also for search and rescue and other types of off-road operations.

5.11 The MRI study team recommends that when the time comes for them to be replaced, Engine 2 and Tanker 1 should be consolidated into a single tender/pumper which combines a regular Class A pumper with the water carrying capabilities of a tender/tanker. If possible, this unit should be configured with a 3,000-gallon water tank, at least one portable tank, quick dump discharges, and a hose bed with a large capacity (4" or larger) diameter hose.

5.12 The procurement of the combination pumper-tender recommended in 5.11 should be funded at the fiscal year 2022 or 2023 town meeting. A federal Assistance to Firefighters Grant (AFG or Fire Act) should also be pursued provided the program is still available and funded at that time. If the AFG grant application is successful, then the capital project can be canceled.

5.13 The MRI study team recommends the Deering Fire and Rescue Department adopt the following long-term apparatus deployments:

- Central Station: 1 quick attack rescue pumper, 1 tender pumper, 1 ambulance,1 rescue boat, command vehicle
- McAllister Station: 1 pumper, 1 forestry unit

5.14 The MRI study team recommends the Deering Fire and Rescue Department work to ensure that all apparatus and vehicles comply with the appropriate NFPA and ISO standards for equipment carried. They should also adopt a policy of purchasing new NFPA 1901 and ISO compliant equipment when new apparatus is purchased. This policy will ensure that equipment is the most technologically up-to-date and that it is safe and functional.

5.15 The MRI study team recommends the Deering Fire and Rescue Department provide a portable radio to each member of the department for use on emergency incidents. If this is not feasible, at the very minimum, the department must ensure that every

member wearing SCBA and entering an IDLH atmosphere is equipped with a portable radio. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

5.16 The MRI study team recommends the Town of Deering provide funding for the Deering Fire and Rescue Department to acquire two new thermal imaging cameras allowing one to be deployed to each station and each major piece of apparatus, and one to be kept as a spare. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

5.17 The MRI study team recommends the Deering Fire and Rescue Department review the recommendations in NFPA 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus (National Fire Protection Association, 2012 edition), and update and revise its vehicle fleet maintenance program as necessary to comply with the recommendations.

5.18 The MRI study team recommends the Deering Fire and Rescue Department fully comply with its weekly apparatus inspection and serviceability procedure. This inspection is the equivalent of a daily pre-trip inspection as outlined in commercial driver manuals. NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus* (2012 edition), has an appendix in the rear of the standard with suggestions for routine vehicle and component inspection and testing. The weekly inspection should also include an inventory and serviceability check of the tools, equipment, and SCBA that is carried on the apparatus.

5.19 The MRI study team recommends the Deering Fire and Rescue Department develop and maintain complete apparatus and equipment maintenance records for each piece of apparatus and all major equipment regardless of where the preventative maintenance and/or repairs are performed.

5.20 The MRI study team recommends the Deering Fire and Rescue Department immediately implement a program of annual pump testing, at intervals no greater than 12 months, in accordance with NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.21 The MRI study team recommends the Deering Fire and Rescue Department immediately implement an annual program of ground ladder testing, at intervals no greater than 12 months, in accordance with NFPA and ISO standards. All tests conducted, results

including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.22 The MRI study team recommends the Deering Fire and Rescue Department immediately implement a program of annual hose testing, at intervals no greater than 12 months, in accordance with NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.23 The MRI study team recommends the Deering Fire and Rescue Department continue its program of annual SCBA flow testing, at intervals no greater than 12 months, in accordance with NFPA standards and manufacturer's recommendations. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.24 The MRI study team recommends the Deering Fire and Rescue Department immediately implement an annual program of SCBA mask fit testing for ALL personnel to comply with NFPA standards and OSHA regulations. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.25 The MRI study team recommends the Town of Deering provide funding for the Deering Fire and Rescue Department to acquire four additional automatic external defibrillators (AEDs) allowing one to be deployed to each major piece of apparatus. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

5.26 The MRI study team recommends the Town of Deering provide funding for the Deering Fire and Rescue Department to acquire four four-gas combustible gas meters, allowing one to be deployed to each major piece of apparatus (engines), and one to be kept as a spare. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

CHAPTER 6

WATER SUPPLY

OVERVIEW

The fire service has experienced tremendous technological advances in equipment, procedures, and training over the past fifty years. Better personal protective equipment (PPE), the widespread use of self-contained breathing apparatus (SCBA), large diameter hose, better and lighter hand lines and nozzles, and thermal imaging cameras are just a few of the numerous advances that have enabled firefighters to perform their duties more effectively, efficiently, and most of all, safely. However, one necessity has remained constant, and that is the undeniable fact that firefighters' most important resource is still the same as it was hundreds of years ago and is the most basic of one of all – water. Most of the other tools and equipment that we have at our disposal are rendered of little value to our fire suppression efforts unless we can develop and sustain an adequate water supply for the needs of the incident.

Determining the fire flow requirements necessary for fire control and extinguishment, and from that calculation estimating the total potential water supply needs for the fire incident they are managing, is one of the key initial tasks that the incident commander (IC) should undertake. In the mid-1980s, the National Fire Academy developed a simple formula that fire ground commanders could utilize to determine their needed fire flow requirements in gallons per minute. It is the application of a sufficient quantity of water, in gallons per minute, to the seat of the fire, that will most effectively, and efficiently, control, and then extinguish it.

$$\text{Needed Fire Flow} = \left(\frac{\text{Length} \times \text{Width}}{3} \right) \times \%\ \text{Involvement}$$

Figure 6.1: National Fire Academy Fire Flow Formula

As was discussed in Chapter 3, *Fire and EMS Operations*, Table 4.3.2 of NFPA 1720, identifies the recommended personnel needs and target response times for structure fires in various types of communities. These recommendations are based upon a fire incident involving several rooms in a 2,000 square foot, one-family, residential occupancy. These are the proverbial "bread and butter" structural fire incidents that fire departments respond to, and are by far the most common type of structure fire, accounting for more than 70% of those types of incidents. With commercial occupancies in Deering being virtually non-existent, these incidents are going to comprise nearly all of the department's structural fires.

The needed fire flow requirements for this type of fire would be:

% INVOLVEMENT	NEEDED FIRE FLOW	TOTAL FIRE FLOW 15 MINUTES	TOTAL FIRE FLOW 30 MINUTES	TOTAL FIRE FLOW 45 MINUTES	TOTAL FIRE FLOW 60 MINUTES
10 %	67 GPM	1,005 GALLONS	2,010 GALLONS	3,015 GALLONS	4,020 GALLONS
25 %	167 GPM	2,505 GALLONS	5,010 GALLONS	7,515 GALLONS	10,020 GALLONS
50 %	333 GPM	4,995 GALLONS	9,990 GALLONS	14,985 GALLONS	19,980 GALLONS
75 %	500 GPM	7,500 GALLONS	15,000 GALLONS	22,500 GALLONS	30,000 GALLONS

*** Designed for interior, offensive firefighting operations with 50% or less involvement of the structure.**
Figure 6.2: National Fire Academy Fire Flow Requirements – 2 story, 2,000 square foot single family dwelling

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

The Insurance Services Office (ISO) also places a high priority on a municipality's water supply needs and capabilities as part of its periodic evaluations. A community's ISO rating can be the basis for the fire insurance rates that are paid by commercial and residential property owners.

The ISO rating system classifies communities from Class 1 to Class 9, with 1 being the most favorable and 9 being the lowest. Most communities like Deering with no municipal water supply system are a Class 9. ISO does award some communities a Class 8B rating which is a special classification that recognizes a superior level of fire protection in otherwise Class 9 areas. It is designed to represent a fire protection delivery system that is superior except for the lack of a water supply system capable of the minimum fire flow criteria of 250 GPM for two hours (30,000 gallons total). Instead, the fire department must have the capability to deliver an uninterrupted flow of 200 GPM for twenty minutes (4,000 gallons total) beginning within five

minutes of the first arriving engine. Achieving a Class 8B rating may result in savings on fire insurance premiums for at least some of the town's homeowners.

Figure 6.3: With no municipal water system and fire hydrants Deering must utilize water tenders to transport water for firefighting operation to the scene to supply portable tanks.

The establishment of a rural water supply operation requires significant resources, both personnel and equipment, all part of a closely coordinated effort. These are frequently labor intensive operations. Portable ponds or tanks are set up near the fire scene to supply engines operating to attack the fire. Water tenders transport water from supply sources located throughout the town (or even in adjoining towns) to the dump tanks near the incident. The size of the fire, and the distance from the fire to the closest source(s) of water, will both directly impact the size and complexity of this type of operation. At an absolute minimum, three rated Class A pumpers are required to maintain a rural water supply operation, along with an adequate number of tenders/tankers. If a water supply is being established through the use of large diameter hose, an additional pumper will be required at each interval of no greater than 1,000 feet.

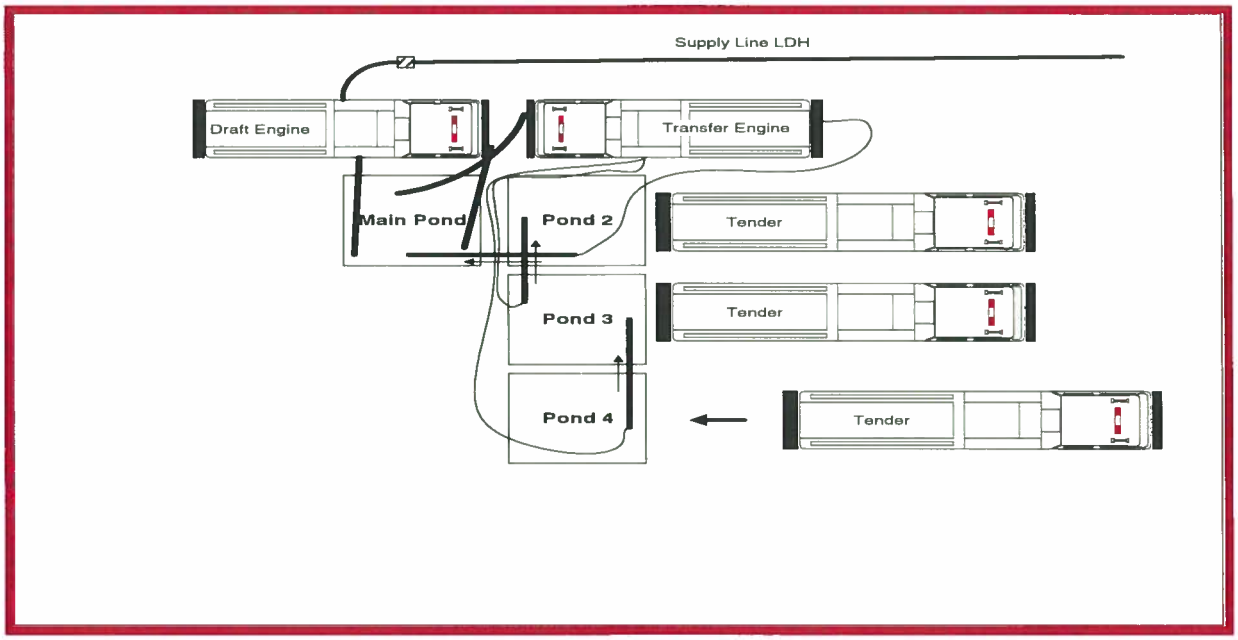


Figure 6.4: Typical rural water supply operation utilizing tenders/tankers and portable ponds/drop tanks.

OBSERVATIONS

The Town of Deering does not have a municipal water supply system anywhere in town. The fire department must depend upon static sources such as ponds, streams, rivers, or cisterns in areas for water, in addition to the water supply that is carried on fire apparatus. At the time of this assessment, the Deering Fire and Rescue Department's apparatus fleet carried a total of 4,250 gallons of water between the three engines and the tanker. Under normal circumstances, that is with a reasonable response time, an adequate number of personnel available to initiate operations, and proper application of the water, this should be a sufficient water supply to handle the majority of structure fires that will probably occur in town. Even at 50% involvement of the 2,000 square foot dwelling there would be enough water to operate for about twelve minutes, enough time to knock the bulk of the fire down while awaiting the arrival of mutual aid resources, providing the water is applied properly.

Complicating the water supply issue even further is the limited number of paved roads in the town, other than Route 149. Many of the other roads are unpaved, Class 6. Responding from a considerable distance away, on these types of marginally improved roads, and over rough terrain, will slow the arrival of mutual aid tenders/tankers on the fire scene.

Overall the fire department does not have any reliable water sources within the town limits. There are some static water supply sources located throughout the town, but they are limited in number, and consist solely of a handful of dry hydrants and/or standpipes. They were previously maintained by the fire department on an annual basis, but this important task has not been performed in a number of years, so the current serviceability of these devices is questionable. The lack of an effective, current, preventative maintenance program is reported to be a budgetary issue. These dry hydrants are going to be most effective primarily for fires that are located within a reasonably close proximity to them. Using them as a fill point for tender operations is definitely a sound tactical option; however, it will take time to establish this type of water supply relay. It would be a false sense of security to suggest that they will serve to cover the town as its only fire suppression water source.

There are a few potential drafting sites located throughout the town, including at the lake. However, these sites are all on private property and in most cases have no direct public access that the fire department can utilize. The only possibility is at the boat launch area. There are also a few fire ponds on private property (farms) scattered around Deering. All of these draft sites are unreliable: often frozen in winter, muddy in spring, and possibly dry in summer, with accessibility possibly problematic year round. In addition, they all require long hose line lays to get to roadways where tanker relays could be established.

The Deering Fire and Rescue Department does not have a comprehensive listing or any map that identifies the location of these fill sites. There are also locations in adjacent towns, including some with municipal water systems with hydrants that could be used for refilling

tenders, which would be reasonable for Deering to use and should be included on any list and/or map developed.

As previously mentioned, the Deering Fire and Rescue Department has one water tanker/tender that carries 1750 gallons of water; however, it is assigned to the McCallister station on the west side of town, which is not centrally located. One of the department's engines also carries only 450 gallons of water which is smaller than standard even for an urban community with a municipal water supply system. As a result of the sum total of all of these facts, the Deering Fire and Rescue Department must rely on tanker relays and mutual aid for any significant and sustained water supply needs.

The CAMAFC has established a mutual aid water supply response system for the region. The State of New Hampshire also has a tanker task force plan that can supply additional tankers from out of the capital region if necessary. Although there are no facilities in Deering that would normally require that quantity of water to suppress a fire, this type of response might be required if another fire in the region was simultaneously occurring and using the regional tankers.

New Hampshire's RSA's 674.36 prohibits communities from mandating automatic fire sprinklers in homes. The state law restricts a planning board from requiring or adopting any regulation that requires the installation of a fire suppression sprinkler system in proposed one- or two-family residences as a condition of approval for a local permit. The law also prevents municipalities or local land-use boards from adopting any ordinance, regulation, code, or administrative practice requiring the installation of automatic fire suppression sprinklers in any new or existing, detached one- or two-family dwelling unit in a structure used only for residential purposes.

Though the law prohibits the town from requiring these systems, the fire department can approach the developer/builder/owner to discuss the pros and cons of residential sprinkler systems during the approval process for subdivisions and large single family residences, and encourage them to consider the installation of these life safety systems. There are a number of publications the fire department can use as resources to market the benefits of residential fire suppression systems including publications from NFPA, which has developed the standards for their design and installation.

As an alternative to fire sprinkler systems, several New England communities that are similar in nature to Deering have adopted bylaws applicable to any new subdivision being built with three or more houses, that a water supply cistern to hold water necessary for fire suppression operations be installed in the development. In some cases individual homes that exceed a certain size, perhaps 3,000 square feet, would be required to comply with the bylaw requirements as well. The requirements for these systems are detailed in several NFPA standards. This is an important fire and life safety initiative for a rural community.

