<u>REPORT</u>

PIONEER VALLEY PLANNING COMMISSION

HILLTOWN REGIONAL FIRE SERVICES FEASIBILITY STUDY

MAY 2021

Prepared by:
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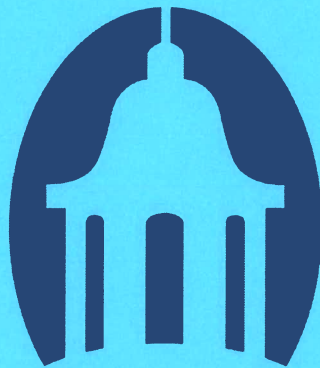66 Main Street, Suite B
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NOTE: Appendices have been developed as a separate document.

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REPORT

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PIONEER VALLEY PLANNING COMMISSION

REGIONAL FIRE SERVICES FEASIBILITY STUDY

MAY 2021

I. PROJECT OVERVIEW, PURPOSE, SCOPE, AND METHODOLOGY

PROJECT OVERVIEW

The Pioneer Valley Planning Commission (PVPC) contracted with Municipal Resources, Inc. (MRI) to provide an evaluation and review of the way fire and rescue services are provided within the communities of Chesterfield, Cummington, Goshen, Plainfield and Worthington. Using this as a basis, the project team has developed recommendations for improvement that take into consideration the current and future needs of the communities. These recommendations provide a path of appropriate modifications to the delivery systems to maintain the existing local fire departments, and to develop a regional footprint to augment service delivery and assist the communities to provide the desired level of fire services.

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

A key component of the basis of this report is that the five towns are seeking to evaluate opportunities for regional cooperation for fire protection and prevention services. The current operations of each community have been reviewed to identify the present and future fire service needs of each participating community and to provide recommendations that will assist the community with decision making for resource allocation and operational planning.

The task of the project was to conduct a feasibility study to determine the potential to achieve the following benefits:

- Increased efficiency;
- Improved effectiveness;
- Preservation of a level of service;
- Enhanced or expanded services;
- Reduced costs;
- Cost avoidance;
- Coordination of regional planning;
- Elimination of artificial boundaries;
- Standardization of services and programs;
- Potential reduced ISO ratings;
- Fire service accreditation;
- Impact on future state and federal grant funding.

SCOPE OF WORK

This study required the extensive involvement of the leadership within each of the participating communities to complete the nine tasks (tasks A-F) identified in MRI's proposal. Based upon the COVID-19 Pandemic, delay in obtaining Computer Aided Dispatch response data and the project time parameters, the project team was unable to host community meetings or accomplish Task E. In place of Task E, several virtual interviews were conducted with a variety of people selected by the committee members.

The high level of participation by municipal partners allowed MRI's team to obtain as much data and other information as possible. The information gathered served as a foundation for this document and allowed the project team to develop a clear and concise report that projects future service models using current accurate data sets as an operational baseline.

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

1. Policies that determine staffing levels and types of staffing used.
2. Community population and demographics.
3. Target hazards that exist or are planned in each community (residential, industrial, educational and municipal features of the community).
4. Property values.
5. Services provided.

6. Special hazards and risks (i.e., nursing homes, assisted living facilities, lakes, rivers and waterfronts, industrial facilities, hotels, road network and multi-story buildings).
7. Budgets.
8. Deployment strategy of manpower and apparatus by type of incident.
9. Call volume.
10. Time services were provided.
11. Response times.

The project team evaluated the overall operations of the five participating fire departments to identify what works and what does not work. The evaluation included the following:

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

Much of the research for this report was completed through virtual meetings based upon the guidance provided by the Commonwealth of Massachusetts pertaining to travel and meetings during the COVID-19 pandemic. These virtual meetings were complemented by in person interviews and on-site field visits when possible. Considering the intensity of the COVID-19 Pandemic, a high percentage of the research and interviews were conducted remotely.

The project team spent several hours collecting and analyzing data; making observations, inspecting facilities, equipment and records, conducting interviews and when possible, touring the departments and the communities. Much of the data collected required in-depth analysis to allow for proper comparison and calculations to be conducted.

METHODOLOGY

MRI's project team conducted an analysis of the five communities followed by the development of this report. Upon completion of its review, the project team developed recommendations for improvement that take into consideration the following:

- Identification of the service level currently being provided in each community
- The sustainability of fire services utilizing current delivery systems
- The projected needs of the communities
- The projected needs of the region as a whole
- Required modifications to the delivery systems
- Identification of optimal response time goals

In addition, the project team also considered how current and future needs will impact the location and/or expansion of physical facilities and impact the need for equipment. This report also identifies whether the current fire and rescue staffing is appropriate or should be modified.

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

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

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

C. Assessed the current staffing plan for deploying the required number of fire officers and supervisors, along with vehicles and apparatus used and recommended cost-effective alternatives based on the type of incident. Evaluated whether there were recommended changes to improve efficiency and delivery of service.

D. Evaluated the response of personnel, including appropriate operational staffing, supervisors, management, and support staff, starting with the initial call for routine or emergency services.

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

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

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

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

1. Met to discuss project goals and objectives
2. Evaluated existing inter municipal cooperation and regional services;
3. Reviewed pertinent service demand data
4. Conducted a review of response activity
5. Toured some of the communities and reviewed some of the target hazards;
6. Evaluated fire service facilities and equipment
7. Met with and or interviewed Fire Chiefs and some staff members
8. Hosted forums to promote communication, obtain input and generate project participation
9. Reviewed various fire department documents and budgets
10. Developed pertinent cost estimates
11. Provided monthly project updates
12. Developed a project report.

During the development of this document, the focus was placed on enhancing current fire service operations by augmenting and supporting existing fire departments. The recommendations contained within this document should be utilized to promote regional discussion and collaboration. The proposed plan and timetable have been developed to allow for flexibility while still moving forward.

To accomplish the goals and objectives this study has been divided into the following seventeen sections:

I. **Project Overview, Purpose, Scope and Methodology**
II: **Makeup of the Study Communities**
III: **Community Risk Assessment**
IV: **Incident Response and Times**
V: **Staffing**
VI: **Automatic Mutual Aid Practices**
VII: **On Call Recruitment and Retention**
VIII: **Budgets**
IX: **Apparatus and Equipment**

X: **Stations**
XI: **Grants**
XII: **Department Needs**
XIII: **Mapping out the Future**
XIV: **Conclusions and Implementing Change**
XV: **Consolidated Recommendations**
XVI: **Project Team Profiles**
XVII: **Listing of Appendices**

II: MAKE UP OF THE STUDY COMMUNITIES

The Study communities consist of Chesterfield, Cummington, Goshen, Plainfield and Worthington all located in Hampshire County in Western Massachusetts.

Figure 1
Project Area Map

The latest population data was taken from the 2010 Census and from the Commonwealth of Massachusetts Department of Revenue 2020 data.

		2010 Population / Average	Equalization Valuation Report / Average
Chesterfield		1222	$165,075,500
Cummington		872	$136,764,000
Goshen		1054	$173,818,900
Plainfield		648	$98,187,300
Worthington		1156	$182,949,300
Total/Average		4952/990.4	$756,795,000 / $151,359,000

Figure 2
Population and Valuation

	Total Area	Land	Water	Pop. Density
Chesterfield	31.2	30.8	0.4	38.6
Cummington	23.1	22.9	0.1	42.4
Goshen	17.7	17.4	0.4	53
Plainfield	21.3	21.1	0.2	28
Worthington	32.1	31.9	0.2	36

	Under 18	18-24	25-44	45-64	Median Age	Change 2000 to 2010
Chesterfield	25.7%	6.1%	29.8%	28.6%	54	1.70%
Cummington	27.9%	5.7%	30.3%	24.8%	38	-10.8%
Goshen	21.9%	4.3%	32.0%	31.1%	41	14.40%
Plainfield	24.8%	4.2%	26.1%	31.9%	42	10%
Worthington	24.5%	6.3%	26.8%	31.4%	42	-9.00%

Figure 3
Area and Population breakdown

The population charts reviewed indicates a somewhat consistent and level population for each community, however each community also has a population fluctuation that is dependent on the time of the year, and the events that are happening that draw in what is often an attendance, that is larger than the community's own population. Public Safety must be able to adapt to these fluctuations and plan for the possibilities for response that are inherent with larger crowds. These events can range from a motor vehicle accident to a large scale Multi Casualty Incident (MCI).

III: COMMUNITY RISK ASSESSMENT

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

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

analysis results create the foundation for developing risk-reduction and community education programs.

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

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

Understanding the definition of hazards and risks is critical to the risk assessment process. Hazards are physical sources of danger that can create emergency events. Hazards can be items such as buildings, roadways, weather events, fires, etc. Risk relates to the probability of a loss due to exposure to a hazard. People and property can be at risk. Consequences to the community are also factors to consider. Each of these factors is assessed during the community risk process (Figure 4).
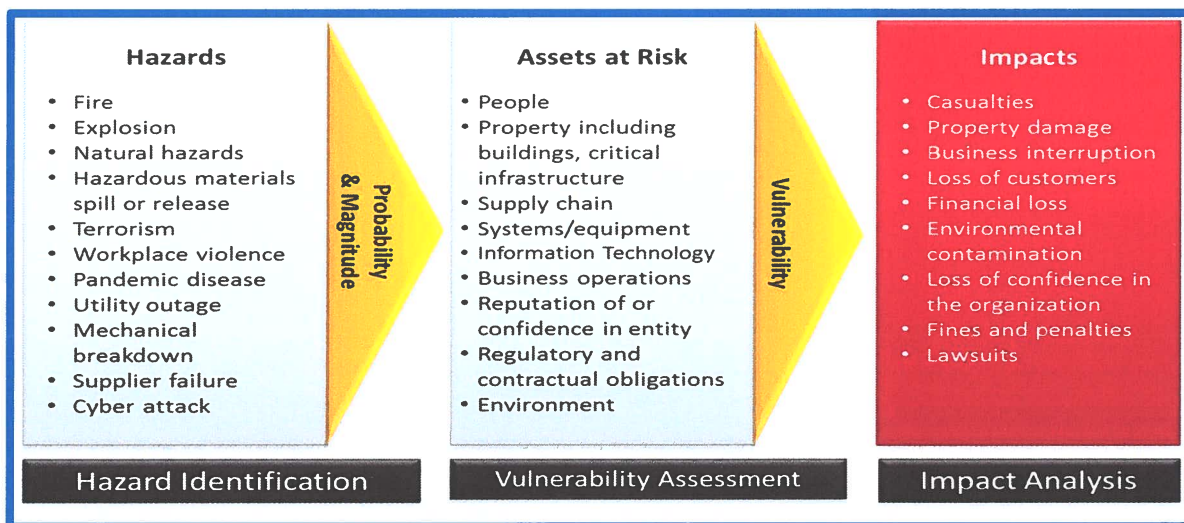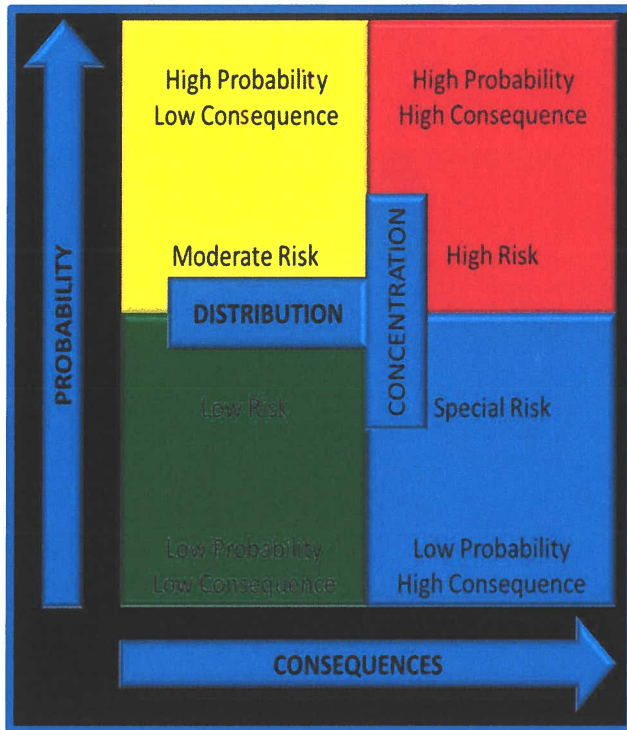

Figure 4
Risk Assessment Process
Image Credit: www.ready.gov/risk-assessment

A more focused fire risk assessment is performed by assessing such factors as the needed fire flow, probability of an incident, consequences of an incident, and occupancy risk. The "score" established is then utilized to categorize the area, or even individual properties, as one of low, moderate, or high/maximum risk. This categorization can assist the fire department in establishing fire risk/demand areas or zones.

Having this information readily available provides the community and the fire department with a better understanding of how fire stations, response run cards, and staffing patterns can be used to provide a higher concentration of resources for higher risk scenarios or, conversely, fewer resources for lower levels of risk.[1]

Figure 5
Fire Probability and Consequences Matrix
Credit: Commission on Fire Accreditation
Intentional

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

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

>   **High-hazard occupancies:** Schools, hospitals, nursing homes, high-rise buildings, and other high life-hazard or large fire-potential occupancies.
>
>   **Medium-hazard occupancies:** Apartments, offices, mercantile, and industrial occupancies not normally requiring extensive rescue by firefighting forces.
>
>   **Low-hazard occupancies:** One-, two-, or three-family dwellings and scattered small business and industrial occupancies[2].

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[1] Fire and Emergency Service Self-Assessment Manual, Eighth Edition, (Commission on Fire Accreditation International, 2009), p. 49.
[2] Cote, Grant, Hall & Solomon, eds., Fire Protection Handbook (Quincy, MA: National Fire Protection Association, 2008), p. 12.

The NFPA also identifies a key element of assessing community vulnerability as fire department operational performance which is a comprised of three elements: resource availability/ reliability, department capability, and operational effectiveness[3].

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

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

> **Operational effectiveness:** The product of availability and capability. It is the outcome achieved by the deployed resources or a measure of the ability to match resources deployed to the risk level to which they are responding.[4]

The implementation of successful community risk reduction strategies after completion of a community risk assessment are linked directly to prevention of civilian and firefighter line of duty deaths and injuries. In fact, they directly address goals found in Firefighter Life Safety Initiatives 14 and 15. Virtually every risk reduction program in the fire and emergency services will have elements of what are called **"The 5 Es of Prevention".** These include:

<p style="text-align:center">Education ▪ Enforcement ▪ Engineering
Economic Incentives ▪ Emergency Response</p>

Understanding and addressing only one element will not lead to a successful program. All five "Es" must be integrated into every program for it to be effective[5] (Figure 6). Strong fire prevention codes have been shown to be an extremely effective means to reduce risk in a community. Fire alarm and sprinkler system mandates, for not only commercial buildings but all occupancies, including single family dwellings, dramatically reduces fire risk and increases life safety. Code implementation that doesn't require these, creates an increased risk. Strong code provisions and enforcement have demonstrated a greater ability to decrease fire problems than continuing to acquire more traditional fire department resources.

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[3] http://www.nfpa.org/assets/files/pdf/urbanfirevulnerability.pdf.
[4] National Fire Service Data Summit Proceedings, U.S. Department of Commerce, NIST Tech Note 1698, May 2011.
[5] http://www.beaherosaveahero.org/2013/10/community-risk-reduction-crr-overview/   February 5, 2016

INSURANCE SERVICES ORGANIZATION (ISO) *RATING*

ISO is an independent risk company that services insurance companies, communities, fire departments, insurance regulators, and others by providing information about the risk. ISO's expert staff collect information about municipal fire suppression efforts in communities throughout the United States. In each of those communities, ISO analyzes the relevant data and assigns a Public Protection Classification – a number from 1 to 10.   This Class rating places the community in the middle of having a commendable fire suppression program for its size. A Class 1 community represents an exemplary fire suppression program, and Class 10 indicates that the area's fire suppression program does not meet ISO's minimum criteria.

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

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

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

While ISO's primary focus is to measure the effectiveness of a community's ability to respond to structure fires for insurance purposes, there are many derivative benefits. These include providing a statistically proven method of measuring performance; a methodology that can help as part of planning, budgeting for and making improvements; a tool that can be used to further the concept of community resilience; and a metric that can help encourage investment in a community.

Community	ISO Rating
Chesterfield	9
Cummington	9
Goshen	9 /10
Plainfield	9
Worthington	9

Figure 7
ISO Ratings

Note: Spilt rating indicates different areas of town
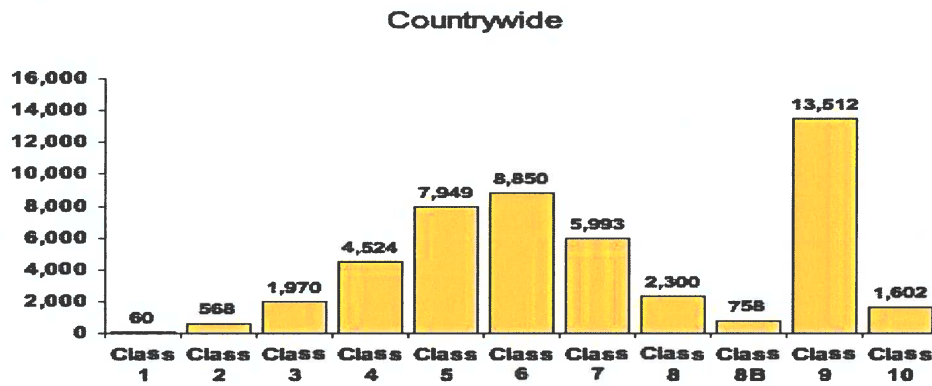
Figure 8
ISO Grading Chart USA
2019

The goal of this initiative should be to move the departments from the current class to a lower class over five years, and ultimately, an even lower class within ten as ISO bands residential insurance rates, it would be fiscally advantageous for the community to move to a lower class. MRI believes that this grade reduction could be accomplished through at least focusing on training and water supply inspection and flow testing. The greatest fire safety concern throughout the area is the potential life loss in fires that occur in non-sprinklered, single and multi-family residential dwellings during sleeping hours, which is consistent with national trends. These fires are fueled by new "lightweight" construction and more flammable home contents. The time to escape a house fire has dwindled from about 17 minutes, 20 years ago,

to three to five minutes today. This poses a severe risk not only to occupants but also to firefighters as they now have less time to do their job and save residents' lives and property.

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

Although it is not clear how many commercial and residential sprinkler systems there are in the study area, it is known that automatic sprinklers are highly effective elements of total system designs for fire protection in buildings. They save lives and property, producing large reductions in the number of deaths per thousand fires, and average direct property damage per fire, especially in the likelihood of a fire with large loss of life or large property loss. They do so, much quicker, and often more effectively and with less damage than firefighting operations. No fire safety improvement strategy has as much documented life safety effectiveness as fire sprinklers because they extinguish the fire, or, at a minimum holds it in check and prevents flashover, until the arrival of the Fire Department.
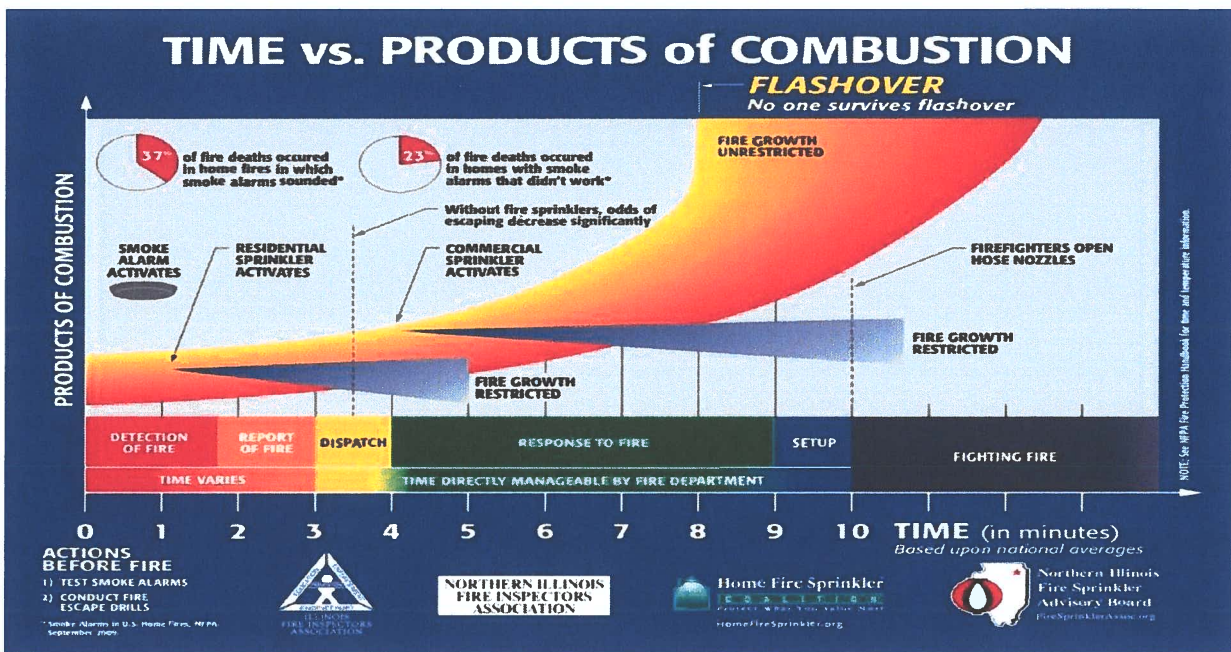
Figure 9

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

Studies from 2007 to 2011 of fires in all types of structures show when sprinklers were present in the fire area of a fire, that was large enough to activate the sprinklers in a building not under construction, sprinklers operated 91% of the time[6]. When they operated, they were effective 96% of the time, resulting in a combined performance of operating effectively in 87% of reported fires where sprinklers were present in the fire area and the fire was large enough to activate sprinklers[7]. **In homes (including apartments), wet-pipe sprinklers operated effectively 92% of the time. When wet-pipe sprinklers were present in the fire area in homes that were not under construction, the fire death rate of 1,000 reported structure fires was lower by 83%, and the rate of property damage per reported home structure fire was lower by 68%.**

Like most communities, all of the study communities have various types of housing that is older, although still well maintained.   Most of these older residential occupancies are wood frame houses.   The fire service further assesses the relative risk of properties based on several factors. Properties with high fire and life risk often require greater numbers of personnel and apparatus to effectively mitigate a fire emergency. Staffing and deployment decisions should be made with consideration of the level of risk within each area of a community.

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

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

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

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

The potential emergency risks present in the towns are not limited to just residential or commercial structural fire incidents. Weather, transportation, hazardous materials, and man-made disasters all add to the overall risk in the community.

It is the project team's assessment that the level of risk differs based on the specific infrastructure and demographics of each community. The level of risk faced by each community and the region overall, can be established based on the information presented within Figure 10.

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

Figure 10
Community Risk Assessment Hazard index

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

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

Ultimately, a comprehensive risk assessment should:

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

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

It is likely, the most significant increase in requests for emergency services will be EMS related. More people simply increase the number of medical emergencies that occur. It would not be unreasonable to expect that the increase in EMS incidents would be proportional to the increase in population; however, that is not always the case. Although a number of factors can ultimately impact the requests for service, such as ages or socio-economic status of new residents, or an aging population, it could reasonably be anticipated that an increase in population, along with potential increases in employment from any significant commercial development, would translate into an increase in emergency medical incidents.

The fire service further assesses the relative risk of properties based on a number of factors. Properties with high fire and life risk often require greater numbers of personnel and apparatus to effectively mitigate a fire emergency. Staffing and deployment decisions should be made with consideration of the level of risk within each area of the community. The assessment of each factor and hazard as listed below took into consideration the likelihood of the event, the impact on the Community itself, and the impact on Community's fire and first response EMS providers ability to deliver emergency services, which includes automatic aid capabilities as well. The list is not all inclusive but includes categories most common or that may be present in the Community as a whole.

Low Risk:

- *Automatic fire/false alarms*
- *Single patient/non-life threatening BLS EMS Incidents*
- *Minor flooding with thunderstorms*
- *Good intent/hazard/public service*
- *Minor fire incidents (fire flow less than 250 gallons per minute) with no life safety exposure*
- *Minor rescues*
- *Outside fires such as grass, rubbish, dumpster, vehicle with no structural/life safety exposure*
- *Small fuel spills*

Moderate Risk:

- *Fires in single-family dwellings and equivalently sized commercial office properties (needed fire flow generally between 250 gallons per minute to 1,000 gallons per minute) where fire and/or smoke is visible indicating a working fire*
- *Life threatening ALS medical emergencies*
- *Motor vehicle accident (MVA)*
- *MVA with entrapment of passengers*
- *Hazardous materials emergencies requiring specialized skills and equipment but not involving a life hazard*
- *Technical rescues involving specialized skills and equipment (such as low angle rescue involving ropes and rope rescue equipment and resources*
- *Larger brush and outside fires, particularly if structures are exposed*
- *Suspicious substance investigation involving multiple fire companies and law enforcement agencies*
- *Surface water rescue*

- *Good intent/hazard/public service fire incidents
  with life safety exposure*

High Risk:

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

Special Risk:

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

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

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FIRE AND FIRST RESPONSE EMS SYSTEM S.W.O.T. PROFILE
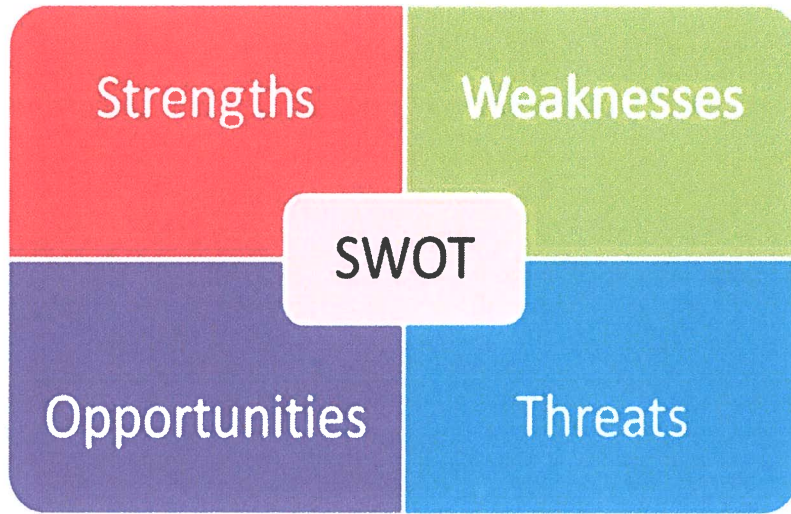
A SWOT analysis is a business term utilized to identify the strengths, weaknesses, opportunities, and threats present within an agency's operating environment. This type of analysis involves specifying the objective or mission of an organization and identifying the internal and external factors that are favorable and unfavorable to achieve that objective.

Figure 11
SWOT Analysis

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

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

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

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

A SWOT analysis can be used to:

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

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

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

Strengths:

- The passion and dedication of all fire and first response EMS personnel – they care and strive to provide excellent service;
- A strong interest by fire department leadership to work with other departments
- A high degree of mission buy-in and ownership;
- A high regard for the customer;
- High quality apparatus and equipment that is well distributed throughout the County;
- Strong support from community leadership;
- Strong support from the public;
- Regularly scheduled training programs;

- Exceptional centralized resources for training and coordination of effort;
- Best practice centralized resource coordination and deployment dispatch system;
- Recognition of current and potential challenges;
- Recognition that there is no one solution;
- High level of engagement in this study;
- A single regional dispatch center providing service to all participating departments;
- A high-quality apparatus set.

Weaknesses:

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

Opportunities:

- Use of legislative processes to secure funding at both the local, regional, state, and federal levels;
- The ability to work with the community to identify the current level of service and set realistic service level/cost expectations;
- Development of regional grant applications to fund a portion of this initiative;

- Increase in regional collaborations and endeavors within the area;
- Create QRF (quick reaction force) model with regional deployment staffed by on-calls paid as per diems as an interim staffing measure;
- Provide Highland ambulance with a backup unit during QRF hour;
- Development of more intensive local recruitment and retention efforts;
- Development of dual role positions to bolster daytime response;
- Address recruitment and retention area-wide, by consolidation of efforts;
- Demonstrate problem solving abilities through programs and by providing a model approach to the declining on-call crisis;
- Explore new forms of outreach and marketing to inform the community of the challenges ahead;
- Marketing and communicating the social identity and benefits of being an on-call firefighter in the Fire Department;
- Identify and harness the best practices from across the nation relative to the further development of recruitment and retention strategies;
- Develop new support roles for on-call personnel (tech, social media, marketing, etc.).

Threats:

- The fire services' ability to improvise and get a mission accomplished despite the absence of appropriate financial resources;
- The inability to provide a timely response to multiple overlapping emergency calls;
- The projection of a problem that does not exist, described as "a crises without evidence". The fire department sees the service gaps but the public sees and accepts a level of service continuity that goes against the description of the problem;
- Continued decline of on-call firefighters across the study area, part of an overall nationwide reduction in volunteerism;
- Continued exodus of younger, trained on-call personnel to career job opportunities;
- The financial costs to communities who will be required to take over the delivery of fire service delivery in municipalities due to the closing of providers;
- The fiscal and operational impact of the COVID-19 pandemic which may significantly impact on-call participation;
- Fire service agencies that resist being transparent about their finances even as they request additional public funding;
- Reduction in operational safety based on staffing trends;
- Aging on-call personnel who in many cases keep the lights on and the apparatus responding;

- Generational and cultural differences in the emergency services that is not always as inclusive as they should be.

Looking ahead, each community's stakeholders should use the SWOT analysis to further define the most critical issues and service gaps facing the fire and EMS services. These service gaps and critical issues will then be utilized as the framework for establishing the priority for implementation of goals and recommendations in this strategic planning document. Based on the SWOT analysis, the project team believes that the five communities have a strong potential to create a regional augmentation program. However, to be effective each community will need to commit to this collaboration and agree to work together to meet future service expectations and provide a high level of operational safety.

Recommendations

II-1:   *Each Town or a group of towns should develop a five-year plan to enhance training documentation and water supply inspection, and flow testing to move toward reclassifying the ISO ratings.*

II-2:   *A group of towns should develop a ten-year plan to enhance training, documentation, water supply inspection, flow testing, and emergency telecommunications operations to move toward reclassifying the departments to an even lower ISO rating.*

II-3:   *Each department should conduct a thorough Community Risk Assessment and use the assessment as a tool to move the department into the future. Over the next year, a plan should be developed to utilize strengths to pursue opportunities and address weaknesses while mitigating threats. This should be an ongoing process that has member involvement and is moved forward by the officer core.*

IV: INCIDENT RESPONSE TYPES AND TIMES

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

In this section two important factors have been reviewed. The first is the number and type of incidents in each of the three years studied. The second is a series of data that looks at the call volume by times of day as well as the response time.

	2018	2019	2020
Chesterfield	118	114	103
		-3%	-10%
Cummington	101	131	81
		30%	-62%
Goshen	92	102	105
		11%	3%
Plainfield	147	109	88
		-35%	-24%
Worthington	109	127	143
		17%	13%
Year Total	567	583	520
Difference		3%	-12%

Figure 12
Comparison of Annual Call volume

The analysis of the overall call volume is not indicative of what is typically seen throughout the Country. It is unclear why the overall numbers dropped from calendar year 2019 to 2020 by 12%; however, it is likely that call volume has changed due to the impact of the COVID-19 Pandemic, response modifications and the reduced activity within each community. In 2020 the fire response volume within the region averages 1.42 calls per day.

An analysis of the type of incidents the study communities responded to from 2018 thru 2020 was completed with data provided by the dispatch center. The table below shows a broad classification of the types of incidents and an average of the number of responses to each, over the 3-year period. It is important to understand that not all departments provide the exact same level of service. Regardless of the actual incident address, all responses were calculated as it was a service that was provided by a department.

The highest demand for service is for Medical Emergencies followed secondly by hazardous conditions. This class reflects trees and power lines down, spill and leaks etc. Fires themselves consistently reflect 7% of the response volume in each year of the study. Typically, fires start at a higher percentage and drop over the years and medical emergencies climb.