Although Deering is almost entirely residential, there are a few other occupancies in town that would be cause for concern, from a water supply standpoint, should a fire occur in them. The Robin Hill Farm is a treatment facility for non-violent adults with brain injuries, some of whom may need assistance to evacuate in a fire situation. This facility is addressed in additional detail in Chapter 7, *Training and Fire Prevention*. However, other than the water supply system for normal domestic consumption and to supply the sprinkler system, there is no on-site water storage. This would be a site that should be a priority for the installation of one or more water cisterns that can supply water necessary to combat a fire.

There are also several summer camps for children located within the town. One of these facilities hosts between 500 and 1,000 campers each week throughout the summer. With a number of dormitories and other assembly spaces necessary to accommodate this many individuals, this is another location where the installation of on-site water cisterns and/or dry hydrants/standpipes should be a priority.

The facilities identified above, as well as other locations located throughout the community, may provide the town and the fire department an outstanding opportunity to enter into strategic public/private partnerships to not only improve fire protection at selected sites, but also to provide for the greater good of the community as a whole. If the Deering Fire and Rescue Department developed a compelling public safety education program, property owners might allow the installation of and access to cisterns on their property that can be utilized for fire suppression water supply. With a thorough knowledge and understanding of how it would benefit them and their neighbors, a property owner is more likely to assist in this public safety initiative. As an additional incentive, the town might consider a property tax abatement for the installation of cisterns on private property.

Figure 6.5 Fire Dept. Connection to underground water cistern for fire protection

Figure 6.6: Pump house and fire department connections to access water in a below ground cistern stored for firefighting use in a planned subdivision in Berlin, MA.

RECOMMENDATIONS

6.1 The MRI study team recommends the Town of Deering strongly consider adopting a municipal regulation requiring the installation of a fire water supply cistern in any new development consisting of three or more homes or for any individual home of larger than a designated square footage.

6.2 The MRI study team recommends the Town of Deering develop a plan to strategically install large (30,000-gallon minimum) underground cisterns on public properties throughout the community, including the fire stations and possibly town hall, public works, etc. The funding to install these cisterns would be included in the town's capital improvement plan. The cost for these cisterns will vary based upon construction costs and to what extent the town's public works department can assist in their installation.

6.3 The MRI study team recommends the town consider entering into public/private partnerships with private property owners to facilitate the installation of cisterns on private properties in various locations throughout Deering. As an additional incentive, the town might consider a property tax abatement for the installation of cisterns on private property. Priority installations sites should include, but are not necessarily limited to, the Robin Hill Farm and the large summer camp.

6.4 The MRI study team recommends the Deering Fire and Rescue Department develop a compelling public education program that explains the significant benefits to residents and property owners of installing cisterns for the storage of fire suppression system water supplies on various properties throughout the town.

6.5 The MRI study team recommends the Deering Fire and Rescue Department develop a compelling public education program that includes discussing the benefits of installing residential fire sprinklers in new one- and two-family homes. Though New Hampshire's RSAs do not allow residential fire sprinkler systems to be mandated, there is no prohibition for property owners to install them if they determine that it is in their best interest.

6.6 The MRI study team recommends the Town of Deering immediately provide priority funding for the fire department and/or public works department to inspect, perform preventative maintenance, and repairs as necessary, to the existing dry hydrants/standpipes located throughout town to ensure they are fully operational should they be needed for a fire.

6.7 The MRI study team recommends the Town of Deering and the Deering Fire and Rescue Department make it a priority to identify additional suitable locations for dry hydrants or standpipes throughout the town, and in conjunction with the public works department, or through the formation of public/private partnerships, install as many of them as possible each year based on the highest risk areas and/or year round accessibility and usability.

6.8 The MRI study team recommends the Deering Fire and Rescue Department, in conjunction with its neighboring fire departments, identify locations within these communities that may be appropriate fill sites for tenders supplying water for fire incidents in certain areas of Deering. These locations can include dry hydrants/standpipes, clear drafting locations, cisterns, and even municipal fire hydrants. Compatibility with threads on connections must be determined, and if necessary, appropriate adapters obtained.

6.9 The MRI study team recommends the Deering Fire and Rescue Department develop a comprehensive list AND a map that shows the location of ALL potential water supply fill sites throughout the town and also, within reason, surrounding communities. This should include all dry hydrants/standpipes, drafting locations, cisterns, fire hydrants, and any other useable sources of water. The list should include pertinent information regarding each location and should be reviewed at least annually and updated as necessary.

6.10 The MRI study team recommends all water supply sites such as dry hydrants/standpipes, drafting locations, and cisterns should be inspected at least two times per year to ensure they are still functional as designed and installed. Any repairs needed should be completed on a priority basis.

6.11 The MRI study team recommends the Deering Fire and Rescue Department review the New Hampshire Fire Mobilization Plan and coordinate a water supply drill through the Capital Area Mutual Aid Fire Compact that would utilize the regional fire tanker/tender task force. The goal of the drill is to document that the fire department can provide 250 gallons per minute (gpm) through tanker shuttle, large-diameter hose relay, or other alternative water supply system. The water must be available within five minutes of the arrival of the first-due apparatus, and the department must maintain the flow, without interruption, for a minimum of twenty minutes. Another more challenging goal would be to maintain the flow for a full two-hour duration.

6.12 The MRI study team recommends that once the drill recommended in 6.10 has been successfully completed and documented, and some other key recommendations implemented, the Town of Deering consider requesting that ISO conduct an updated evaluation of the town and its fire department, for the purpose of seeking a lower Class 8B or better rating, depending upon the length of time the water supply was maintained for. This could possibly result in lowered insurance premiums for certain residents.

6.13 The MRI study team recommends that upon report of any structure fire or possible structure fire, such as smoke in a building or dwelling, that at least two additional tankers/tenders be immediately dispatched on the initial assignment through automatic aid. This procedure will ensure that additional water is immediately en route to the scene should it be needed, reducing possible delays in establishing a sustained water supply operation. Once a working fire is confirmed, additional tankers/tenders should be dispatched.

CHAPTER 7

TRAINING AND FIRE PREVENTION

OVERVIEW

Training and fire prevention are, without question, two of the three most important functions that a fire department should be performing on a regular basis; the other being a response to emergency incidents. One could even make a credible argument that training is, in some ways, more important than emergency responses because a department that is not well trained, prepared, and operationally ready will be unable to effectively, efficiently, correctly, and safely, fulfill its emergency response obligations and mission. A comprehensive, diverse, and on-going training program is absolutely critical to the fire department's level of success. Firefighting is a team-based activity and training provides the foundation to build a well-coordinated emergency response team.

An effective fire department training program must cover all of the essential elements of each department's specific core missions and responsibilities, in this case, Deering's. The program must include an appropriate combination of technical/classroom training and manipulative or hands-on/practical evolutions. Most of the training, but particularly the practical, standardized, hands-on training evolutions, should be developed based upon the Deering Fire and Rescue Department's own operational procedures, while remaining highly cognizant of nationally and widely accepted practices and standards that could be used as a benchmark to judge the department's operations for any number of reasons. Failure to use modern, up-to-date, currently accepted, firefighting practices was a significant conclusion in the many investigations that were conducted after the Charleston, South Carolina, Super Sofa Store fire in June 2007 that resulted in the deaths of nine firefighters. As with all other fire department operations, there must be consistency in how the training is being conducted.

Certain Occupational Safety and Health Administration (OSHA) regulations dictate that minimum training must be completed on an annual basis, covering various topics including:

- a review of the respiratory protection standard, self-contained breathing apparatus (SCBA) refresher and user competency training, SCBA fit testing (29 CFR 1910.134)
- Blood borne Pathogens Training (29 CFR 1910.1030)
- Hazardous Materials Training (29 CFR 1910.120)
- Confined Space Training (29 CFR 1910.146)

- Structural Firefighting Training (29 CFR 1910.156)

In addition, National Fire Protection Association (NFPA) standards contain recommendations for training on various topics such as a requirement for a minimum of twenty-four hours of structural firefighting training annually for each fire department member.

From the important fire prevention perspective, a comprehensive fire protection system should include, at a minimum, the key functions of fire prevention, code enforcement, inspections, and public education. Preventing fires before they occur and limiting the impact of those that do should be priority missions of every fire department. Educating the public about fire safety and teaching them appropriate behaviors on how to react should they be confronted with a fire is also an important life safety responsibility of the fire department. Fire prevention is a key responsibility of every member of the fire department, and fire prevention activities should include all personnel.

Since fire prevention should truly be approached in a systematic manner and various community stakeholders have a vested interest and/or responsibility in this endeavor, activities such as plan reviews, permits, and inspections, should be coordinated with similar activities in the town building inspection and planning departments. Inspection and code enforcement procedures and policies must conform to applicable state and local statutes, ordinances, codes, and regulations.

OBSERVATIONS

At the time of this assessment, the Deering Fire and Rescue Department has a total of twenty-two active members based on a 2014 response log provided to the MRI study team by the department. This is a slightly different figure than the last two annuals reports which list twenty-one personnel. According to information that we received from the department, thirteen of these personnel (59.1%) are certified firefighters. Of these, a total of four are certified at the Firefighter I level, including one who completed training in 2014, while an additional nine have achieved Firefighter Level II certification. Twelve of the certifications were earned through the New Hampshire Fire Academy. One member who possesses Firefighter II earned their certification through the Department of Defense. The department's annual reports for both 2013 and 2014, on the other hand, contain identical language stating that seventeen of twenty-one members (81%) have earned firefighting certifications. The reasons for the discrepancy in numbers could not be ascertained. However, the possibility that less than 60% of the department being certified to at least the Firefighter I level is an area of major concern, and could present the town with increased liability.

The department also reports that a number of personnel have earned various emergency medical certifications. These include one first responder, nine EMTs, one intermediate EMT,

and one paramedic. Three members were reported to have earned their basic EMT certification in 2014. One additional intermediate EMT left the department during the previous year.

For new members, completion of Firefighter I or Emergency Medical Technician (EMT) training is required prior to completion of their one-year probationary period. The study team was unable to ascertain if this requirement is consistently adhered to or not. Members who are not certified to at least the Firefighter I level are limited in the activities they can perform on the emergency scene.

With regard to the above information, and for the remainder of this chapter, like every other aspect of this report accurate and up-to-date information was difficult to obtain and verify, and in many cases was conflicting based upon the source. Complicating matters even more is the fact that in many cases documentation was lacking or even non-existent.

As is the common practice with many call and volunteer fire departments, the Deering Fire and Rescue Department holds a once monthly training or drill night for members. These once per month training sessions are occasionally supplemented by an additional training night or two, or a weekend drill. Training is normally conducted by the training supervisor and training officer. However, only one member of the department is certified as a fire instructor so even though both of these personnel possess a training designation, they both are not certified. None of the department's officers have any level of fire officer certification.

It appears that the training often covers the same topics from year to year, including pumps, equipment familiarity and care, driver training, building preplanning, and vehicle extrication. Other topics that were mentioned as having been covered include water supply, rural hitch operations, and training on new equipment, such as a thermal imaging camera (TIC). There is no mention made of any basic firefighter skills training, or training that is recommended by NFPA standards and required by OSHA regulations. The department also does not have any formal building pre-plans despite listing this as training that is conducted annually.

Mandatory, annual training required by various standards and regulations such as CPR refresher, blood borne pathogens training, and personal protective equipment use were reported to be completed annually. However, training reports to confirm this do not exist.

Driver training is conducted by members of the department, although the instructors are not certified to present this type of training. Commercial Driver's License (CDL) and emergency vehicle operator training (EVOT) are both recommended, but not required.

No lesson plans or training outlines are utilized to conduct the training, and there are no skill evaluations of any type conducted. Training reports consist of little more than attendance records that are submitted for payment to personnel who attended. The department does not maintain training files at the department level; records are maintained in the town hall.

Training records consist of little more than copies of reports and certificates from the New Hampshire Fire Academy. Although attendance at monthly training sessions is reported to be mandatory, enforcement of this requirement is sporadic at best, with the decision on whether to discipline personnel for not attending left solely to the discretion of the fire chief.

A number of members of the department have completed additional training courses primarily at the New Hampshire Fire Academy. All members were reported to be up-to-date on their certifications, although this could not be verified since training records were not available for inspection.

EMS training appears to be more diversified and provides more back to basics types of topics. These include pediatric emergencies, handling bariatric patients, patient handling techniques, airway management, patient assessment, scene preservation, and hazardous materials response. EMS personnel also completed training on the updated New Hampshire Bureau of EMS State Protocols. Three personnel also earned their EMT certification.

In 2013, Deering's insurance carrier, PRIMEX, conducted an assessment of various departments and operations, and made a series of recommendations for improving operations and reducing the town's liability exposure and risk. A number of these recommendations focused on the fire department, and specifically on training that always provides at least a partial shield of immunity from liability. However, apparently few, if any, of the recommendations for the fire department have been addressed or implemented. A number of the MRI recommendations in this section will be similar to those made by PRIMEX.

Fire Prevention

Deering is a primarily rural town, and, as is our usual experience in these types of communities, it is almost totally residential and has little in the way of commercial occupancies and/or businesses. At the time of this assessment, there were just a few commercial type occupancies located within the town limits, including a residential acute care treatment facility for patients with traumatic brain injuries, and a large seasonal camp for school age children. There are also several other summer camps, a few churches, a Grange Hall, and a handful of other businesses.

There is no formal fire prevention inspection program by the fire department, although some inspections may get performed by the town's part-time building inspector, who is certified to perform fire inspections. Fire prevention and life safety inspections of the more significant life hazard facilities and other public buildings, are handled by the fire chief or their designee.

The Robin Hill Farm is a treatment facility for non-violent adults with brain injuries. It consists of two buildings in a farm like setting. One of the buildings is equipped with an automatic fire suppression sprinkler system while the other is not. While the MRI team did not conduct an inspection, it appears to meet all state code requirements for such a facility. However, there is

no formal pre-fire plan. This facility should be a priority location for the installation of water storage cisterns for firefighting purposes.

The other major life hazard is the summer camp which has between 500 and 1,000 weekly campers. The dormitories in this facility are not equipped with automatic sprinklers, and there is no on-site water supply other than the lake. There is no pre-fire plan available for this facility. A facility such as this (and the other summer camps) also provides the department with an opportunity to present public fire education programs that could have widespread positive impact.

The Deering Fire and Rescue Department does not have any type of pre-fire/incident planning program. The purpose of a fire pre-planning program is to allow firefighters to become familiar with buildings and/or facilities within their response area prior to an emergency, alert them to on-site hazards and risks, and develop a detailed fire response plan for them that includes specific tactics that will be required to mitigate fires or other emergencies. Information collected for pre-fire/incident plans includes, but is certainly not limited to, data such as:

- the occupancy type
- floor plans/layouts
- building construction type and features
- fire protection systems (sprinkler system, standpipe systems, etc.)
- utility locations
- hazards to firefighters and/or firefighting operations
- special conditions in the building
- apparatus placement plan
- fire flow requirements and/or water supply plan
- forcible entry and ventilation plan

The information contained in pre-fire/incident plans allows firefighters and officers to have a familiarity with the building/facility, its features, characteristics, operations, and hazards, thus enabling them to more effectively, efficiently, and safely, conduct firefighting and other emergency operations. Pre-fire/incident plans should be reviewed regularly and tested by

periodic table-top exercises and on-site drills. As a community which is rural in nature and lacks a municipal water supply system, developing a comprehensive list of water source locations from where water can be obtained for firefighting operations throughout the town should be a priority of any pre-fire planning program initiated by the Deering Fire and Rescue Department.

Public fire education is conducted through a yearly activity in the community, mostly geared toward children. This consists of one fire department-sponsored public safety day a year. The 2015 event was held in early September, and it was reported to the MRI team that it was poorly attended by citizens. Generally, the department displays their apparatus and equipment and talks about what the department does. The department previously sponsored open houses, but often had no one at all attended, so they were discontinued. Occasionally, a scout troop will request a station visit or presentation. In the past, the Deering Fire and Rescue Department would go to the school in Hillsborough where Deering students attend and do a joint public education visit with Hillsborough Fire. However, they no longer engage in this joint endeavor.

Beyond that, there is no defined program. The department does not have fire safety posters to distribute in public locations and does not have signs outside of stations reminding residents of basic fire safety tips, such as the use of smoke detectors. The Deering Fire and Rescue Department does not have a formal procedure in place regarding the investigation of fires. Generally, the incident commander and or department command staff perform initial cause and origin fire investigations. The New Hampshire Fire Marshal's Office is requested if the cause cannot be determined, is a suspected incendiary fire, or the fire resulted in a fatality, structural collapse, or carbon monoxide (CO) incidents.

As a rural community, there is heavy demand by residents for burning permits. However, the heavily forested nature of the community creates a significant potential hazard and a compelling corresponding need that all burning be done safely, and in accordance with appropriate regulations. A number of the Deering Fire and Rescue Department officers concurrently serve as forest fire wardens who issue permits to residents and ensure that any burning that occurs is conducted safely. The wardens are not compensated for this duty. Members of the fire department staff the fire stations in the mornings each year during the month of May to allow residents to apply for and/or renew their annual burning permits. At the time of this assessment, the town and department did not charge any fee for issuing the annual burning permits.

RECOMMENDATIONS

7.1 The MRI study team recommends the Deering Fire and Rescue Department conduct a formal training needs assessment for the purpose of determining training program priorities. Part of this needs assessment should be an initial evaluation of the current basic skills proficiency of ALL department personnel.

7.2 The MRI study team recommends that based on the results of the needs assessment, the Deering Fire and Rescue Department should begin the development of a comprehensive training program that addresses, but is not limited to, mandatory OSHA training, recommended NFPA training, and every operational mission and responsibility of the department. The training should comply with accepted and/or recommended practices and standards, should include standardized evolutions, and should be consistent with Deering Fire and Rescue Department operations and procedures. This type of training program was previously recommended in the PRIMEX report. Self-contained breathing apparatus proficiency should be stressed, as should preparedness for low-frequency, high-risk emergencies.

Examples of topics for training include, but are certainly not limited to:

- Mandatory training
  - ✓ Blood borne pathogens
  - ✓ SCBA fit testing and refresher training
  - ✓ Sexual harassment
- Basic fire training
  - ✓ Basic engine company operations
  - ✓ Water supply operations
  - ✓ Hazardous materials operations
  - ✓ Confined space awareness
  - ✓ Firefighter safety operations
  - ✓ Rapid intervention team/down firefighter training
  - ✓ Water rescue
  - ✓ Vehicle extrication
  - ✓ Lock out/tag out procedures
- Administrative and rule training
  - ✓ Deering Fire and Rescue Department SOGs

7.3 The MRI study team recommends formal training of some type, lasting a minimum of two hours, occur at least monthly and when possible, a weekly training subject be suggested by the department using electronic sources. Additional opportunities for training can be found during related activities such as weekly/monthly apparatus and equipment inspections and building pre-planning activities.

7.4 The MRI study team recommends additional, high-intensity training on various subjects, including periodic live fire training, be conducted on a quarterly or semi-annual basis, at a formal fire academy where appropriate training facilities, structures, and props are available. This training could be conducted as a regional endeavor with other neighboring fire departments to give personnel who may normally respond to incidents together the opportunity to train together beforehand.

7.5 The MRI study team recommends that to the extent possible, training be delivered and/or conducted utilizing formal, standardized lesson plans that include objectives and performance criterion. However, when this is not possible or practical (a frequent occurrence in the fire service), a detailed description of the training should be included in the narrative section of the training report.

7.6 The MRI study team recommends that all training that is conducted, no matter how brief or inconsequential it may seem, MUST result in the completion of a formal training report. Training reports should include the date, the time training commenced, the time duration of the training, the instructor, the officer in charge, the names of all personnel trained, and include a detailed description of the training, or reference the formal lesson plan utilized. All persons trained should sign or initial either a printed hard copy of the training report, or if this is not practical, a sign in sheet should be attached. The officer in charge, and when possible, the instructor, should also sign the hard copy training report. A formal operational procedure on the completion of training reports should be developed. The training module of whatever management software program the department selects should be utilized for completion of training reports, and to assist with the development of a training database, keeping track of certifications and related lapse dates, etc.

7.7 The MRI study team recommends the Deering Fire and Rescue Department develop a separate training file for each member that can provide a supplement to the member's main personnel file. The training file should, at a minimum, include all course completion certificates, professional certifications, skills performance evaluation sheets and reports, and an annual summary of completed training.

7.8 The MRI study team recommends that as part of the development of a new comprehensive training program, the department should implement periodic basic skills proficiency evaluations for ALL personnel. These proficiency evaluations, consisting of standardized evolutions, can be based on recognized standards and benchmarks, in conjunction with performance criterion and benchmarks, established through evaluation of, and based upon, Deering Fire and Rescue Department operations and procedures.

7.9 The MRI study team recommends that in order to assist with the large amount of training that needs to be done, and in recognition of their important role in the delivery of training and the success of the program, the Deering Fire and Rescue Department should provide fire instructor training for any members of the department who wish to take it. All officers should be formally certified at Fire Instructor Level I.

7.10 The MRI study team recommends the Deering Fire and Rescue Department encourage personnel to seek additional training on their own, and to the financial and practical extent possible, send personnel to outside training opportunities such as the Firehouse Expo in Baltimore, and the Fire Department Instructors Conference in Indianapolis. Information gained from this training can then be brought back and delivered to other members of the department. Training reports should be completed for all training, and copies of any certificates earned should be placed in the member's personnel and training files. A training board should be placed in each station where upcoming training opportunities can be posted for all personnel to review. These opportunities should also be posted on the department's website and could be e-mailed to every member once addresses are established.

7.11 The MRI study team recommends that fire prevention should be promoted as a key component of the vision of the Deering Fire and Rescue Department and should be a major aspect of its primary mission. Aggressive fire prevention programs are the most efficient and cost-effective way to reduce fire risks, fire loss, and fire deaths and injuries in the community. To the extent practical, every member of the department should have a responsibility for fire prevention.

7.12 The MRI study team recommends the Deering Fire and Rescue Department ensure that periodic inspections (at least annually with semi-annual or quarterly preferred) are conducted on the several major life hazard occupancies located within the town to maintain familiarity and up-to-date fire code compliance.

7.13 The MRI study team recommends that the Deering Fire and Rescue Department make it a priority to update its pages on the town's website on a regular basis to provide its customers, and other interested parties, as much information as possible on fire safety, fire prevention, and the department as a whole. This should be a priority for the next chief.

7.14 The MRI study team recommends the Deering Fire and Rescue Department consider the use of social media to spread the fire safety message and possibly recruit new, younger members to the department.

7.15 The MRI study team recommends the Deering Fire and Rescue Department adopt a year-round public fire safety education program throughout the community, including in

the summer camps in town as frequently as possible during their season. A program of this type could provide wide-ranging positive benefits not only to Deering, but to wherever the campers call home. Ready to use programs are available from the United States Fire Administration, Federal Emergency Management Agency, and the National Fire Protection Association. Funding for these initiatives may also be available through the Fire Prevention and Safety grant program of the Assistance to Firefighters grants. The town is encouraged to apply for these grants on an annual basis. Other sources of grant funding, both public and private, may be available.

7.16 The MRI study team recommends the Deering Fire and Rescue Department reimplement the joint public education programs with the Hillsborough Fire Department at the school in Hillsborough which Deering students attend.

7.17 The MRI study team recommends the Deering Fire and Rescue Department consider some door-to-door campaigns in the community. These campaigns can be multi-faceted to deliver fire prevention information, check on smoke detectors and provide free ones if needed, and possibly recruit new members into the department.

7.18 The MRI study team recommends the Deering Fire and Rescue Department establish a formal pre-incident planning program. The purpose of a pre-incident planning program is to develop a fire/emergency response plan for buildings in the town. A pre-fire/incident plan includes data such as the occupancy type, floor plans, construction type, hazards to firefighting, special conditions in the building, apparatus placement plan, water supply plan, forcible entry plan, and ventilation plan. Pre-planning will improve the firefighter knowledge of the specific tactics needed to handle a fire or other emergency at a facility and will alert them to on-site hazards and risks. Pre-fire/incident plans should be reviewed regularly and tested by periodic table-top exercises and on-site drills. In addition, the department should develop a plan to make pre-fire/incident plans accessible on mobile data terminals (notebook/laptop computers) on fire apparatus for use en route to an incident and while on-scene.

CHAPTER 8

COMMUNICATIONS, DISPATCH, AND USE OF TECHNOLOGY

OVERVIEW

An efficient communications system is central to the full spectrum of services delivered by the fire department and rescue squad. Encompassed within the communications system are internal and external (inter-agency and public) elements. To be effective and reliable, all emergency services communications must be operational twenty-four hours per day, seven days per week. Redundancy must be built into the system so that the failure of one or more components will not compromise emergency operations. There must be interoperability between systems to ensure that the emergency services organizations can communicate with federal, state, regional, mutual aid, and other local agencies, during a major incident or a catastrophic event. Numerous national standards and agencies are available for referencing acceptable criteria for critical system components. Fire departments and rescue squads are increasingly dependent upon modern technology for communications, information management, incident command fire inspections, pre-fire planning, records management, third party insurance billing, patient care records, and operational effectiveness.

OBSERVATIONS

The MRI study team was informed that radio coverage and communications are fairly good in all sections of town. This is due primarily to the fact that the repeater site is located in town. This is an important component of the emergency communications system and a vital safety link for all of the town's emergency services. However, we also have concerns that there is a lack of redundancy in the system. With the town's remote location, and the fact that there is a mountain in the middle of it, should this single repeater be knocked offline for any reason, emergency communications in town may be significantly and adversely impacted, creating safety hazards to all responders.

The Deering Fire and Rescue Department utilizes Kenwood brand portable radios for emergency scene communications between personnel. These radios were purchased through a federal grant that was administered by the New Hampshire Department of Safety in order to provide interoperability for first responders throughout the state. The current radios are reported to be approximately six years old, so while still serviceable, have probably surpassed the midpoint of their expected service life. The MRI study team did observe that there are not enough portable radios to place one at each riding position on the apparatus, pair one with each SCBA, or best of all for each member of the department, to be issued their own unit. This is a significant life safety hazard as all firefighters that may enter an Immediately Dangerous to Life and Health (IDLH) atmosphere must have the ability to immediately and effectively communicate with their fellow crew member(s), or the outside supervisor in the event they

become trapped or injured. Everyone on the interior team(s) at a structure fire must have a portable radio. One portable radio per crew is not an acceptable or safe practice.

As noted previously, the department currently has just two thermal imaging cameras (TICs) for use between the three stations. Both are older, earlier generation units that are not as technologically advanced as new cameras. They are probably nearing the end of their useful service life.

The MRI study team did not see any evidence or receive any information that the fire department utilizes GIS technology for any aspect of their operations. The use of this rapidly expanding technology has tremendous potential in many areas of emergency services planning and operations. It is unclear to what extent GIS may be available to the Town of Deering. The fire department also does utilize mobile data terminals in their apparatus.

RECOMMENDATIONS

8.1 The MRI study team recommends each Deering fire station is supplied with a personal computer with appropriate software, including Firehouse software for data entry and collection purposes.

8.2 The MRI study team recommends the Fire Chief be supplied with a laptop computer with appropriate software, including Firehouse software and the capability to develop pre-fire plans.

8.3 The MRI study team recommends the Town of Deering give consideration to investing in the installation of a second repeater site so that there is redundancy in the communications system in the event of a primary location failure.

8.4 The MRI study team recommends the Deering Fire and Rescue Department provide a portable radio to each member of the department for use on emergency incidents. If this is not feasible, at the very minimum the department must ensure that every member wearing SCBA and entering an IDLH atmosphere is equipped with a portable radio. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

8.5 The MRI study team recommends the Town of Deering provide funding for the Deering Fire and Rescue Department to acquire two new thermal imaging cameras, allowing one to be deployed to each station and each major piece of apparatus, and one to be kept as a spare. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

8.6 The MRI study team recommends the Deering Fire and Rescue Department develop a plan to install mobile data terminals (MDTs) in all fire apparatus and rescue vehicles. At a minimum, the incident commander at a scene should have access to pre-fire plan data, building permit data (building plans and current data about renovation and construction projects), real-time weather data, and hazardous materials data. In conjunction with the recommendation for the installation of MDTs, the Deering Fire and Rescue Department should explore possible uses for GIS technology to enhance their operations.

8.7 The MRI study team recommends the Deering Fire and Rescue Department place an increased emphasis on evaluating new technology for use in emergency incidents, particularly when it pertains to firefighter/member safety or patient care.

CHAPTER 9

POLICIES, RULES AND REGULATIONS AND STANDARD OPERATING PROCEDURES

OVERVIEW

Fire departments are established through the governing body of each town or city in New Hampshire pursuant to New Hampshire RSA 154. Once established, the fire department is not only managed by the officers and command staff, but through the laws, regulations, standards, town policies, department rules, regulations, and standard operating guidelines. Through these documents, fire departments create efficiencies, increase their effectiveness, provide guidance for firefighter safety, and provide the public with a consistent level of service. Fire and EMS Standard Operating Guidelines (SOGs) are the primary connection between a department's organizational leadership, policy makers, planners, administration personnel, and the department members.

Well-developed SOGs employ a framework for the department by establishing a departmental processes, that includes formal functions and subjects enabling fire departments to drive member consistency, assist in the delivery of organizational and operational excellence, standardize behavior, avoid confusion, limit liability, improve efficiency, improve training, deliver public education, and enhance member and public safety.

Department rules, regulations, and SOGs are developed by the each department based on the types and levels of service that the department provides to the community. They do so in concert with local protocols, in conjunction with mutual aid agreements, consistent with town policy, and based on emergency services best practices. It is important that department rules are not in conflict with the laws, regulations, or town rules and policies.

Department rules and regulations provide guidance for department members for administrative activities, personnel matters, and general conduct for department members. Through these documents, the town and department communicate their expectations for department members. As members join the department and throughout their fire careers, these rules will be an important subject for training, certification, and promotion.

OBSERVATIONS

The MRI team reviewed the Deering Fire and Rescue Department Rules and Regulations and Standard Operating Guidelines, as well as the pertinent town

policies and rules. The SOGs are well-written, describing the purpose of the SOG, the scope or application, and the procedure or guidance. The SOGs were specific to certain incidents and personnel matters, as well as equipment. The MRI team felt that the SOGs should be reviewed and updated to be consistent with the actual practices that the department was doing. This concern is a common problem with most organizations.

The Deering Rules and Regulations are a thorough document that includes an overview of the organization, administrative procedures, hiring and termination, authorities and duties of its members (rank/position), equipment, and uniforms. It includes appendices with NH-RSA 154, all Deering fire SOGs, and EMS Protocols. It includes a signatory page for the Deering Board of Selectman and for the department member. The document was presented to the town for acceptance, and the board of selectman signed the document in January 2012.

As stated in the Town's Personnel Policy, revised in August 2012, it is the mission of the Town of Deering to effectively and efficiently meet the governing and service needs of the town, as determined and supported by its citizens, drawing upon the skills and talents of its employees and its citizen volunteers. The hiring policy in the manual supersedes and replaces any and all prior manuals, policies, procedures, and practices of the Town of Deering.

A personnel issue regarding the hiring and termination policy was brought to the attention of the MRI Team. A recent incident regarding the termination and possible reinstatement of a former department member has department members questioning the authority of the town and/or the department in this matter. Members of the department believe that NH-RSA 154 grants the fire chief sole authority to hire and terminate department employees. The MRI team contacted J. William Degnan, New Hampshire Fire Marshal, to seek his opinion. Marshal Degnan was clear in stating that RSA 154 (see Appendix B) grants each town the ability to determine how their fire department will be appointed and to what level the governing body will participate in that process. It is clear that on March 17, 2012, at a Town Meeting, the townspeople voted in the affirmative on Article 13 to adopt the provisions of RSA 154:1-I(a). As such, the board of selectman retained the authority to appoint the fire chief, but relinquished the authority to appoint firefighters, granting that authority to the fire chief.