	2018		2019		2020		Average	
Medical Emergencies	373	(66%)	342	(59%)	326	(63%)	347	(62.6%)
Fire Incidents	41	(7%)	39	(7%)	38	(7%)	39	(7%)
Motor Vehicle Accidents	35	(6%)	32	(5%)	30	(6%)	32	(5.6%)
Fire Alarm & Co Alarms	57	(10%)	64	(11%)	48	(9%)	56	(10%)
Assists (service calls)	16	(3%)	22	(4%)	08	(2%)	15	(3%)
Not Classified	15	(3%)	20	(3%)	30	(6%)	22	(20%)
Hazardous Conditions	30	(5%)	64	(11%)	40	(7%)	4	(44.6%)

Figure 13
Fire Department Three Year Call Analysis by Incident type

Incidents by time of day and month were also analyzed. The outcome of the data looked at, is very comparable to other departments that have been looked at over the past few years.

		0000-0359	0400-0759	0800-1159	1200-1559	1600-1959	2000-2359
2020	Chesterfield	3	17	25	20	23	15
	Cummington	4	13	19	13	18	14
	Goshen	7	10	20	22	29	17
	Plainfield	6	12	10	23	24	13
	Worthington	12	12	31	30	36	22
	Total	32	64	105	108	130	81
	Average	4.6	9.1	15.0	15.4	18.6	11.6
2019	Chesterfield	11	7	22	24	33	17
	Cummington	8	8	29	35	34	17
	Goshen	9	11	28	21	26	7
	Plainfield	9	15	23	18	26	18
	Worthington	11	20	23	27	32	14
	Total	48	61	125	125	151	73
	Average	6.9	8.7	17.9	17.9	21.6	10.4
2018	Chesterfield	9	15	24	30	22	18
	Cummington	7	10	19	39	13	13
	Goshen	5	10	16	21	28	12
	Plainfield	13	12	30	31	33	28
	Worthington	10	14	21	30	20	14
	Total	44	61	110	151	116	85
	Average	6.3	8.7	15.7	21.6	16.6	12.1
3 Year Combined	Chesterfield	23	39	71	74	78	50
	Cummington	19	31	67	87	65	44
	Goshen	21	31	64	64	83	36
	Plainfield	28	39	63	72	83	59
	Worthington	33	46	75	87	88	50
	Total	101	147	269	310	319	189
3 Year average	Chesterfield	7.7	13.0	23.7	24.7	26.0	16.7
	Cummington	6.3	10.3	22.3	29.0	21.7	14.7
	Goshen	7.0	10.3	21.3	21.3	27.7	12.0
	Plainfield	9.3	13.0	21.0	24.0	27.7	19.7
	Worthington	11.0	15.3	25.0	29.0	29.3	16.7
	Total	33.7	49.0	89.7	103.3	106.3	63.0
	Average	4.8	7.0	12.8	14.8	15.2	9.0

Figure 14
Incidents by time of day

The time-of-day data indicates that the peak time of service is from 8:00 AM to 8:00 PM. This seems to correspond well with the time most of the residents are up and about and doing their daily business. The second highest time frame was from 8 PM to midnight with 40 calls for service followed by 4 AM to 8 AM, when people are just waking up. Not surprisingly the time frame from midnight to 4 AM, when most people are sleeping indicates the slowest time. What is truly clear, the public needs are twenty-four-hour needs. It is important to be able to respond efficiently and effectively to the incidents all day every day.

The months of the year was next studied, to see how many calls per month each community respond to and what is the average call for each community over the three-year period of 2018 thru 2020. In order to get a better picture of the department's monthly responses the team looked at two distinctively different average figures. The average monthly responses over the three-year period for all towns within the study were 32.18 calls per month. All this information will become important when looking at potential staffing models for the years to come.

Totals and Average over three years (2018-2020)

		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg call per month
Chesterfield	Total	29.0	30.0	14.0	28.0	23.0	20.0	37.0	47.0	24.0	24.0	25.0	34.0	
	Avg	9.7	10.0	4.7	9.3	7.7	6.7	12.3	15.7	8.0	8.0	8.3	11.3	17.0
Cummington	Total	51.0	64.0	29.0	44.0	45.0	49.0	61.0	86.0	43.0	52.0	56.0	68.0	
	Avg	17.0	21.3	9.7	14.7	15.0	16.3	20.3	28.7	14.3	17.3	18.7	22.7	27.2
Goshen	Total	29.0	21.0	25.0	15.0	32.0	24.0	27.0	31.0	36.0	26.0	18.0	15.0	
	Avg	9.7	7.0	8.3	5.0	10.7	8.0	9.0	10.3	12.0	8.7	6.0	5.0	5.7
Plainfield	Total	27.0	28.0	23.0	28.0	18.0	27.0	26.0	30.0	18.0	55.0	27.0	37.0	
	Avg	9.0	9.3	7.7	9.3	6.0	9.0	8.7	10.0	6.0	18.3	9.0	12.3	9.6
Worthington	Total	32.0	35.0	32.0	27.0	28.0	30.0	34.0	42.0	32.0	36.0	20.0	31.0	
	Avg	10.7	11.7	10.7	9.0	9.3	10.0	11.3	14.0	10.7	12.0	6.7	10.3	11.9

Figure 15
Incidents by month

Structural firefighting has become far more challenging and dangerous in the last thirty years. A fire can easily at least double in size and intensity every 30 seconds. If firefighters cannot arrive in a timely manner and attack the fire quickly, a strong possibility exists that a dangerous flashover (simultaneous ignition of all combustible materials in a room) will occur. Flashover can occur within five to seven minutes of fire ignition and is one of the most dangerous events that a firefighter, or trapped civilians, can face. When a flashover occurs, initial firefighting forces are generally overwhelmed and will require significantly more resources to affect fire control and extinguishment.

Heart attack and stroke victims require rapid intervention and care, and transport to a medical facility. The longer the time duration without care, the less likely the patient is to fully recover. Numerous studies have shown that irreversible brain damage can occur if the brain is deprived

of oxygen for more than four minutes. In addition, the potential for successful resuscitation during cardiac arrest decreases exponentially with each passing minute that cardio-pulmonary resuscitation (CPR) or cardiac defibrillation is delayed. The true key to success in the chain of survival is the education and early access to the 911 system by civilians. The early notification coupled with the added skills of properly trained EMS staff that arrive quickly and transport at the appropriate level of care are all key factors in a positive outcome of patients.

For EMS incidents, nationally the standard of care based on stroke and cardiac arrest protocols is to have a unit on scene at a medical emergency within six minutes from receipt of the 9-1-1 call. Considering the future potential of this regional approach, Paragraph 4.1.2.1(4) of NFPA 1710[8], which would be applicable to departments that provide first response EMS operations since they are primarily provided by in station, per diem staff, recommends that for EMS incidents, a unit with first responder or higher level trained personnel and equipped with an AED, should arrive within four minutes of response (five minutes of dispatch of the call), and an Advanced Life Support (ALS) unit should arrive on scene within eight minutes (ten minutes of call receipt. Paragraph 4.1.2.2 recommends the establishment of a 90% performance objective for these response times. CAAS[9] recommends that an ambulance arrive on scene within eight minutes, fifty-nine seconds (00:08:59) of dispatch.

The response time is calculated from the time of dispatch to the time of arrival of the first piece of fire/EMS apparatus. It is also important to keep in mind that there are many possible variables to actual response times such as weather, physical location of the incident compared to the location of the station (travel distance) especially during mutual aid responses as well as other simultaneous calls that may be happening. Four out of five communities have decreased the response time.

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[8] NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Career Fire Departments, 2014 edition (National Fire Protection Association, Quincy, MA), outlines organization and deployment of operations by career and primarily career fire departments.
[9] *The Commission on Accreditation of Ambulance Services (CAAS) is an independent commission that established a comprehensive series of standards for the ambulance service industry.*

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	2020	2019	2018
Chesterfield	11.65	12.44	12.05
Cummington	9.11	9.04	11.45
Goshen	7.41	8.06	8.11
Plainfield	9.2	9.31	11.0
Worthington	14.34	13.39	12.05
Average	10.34	10.44	10.93
Prior year decrease	.10	.49	-

Figure 16
Response times in Minutes

Recommendations

IV-1:   *Each town must look at the response times and work to improve these times in an effort to save lives and prevent property damage.*

IV-2:   *Each Town should be asked to select an appropriate service level, and if that requires the rapid response of a single unit, the town should appropriate sufficient funding to put towards a collaborative two-person day schedule Monday thru Friday. (Greater details on this effort are outlined in Chapter XIII – Mapping Out the Future.)*

IV-3:   *Every effort should be made to preserve the primary responder role of volunteer and on-call personnel within each Fire Department.*

IV-4:   *Each fire department should continue to exist and be funded on the local level. Pursuing regional augmentation strategy should not replace local response.*

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V: STAFFING

Staffing is the biggest key to the success of any fire service response. For the most part the average citizen only sees the amount of shiny red fire trucks a department has and sees that as their "fire department". It has often been said that the fire service can have all the best equipment, but that equipment is useless without a good and efficient crew to operate them. In today's world, call and volunteer firefighters are getting harder and harder to not only recruit but also to retain. This is a nationwide issue that in many communities is now becoming a crisis.

The chart below indicates the staffing levels in each of the study fire departments in the Fall of 2020.

Community	Total	Active	Chief	C2	Captain	Lt	FF	Explorer	Support	Other	
Chesterfield	21	16	1	1	2	2	14	1	0	0	
Cummington	18	13	1	3	0	1	11	0	1	1	Jr FF
Goshen	24	24	1	1	2	3	12	5	0	0	
Plainfield	20	20	1	1	2	2	14	2	1	0	
Worthington	15	8	1	1	2	2	9	5	1	0	
	98	81	5	7	8	10	60	13	3	1	

Figure 17
Staffing Level by Department

Community	Basic EMT or Higher level
Chesterfield	1
Cummington	4
Goshen	4
Plainfield	5
Worthington	1
TOTAL	15

Figure 18
EMS by Department

Having a number of people listed on a roster may give a false sense of security and be misleading. Their participation in training and actual response to incidents shows the real numbers and the level of service the department can actually deliver.

Most firefighters are not providing the service to the community for money. As an example, MRI has studied a Department where 14% of emergency calls received no response from the local community. In an effort to address the situation the Board of Selectmen doubled wages but received no associated increase in participation and response. Although this is an extreme case, other retention strategies may be more effective. It is the hope of most departments to get people interested in performing the services and to keep them as long as they can.

The amount of time that is required to complete training programs should be rewarded. Stipends for making certain benchmarks are another way of compensating staff. A consideration to giving one-time stipends for completing firefighter 1, firefighter 2, different fire officer levels, and EMS certifications are a way of rewarding people for taking the time and completing programs.

NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments,* 2014 edition outlines organization and deployment of operations by volunteer, and primarily volunteer fire departments.

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

1. Paragraph 4.3.1 on Staffing and Deployment states that the Fire Department shall identify minimum staffing requirements to ensure that enough members are available to operate safely and effectively.
2. Paragraph 4.3.2 on Staffing and Deployment states that Table 4.3.2 (Figure 19) 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, without basement or exposures.

Table 4.3.2, Staffing and Response Time				
Demand Zone	Demographics[1]	Minimum Staff to Respond	Response Time[2] (minutes)	Meets Objective (% of the 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 distance > 8 mi.	4	Dependent upon travel distance	90 %

1 – A jurisdiction can have more than one demand zone.

2 – Response time in this table begins upon completion of the dispatch notification and ends at the time interval shown in the table.

Figure19
Staffing and Response times from NFPA 1720

1. *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 two minutes, 90% of the time.*
2. *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.*
3. *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.*
4. *Paragraph 4.7.2 Sustained Firefighting Operations also states that the capability to sustain operations shall include sufficient personnel, equipment, and resources to conduct the appropriate operations effectively, efficiently, and safely.*

Note: While the 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.

Figure 20
Example of a significant incident requiring the response of several communities.

Some jurisdictions add additional response resources and, in some cases, exceed the specifics of national benchmarking for personnel and other resources particularly when the incident is in a larger structure where the life hazard may be higher and/or the potential fire situation much more complex. Personnel needs for fires involving large, more complex structures, such as large senior citizen, assisted living (Figure 20), and commercial occupancies will require a significantly greater commitment of initial personnel, minimally 27/28, according to the 2016 edition of NFPA 1720's companion standard 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*. This should include reported fire incidents in buildings that are fully sprinklered. While sprinklers are highly effective, they are not 100% so. Until such time as the extent and seriousness of the incident can be determined, a full complement of personnel and apparatus should be dispatched.

Figure 21 identifies, and Figure 22 illustrates, the critical tasks and resource deployment required for low to moderate-hazard incidents such as one and two family residential and small commercial structure fires. Although some people advocate that these types of incidents can be handled with less personnel, unless it is a small fire, there is the possibility there will not be enough personnel available to perform all the critical tasks necessitating that some be delayed

CRITICAL TASK	NEEDED PERSONNEL
Incident Command	1
Continuous Water Supply/Pump Operator	1
Fire Attack via Two Handlines	4
Hydrant Hook-Up, Forcible Entry, Utilities	2
Primary Search and Rescue	2
Ground Ladders and Ventilation	2
Aerial Operator (if Aerial is Used)	1
Establishment of an IRIT (Initial Rapid Intervention Team)	2
Effective Response Force	14/15

Figure 21
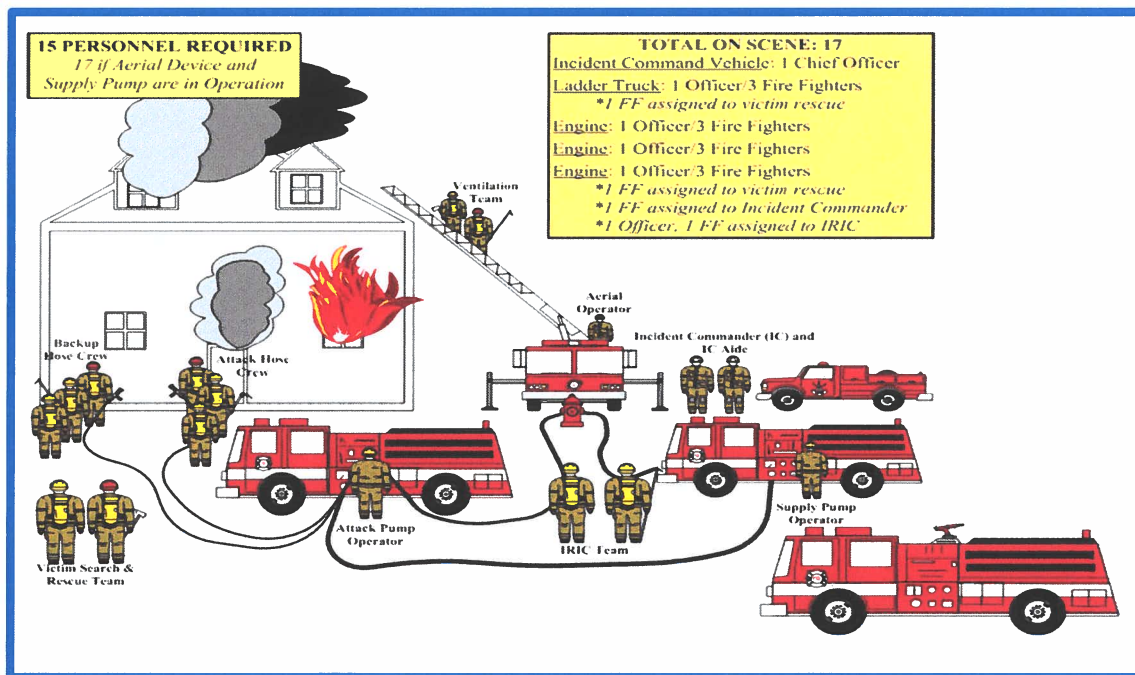**CRITICAL TASKING: LOW AND MODERATE RISK STRUCTURE FIRE**

Figure 22
TYPICAL BASIC STAFFING NEEDS FOR A SINGLE-FAMILY DWELLING FIRE.
Image credit: IAFF 266

These tasks meet the minimum requirements of NFPA 1720 for the initial full-alarm assignment to a typical low-risk, 2000 square foot, 2 story residential structure. These are the proverbial "bread and butter" structural fire incidents that fire departments respond to, and which are, by far, the most common type of structure fire. Personnel requirements for fires involving large,

more complex structures such as commercial or industrial facilities or multifamily residential occupancies will require a significantly greater commitment of personnel.

Respondents to the fire and EMS questionnaire reported that they achieved NFPA 1720 compliance for structure fire response and average of 60.52% of the time. This ranged from a low of six percent to a reported high of 100%.

The 2016 edition of NFPA 1710 recommends a minimum of 27/28 personnel on the initial response for fires involving moderate hazard garden-style apartments and strip shopping centers (Figure 23).

CRITICAL TASK	NEEDED PERSONNEL
Incident Command	2
2 – Independent Water Supply Lines/Pump Operators	2
Fire Attack via Three Handlines	6
Support Firefighter for each Handline	3
2 - Search and Rescue Teams	4
2 - Ground Ladders and Ventilation Teams	4
Aerial Operator (if Aerial is Used)	1
Rapid Intervention Team (1 Officer/3 Firefighters)	4
EMS/Medical	2
Effective Response Force	27/28

Figure 23
CRITICAL TASKING: MODERATE RISK STRUCTURE FIRE

Figure 24 identifies critical tasking for fires involving high risk structures such as hospitals, nursing homes, and assisted living facilities.

CRITICAL TASK	NEEDED PERSONNEL
Incident Command	2
2 – Independent Water Supply Lines/Pump Operators	2
Investigation/Initial Fire Attack Line	3
Backup Line	3
Secondary Attack Line	3
3 - Search/Rescue Teams	6
2 – Ground Ladder and Ventilation teams	4
Water Supply/Fire Department Connection	2
Aerial Operators (if Aerials are Used)	2
Safety/Accountability	2
Rapid Intervention Team (1 Officer/3 Firefighters)	4
EMS/Medical	4
Effective Response Force	35/37

Figure 24
CRITICAL TASKING: HIGH RISK STRUCTURE FIRE

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

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

➤ *The four-person crews were able to deliver water to a similarly sized fire 15% faster than the two-person crews and 6% faster than three-person crews, steps that help to reduce property damage and reduce danger/risks to firefighters.*

> ➤ *Four-person crews were able to complete critical search and rescue operations 30% faster than two-person crews and 5% faster than three-person crews.*

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

Beyond the NFPA standard(s), which as standards do not carry the weight of regulation or law, is the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard, CFR 1910.134, which carries the weight and force of regulation, thus making compliance mandatory. One key provision of the Respiratory Protection Standard that is directly applicable to fire department staffing is known as the "Two-In/Two-Out" rule. In brief, this regulation specifies that anytime firefighters operate in an environment/atmosphere that is "immediately dangerous to life and health" (IDLH), whenever two members enter the IDLH area together/as a team, they must maintain visual or voice communication with two additional firefighters who must remain outside of the IDLH atmosphere, prepared to render immediate emergency assistance to those inside (Figure 25). The OSHA rule does provide an exception, however, which states that the rule does not apply in emergency rescue situations where a person is visible and in need of immediate rescue, or there is credible and reasonable information that potentially viable victims are still in need of rescue.

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

The OSHA:" Two-In/Tow-Out" rule is an essential component of operational safety and should be the basis of fire service operations within the study communities. Despite the rural nature of the area, and the reality of some elongated response times, interior operations beyond a visible rescue should not be initiated until four personnel arrive on the incident scene.
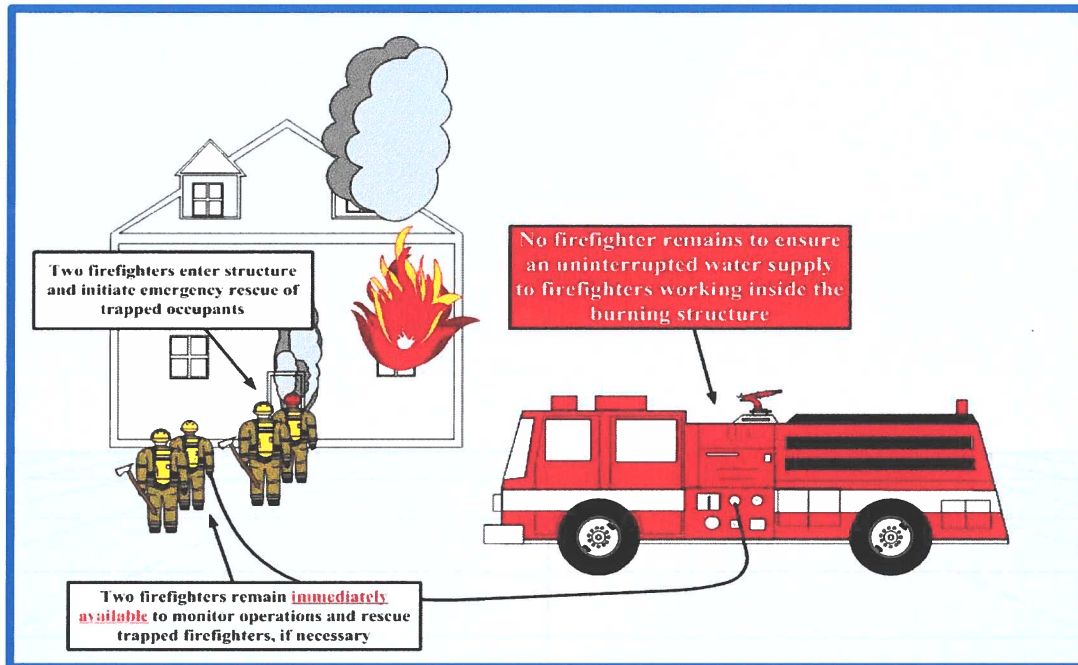
Figure 25
OSHA TWO-IN/TWO-OUT
Image Credit: IAFF 266

Paragraph 4.1, *Fire Suppression Organization* in NFPA 1720[10] states, fire suppression operations shall be organized to ensure that the Fire Department's fire suppression capability includes sufficient personnel, equipment, and other resources to deploy fire suppression resources effectively, efficiently, and safely. Paragraph 4.2.2, *Community Risk Management,* states the number and types of units assigned to respond to a reported incident shall be determined by risk analysis and/or pre-fire planning.

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

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

property damage. It is important that all communities give and receive mutual aid to fires with appropriate staffing of at least 4 personnel one of which should be an officer.

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

The federal government has a version of the Staffing for Fire and Emergency Response (SAFER) grant program that pertains strictly to volunteer and on-call firefighters. It provides competitively awarded funds to municipalities to recruit and retain on-call and volunteer firefighters. The grant funds expenses, such as recruitment campaigns, providing money for such expenses as tuition for college curriculums in fire science, for EMT and paramedic training, for health insurance for call members, for physical fitness programs, uniforms, and various tax incentives offered to attract new candidates to join the Fire Department, and then stay for an extended period of time.

MRI believes that the towns/departments or regional group should attempt to secure a SAFER grant to recruit and retain on-call members for the first time. This grant should note the staffing issue that currently exists and indicate that the grant would be an attempt to meet the NFPA 1720 fire response standard. The goal of developing a viable call force of twenty-five total on-call firefighters would also be a goal to articulate in the grant application. It is quite possible that a portion of the health care program cost described above may be eligible for incorporating in a SAFER grant.

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

Note: much of the following section is inserted as a best practice example of how and where the on-call volunteer staffing is elsewhere and that the participating communities are not alone in working on properly staffing the department.

THE VANISHING ON-CALL / VOLUNTEER FIREFIGHTER

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

In March 2004, the International Association of Fire Chiefs (IAFC) issued a report by the Volunteer and Combination Officers Section, entitled **"A Call for Action: Preserving and Improving the Future of the Volunteer Fire Service"** (Appendix A). Among other things, the report highlighted the fact that the ranks of on-call firefighters nationwide are declining due at least in part, to an increasing demand for services. There are also various other factors that are prevalent to the reduction in the number of on-call firefighters in communities. Among them is that the demographics of many communities today do not support a sufficient number of the type of person who is attracted to the fire service in the 21st century - someone with time to dedicate to public service, or a young person who wants to make a career of it. According to the SR 6 report, the average age of an on-call firefighter in Pennsylvania is 48 years old. In many cases those who are looking for a career leave the Hill town area as soon as they are offered a job, which is often in other nearby states.

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

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

- An overall reduction in leisure time;
- Employment obligations and the common need to maintain more than one job;
- The virtual elimination of employers understanding and flexibility relating to this form of community service;
- Increased family demands;
- Generational differences;
- Increasing training requirements;

- The cost of housing in many affluent communities;
- Organizational culture;
- Internal respect;
- Recognition of personnel;
- Internal communication;
- Department leadership styles and commitments;
- Severe lack of funding;
- Outdated service delivery models;
- Political polarization.

In November 2005, the IAFC Volunteer and Combination Officer's Section released a second report, called **"Lighting the Path of Evolution: Leading the Transition in Volunteer and Combination Fire Departments"** (Appendix B). This report further expanded on issues and strategies for maintaining high service levels to the community, and safety for emergency response personnel while simultaneously keeping costs down. One prominent question asked in the report was **"How can fire departments ensure the delivery of services are reliable?"** The answer was the development of a list of "indicators for change", were fire department managers and local government leaders need to be cognizant of warning signs pointing to potential problems and "prepare for change before it is forced on them by external circumstances". These "indicators" of change include:

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

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

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

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

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

Most of these issues appear to have growing applicability to the communities and its fire service delivery system as a whole. These warning indicators are not necessarily an indictment

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of anything wrong in the area; the same problems are facing on-call fire companies and departments across the state and the entire country. The challenge is finding ways to preserve and improve the fire service in the communities for the foreseeable future.

In September of 2020 the National Volunteer Fire Council published results of a research that was titled and focused around **"Why Do Volunteers Stop Volunteering?"**. In this study former volunteers were surveyed to learn of the reasons they left a department, and these results were compared to the perception of the current volunteer leaders and non-leaders alike. Not surprising to the MRI team, the results indicated the primary reason for leaving was not money; but was due to the lack of support and the lack of flexibility in dealing with the department requirements and that of a family life. In fact, the primary reason for leaving was due to the department atmosphere being full of cliques and groups that exclude others. The current volunteers in the research conducted, indicated that leadership and not focusing on or supporting the needs of members as another of the top three reasons. To round out the top three points of contention, current volunteers cited a lack of clear expectations on how much time and effort is required each week or month to meet training requirements. All of these items will be discussed in the future section of this report.

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

Several key findings of the study include:

1. Four-person firefighting crews were able to complete 22 essential firefighting and rescue tasks in a typical residential structure 30% faster than two-person crews, and 25% faster than three-person crews.
2. The four-person crews were able to deliver water to a similarly sized fire 15% faster than the two-person crews, and 6% faster than three-person crews, steps that help to reduce property damage and reduce danger/risks to firefighters.

3. Four-person crews were able to complete critical search and rescue operations 30% faster than two-person crews and 5% faster than three-person crews.

Although all the fire departments are facing emerging operational staffing challenges, the project team believes that all the departments can remain successful, primarily on-call organizations, with reduce response times, and meeting OSHA "Two-in/Two-out" for at least the next decade. However, continuing the on-call composition of the organization will require a concerted effort and the deployment of several best practices, and non-traditional strategies. Although the department is open to new members, a new level of effort needs to be directed toward recruitment and retention initiatives.

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

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

SEVEN MOST SIGNIFICANT CHALLENGES FACING FIRE SERVICES

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

1. Rapidly diminishing staffing pool for fire operations, part of a nationwide trend. The cost associated with addressing this issue will be the biggest challenge ahead for all the stakeholders, both internal and external.

2. Emerging generational differences that often produce a lack of understanding on both sides.
3. The time commitment required for certifications and continued training.
4. Tapping into the high school aged students and the ability to market the fire service.
5. Elongated response times based on a lack of available personnel, requiring mutual aid for even basic operations;
6. The skill set required in today's high-tech environment will need to be adapted to.
7. The need to train in new work force prior to the active members aging out.

IMPLICATIONS OF NOT TAKING ACTION

The challenges that are facing the fire and EMS services in all of the departments in and around the study has sometimes been referred to as, *"a crisis without evidence"*. The MRI project team heard this multiple times. But make no mistake, there is a crisis that is slowly building, and has been for a considerable period. The reason that many stakeholders – municipal leaders and the general public – do not see "evidence" is the long tradition in both the fire and EMS services of "getting the job done". It has long been known that when people have a problem they don't know how to deal with, they call the fire department because two things are certain when they do: 1) the fire department will come, and 2) they will figure out how to deal with the problem or find someone that can/will. Despite robust rosters, decreasing participation translates to longer response times and having fewer appropriately trained personnel on the incident scene.

Looking ahead, the implications of not taking action will be quite simple: service levels will begin to diminish, some companies and EMS agencies may fold under financial pressures, and fewer and fewer (most likely) aging members will be trying to respond to an ever-increasing number of requests for service.

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

Recommendations

V-1: *Fire Departments should require its personnel, and strongly encourage its call officers, to obtain a certain level of fire officer certification as a job requirement, such as Fire Officer I for lieutenant, Fire Officer III for deputy fire chief, and Fire Officer Level IV for fire chief.*

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

V-3: *As part of the succession planning process, the Fire Chiefs should work to implement a professional development program to ensure that all officers can perform their superior's duties, as well as identify the core future leaders of the department.*

V-4: *All Departments should continue to foster and support any member to be trained and certified to the Firefighter 1 and preferably the Firefighter 2 level.*

V-5: *Working with the training officer more training should be planned delivered and documented. In an effort to keep members interested in training the department should be creative and offer training that is outside the normal programs. Making programs fresh, fun and to some degree competitive, may increase the participation by members. If it's the same old training, people will lose interest. Make it so they want to participate and at the same time meet training goals.*

V-6: *In consultation and cooperation with its neighboring departments, all participating Fire Departments should enter into formal automatic aid agreements that specifies the number and types of resources that should be dispatched immediately to various types of reported emergencies, such as structure fires. These recommendations should be based upon a community-wide risk management process and/or pre-fire/incident plan.*

V-7: *Although more stringent than the requirements found in Table 4.3.2 of NFPA 1720 for rural communities, through the utilization of automatic aid agreements with neighboring communities, Fire Departments should consider the adoption of an SOC with the goal of attempting to have at least 16 personnel on the scene of any reported structure fire within 14 minutes.*

V-8: *Fire Departments should make it a priority to improve its first unit on scene response times, including the adoption of a SOC, for the town. The SOC should be based upon a hybrid of the NFPA 1710/1720 and Commission on the Accreditation of Ambulance Services (CAAS) recommendations.*

V-9:   *Fire Departments should review standards of cover benchmarks, to have the first unit responding to emergency incidents within one minute of dispatch (staffed station), and have the first unit on scene within eight minutes after responding to all types of calls, 90% of the time. With the current staffing model in place and no other calls in progress, this is something that can be met, if the staff in the station is properly qualified with the appropriate level of training and qualifications. A closer look at simultaneous calls and calls that run back-to-back (ambulance is transporting, and a second call comes in) should be looked at. At the time of this evaluation the program of having per diem staff in the station was still in its infancy, and it is not known if the station was sufficiently covered while this crew was committed to the first call.*

V-10:   *Fire Departments should work with the communities listed on each of the "run cards" to assure the number and qualification of staffing, that will be sent on the assignments. In order to be able to meet a safe level of on scene staffing, it will be important to know not only what the department will be receiving and how long it will take, but also to outline what each town will be sending, when these communities request resources from them.*

V-11:   *Review the department roster and look to the members with low participation and find out what can be done to increase their involvement. Work with these members to increase their participation within a pre-determined time frame.*

V-12:   *Fire Department should set a minimum criterion for members to remain in active status. This criterion should include both minimum training and response to incidents for a determined time period (one year). This criterion should also allow for people to go into an inactive status for a period of time due to approved circumstances. It would be important for inactive-status people to make up any important training prior to being put back on active status.*

V-13:   *The town should consider encouraging members of Police Departments that live in the area to become on-call firefighters.*

V-14:   *Fire Departments should work with their Road Agents to ensure that on-call firefighters are given preference when DPW personnel are hired.   If on-call members are not interested and or qualified the town should hire personnel that are willing to become an on-call firefighter as a condition of employment.*

V-15:   *Unless critical DPW operations are underway, DPW personnel that are on-call firefighters should respond to emergencies to supplement staffing and assist in meeting the OSHA "Two-in/Two-Out" Standard.*

V-16: Towns either individually or jointly should apply for a federal SAFER grant for on-call recruitment and retention. This grant should be utilized to develop a comprehensive marketing program to attract new members, and provide incentives for the retention of those personnel, such as tuition reimbursement, health care benefits, tax abatements, etc. This competitive grant requires a lot of time and dedication to write and to be successful to obtain.