154:1 Organization.

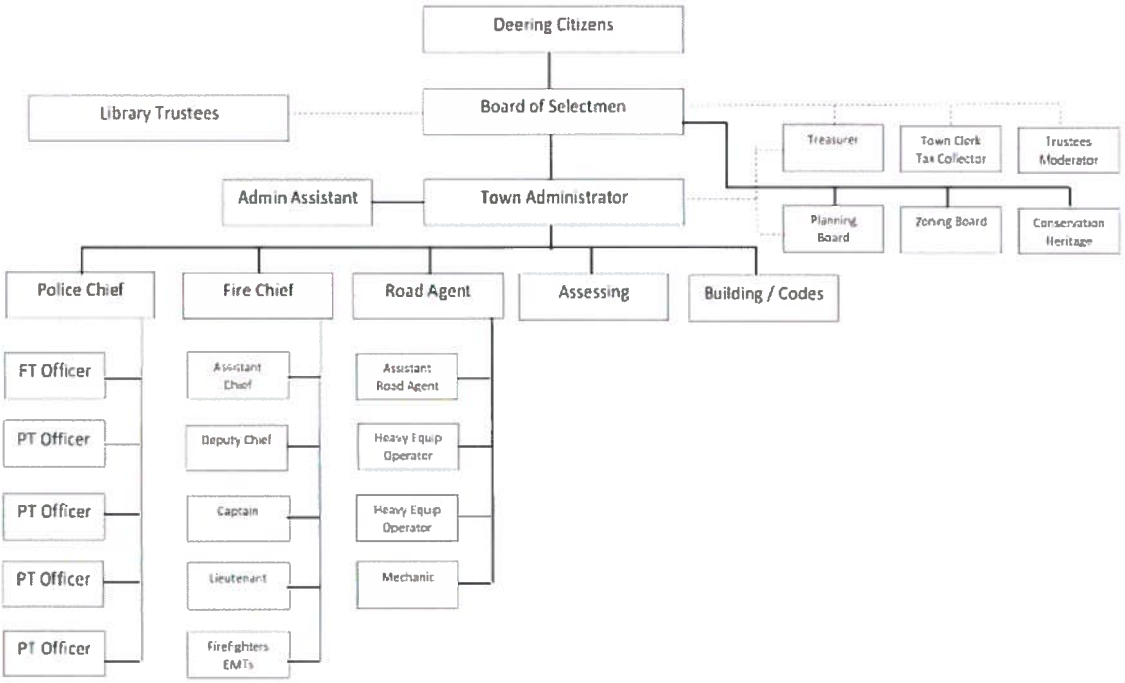
I. All town and city fire departments, and fire departments of village districts or precincts organized pursuant to RSA 52:1, I(a), shall be organized according to one of the following forms, chosen by vote of the local legislative body:

(a) A fire chief appointed by the local governing body, or by the town or city manager, if any, with firefighters appointed by the fire chief;)

At some point, the town did have fire wards that had this authority, but as those positions were left vacant, the town voted to disband the fire wards, and the board of selectman became the governing body for the fire department.

The Deering Fire and Rescue Department Organizational Chart supplied to the MRI Team by the fire department shows that the fire chief is reporting directly to the town administrator, which is in conflict with what the team was told by the town administrator.

Deering Organizational Chart



A review of town policies, interviews with selectman, the town administrator, and department members determined that all parties were in conflict with how the fire department is organized, who the appointing body for department members should be, and what changes needed to occur. Some members of the fire department expressed concern that if the selectman began authorizing and approving the hiring of department personnel, especially without consulting with the department chief,

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many of the current members would terminate their membership. The board of selectman felt that the fire department should have the same requirements as all other town departments, with the board of selectman having final hiring authority.

The MRI team reviewed all of the fire departments SOGs, but specifically evaluated the hiring Deering Fire and Rescue Department SOG # 66, *Procedures for Hiring Personnel*.

As per the SOG:

- *Applicants will receive Deering Fire and Rescue application.*
- *Applicants will be asked to provide completed application, motor vehicle records inquiry, and criminal background check when returning the application. Application is to include references.*
- *Upon receipt of application, at next possible meeting, the standing committee will review the application and either recommend applicant, choose to hold off for further review until references are checked, or deny application.*
- *If applicant is recommended to proceed, the standing committee will make contact with them for interview date and time.*
- *If applicant is not recommended or their references need to be checked, the standing committee will make contact with them to let them know the status of their application.*
- *If after the interview, the applicant is recommended to become a member of Deering Fire and Rescue, they will be contacted by the Captain of the station they will be assigned to.*
- *The applicant will undergo a pre-screen physical before beginning any activities with the department.*

This procedure does not reference any town policy or hiring procedure. Department policies and procedures should not be in conflict with, nor should they not consider the town policies and rules. As such, the hiring practice has established an inherent conflict between the two parties. It is difficult for a department to be recognized and funded by the town, but is not required to follow the same rules or policies as the other departments and other employees in the town.

Communications to Department Members: One of the issues that the MRI team found was that the department was not using electronic media for communicating basic information to department members. Further, the town or the town administrator was not able to easily establish communication with the department members or the department's chief officers. The process of using hard copies and mailboxes for departments can lead to missed or untimely communication.

During one of the MRI teams site visits, this became evident when the fire chief was notified that he received communications regarding a board request, it was placed into the fire department mailbox at town hall, and he never received it until he attended a board of selectman meeting. Based on his work schedule and this process, it was evident that this manner of communication was inefficient. The MRI team was told that most department information flowed to its members by "paper" delivery and mailboxes that were unsecured at each member's assigned station.

Today, the use of emails, electronic media formats, and personal computers are common and accepted methods for communications. Most departments use these methods to share information with members, assist dispatching to incidents, on-line training, and a number of other routine administrative functions. Fire department personnel stated that the department's computer hardware and software was outdated and unreliable. Thus, it relies on the department mailbox system to deliver basic information to its members. The fire chief is assigned the only laptop computer.

The Deering Fire and Rescue Department is inadequately using electronic methods for maintaining department records such as training, response data, and personnel. This is causing duplication of efforts, as well as decreasing accuracy. Up until 2012, department reports were posted on the department website. This has not been done in nearly three years.

Though the documents that were reviewed by the MRI team were found to be appropriate for the fire department, there were a number of documents that were incomplete, missing, or unattainable. We believe that with new computers, training, and establishing administrative requirements for record keeping, these issue will be addressed.

RECOMMENDATIONS

9.1 The MRI team recommends the board of selectman propose a warrant article at the next Town Meeting that will allow the town to reorganize the fire department pursuant to RSA 154:1 I(b) " A fire chief appointed by the local governing body, or by the town or city manager, if any, with firefighters

appointed by the local governing body or manager, upon recommendation of the fire chief;"

This process is allowed under RSA 154:1 IV so that "a town, city, village district or precinct may, by vote of the local legislative body, change the organization of its fire department from one form to another. For municipalities with a town meeting form of government, such a vote shall be taken under an article inserted by the selectmen or by petition in the warrant for the annual meeting, and the change in form shall not take effect until one year following such vote."

9.2 The MRI team recommends that a meeting between the board of selectman and the fire department occur. The meeting should be facilitated by a third party to allow all parties to express their opinions and concerns. Because of the uncertainty of the organization of the fire department and the conflict that has occurred, both parties need to work together for the common goal that they both have expressed to our team: "Provide a high level of professional fire, rescue and EMS services to the citizens of Deering."

9.3 The MRI team recommends the department review and update the current Standard Operating Guidelines (SOGs). The department Rules and Regulations stated that this should occur at least every three years. We recommend that a process is developed that on an annual basis 25% of the SOGs be reviewed, and updated or removed if necessary. Therefore, the task does not get out of hand and allows about twenty (20) SOGs per year to be completed.

9.4 The MRI Team recommends the department adopt an updated department SOG regarding hiring practices, and until such time that the department can be reorganized, authorizing the board of selectman to hire firefighters, that the department work with the town administrator to establish minimum hiring standards for new employees, including minimum education requirements, the ability to respond to emergencies, training, etc., driving history, and criminal background. All hiring standards should not be in conflict with federal or state laws, or in conflict with town policies.

9.5 MRI recommends developing a hiring practice that requires all applicants that meet the department's attendance, response, and training requirements be required to pass a criminal background check, driving record for all states that the person has lived in the past ten years, and drug screening test. Any costs associated with these should be paid by the applicant. If an applicant is hired, then the cost could be reimbursed to that person.

9.6 The MRI team recommends that the Department work with the Town to establish a communication method using electronic media (computers, social media, cell phones, pagers, etc.) to more efficiently and effectively communicate with its members.

9.7 The MRI team recommends the department update all computer hardware and software. The system should be used for personnel, equipment, and incident records. There are a number of software programs available that will meet the needs of the department. The software can be purchased and provided on computers at each fire station and allow each chief officer that are provided with a laptop to use the same software for record management, report writing, inspection records, training, etc. This will increase efficiency for those officers, as well as creating records and documents that will assist the department and town in establishing future plans including budget preparation.

9.8 The MRI team recommends the department update their website. A fire department's website is an opportunity to communicate with the public and provide information on fire and life safety, as well as information that people may need for obtaining permits, understanding fire codes, and general information about the department. Websites can be designed so that there are both public and private portals. Thus, the website can be used to dispense department information such as training, SOGs, scheduling, and general department information.

CHAPTER 10

OPTIONAL SERVICE DELIVERY

OVERVIEW

There is no legal obligation to provide fire and EMS services within a community. Each community must determine what level that they can afford and at what level of service the citizens and taxpayers expect. The MRI Team evaluated the current level of service and the costs associated with that service, and looked at some alternative options for the Town of Deering in order to provide fire and EMS services.

The first step in attempting to provide an adequate level of service to the community is to look inward. There are a number of areas that the MRI team believes the Deering Fire and Rescue Department can improve upon to become more effective and more efficient in increasing levels of service. Each section of this report includes a number of those recommendations.

OBSERVATIONS

The department leadership believed that if the pay was increased for members that responses by personnel, as well as moral, would increase. That has not been the fact. Though a pay structure was adopted during the past year, the department is still not able to respond to the calls that they had anticipated. Reasons for this have been discussed in other areas of this report. The MRI Team believes that the pay structure is fair and appropriate for the members and the duties they provide.

The Deering Fire Association is a not-for-profit organization that allows department members and non-members to raise funds for social activities and provide funds to donate to other organizations, including the Town of Deering and the Deering Fire Department. At the time of writing this report, it was reported to the MRI team that the Deering Fire Organization was in the process of re-establishing their 501-C tax status. When a member of the fire association donates their time or services to the organization for the purpose of maintaining facilities, providing public fire education, or other non-emergency responses or mandatory fire department meetings or training, they may do so without pay from the Town of Deering. A log for each member and a monthly report for the entire association for these incidents, including the date, hours served, and purpose should be maintained and included with the weekly payroll documents for each member. Thus, all hours, whether donated for service or those hours eligible for compensation, will be documented.

The MRI team feels strongly that there has been a lack of consistent management and leadership for the department in the past few years. This has placed a strain on the relationship with the board of selectman and the department. This has had an impact on the

moral for department members and frustrated the governing body. In order to have consistent leadership, coordination with the town administrator, and the other town departments, the MRI Team believes that having a permanent part-time fire chief should be a consideration for the town. Many communities throughout New Hampshire have been able to maintain a call fire department, but have determined that there was a need for a fire chief that is scheduled to work daily, during normal business hours. These fire chiefs are available to respond to emergency calls while on duty and can conduct fire code inspections, besides the administrative duties that are required to manage a professional fire department. Funds for this position could be funded through the current Deering Fire and Rescue Department budget, but might require additional funding.

SERVICE DELIVERY OPTIONS

Part-time Fire Chief

During the process of gathering information for this report, the MRI team became aware that the current situation with a call fire chief, who was working a full-time job outside of the community, was having a very difficult time gathering information and assisting with developing reports. That is not unusual with many call and volunteer fire departments. Further, many reports that should be maintained by a fire department are not being done by the Deering Fire and Rescue Department. If there was a fire chief working 20-30 hours, we believe many of these administrative projects would be completed.

Some New Hampshire fire departments have hired retired fire officers to fill these positions. There are limitations in weekly and annual hours that they can work, but most communities have been able to develop a flexible work schedule that meets their needs. These fire officers have the skills and abilities to provide a community with a fire chief that is on duty during the day, can respond with a department vehicle to provide initial scene size-up, patient assessment, initial medical support to a patient, basic fire suppression, or take command and establish an initial incident command system.

Per-diem and part-time firefighter/EMTS

In order to provide staffing during the daytime, many departments are utilizing per diem employees. These part-time firefighters/EMTs (consideration for FF/Paramedic) can be scheduled to work during the daytime hours when a department is unable to turn out a call force. These firefighters can perform routine station, apparatus, and equipment maintenance when not responding to emergency calls. The MRI team determined that fire hose and pumps have not been tested in some time. These are important to do annually and are the types of functions on duty, per-diem/part-time firefighters could do. Many departments that use per-diem/part-time firefighters also use them to provide fire inspections, public safety education, pre-planning information gathering, and additional administrative duties.

If this staffing model is considered, the per-diem positions should not replace a part-time fire chief if that option is considered, but would work in conjunction with the fire chief. Scheduling of the two positions could overlap in order to provide at least one person on duty

During an interview with the Hillsborough fire chief, he stated to the MRI Team that he is using both call and per-diem firefighters to fill positions. This staffing model allows the Hillsborough fire department to staff an apparatus and ambulance twenty-four hours a day.

Regional Fire and EMS

The coordination of resources and personnel, as well as potential savings to the community, are important reasons why towns such as Deering should consider regionalization and partnerships in delivering fire and EMS services. There are some downsides in developing regional fire and EMS departments. The loss of direct control for a community when it relinquishes those authorities to a regional quasi-governmental is one issue.

Often the costs associated with regional services are more expensive than the current costs for providing that service, especially when your department has minimal administrative costs. When communities partner to deliver a service, there can be concerns over costs for one community versus the services that they receive or perceive that they are getting. There are communities that have attempted regional partnerships, that have later determined that they are not receiving the services that they expected for the costs that they are paying, and have attempted to terminate the partnership.

While the creation of truly regional fire and EMS departments has rarely occurred in New England or the Northeast, in reality the concept has been in place for many years through the provision of mutual and/or automatic aid. While the two terms are essentially similar, there is also a significant difference. In fact, with the exception of the larger communities, almost all small to medium size municipalities rely on the assistance of their neighbors through either mutual or automatic aid to be able to successfully handle any incident of significance including in many cases the proverbial "bread and butter" single-family dwelling fire.

The use of these agreements allows communities to more closely meet various recommended standards, such as NFPA 1720, and industry best practices, as well as improving operational effectiveness, efficiency, and safety.

In a recent study conducted by MRI, a firefighter made the observation that "In practice we are already a regional fire department, the only thing we need to change to make it official is the patches on our uniforms and the names on our apparatus."

Partnering with another fire department

There are some departments that have developed informal partnerships where they share training officers, assist with testing and maintenance of equipment, and assist with each other's response. This would be coordinated with Concord Dispatch so that both on-call or volunteer fire departments would be toned out during the daytime hours. This would increase response personnel during those times of days that are difficult to fill.

Even though this type of partnership might not be formalized, it expands the personnel resources for each community. Another area that might be a possibility for partnering could be through partnering in a purchasing consortium in order to attempt to lower costs for similar equipment that the departments

Contract Services

Another possibility would have the town outsource emergency medical transport services. This could be done through a private ambulance service or through another local fire department.

The MRI team discussed this with the Hillsborough Fire Department to determine if there might be some interest. We believe that the Town of Hillsborough might be interested in entertaining a proposal, but cautioned that they are already at their maximum capability to provide those services to their community.

It should be assumed that this method will have a significant cost in order to ensure the level of service that the town expects. If Deering were to consider contracting for these services, they will need to draft an RFP and subsequent contract that explicitly describes the level of service that is requested, including response times, resource allocation, the level of certification of the staff, number of staff on duty 24/7, the equipment, ambulances, ownership, additional costs for equipment, fuel, facilities, storage, etc. Further, there were a number of concerns that were considered. It is extremely important to have a lengthy "out" clause to allow the town to find a new provider or return to the fire department based EMS service. There have been instances where communities have eliminated their fire department based EMS to use a private ambulance service who was willing to enter into a "$0" cost initial year contract, only to have them raise the cost in subsequent years with no alternative or options for the town.

Another problem that can happen with outsourcing is the continuity of service in that many private ambulance services rely on part-time employees and have a high rate of personnel turnover. This impacts the level of service to the community. It was apparent to the MRI Team that the Deering department has limitations in providing a consistent level of service twenty-four hours a day, seven days a week. This is based on reviewing responses in Deering and the use of mutual aid from surrounding departments.

RECOMMENDATIONS: The following recommendations should be considered as options for the Town of Deering to maintain and increase fire, rescue, and emergency medical services. The town might consider all or some of these recommendations, and they might do so in stages.

10.1 The MRI team recommends the Town of Deering appoint a part-time fire chief to work twenty-five to thirty hours a week, with a flexible work schedule. The fire chief should have the capability to respond to both fire and EMS incidents while on duty, as well as perform the necessary administrative duties, fire code inspections, and coordinate activities with both internal departments in Deering, as well as regional emergency services.

10.2 The MRI team recommends the Town of Deering consider hiring per-diem/part-time FF/paramedics during daytime hours. These employees would augment the on-call members of the Deering Fire and Rescue Department and possibly the part-time fire chief. Through flexible scheduling, this would allow the town to provide a basic level of service during those periods of time that they are currently having a difficult time responding fire and EMS personnel.

10.3 The MRI team recommends the Deering Fire and Rescue Department reach out and attempt to partner with other local departments to develop a regional response plan through expansion of automatic aid for specific areas of the town, especially during daytime hours. This would require Deering to take on added responsibility for some days during the week that they would be responsible for not only their own responses, but would take on additional responsibilities in neighboring towns. Those neighboring towns, if willing to partner with Deering, would then take on additional responsibilities in Deering during those other days of the week.

10.4 The MRI team recommends that Deering consider contracting for specific EMS services during daytime hours. These services could be provided through negotiations with other fire departments that abut Deering or possibly a private ambulance service.

CHAPTER 11

CONCLUSION

The Deering Fire and Rescue Department is similar to many rural call fire departments throughout this country. They are struggling to provide basic fire and EMS services. This is not because of a lack of desire from the current department members, the interim fire chief, or the community to provide a high level of service. The issues that have caused the level of service to decline in Deering are based on the ability of the department to recruit and retain members, the ability to have firefighters and EMTs respond consistently during the day, the requirements for training in order to maintain required certifications, the inability for a call fire chief to provide the management and administration expected by the community, and the willingness of the community to pay for the services they expect.

The MRI Team found a fire department that wants to provide a high level of service to the community and wants to work with the town to return to the days when the department was respected and appreciated. Discussions with department members and the MRI team lead us to believe that the Deering Fire and Rescue Department understands and recognizes their deficits. They are willing to work with the town and the board of selectman to achieve the needed changes. In order for any organization to move forward, they must know where they are, where they want to be, and develop a road map to get there.

The Deering Fire and Rescue, as well as the town, knows that they want to deliver a professional level of service. With this report, the town and the fire department will have a foundation to assist them in developing a plan of action. One of the issues that they will have to overcome, and one that the MRI team struggled with, is determining where they currently are. It was difficult to retrieve and analyze data regarding emergency responses, mutual aid, maintenance records, and department training records. In order for the fire department to move forward, record maintenance will have to become a priority.

There are a number of recommendations in this report that can be easily applied with minimal time, effort, and cost. There are others that will take time and should be included in the long-term plans for the town and the department. Together, the department leadership and the town should determine a reasonable timeline and plan for adopting the recommendations that have been proposed by the MRI study team. There will be challenges to achieving some of the recommendations, but these challenges are shared by many communities with similar issues that Deering is facing.

Again, it is MRI's hope and expectation that this report and many of its recommendations will be adopted and result in a much better functioning organization, providing better service to the community, and restoring public confidence in the fire department.

CHAPTER 12

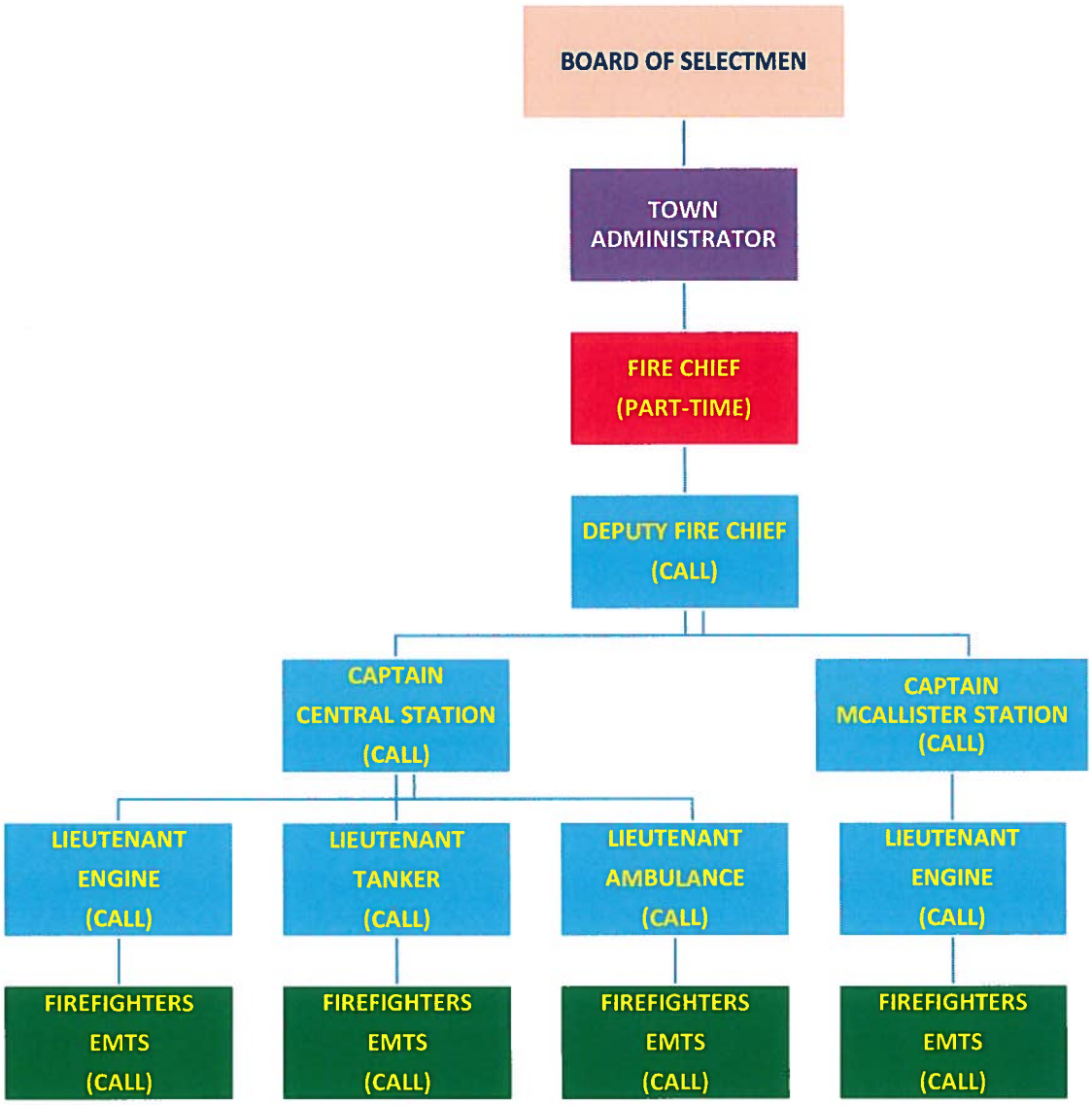
RECOMMENDATIONS

The following are a summary of all the recommendations that are included in each chapter of this report. There may be recommendations that are duplicated from one chapter into another chapter because the recommendation is pertinent to both subject matters.

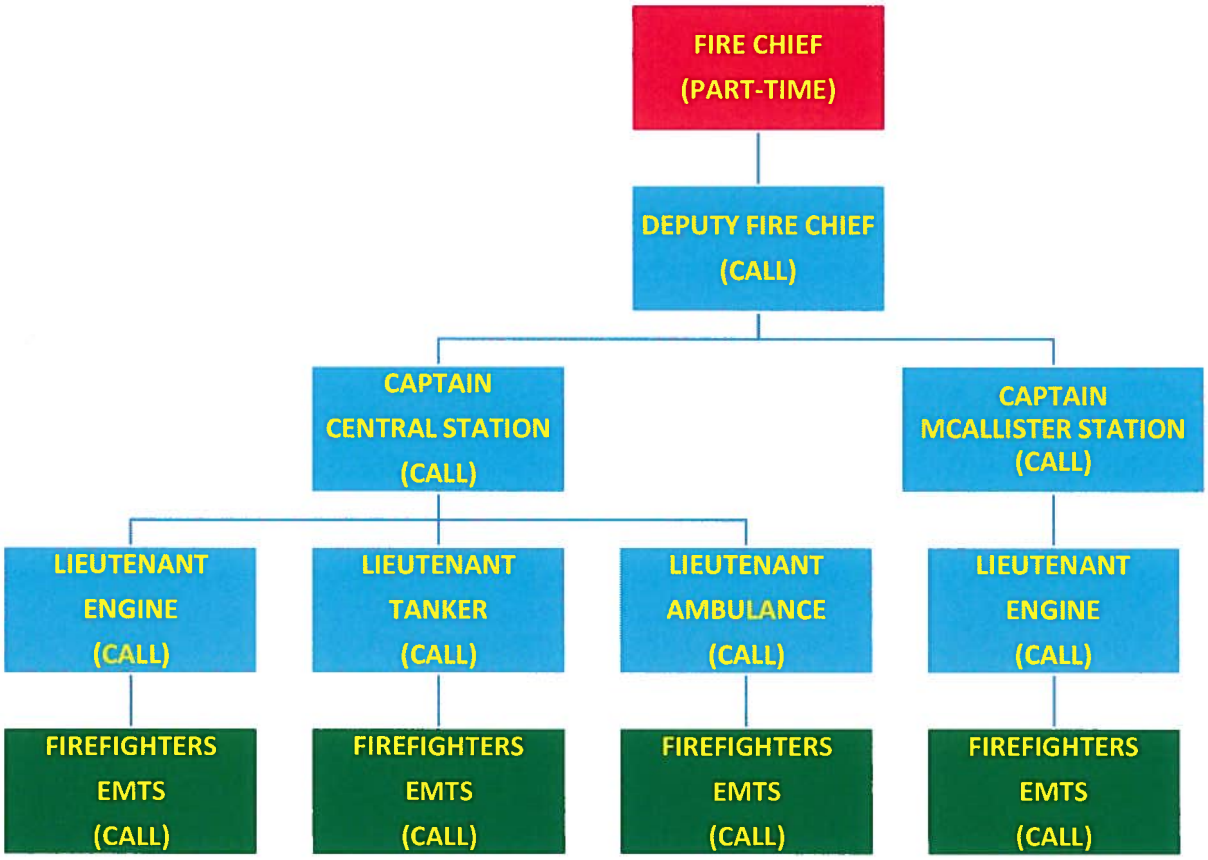
CHAPTER 3: FIRE AND EMS OPERATIONS

3.1 The MRI study team recommends that building upon our recommendations in Chapter 5, *Facilities, Apparatus and Equipment,* for a consolidation of facilities and rightsizing of its apparatus fleet, that the Town of Deering and Deering Fire and Rescue Department adopt the following revised organizational chart:

Municipal Resources



Municipal Resources



3.2 The MRI study team recommends that building upon our recommendations *in* Chapter 9, *Policies, Rules and Regulations, and Standard Operating Guidelines,* that the Town of Deering adopt the provision of New Hampshire RSA 154: 1-(I)b which will allow the board of selectman to not only appoint the fire chief, but would allow them to appoint any firefighters upon recommendation of the town administrator and the fire chief. This hiring practice would be consistent with all personnel policies adopted by the town.

3.3 The MRI study team recommends that the Deering Fire and Rescue Department should work with the CAMAFC dispatch to collaboratively develop consistent response time statistics to determine compliance with the provisions of NFPA 1720.

3.4 The MRI study team recommends that the Deering Fire and Rescue Department should establish a formal pre-incident planning program with the goal of having an up-to-date pre-plan for every business and commercial occupancy (including summer camp facilities). The purpose of a pre-incident planning program is to develop a fire/emergency response plan for buildings in the town. A pre-fire/incident plan includes data such as the occupancy type, floor plans, construction type, hazards to

firefighting, special conditions in the building, apparatus placement plan, water supply plan, forcible entry, and ventilation plan. Pre-planning will improve the firefighter's knowledge of the specific tactics needed to handle a fire or other emergency at a facility and will alert them to on-site hazards and risks. Pre-fire/incident plans should be reviewed regularly and tested by periodic table-top exercises and on-site drills.

3.5 The MRI study team recommends that when there is a report of a structure fire, or smoke in a structure, a full structural response should be automatically initiated. This would include the immediate and automatic response of several departments with additional water tenders/tankers.

3.6 The MRI study team recommends that, although more stringent than the requirements found in Table 4.3.2 of NFPA 1720 for rural communities, through the utilization of automatic mutual aid agreements with neighboring communities, the Deering Fire and Rescue Department should attempt to achieve a goal of having a minimum of 16 personnel on the scene of any reported structure fire, within 14 minutes or less.

3.7 The MRI study team recommends that the Deering Fire and Rescue Department should attempt to improve its initial unit on scene response times AND reduce the number of times that the department is unable to respond to emergency incidents, particularly EMS incidents requiring the ambulance.

3.8 The MRI study team recommends that the Deering Fire and Rescue Department establish a formal fireground/incident safety officer program. All department officers should receive safety officer training, obtain safety officer certification, and an operational procedure should be implemented that results in a guaranteed response of at least one Deering (preferably two including a mutual aid) additional chief officer on every working/all hands incident.

3.9 The MRI study team recommends that the Deering Fire and Rescue Department should acquire a vehicle (possibly a 4X4 SUV or pick-up truck) for use by the department's chief officers as a command vehicle to facilitate more effective, efficient, and safe, incident management/command operations on all types of emergency incidents, and allow the establishment of formal command posts on the scene. This vehicle would be used daily for inspections, responses, and administrative duties if a part-time fire chief is employed.

3.10 The MRI study team recommends that the Deering Fire and Rescue Department should apply for a federal SAFER grant for on-call firefighter recruitment and retention. This grant should be utilized to develop a comprehensive marketing program to attract new members, and provide incentives for the retention of those personnel, such as tuition reimbursement, health care benefits, tax abatements, etc.

3.11 The MRI study team recommends that the Deering Fire and Rescue Department make it a priority to develop an active on-call recruitment program led by a chief officer. At a minimum, this program should concentrate on recruiting personnel from within Deering and consist of:

- Developing a recruitment brochure and mailing it to all residents
- Performing public outreach through the local media
- Contacting community and service groups
- Developing an eye-catching banner on the town's website
- Placing signs recruiting call/volunteer personnel at the main entrances to town
- Placing signs call/recruiting volunteer in local businesses particularly high volume locations
- Although time-consuming, consideration should also be given to conducting a door-to-door recruitment campaign of every residence in the town. Increasing the number of personnel in the department should result in an enhancement of the number of personnel responding to incidents and assist with reducing response times.