V-17: All towns should recognize that the only way to develop a more active and properly staffed fire department in the absence of hiring a larger force of career firefighters is to determine what would motivate potential responders and craft a program of investment that meets these extrinsic and intrinsic needs.

V-18: All towns should jointly convene a focus group to determine what concepts and recruitment and retention strategies are feasible and most attractive to potential candidates.

V-19: Fire Departments should set a realistic goal of recruiting at least 5 to 10 new members over the next three years, and simultaneously set a goal of increasing the overall call member force to around 25 to 30 active personnel. These personnel should be required to be properly trained and certified to the Firefighter I/II level, and preferably to the minimum of EMR level.

V-20: All Departments should make it a priority to develop an active on-call recruitment program led by a Chief Officer. At a minimum, this program should consist of:

1. Developing a recruitment brochure and mailing it to all residents;
2. Holding periodic open houses at the fire station;
3. Performing public outreach through the local media;
4. Contacting community and service groups;
5. Developing an eye-catching banner on the town's and fire department's web sites;
6. Placing signs recruiting call/volunteer personnel at the main entrances to town;
7. Placing a temporary sign board at various locations within the community;
8. Placing signs for call/recruiting volunteers in local businesses, particularly high-volume locations;
9. Implementing a fire explorer program;
10. Radio and media advertisements;
11. Although time consuming, consideration should also be given to conducting a door-to-door recruitment campaign of every residence in the town;

12. *The proposed SAFER Grant could be utilized to cover many of the above expenses.*

V-21: *The Fire Chief should develop a social media presence and involve other members of the department in this endeavor. The use of social media like Facebook and Twitter are what the younger generation use, and a very active social media account has the opportunity to reach out to this group of people for hiring.*

V-22: *The Fire Chief or his designee should create a quarterly "newsletter" that will highlight the positive things that the department has done the prior months. This newsletter should be posted on the town's web page, shared in social media, given to the town manager who in turn should share with the Board of Selectmen. It is important that the public is made aware of all of the great people and all the good things the department does.*

V-23: *The towns and the fire departments should attempt to enter partnerships with local businesses to allow their personnel to respond, when needed, to emergency incidents during working hours, without any financial penalty.*

V-24: *The towns should explore the feasibility of utilizing, and in fact encouraging, town employees to perform "dual roles" by serving not only in their full-time positions, but also serving the town as call firefighters and/or rescue personnel. Caution is needed here though as there are provisions of the Fair Labor Standards Act that would be applicable, particularly if these personnel respond to incidents during times when they are not working.*

V-25: *Fire Departments should develop a series of team-based activities that build involvement in the organization.*

V-26: *All officer positions, from lieutenant to fire chief, should be filled based upon the person's firefighting/emergency services training, certifications, and experience, commensurate with the position being sought, along with successful completion of a formal, rank appropriate assessment process, and a basic practical skills evaluation.*

V-27: *Fire Department should ensure that all department members are trained/ certified to the minimal NIMS level required for their duties/responsibilities and ranks. In addition to the basic I-100/I-700 training mandated; it is MRI's recommendation that all officers should be trained to the ICS-300 level. All chief level officers should be trained to the ICS-400 level.*

V-28: *Visit the National Volunteer Fire Council web site for cooperative programs they have posted. One of the newer programs is looking to attract returning or former military personnel into the fire service.*

VI: AUTOMATIC AND MUTUAL AID PRACTICES

Paragraph 4.1, *Fire Suppression Organization* in NFPA 1720[11] states, fire suppression operations shall be organized to ensure that the fire department's fire suppression capability includes sufficient personnel, equipment, and other resources to deploy fire suppression resources effectively, efficiently, and safely. Paragraph 4.2.2, *Community Risk Management,* states the number and types of units assigned to respond to a reported incident shall be determined by risk analysis and/or pre-fire planning.

The overall study has seen an increase in providing and receiving mutual aid from other area departments. This is a trend that has been increasing throughout the fire service in the country over the past few years. Most departments are requesting mutual aid sooner due in large part to the low level of staffing levels to allow for safe operations at incident scenes and also due to the larger fire volume and exposure threats that are being found.

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

At the time of this assessment, it appears that most departments do 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 recommended four. It is MRI's opinion that most departments, with their current personnel resources, will rarely be

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

able to get either sufficient apparatus or firefighters to the scene of a significant incident without turning to their neighboring departments for assistance. 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.

It is important that all communities give and receive mutual aid to fires with appropriate staffing of at least 4 qualified personnel one of which should be an officer.

From discussions with the Fire Chiefs in the study, it appears that for the most part automatic aide is being requested. The MRI team would encourage each community to review this and that this becomes the norm for most fire calls and if appropriate, EMS calls.

VII: ON CALL RECRUITMENT AND RETENTION

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

As was described in the section titled ***"The Vanishing Volunteer",*** the number of on-call firefighters across the country is rapidly declining, a trend that has been occurring for several decades (Figure 26). To demonstrate this point, the project team utilized Pennsylvania as an example. According to the Pennsylvania Fire and Emergency Services Institute, the number of on-call firefighters in Pennsylvania have declined from around 300,000 in the 1970's, to about 60,000 in the early 2000's. and to 38,000 in 2018. It should be noted also that Pennsylvania has one of the strongest and proudest traditions of on-call firefighters in the United States, and, has more on-call fire companies than any other state.
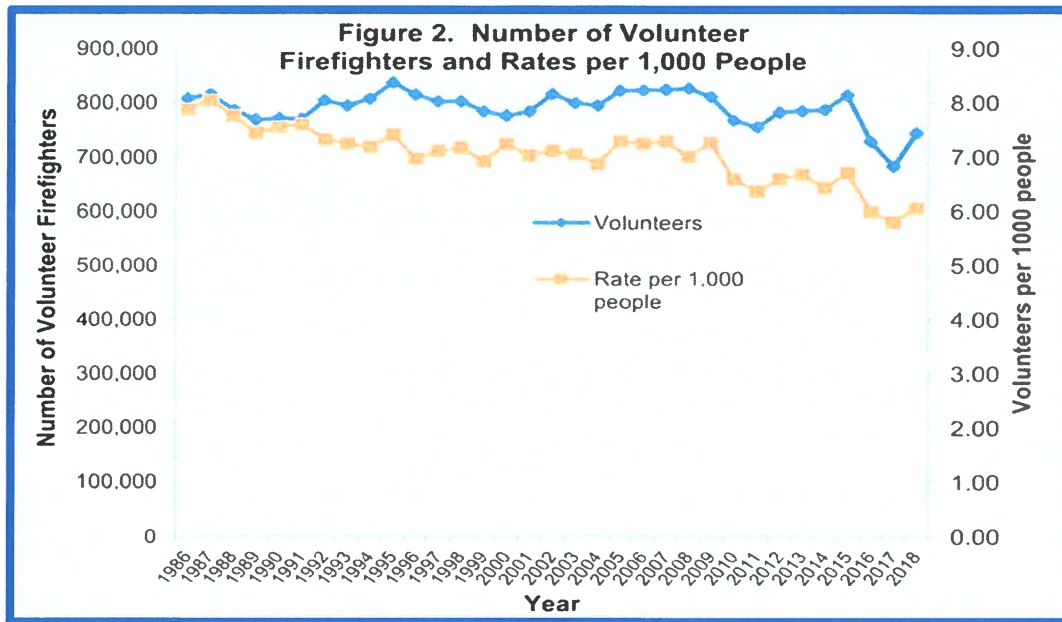
Figure 26
NUMBER AND RATES OF VOLUNTEER FIREFIGHTERS: 1986 – 2018

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

On its own, this number may look to be sufficient for the activity level. However, in almost any on-call emergency services organization there is going to be a percentage of members whose names still appear on the "active" roster, yet they no longer truly are, or are minimally so, for a variety of reasons. Factor in that most members of the department have a primary job, other than the Fire Department, that probably limits their availability to respond, mostly during normal business hours, and the current personnel picture becomes much more of a concern.

Based upon the analysis only about three or four of the on-call personnel respond to incidents on a regular basis.

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

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

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

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

In August 2017, a Fire Chiefs association was awarded a SAFER grant for $381,000 for volunteer recruitment and retention. In June 2019, the MRI project team had the opportunity to be present at a committee meeting which was attended by five members, consisting of two fire

chiefs, two firefighters, and a vendor who is providing marketing services. Some of the obstacles to recruitment that have been identified include:

A. Prospective members sometimes have difficulty connecting with local fire departments and feeling welcomed to the organization.
B. Websites often do not market properly. A random sampling of fire department and municipal websites by the MRI project team found that almost none have the need for call firefighters and first response EMS personnel displayed prominently in a pinned or scrolling heading, on the home page of their websites. Many have a tab, but they are often in with the website's other tabs.
C. Recruitment itself is a very involved, time consuming and labor-intensive endeavor. It needs to be conducted almost continuously and to be successful it must have follow-through and a true commitment to put in the effort.

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

An example advertising and marketing campaign called Help Fight Fire. A website dedicated to this effort is located at https://www.helpfightfire.com/. A campaign such as the example depicted could be a valuable resource to the Fire Departments.

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

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

- Placing a prominent banner or link on the home page of each fire company and municipal website and along with on all social media platforms. This should be done as a priority that can be accomplished for little to no cost.
- Conducting a recruitment mailing to all residential properties in each municipality with information about the fire company and recruiting new members.
- Placement of temporary signboards at various locations throughout the Community in addition to the billboards from Help Fight Fire. At least one fire company does this in their response area.
- Placement of a recruitment message on the signboard at the various municipal buildings and fire stations.
- Working with local businesses to form partnerships that would allow employees to leave work to respond to emergency incidents when needed.
- Appoint an on-call firefighter "Recruitment and Retention Coordinator" to develop, implement, and coordinate these activities. This should be undertaken as a community endeavor.
- Provide a reduction in property taxes, or a tax abatement incentive, for on-call service.
- Provide on-call firefighters with community-based benefits such as free dump stickers, etc.
- Provide community-based awards and recognitions such as implementing an incentive for members that attain a level of more than 25% response. An example would be to provide gift certificates for local restaurants, concerts, or other entertainment as a reward for attaining a high level of response.
- Distribute posters to convenience stores, gas stations, restaurants, and other high traffic locations seeking to recruit new members.

Figure 27
On-call recruitment poster from Recruit NY volunteer recruitment program

Figure 28
Recruitment poster

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

As the Hill towns and the surrounding areas become more diverse, the Fire Departments in the area will need to adjust accordingly to be more inclusive and welcome in new members from different cultures. This is a changing dynamic that the fire companies will need to maintain awareness of as they try to determine the most effective focus of their recruitment, and perhaps more importantly, retention efforts. One of the most important keys to the latter, is that the fire company presents a positive and inclusive atmosphere and there is a sense that the leadership is competent. In addition, disciplined, policy driven on-call organizations are often more successful than those where there is little to no discipline and the attitude is, "we're only on-call, so leave us alone".

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

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

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

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

- Keeping prospective members engaged throughout the entire recruitment process with emails and phone calls;
- Clearly articulate expectations;

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

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

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

B. Implement a tracking program to follow the member's progress through their probationary period. Are they engaged and showing interest? Are they hitting the right marks? Where do they need help? Any number of programs can also to help track key certifications, schedule duty shifts, hold emergency contact information and more.

C. Create a "New Member Guide" with various checklists, progression information, copies of primary response maps, key forms and other critical details they'll need to know as a member of the fire company. Solicit the **"what"** for the document from both the department's longstanding members (what do they wish new members knew sooner?) and the newer members (what do they wish they had known faster when they first joined?)

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

There are no easy or guaranteed solutions to the declining number of on-call firefighters and the related staffing quandary facing communities throughout the country. It is also important to stress that what may work in one community or fire company with regards to staffing and on-call recruitment and retention, may not work in another nearby community or the fire

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company next door. Each community and fire company must individually determine what programs, incentives, and motivations will work, and be most effective in their community or company. It is also very important to advise the stakeholders in the towns that should they decide to transition from a mostly on-call fire service, to a more combination service, the process may be difficult. However, this situation is one that many fire companies/departments and communities experience during the time of their evolution, and growing pains would not be unique at all to the departments.

One huge unknown for the fire and EMS services is the long-term implications of COVID-19 Pandemic from a personnel standpoint. The implications here could be particularly acute to the on-call services. In New Jersey, as well as other states, several on-call EMS organizations were forced to suspend operations due to a lack of personnel to provide coverage and response to calls. The on-call emergency services are aging (the average age for an on-call firefighter in Pennsylvania is 48), so a significant percentage of on-call responders are going to be at, or close to, being higher risk just based upon their age, without factoring in any other underlying health issues. These personnel may decide it is time to take a well-earned retirement. Younger members with families may find themselves reassessing the risks involved in providing on-call services and conclude that it is too great and step away. The pandemic is also certain to impact future recruitment efforts. The Fire Departments need to monitor this situation and be prepared for whatever the results ultimately are on their membership.

The Federal Government has a version of the Staffing for Fire and Emergency Response (SAFER) grant program that pertains strictly to on-call firefighters. It provides competitively awarded funds to municipalities to recruit and retain on-call firefighters. The grant funds expenses, such as recruitment campaigns, tuition for college curriculums in fire science, EMT and paramedic training, health insurance for call members, physical fitness programs, uniforms, and various tax incentives offered to attract new candidates to join the Fire Department, and then stay for an extended period of time.

MRI believes that the town/department or the region should attempt to secure a SAFER grant to recruit and retain on-call members. This grant should note the staffing issue that currently exists and indicate that the grant would be an attempt to meet the NFPA 1720 fire response standard. The goal of developing a viable call force of twenty-five total on-call firefighters, would also be a goal to articulate in the grant application. It is quite possible that a portion of the health care program cost described above may be eligible for incorporating in a SAFER grant.

Even if the recruitment obstacles can be overcome, hurdles remain before a new member is a productive member of the department. Once an individual becomes interested in becoming an on-call firefighter, they must achieve a level of ever-increasing specialized skill that is time consuming. Often exit interviews reveal that the training commitment alone is daunting and

one of the primary reasons that on-call personnel resign. It is also costly to the department. To become a certified firefighter takes several hundred hours. Once certified, there are the dozens of hours training annually spent maintaining firefighter and EMT or paramedic (if required) skills and certifications. Unfortunately, in 2020, the average citizen does not want to spend a great deal of personal time dedicated to the fire and emergency services, especially when family commitments take priority. In addition, many on-call firefighters in departments that have a career force handling the day-to-day emergencies, find it hard to stay motivated if they are not being utilized frequently. Other reasons are for difficulty recruiting and retaining members include:

- An overall reduction in leisure time
- Employment obligations and the common need to maintain more than one job
- Increased family demands
- Generational differences
- Increasing training requirements
- Organizational culture
- Internal respect
- Recognition of personnel
- Internal communication
- Department leadership styles and commitment

VIII: Budgets

		2019	2020	2021
Total Budget	Chesterfield	$ 38,031.00	$ 38,171.00	$ 39,606.00
	Cummington	$ 21,171.00	$ 22,204.00	$ 22,489.00
	Goshen	$ 56,583.00	$ 57,003.00	$ 57,157.00
	Plainfield	$ 33,810.21	$ 35,952.71	$ 35,685.71
	Worthington	$ 19,390.75	$ 21,522.86	$ 22,800.00
	TOTALS	**$ 168,985.96**	**$ 174,853.57**	**$ 177,737.71**

		2019	2020	2021
Capital	Chesterfield	$ 31,841.00	$ 32,121.00	$ 32,643.00
	Cummington	$ 4,000.00	$ 4,000.00	$ -
	Goshen	$ -	$ 75,000.00	$ -
	Plainfield	$ 55,000.00	$ -	$ -
	Worthington	$ -		$ -
	TOTALS	**$ 90,841.00**	**$ 111,121.00**	**$ 32,643.00**

**Figure 29
Budget 2019-2021**

It is important to note that not all budgets above consist of the same components. For example, some community budgets include some or all of the expenses for the facility (fire station) and the maintenance and repairs to them, others do not. It is also important to note that not all departments pay the staff at the same rates and in fact some are still volunteer departments.

The annual budgets also do not include any bond payments for capital items where the funds have been borrowed and payments are being made.

The budgets for the departments appear to be in line for the current operations that are being supported. Due to the nature of how each department and its members are or are not compensated have a great deal of impact on the overall operational budgets are made up. The budgets are included in this report as a reference and should be referred to when the report is reviewed, and future actions are being considered.

IX: APPARATUS AND EQUIPMENT

Figure 30
Example Apparatus from the Study Area

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 regional response area is primarily rural communities with the expected limited fire potential such communities usually present. However, new single-family dwellings are nearly all built utilizing lightweight construction which presents many safety hazards to firefighters. These factors, as well as projected future needs, must be taken into consideration when specifying and purchasing apparatus and equipment. Every effort should be made to make new apparatus as versatile and multi-functional/capable as is possible and practical.

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

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

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

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

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

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

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

As the value of the apparatus or vehicle depreciates, the maintenance costs are evaluated along with the age, mileage, and engine hours so that expected maintenance costs do not exceed the value of the apparatus or vehicle. When considering apparatus usage, hours on the engine and pump must be taken into consideration. Fire apparatus typically spends more time idling while at the scene of emergencies, or when operating the fire pump at a fire. A rule of thumb that can be used is that each hour on the motor is the equivalent of 30 - 35 miles of actual driving mileage.

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

The departments appear to have an adequate apparatus set based on call volume for all types of incidents except brush or grass fires where additional small 4wd vehicle may be better suited for off road response than a structure piece. A consideration for the number of apparatus is the number of actual qualified responders. It is unclear if the department has enough properly trained and available staff to operate the trucks when they are needed. With the large percentage of the areas being out of a pressurized water district the department should continue with assuring the future apparatus have sufficient water on board with a minimum of 1000 gallons. All the apparatus appears to be well maintained and in good shape. (A full complete thorough inspection was not conducted as part of this project.)

Recommendations

IX-1:   *Each Department should identify and prioritize its most critical equipment, training and/or operational needs, and apply annually to the Assistance to Firefighters Grant (AFG) program. This should include making applications for apparatus capital*

replacement projects that will otherwise be funded through the town's capital budget and at town meeting.

IX-2: *Towns should actively continue to search for other grant opportunities. Grants for fire protection, fire safety, fire prevention, domestic and emergency preparedness, and homeland security may be available from federal, state, corporate, and foundation sources.*

IX-3: *Towns should actively seek out businesses that may be interested in establishing public/private partnerships that could provide, or assist with, funding for various programs, projects, or initiatives.*

IX-4: *Towns should expand its formal replacement plan for equipment. The regular replacement of large cost items such as hose, ladders, PPE, portable radios, AEDs, and even SCBA on an incremental basis will avoid major one-time increases in the annual operating budget where such purchases should be funded. For instance, the hose and ladders on one vehicle can be replaced in one fiscal year, another the following year, etc. The life expectancy of these items can be estimated based on usage and manufacturer's recommendations. Items such as hose and ladders can remain in service indefinitely, provided they continue to successfully pass their annual tests.*

X: STATIONS

The Fire stations are typical New England Fire stations with the design and capacity of call/volunteer departments. Most stations are under size for the type and amount of equipment that is needed to carry out the mission of the departments in a modern-day fire service. Storage and room for expansion is very limited in most if not all the departments in the study. The consolidated reviews of the stations are listed below.

	Sq Feet	Year Built	Bays	# Equipment	Available Space	Training Room Capacity
Chesterfield	1512	1950's	2	4	No	20
Cummington	4806		4	12	No	50
Goshen		1989	3	4	No	40
Plainfield	10,000		6	10	No	80
Worthington		1990's	3	6	No	30

	Living Space	Bunk Rooms	Bathroom	Shower	Kitchen	Storage
Chesterfield	No	No	Yes	No	Small	No
Cummington	No	No	Yes	Yes	135 sq ft	Yes (600 sq ft)
Goshen	Yes	No	Yes	No	Yes	Yes (107 sq ft)
Plainfield	Yes	No	Yes	Yes	Yes	Yes (190 sq ft)
Worthington	No	No	Yes	Yes	Yes	Yes (1063 sq ft)

	B/U Power	Room for Expansion	Notes
Chesterfield	No	NO	Washer/Dryer, files, skid unit stored at Chiefs house due to lack of space
Cummington	Yes	Very Little	Conference Room for 10, Communications 56 Sq ft
Goshen	Yes	Limited	
Plainfield	Yes	Yes	Back up for Northampton Control
Worthington	Yes	Yes	Dispatch area of 90 sq ft/ Office for Police

Figure 31
Fire Station Stats

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Figure 32
Typical Apparatus bay

Figure 33
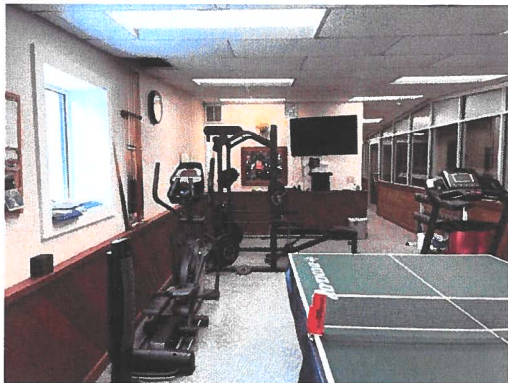**Cummington Fire Front view**

Figure 34
Fitness Area

Figure 35
Conference Room

Figure 36
Kitchen

XI: GRANTS

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

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

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

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

Fire Prevention and Safety Grants support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to target high-risk populations and mitigate high incidences of death and injury.

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

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

XII: DEPARTMENT NEEDS

As part of the teams review of the departments several questions were asked of the Chiefs in order for the team to have a better understanding of the local concerns, problems and needs and hopefully be able to address these in some fashion with recommendations for the future. Although the questions and answers were given to each department it is important to look at each of the following question not only as individual departments but more importantly as the group of departments. The experience from the MRI team is that not any one department within the study group due to size would be able to have all the right equipment and or staffing to handle each of the specialized events listed.

It is clear from the results that there is a great need to increase training and equipment on each of the subjects. There is not a single line with an average that is at or above the middle of the road. This truly is something that a collaborative effort with all the towns involved can be greatly improved upon. Recommendations on how this can be accomplished are forthcoming in this document.

As part of the data collection a set of questions were asked of the Chiefs with combined results listed below.

Question: What are the top three operational concerns with your department?

- Assistant to do paperwork
- Recruiting new members
- Sufficient trained staff for 24/7 responses
- Station and an area for winter training
- Training

Question: What are the top three training needs for your department?

- Live fire
- Officer training
- Hazardous materials
- Tech rescue
- Roof operations
- More regular scheduled training
- Utilization of outside instructors

Question: What are your top three purchasing needs?

- Station
- Tanker
- Air compressor for SCBA filling
- Engine
- Bucket truck
- SCBA
- Rescue truck
- Battery auto X tools
- New UTV
- Mini Pump
- Training props

The project team clearly recognizes and appreciates all the comments from the Chiefs on what they know are the department needs in a variety of ways. Often these comments are seen first-hand and are backed up by the visits conducted by the MRI team and further backed up with the data received and reviewed. It is important that each of the items mentioned are part

of any plan moving forward, and that careful consideration is made to assure that every department need will be in some manner addressed.

XIII: MAPPING OUT THE FUTURE

"A Road Map to Success with proper timing and funding"

The MRI project team found that there was a common thread to many of the department's needs, concerns, and desires. Based on all the information analysis and discussion, MRI proposed the recommendations detailed below. These recommendations have been grouped into seven phases and a means to pace change, evaluate success and provide the necessary resources to support this project.

It is important to keep in mind that these phases are in a particular order, and are dependent on the success of the ones before it. The project team has tried to allow the communities to be able to implement the ideas that work best for the five participating communities and then to take incremental steps to move toward success. Ultimately, it is up to each community and the area as a whole to decide what works best for them and what level of service/fire protection they wish to have.

Regionalization of the fire service is a term that many people are afraid to consider, as there is a thought that the local resources (fire apparatus, fire station and firefighters) will go away, and that the local authority will be diminished. There have been several regionalization discussions that have gone nowhere, and some that have been highly successful. There is also a strong thought that regionalization will cost a community less than they are currently paying and they will get more. Although it is true that regionalizing will no doubt create an economy of scale, that can be the foundation of efficient services, it still will come with a cost. In the long term, 10 plus years, there may be an indicator of cost savings or in some areas the development of a revenue stream to offset the overall costs.

To begin the process, stakeholders in each community town and each Fire Chief, should take the time to thoroughly read and understand the information provided within this report. This group should then sit down as an informal group and discuss the many options they have moving forward. It is MRI's hope that this discussion will lead to a basic plan where communities can individually decide if they wish to continue to participate in the process.

The MRI team sees this process moving carefully forward, with the hope that other towns will join in the process thus expanding the footprint of this regional initiative. It is suggested that each of the recommendations be considered individually; then put into a priority that the group decides will work best. To build the collaboration, it is further recommended that the no cost

items be pursued initially, and then after establishing a track record of success, move forward with items that will require cost sharing.

It is important to note that not all departments will choose to participate, or in some cases are capable of partaking in all the steps identified in this document. It is essential to realize that it is not a good practice to put all your capabilities into one or two departments. The five participating communities should consider capitalizing on organization's strengths, resources and skills while at the same time developing a depth of service delivery.

There are some regional service options that have worked in other parts of the Country and the project team has identified these programs as alternatives. As the five participating communities consider the next steps, there are three options to choose from.

1. The first and most costly will be to create **one regional department**. This new department would consist of both fulltime and combination staffing. The political challenges with this model far outweigh any advantages and if selected would takes a significant period, to obtain authorization from all levels of local governments before it could even get off the ground. The challenges of personnel, equipment, stations, response time, and the vast area requiring coverage will all need to be addressed.
2. The second approach would be to consider a **regional support for independent fire departments**. This regional approach would be for training and policy development as well as consideration for regional fire prevention services. This approach will do little if anything to improve on response times, response levels and more importantly to improve the actual services being delivered to stakeholders in each participating community.
3. ***Regional Hub and Spoke Concept (semi regional approach)*** *which maintains individual fire departments/companies on the local level and amplifies service delivery through regional training, coordination and a single unit quick reaction response force and availability of additional personnel on a recall basis. MRI recommends that this is the optimal approach for the study communities. This initiative is modular in that communities can choose the specific services that would be provided. Examples of services that could be provided are listed below:*

4. Regional training development and delivery

    - Regional policy and Standard Operating Procedure/Guideline development
    - Fire Prevention and inspection services
    - Quick reaction response (single unit)
    - Reserve force activation
    - Mobile integrated health care services

Considering the options outlined above, MRI strongly advocates that the participating hill town communities move forward with the Regional hub and spoke approach, starting off with small pilot programs and then build a larger regional footprint based upon demonstrated success. **MRI believes that developing a hybrid regionalization model that supports existing fire departments is feasible if paced, and developed utilizing a phased approach.** The project team has developed a series of seven recommended phases with each phase building on the success of the previous phase. Where practical, the project team produced a reasonable timeline and a cost estimate for the individual and or combined components of a specific phase.

As with any other budget estimate, costs will need to be recalculated and adjusted on at least an annual basis. To further assist with looking at the individual community costs, the project team used a successful hybrid formula to indicate in dollars, as well as percentage of the cost of the program. This is the foundation to identifying an effective means of cost sharing between the participating communities.

To provide some options for cost sharing, at the conclusion of this section, MRI has harnessed the project team's experience to provide an overview of a few examples of regional cost sharing methodologies. MRI hopes that other area communities will want to become part of this ongoing collaboration and will help spread the overall costs. This economy of scale would serve to proportionally lower the cost per community.

The MRI project team has proposed a timeline to guide the implementation of objectives and provide sufficient time to complete each phase before moving forward to the next step. It is clearly understood that there are many factors that may not allow this timeline to be strictly followed. The timeline can be easily adjusted based on the pace that best serves the communities.
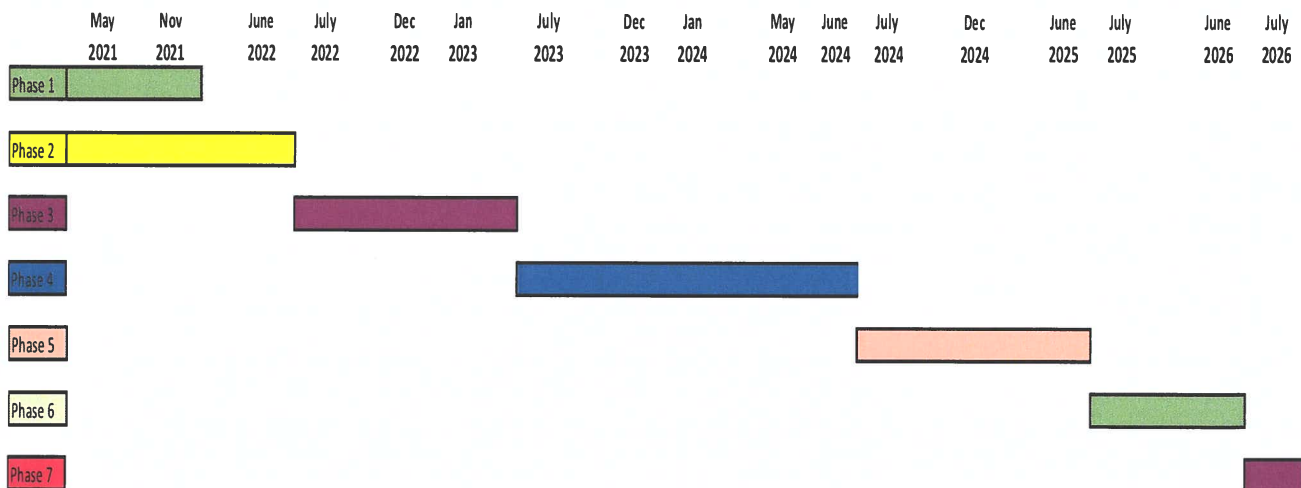

Figure 37
Projected Phased Timeline

NOTE: For each of the phases the project team has calculated a budget figure that will need to be reviewed and possibly adjusted on an annual basis. All staffing line items have been calculated an indirect cost that would reflect the cost to a community. A 21% indirect cost for part-time and a 40% indirect cost for full-time staff has been added.

PHASE 1 - May 2021 – November 2021

In this phase the MRI team recommends that the communities utilize the services of the Eric Weiss and the Pioneer Valley Planning Commission to review this document and to decide how and when they want to proceed. A key component to this phase is to involve the Fire Chiefs, Select Boards, and the staff on the departments. For any improvements to be made at a regional level all the people that are impacted should have some input. Planning will be key to developing budgets and for any true success to happen. It is clearly understood that some departments need things to happen faster than others. In order for anything to be successful it must be clearly vetted by each community first.

Cost = Working with the Pioneer Valley each community will not have to appropriate money but will have to participate.

PHASE 2 - June 2021 to June 2022

Phase two is the foundation of the program. It is here that the creation of sharing of resources and building the necessary relationships will begin to foster. With this phase the collaboration of the departments is truly going to be the key to success. This phase has also been designed as a low-cost phase as budgets will already be in place for the operational period.
Objectives:

1. **SOP Development Team** - Create a team to develop Standard Operating Procedures that each community can follow. To start with, these SOP's cover common operational procedures, examples include wearing of PPE, use of SCBA, May Day procedures, and ventilation operations. To assist with the development of this action item, refer to the SOP index and example in Appendix E.