3.12 The MRI study team recommends that the Deering Fire and Rescue Department should work to develop statistics that indicate the frequency with which the department is able to comply with the requirements of NFPA 1720, and also the average number of call personnel who respond to each incident. These statistics should be further broken down by weekday/daytime (normal working hours 7:00 AM to 6:00 PM), weekday/night time (6:00 PM to 7:00 AM), and weekends.

3.13 The MRI study team recommends that as a primarily call organization where personnel respond from various locations upon receipt of an emergency incident dispatch, the Deering Fire and Rescue Department (or Concord Fire Dispatch) should purchase and implement a system to track members who are responding to the incident such as the *"I Am Responding"* system. These systems let you know who is responding to the dispatches, where they are responding from, and when they will be responding or arriving. These web-based products can save critical time, and reduce response times, for fire departments and EMS agencies. They will let the dispatcher and/or on duty officer in town know when personnel are on the way, or if they need to page additional

personnel. It can also allow the officer to know who is responding to the station, scene, or any other location.

CHAPTER 4: MUTUAL AID

4.1 The MRI study team recommends that the Deering Fire and Rescue Department continue as a member of the Capital Area Mutual Aid Fire Compact. CAMAFC has worked well for the town and has provided necessary resources for fire and EMS services when Deering is unable to respond or when they need additional resources.

4.2 The MRI study team recommends that the Deering Fire and Rescue Department evaluate the current automatic aid areas of town and consider expanding the size of these areas. The town and the department should give consideration to entering into agreements for expanded automatic aid with communities that are willing and capable of providing these services, especially during daytime hours when Deering's staffing is limited. This will allow other departments that might respond to a specific area in Deering to initiate their response more rapidly.

4.3 The MRI study team recommends that data for mutual and automatic aid both given and received be recorded and analyzed regularly in order to determine what strains are being put on the regional mutual aid system and allow for better response planning for the department.

CHAPTER 5: FIRE DEPARTMENT FACILITIES, APPARATUS AND EQUIPMENT

5.1 The MRI study team recommends the Town of Deering and Deering Fire and Rescue Department develop a comprehensive capital improvement plan (CIP) for apparatus, major equipment, and capital facility needs. The plan should be incorporated into the town's capital improvement plan. The plan should also take into consideration potential funding strategies, such as bonding, lease-purchase agreements, and grant opportunities.

5.2 The MRI study team recommends the Town of Deering begin a planning process to construct a new, modern, energy-efficient, "green" fire station near the center of the town. The operations of the Donavan and Murdough stations should then be consolidated into this new central (headquarters) facility. Since the new central (headquarters) fire station would consolidate two stations into one, it should be big enough to accommodate the assigned apparatus and support vehicles, as well as training, gear storage, crew quarters (for extended stays), decontamination areas for both equipment and personnel, EMS equipment storage (clean area, out of the apparatus bay), and an at-source vehicle exhaust removal system.

5.3 The MRI study team recommends the Town of Deering seek funding for the design of the new station recommended in 5.2, after the capital improvement plan has been developed and adopted by the town.

5.4 The MRI study team recommends the McAllister station continue to be maintained due to the geography of the town. Upgrades should include the addition of facilities such as showers, locker room, and eating and sleeping areas for crew members who may need to remain in the station for extended periods. Funding for this project can also be sought after the capital improvement plan has been developed and adopted by the town.

5.5 The MRI study team recommends automatic fire alarm systems with heat and smoke detection be installed in all fire stations. These systems should not only be equipped with both audible and visible warning devices, they should automatically transmit an alarm to either the department's dispatch center or an approved central monitoring station. All stations should also be equipped with CO detectors. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants. The new station should be equipped with a complete automatic fire suppression system.

5.6 The MRI study team recommends all fire stations be equipped with emergency generators to provide back-up power supply in the event of interruption of the electrical service allowing for continuity of operations. Grants may be available through the New Hampshire emergency management agency to assist with this project.

5.7 The MRI study team recommends all stations be equipped with source capture vehicle exhaust emissions systems. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

5.8 The MRI study team recommends the Town of Deering and the Deering Fire and Rescue Department begin the process of replacing twenty-nine-year-old Engine 3, a 1986 International. MRI recommends this apparatus be replaced with a modern, state of the art, quick attack fire rescue pumper equipped with a full-size pump, carrying at least 500 gallons of water and equipped with hydraulic rescue tools. A fire/rescue pumper or squad combines the functions of an engine (pump, hose, water) with vehicle extrication and possibly other basic special hazards/operations (technical rescue/hazardous materials) tools and equipment.

5.9 The procurement of the rescue pumper "squad" recommended in 5.8 could be funded at the fiscal year 2017 town meeting after a federal Assistance to Firefighters Grant (AFG or Fire Act) was applied for during the 2016 grant period, which will open in the

spring of that year. If the AFG grant application is successful, then the FY 2017 capital project can be canceled.

5.10 The MRI study team recommends that since the town is heavily wooded, consideration be given to the Deering Fire and Rescue Department acquiring an appropriate forestry vehicle that can not only be used for wildland fire operations, but also for search and rescue and other types of off-road operations.

5.11 The MRI study team recommends that when the time comes for them to be replaced, Engine 2 and Tanker 1 should be consolidated into a single tender/pumper which combines a regular Class A pumper with the water carrying capabilities of a tender/tanker. If possible, this unit should be configured with a 3,000-gallon water tank, at least one portable tank, quick dump discharges, and a hose bed with a large capacity (4" or larger) diameter hose.

5.12 The procurement of the combination pumper-tender recommended in 5.11 should be funded at the fiscal year 2022 or 2023 town meeting. A federal Assistance to Firefighters Grant (AFG or Fire Act) should also be pursued provided the program is still available and funded at that time. If the AFG grant application is successful, then the capital project can be canceled.

5.13 The MRI study team recommends the Deering Fire and Rescue Department adopt the following long-term apparatus deployments:

- Central Station: 1 quick attack rescue pumper, 1 tender pumper, 1 ambulance,1 rescue boat, command vehicle

- McAllister Station: 1 pumper, 1 forestry unit

5.15 The MRI study team recommends the Deering Fire and Rescue Department work to ensure that all apparatus and vehicles comply with the appropriate NFPA and ISO standards for equipment carried. They should also adopt a policy of purchasing new NFPA 1901 and ISO compliant equipment when new apparatus is purchased. This policy will ensure that equipment is the most technologically up-to-date and that it is safe and functional.

5.15 The MRI study team recommends the Deering Fire and Rescue Department provide a portable radio to each member of the department for use on emergency incidents. If this is not feasible, at the very minimum, the department must ensure that every member wearing SCBA and entering an IDLH atmosphere is equipped with a portable radio. Funding for this project may be available through the FEMA Assistance to

Firefighters grant programs, and the town is encouraged to apply annually for these grants.

5.16 The MRI study team recommends the Town of Deering provide funding for the Deering Fire and Rescue Department to acquire two new thermal imaging cameras allowing one to be deployed to each station and each major piece of apparatus, and one to be kept as a spare. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

5.17 The MRI study team recommends the Deering Fire and Rescue Department review the recommendations in NFPA 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus (National Fire Protection Association, 2012 edition), and update and revise its vehicle fleet maintenance program as necessary to comply with the recommendations.

5.18 The MRI study team recommends the Deering Fire and Rescue Department fully comply with its weekly apparatus inspection and serviceability procedure. This inspection is the equivalent of a daily pre-trip inspection as outlined in commercial driver manuals. NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus* (2012 edition), has an appendix in the rear of the standard with suggestions for routine vehicle and component inspection and testing. The weekly inspection should also include an inventory and serviceability check of the tools, equipment, and SCBA that is carried on the apparatus.

5.19 The MRI study team recommends the Deering Fire and Rescue Department develop and maintain complete apparatus and equipment maintenance records for each piece of apparatus and all major equipment regardless of where the preventative maintenance and/or repairs are performed.

5.20 The MRI study team recommends the Deering Fire and Rescue Department immediately implement a program of annual pump testing, at intervals no greater than 12 months, in accordance with NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.21 The MRI study team recommends the Deering Fire and Rescue Department immediately implement an annual program of ground ladder testing, at intervals no greater than 12 months, in accordance with NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.22 The MRI study team recommends the Deering Fire and Rescue Department immediately implement a program of annual hose testing, at intervals no greater than 12 months, in accordance with NFPA and ISO standards. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.23 The MRI study team recommends the Deering Fire and Rescue Department continue its program of annual SCBA flow testing, at intervals no greater than 12 months, in accordance with NFPA standards and manufacturer's recommendations. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.24 The MRI study team recommends the Deering Fire and Rescue Department immediately implement an annual program of SCBA mask fit testing for ALL personnel to comply with NFPA standards and OSHA regulations. All tests conducted, results including deficiencies noted, and any corrective action taken should be documented. Annual funding should be included in the fire department budget for these tests.

5.25 The MRI study team recommends the Town of Deering provide funding for the Deering Fire and Rescue Department to acquire four additional automatic external defibrillators (AEDs) allowing one to be deployed to each major piece of apparatus. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

5.26 The MRI study team recommends the Town of Deering provide funding for the Deering Fire and Rescue Department to acquire four four-gas combustible gas meters, allowing one to be deployed to each major piece of apparatus (engines), and one to be kept as a spare. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

CHAPTER 6: WATER SUPPLY

6.1 The MRI study team recommends the Town of Deering strongly consider adopting a municipal regulation requiring the installation of a fire water supply cistern in any new development consisting of three or more homes or for any individual home of larger than a designated square footage.

6.2 The MRI study team recommends the Town of Deering develop a plan to strategically install large (30,000-gallon minimum) underground cisterns on public properties throughout the community, including the fire stations and possibly town hall, public

works, etc. The funding to install these cisterns would be included in the town's capital improvement plan. The cost for these cisterns will vary based upon construction costs and to what extent the town's public works department can assist in their installation.

6.3 The MRI study team recommends the town consider entering into public/private partnerships with private property owners to facilitate the installation of cisterns on private properties in various locations throughout Deering. As an additional incentive, the town might consider a property tax abatement for the installation of cisterns on private property. Priority installations sites should include, but are not necessarily limited to, the Robin Hill Farm and the large summer camp.

6.4 The MRI study team recommends the Deering Fire and Rescue Department develop a compelling public education program that explains the significant benefits to residents and property owners of installing cisterns for the storage of fire suppression system water supplies on various properties throughout the town.

6.5 The MRI study team recommends the Deering Fire and Rescue Department develop a compelling public education program that includes discussing the benefits of installing residential fire sprinklers in new one- and two-family homes. Though New Hampshire's RSAs do not allow residential fire sprinkler systems to be mandated, there is no prohibition for property owners to install them if they determine that it is in their best interest.

6.6 The MRI study team recommends the Town of Deering immediately provide priority funding for the fire department and/or public works department to inspect, perform preventative maintenance, and repairs as necessary, to the existing dry hydrants/standpipes located throughout town to ensure they are fully operational should they be needed for a fire.

6.7 The MRI study team recommends the Town of Deering and the Deering Fire and Rescue Department make it a priority to identify additional suitable locations for dry hydrants or standpipes throughout the town, and in conjunction with the public works department, or through the formation of public/private partnerships, install as many of them as possible each year based on the highest risk areas and/or year round accessibility and usability.

6.8 The MRI study team recommends the Deering Fire and Rescue Department, in conjunction with its neighboring fire departments, identify locations within these communities that may be appropriate fill sites for tenders supplying water for fire incidents in certain areas of Deering. These locations can include dry hydrants/standpipes, clear drafting locations, cisterns, and even municipal fire hydrants.

Compatibility with threads on connections must be determined, and if necessary, appropriate adapters obtained.

6.9 The MRI study team recommends the Deering Fire and Rescue Department develop a comprehensive list AND a map that shows the location of ALL potential water supply fill sites throughout the town and also, within reason, surrounding communities. This should include all dry hydrants/standpipes, drafting locations, cisterns, fire hydrants, and any other useable sources of water. The list should include pertinent information regarding each location and should be reviewed at least annually and updated as necessary.

6.10 The MRI study team recommends all water supply sites such as dry hydrants/standpipes, drafting locations, and cisterns should be inspected at least two times per year to ensure they are still functional as designed and installed. Any repairs needed should be completed on a priority basis.

6.11 The MRI study team recommends the Deering Fire and Rescue Department review the New Hampshire Fire Mobilization Plan and coordinate a water supply drill through the Capital Area Mutual Aid Fire Compact that would utilize the regional fire tanker/tender task force. The goal of the drill is to document that the fire department can provide 250 gallons per minute (gpm) through tanker shuttle, large-diameter hose relay, or other alternative water supply system. The water must be available within five minutes of the arrival of the first-due apparatus, and the department must maintain the flow, without interruption, for a minimum of twenty minutes. Another more challenging goal would be to maintain the flow for a full two-hour duration.

6.12 The MRI study team recommends that once the drill recommended in 6.10 has been successfully completed and documented, and some other key recommendations implemented, the Town of Deering consider requesting that ISO conduct an updated evaluation of the town and its fire department, for the purpose of seeking a lower Class 8B or better rating, depending upon the length of time the water supply was maintained for. This could possibly result in lowered insurance premiums for certain residents.

6.13 The MRI study team recommends that upon report of any structure fire or possible structure fire, such as smoke in a building or dwelling, that at least two additional tankers/tenders be immediately dispatched on the initial assignment through automatic aid. This procedure will ensure that additional water is immediately en route to the scene should it be needed, reducing possible delays in establishing a sustained water supply operation. Once a working fire is confirmed, additional tankers/tenders should be dispatched.

CHAPTER 7: TRAINING AND FIRE PREVENTION

7.1 The MRI study team recommends the Deering Fire and Rescue Department conduct a formal training needs assessment for the purpose of determining training program priorities. Part of this needs assessment should be an initial evaluation of the current basic skills proficiency of ALL department personnel.

7.2 The MRI study team recommends that based on the results of the needs assessment, the Deering Fire and Rescue Department should begin the development of a comprehensive training program that addresses, but is not limited to, mandatory OSHA training, recommended NFPA training, and every operational mission and responsibility of the department. The training should comply with accepted and/or recommended practices and standards, should include standardized evolutions, and should be consistent with Deering Fire and Rescue Department operations and procedures. This type of training program was previously recommended in the PRIMEX report. Self-contained breathing apparatus proficiency should be stressed, as should preparedness for low-frequency, high-risk emergencies.

Examples of topics for training include, but are certainly not limited to:

- Mandatory training
  - ✓ Blood borne pathogens
  - ✓ SCBA fit testing and refresher training
  - ✓ Sexual harassment
- Basic fire training
  - ✓ Basic engine company operations
  - ✓ Water supply operations
  - ✓ Hazardous materials operations
  - ✓ Confined space awareness
  - ✓ Firefighter safety operations
  - ✓ Rapid intervention team/down firefighter training
  - ✓ Water rescue
  - ✓ Vehicle extrication
  - ✓ Lock out/tag out procedures
- Administrative and rule training
  - ✓ Deering Fire and Rescue Department SOGs

7.3 The MRI study team recommends formal training of some type, lasting a minimum of two hours, occur at least monthly and when possible, a weekly training subject be suggested by the department using electronic sources. Additional opportunities for training can be found during related activities such as weekly/monthly apparatus and equipment inspections and building pre-planning activities.

7.4 The MRI study team recommends additional, high-intensity training on various subjects, including periodic live fire training, be conducted on a quarterly or semi-annual basis, at a formal fire academy where appropriate training facilities, structures, and props are available. This training could be conducted as a regional endeavor with other neighboring fire departments to give personnel who may normally respond to incidents together the opportunity to train together beforehand.