2. *Online Inventory* - Develop an online inventory of resources and assets that can be quickly referenced by Incident Commanders and Dispatchers. This list should be for items such as boats, ATVs, snowmobiles, Rad 57 Meters, multi gas meters, MCI equipment, water rescue equipment, ice rescue equipment, dive teams, air bags and other special operations resources.

3. **Water Supply Plan -** Each community will need to develop and communicate a water supply plan for specific response areas. This project can be a multi town project as the needs, equipment; water supply locations etc. are similar. The dispatch centers should be consulted for formatting purposes and to enhance the consistency of this plan. The plan needs to be shared and when possible reviewed by all personnel that will be involved in response. Once developed each community should host a training session that involves the use and review of this plan.

4. **Enhanced Automatic Aid -** Automatic aid needs to be expanded as discussed earlier in this document. Each community must assure they have adequate staffing on scene or responding to a fire call to ensure the safety of both the responders and the life safety of the occupants. In areas where water supply is a concern, this additional element must be considered early as the time necessary to establish a static water supply can become an operational barrier. Based on the project team's experience MRI recommends that upon the report of a structure fire four communities be toned to respond.

5. **Cooperative Purchasing -** Equipment needs and purchasing. This is one area that can produce a significant cost savings. Most manufacturers and vendors will offer a price discount based on volume (economy of scale). Participation from all communities is the key to making this concept work. Each department should develop a list of typical annual purchases as well as long term or capital purchases. These should be combined and analyzed to combine purchase timing and specifications to obtain better volume-based pricing. It is not uncommon for a list of this type to be sent out to prospective suppliers to be bid on; thus, eliminating a delay in procurement when items are needed.

Part Time Fire Coordinator - Obtain the services of a part time fire coordinator. This person would keep records, documents and to facilitate meetings and develop regional opportunities that bring the departments together. This position can be an hourly or a salary-based position with an average of 12 hours per week. Some agencies have expanded the responsibility of this position to include significant incident response in support of the local Fire Chief. This operational possibility should only be considered after this position is administratively established.

		Hours	Rate	Weeks	Sub Total	Indirect Costs	Total
Coordinator		12	$ 15.00	50	$ 9,000.00	$ 1,890.00	$ 10,890.00
Office Supplies					$ 500.00	$ -	$ 500.00
Phone reimburse					$ 200.00	$ -	$ 200.00
						TOTAL	$ 11,590.00

Phase 2			**Budget**	**$11,590.00**	Valuation	Population		
Town	Grand List	Square Miles	Population	10% fixed	40% total Budget	50% total budget	Total Amount	% of budget
Chesterfield	$ 165,075,500.00	31.2	1222	$ 231.80	$ 1,011.22	$ 1,430.03	$ 2,673.05	23%
Cummington	$ 136,764,000.00	23.1	872	$ 231.80	$ 837.79	$ 1,020.44	$ 2,090.04	18%
Goshen	$ 173,818,900.00	17.72	1054	$ 231.80	$ 1,064.79	$ 1,233.43	$ 2,530.01	22%
Plainfield	$ 98,187,300.00	21.27	648	$ 231.80	$ 601.48	$ 758.31	$ 1,591.59	14%
Worthington	$ 182,949,300.00	32.1	1156	$ 231.80	$ 1,120.72	$ 1,352.79	$ 2,705.31	23%

Figure 38
Phase Two Cost Sharing Matrix

PHASE 3 - July 2022 – June 2023

This phase has three components that should be considered. The first is the consideration of two or more towns merging fire departments. Due to the staffing levels in this phase the departments would still maintain their individual fire stations, fire apparatus, equipment and staffing. The intent of this merger would be to facilitate cross training of personnel on each departments equipment to increase response. These two stations would respond as a single unit to pre-established types of calls. The goal would be to have a greater number of responders going to any one of the stations (that may be closer to their response location and or closer to the incident) and provide for more of a proper rapid response.
This second component of this phase takes training to the next level with the creation of standardized training components as well as a wide range of training props that can and should be shared among all departments. The importance of unified training on Standard Operating Procedures is the foundation of effective regional response.

The third and final component would harness the talents of members from all departments and to begin to create a cadre of "Specialty Teams". These specialty teams will be a tremendous asset to the region as there is no one department that has the properly trained staff, proper equipment, or fiscal resources to handle these types of incidents alone.

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Resources, Inc.

Objectives:

1. **Continue the services of a part time coordinator.** This person would keep records, documents and to facilitate meetings all to develop a regional opportunity to bring the departments together. It is possible that this person be given some administrative duties for any department that would like it. This position can be an hourly or a salary-based position with an average of 12 hours per week.

2. **Pilot Program – Two or three Departments Share All Personnel** - There has been a great deal of success with departments merging with each other for operational purposes while still maintaining their name and to some degree their own autonomy. In the study area, there are some smaller departments that would benefit by conducting a pilot program of merging. For example, if two departments merged, they would increase available staffing, decrease response time to emergency incidents, add additional response resources to the emergency. These two departments would conduct training together, while still maintaining their own equipment and stations. This type of pilot program could be developed for any towns that feel it may work and it may be with more than just two. These pilot programs should be pursued as a one-year trial with a minimum of quarterly review and discussion that includes input from all the stakeholders. There two examples in the Lakes Region in New Hampshire that this pilot could be modeled after. The Towns of Campton and Thornton have successful and efficiently merged, and the Towns of Tilton and Northfield have merged and can offer some lessons learned.

3. **Emphasize and Expand Firefighter I Training** - is a critical success factor. Although the training may be long it is imperative that all the fire staff have this basic training to keep themselves safe and develop operational capability. Participating departments should join forces and provide the structure and resources necessary to deliver these programs.

4. **Conduct Frequent Shared Training Sessions** – Each participating fire department trainings on similar subjects on a monthly basis. These organizations should join together and offered shared training evolutions on a regular basis. Combining two compartments (or more) at a single training session often adds a new positive dynamic to the training. Training does not need to be mundane and with very little effort it could become a fun active event that people will look forward to.

   Training can be done at different stations on different scheduled nights. If the subject matter and the instructors facilitating the training are willing and available, the program could be offered more than once in different locations and all should be

encouraged to attend one of the sessions. This would not only foster inter agency relationships, but it would provide firefighters with flexibility.

The only drawback to this type of training is that of local preference. It must be stated right up front that in most of the training conducted there may be and often there is more than one way of completing the task. Sometimes it is better to have a change of scenery and a look at a different way of doing something while being respectful of the different way at the same time. More importantly it is ok for people to admit that they do not know something, as long as they are willing to learn.

5. **Develop Shared Training Props -** The creation of realistic training props is a common need of departments. For the most part props do not need to cost thousands of dollars. Plans for the development of these props can be found online. If possible, training props should be shared and constructed to be transported to various locations. If props are made to be available to many departments generally, local stores are more willing to donate supplies to build them (for a little credit). Firefighters can be very creative if given the opportunity to build and operate good safe training props leaving the expensive labor cost out of the equation.

Figure 39
Window Prop

Figure 40
Restrictive Prop

Figure 41
Roof Prop

6. **Develop Officer Training for Current and Future Officers -** There is a lot more to be an officer than just the title. Officers need to be proficient at all things fire service related. This does not happen overnight and is very dangerous if conducted by a populous vote and not that of knowledge skills and abilities. For the fire service to succeed mentoring is a necessity. There is a lot of talent in the senior firefighters, and there is need to develop them into mentors in order to pass along the knowledge base they have.

7. **Apply for A Collaborative Grant to Help Fund Equipment Needs -** It has been shown that a multi town grant application with support letters have seen grant awards. Because a grant will cover more than one community and serve a larger group of the local population as well as a larger group of firefighters and fire departments all with a defined need, would go a long way to demonstrating the need and commitment.

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							Total	
Training Props				$ 5,000.00			$	5,000.00
Equipment				$ 15,000.00			$	15,000.00
						TOTAL	$	20,000.00

Phase 3			**Budget $ 20,000.00**		Valuation	Population		
Town	Grand List	Square Miles	Population	10% fixed	40% total Budget	50% total budget	Total Amount	% of budget
Chesterfield	$ 165,075,500.00	31.2	1222	$ 400.00	$ 1,745.00	$ 2,467.69	$ 4,612.69	23%
Cummington	$ 136,764,000.00	23.1	872	$ 400.00	$ 1,445.72	$ 1,760.90	$ 3,606.62	18%
Goshen	$ 173,818,900.00	17.72	1054	$ 400.00	$ 1,837.42	$ 2,128.43	$ 4,365.85	22%
Plainfield	$ 98,187,300.00	21.27	648	$ 400.00	$ 1,037.93	$ 1,308.56	$ 2,746.49	14%
Worthington	$ 182,949,300.00	32.1	1156	$ 400.00	$ 1,933.94	$ 2,334.41	$ 4,668.35	23%

Figure 42
Phase Three Cost Sharing Matrix

PHASE 4 - July 2023 – June 2024

In this phase, daytime staffing will be added for a minimum of a two-year pilot program. MRI recommends an initial staffing pattern of eight-hour shifts Monday thru Friday with a staff of two people being assigned to an existing piece of Apparatus from a participating community. One of the two positions should be filled with a fulltime person and the second would be from a pool of part time or per diem staffing. This crew would augment the current response policies of participating departments. **The priority for filling the per diem staffing would be from firefighters from within participating departments.** The pilot program should be under constant review and at a minimum on a quarterly basis a SWOT analysis should be undertaken to further define performance and enhance future opportunities.

Objectives:

1. **Expand Fire Coordinators position** - The logistical work as well as the documentation of the Coordinator should continue to build, and the position in this phase will have the hours and rate increased. This person could serve as the fulltime component of the rapid response force listed below.

2. **Create a Regional Rapid Response Force -** With the projected continued increase in response times during the weekday 8-4 hours, the group should look to implement a program that will assist the area with staffing during peak hours. It is recommended that the program have one fulltime fire/first response EMS person working with a per-diem person, that will be scheduled by the coordinator from an active pool of

staff. There will need to be many questions answered before this program starts, some of these questions are listed below:

a. What will the actual work hours be (maximum before benefits for per diem staff)?
b. How many people will be scheduled to work?
c. What will the pay rate pay?
d. What vehicle(s) will they use?
e. What incidents will they respond to?
f. What station will they work out of?
g. How will they be paid?
h. What community will assume them as employees?
i. What will the hiring process be and who will handle this?
j. What will the uniforms and PPE be?
k. Where do they fit in the organizational chart and who do they report to?
l. What other tasks can they do between incident responses?

- ❖ Truck and equipment check
- ❖ Light maintenance
- ❖ Record keeping
- ❖ Inspections
- ❖ Public education
- ❖ Training development
- ❖ Preplanning
- ❖ Target hazard analysis

Phase 4				**Budget $154,384.80**	Valuation	Population		
Town	Grand List	Square Miles	Population	10% fixed	40% total Budget	50% total budget	Total Amount	% of budget
Chesterfield	$ 165,075,500.00	31.2	1222	$ 3,087.70	$ 13,470.04	$ 19,048.69	$ 35,606.43	23%
Cummington	$ 136,764,000.00	23.1	872	$ 3,087.70	$ 11,159.84	$ 13,592.85	$ 27,840.39	18%
Goshen	$ 173,818,900.00	17.72	1054	$ 3,087.70	$ 14,183.50	$ 16,429.88	$ 33,701.08	22%
Plainfield	$ 98,187,300.00	21.27	648	$ 3,087.70	$ 8,012.01	$ 10,101.11	$ 21,200.82	14%
Worthington	$ 182,949,300.00	32.1	1156	$ 3,087.70	$ 14,928.53	$ 18,019.87	$ 36,036.10	23%

Note: The budget figure for this phase includes the costs as outlined below. It should be noted that these are figures that are average for the time this report was created and may need to be adjusted according to standards that are normal for the time frame.

		Hours	Rate	Weeks	Sub Total	Indirect Costs	Total
Coordinator		40	$ 15.00	50	$ 30,000.00	$ 6,300.00	$ 36,300.00
FT FF/EMT		40	$ 18.00	52	$ 37,440.00	$ 14,976.00	$ 52,416.00
PT FF/EMT		40	$ 16.00	52	$ 33,280.00	$ 6,988.80	$ 40,268.80
Props							$ 6,200.00
Tech Rescue							$ 8,000.00
Uniforms -PPE							$ 10,000.00
Office Supplies							$ 1,200.00
						TOTAL	$154,384.80

Figure 43
Phase Four Cost Sharing Matrix

PHASE 5 - July 2024 – July 2025

With the build-out of the program to date, MRI recommends that an official structure be established to guide future action. This group can be made up as an Association, or a Board of Directors, or other similar type of organizational structure. The importance of guidance and professional leadership will be key to the success of the next phases. Whatever the name or structure that will lead into the future, they will need to do so as transparent as possible while at the same time assuring that each community and their fire department are players in the decisions that affect them. The following objectives have been stated as a basis to begin to layout this form or organization. To further assist this, MRI has included in the appendix of this document a working example of By-laws for a regional service area. Without question legal advice will need to be consulted to assure that all Federal, State, and local laws are being followed.

Objectives:

1. **Enter an Intermunicipal Fire Protection Agreement -** Following the guidance of a legal counsel the group should develop and execute an intermunicipal fire protection agreement for shared services. This agreement should be reviewed by Counsel to ensure that it complies with applicable Massachusetts law.

2. **Create a Fire Association -** Following the guidance of a legal professional the group should create a "Association" that follows Massachusetts and Federal Laws.

Simultaneously the group should create a Board of Directors and develop operational By-Laws for all to follow.

3. **Create a Board of Directors -** Create a Board that will be charged with working with all stakeholders in the creation of the "District".

4. **Identify Composition of the Board of Directors -** The Board will consist of a single member of each town's fire department and a single member from town government. Each town should have equal representation on the Board, so it is recommended that there be a two-person maximum.

5. **Fill Key Positions -** This group will come together and create a mission statement and vote on filling the position of Chairman, Vice Chairman and secretary- treasurer (these may be separate positions.)

6. **Create Appropriate Bylaws -** The newly created board will create By-Laws that will govern the group. The first set of By-Laws should be voted on by the Board. The procedure for future additions, deletions, and edits will be part of the By-Laws and should be voted on by the full body.

7. **Evaluate Bylaws -** The By-laws should clearly answer the following questions:

   o Mission and purpose of the group
   o Who belongs to the association (towns), how can a town be included?
   o How is each town represented at the board level?
   o How do other department members have a voice?
   o Will there be a fee structure?
   o Development of a job description for each position on the board
   o How and how often and each position within the board changed
     • For continuity purposes, it is suggested that the Chairman and Vice Chairman are elected with a one-to-two-year separation.

Phase 5				Budget $157,754.40	Valuation	Population		
Town	Grand List	Square Miles	Population	10% fixed	40% total Budget	50% total budget	Total Amount	% of budget
Chesterfield	$ 165,075,500.00	31.2	1222	$ 3,155.09	$ 13,764.04	$ 19,464.45	$ 36,383.57	23%
Cummington	$ 136,764,000.00	23.1	872	$ 3,155.09	$ 11,403.42	$ 13,889.52	$ 28,448.03	18%
Goshen	$ 173,818,900.00	17.72	1054	$ 3,155.09	$ 14,493.06	$ 16,788.48	$ 34,436.64	22%
Plainfield	$ 98,187,300.00	21.27	648	$ 3,155.09	$ 8,186.88	$ 10,321.57	$ 21,663.54	14%
Worthington	$ 182,949,300.00	32.1	1156	$ 3,155.09	$ 15,254.36	$ 18,413.17	$ 36,822.62	23%

		Hours	Rate	Weeks	Sub Total	Indirect costs	
Coordinator		40	$ 16.00	52	$ 33,280.00	$ 6,988.80	$ 40,268.80
FT FF/EMT		40	$ 19.00	50	$ 38,000.00	$ 15,200.00	$ 53,200.00
PT FF/EMT		40	$ 17.00	52	$ 35,360.00	$ 7,425.60	$ 42,785.60
Props							$ 500.00
Tech Rescue							$ 5,000.00
Uniforms -PPE							$ 6,500.00
Office Supplies							$ 1,500.00
Legal Fees							$ 8,000.00
						TOTAL	$157,754.40

Figure 44
Phase Five Cost Sharing Matrix

PHASE 6 - July 2025

Building on the program to assist in moving departments to a more consistent training program, as well as to increase the available response hours of the response team by increase of shift hours from eight to sixteen will be optimal. This would provide a staffing level of a coordinator and two personnel during the day and two personnel for evening coverage.

Objectives:

1. **Increase Rapid Response Force (RRF) Staffing to Two FTEs** - Increase the fulltime response staffing to 2. One will be scheduled to be on duty at a time working with a per-diem staff member. A 40-hour week will be scheduled.

2. **Increase Per Diem Shifts and Staffing Level to Four Personnel.** Increase the number of available shifts for per-diems to work.

3. **Continue fulltime Fire Coordinator Position**- Increase the hours of the coordinator from part time to full time and to take a more active role in operations (training and meetings) and to assist with developing additional regional opportunities to bring the departments together.

4. **Continue Training Program Development** - Continue to fund Training programs. RRF should deliver all regional training programs.

5. **Continue Technical Rescue Program Development -** Continue to fund Tech Rescue program

Phase 6				Budget $314,878.08	Valuation	Population		
Town	Grand List	Square Miles	Population	10% fixed	40% total Budget	50% total budget	Total Amount	% of budget
Chesterfield	$ 165,075,500.00	31.2	1222	$ 6,297.56	$ 27,473.04	$ 38,851.07	$ 72,621.68	23%
Cummington	$ 136,764,000.00	23.1	872	$ 6,297.56	$ 22,761.24	$ 27,723.51	$ 56,782.32	18%
Goshen	$ 173,818,900.00	17.72	1054	$ 6,297.56	$ 28,928.18	$ 33,509.84	$ 68,735.59	22%
Plainfield	$ 98,187,300.00	21.27	648	$ 6,297.56	$ 16,341.03	$ 20,601.88	$ 43,240.47	14%
Worthington	$ 182,949,300.00	32.1	1156	$ 6,297.56	$ 30,447.73	$ 36,752.73	$ 73,498.02	23%

		Hours	Rate	Weeks	Sub Total	Indriect costs	
Coordinator		40	$ 17.00	52	$ 35,360.00	$ 7,425.60	$ 42,785.60
FT FF/EMT - Sr.		48	$ 19.00	52	$ 47,424.00	$ 18,969.60	$ 66,393.60
FT FF/EMT		48	$ 18.00	52	$ 44,928.00	$ 17,971.20	$ 62,899.20
PT FF/EMT		112	$ 17.00	52	$ 99,008.00	$ 20,791.68	$119,799.68
Overtime					$ 5,000.00		$ 5,000.00
Props							$ 1,500.00
Tech Rescue							$ 5,000.00
Uniforms -PPE							$ 10,000.00
Office Supplies							$ 1,500.00
						TOTAL	$ 314,878.08

Figure 46
Phase Six Cost Sharing Matrix

PHASE 7 - July 2026

In this phase MRI is proposing that the Coordinator works Monday – Friday, days (40 hours) and the RRF program move to a 24-hour seven day a week model utilizing three work groups each and full-time staff member and a per-diem member working each shift (24/7).

Phase 7 Budget $453,645.52

Town	Grand List	Square Miles	Population	10% fixed	Valuation 40% total Budget	Population 50% total budget	Total Amount	% of budget
Chesterfield	$ 165,075,500.00	31.2	1222	$ 9,072.91	$ 39,580.47	$ 55,972.82	$ 104,626.21	23%
Cummington	$ 136,764,000.00	23.1	872	$ 9,072.91	$ 32,792.17	$ 39,941.33	$ 81,806.41	18%
Goshen	$ 173,818,900.00	17.72	1054	$ 9,072.91	$ 41,676.90	$ 48,277.70	$ 99,027.51	22%
Plainfield	$ 98,187,300.00	21.27	648	$ 9,072.91	$ 23,542.56	$ 29,681.17	$ 62,296.64	14%
Worthington	$ 182,949,300.00	32.1	1156	$ 9,072.91	$ 43,866.11	$ 52,949.74	$ 105,888.76	23%

		Hours	Rate	Weeks	Sub Total	Benefits	
Coordinator		40	$ 17.00	52	$ 35,360.00	$ 14,144.00	$ 49,504.00
FT FF/EMT - Sr.		48	$ 19.00	52	$ 47,424.00	$ 18,969.60	$ 66,393.60
FT FF/EMT		48	$ 18.00	52	$ 44,928.00	$ 17,971.20	$ 62,899.20
FT FF/EMT		48	$ 18.00	52	$ 44,928.00	$ 17,971.20	$ 62,899.20
PT FF/EMT		168	$ 17.00	52	$148,512.00	$ 31,187.52	$179,699.52
Overtime					$ 10,000.00	$ 4,000.00	$ 14,000.00
Props							$ 1,500.00
Tech Rescue							$ 5,000.00
Uniforms -PPE							$ 10,000.00
Office Supplies							$ 1,750.00
						TOTAL	$ 453,645.52

Figure 47
Phase Seven Cost Sharing Matrix

The total budget amount for all Phases:

Phase	Amount	Start Time
1	$ -	May 2021
2	$ 7,900.00	May 2021
3	$ 20,000.00	July 2022
4	$ 176,216.00	July 2023
5	$ 183,682.00	July 2024
6	$ 357,365.76	July 2025
7	$ 498,499.60	July 2026
Total	$ 1,243,663.36	

Figure 48
Total Budget Calculation

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Cost Sharing Options:

If the communities all agree to move forward with a program that is a combination of any of the above recommendations it will require that there be some type of funding. The simplest way of coming up with the community cost would be to divide the budget figure equally by the number of towns.

There are many other ways to calculate a fee to divide up a budget into a reasonable cost per community. There are also many variables that could be considered when doing the calculations for this purpose. Some are more complex such as combining population and number of structures and others like call volume, dollar loss, are an annual moving target that is hard to use. For this project, the project team has calculated a fee schedule four different ways all using the budget figure of $100,000.00 and uses all other data from 2019. The MRI team does not favor one method over another and is using the types of calculations below to give the communities examples of other ways the costs can be looked at. Obviously if another community that is not part of the study would like to be on board with whatever the collective group decides, then the overall percentage and costs for each community would go down.

The far-right column in each of the first three charts indicates the percentage of the total fire department budget each community would pay.

Population Only			
Chesterfield	1222	$ 24,676.90	25%
Cummington	872	$ 17,609.05	18%
Goshen	1054	$ 21,284.33	21%
Plainfield	648	$ 13,085.62	13%
Worthington	1156	$ 23,344.10	23%
Total	4952	$ 100,000.00	100%

Figure 49
Cost by Population

Residential Strutures

Chesterfield	575	$ 21,391.37	21%
Cummington	505	$ 18,787.20	19%
Goshen	614	$ 22,842.26	23%
Plainfield	340	$ 12,648.81	13%
Worthington	654	$ 24,330.36	24%
Total	2688	$ 100,000.00	100%

Figure 50
Cost by Residential Structures
Data from Citi-Data.com

Call Volume (2020)

Chesterfield	103	$ 19,807.69	20%
Cummington	81	$ 15,576.92	16%
Goshen	105	$ 20,192.31	20%
Plainfield	88	$ 16,923.08	17%
Worthington	143	$ 27,500.00	28%
Total	520	$ 100,000.00	100%

Figure 51
Cost by Incident Volume

Hybrid

Town	Grand List	Square Miles	Population	Fixed 10% fixed	Valuation 40% total Budget	Population 50% total budget	Total Amount	% of budget
Chesterfield	$ 165,075,500.00	31.2	1222	$ 2,000.00	$ 3,724.33	$ 12,338.45	$ 23,063.43	23%
Cummington	$ 136,764,000.00	23.1	872	$ 2,000.00	$ 7,223.59	$ 8,804.52	$ 18,033.11	18%
Goshen	$ 173,818,900.00	17.72	1054	$ 2,000.00	$ 9,137.11	$ 10,642.16	$ 21,829.27	22%
Plainfield	$ 98,187,300.00	21.27	648	$ 2,000.00	$ 5,133.54	$ 6,542.81	$ 13,732.45	14%
Worthington	$ 182,949,300.00	32.1	1156	$ 2,000.00	$ 9,563.63	$ 11,672.05	$ 23,341.74	23%
Total	756,795,000.00	125.39	4952	$ 10,000.00	$ 40,000.00	$ 50,000.00	$ 100,000.00	100%

Figure 52
Cost by Hybrid Formula

All of the above charts are easy to follow except for the last one referred to as a Hybrid that requires a more detailed explanation. This formula has been used in a Regionalized area for many years and works well.

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The Hybrid formula for Community Assessment is arrived at using a method that takes into account fixed costs (10% of the total budget), property valuations (40%) and population (50%) of each community.

- **Fixed Costs is 10%** of the total budget and is divided by the number of communities in the cost share program.
- **Valuation Factor is 40%** of the assessment value (Grand List) on a community's total property value. A formula has been arrived at, that takes these different figures into account and ensures an equitable assessment to each town based on the fact that each one is different.
- **Population Factor is 50%** of the assessment value based on a community's population. The population factor is arrived at by dividing 50% of the total budget by the total population of all member communities.

The Chart below is a side-by-side comparison of the results of the different formulas used to calculate the cost sharing of the $100,000.00 budget for each community. It is MRI's opinion that there is no one single way that is best, and that if there is an appropriate methodology to sharing the costs; it is up to the communities to agree on how the sharing should be done. It should be noted that the formula for cost sharing should be included in the written agreement that is signed each year.

Town	Population	Residential Structures	Call Volume	Hybrid
Chesterfield	25%	21%	20%	23%
Cummington	18%	19%	16%	18%
Goshen	21%	23%	20%	22%
Plainfield	13%	13%	17%	14%
Worthington	23%	24%	28%	23%

Figure 52
Comparison of Formula type

XIV: CONCLUSIONS AND IMPLEMENTING CHANGE

Based upon the analysis of the current day operations of the departments within the study area, the MRI project team has found five functional fire departments that are operating well but struggling to provide the communities they serve with the expected level of service. The departments are well respected in the area. During their time speaking with people for this project, the project team heard how much the departments do for the Community's and how much they are appreciated.

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

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

Looking ahead, the fire departments possess some definitive positive attributes, most notably the dedication of its core membership and the community leadership within each group. This shows there is a strong foundation upon which to build.

However, the departments are also facing serious challenges both today, and looking toward the future. With volunteerism declining and the ranks of on-call and volunteer emergency services personnel dwindling nationwide, all the departments are facing the dual challenges of attempting to balance a credible emergency response system, staffed with on-call or volunteer members, while simultaneously facing a slowly increasing number of requests for service, both emergency and non-emergency.

The culture of the fire service is very resistant to change. This is not something new and certainly not just with the five communities that participated in this study. Whatever changes are made to the department they need to be implemented at a reasonable pace and most importantly communicated to all members ahead of time.

As part of the process in creating this document the Strategic plan dated March 3, 2021 for the Town of Ashfield was reviewed. The document is well done and outlines many of the same concerns and needs the MRI team has found and outlined in this report. The MRI review team does not feel that the recommendations in the Ashfield report line up with the findings, wishes and desires of the communities as part of this study and does not recommend using or comparing that report in considering the future of the study communities.

In conclusion, the missions performed by the fire departments are some of the most basic and fundamental functions of government; to ensure the safety and protection of its residents and visitors. The real issue facing the fire departments, as it is for every community, is to determine an acceptable level of risk and then define an appropriate level of service for the community.

It is the opinion of the assessment team that having a call department is appropriate for the number of incidents and type of calls they respond to. There is no "right" amount of fire protection or first response EMS delivery in any community. It is a constantly changing level based upon the expressed needs of the community. Determining the appropriate level of service also involves deciding upon the municipalities' fiscal ability, and willingness, to pay for the desired level of service. These are decisions that the citizens of the town and the board of selectmen will ultimately need to make.

The challenges brought on by the unprecedented responses to the COVID-19 made this project and research associated with it very much different than what MRI would typically do. The lack of in person community-based meetings and ability to physically see and document more in person is something taken for granted. The tremendous cooperation from all those the MRI Team spoke with, especially; the Chiefs and community leaders has allowed them to do a fair assessment and be able to provide the information and recommendations included in this document.

It is important that the towns continue to support the departments and to help meet the needs in staffing and equipment so they may continue to protect and serve when they are called to do so. All the towns are very fortunate to have a great core of dedicated members in its Fire Department. With some strong work the Chief Officers can lead these groups forward toward a common set of goals, while navigating through the cultural parameters of the past.

XV: CONSOLIDATED RECOMMENDATIONS

III-1: *Each Town or a group of towns should develop a five-year plan to enhance training documentation and water supply inspection, and flow testing to move toward reclassifying the ISO ratings.*

III-2: *A group of towns should develop a ten-year plan to enhance training, documentation, water supply inspection, flow testing, and emergency telecommunications operations to move toward reclassifying the departments to an even lower ISO rating.*

III-3: *Each department should conduct a thorough Community Risk Assessment and use the assessment as a tool to move the department into the future. Over the next year, a plan should be developed to utilizes strengths to pursue opportunities and address weaknesses while mitigating threats. This should be an ongoing process that has member involvement and is moved forward by the officer core.*

IV-1: *Each town must look at the response times and work to improve these times in an effort to save lives and prevent property damage.*

IV-2: *Each Town should be asked to select an appropriate service level, and if that requires the rapid response of a single unit, the town should appropriate sufficient funding to put towards a collaborative two-person day schedule Monday thru Friday. (Greater details on this effort are outlined in Chapter XIII – Mapping Out the Future.)*

IV-3: *Every effort should be made to preserve the primary responder role of volunteer and on-call personnel within each Fire Department.*

IV-4: *Each fire department should continue to exist and be funded on the local level. Pursuing regional augmentation strategy should not replace local response.*

V-1: *Fire Departments should require its personnel, and strongly encourage its call officers, to obtain a certain level of fire officer certification as a job requirement, such as Fire Officer I for lieutenant, Fire Officer III for deputy fire chief, and Fire Officer Level IV for fire chief.*

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

V-3: As part of the succession planning process, the Fire Chiefs should work to implement a professional development program to ensure that all officers can perform their superior's duties, as well as identify the core future leaders of the department.

V-4: All Departments should continue to foster and support any member to be trained and certified to the Firefighter 1 and preferably the Firefighter 2 level.

V-5: Working with the training officer more training should be planned delivered and documented. In an effort to keep members interested in training the department should be creative and offer training that is outside the normal programs. Making programs fresh, fun and to some degree competitive, may increase the participation by members. If it's the same old training, people will lose interest. Make it so they want to participate and at the same time meet training goals.

V-6: In consultation and cooperation with its neighboring departments, all participating Fire Departments should enter into formal automatic aid agreements that specifies the number and types of resources that should be dispatched immediately to various types of reported emergencies, such as structure fires. These recommendations should be based upon a community-wide risk management process and/or pre-fire/incident plan.

V-7: Although more stringent than the requirements found in Table 4.3.2 of NFPA 1720 for rural communities, through the utilization of automatic aid agreements with neighboring communities, Fire Departments should consider the adoption of an SOC with the goal of attempting to have at least 16 personnel on the scene of any reported structure fire within 14 minutes.

V-8: Fire Departments should make it a priority to improve its first unit on scene response times, including the adoption of a SOC, for the town. The SOC should be based upon a hybrid of the NFPA 1710/1720 and Commission on the Accreditation of Ambulance Services (CAAS) recommendations.

V-9: Fire Departments should review standards of cover benchmarks, to have the first unit responding to emergency incidents within one minute of dispatch (staffed station), and have the first unit on scene within eight minutes after responding to all types of calls, 90% of the time. With the current staffing model in place and no other calls in progress, this is something that can be met, if the staff in the station is properly qualified with the appropriate level of training and qualifications. A closer look at simultaneous calls and calls that run back-to-back (ambulance is transporting, and a second call comes in) should be looked at. At the time of this evaluation the program of having per diem staff in the station was still in its infancy, and it is not known if the station was sufficiently covered while this crew was committed to the first call.

V-10: *Fire Departments should work with the communities listed on each of the "run cards" to assure the number and qualification of staffing, that will be sent on the assignments. In order to be able to meet a safe level of on scene staffing, it will be important to know not only what the department will be receiving and how long it will take, but also to outline what each town will be sending, when these communities request resources from them.*

V-11: *Review the department roster and look to the members with low participation and find out what can be done to increase their involvement. Work with these members to increase their participation within a pre-determined time frame.*

V-12: *Fire Department should set a minimum criterion for members to remain in active status. This criterion should include both minimum training and response to incidents for a determined time period (one year). This criterion should also allow for people to go into an inactive status for a period of time due to approved circumstances. It would be important for inactive-status people to make up any important training prior to being put back on active status.*

V-13: *The town should consider encouraging members of Police Departments that live in the area to become on-call firefighters.*

V-14: *Fire Departments should work with their Road Agents to ensure that on-call firefighters are given preference when DPW personnel are hired. If on-call members are not interested and or qualified the town should hire personnel that are willing to become an on-call firefighter as a condition of employment.*

V-15: *Unless critical DPW operations are underway, DPW personnel that are on-call firefighters should respond to emergencies to supplement staffing and assist in meeting the OSHA "Two-in/Two-Out" Standard.*

V-16: *Towns either individually or jointly should apply for a federal SAFER grant for on-call recruitment and retention. This grant should be utilized to develop a comprehensive marketing program to attract new members, and provide incentives for the retention of those personnel, such as tuition reimbursement, health care benefits, tax abatements, etc. This competitive grant requires a lot of time and dedication to write and to be successful to obtain.*

V-17: *All towns should recognize that the only way to develop a more active and properly staffed fire department in the absence of hiring a larger force of career firefighters is to determine what would motivate potential responders and craft a program of investment that meets these extrinsic and intrinsic needs.*

V-18: *All towns should jointly convene a focus group to determine what concepts and recruitment and retention strategies are feasible and most attractive to potential candidates.*

V-19: *Fire Departments should set a realistic goal of recruiting at least 5 to 10 new members over the next three years, and simultaneously set a goal of increasing the overall call member force to around 25 to 30 active personnel. These personnel should be required to be properly trained and certified to the Firefighter I/II level, and preferably to the minimum of EMR level.*

V-20: *All Departments should make it a priority to develop an active on-call recruitment program led by a Chief Officer. At a minimum, this program should consist of:*

1. *Developing a recruitment brochure and mailing it to all residents*
2. *Holding periodic open houses at the fire station*
3. *Performing public outreach through the local media*
4. *Contacting community and service groups*
5. *Developing an eye-catching banner on the town's and fire department's web sites*
6. *Placing signs recruiting call/volunteer personnel at the main entrances to town*
7. *Placing a temporary sign board at various locations within the community*
8. *Placing signs for call/recruiting volunteers in local businesses, particularly high-volume locations*
9. *Implementing a fire explorer program*
10. *Radio and media advertisements*
11. *Although time consuming, consideration should also be given to conducting a door-to-door recruitment campaign of every residence in the town.*
12. *The proposed SAFER Grant could be utilized to cover many of the above expenses.*

V-21: *The Fire Chief should develop a social media presence and involve other members of the department in this endeavor. The use of social media like Facebook and Twitter are what the younger generation use, and a very active social media account has the opportunity to reach out to this group of people for hiring.*

V-22: *The Fire Chief or his designee should create a quarterly "newsletter" that will highlight the positive things that the department has done the prior months. This newsletter should be posted on the town's web page, shared in social media, given to the town manager who in turn should share with the Board of Selectmen. It is important that the public is made aware of all of the great people and all the good things the department does.*

V-23: The towns and the fire departments should attempt to enter partnerships with local businesses to allow their personnel to respond, when needed, to emergency incidents during working hours, without any financial penalty.

V-24: The towns should explore the feasibility of utilizing, and in fact encouraging, town employees to perform "dual roles" by serving not only in their full-time positions, but also serving the town as call firefighters and/or rescue personnel. Caution is needed here though as there are provisions of the Fair Labor Standards Act that would be applicable, particularly if these personnel respond to incidents during times when they are not working.

V-25: Fire Departments should develop a series of team-based activities that build involvement in the organization.

V-26:   All officer positions, from lieutenant to fire chief, should be filled based upon the person's firefighting/emergency services training, certifications, and experience, commensurate with the position being sought, along with successful completion of a formal, rank appropriate assessment process, and a basic practical skills evaluation.

V-27:   Fire Department should ensure that all department members are trained/ certified to the minimal NIMS level required for their duties/responsibilities and ranks. In addition to the basic I-100/I-700 training mandated; it is MRI's recommendation that all officers should be trained to the ICS-300 level. All chief level officers should be trained to the ICS-400 level.

V-28: Visit the National Volunteer Fire Council web site for cooperative programs they have posted. One of the newer programs is looking to attract returning or former military personnel into the fire service.

IX-1:   Each Department should identify and prioritize its most critical equipment, training and/or operational needs, and apply annually to the Assistance to Firefighters Grant (AFG) program. This should include making applications for apparatus capital replacement projects that will otherwise be funded through the town's capital budget and at town meeting.

IX-2: *Towns should actively continue to search for other grant opportunities. Grants for fire protection, fire safety, fire prevention, domestic and emergency preparedness, and homeland security may be available from federal, state, corporate, and foundation sources.*

IX-3: *Towns should actively seek out businesses that may be interested in establishing public/private partnerships that could provide, or assist with, funding for various programs, projects, or initiatives.*

IX-4: *Towns should expand its formal replacement plan for equipment. The regular replacement of large cost items such as hose, ladders, PPE, portable radios, AEDs, and even SCBA on an incremental basis will avoid major one-time increases in the annual operating budget where such purchases should be funded. For instance, the hose and ladders on one vehicle can be replaced in one fiscal year, another the following year, etc. The life expectancy of these items can be estimated based on usage and manufacturer's recommendations. Items such as hose and ladders can remain in service indefinitely, provided they continue to successfully pass their annual tests.*

XVI: APPENDICES

The MRI team has provided the following documents as a separate attachment to this report. These documents have been included based on relevance to the project and to provide the five participating communities with additional information. It is MRI's hope the appendices will be utilized as a reference source that is a source of for the implementation of recommendations.

- **Appendix A -** *A Call for Action: Preserving and Improving the Future of the Volunteer Fire Service"*

- **Appendix B -** *"Lighting the Path of Evolution: Leading the Transition in Volunteer and Combination Fire Departments"*

- **Appendix C – Example SOP Index**

- **Appendix D – Example Standard Operating Procedure (SOP)**

- **Appendix E – Example Organizational Bylaws**

XVII: TEAM PROFILES

Project Manager

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

John Ingram is a professional and dedicated fire and emergency service manager who recently became the Fire Chief in the Town of Belchertown Massachusetts. As the Fire Chief John leads a combination department that includes a 16-person career staff. John had a 33-year career with the Amherst Fire Department rising through the ranks to the position of Fire Captain. John had the great privilege to be the Leverett Massachusetts Fire Chief for six years. During his time there, he brought the Leverett Fire Department up to today's standards and into the 21st century. John is an Accreditation Fire Chief in Massachusetts and holds a Master's degree in

Fire Administration from Anna Maria College. John is also a certified Emergency Medical Technician both at the National Level and within the Commonwealth of Massachusetts. John has also served as the vice president to the Northwestern D.A. NoFires program, the program concentrates on juvenile fire setting and uses education to learn the dangers of fire. He served on many other operational and safety related committees in both Leverett and Amherst. John is an active member in several associations including The Fire Chiefs Association of Massachusetts, Western Massachusetts Fire Chiefs Association and the Hampshire County Fire Defense Association. John is also a member of the Fire Prevention Association of Massachusetts, and New England Association of Fire Chiefs.

Ellen Murray most recently served as the Fire Chief of the Naugatuck CT Fire Department where she retired in June 2020. She held the position of Chief for nearly 5 years. Prior to Chief, she was the Deputy Chief of Naugatuck FD for over 4 years.

Ellen started her nearly 38-year career when she was appointed to the Stratford CT Fire Department in September of 1982; giving her the distinction of being the first female career firefighter in the State of CT. Ellen spent most of her career in Engine Company and Rescue Company operations, is a licensed paramedic and a certified Open Water SCUBA Diver. She rose through the ranks and retired as Assistant Fire Chief in June 2010. While at the Stratford Fire Department Ellen's duties included being a Line Firefighter, Company Officer on an Engine Company, Shift Commander, and Department EMS Chief as well as supervising the Joint Public Safety Dispatch Center.

Ellen is a graduate of Southern Connecticut State College where she obtained a Bachelor of Science degree in Physical Education. Her Fire Service education includes CT certified Fire Officer, CT certified Fire Instructor, numerous courses of study through both the CT State Fire Academy and the National Fire Academy as well as numerous FEMA certifications. Ellen also has numerous credits toward her Master's Degree in Emergency Management.

She is a member of the Waterbury Fire Chiefs Association, and the International Association of Fire Chefs. She was a member of the inaugural meeting of the nationwide Women Fire Chief Council. Ellen is on the Board of Directors for the CT Firefighters Charitable Foundation and was recently an honoree at the CT Woman's Hall of Fame.

PIONEER VALLEY PLANNING COMMISION

HILLTOWN REGIONAL FIRE SERVICES FEASIBILITY STUDY

MAY 2021

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APPENDICES
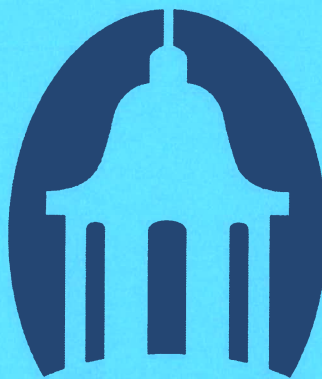
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LISTING OF APPENDICES

- **Appendix A -** *A Call for Action: Preserving and Improving the Future of the Volunteer Fire Service"*

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APPENDIX A

A Call to Action: Preserving and Improving the

Future of the Volunteer Fire Service

Municipal Resources

A Call for Action

The Blue Ribbon Report

Preserving and Improving the Future of the Volunteer Fire Service

Volunteer & Combination

INTERNATIONAL FIRE CHIEFS ASSOCIATION

Est 1994

Officers Section

A Call for Action

The Blue Ribbon Report
Preserving and Improving
the Future of the Volunteer Fire Service

A CALL FOR ACTION

THE BLUE RIBBON REPORT

PRESERVING AND IMPROVING
THE FUTURE OF THE VOLUNTEER FIRE SERVICE

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Executive Summary

America's volunteer fire service has faithfully served our nation for more than 300 years. Volunteer firefighters serve their communities with dedication and enthusiasm. Volunteer fire departments save local communities approximately $37 billion per year—money that can be reinvested to improve local infrastructure, social programs and minimize the local tax burden.

Since the terrorist attacks of September 11, 2001, America has learned that local emergency responders are the community's FIRST line of response, regardless of the event. Community protection and well-being depends on the experience, expertise and tenure of local emergency service providers. The volunteer fire service faces significant challenges in overcoming a basic lack of resources—both financial and in human capital. Only by aggressively confronting both of these issues will we create the necessary atmosphere of stability that will allow volunteer fire and rescue departments to meet the new expectations and challenges of the 21st century.

While volunteer firefighters and emergency workers provide a tremendous contribution to our country, they are often under-funded and ill-equipped. Lacking cohesive national leadership, efforts to correct these problems are often fragmented and ineffective. Additionally, volunteer fire departments have a difficult time retaining volunteers. Ultimately, much of the blame for these problems can be attributed to poor leadership. Unfortunately, there are few programs at the local, state or national level to assist fire chiefs and volunteer managers in acquiring the knowledge and skills necessary for effective management.

Support from the local, state and federal levels is necessary to ensure that the volunteer fire service continues to be a full partner with all facets of homeland security response and effectively functions as the first line of defense within local communities. The International Association of Fire Chiefs believes that by enacting the specific recommendations outlined in the text of this report, we can enhance the role of the volunteer fire service in this critical mission. The most important of those recommendations are outlined below.

At the **local** level, we must:
1. Emphasize the importance of local support for this basic community service
2. Provide appropriate levels of funding for necessary safety gear and training
3. Engage in strategic planning that emphasizes volunteer retention
4. Use mutual aid to offset service and technical deficiencies
5. Use uniform incident management systems
6. Use performance measurement to measure and analyze response times, fire fighting effectiveness, training and retention rates of volunteer fire departments.

At the **state** level, we must:
1. Emphasize the importance of the state government in developing and promoting disaster planning
2. Certify fire and emergency medical services (EMS) personnel to comply with basic training standards
3. Promote regional service delivery where local capabilities and technical expertise are weak
4. Provide statewide volunteer benefit programs to protect both the firefighter and employer from the risks associated with volunteer fire service.

Finally, at the **federal** level, we must:
1. Work to produce a national climate encouraging individuals to volunteer within their local communities

A CALL FOR ACTION

THE BLUE RIBBON REPORT
PRESERVING AND IMPROVING
THE FUTURE OF THE VOLUNTEER FIRE SERVICE

Introduction

America's volunteer fire service is deeply woven into the basic fabric of our nation. According to the National Fire Protection Association (NFPA), there are close to 800,000 volunteer firefighters across the United States, and the majority of this nation's geographical area is protected by volunteer fire departments. Of all the fire departments in America, 73 percent are all-volunteer departments.

Firefighters, both career and volunteer, are extremely dedicated to public service. This trait explains why firefighters often take tremendous risks to save the lives of the citizens they are sworn to protect. Volunteer firefighters, because of their diverse educational and employment backgrounds, bring tremendous depth and diversity to any emergency scene based upon their regular jobs and expertise in their communities. In many cases, volunteer firefighters invest an enormous amount of time and dedication to fire fighting, moving the fire service forward through improved fire fighting techniques and technological innovations.

Volunteer firefighters provide an enormous economic benefit to our nation. It is estimated that volunteer firefighters save the American taxpayers $37 billion per year that can be reinvested in each community's infrastructure, social and other community programs, and/or a general reduction in local taxes.

Unfortunately, despite their tremendous contribution to American society, volunteer fire departments are often under-funded and ill-equipped, putting many in a position where they must raise their own operational funds to provide apparatus and safety equipment. In addition, the number of volunteer firefighters is declining across the country. During the mid-1980s, it was estimated the volunteer fire service was more than 880,000 members strong, but those numbers have dropped to less than 800,000 in recent years. Finally, the volunteer and combination fire service continues to be unorganized across the nation with no clear leadership representing the volunteers. It has no unified position on national legislative initiatives or research issues affecting their services. Volunteer departments and their managers will continue to struggle until local, state and national attention directs a concentrated effort to assist in preserving and improving the management of this long-standing American tradition.

The perception of the role of emergency services changed with the events of Sept. 11, 2001. These attacks against America changed the expectations of local emergency providers who are now clearly each community's first line of response, regardless of the event. As the country and local communities re-evaluate their abilities to respond and

handle new threats, such as weapons of mass destruction and biological incidents, the stability of the American volunteer fire service has become a significant issue. Community protection and well-being depends on the experience, expertise and longevity of local emergency service providers. It becomes imperative that local communities understand that the homeland is secure when the hometown is secure. Local communities and the leadership of those communities will look toward the volunteer fire department for answers to questions of terrorist threats and threat assessment. Enhancing the overall community safety is a new responsibility for local responders. Significant improvements in the volunteer fire service will be necessary to improve retention and create an atmosphere of stability, allowing local, volunteer fire departments to meet the new expectations and challenges of the 21st century.

Volunteer and Combination Fire Departments Across the United States:
Examples of Value and Effectiveness
Campbell County, Wyo., is governed by a Joint Powers Fire Board and covers the City of Gillette, the Town of Wright and all of Campbell County, with a total response area of 5,000 square miles and a population of approximately 40,000 residents. One third of the nation's coal supply is mined in this community. The combination fire department is composed of 19 career positions and 175 volunteers. The volunteer firefighters of Campbell County have saved local taxpayers more than $21 million in wages alone since 1996. The department's savings are calculated on the reduced need for full-time career staffing and the actual dollar savings for 226,243 donated hours during the study period. When assigned a value of $16.05 per volunteer hour* (used as a national mean), the volunteer contribution of $3,413,244 annually becomes a significant savings for the community.

The Campbell County Fire Department provides all of the normal city emergency services—fire suppression, emergency medical response, rescue, etc. It enjoys an above average working relationship with law enforcement and provides extensive industrial and wildland fire response expertise. The department offers full administrative services including building inspections, plan reviews, investigations, public education, vehicle and building maintenance, and an aggressive industrial fire training and hazardous materials training program to community businesses. All career employees provide both shift coverage and administrative duties. Tactical operations are considered fully integrated and all personnel, regardless of career or volunteer status, meet the same training and experience standards for the rank that they hold. The department retention rate for volunteers is 17 years per person.

The department is family based with yearly activities that support and promote a strong family unit. The department sponsors the Campbell County Cadet Program, which functions as a worksite for juvenile offenders and was chosen as the number one Junior Emergency Services program in the United States in 2000 by Volunteer Fire Insurance Services. Volunteers are active in a number of community events throughout the calendar year, including a community pancake feed serving more than 2,000 people on the Fourth of July and a number of fundraising projects to assist less fortunate families in the community.

The midwest village of *Tinley Park, Ill.* is protected by a 120-member paid on-call volunteer fire department. All firefighters are certified and tested under the state of Illinois certification program. Tinley Park provides coverage for hazardous materials incidents, and features a Combined Area Rescue Team (CART) that provides special services for building collapse and major structural incidents, as well as a Rapid Intervention Team (RIT). All department members are trained to the Hazardous Materials Awareness level, and members of CART and RIT are certified by the state of Illinois.

The department also employs two personnel specializing in public education, inspections, preplanning, and investigations, supporting the overall safety mission of the department and relieving these administrative duties from the volunteers. It is the largest volunteer fire department of this type in the state of Illinois, protecting a population of 56,000 residents and an estimated 100,000 daytime work population within the 17-square mile area. Full city services are provided from four fully equipped fire stations, and personnel are trained at a state-of-the-art training center. Tinley Park has an Insurance Services Office (ISO) rating of Class 3. The department averages 800 calls per year with a

turnout rate of 30 firefighters per call. The department also assists the local EMS provider with incidents requiring extrication or reported entrapment. All fire department motorized equipment is secured through fund drives. For example, in 2004, community fund drives will finance and pay for the cost of one Class A pumper and a one combination Quint 95' aerial unit with a total cost $1,500,000.

The department boasts a retention rate of approximately six years per firefighter. Because of the volunteer coverage, the estimated yearly savings to the village exceeds $3,744,000 per year, deducting the direct volunteer expenses. This is one-quarter the cost of a full-time department.

In *German Township, Ind.*, the predominantly volunteer department (two paid personnel and 70 active volunteers) serves 11,000 residents and provides the community a direct savings in staffing costs of $441,000 per year. German Township Volunteer Fire Department responds with an average of 10 volunteer personnel per call. To replace the volunteers with an all paid staff would cost their residents more than $1.5 million dollars annually.

The community is a suburban bedroom community. Nearly 99 percent of the residents own their residences, and 50 percent of the population has moved into the community within the last 10 years. The fire protection challenges are significantly impacted by the availability of water. A large segment of the population and geographical area has a rural water system that does not provide hydrants every 500 or 1,000 feet. The other portion of the population is protected by a municipal water system that does provide hydrants in the normal configuration. The water or lack of it requires the department purchase apparatus with large water tanks.

The department historically has made a significant commitment to training its members. It has always been its goal that each member is highly trained and competent in all necessary skills. The department's training program is outcome-based and requires a significant investment of time and energy. The instructional staff has identified more than 70 basic skills, and written drills have been developed to allow members to train and measure their competency without attending every regular training session. These basic skills drills have significantly improved the members' competency. They know that when confronted with a dangerous situation, they will be able to perform the fire ground evolution safely and effectively.

Leadership development and certification are encouraged, and in most cases tuition reimbursement is available for course work. The promotional process for leadership positions is based upon a written test, experience, education, seniority and personal performance evaluation. It is not based upon an election or the buddy system. Officers maintain their ranks on a permanent basis provided they continue to receive satisfactory evaluations.

The *Ponderosa Volunteer Fire Department* is an ISO Class 3 rated, combination fire department in northern Harris County (Houston), Texas—the third most populous county in the nation. The department, formed in 1972 as population growth in the area exploded, currently serves a population of approximately 45,000 people in 13 square miles and provides the community a direct savings of $439,000 per year based on the hours donated by volunteers. To provide the same coverage with an all-career department would cost the taxpayers an additional $3,315,000 per year in personnel expenses.

The county lacks the tax base to provide the necessary funding to transition to full-time career positions. The Emergency Services District levies a tax of 6 cents per hundred dollars of evaluation, which equates to $60 per $100,000 of property value that fund all operating and capital expenditures. The 65 volunteers continually demonstrate their commitment to the community by their performance and by maintaining a very effective response system that includes fire, technical rescue, EMS first response, water rescue, hazardous materials response, public education and a host of other services. The cost of the high quality services is only $27 per resident, which compares to full career departments that are above $110 per resident.

The *Roseville, Minn. Fire Department* is staffed by two full-time career firefighters and 70 volunteer firefighters serving a first-ring suburb of Minneapolis and St. Paul. The volunteers represent a vast cross-section of the community, ranging in age from 18 to 55. The chosen full-time career fields of Roseville's volunteers include: police officers, accountants, software engineers, bankers, career firefighters, city employees, teachers and a dentist. More than half of the department's members have college degrees. In addition to their very demanding full-time jobs and family commitments, each volunteer contributes an average of 16 hours every week serving the community. Many say that serving as a volunteer firefighter completes their lives, giving them an opportunity to serve others during difficult times and gives them a reward and sense of fulfillment and teamwork they are unable to achieve in their full-time occupations.

Providing fire and rescue services from three stations, the volunteer department consumes only 3.8 percent of the city's $35 million budget, easily earning it the accolades of best value in town. In addition to an intense commitment to provide high quality service for the department's 700 annual emergency responses, members contribute thousands of hours supporting hundreds of community events each year. Throughout the summer, Roseville firefighters are frequent visitors to the city's 28 parks, giving hundreds of kids of all ages an opportunity to ride a fire engine and learn fire prevention tips. Firefighters will dress-up a parent in firefighter gear, using the opportunity to teach kids about the equipment firefighters use while educating the parents about the cost of a firefighter's ensemble. Kids are quizzed on fire safety and awarded prizes for correct answers. Roseville's firefighters attend more than 100 community block parties each year, regularly visit senior centers and pre-schools, hosts birthday parties in the fire stations and occasionally show up with a fire engine when the candles are lit on the cake during a celebration of a special senior resident's birthday.

Each and every one of these events represents an opportunity to educate, a role the department takes seriously. While some departments focus primarily on the response to emergency calls, in Roseville, the priority is prevention and education. It's no accident that first line of the department's mission statement reads "To continually strive for the prevention of fires, injuries and accidents…" When it comes to emergency responses, the department is well-trained, well-equipped and well-prepared. In 2001, the ISO scored the department with a 79.36 (ISO Rating 3).

Issues Confronting the Volunteer Fire Service

While there are many volunteer fire departments across the country that play a vibrant role in their community—as exemplified by the examples mentioned in the previous section—much of the volunteer fire service across the United States is currently in crisis. While many departments function at a very high level, many other departments struggle for their very existence. Particularly in rural areas, volunteer departments are closing their doors and shuttering their windows for two basic reasons: 1) lack of financial resources and 2) lack of volunteers. But this problem is not only found in rural America. Many volunteer departments in more populated areas are in a state of crisis and face a deep-seated struggle to provide adequate services. In order to ensure that we maintain a vibrant, capable volunteer fire service throughout the United States, we must confront both of these complex problems head on.

LACK OF RESOURCES

Few local governments understand the true value of their local volunteer fire department—both in financial terms as well as the social capital generated by the department. A number of departments are independent corporations that do not have direct attachment to their local government, yet they are the sole providers of emergency services. In addition, volunteer fire departments often serve as the social and communal hub of their towns. As detailed by the earlier examples, volunteer fire departments save local communities significant expenses. Unfortunately, most volunteer firefighters not only donate their time for this basic community service but also are required to spend a significant amount of time conducting fundraisers to generate revenue. In many communities, local governments take for granted the services provided by the volunteer fire department. They are not willing to assist with even the most basic expenses, such as appropriate safety gear, functional apparatus or station facilities.

Compounding this problem, the demands on volunteer fire departments have increased significantly over the past 20 years. Today, because of increasing call volumes, departments provide more and more traditional services (firefighting, EMS response, etc.). However, volunteer fire departments also are being asked to expand their role in order to address new problems, the most prominent of which are new duties surrounding homeland security. This increase in responses and responsibility, combined with the lack of resources noted above, means that many departments must make hard choices about the level of service they can provide. This is difficult in a mobile society, where urban dwellers often move to more remote locations and continue to expect the same level of service they were receiving previously. Often, they do not appreciate the funding constraints placed on rural communities.

In addition, the costs associated with new apparatus and equipment have increased exponentially. In 1972, a Class A pumper was about $25,000; today a new pumper can easily approach $350,000. Just a few years ago, a single self-contained breathing apparatus (SCBA) cost about $1,900; today an SCBA unit costs about $3,500. The cost for this basic equipment has increased over and above the funding levels available to many volunteer fire departments. As a result, many communities have had to reduce their capabilities by not purchasing needed apparatus, equipment and technology. Other communities have reacted by extending the life of their current equipment. Unfortunately, this decision can give rise to numerous safety related issues.

The following charts demonstrate the growth in emergency response calls in the United States. Total emergency calls in the United States have increased by an estimated 61 percent since 1983 to nearly 18,000,000 responses per year.

Total Number of Calls for U.S. Fire Departments 1983-1996
Source: National Fire Protection Association
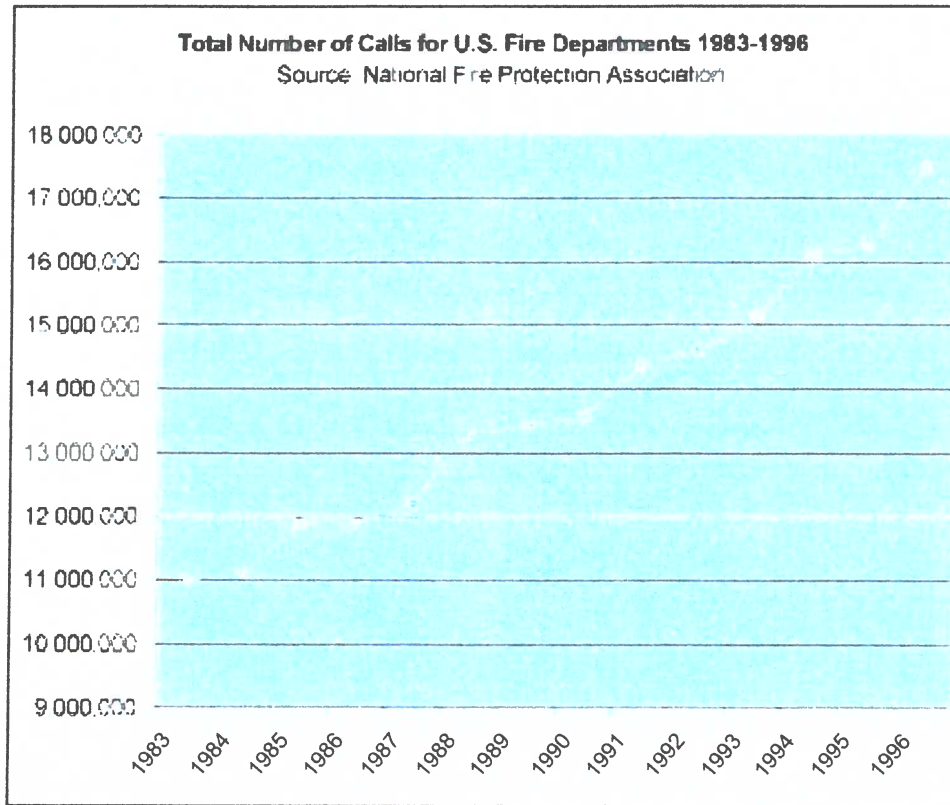
What is particularly interesting about these statistics is the change in the nature of emergency responses. While total responses have increased, the number of actual working fires has decreased 47 percent since 1977. Residential fires have decreased from a reported 472,000 incidents in 1992 to 396,500 fires in 2001, a 16 percent reduction. Because departments are responding to fewer fires, managers are often concerned about the promotion of engine/command officers who lack sufficient experience actually fighting fires. This problem affects the safety of emergency operations and could lead to increased liability exposure for departments.

Total Number of Working Fire Calls in the U.S.
1977 - 2001
Source: National Fire Protection Association
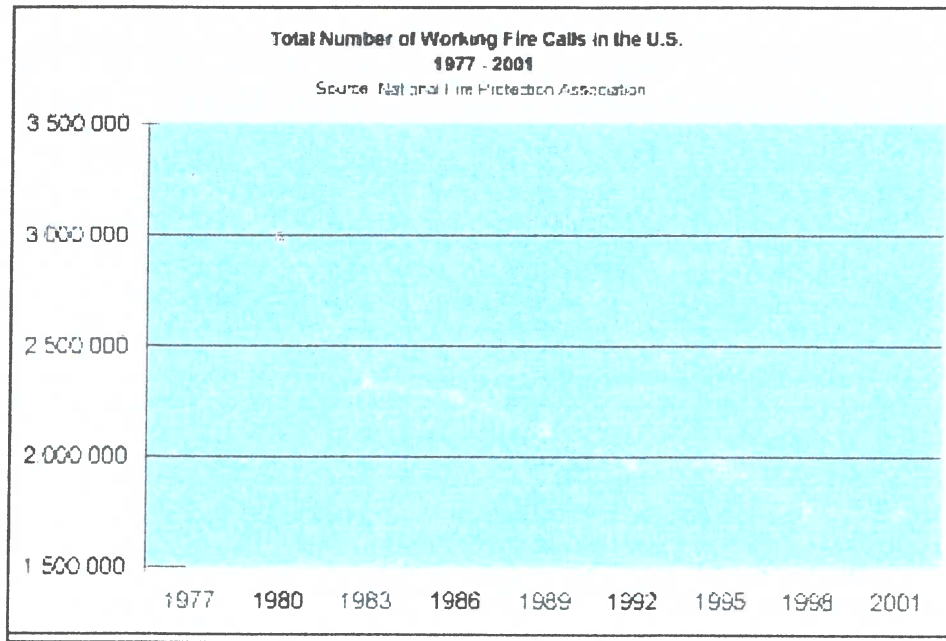
Detailing the Lack of Resources

As part of an effort to better understand the needs of the fire service, the Congress directed the National Fire Protection Association (NFPA) to conduct a Needs Assessment Study of the U.S. Fire Service for the United States Fire Administration (USFA). The study attempted to define problem areas in the nation's fire service as well as function as a guide for future planning to enhance the fire service and firefighter safety.

The following issues were outlined in the executive summary provided in the NFPA report. While the report surveyed all types of fire departments, items selected for this report have the most impact on volunteer/combination departments. All of the problems documented below are a greater problem in smaller communities.

Concerns with Facilities, Apparatus and Equipment

- Roughly 15,500 fire stations (32 percent) are at least 40 years old and 27,500 fire stations (57 percent) have no backup electrical power.
- It is estimated that 60 to 75 percent of fire departments have too few fire stations to meet maximum response distance guidelines promulgated by the Insurance Services Office.
- Approximately half of all fire engines are at least 15 years old and more than one-third are over 20 years old.
- One-third of firefighters per response are not equipped with self-contained breathing apparatus (SCBA) and nearly half of SCBA units are at least 10 years old.

- Fifty percent of emergency responders per shift are not equipped with personal alert safety system (PASS) devices that assist in locating firefighters trapped in burning buildings.
- An estimated 57,000 firefighters lack even basic personal protective clothing, and an estimated one-third of personal protective clothing is at least 10 years old.

Communications and Communications Equipment
- Fire departments do not have enough portable radios to equip more than half of the emergency responders. This is a particular problem in small communities.
- Only 25 percent of fire departments can communicate on scene with all of their public safety partners at the local, state and federal level.
- Forty percent of all fire departments lack internet access.