7.5 The MRI study team recommends that to the extent possible, training be delivered and/or conducted utilizing formal, standardized lesson plans that include objectives and performance criterion. However, when this is not possible or practical (a frequent occurrence in the fire service), a detailed description of the training should be included in the narrative section of the training report.

7.6 The MRI study team recommends that all training that is conducted, no matter how brief or inconsequential it may seem, MUST result in the completion of a formal training report. Training reports should include the date, the time training commenced, the time duration of the training, the instructor, the officer in charge, the names of all personnel trained, and include a detailed description of the training, or reference the formal lesson plan utilized. All persons trained should sign or initial either a printed hard copy of the training report, or if this is not practical, a sign in sheet should be attached. The officer in charge, and when possible, the instructor, should also sign the hard copy training report. A formal operational procedure on the completion of training reports should be developed. The training module of whatever management software program the department selects should be utilized for completion of training reports, and to assist with the development of a training database, keeping track of certifications and related lapse dates, etc.

7.7 The MRI study team recommends the Deering Fire and Rescue Department develop a separate training file for each member that can provide a supplement to the member's main personnel file. The training file should, at a minimum, include all course completion certificates, professional certifications, skills performance evaluation sheets and reports, and an annual summary of completed training.

7.8 The MRI study team recommends that as part of the development of a new comprehensive training program, the department should implement periodic basic skills proficiency evaluations for ALL personnel. These proficiency evaluations, consisting of

standardized evolutions, can be based on recognized standards and benchmarks, in conjunction with performance criterion and benchmarks, established through evaluation of, and based upon, Deering Fire and Rescue Department operations and procedures.

7.9 The MRI study team recommends that in order to assist with the large amount of training that needs to be done, and in recognition of their important role in the delivery of training and the success of the program, the Deering Fire and Rescue Department should provide fire instructor training for any members of the department who wish to take it. All officers should be formally certified at Fire Instructor Level I.

7.10 The MRI study team recommends the Deering Fire and Rescue Department encourage personnel to seek additional training on their own, and to the financial and practical extent possible, send personnel to outside training opportunities such as the Firehouse Expo in Baltimore, and the Fire Department Instructors Conference in Indianapolis. Information gained from this training can then be brought back and delivered to other members of the department. Training reports should be completed for all training, and copies of any certificates earned should be placed in the member's personnel and training files. A training board should be placed in each station where upcoming training opportunities can be posted for all personnel to review. These opportunities should also be posted on the department's website and could be e-mailed to every member once addresses are established.

7.11 The MRI study team recommends that fire prevention should be promoted as a key component of the vision of the Deering Fire and Rescue Department and should be a major aspect of its primary mission. Aggressive fire prevention programs are the most efficient and cost-effective way to reduce fire risks, fire loss, and fire deaths and injuries in the community. To the extent practical, every member of the department should have a responsibility for fire prevention.

7.12 The MRI study team recommends the Deering Fire and Rescue Department ensure that periodic inspections (at least annually with semi-annual or quarterly preferred) are conducted on the several major life hazard occupancies located within the town to maintain familiarity and up-to-date fire code compliance.

7.13 The MRI study team recommends that the Deering Fire and Rescue Department make it a priority to update its pages on the town's website on a regular basis to provide its customers, and other interested parties, as much information as possible on fire safety, fire prevention, and the department as a whole. This should be a priority for the next chief.

7.14 The MRI study team recommends the Deering Fire and Rescue Department consider the use of social media to spread the fire safety message and possibly recruit new, younger members to the department.

7.15 The MRI study team recommends the Deering Fire and Rescue Department adopt a year-round public fire safety education program throughout the community, including in the summer camps in town as frequently as possible during their season. A program of this type could provide wide-ranging positive benefits not only to Deering, but to wherever the campers call home. Ready to use programs are available from the United States Fire Administration, Federal Emergency Management Agency, and the National Fire Protection Association. Funding for these initiatives may also be available through the Fire Prevention and Safety grant program of the Assistance to Firefighters grants. The town is encouraged to apply for these grants on an annual basis. Other sources of grant funding, both public and private, may be available.

7.16 The MRI study team recommends the Deering Fire and Rescue Department reimplement the joint public education programs with the Hillsborough Fire Department at the school in Hillsborough which Deering students attend.

7.17 The MRI study team recommends the Deering Fire and Rescue Department consider some door-to-door campaigns in the community. These campaigns can be multi-faceted to deliver fire prevention information, check on smoke detectors and provide free ones if needed, and possibly recruit new members into the department.

7.18 The MRI study team recommends the Deering Fire and Rescue Department establish a formal pre-incident planning program. The purpose of a pre-incident planning program is to develop a fire/emergency response plan for buildings in the town. A pre-fire/incident plan includes data such as the occupancy type, floor plans, construction type, hazards to firefighting, special conditions in the building, apparatus placement plan, water supply plan, forcible entry plan, and ventilation plan. Pre-planning will improve the firefighter knowledge of the specific tactics needed to handle a fire or other emergency at a facility and will alert them to on-site hazards and risks. Pre-fire/incident plans should be reviewed regularly and tested by periodic table-top exercises and on-site drills. In addition, the department should develop a plan to make pre-fire/incident plans accessible on mobile data terminals (notebook/laptop computers) on fire apparatus for use en route to an incident and while on-scene.

CHAPTER 8: COMMUNICATIONS, DISPATCH, AND USE OF TECHNOLOGY

8.3 The MRI study team recommends each Deering fire station is supplied with a personal computer with appropriate software, including Firehouse software for data entry and collection purposes.

8.4 The MRI study team recommends the Fire Chief be supplied with a laptop computer with appropriate software, including Firehouse software and the capability to develop pre-fire plans.

8.3 The MRI study team recommends the Town of Deering give consideration to investing in the installation of a second repeater site so that there is redundancy in the communications system in the event of a primary location failure.

8.4 The MRI study team recommends the Deering Fire and Rescue Department provide a portable radio to each member of the department for use on emergency incidents. If this is not feasible, at the very minimum the department must ensure that every member wearing SCBA and entering an IDLH atmosphere is equipped with a portable radio. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

8.5 The MRI study team recommends the Town of Deering provide funding for the Deering Fire and Rescue Department to acquire two new thermal imaging cameras, allowing one to be deployed to each station and each major piece of apparatus, and one to be kept as a spare. Funding for this project may be available through the FEMA Assistance to Firefighters grant programs, and the town is encouraged to apply annually for these grants.

8.6 The MRI study team recommends the Deering Fire and Rescue Department develop a plan to install mobile data terminals (MDTs) in all fire apparatus and rescue vehicles. At a minimum, the incident commander at a scene should have access to pre-fire plan data, building permit data (building plans and current data about renovation and construction projects), real-time weather data, and hazardous materials data. In conjunction with the recommendation for the installation of MDTs, the Deering Fire and Rescue Department should explore possible uses for GIS technology to enhance their operations.

8.7 The MRI study team recommends the Deering Fire and Rescue Department place an increased emphasis on evaluating new technology for use in emergency incidents, particularly when it pertains to firefighter/member safety or patient care.

CHAPTER 9: POLICIES, RULES AND REGULATIONS AND STANDARD OPERATING PROCEDURES

9.1 The MRI team recommends the board of selectman propose a warrant article at the next Town Meeting that will allow the town to reorganize the fire department pursuant to RSA 154:1 I(b) " A fire chief appointed by the local governing body, or by the town or city manager, if any, with firefighters

appointed by the local governing body or manager, upon recommendation of the fire chief;"

This process is allowed under RSA 154:1 IV so that "a town, city, village district or precinct may, by vote of the local legislative body, change the organization of its fire department from one form to another. For municipalities with a town meeting form of government, such a vote shall be taken under an article inserted by the selectmen or by petition in the warrant for the annual meeting, and the change in form shall not take effect until one year following such vote."

9.2 The MRI team recommends that a meeting between the board of selectman and the fire department occur. The meeting should be facilitated by a third party to allow all parties to express their opinions and concerns. Because of the uncertainty of the organization of the fire department and the conflict that has occurred, both parties need to work together for the common goal that they both have expressed to our team: "Provide a high level of professional fire, rescue and EMS services to the citizens of Deering."

9.3 The MRI team recommends the department review and update the current Standard Operating Guidelines (SOGs). The department Rules and Regulations stated that this should occur at least every three years. We recommend that a process is developed that on an annual basis 25% of the SOGs be reviewed, and updated or removed if necessary. Therefore, the task does not get out of hand and allows about twenty (20) SOGs per year to be completed.

9.4 The MRI Team recommends the department adopt an updated department SOG regarding hiring practices, and until such time that the department can be reorganized, authorizing the board of selectman to hire firefighters, that the department work with the town administrator to establish minimum hiring standards for new employees, including minimum education requirements, the ability to respond to emergencies, training, etc., driving history, and criminal background. All hiring standards should not be in conflict with federal or state laws, or in conflict with town policies.

9.5 MRI recommends developing a hiring practice that requires all applicants that meet the department's attendance, response, and training requirements be required to pass a criminal background check, driving record for all states that the person has lived in the past ten years, and drug screening test. Any costs associated with these should be paid by the applicant. If an applicant is hired, then the cost could be reimbursed to that person.

9.6 The MRI team recommends that the Department work with the Town to establish a communication method using electronic media (computers, social media, cell phones, pagers, etc.) to more efficiently and effectively communicate with its members.

9.7 The MRI team recommends the department update all computer hardware and software. The system should be used for personnel, equipment, and incident records. There are a number of software programs available that will meet the needs of the department. The software can be purchased and provided on computers at each fire station and allow each chief officer that are provided with a laptop to use the same software for record management, report writing, inspection records, training, etc. This will increase efficiency for those officers, as well as creating records and documents that will assist the department and town in establishing future plans including budget preparation.

9.8 The MRI team recommends the department update their website. A fire department's website is an opportunity to communicate with the public and provide information on fire and life safety, as well as information that people may need for obtaining permits, understanding fire codes, and general information about the department. Websites can be designed so that there are both public and private portals. Thus, the website can be used to dispense department information such as training, SOGs, scheduling, and general department information.

CHAPTER 10: OPTIONAL SERVICE DELIVERY

10.1 The MRI team recommends the Town of Deering appoint a part-time fire chief to work twenty-five to thirty hours a week, with a flexible work schedule. The fire chief should have the capability to respond to both fire and EMS incidents while on duty, as well as perform the necessary administrative duties, fire code inspections, and coordinate activities with both internal departments in Deering, as well as regional emergency services.

10.2 The MRI team recommends the Town of Deering consider hiring per-diem/part-time FF/paramedics during daytime hours. These employees would augment the on-call members of the Deering Fire and Rescue Department and possibly the part-time fire chief. Through flexible scheduling, this would allow the town to provide a basic level of service during those periods of time that they are currently having a difficult time responding fire and EMS personnel.

10.3 The MRI team recommends the Deering Fire and Rescue Department reach out and attempt to partner with other local departments to develop a regional response plan through expansion of automatic aid for specific areas of the town, especially during daytime hours. This would require Deering to take on added responsibility for some

days during the week that they would be responsible for not only their own responses, but would take on additional responsibilities in neighboring towns. Those neighboring towns, if willing to partner with Deering, would then take on additional responsibilities in Deering during those other days of the week.

10.4 The MRI team recommends that Deering consider contracting for specific EMS services during daytime hours. These services could be provided through negotiations with other fire departments that abut Deering or possibly a private ambulance service.

CHAPTER 13

THE MRI TEAM

PRINCIPAL-IN-CHARGE

Alan S. Gould, President and Chief Operating Officer, is a graduate of Saint Anselm College with a BS degree in Criminal Justice. He is certified as a Public Manager by the American Academy of Certified Public Managers and has completed numerous management and leadership programs including the Babson Command Training Institute and the FBI's LEEDS program. He is recognized for his creativity in community policing and his leadership in promoting ethics in the law enforcement community. Mr. Gould began his public sector career with the Salem, NH, Police Department where, during 21 years, he served at all ranks of the Department. He served as Chief of Police in Rye, NH, where, upon retirement from law enforcement, he was appointed and served as Town Administrator until joining MRI in 2008. Mr. Gould served as the Ethics Instructor at the New Hampshire Police Academy for 15 years and has been an instructor of college courses in Criminal Code, Criminal Investigation, Report Writing, Constitutional Law, and Juvenile Delinquency. Among his many community involvements, Alan served as an initial incorporator of two non-profit organizations; one addressing family violence and visitation issues, and the other established to help seniors remain in their homes as they age. He continues to serve as Deputy Emergency Management Director in the coastal community of Rye, NH, located within the Seabrook Nuclear Power Plant's Emergency Planning Zone. In addition to his responsibilities as MRI's Chief Operating Officer, Mr. Gould manages most of the company's public safety projects including operational studies and "internal" investigations. Mr. Gould also specializes in recruitment/selection processes for executive level municipal positions and has completed dozens of processes for top management positions throughout New England.

PROJECT MANAGER

George Klauber is a Senior Public Safety Consultant with MRI; he graduated from Charter Oaks State College with a BS in Fire Science and Technology, and has taken numerous courses at the National Fire Academy. Chief Klauber retired as the Fire Chief in Derry, New Hampshire, where he served since 2003. His retirement capped a career of almost 40 years in the Fire Service. George began his career in the Waterbury CT Fire Department where he served with distinction and rose through the ranks to become Chief of the Department, a position he held for 3 years before accepting the position of Chief in Derry NH. Chief Klauber is a Certified Fire Officer in accordance with NFPA 1021; a Certified Fire Service Instructor in accordance with NFPA 1501; and a Certified Safety Officer in accordance with NFPA 1521. Chief Klauber is a member of the International Association of Fire Chiefs; the New England Association of Fire Chiefs, the New Hampshire Fire Chiefs Association; the National Fire Protection Association, and the

International Association of Emergency Managers. Chief Klauber has served as a subject expert and consulting advisor to MRI clients since 2001.

TEAM MEMBERS

Peter J. Finley, Jr. most recently served as Chief of the Winslow Township Fire Department in New Jersey, where he was responsible for the planning, establishment, and initial deployment of the career component of the department. He previously served for 4 ½ years as the Chief of Department for the City of Vineland, New Jersey Fire Department where he initiated significant changes within the department including updating and modernizing equipment, providing the department's first ever formal officer training, and significantly increasing the capabilities of the regional hazardous materials response team. During his tenure, the department received more than one million dollars in various grants. He formerly commanded the Vineland Rescue Squad gaining significant EMS operations and command experience, as well as completing an overhaul of that organization's operations. Chief Finley serves as an Adjunct Professor in the Fire Science Program at Camden County College. Chief Finley received his Associate in Applied Science degree from Atlantic Community College in New Jersey, and earned his Bachelor of Science degree in Fire Science/Administration from the University of Maryland. He is a graduate of the National Fire Academy's Executive Fire Officer Program, earning perfect scores on three of his four Applied Research Projects. He was awarded an Outstanding Research Award for his 2002 paper titled, "Residential Fire Alarm Systems: The Verification and Response Dilemma". Chief Finley holds nearly two dozen state and national certifications and is a member of a number of fire service organizations, including achieving the prestigious Chief Fire Officer designation from the Commission on Fire Accreditation International (formerly the Center for Public Safety Excellence). He is a member of a number of fire service organizations and is currently serving as President of the New Jersey Career Fire Chiefs Association where he has been involved in the development and administration of fire service promotional examinations. From 2003–2005 he served on the Training and Education Committee of the Governor's Fire Service and Safety Task Force. He also previously served on the state committee that developed New Jersey's first Firefighter I Instructor Manual.