Training Concerns
- An estimated 233,000 firefighters, most of whom are volunteers serving in small communities, lack formal training in structural firefighting—the most basic service the volunteer fire service provides. An additional 153,000 firefighters have received some training but lack certification in structural firefighting.
- An estimated 27 percent of fire department personnel involved in delivering EMS lack formal training in those duties. And in the majority of fire departments, EMS personnel are not certified to the level of Basic Life Support.
- An estimated 40 percent of fire department personnel involved in hazardous materials response lack formal training in those duties; the majority of them serve in smaller communities. In 80 percent of fire departments, personnel involved in hazardous materials response are not certified to the operational level.
- An estimated 41 percent of fire department personnel involved in wildland fire fighting lack formal training in those duties; there are substantial training and certification needs in communities of all sizes.

Ability to Handle Unusually Challenging Incidents
- Only 11 percent of fire departments can handle a technical rescue with EMS at a structural collapse of a building involving 50 occupants with local trained personnel. Nearly half of all departments consider such an incident outside their scope.
- Only 13 percent of fire departments can handle a hazmat and EMS incident involving chemical and/or biological agents and 10 injuries with locally trained personnel. Forty percent of all departments consider such an incident outside their scope.
- Only 26 percent of fire departments can handle a wildland-urban interface fire affecting 500 acres with locally trained personnel. One-third of all departments consider such an incident outside their scope.
- Only 12 percent of fire departments can handle mitigation of a developing major flood with locally trained personnel. The majority of departments consider such an incident outside their scope.

LACK OF VOLUNTEERS

Nationally, the number of volunteers has continued to drop since a high of 880,000 in 1984. Today, the total number of volunteer firefighters has declined by about 10 percent, representing a reduction of approximately 90,000 individuals to 790,000.
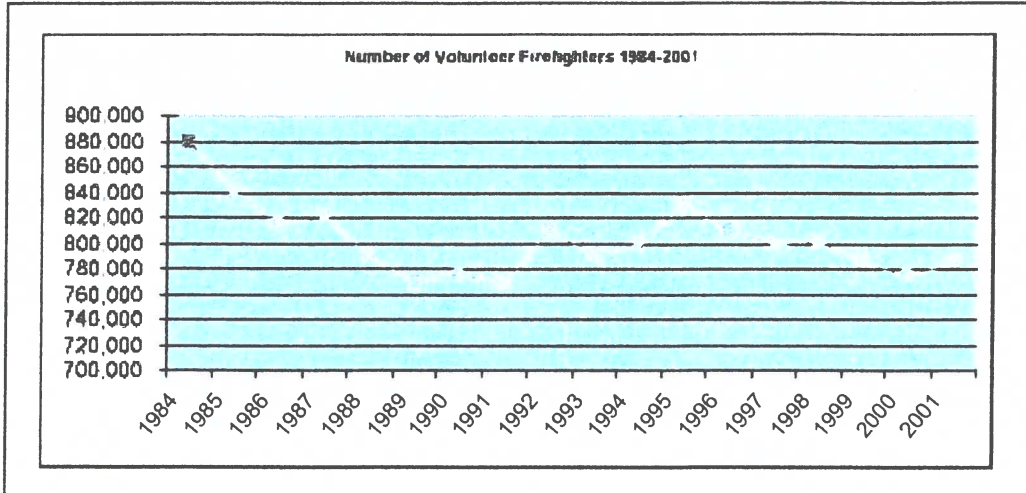
The decline in the number of volunteers is a two-faceted problem. It stems both from difficulties in retaining current volunteers as well as problems with recruiting new volunteers.

Retention

Retention of volunteer firefighters is a substantial concern for the fire service. It is estimated that the national retention average of volunteer firefighters is approximately four years per person, per department. When recruiting volunteer firefighters, the fire department will spend approximately $4,000 per person in orienting, equipping and training those recruits. While this figure would appear to be conservative in some jurisdictions, the cost to maintain one volunteer for the national retention rate average of four years is approximately $1,000 per year. This may not be an effective investment based on the return by the volunteer.

Retention of volunteer firefighters is a complex issue with a number of variables that can contribute to the lack of longevity. In 1993, the consulting firm Tri-Data, on behalf of the United States Fire Administration (USFA), conducted a national study titled *Retention and Recruitment in the Volunteer Fire Service, Problems and Solutions.* The study was assembled with input from volunteer departments across the country. The following areas were identified as major issues affecting retention of volunteer firefighters:

- Volunteers face increased demands from the fire department stemming from the increase in emergency response calls, the need for ongoing training and the increasing need to undertake specialized training.
- Demands on the volunteer's time are also increasing away from the fire department as families struggle to balance the career and family obligations of today's two-income families.
- Many of those who volunteer for the fire department do so in order to improve their employability. A volunteer fire department will provide training at no cost. This training can then be used to obtain a full-time position within the profession.

- The lack of a comprehensive benefit and incentive program. Benefits are necessary to protect the livelihood of the volunteer and his or her family in the event the volunteer suffers a significant injury or dies while on duty, while incentives are designed to recognize their personal achievements and to motivate them to improve their skills and participation.
- Finally, the lack of quality local leadership within the fire department is cited as the most significant problem to retaining volunteer firefighters. Echoing the sentiment of that finding, it is the opinion of the contributing authors that ineffective leadership will doom an otherwise excellent organization. Sound management practices have the potential to significantly enhance retention rates.

The Value of Good Management

The following passage is taken directly from the Tri-Data report discussed above.

> The ability of a fire department to retain its people is directly related to its ability to manage those people. *It was unanimous among workshop attendees that poor management contributed heavily to people leaving the volunteer fire service.* The leadership issue was considered the most important; in one way or another, nearly all the other causes were either directly or indirectly traced back to the leadership problem. (emphasis added)·

The lack of quality leadership is the most critical issue confronting the volunteer and combination fire service. Few programs at the state or national level have been established to assist and provide fire chiefs and/or managers with the skills necessary for effective management. An example of how poor management can exacerbate a problem, such as an increase in call volume, is illustrated through the example below.

An increase in emergency service calls can significantly affect volunteer retention, so an effective manager will look at ways to minimize this intrusion on the daily life of a volunteer. A department that provides emergency medical services (EMS) will intrude on the life of a volunteer more often than those departments without EMS. EMS is an emergency response that can be reasonably predicted. As a result, staffing for EMS response is generally easier than staffing for activities that occur with a much lower frequency—such as structural fires. In addition, the number of staff required to respond to each call is relatively low. Three emergency care providers can handle the overwhelming majority of EMS calls. When a volunteer fire department providing EMS alerts a volunteer component of 20 members to an EMS call when only three members are needed, it can be damaging to a system. This intrusion into the life of the volunteer sets up a "cry wolf" syndrome where the pager is alerted but the volunteer is not needed. This increases the risk that the volunteer will not respond when actually needed.

The Challenges of Managing a Combination Department

Another difficult management challenge is the management of fire departments staffed with both career and volunteer personnel—combination departments. Combination fire departments are difficult to manage because career and volunteer firefighters often have different institutional interests. Administrative changes such as the transition from an all-volunteer department to a combination system may exacerbate the problem. The individual volunteer's sense of identity is important. Although the financial consequence of resigning a volunteer position is small, the psychological cost to an individual is extremely high because of the firefighter's great personal investment in the organization. The structural distrust the volunteer and career groups have for each other might be more tolerable if each group did not have to work with the other, but they usually do. Efficiency is a desirable goal; however, reaching that goal can be a tortuous path of management anxiety arising from personnel conflict between the two groups. The conflicts within a combination department can lead to unproductive involvement by the local government that sees itself as legally and often politically responsible for resolving the conflict.

A combination system will not work when it is based on prejudice or when either group of firefighters, volunteer or career, functions in a minority role and is perceived as subservient to the other. This situation often creates an atmosphere where the department is unable to tap the knowledge and expertise possessed by the individual. This can be perpetuated when we lose site of our basic mission—serving the public. The real test of a successful combination department is its ability to fully integrate tactical rank structure. The training and performance standards should be the same, regardless of the firefighter or officer status with parallel lines of authority, bringing personnel resources into harmony. The quantitative measure of that success is the retention rate of the minority group.

Nature of Volunteerism in the United States and its
Implications for the Volunteer Fire Service

In 2002, the Bureau of Labor Statistics of the U.S. Department of Labor released the Volunteer Service Indicator, a new national measurement of volunteer behavior developed by the Census Bureau, the Bureau of Labor Statistics and the USA Freedom Corps. The indicator provides a wealth of information relating to volunteerism in the United States. Those findings indicate that 27.6 percent of individuals (more than 59 million) over the age of 16 volunteered with a volunteer service organization between September 2001 and September 2002. The findings suggest that certain groups are more likely to volunteer, while others are more likely to volunteer more hours. The findings also offer information regarding what types of organizations and activities enjoy support from different segments of the population. Finally, they give information on how much time people are dedicating to volunteer work, including data that more than 34 percent of those who volunteered did so for more than 100 hours during the past year.

Perhaps the most striking statistic from the survey is that volunteers spent a median of 52 hours volunteering during the year. Volunteering for the fire service can be and most often is substantially more demanding. Depending on the call volume, designated shift coverage and the level of training standards mandated by the local community, an average volunteer could easily contribute in excess of 1,000 hours per year in community service. In Campbell County, Wyo., an active average volunteer can expect to donate 750–1,000 hours of service per year, German Township, Ind., 500 hours per year and in Ponderosa, Tex., 360 hours per year. In two communities with mandatory 24-hour volunteer shift coverage—Tinley Park, Ill. and Roseville, Minn.—an active volunteer will be required to provide 1,000 hours to maintain his or her volunteer membership. Both departments provide volunteers with a monetary stipend as part of the compensation for services provided.

The estimated 800,000 volunteer firefighters account for less than one fifty-ninth of the estimated number of individuals who volunteered, in some fashion, for their communities during the time of this study. The available personnel pool for volunteer firefighters may be more extensive than we realize, and a more detailed review of this study may provide insight into the recruiting strategies and diversification options that must be developed to fill open positions within our departments.

To be competitive, the volunteer fire service may need to refocus recruiting efforts, develop diversification strategies and design other volunteer opportunities within the organization that utilize skills outside of traditional recruitment considerations.

RECOMMENDATIONS – A CALL FOR ACTION

The International Association of Fire Chiefs represents the leaders of America's fire service, both career and volunteer. Through the technical expertise and guidance of its Volunteer & Combination Officers Section (VCOS), the IAFC is well positioned to lead the volunteer fire service forward to confront the difficult issues detailed in this report. The recommendations that follow are broken down by the level of government that should address the solution. While most of these recommendations must be implemented at the local level, the IAFC will be active at the national level to secure the necessary resources and climate to make these important changes in the volunteer fire service.

Federal Responsibilities/Recommendations:

- Advance a Congressional Resolution supporting the American Volunteer Firefighters Bill of Rights.
- Create an Office of Volunteer and Combination Fire Service within the Department of Homeland Security.
- Develop a grading system for evaluating local emergency response capability.
- Create a national definition of allowable compensation for volunteer firefighters.
- Develop and support administrative changes to the Internal Revenue Code to clarify legislative issues related to length of service awards programs and allow "cafeteria style" benefit programs for volunteers.
- Create national job protection for volunteer firefighters.
- Fund the Assistance to Firefighters Grant Program (FIRE Act) at its full authorization, allowing the fire service to build a solid baseline of apparatus and safety equipment within its hometown communities.
- Appropriate funding for the Staffing for Adequate Fire and Emergency Response Firefighters Act (SAFER Act).
- Provide tax incentives for the installation of automatic fire suppression and alert systems.
- Provide national tax incentives for certified volunteer firefighters, reducing federal income tax by 3 percent annually.

State-Level Responsibilities/Recommendations:

- Develop community, regional and state disaster plans with specified review dates. Plans should include identified resources and certifiably trained personnel available for regional and statewide deployment.
- Develop methods for certifying fire and EMS personnel to enhance their professional commitment and achieve minimum training standards.
- Develop a benefits plan for all emergency responders to protect and provide for responders who are injured or killed in the line of duty.
- Develop a benefits plan that provides college tuition, including books, to the immediate family members of firefighters killed in the line of duty.
- Develop regional and statewide recruitment campaigns.
- Assure that volunteer liability protection is provided.
- Assure that statewide mutual aid places response liability on the responding agency versus the requesting agency.

Local Responsibilities/Recommendations:

Volunteer firefighters, leadership within the volunteer fire department, community leaders, elected officials and citizens should expect that standards, rules and regulations be used, adopted and enforced at the local level that measure the effectiveness of services provided.

Strategic planning must become institutionalized as an integral part of fire department operations and community resource allocation.

- Plan development should be performed in conjunction with the community to meet community expectations, growth and staffing requirements.
- Planning should be done in conjunction with surrounding communities affected by automatic mutual aid agreements. A multi-jurisdictional approach must be utilized to provide specialized services such as technical rescue, hazardous materials response and water rescue as well as covering training needs for these responses.

- The planning process should be developed with immediate, intermediate and long-range goals and have established review dates.
- An evaluation of the current volunteer response capabilities must be completed as part of the strategic planning process.
- A risk management policy must be instituted that clearly identifies the necessity of performing defensive fire suppression operations under noted conditions.
- A management structure must be developed and maintained. It should address business management operations, training, EMS, member benefits and operational leadership strategies.
- The number of calls significantly increases the business aspect of running a fire department. A department that responds to more than 750 calls per year, which is an average of two calls per day, should consider providing a compensated leadership position for developing and executing an organizational plan.
- If transition to paid personnel is necessary, the emergency service delivery system must prepare for an orderly transition from an all-volunteer to a partial career staff with identifiable funding options. Critical issues such as pay rates, job descriptions, duties, responsibilities, positions and status authority for career and volunteer personnel must be examined. When the overall composition of the department is predominately volunteer, then career personnel serve to support the volunteer system.
- A funding plan for vehicle and equipment maintenance and replacement, as well as a plan to replace personal protective gear and accessory equipment in order to ensure adequate protection of emergency service personnel should be developed.
- Local, county, regional, state, federal and industrial resources that are available within the jurisdiction should be identified as part of a mutual aid agreement.
- The organization must develop a service delivery approach to meet the risks that are presented, consistent with what the community expects and can afford (standard of response cover).

Recruiting and retaining quality personnel continues to be the most important element in the overall success of a volunteer or combination fire department. Therefore, it is important to look at developing the following:

- Programs designed to certify and credential volunteer and career firefighters as well as officer positions at the state minimum level (NFPA Firefighter I/Fire Officer I or equivalent) to improve individual educational levels, emergency scene proficiency and safety.
- A diversification plan that maximizes individual talent and skill in order to enhance the overall efficiency, safety and effectiveness of the department. It should also guide the educational growth of the individual while maximizing his or her potential and enthusiasm in a specific discipline(s) within the organization.
- Ongoing educational opportunities that reinforce minimum training standards, enhance awareness and reinforce safety precautions dealing with local target hazards.
- Training that is measurable and emphasizes safety, command, multi-company drills, multi-agency drills and multi-jurisdictional responses.
- Benefit programs that encourage long-term participation from individual volunteers. Programs could include, but are not limited to, workers compensation; health, accident and life insurance; and coverage that will protect the livelihood of the individual volunteer against lost wages.
- A housing analysis to document housing availability and, if necessary, contingent housing alternatives for retaining reliable and well-trained volunteers within a community. Those options may include, but are not limited to, subsidized housing, dormitories, low or no-interest loans or relief on property taxes.
- Adequate liability coverage to protect an employer from costs associated with injuries that occur while performing duties. This consideration may extend to policies that provide the employer with overtime coverage to fill the position of the injured volunteer.
- A recruitment program that ensures adequate staffing and delivery of emergency services.
- Appropriate recognition and award programs to identify individuals or team members because of their performance or commitment to the department and community.

- A promotional process that ensures fairness for all members within the existing rank structure. Promotional systems should replace the traditional method of electing officer positions. It should be based upon merit with appropriate performance, education, training, skills and experience.
- Partnerships with other community emergency entities working to maximize resources.
- Partnerships with civic organizations and local businesses to integrate the fire department within the local community.
- Training programs that provide all new recruits with basic firefighting skills and First Responder level training before they are allowed to respond to and perform on fire, medical or rescue emergencies.
- A physical assessment program designed to evaluate each member's physical ability to perform the activities and tasks required for every job description within the organization. This assessment should be performed at least annually.
- A written policy prohibiting drug and alcohol use with specific enforcement, discipline and follow-up procedures.
- An "Emergency Vehicle Operational Policy" to qualify each member as a driver/operator of fire and rescue apparatus.
- A process to check the status of each member's driver's license annually.
- Criminal background checks on all prospective members.

Community Support Services are necessary elements to the overall image and success of the department and the well-being of the community. Departments should develop the following:

- Fire prevention and education programs to educate at risk groups as identified by the USFA. Programs should direct educational, awareness, prevention and support groups to assist in reducing concerns.
- Safety and accident prevention programs beyond the normal scope of fire prevention to augment identified needs of the community. Those programs could include, but are not limited to, drowning prevention; bike, rollerblade and car safety; and sponsorship of SAFE KIDS projects.
- Practices that would prevent fire loss, injury or death based upon occupancy, construction, apparatus, water supply, available personnel, communication abilities and response capabilities.
- An annual evaluation of water systems that affect local operations, including county, industrial and/or private delivery. Evaluations should include the capability of the water supply to deliver the required fire flows based upon existing occupancy as well as planned growth. Ensure that appropriate steps and procedures are in place to properly maintain supply.
- Customer service programs that provide community feedback and satisfaction ratings.
- The capability to complete investigations in an efficient and reliable manner involving police agencies where applicable.
- Appropriate preplan documents, including target hazards, to provide timely and accurate information to incident commanders.
- A partnership with the Local Emergency Planning Committee to work for a fire safe community.

The volunteer fire service is at a critical juncture in the United States. On one hand we have a positive can-do spirit, on the other hand we have forces that are creating ever-increasing challenges that attack that spirit. The needs and realities of the volunteer fire service appear to be moving in divergent directions, so when the spirit dies, all that remains is historic fact. It is imperative that local, state and federal government understand the challenges listed in this document, develop a problem solving attitude and be proactive in creating a new pathway that will allow the volunteer fire service to survive and flourish. The IAFC stands read to work with all partners to lead this charge. This great country cannot afford to lose the rich legacy of the volunteer fire service.

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Based on an average of 16 hours of shift coverage and three hours of training per week.

APPENDIX B

Lighting the Path of Evolution: Leading the

Transition in Volunteer and Combination Fire Departments

Municipal
Resources

LIGHTING THE PATH OF EVOLUTION

THE RED RIBBON REPORT

LEADING THE TRANSITION IN VOLUNTEER AND COMBINATION FIRE DEPARTMENTS

Volunteer & Combination

INTERNATIONAL FIRE CHIEFS ASSOCIATION
ORG 1873 · Est. 1994

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LIGHTING
THE
PATH OF EVOLUTION

THE RED RIBBON REPORT

Volunteer & Combination

ORG 1873
INTERNATIONAL
Est. FIRE CHIEFS 1994
ASSOCIATION

Officers Section
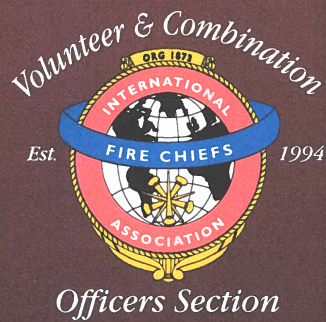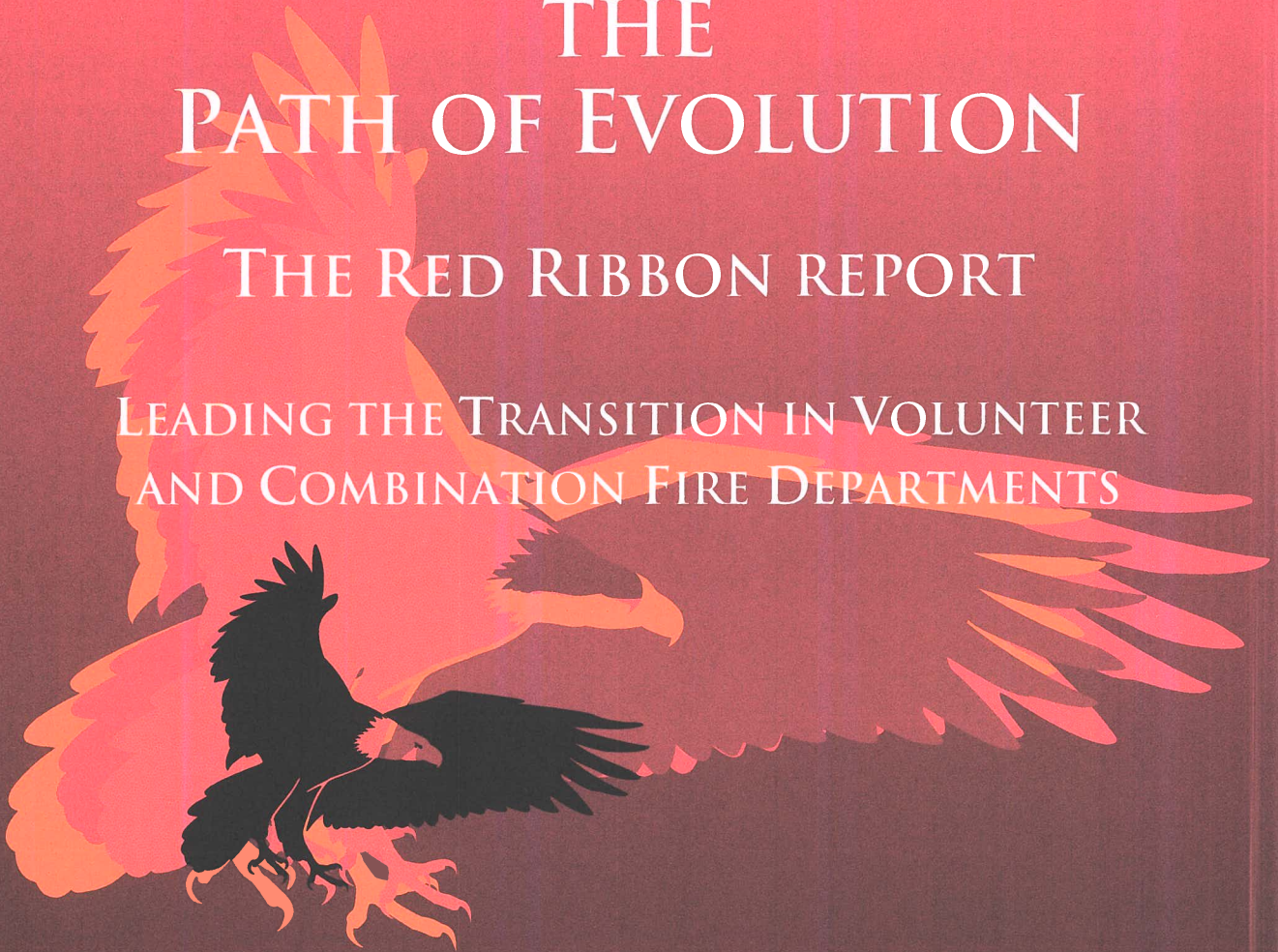
LEADING THE TRANSITION IN VOLUNTEER
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NOVEMBER 2005

LIGHTING THE PATH OF EVOLUTION

THE RED RIBBON REPORT

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LIGHTING
THE
PATH OF EVOLUTION

THE RED RIBBON REPORT

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AND COMBINATION FIRE DEPARTMENTS

Introduction

Nearly 300 million people live in the United States today and the number keeps growing. Many areas of the country that traditionally have relied on citizen volunteers to provide fire protection and emergency medical services are finding fewer people available or willing to carry on the honorable tradition. The demand for service grows and the number of providers declines. How are communities' needs to be met? Finding the answer to that question is one of the most daunting challenges facing local governments and fire service leaders all across the country. What is the appropriate level and menu of emergency services to be offered in the community? How do we assure that those services are delivered reliably? If not by volunteers, then by whom?

It's an issue of considerable national and local importance. As the March 2004 Blue Ribbon Report by the Volunteer and Combination Officers Section of the International Association of Fire Chiefs noted, of the 26,354 fire departments in the country, about three-quarters of them that serve 19,224 communities are staffed by volunteers. The balance—and these numbers have been rising as more departments are unable to provide adequate services using only volunteers—includes 4,892 departments that operate with a combination of compensated and volunteer staffing and 2,238 that are fully staffed by paid personnel. The 800,000 volunteer firefighters who today protect large areas of America number ten percent fewer than 20 years ago. Why the decline?

The answer lies in a combination of factors that reflect our society's evolution. The growth in population has meant an increase in the numbers of calls for service just about everywhere in the country, putting added pressure on the volunteer staffing component and systems. There's the matter of rising expectations by citizens in most communities that have led to demands for increasingly sophisticated services. External drivers, such as legislative mandates, legal considerations, and the need to deal with the potential threats of terrorism, have all had an impact on volunteers. So have family considerations: two-job parents, two-earner households, and more competition for personal and family time...they all factor into the decline in the number of volunteers on the front lines. What does this mean for fire service and community leaders?

The fire service is evolving as well; in fact, it always has been. As demand for services outstrips resources, there has been in many areas of the country a natural progression from departments fully staffed by

volunteers, to some form of combination system, to a fully paid service. The pace of that change is different from place to place, as are the problems encountered along the way. It depends largely on how successfully deficiencies, at all levels in organizations, are identified and resolved by the chief officers and the extent to which appropriate services are delivered successfully.

An evolving and progressive volunteer fire department will encounter a number of service delivery options before actually migrating into the combination fire service arena. This evolution process, if managed, can be systematic and prolonged. There is no cookie-cutter approach to staffing an evolving department, but there are a variety of approaches that have been successful in many communities. This report will share several of those successful models. As the accompanying chart illustrates, there is a progression from a purely volunteer-staffed organization to one that is primarily staffed by paid personnel.
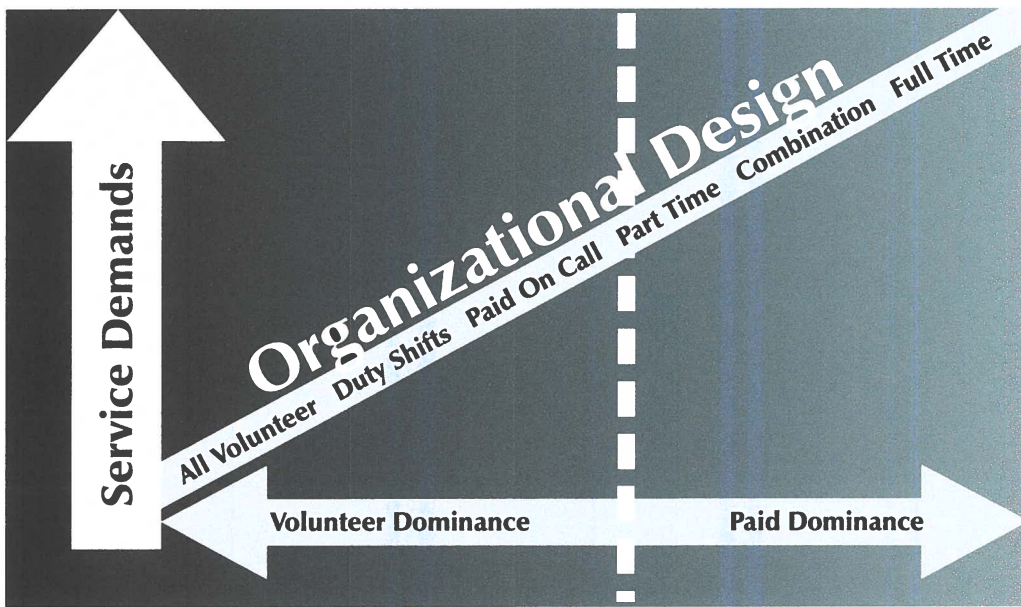
The goal of the fire service is to protect life and property by delivering the highest possible level of service consistent with need at the lowest possible cost consistent with safety. The goal of this report is to call attention to some of the strategies and options available to fire service and community leaders who are looking to do just that.

Signals of Change

Longtime volunteers often look back on the "way it used to be." They recall a time when training was much less demanding and time consuming and the local fire department had fewer responsibilities. Fires and accidents were pretty much the game. Attendance and training standards were achievable. There were fewer calls but each was an event that required the assistance of neighbors, who took great pride in their membership in the local department. The community appreciated their neighbors' help, local businesses supported the volunteer fire department, and the call volume was small enough so as not to interfere with the requirements of the members' jobs. The system was manageable, the emergencies were mitigated, and it was fun to be a member.

The reality today is that in many communities, to be a contributing, effective firefighter, a person has to meet significantly higher standards physically, in terms of training, and in terms of time "on the job" gaining experience. Not everyone has the luxury of time, or in some cases the inclination, to meet those requirements in today's hectic environment. Anymore, the fire department is not just a group of people trained to suppress fire and render first aid. It has become the premiere provider of choice for different levels of emergency medical services and in many cases transportation, as well as the provider of just about every other service that is not provided by the police department—hazardous materials response, high-rise and below-grade rescue, inspections, prevention and education, and community emergency planning and management, to name a few.

This is not to say that volunteers can't handle the job, for their abilities and successes are demonstrated daily in many places from coast to coast and border to border. But where they can not, community and fire leaders are challenged to meet their community's needs. In some cases, they will find ways to reinvigorate the volunteer members of their departments and improve their performance. In others, they will recognize the need for another type of change, moving to some form of partial or fully paid department, and they will set out to make it happen.

Indicators for change

A natural evolution for a volunteer department is the growth in services and added responsibilities as the demographics of the community change. When the system develops problems, people generally know about them long before they are willing to admit that they need serious attention. For fire department managers and local government leaders, it is critical that they recognize the signs of problems ahead and prepare for change before it is forced on them by external circumstances. It is helpful when they recognize these pointers to change:

Community Growth. Emergency services are directly impacted by community growth—more people, more businesses, more emergencies. The larger a community, the higher level of service people expect. In many areas people moving to "suburbs" assume wrongly that emergency services are delivered in the same way they are provided in the more established cities and towns. A history of community growth and projected increases in demand can help managers forecast and plan for changes in the delivery of emergency services. In some cases, population growth projections might even help a department determine to limit its services based on available staffing.

Community Aging. A fire department's ability to recruit new members in part depends on the supply of new, younger people who can be tapped for service. A community's age profile can be an indicator of problems ahead. The age factor in your community is revealed by data showing who are moving in and moving out. If the younger people are moving away, or if schools are showing or expecting declining enrollment, the fire department may have a difficult time maintaining appropriate levels of service in the future.

Missed Calls. When an emergency call goes unanswered—a "scratch" on the East Coast or in other communities a "did not respond"— the fire department has a serious problem, not just because life and

property are at stake, but also because it is a failure highly visible to the public. Equally serious is a department's over-reliance on mutual aid for coverage and the lack of adequate personnel to handle subsequent calls when primary units are on an assignment

Extended Response Times. When units regularly fail to get out of the fire station in a timely manner because of inadequate staffing resources, the community is endangered and fire department managers have a reliability problem. Response time is a critical factor for any fire department determined to provide appropriate service to the public. It is especially critical for medical calls when the first-due company fails to respond for whatever reason and an EMS unit responds but fails to meet the response-time standard, a common occurrence even when mutual aid is not involved.

Reduced Staffing. Units responding with fewer than the required number of people needed to perform that unit's functions pose a serious problem for the safety of citizens and the responders. This is another indicator of reduced service capability.

All of these situations indicate an inconsistency in a department's ability to provide necessary service, though not all are necessarily caused by a shortage of volunteer members. Staffing deficits can be related to other factors, such as changes in local business and industry policies regarding employees leaving the workplace, the number of volunteers who are employed outside their response areas, a lack of understanding on the part of new corporate managers of the community's needs, a tight labor market driven by rapid community growth, or even members' apathy. Where workforce restrictions are at play in the community, they typically lead to daytime response shortages and a significant challenge for the department.