Christopher J. LeClaire currently serves as the Fire Chief for Newburyport, MA. Prior to his appointment in Newburyport he served as Fire Chief /Emergency Management Coordinator for the City of Portsmouth, NH, and has over 25 years of experience in fire protection, EMS, emergency management and law enforcement. He holds a degree in fire protection, and is one of only a few to be designated as a Chief Fire Officer by the Center for Public Safety Excellence. He has several strategic and management certificates from the New Hampshire Fire Academy and the National Fire Academy. He is a senior instructor for the New Hampshire Fire Academy, and serves on the Governor's Council on Emergency Preparedness and the Homeland Security Grants Committee. He serves as the President of the Seacoast Chief's Mutual Aid District and chairs the Portsmouth Area Emergency Planning Team. Chief LeClaire is certified as a Fire Instructor II and Fire Officer IV. He is also a Past-President of the New Hampshire Association of

Fire Chiefs. Chief LeClaire has served as a subject advisor to MRI since 2011 and will occasionally work on a project team.

APPENDIX A

Municipal
Resources
Inc.

APPENDIX A

Run Cards for: DEERING RESPONSES

Grid	Zone Location	Zone:	Call for Service / Alarm Level
8401	DEERING FIRE	84A	TOWN DEFAULT
TO SCENE:	84S1		
8401	DEERING FIRE	84A	MEDICAL AID
TO SCENE:	84AMB1		
8401	DEERING FIRE	84A	MVA NO EXTRICA
TO SCENE:	84AMB1, 84ENG1		
8401	DEERING FIRE	84A	MVA W/EXTRICA
TO SCENE:	84AMB1, 84ENG1, 84ENG3		
8401	DEERING FIRE	84A	BUILDING FIRE
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1, 59ENG2, 59TKR1, 59RSQ1, ANTRIMENG1, ANTRIMHSE1, FRNCSTWNE1, FRNCSTWNT1, 75ENG5, 75TKR1, CAPAREA1		
8401	DEERING FIRE	84A	2ND ALRM BUILDING
TO SCENE:	58ENG1, 58TKR1, 86ENG2, 86TKR1, BENINGENG1, ANTRIMAMB2		
8401	DEERING FIRE	84A	3RD ALRM BUILDING
TO SCENE:	59ENG1, 60ENG1, 76ENG1, 76TKR1, FRNCSTWNT2, 58AMB2		
8401	DEERING FIRE	84A	4TH ALRM BUILDING
TO SCENE:	GFSTWNENG1, GFSTWNENG2, 82ENG2, STODDARDE2, STODDARDT1		
8401	DEERING FIRE	84A	5TH ALRM BUILDING
TO SCENE:	HANCOKENG1, HANCOKTKR1, 57ENG1, GRNFLDENG4, GRNFLDTKR1		
8401	DEERING FIRE	84A	BRUSH GRASS FIRE
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1, 84FOR1		
8401	DEERING FIRE	84A	2ND ALRM BRUSH
TO SCENE:	59FOR1, 58FOR1, ANTRIMFOR1, 59TKR1, 58TKR1, ANTRIMAMB2, ANTRIMHSE1, CAPAREA1		
8401	DEERING FIRE	84A	3RD ALRM BRUSH
TO SCENE:	75FOR1, FRNCSTWNF1, DICK, 75TKR1, FRNCSTWNT1		
8401	DEERING FIRE	84A	4TH ALRM BRUSH
TO SCENE:	60FOR1, 86FOR1, 60TKR1, 86TKR1, BENINGTKR1		
8401	DEERING FIRE	84A	5TH ALRM BRUSH
TO SCENE:	82FOR1, 57FOR1, 76FOR1, 82TKR1, 57TKR2		
8401	DEERING FIRE	84A	6TH ALRM BRUSH
TO SCENE:	84S1		
8401	DEERING FIRE	84A	MASS CAS 1ST ALRM
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1		
8401	DEERING FIRE	84A	MASS CAS 2ND ALRM
TO SCENE:	ANTRIMENG1, 59AMB2, ANTRIMAMB2, 58AMB2, 59RSQ1		
8401	DEERING FIRE	84A	MASS CAS 3RD ALRM
TO SCENE:	59ENG2, 75AMB1, 60AMB1, 86AMB1, 58RSQ1		
8401	DEERING FIRE	84A	MASS CAS 4TH ALRM
TO SCENE:	58ENG1, 52AMB1, 57AMB1, GFSTWNAMB1, 75RSQ1		
8401	DEERING FIRE	84A	SINGLE ENGINE
TO SCENE:	84ENG1		
8401	DEERING FIRE	84A	ICE/WATER RSQ 1ST
TO SCENE:	84S1, 84ENG1, 84ENG2, 84ENG3, 84AMB1, 84BOAT1, CAPAREA1		
8401	DEERING FIRE	84A	ICE/WATER RSQ 2ND
TO SCENE:	59RSQ1, 59BOAT1, 58BOAT1, ANTRIMAMB2, 75AMB1		
8401	DEERING FIRE	84A	ICE/WATER RSQ 3RD
TO SCENE:	75RSQ1, 75BOAT1, FRNCSTWNB1, 58AMB2, 59AMB2		
8401	DEERING FIRE	84A	ICE/WATER RSQ 4TH

Run Cards for: DEERING RESPONSES

Grid	Zone Location	Zone:	Call for Service / Alarm Level
8403	DEERING FIRE	84C	TOWN DEFAULT
TO SCENE:	84S1		
8403	DEERING FIRE	84C	MEDICAL AID
TO SCENE:	84AMB1		
8403	DEERING FIRE	84C	MVA NO EXTRICA
TO SCENE:	84AMB1, 84ENG1		
8403	DEERING FIRE	84C	MVA W/EXTRICA
TO SCENE:	84AMB1, 84ENG1, 84ENG3		
8403	DEERING FIRE	84C	BUILDING FIRE
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1, 59ENG2, 59TKR1, 59RSQ1, ANTRIMENG1, ANTRIMHSE1, FRNCSTWNE1, FRNCSTWNT1, 75ENG5, 75TKR1, CAPAREA1		
8403	DEERING FIRE	84C	2ND ALRM BUILDING
TO SCENE:	58ENG1, 58TKR1, 86ENG2, 86TKR1, BENINGENG1, ANTRIMAMB2		
8403	DEERING FIRE	84C	3RD ALRM BUILDING
TO SCENE:	59ENG1, 60ENG1, 76ENG1, 76TKR1, FRNCSTWNT2, 58AMB2		
8403	DEERING FIRE	84C	4TH ALRM BUILDING
TO SCENE:	GFSTWNENG1, GFSTWNENG2, 82ENG2, STODDARDE2, STODDARDT1		
8403	DEERING FIRE	84C	5TH ALRM BUILDING
TO SCENE:	HANCOKENG1, HANCOKTKR1, 57ENG1, GRNFLDENG4, GRNFLDTKR1		
8403	DEERING FIRE	84C	BRUSH GRASS/FIRE
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1, 84FOR1		
8403	DEERING FIRE	84C	2ND ALRM BRUSH
TO SCENE:	ANTRIMHSE1, FRNCSTWNT1, 59TKR1, ANTRIMAMB2, FRNCSTWNF1, 59FOR1, ANTRIMFOR1		
8403	DEERING FIRE	84C	3RD ALRM BRUSH
TO SCENE:	75TKR1, 58TKR1, 75FOR1, 58FOR1, BENINGFOR1		
8403	DEERING FIRE	84C	4TH ALRM BRUSH
TO SCENE:	86TKR1, BENINGTKR1, 86FOR1, DICK, 60FOR1		
8403	DEERING FIRE	84C	5TH ALRM BRUSH
TO SCENE:	82TKR1, 60TKR1, 82FOR1, 76FOR1, 57FOR1		
8403	DEERING FIRE	84C	MASS CAS 1ST ALRM
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1		
8403	DEERING FIRE	84C	MASS CAS 2ND ALRM
TO SCENE:	ANTRIMENG1, 59AMB2, ANTRIMAMB2, 58AMB2, 59RSQ1		
8403	DEERING FIRE	84C	MASS CAS 3RD ALRM
TO SCENE:	FRNCSTWNE1, 86AMB1, 75AMB1, 60AMB1, 58RSQ1		
8403	DEERING FIRE	84C	MASS CAS 4TH ALRM
TO SCENE:	59ENG2, 57AMB1, 52AMB1, GFSTWNAMB1, 75RSQ1		
8403	DEERING FIRE	84C	SINGLE ENGINE
TO SCENE:	84ENG1		
8403	DEERING FIRE	84C	ICE/WATER RSQ 1ST
TO SCENE:	84S1, 84ENG1, 84ENG2, 84ENG3, 84AMB1, 84BOAT1, CAPAREA1		
8403	DEERING FIRE	84C	ICE/WATER RSQ 2ND
TO SCENE:	59RSQ1, 59BOAT1, 58BOAT1, ANTRIMAMB2, 75AMB1		
8403	DEERING FIRE	84C	ICE/WATER RSQ 3RD
TO SCENE:	75RSQ1, 75BOAT1, FRNCSTWNB1, 58AMB2, 59AMB2		
8403	DEERING FIRE	84C	ICE/WATER RSQ 4TH
TO SCENE:	58RSQ1, 58AMB1, 59AMB1, 59BOAT2, 60BOAT1		

Run Cards for: DEERING RESPONSES

Grid	Zone Location	Zone:	Call for Service / Alarm Level
8404	DEERING FIRE	84D	TOWN DEFAULT
TO SCENE:	84S1		
8404	DEERING FIRE	84D	MEDICAL AID
TO SCENE:	84AMB1		
8404	DEERING FIRE	84D	MVA NO EXTRICA
TO SCENE:	84AMB1, 84ENG1		
8404	DEERING FIRE	84D	MVA W/EXTRICA
TO SCENE:	84AMB1, 84ENG1, 84ENG3		
8404	DEERING FIRE	84D	BUILDING FIRE
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1, 59ENG2, 59TKR1, 59RSQ1, ANTRIMENG1, ANTRIMHSE1, FRNCSTWNE1, FRNCSTWNT1, 75ENG5, 75TKR1, CAPAREA1		
8404	DEERING FIRE	84D	2ND ALRM BUILDING
TO SCENE:	58ENG1, 58TKR1, 86ENG2, 86TKR1, BENINGENG1, ANTRIMAMB2		
8404	DEERING FIRE	84D	3RD ALRM BUILDING
TO SCENE:	59ENG1, 60ENG1, 76ENG1, 76TKR1, FRNCSTWNT2, 58AMB2		
8404	DEERING FIRE	84D	4TH ALRM BUILDING
TO SCENE:	GFSTWNENG1, GFSTWNENG2, 82ENG2, STODDARDE2, STODDARDT1		
8404	DEERING FIRE	84D	5TH ALRM BUILDING
TO SCENE:	HANCOKENG1, HANCOKTKR1, 57ENG1, GRNFLDENG4, GRNFLDTKR1		
8404	DEERING FIRE	84D	BRUSH GRASS/FIRE
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1, 84FOR1		
8404	DEERING FIRE	84D	2ND ALRM BRUSH
TO SCENE:	ANTRIMAMB2, ANTRIMHSE1, FRNCSTWNF1, FRNCSTWNT1, 75FOR1, 75TKR1, 59FOR1		
8404	DEERING FIRE	84D	3RD ALRM BRUSH
TO SCENE:	59TKR1, DICK, ANTRIMFOR1, ANTRIMTKR1		
8404	DEERING FIRE	84D	4TH ALRM BRUSH
TO SCENE:	BENINGTKR1, 86TKR1, 86FOR1, 57TKR1, 57FOR1		
8404	DEERING FIRE	84D	5TH ALRM BRUSH
TO SCENE:	82FOR1, 82TKR1, 60FOR1, 60TKR1, 76FOR1		
8404	DEERING FIRE	84D	MASS CAS 1ST ALRM
TO SCENE:	84ENG1, 84ENG2, 84ENG3, 84TKR1, 84TKR2, 84AMB1		
8404	DEERING FIRE	84D	MASS CAS 2ND ALRM
TO SCENE:	FRNCSTWNE1, 59AMB2, ANTRIMAMB2, 75AMB1, 75RSQ1		
8404	DEERING FIRE	84D	MASS CAS 3RD ALRM
TO SCENE:	ANTRIMENG1, 86AMB1, 58AMB2, 57AMB1, 59RSQ1		
8404	DEERING FIRE	84D	MASS CAS 4TH ALRM
TO SCENE:	75ENG5, 76AMB1, GFSTWNAMB1, 60AMB1, 58RSQ1		
8404	DEERING FIRE	84D	SINGLE ENGINE
TO SCENE:	84ENG1		
8404	DEERING FIRE	84D	ICE/WATER RSQ 1ST
TO SCENE:	84S1, 84ENG1, 84ENG2, 84ENG3, 84AMB1, 84BOAT1, CAPAREA1		
8404	DEERING FIRE	84D	ICE/WATER RSQ 2ND
TO SCENE:	59RSQ1, 59BOAT1, 58BOAT1, ANTRIMAMB2, 75AMB1		
8404	DEERING FIRE	84D	ICE/WATER RSQ 3RD
TO SCENE:	75RSQ1, 75BOAT1, FRNCSTWNB1, 58AMB2, 59AMB2		
8404	DEERING FIRE	84D	ICE/WATER RSQ 4TH
TO SCENE:	58RSQ1, 58AMB1, 59AMB1, 59BOAT2, 60BOAT1		

APPENDIX B

Municipal
Resources
Inc.

APPENDIX B

NH RSA 154 Section 154:1

TITLE XII
PUBLIC SAFETY AND WELFARE

CHAPTER 154
FIREWARDS, FIREFIGHTERS, AND FIRE HAZARDS

Firewards, Fire Chiefs and Fire Departments; Organization, Powers and Duties

Section 154:1

154:1 Organization. –

I. All town and city fire departments, and fire departments of village districts or precincts organized pursuant to RSA 52:1, I(a), shall be organized according to one of the following forms, chosen by vote of the local legislative body:

(a) A fire chief appointed by the local governing body, or by the town or city manager, if any, with firefighters appointed by the fire chief;

(b) A fire chief appointed by the local governing body, or by the town or city manager, if any, with firefighters appointed by the local governing body or manager, upon recommendation of the fire chief;

(c) A fire chief elected by the local legislative body pursuant to RSA 669:17, with firefighters appointed by the fire chief;

(d) Firewards of any number, as determined by the local legislative body, either elected pursuant to RSA 669:17 or appointed by the local governing body, with a fire chief appointed by the firewards and firefighters appointed by the fire chief; or

(e) Firewards of any number, as determined by the local legislative body, either elected pursuant to RSA 669:17 or appointed by the local governing body, with a fire chief and firefighters appointed by the firewards.

II. Firefighters may recommend the appointment of any firefighter, fire officer, or fire chief to the appointing authority as provided in subparagraphs I (a) through (e).

III. A municipality may choose a form of fire department organization different from those set forth in paragraph I, including the election of fire chief, fire officers or firefighters, or all such persons, by the firefighters.

IV. A town, city, village district or precinct may, by vote of the local legislative body, change the organization of its fire department from one form to another. For municipalities with a town meeting form of government, such a vote shall be taken under an article inserted by the selectmen or by petition in the warrant for the annual meeting, and the change in form shall not take effect until one year following such vote.

V. Further fire department organizational provisions, including, but not limited to the manner of appointment and promotion of firefighters and officers, may be set forth in a municipal charter or local ordinance, if such provisions conform to this chapter.

VI. Subject to statute, charter, or local ordinance, and subject to such written formal policies or guidelines as may be adopted or approved by the appointing authority, the fire chief shall have the organizational and administrative control of the fire department.

VII. For purposes of this chapter the term "firewards" includes fire engineers and fire commissioners, where applicable.

VIII. The firewards, if any, shall constitute a board, and shall take actions by majority vote. They shall elect a clerk, and may adopt a badge of office.

Source. RS 111:1. 1844, 143:1. 1845, 243:1. CS 114:1, 4. GS 96:1. GL 106:1. PS 115:1. PL 146:1. RL 175:1. RSA 154:1. 1975, 443:1. 1992, 154:2. 1993, 28:4, eff. Jan. 1, 1994.