Other Considerations. While employment issues tend to be the major factor in volunteer staffing shortages, other factors also contribute. Decreased interest among members who fail to participate could be the result of unreasonable community expectations, some problem with the fire department's internal requirements, or other organizational issues, such as:

- *Responsibilities outpace capabilities.* Mandated and selected responsibilities and response commitments exceed the department's capability to manage outcomes properly. Mandated responsibilities may have their basis in state statutes or local resolutions, proclamations and ordinances. Selected responsibilities are response categories that result from self-imposed obligations to provide a service.
- *Inability to raise funds.* Growth in the department as it faces new demands outpaces the volunteers' ability to raise capital and operational funds.
- *Waning political support.* A once-supportive political climate begins to falter and less emphasis is placed on the volunteer-staffed fire company. This becomes noticeable when apparatus is not replaced, new purchases are postponed, or local government wants the volunteer company to operate less expensively. The volunteer-staffed fire company needs to be a vital, supportive and healthy part of the local governmental infrastructure.
- *Internal conflict.* A department has internal struggles over its mission in the community and that conflict involves the preservation of the system as a fraternal organization rather than a service-delivery system.
- *Officers filling lower operational positions.* Staffing shortages that result in the fire chief driving the fire truck or fulfilling the responsibilities of other line firefighters is another sign of a serious staffing problem.
- *Mission creep.* When first-responder programs that once managed to provide essential services and also extra staffing for critical events and rescues become subject to all kinds of other assignments: or to policies that dictate that fire units respond every time an ambulance is dispatched, chronic staffing shortages can be a problem.
- *Controversy.* When internal controversy becomes the focal point and public image of the department, its effectiveness is impaired. Controversy can be inflamed by a poorly managed

emergency, an event that exceeds the capabilities of the volunteers, or public criticism that home response is no longer adequate for the number of emergency calls handled by the department. The problems are exacerbated when the volunteers are unable to reorganize and meet the increased demands, or when the news begins to publicly question the effectiveness of the service. Few volunteers join the department to fail or be exposed to a community philosophy that "they tried hard, but they are just volunteers."

- *Too many jobs, too little time.* Another indicator: The department cannot provide fire prevention, public education or inspection responsibilities because of training and response demands occupy the time volunteers have to commit.
- *Kingdoms come first.* Some jurisdictions consider their response areas their "kingdoms." Boundary disputes can occur when department leaders fail to understand that the public does not care what color or name is on the fire truck. The "kingdom" attitude also leads to contentious working environments with neighboring agencies.
- *Lack of budget support.* Failure by elected officials to approve budgets that include capital expenditures for the department is an ominous sign.
- *Missed deadlines.* When critical administrative deadlines, such as daily response reports, training records, and legally required documentation are not completed or budget deadlines are not met, the department's effectiveness is compromised.
- *Catastrophic losses.* Catastrophic events, such as the loss of a firefighter or a civilian fatality, focus great attention on the department, and perhaps its problems and deficits, which can discourage members.
- *Volunteers priced out of the community.* In many communities the price of homes and property taxes makes it difficult for the children of current volunteers or others who have time to volunteer to live in the community, thus reducing the pool of potential members.
- *Demographic Changes.* Shifts in the community that drive decisions by current members to purchase homes outside the fire district are a detriment to member retention.

When the time for change has come

Once a department recognizes there is a need for change, it must examine carefully both the organization and the options available to it. It is essential that all members of the organization identify the department's mission and core values. Whether in the end the change is a revitalized volunteer organization or a move to some type of paid or part-paid organization, a careful articulation of core values is critical to the success of the organization. Those core values must be incorporated and reinforced as employee strategies in new career positions and the core values must be carried throughout the evolution process. If the members expect the organization to be a mirror of what it once was, everyone must believe in and apply its core values. If you expect to maintain big city services with small town pride, the organization must maintain the focus on their core values and reinforce those values at every opportunity.

Once it is clear that change is necessary to preserve the department's ability to engage in its core mission, creating a paid staff is not necessarily the first option to consider. Having the answers to a number of key questions may help resolve a department's staffing issues.

Does the department have the right leadership? An initial examination of problems should always include a review of the fire department's leadership. The lack of dynamic, adequately prepared leaders has long been identified as a significant issue for the volunteer fire service. Poor leadership has a significant impact on the retention rate of volunteers, on a department's desire and ability to meet new levels of service demand, and on the quality of the service provided.

Does the department offer benefits and incentives? Benefits are safeguards provided by the community or the department to protect firefighters and their families against unexpected financial strain should the

firefighter be injured, disabled or killed while on the job. As demands for service increase, so do the chances that firefighters will be injured or worse at the emergency scene. Departments need to provide protection—such as insurance and retirement or wage supplement plans—to ensure that the health, welfare and financial stability of firefighters and their families are protected. Such benefits are essential to assure that members are treated as valuable assets.

Incentives can provide motivation for members to improve personal performance and participation. These are defined by personal or team recognition programs or awards. Young people today, the future lifeblood of all fire departments, are interested in immediate feedback and that includes benefits and incentives. It is more cost-effective to pay for benefits than it is to pay people.

It is imperative that the community be involved in determining the level of support for volunteer or part-time firefighters. How willingly the community provides benefits for them now may help department leaders gauge its willingness to sustain a combination system, if one is needed.

Are department membership standards appropriate? Fire department leaders should review membership standards to ensure that they are appropriate for the services provided. Do you need to increase requirements to ensure that volunteers have adequate skills to deal with the dominant types of calls to which the department responds? Does the department really need a requirement that all members have the expertise and the responsibility to respond to all types of calls?

Can you use diversification strategies? It is critical for department leaders to understand that not everyone is equal in skills or abilities. Diversification strategies—essentially, not everyone in the department has to be proficient in all the jobs in the department—can be helpful in attracting new members. Diversification strategies are fairly simple. Recruit subject-matter experts for the different disciplines within the department. You can take advantage of that to attract new members and take pressure off of a small group of dedicated responders. For example, you might recruit from a number of professions within the community that deal with hazardous materials. Attract and train those individuals as volunteers and use them when chemical emergencies are dispatched. By implementing diversification strategies, you may actually improve your volunteer base by reducing the demand on all your members and enhancing their subject-matter expertise.

Trim the non-essentials. Review your organization's mission and values and identify the essential functions and services it is required to deliver. A review can, in some cases, lead to reducing or eliminating nonessential services. Remember, you can't be all things to all people.

Transitioning from the present system—alternative delivery systems

When it is clear that the present system is not working well, departments can follow a progressive path that leads from a completely volunteer-staffed organization to one that is staffed by some combination of volunteer and paid personnel. A department can stop anywhere along the path when that step leads to a satisfactory resolution of the community's fire department problem. The stop may be transitory or it could be permanent. The incremental approach helps a community achieve the best possible resolution of its issues at the lowest cost. Here are steps along the progressive path:

- Divide volunteer members into on-call duty shifts to ensure adequate coverage.
- Develop a program for volunteers to provide 24 hour coverage. Shift coverage needs to be flexible to accommodate individual commitments of 4, 6, 8 or 24 hours. Allow flexibility of start times and lengths of shifts to accomplish the coverage.
- Convert all-volunteer members to pay-per-call members, financially rewarding their participation.
- Implement regional response coverage and develop station-specific expertise.
- Develop Standard Operating Procedures or Standard Operating Guidelines.

- Establish a paid-on-call system, allowing the chief the flexibility to actually schedule shift coverage with financial compensation, essentially setting up part-time employee contracts with the volunteers.
- Create paid-on-call positions for specific job functions such as training, public education, inspections or administrative duties.
- Consider part-time employees specifically hired to provide coverage for inconsistent and sporadic volunteer coverage.
- Establish full-time career positions for daily shift coverage and completing administrative duties while supporting and maintaining a predominantly volunteer system.
- Convert a predominantly volunteer department to a 50/50 split, or predominantly career department where volunteers assume the supportive role.

Any of these solutions requires a new level of commitment, planning and consideration.

Typically, paid personnel are brought in to take on administrative duties or provide coverage for specialty services such as hazardous materials or technical rescue at a county or regional level, freeing volunteer firefighters to provide core services. (When an organization begins to pay personnel an hourly wage, they are subject to the Fair Labor Standards Act.) Doing so also sets the stage for more cooperative efforts on a regional basis. Regionalization of services clearly has a future in the volunteer fire service, providing economic relief and maximizing, not competing for, available volunteers.

Transitioning to a combination system

Communities need to understand the forces that drive departments to consider transitioning, which may include hiring paid firefighters. Doing so is critical to a successful transition. The community's expectations about services and what they should include must guide how the fire department deploys and seeks additional resources. Such expectations are best identified in the local government by finding the balance between expectations of service and what the available funding is will support. These expectations can be expressed in the form of response goals that provide the fire department a benchmark for success. It is important that goals are not set internally. Sometimes the fire service choose what they "think" is right and move forward with the goal. Community feedback is essential to determining the correct path to the future.

Sample performance goals include:

- Average time from dispatch to response.
- Average time from response to arrival.
- Average time on scene with basic or advanced life support.
- Number of certified/qualified firefighters assembled on scene within a defined time period (NFPA 1720).
- Generation of proper fire flow (as defined by locality / ISO expectations) within a defined time period.

Such data can provide "dashboards" (analogous to the array of gauges in a car) for the fire department and the local government to use in determining how the department's performance measures up to community expectations. Organizational dashboards provide a way to monitor in real time compliance with organizational goals. Translated to the fire service, the department can monitor response goals in real time and adjust response strategies accordingly. The system will be performing efficiently when the organization is in full compliance with the goals and expectations set by the community. When goals and expectations are not being met, the department needs to re-evaluate how it operates.

In volunteer and combination systems other dashboards may be used to monitor performance and progress in other areas besides response. Other benchmarks include:

- Average volunteer retention rate.
- Average annual recruitment and associated demographics.
- Average call per volunteer.
- Various fund-raising data.
- Less government taxing support.
- Controlling the cost of recruiting, hiring and training new personnel.

Such information can be used to monitor the health of the organization based on what is deemed important by the stakeholders, but it isn't determined in a vacuum. It takes a plan.

Strategic Planning

What is a Strategic Plan?

The development of a strategic plan is an important aspect of the evolution process. Fire executives who adopt a strategic plan for transition are better able to predict and manage change successfully. Strategic planning for an evolving department requires a commitment from the department's leadership and members and also from elected officials and other leaders in the community. Developing a strategic plan without involving community partners and stakeholders lessens chances for success.

Fire chiefs, presidents, and elected officials are often so preoccupied with immediate issues that they lose sight of their ultimate goals. That's why a preparation of a strategic plan is a necessity. A plan is not a recipe for sure success, but without it a fire department is much more likely to fail. A sound plan should:

- Serve as a framework for decisions or for securing support/approval.
- Provide a basis for more detailed planning.
- Incorporate detailed plans that include timelines, assignments and evaluations.
- Explain the services provided to others in order to inform, motivate and involve.
- Assist bench marking and performance monitoring.
- Stimulate change and become the building block for next plan within established timelines.

Preparing a strategic plan involves a multi-step process addressing vision, mission, objectives, values, strategies, goals and programs. When you develop a strategic plan, you must involve all the stakeholders if you hope to be successful.

The Vision

Your first step is to develop a realistic **Vision** for the department. Present it as a picture of the community and the department in three or more years' time, stated in terms of the department's likely growth and development.

The Mission

Describe the nature of a fire department in terms of its **Mission**, which indicates the purpose. Some people confuse mission statements with value statements (see chart on next page)—the former should be very hard-nosed, while the latter can deal with "softer" issues surrounding the business.

The Values

This element expresses the **Values** governing the operation of the department and its conduct or relationships with society at large, employees, local community and other stakeholders.

The Objectives

It is essential that you state the fire department's business **Objectives** in terms of the results it needs or wants to achieve in the medium and/or long terms. Objectives should relate to the expectations and requirements of all the major stakeholders, including employees, and should reflect the underlying reasons for operating the department.

The Strategies

Strategies reflect the roles and guidelines by which the mission, objectives and the like may be achieved. They can be developed using a SWOT analysis to identify **strengths,** identify and resolve **weaknesses,** identify and exploit **opportunities,** and identify and avoid **threats**.

The Goals

Goals are specific interim or ultimate time-based measurements to be achieved by implementing strategies in pursuit of the objectives. Goals should be quantifiable, consistent, realistic and achievable.

The Programs

The final elements are the **Programs** that set out the implementation plans for the key strategies. These should cover resources, objectives, timescales, deadlines, budgets and performance targets.

Hard	Soft
What business is / does	Reason for existence
Primary products / services	Competitive advantages
Key processes and technologies	Unique / distinctive features
Main customer groups	Important philosophical / social issues
Primary markets / segments	
Principal channels / outlets	Image, quality, style standards
	Stakeholder concerns

Designing a Combination System

The transition from an all-volunteer department to a combination system works best when the system is developing through detailed communication and strategic planning, rather than blind evolution. Many departments have evolved into an awkward conglomerate of resources with little thought given to system design and functionality and the long-term effects such a transition may have on the future of the organization. In many cases the evolution process is made more difficult by a lack of stable leadership. The revolving door process for selecting leaders within the volunteer fire service creates a difficult structure to overcome in developing long-range plans. In addition, the election of officers requires a constant political campaign, creating a significant strain on the organization's ability to evolve. This paper strongly recommends that the officers' selection process eliminates elections and focuses on credentialing with performance factors.

Casualties of Transition

As departments approach the task of transitioning from an all-volunteer organization to another form of deployment, they need to be aware of a variety of pitfalls. It is common for such transitions to be emotionally charged events for those closely involved, and emotions often lead to serious mistakes. When emotions are allowed to overtake rationality, departments should expect some limited attrition of

volunteers. Casualties could be significant but the vast majority of the volunteer members, even though some may be skeptical and cautious, will be willing to work through the issues and contribute meaningfully to improve the department. The same dangers apply to paid personnel. Those who are unable to integrate effectively with volunteer firefighters will quickly become a liability to the system. They seldom last if the department leadership recognizes and addresses the issues.

Another common casualty of transition results from avoiding sensitive issues and dodging conflict. Some departments may deem themselves "combination" simply because they utilize both career and volunteer personnel, but closer examination may show they are organizations in which paid firefighters are segregated from volunteer firefighters and there is little cooperation and integration between the two. This type of system is best described as "dual" rather than combination. While some dual departments function successfully in the short term, their division makes issues between the two groups stand out even more, and they miss out on many of the advantages a combination system brings. Poorly managed "dual" systems often become "duel" systems that are destined to fail.

Some indicators of a dual system include:

- Volunteers operating in different quarters than paid staff.
- Volunteers riding on separate apparatus than paid staff.
- Separate rules and regulations used.
- One group receiving better equipment and apparatus than the other.
- Rank structures and supervision not integrated.
- No opportunity for social interaction.

Departments should work to ensure system fairness for all parties. Integrating personnel fosters relationships that help to sustain the system.

An effective indicator of transition casualties is the retention rate of the minority component of the organization. If the paid component of the organization is in the minority and the retention rates are less than two years, it is likely that issues exist that are driving these firefighters away. Likewise, if the volunteers serve as the minority and retention rates are declining, it is likely issues are present that have negative impacts on the organization. The key to avoiding these issues is to ensure that everyone fully understands the core values of the organization and is committed to its mission.

Basic Design Models
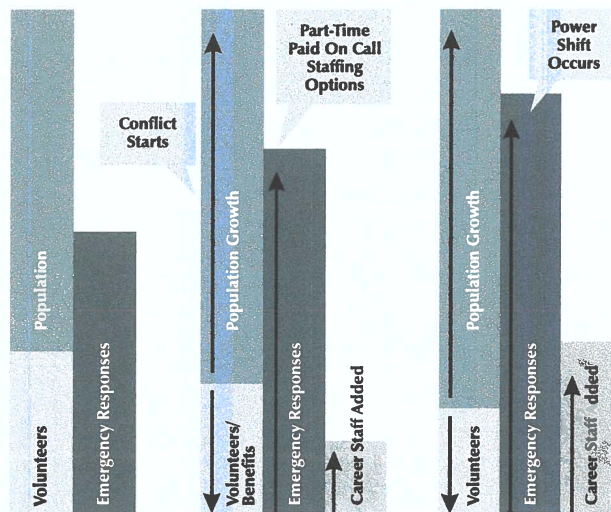
A department should conduct a cost/benefit analysis during system design to determine which model will function most efficiently for its locality. System design needs to recognize that volunteer/paid-on-call personnel are paid only for work performed. Career firefighters are paid for the POTENTIAL to be used. This does not mean that one is better than the other but it implies that department managers need to clearly understand the differences between the two as they relate to cost.

Some of the benefits/risks of the common system designs include:

All-Volunteer System

- Reduced labor costs.
- High-volume staffing during major emergencies such as natural disasters. Such influxes of manpower may be contingent on employers allowing volunteer employees to leave work during such events.
- Volunteers are willing or able to take off work to assist.
- Salary cost avoidance, which can be diverted to essential equipment and apparatus.
- Unpredictable response from volunteer staff.
- Volunteer systems can be more challenging to coordinate because of intermittent or sporadic participation from various members.
- Can rely on individual response rather than system response to meet call load, thus resulting in unpredictable service levels.

Combination System

- Can consist of any combination of career, volunteer, paid-on-call and part-time personnel.
- Enhanced staffing deployment as combination systems can capitalize on both the stability of a paid system and the manpower of the volunteer system during a major emergency, providing greater depth for staffing.
- Salary cost avoidance, which can free funds for essential equipment and apparatus.
- True integration of available resources and distribution of talent resulting in greater efficiency.

All-Paid System

- Consistent staffing providing predictable service level.
- Expensive due to increased salary and benefits requirements.
- Can lack depth during major emergencies because once multiple shifts have been deployed in a major incident, few resources are left to cover other service demands.

Another vital consideration when designing a combination system is identification of the stakeholders in the department. These stakeholders may include volunteers, employees, the fire department's management, local government interests, citizens and even the news media. A group of stakeholders should be convened early in the process to identify the obstacles to change and the processes to be used for over coming them. The creation of a combination system can be challenging by its very nature and great care should be used to facilitate the change process.

Establishing Authority

One of the most controversial aspects of designing a combination system is establishing a clear line of authority and chain of command. Avoiding this challenge will breed animosity and mistrust over time, so it is critical that the lines be drawn early in the process. No matter if the chief will be paid or volunteer, the local government must empower the chief officer to lead the system as a whole. The local government – the "boss" – should be prepared to stand behind the chief as the transition progresses, even when political battles ensue, as they most likely will. Establishing local ordinances, resolutions or

regulations that clearly define the authority of the fire chief and empower the position holder to effectively lead the organization is vital to success in the combination system.

Selecting a chief to lead a combination system is a delicate task. Leading a combination system should be approached as a specialty, and care should be taken to seek out candidates that have experience in this field. A qualified candidate should possess experience in dealing with both volunteer and paid personnel and have a leadership style that is conducive to conflict resolution and facilitation. Failure to select a candidate for chief with the appropriate experience and background can challenge the ability of the combination system to be successful. There is nothing that requires a chief in a combination system to be paid. The selection process for a chief in a combination system should not include term limits or an election, but should be based on common hiring practices. Equally dangerous is the philosophy that a chief from a fully career department automatically has the ability to motivate and supervise volunteers.

Subordinate officer selection can also be challenging. The selection of Assistant Chiefs and Deputy Chiefs should follow the same model outlined for the selection of the Chief. As captains, engine company officers, and other supervisory positions are created and people selected, the system's success is very much dependant on their enthusiasm and commitment to a combination system. They have to recognize and support the overall philosophy of a combination system and clearly understand their role in making it productive and successful. A promotional process should be in place that takes into account experience, education, service, testing and evaluation. Detrimental to this philosophy would be a career officer's inflated sense of rank based merely on wage compensation. Conversely, a volunteer officer's assumptions that the majority of "mopping up" duties are to be left to paid personnel defeats the cooperative nature essential to the mission of the department.

Substantial benefits can be derived from educating all the department members on the strengths and weaknesses of the system and clearly outlining the expectations of all the firefighters. It is important to ensure that career staff members understand they become informal leaders regardless of their rank because of their frequent exposure to emergency calls and the expertise they develop. Thus, every career firefighter is potentially a mentor who is expected to help others, including volunteers, capitalize on opportunities to improve, excel, and build confidence.

Local officials who believe that a system can always operate more cheaply have affected more than one well-organized and productive combination fire system. Sometimes their lack of knowledge about your department's history, the significant events that have formed it, its struggle for change, and the acceptance of its services by the public seem inconsequential when the time comes to balance budgets. Combination systems have a difficult challenge showing their cost effectiveness because there is no rebate of the monies saved or refund being returned to the funding entities.

It is imperative that local officials understand their obligation in this kind of system. Reducing the need for career positions saves the community substantial amounts of money that can be reinvested in other critical infrastructure. It is their responsibility to ensure that all firefighters have good equipment, apparatus, sufficient funds for overtime pay to allow career and volunteer members to train together, and capital to invest in new technology. Those issues make the system complete and they ensure that all the stakeholders have a vested interest in success.

Communication & Policy Development

Communication is essential in a successful combination system. The fire department leadership should constantly facilitate communication between paid and volunteer personnel and work tirelessly to manage information and dispel rumors. Leadership must constantly maintain open communications with elected officials and government authorities. Including stakeholders in the development of policies and procedures will help to develop ownership in the combination system and create transparency that will help avoid unnecessary conflicts. Both volunteer and paid members of the organization have special considerations that should be taken into account when developing policies. Time is often a major issue

with volunteers who must juggle other jobs and family obligations, while paid members may be more interested in working conditions and wages. Each perspective should be considered valid and accommodations reached that allow both groups to succeed within their own abilities.

Job Descriptions and Expectations

It is imperative that all members of the organization understand their responsibilities and expectations. People often join an organization expecting one thing and then experience something quite different and over time they develop negative attitudes.

The job description must identify the specific roles and responsibilities of each member of the organization. Remember, paid personnel are being compensated for the work they do, but this does not mean that any less is expected from the volunteers.

The expectations of leadership are the same whether career or volunteer members hold top positions. These expectations are the same for firefighters as well. Being trained and competent is not determined by a paycheck but by the level of commitment. Everyone should be expected to be trained and competent; a paycheck or lack of one is not an excuse for incompetence.

Focus is important to any organization. If leaders fail to provide a focus, the members will develop their own, and their focus most likely will be centered on themselves and not the organization. Job descriptions and expectations help keep the members focused.

One specific responsibility of the career firefighter should be to help mentor the volunteers. The mentoring process should be spelled out in the Standard Operating Procedure (SOP) manual. This helps the volunteers grow and develop in their abilities and skills. Ultimately the volunteers will be able to function at a much higher level as a result of mentoring.

In addition, the career firefighter should help identify and correct problems within the fire department. It is no longer someone else's responsibility to solve problems.

Well thought out job descriptions and expectations can do much to keep the organization running smoothly. They help all members stay on the same page.

Clearly defined expectations, along with an evaluation system, will provide an excellent tool for managing the transition. The expectation model must include an analysis and evaluation of each individual's ability to function as a team member. Department leaders must enforce the model once it is set, but they should modify it when circumstances invalidate expectations. Maintaining expectations that no longer apply to the organizational structure can lead to conflict. The change model can be learned and implemented as long as management continues to understand that change is inevitable and most likely will produce improved service levels.

Sustaining a Combination System

Ensuring that a combination system stays focused requires constant maintenance and leadership. Local government and fire department leaders must embrace the combination philosophy and be prepared to endure intense scrutiny and political pressure. Leaders within the local government and fire department must regularly recommit to the combination mission and keep both paid and volunteer firefighters focused on service delivery.

The underlying philosophy of a combination system is improved service at a reduced cost. A combination department needs to be recognized for its value as a cost avoidance tool that reduces the need for employing full time career firefighters. Local officials should support the department with adequate funds committed to maintaining modern apparatus, protective gear and other equipment, and investment in improved technology.

Adequate allowance for overtime pay is necessary to ensure that all firefighters can train together, most likely on a schedule that ensures maximum participation by volunteers.

Monitoring the retention rate and/or general treatment of the minority group becomes a good indicator of how the combination system is performing and provides a mechanism for making internal changes.

Tactical Equality

One of the secrets of successful combination fire departments is full integration of career and volunteer firefighters at a tactical level. The concept is simple although it can be challenging to implement if you are already a combination department that is not so integrated. Tactical integration pays big dividends for the department and the community by improving emergency scene operations and increasing volunteer longevity.

Tactical equality recognizes that all positions, from firefighter through senior fire officer, require formal training and education to meet the expected performance level. Members of an evolving system must understand the complex issues facing the department and community and the serious nature of the service.

Officer promotions should be based on certification, tenure, experience and proficiencies in technical skills as well as soft skills, such as interpersonal communication.

Tactical equality is achievable if your department provides performance-based, certifiable training and the opportunity for the volunteer and career firefighters to train at the same time. This establishes a respect for the rank and the achievement to obtain the position and less emphasis on whether it is filled by a volunteer or career member. Position and rank are not affected by time of day or the day of the week. The attitude toward rank for everyone should be, "You earned it, you own it."

The importance of joint training and interaction means that it should be supported by adequate overtime funds to ensure training with the volunteers is a formal expectation of the job for the career employee.

One obstacle to tactical equality can be a requirement that volunteers meet training standards that are common in paid settings. The time commitment required to complete the training is an issue with many volunteers. Fire service professional standards and accreditation organizations should develop ways to incorporate performance-based training concepts into certification courses that allow students to gain qualification based on actual abilities rather than classroom hours.

Implementing this philosophy while the department is still a volunteer-staffed organization can improve the quality of officers available for promotion. Of equal importance, it fosters a cultural change that will dictate the value and respect that are placed on volunteer personnel long after career firefighters are incorporated into the system.

Resource Deployment Options

When looking at resource deployment of your department make sure that you consider all the options, thinking outside the framework of normal deployment systems and keeping all your search avenues open. It is imperative that leadership does not compare and try to create a system emulating large departments. Focus on what your department should be and create a model that is effective and efficient for your community.

Deployment can be a very simple or an extensive and costly process. As we look at the objectives of deployment (NFPA 1710/1720) we need to take into consideration items such as:

- Proper number of personnel.
- Time for response & delivery.
- Apparatus.

Deployment should take into account a means of getting the proper staffing, needed tools, and required resources to a predetermined location to effectively and efficiently mitigate the emergency. There should never be a differential between adequate "hardware" resources and payroll.

Some personnel deployment options include paging by radio, pager, or cell phone. Other items to consider are duty assignments allowing for the best utilization of staff, or working out a system that will provide required staffing without the traditional "everyone respond" or the use of several pieces of apparatus just to gain necessary staffing.

The fire service often utilizes apparatus as "expensive" taxis to bring together numbers of personnel rather than calling the proper apparatus for the performance needed. Departments should identify the required level of apparatus and staffing based on type of call, and then look at alternate means of transporting personnel, such as utility vehicles or command vehicles. It is not always prudent to buy bigger apparatus just to carry personnel. Another option is to manage personal vehicle deployment, but this method requires significant discipline to assure accountability and safety considerations.

Departments should have a method of monitoring the number of personnel responding to incidents so management can determine if sufficient staffing is going to be available to deliver the required service.

Staffing management is key to assuring the proper number of personnel on an incident scene. Assignment of duty hours or days or shifts can ensure proper staffing and help avoid overstaffing. Having each member assigned a time slot and/or a service function can regulate the number of members who respond to a call type so that the result is needed deployment but not overdeployment. This may also provide a more reliable time commitment for the volunteer.

Note: When attempting to define the timing element of your deployment system, you must consider the time for a response and the actual time required for the delivery of the service, which could be vastly different. A good reference for assistance in determining response and delivery times is *NFPA 1720: Standard for the Organization and the Deployment*, or a copy of the *Fire Service Standards of Cover*.

Looking at some nontraditional means of deployment could help solve overstaffing or understaffing concerns that often burden your department's service deployment. Reviewing all deployment opportunities will save the embarrassment of lack of proper resource development during the time of need.

Regional Response and Mutual Aid

It may be time to ask, "Can we be all things to all people?" Can two or three departments provide the needed services for the community versus parallel systems for each department?

The concept of regional response can help reduce the service-delivery burden felt by many fire departments today. Using this concept, fire departments can stop duplicating resources and services. This saves both time and money for the local community and addresses gaps in specialized response.

A relevant question is, "Do each of two fire departments that are located three miles from each other need two tankers and an aerial? Isn't it possible for one department to have two tankers and the other department an aerial?" Look at the possible savings that an agreement like this could mean for both communities. Although ISO ratings may affect these considerations, the fire service leaders must determine the best deal for the dollar and the best way to provide service to the community. Never allow ISO to be the driving factor. If your system is effective, your ISO rating will improve.

During the day two departments have a total of five people on staff. There are two people at one department and three in another. Could we place all five in one station to enhance the staffing? Now the first responding truck has a total of five instead of the possibility of only two. However resources are deployed, a minimum of four people per apparatus dispatched should be assembled on the fire ground.

With the needs of the community as the primary driver, fire department leaders can develop many possible solutions. Never design a system to handle the worst-case scenario. Design it to properly address the vast majority of your responses. It may be that one department will no longer be the expert in all areas. Instead, each department in an area may have a specialty and its services can be offered to the region in exchange for specialized services from other departments. Regionalization of services can reduce the burden on many of the nation's fire departments.

The concept of mutual aid is sometimes abused. Departments that are unable to answer an initial call will rely on mutual aid to cover the alarm. This increases the burden on the other department. True mutual aid should be utilized when back-to-back calls are received, or when an incident is bigger than the resources that are on hand and additional people or equipment is needed.

The Impact of Emergency Medical Services (EMS)

EMS calls have created a strain for many fire/EMS systems as a result of increases in call volume. It is much easier to get people to volunteer for 150 fire calls than it is for 400 calls. The higher the call volume, the more strain that is placed on the personnel.

Even departments that don't provide EMS patient transports but only first response care are feeling the impact of higher run volumes due primarily to national issues related to health care conditions. To compound this, many stand-alone EMS systems are expecting and relying on fire departments to assist them on various EMS calls. In addition, EMS certifications have become a significant burden for volunteer and career members that results in additional costs and time commitments.

The EMS system benefits from this arrangement with the fire department's first responders in several ways. First, they can reduce the number of EMS units needed to cover a specific area. Fire departments are usually strategically located throughout the community. This allows for quick response and timely coverage, so in many cases the fire department will be on-scene before the EMS unit.

Some EMS systems will rely on the first responder to assist with lifting, CPR and other labor-intensive tasks. By doing this the EMS system reduces its cost of doing business, since the fire department is doing what additional EMS personnel would normally do, thus increasing the run volume.

Another aspect to consider is that some fire departments have consolidated fire and EMS operations. Although run volumes are increased substantially, additional revenue can be generated through EMS billing and additional services are provided for the community.

This additional service is good for the public image of the department and the additional revenue can provide money to help support a part-time, paid-on-call or combination system.

EMS can create many challenges for the local fire department. New methods for dealing with the challenges of EMS growth must be identified for the specific community. How the department deals with the EMS issue will ultimately determine its success. People expect to summon an ambulance for any reason at any time and be confident that someone will show up in a short period of time to transport them where they need to go. This public expectation becomes a huge burden when you staff with volunteers via home response. Even in a combination system this can create situations where nonessential EMS calls are taking up so much of the paid staff's time that other duties are not being completed. Most volunteers join for the excitement and the thrill associated with saving lives, but most EMS calls are not full of excitement and thrills. If peoples' expectations for service are to be met, they need to be aware that there are costs associated with it delivery. The cost of providing ambulance service in most cases must include career/part-time paid staffing.

Part-time Staffing as an Alternative

There are alternatives to operating a combination department. One is transitioning from an all-volunteer system to one of all part-time firefighters. The part-time employee program can be

designed around the specific needs of the department. It is dynamic in nature and can grow as the needs of the department change.

Under this system the volunteers are hired as part-time employees. Stations are staffed with part-time members around the clock or during peak call times. This allows for staffing that is comparable to that of the career department at a fraction of the cost to the community.

The administrators of the department can decide, based on run volume, the number of staff members needed on each shift. Shifts can vary in any degree of time blocks. Members can work their normal full-time job and sign up for shifts when they are available. Managers must be capable of making creative shift assignments. If a call requires more personnel than are on duty, members responding from home or work are paid from the time the call comes in until they are placed back in service and all equipment is made ready for the next run.

The pay scale for this system can be flexible. One example would be to pay those who are trained as firefighters in one pay range while paying basic EMTs and paramedics another range. This makes sense especially in those departments with high EMS call volumes.

EXAMPLE:

FIREFIGHTER ONLY $ 7.00 per hour
FIREFIGHTER/EMT $ 10.00 per hour
FIREFIGHTER/PARAMEDIC $ 13.00 per hour

Under this system the members are paid more for education. A firefighter wanting to earn more money can return to train for a higher paying position and be paid at the level upon achieving certification. In addition to education, this system pays for performance compensating employees for what they do.

Scheduling must be monitored to prevent overtime and creating Fair Labor Standards issues.

The cost of the part-time system compared to the full-time system is greatly reduced. The need for many benefits is reduced when part-time employees are working full time at another career. For example, a department with 50 part-time members would save nearly $400,000 by not providing healthcare benefits. (50 employees X $8,000 per employee = $400,000)

There are intrinsic benefits to this system as well. The volunteer is now a paid employee. This can increase pride and he or she may feel more valued by the organization.

Leadership Selection

To ensure a healthy organization, it is imperative that strong leaders are selected for officer positions. Just because an individual is a good firefighter does not guarantee that he or she will perform well as an officer. Sometimes, technical skills are confused with leadership skills. Both are important but remember you are selecting a leader, not a "head firefighter." This means that special considerations must be taken in selecting those who have the ability to lead.

Leadership is a skill that can be learned and developed, but the leader must also have certain characteristics to ensure success. First, *integrity* gives the officer credibility. If the officer compromises his integrity, credibility is lost, and when credibility is lost his effectiveness is lost as well.

Leaders cannot lead where they cannot see. Therefore the officer must have a clear and distinct *vision*. Where does he see the organization moving? What will the organization look like in the future? Even a frontline officer must be able to see where he would like the people under his command to move. Once this vision is created, the officer must communicate it to the people and get them excited about it. People must buy into it if the vision is to become reality.

The officer must maintain integrity even when it hurts. In other words, the officer chooses to do what is best for the people and the organization even when another choice would benefit the officer.

Ask employees what they want from their bosses, and most often the answer is character and fairness. People want to be led by someone they can *trust*. And when trust is high, overall performance will increase.

Next, the officer must have a good attitude, be *optimistic* about the future, and focus on the positive more than the negative without avoiding problems.

An effective officer will also demonstrate a *caring attitude* for the firefighters, the organization and the community in which he serves. To put it bluntly, "If you don't care, then get out of the organization or at a minimum, get out of the position of leadership and influence." The officer sets the tone for the organization. If he is negative and constantly complaining, he creates a negative work environment that acts as a cancer spreading throughout the department. If an officer has a "no" attitude, or a "we cannot do that" attitude, the members will adopt the same philosophy. Eventually this will head into a downward spiral of defeat.

The officer must have self-discipline. *Self-discipline* is defined as "knowing what I need to do, not wanting to do it, but doing it anyway." Self-discipline demonstrates the officer's ability to stay cool under pressure. He tends to do what is right for the organization instead of what is popular.

Courage is an important trait for any officer at any level. Courage allows the officer to make tough decisions even when he knows he will be challenged. Courage allows the officer to show a healthy confidence in doing the job.

Another characteristic important to the officer is *humility*. A good officer is not driven by ego but by a value system that recognizes right from wrong. The humble leader will admit when he is wrong instead of pointing the blame elsewhere (self-esteem is managed internally) and will work to correct mistakes. Humble leaders are in their positions for the right reasons. They are transparent with nothing to hide and nothing to prove. They are there to serve the people they lead.

Effective officers *seek excellence* in all that they do. They constantly look for better ways of doing things. They learn from their mistakes and educate themselves on a continual basis. They strive to do the best they can in all situations. At the same time, successful officers understand that decision-making is a constant process of assessing risk versus gain or cost. So they incorporate into their decision process a "reality check" that helps to give their decisions a real world perspective. They recognize that not every decision will be the perfect solution.

Leadership is a privilege. To lead and influence people is one of the highest honors an individual can be accorded. A leader must never abuse his or her authority or influence, no matter how tempting it may be. The organization must recognize this and have systems in place to ensure that high performers are rewarded for their successes. This provides an incentive for good people to strive for leadership positions.

When selecting an officer, look for people who are *good communicators,* people who are able to articulate information in a timely and accurate manner. They must believe in "open-book management," which means that information is not guarded but freely distributed within the organization.

Remember, the organization will never progress beyond the abilities of the officer. If the officer's ability to lead is limited, the organization will be limited as well. Strong leaders make strong organizations. Review your current officer selection process and determine how it can be improved.

Feedback from firefighters is often helpful for the command officer. An example of a firefighter evaluation of the command officer is included in *Addendum B*. Feedback from the bottom up is a very

important part of the process of having great officers. Some fire officers fear this type of evaluation, but this method clearly demonstrates commitment and leadership.

Assessment Center – Leadership Selection

An assessment center consists of a standardized evaluation of behavior based on multiple evaluations, including job-related simulations, interviews and/or psychological tests. Job simulations are used to evaluate candidates on behaviors relevant to the most critical aspects (or competencies) of the job.

Assessment Center Exercises

An assessment center can be defined as "a variety of testing techniques designed to allow candidates to demonstrate, under standardized conditions, the skills and abilities that are most essential for success in a given job." Assessment centers allow candidates to demonstrate more of their skills through a number of job-relevant situations. The term assessment center is really a catchall for an assessment process that can consist of some or all of a variety of exercises. While assessment centers vary in the number and type of exercises included, two of the most common exercises are the in-basket and the oral exercise. Other possibilities include counseling simulations, problem-analysis exercises, interview simulations, role-play exercises, written report/analysis exercises and leaderless group exercises.

In-basket exercise. In a traditional in-basket exercise, candidates are given time to review the material and initiate in writing whatever actions they believe to be most appropriate in relation to each in-basket item. When time is called for the exercise, the in-basket materials and any notes, letters, memos or other correspondence written by the candidate are collected for review by one or more assessors. Often the candidates are then interviewed to ensure that the assessor(s) understand actions taken by the candidate and the rationale for the actions. If an interview is not possible, it is also quite common to have the candidate complete a summary sheet (i.e., a questionnaire). A more recent trend over the past 10 years has been the development of selection procedures that are based on the assessment center model, but which can be turned into low-fidelity simulations. Some low-fidelity simulations involve having an applicant read about a work situation. The applicant then responds to the situation by choosing one of five alternative answers. Some procedures have the applicant choose the response he/she would most likely make in a situation and the response that he/she would least likely make. These samples of hypothetical work behavior have been found to be valid predictors of job performance.

Recently, the in-basket has become a focus of interest because of its usefulness in selection across a wide variety of jobs. A variety of techniques have been used to develop in-baskets. Quite often information on an in-basket's development is not available for review because the reports do not contain the critical information. It is not uncommon for armchair methods to be used or for in-baskets to be taken off the shelf. A recent review indicated that nearly 50 percent of the studies do not describe how the in-basket was constructed. There is also a great deal of variation among the ways in which the in-basket is scored, with some scoring systems utilizing almost entirely subjective judgment, while others utilize a purely objective approach. The in-basket exercise may be thought of as an approach that assesses a candidate's "practical thinking" ability, by having a candidate engage in implicit problem solving for a job-relevant task.

It is now well recognized that a content-valid approach to constructing an in-basket is one that is professionally accepted as a technique that has passed legal scrutiny. However, despite the acceptance by the courts and practitioners, the reporting basis for content validity is often deficient. Schippmann, Prien and Katz in a 1990 report point out that all the studies they reviewed failed to establish a link between the task portion and the knowledge, skill and ability portion of the job analysis in order to provide a firm foundation for the construction of the in-basket. Often there has been no procedure for translating the job analysis information into development or choice of the test.

Oral exercises. Like all assessment center exercises, oral exercises can take many forms depending on the work behaviors or factors of the job being simulated. Common forms of oral exercises include press

conference exercises, formal presentations and informal presentations (briefing exercise). In oral presentation exercises, candidates are given a brief period of time in which to plan/organize their thoughts, make notes, etc., for the presentation/briefing. Traditionally, the audience is played by the assessor(s), who observes the presentation and makes ratings. Assessors may also ask candidates a series of questions following their briefing/presentation. The questions may or may not relate directly to the topic of the presentation.

Leaderless Group Discussion. The leaderless group discussion is a type of assessment center exercise where groups of applicants meet together to discuss an actual job-related problem. As the meeting proceeds, the behavior of the candidates is observed to see how they interact and what leadership and communications skills each person displays.

Role Playing. Role playing is a type of assessment center exercise in which the candidate assumes the role of the incumbent of the position and must deal with another person in a job-related situation. A trained role player is used and responds "in character" to the actions of the candidate. Performance is assessed by observers.

Several trained observers and techniques are used. Judgments about behavior are made and recorded. The discussion results in evaluations of the performance of the candidates on the dimensions or other variables.

Agencies should not utilize the assessment center as the only Pass/Fail portion of selection. Consider a "piece of the pie" attitude when utilizing assessment centers. Balance is the key objective.

Hiring Practices

Hiring career personnel is not only an important management/leadership decision, it is also a large monetary and professional investment for the organization. Depending on the size of the agency, it is estimated that approximately 70 to 80 percent of an operating budget for a combination department is dedicated to salaries, wages and fringe benefits for staff. Personnel are truly the most valuable resource for any organization, both in a monetary and asset sense.

With that said, organizations should ensure that their recruitment and hiring processes are designed appropriately to facilitate the hiring of qualified staff that meets the organizational needs and that the candidates are screened to appropriately identify strengths and weaknesses so that solid hiring decisions can be made. Once again, it is not only about firefighting and EMS skills—people skills are very important.

There are many models that identify the hiring techniques utilized by different organizations for the recruitment, hiring and appointment of volunteer, paid-on-call, part-time and career personnel. While specific criteria may vary with regard to experience, training, education and certification, several very important aspects should remain constant. Two of the most important aspects that come to mind are attitude and personality.

Attitudes

While hard to measure, attitude can be a driving force that overcomes many obstacles and can be the resolve that carries a person to a higher level of achievement. Southwest Airlines has embraced the motto "Hire for attitude—train for skills." Attitude is an individual trait that should be measured to ensure that potential candidates possess a level of commitment that will blend with and be accepted within the organizational culture.

The use of Likert scales or Semantic Differential Scales can be useful in developing appropriate evaluation mechanisms unique to the organization and can greatly assist managers in assessing a candidate's attitude. The following Web address provides an overview of the Likert scale and how to develop an evaluation mechanism: www.socialresearchmethods.net/kb/scallik.htm.

For more information regarding levels of measurement and scaling, visit: www.fao.org/docrep/W3241E/w3241e04.htm.

The following Web address provides an overview of the do's-and-don'ts of survey design: www.unf.edu/dept/cirt/workshops/survey/polland_handout.pdf.

Personality

As important as attitude is personality. The ability of an employee to survive and operate within an organizational culture may very well depend on his ability to fit in. Notwithstanding the fact that measuring a candidate's personality is subjective, it is extremely important to identify whether or not a potential candidate has the necessary interpersonal skills to connect with peers and supervisors in the organization.

A widely utilized mechanism for identifying personality traits is the Myers-Briggs Type Indicator® instrument, which provides a useful way of describing people's personalities by looking at their preferences on four scales (extraversion vs. introversion, sensing vs. intuition, thinking vs. feeling, and judging vs. perceiving).

Paladin Associates was formed as a nonprofit organization for the purpose of promoting the benefits of the Myers-Briggs Type Indicator® instrument. Their Web site is www.paladinexec.com and it provides a great deal of information and resources for personal and professional development. The Myers-Briggs Type Indicator® instrument is available free of charge at www.paladinexec.com/mtbionlinetest.htm.

The psychological assessment is based on the psychologist's knowledge of the requirements of firefighting duties. These requirements are based on a job analysis with identification of the psychological variables that are relevant to the knowledge, skills and abilities needed to be an effective firefighter. In addition to the variables that are more or less common to all or most fire departments, the psychologist can also customize the focus on those variables that are valued or required by a specific department.

The assessment procedures may include an individual interview with the candidate and a series of paper-and-pencil psychological tests. The comprehensive interview is primarily focused on work and career-related issues. The psychologist may also explore areas such as family history, education, interest in the pursuit of a fire service career, the individual's strengths and developmental needs, mental health history, legal history, exploration of the use of mood-altering drugs and chemicals, and overall adjustment.

The paper-and-pencil psychological tests may include the verbal comprehension, numerical reasoning and verbal reasoning subtests of the Employee Aptitude Survey® series; the Minnesota Multiphasic Personality Inventory-II®; the California Psychological Inventory®; the Myers-Briggs Type Indicator®; and/or a writing sample.

The three intellectual-based tests (verbal comprehension, numerical reasoning and verbal reasoning) provide an estimate of the individual's vocabulary knowledge and inductive and deductive reasoning capabilities. They identify the candidate's ability to analyze situations as well as deal with matters of a more conceptual nature. They provide an indication of how quickly the individual will learn what he or she needs to know to be successful on the job. The candidate's scores on the aptitude tests are compared to a sample of firefighter candidates' scores.

The Minnesota Multiphasic Personality Indicator-II® is a clinical screening instrument designed primarily to detect the presence of abnormal functioning, and to screen out clinically significant pathology that may impair an individual's ability to perform the duties of a firefighter. The California Psychological Inventory® is a general personality inventory designed primarily to differentiate among essentially normal individuals on a number of dimensions, including dominance, independence, responsibility, self-control, etc. Both of these inventories are used extensively in the selection of firefighters in the United States, and there are numerous research studies attesting to their validity and utility in the selection process.

The Myers-Briggs Type Indicator® provides useful information related to work style, including how people relate to each other, organizational skills and what information is relevant to them in making decisions (e.g., facts versus feelings).

The writing sample consists of having candidates write about a conflict situation. They are evaluated on the basis of the content as well as grammatical accuracy.

The conclusions of the psychologist regarding the candidate are based on all of the information gathered from the assessment processes described above. They represent the overall best judgment of the psychologist, taking into account not only the test results but also impressions gained from the interview. In addition to providing an overall description of the candidate in the report, the psychologist may also make a recommendation about hiring. For example, the candidate may be recommended unconditionally, recommended with reservations, or not recommended for hiring. When the psychologist recommends a candidate with reservations, the reservations may not be significant enough to disqualify the candidate but may cause some difficulty or be problematic. In some cases candidates may not be recommended for hire because the psychologist feels the candidate would not be a solid match or does not possess the characteristics that are particularly valued or required by a specific department. The agency must establish the benchmarks or it most likely will be saddled with a low performing employee (or volunteer).

Physical Abilities

One of the key elements of an organization's assessment of employees is determining their ability to perform the essential functions of the jobs that are detailed in position descriptions. Regardless of whether an employee is volunteer, paid-on-call, part-time or career, it is essential that the organization evaluate his or her physical abilities prior to appointment to the organization and thereafter on a periodic basis, to ensure capability of performing the essential functions of whatever position the employee fills.

A principal concern is the cardiovascular fitness of firefighters. The American fire service continues to see an increase in both injuries and cardiac-related on-duty deaths, which in turn leads to higher insurance premiums and increased workers' compensation costs.

The International Association of Fire Chiefs (IAFC) and the International Association of Fire Fighters (IAFF), through the Joint Labor Management Task Force, developed The Fire Service Joint Labor Management Wellness Fitness Initiative. The Guide to Implementing IAFC/IAFF Fire Service Joint Labor Management Wellness/Fitness Initiative is available via electronic format through the IAFC at no charge.

The manual includes information on these topics:

- Fitness evaluation.
- Medical evaluation.
- Rehabilitation.
- Behavioral health.
- Data collection.

In addition to these programs, the Joint Labor Management Task Force developed the Peer Fitness Training Certification Program, which is designed to train personnel to implement fitness programs, improve the wellness of personnel and assist in the physical training of new recruits. More information is available from the IAFF web site, www.iaff.org/safe/content/wellness/peer.htm.

The IAFC, in conjunction with the IAFF, developed and adopted the Candidate Physical Agility Test (CPAT), as an entry-level physical ability test for measuring the physical capabilities of a firefighter candidate to perform firefighting functions. The Candidate Physical Agility Tests Manual is available through the IAFC and the IAFF. Additional information can be obtained from the IAFF Web site at www.iaff.org/safe/wellness/cpat.html and the IAFC Web site www.iafc.org (member only access).

It is essential that organizations utilize evaluation mechanisms that have been approved by their political entities and legal counsel to ensure compliance with local, state and federal legislation, such as Americans with Disabilities (ADA). More information can be obtained by visiting the ADA Web site at www.ada.gov.

Background Investigations

Many changes in the way we conduct business have come about as a result of an increased awareness of global terrorism and the new role of the nation's fire service as it relates to homeland security. Prior to September 11, 2001, many organizations were obligated under their state statutes to complete background investigations for health care providers with regard to offenses such as domestic violence, theft and drug abuse.

With the heightened level of security and the integral role that the nation's fire service now has at the local, state and federal level with homeland security, it is imperative that organizations perform a comprehensive background investigation on all candidates.

Some of the more common aspects of formal background investigations include:

- Employment history and verification.
- Reference checks and verification.
- Credit history.
- Criminal case history (www.howtoinvestigate.com).
- Certification/training verification.
- Polygraph (www.polygraph.org).
- Drivers license checks (current, tickets, suspensions, etc.).

There are numerous examples of potential candidates misrepresenting their training, education and previous employment and/or criminal record. By utilizing simple technology and/or services, organizations can quickly verify these areas thus confirming the validity of the information provided by a potential candidate.

Medical Evaluations

According to the National Fire Protection Association (NFPA), data show that in the ten years from 1995 to 2004, 307 of the 440 firefighters who suffered sudden cardiac death were volunteers.

NFPA 1582 Standard on Comprehensive Occupational Medical Program for Fire Departments should serve as a guideline for the medical evaluations of fire/EMS personnel. Organizations should be cognizant of specific requirements imposed by their state.

Tobacco/Drug/Alcohol-Free Workplace

A tobacco, drug and alcohol-free workplace should be a requirement of all emergency service organizations, regardless of their composition of volunteer, paid-on-call, part-time and career members.

If your organization is intending to apply for a FIRE ACT grant or is a recipient of the grant in prior years, it is required to be a drug-free workplace. Below is the language from the grant guidelines:

As required by the Drug-Free Workplace Act of 1988, and implemented at 44CFR Part 17, Subpart F, for grantees, as defined at 44 CFR part 17, Sections 17.615 and 17.620:

The applicant certifies that it will continue to provide a drug-free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition.

(b) Establishing an ongoing drug-free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace
(2) The grantee's policy of maintaining a drug-free workplace
(3) Any available drug counseling, rehabilitation and employee assistance programs
(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace

(c) Making it a requirement that each employee to be engaged in the performance of the grant to be given a copy of the statement required by paragraph (a).
(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will:

(1) Abide by the terms of the statement and

(2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction.

(e) Notifying the agency, in writing within 10 calendar days after receiving notice under subparagraph (d2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to the applicable DHS awarding office, i.e. regional office or DHS office.

(f) Taking one of the following actions against such an employee within 30 calendar days of receiving notice under subparagraph (d2), with respect to any employee who is so convicted:

(1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
(2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state or local health, law enforcement or other appropriate agency.

(g) Making a good faith effort to continue to maintain a drug free workplace through implementation of paragraphs (a), (b), (c), (d), (e), and (f).

Training & Certification

The experience and training level for a particular recruit will most likely vary and is dependant on organizational needs.

It is not uncommon for smaller volunteer and combination departments to recruit personnel and then train them or assist in training them to the desired level. Other organizations recruit those who have obtained a minimum level of training and/or certification. Each organization will have to evaluate its hiring decisions based on:

- Immediate need of trained/certified personnel.
- Training/certification infrastructure of the organization.
- Available funds for training/certification programs.
- Cost versus benefit of training versus certification.

The International Fire Service Accreditation Congress (www.ifsac.org) and the National Board of Fire Service Professional Qualifications (www.theproboard.org) are two organizations that accredit training and education. Their respective Web sites can provide additional information regarding each organization.

Reverse Transitioning: Is it too late to turn back?

Just as it is appropriate to consider transitioning from an organization staffed completely by volunteers to a combination or fully paid department, there also may be situations in which it is appropriate to look at

reversing the transition—moving from a fully career department to a combination system that incorporates volunteers.

The clues that reverse transitioning may be an option are clearly visible in career systems. Departments in which training opportunities are restricted, worn-out apparatus is not being replaced, building improvements are not made, or building and apparatus maintenance are deferred because of a shortage of funds, or which face staff downsizing and reduced minimum staffing levels, are candidates for reverse transitioning.

When there are serious budgetary shortfalls reverse transitioning from a fully career department to a combination system could, over a period of time, allow for much-needed tax dollars to be reinvested in a physically failing essential service. However, any reallocation of funds must not be at the expense of service to the community. Staffing alternatives of this kind should never diminish the need for qualified, well-trained and experienced emergency service providers.

Introducing volunteers to offset staffing shortages and career staff reduction through attrition is a subject that requires a great deal of department and community coordination before a switch can be made. While the number of communities that may have to consider this option is growing, organized efforts to make this switch will classify your department as a pioneer in rediscovering volunteerism and a trendsetter for others to follow. You will be recognized as an organization that planned and prepared the department and the community for the change with successful results.

While the needs for reverse transitioning may be obvious, a move to a combination system will require a great deal of planning and consensus building within the community. Community surveys may be useful in determining the practicality of such a move with some insight into the supportive population base. Solicited information should include available time commitments, average population age, types of industries and shift schedules, percentage of single-parent families, average income levels, local cost of living trends, and the involvement of local youth programs. All of these will provide clues as to potential availability of local residents. A key element of a successful effort is to include the union component in all discussions.

Other indications of community support may be obtained from a study of the activity levels of other civic groups, which may lend additional clues as to the available population to volunteer. Strong civic organizations with lots of activities and time commitment would most likely indicate an interest of the public to support volunteer functions. The opposite may be true if long-term civic events are cancelled because of a lack of volunteer assistance.

A task force encompassing a broad base of community interests and leaders may be useful in researching and documenting the success and effectiveness of similar-sized communities that operate with successful combination systems. This group may have a substantial impact on the decision to make the switch and provide a check and balance to the emotions that can be associated, real or perceived, with such a major change.

A timeline for this transition will have to include extended and multiple training opportunities for potential volunteers who have to maintain family obligations and full-time jobs. Career personnel must have the appropriate training to be successful mentors and guidelines for conduct to ensure success. Immediate and decisive disciplinary action may be necessary to curb willful attempts to derail the change.

Without proper planning and consensus building, claims of reduced or less than reliable service become a detriment and find their place in destructive rumors.

Examples Of Model Combination Fire Departments

Department	Chief of Department	Web Address
Garden City FD (NY)	Edward Moran	www.gardencityny.net/fire_dept.
Long Beach FD (NY)	Ralph Tuccillo	www.longbeachny.org
City of West Des Moines FD (IA)	Donald Cox	www.wdm-ia.com
Hanover Co. Fire/EMS (VA)	Fred Crosby	www.co.hanover.va.us/fire-ems
Vashon Island Fire & Rescue (WA)	Jim Wilson	www.vifr.org
Xenia Twp. FD (OH)	William T. Spradlin	www.xeniatownship.org
Jefferson Twp. FD (OH)	Keith Mayes	www.jeffersontownship.org/departments/fire
City of Vandalia FD (OH)	Chad E. Follick	www.ci.vandalia.oh.us/firedepartment.html
Montgomery Co. Fire/Rescue (MD)	Tom Carr	www.mocofiredepartment.com
Prince William Co. FD (MD)	Mary Beth Michos	www.co.prince-william.va.us
Bloomington FD (MN)	Ulysses Seal	www.ci.bloomington.mn.us/cityhall/dept/fire
Campbell County VFD (WY)	Gary Scott	www.ccvfd.com
Troy Fire Dept. (MI)	Bill Nelson	www.ci.troy.mi.us/fire
Clackamas County FD (OR)	Norm Whiteley	www.ccfd1.com
Hillsborough CO Fire/Rescue (FL)	Bill Nesmith	www.hillsboroughcounty.org/firerescue
Volusia County Fire/Rescue (FL)	James G. Tauber	http://volusia.org/fireservices
Marion County FD (FL)	Steward McElhaney	www.marioncountyfl.org
Ponderosa VFD (TX)	Fred C. Windisch	www.ponderosavfd.org
Kitsap County Fire/Rescue (WA)	Wayne Senter	www.kitsapfire7.org
Saginaw Charter Twp. FD (MI)	Richard Powell	www.stfd.com
Farmington Hills FD (MI)	Richard Marinucci	www.ci.farmington-hills.mi.us/services/fire
Evesham Fire/Rescue (NJ)	Ted Lowden	www.eveshamfire.org
Miami Township Div. Fire/EMS (OH)	David B. Fulmer	www.miamitownship.com
Clearcreek FPD (OH)	Bernie Becker	www.clearcreektownship.com/FD/findex.htm
Miami Township FD (OH)	James Witworth	www.miamitwp.org/fireems/fire.htm
German Township VFD (IN)	John M. Buckman	www.germanfiredept.org/
Tinley Park VFD (IL)	Kenneth Dunn	www.tinleyparkfire.org
Bath Twp. FD (OH)	Jim Paulette	www.bathtownship.org/fire/index.htm
City of Roseville FD (MN)	Rich Gassaway	www.ci.roseville.mn.us/fire
York County Fire/Life Safety (VA)	Steve P. Kopczynski	www.yorkcounty.gov/fls/index.html
Village of Savoy FD (IL)	Michael Forrest	www.village.savoy.il.us/index
City of Fitchburg FD (WI)	Randy Pickering	www.fitchburgfire.com

Addendum A

Employee Expectations

The following is a list of expectations that are not included in your job description. We feel it is extremely important for everyone to know what is expected of them. In order for the team to effectively operate all members must buy into these concepts outlined below. Please review the list and clarify any questions you may have. This list is intended to help you make an easy transition to our organization.

1. Maintain and promote a winning attitude.

- Look at problems as opportunities. How can we improve?
- When you bring a concern to an officer, bring two possible solutions.
- Do not engage in chronic complaining. Be part of the solution, not part of the problem. Complaining does little to improve the organization. Help us work toward positive solutions.
- Don't accept negative attitudes in others. Bring negativity to their attention.
- Avoid negative thinking. Negative thinking is contagious and limits our potential.
- Remember… Attitude is a choice; choose to have a good one.
- Develop a "can do" attitude. You are in control of your potential.
- Focus on making a positive impact on others and the organization.
- Seek out opportunities and ways to implement them.
- Deal in FACTS not assumptions.

2. Practice the Golden Rule.

- Treat others the way you wish to be treated.
- See value in others. Everyone has value.
- Care about the other members and help them succeed.
- Focus more on the positive attributes of others instead of the negatives. We will not ignore the negative, but we will emphasize the positive.
- Help energize others by being motivated yourself.

3. Be a team player.

- Participate in meetings and trainings.
- Help your fellow members succeed.
- Remember… We win and we lose as a team, not individuals.
- Keep communications open.
- Always seek win-win solutions.
- Have fun. Enjoy working with the group.
- Make it a safe environment.
- Build relationships to improve trust and understanding.
- Allow mistakes. We will all make mistakes when we try new ideas.
- Learning must take place when we make mistakes.
- Poor performance is not tolerated.
- Recognize fellow members for a job well done.

4. Seek excellence.

- Increase your education and skill level.
- Focus on helping move the organization forward for today and tomorrow.
- Finish what you start. Get help if you need it.
- Seek to improve everything we do.
- Think why we can, instead of why we can't.

- Be data driven.
- Understand our budget is limited. How can we make the biggest impact with what we have?

5. Do that which is right.

- Everything you do must be done in a moral, ethical and legal manner.
- Contribute to the mission and vision of the organization.
- Help accomplish our goals.
- Always consider the internal and external customer.
- Be trustworthy and show integrity.

6. Stay focused.

- Remember... You're here to help the organization succeed.
- Stay focused on contributing to the mission, vision and goals.
- Don't get distracted with personal agendas.
- You are our most valuable resource... We will support you through education, training, coaching and counseling.
- Every task that you engage in must be aligned with the mission.

7. Participate.

- Participate in meetings, training, special details and emergency calls.
- Participate by communicating, asking questions and offering suggestions.
- Participate by helping the organization be better today than it was yesterday.

8. Capitalize on adversity.

- We are constantly faced with adversity and problems. Don't let the problems pull you down. Our job is to adapt and overcome problems.
- Seek out opportunity any time you are confronted with adversity.
- Understand all of the facts when confronted with adversity.
- Help develop and implement the plan to overcome adversity.

I have reviewed and discussed the above list to clarify my understanding of the expectations. A copy has been provided to me for future reference.

_____   _____

     Employee Date   Officer

Addendum B

Officer Evaluation

1. I do not interact with this officer enough to complete the survey. ❑

2. Do you personally get along with this officer? ❑ Yes ❑ No

3. How would you rate his/her ability to take charge of an incident?
   ❑ Excellent   ❑ Above average   ❑ Average
   ❑ Below average   ❑ Needs definite improvement

4. How would you rate his/her ability to deal with personnel issues?
   ❑ Excellent   ❑ Above average   ❑ Average
   ❑ Below average   ❑ Needs definite improvement

5. How would you rate his/her communication skills?
   ❑ Excellent   ❑ Above average   ❑ Average
   ❑ Below average   ❑ Needs definite improvement

6. Do you believe that this officer has the appropriate leadership skills and experience to hold this position?
   ❑ Yes   ❑ No   ❑ Could, but needs improvement

7. Please rate this officer's abilities in the following areas. Rate on a scale of 1-5, 5 being the highest rating and 1 the lowest.
   _____ Ability to adapt to change
   _____ Level of personal motivation
   _____ Ability to motivate others
   _____ Ability to approach problems and issues in a logical fashion

8. Please rate this officer in overall performance with 5 being the highest rating and 1 the lowest. _____

9. Please rate his/her ability and experience to handle the following situations as a command officer. Rate each item on a scale of 1 to 5, 5 being the highest rating and 1 the lowest.
   _____ Residential structural responses
   _____ Commercial/industrial responses
   _____ Hazardous material incidents
   _____ Rescue operations
   _____ Medical emergencies
   _____ Station operations
   _____ Interaction on mutual aid responses

10. Do you support this individual in his/her current position?
    ❑ Yes ❑ No

Addendum C

Sample Career Employee Evaluation

Interim Performance Appraisal

Employee Name:	Title:
Reason for Review: ❏ Annual Performance Appraisal ❏ Interim Performance Evaluation	

The purpose of this performance appraisal is to encourage and recognize the level of employee performance and the achievement of organizational objectives and accomplishments. The Interim Performance Evaluation is designed to solicit your opinion of your performance, combined with comments from your immediate supervisor and the Chief, and to develop a progressive plan to improve skills and performance. This form is designed to facilitate a mutual understanding of performance expectations and the performance appraisal process by encouraging the employee and the supervisor to participate in a meaningful dialogue.

Performance will be evaluated on the following rating levels:

5 = Outstanding	Performance consistently and significantly exceeds the requirements of the job and is beyond established standards. Employee achieves objectives at a superior level. The employee demonstrates exceptional skills and innovation in work performance.
4 = Commendable	Performance exceeds job requirements in all major areas. Employee displays leadership and initiative, produces quality work, and sets an example for others to follow.
3 = Effective	The employee consistently performs tasks at acceptable levels, produces the required amount of quality work, and makes effective use of resources (ex: materials, budget, time, guidelines, procedures, etc.)
2 = Needs Improvement	Performance is below job requirements in one or more important area(s) and immediate improvement is required. Employee fulfills some responsibilities; has difficulty completing others. Additional training or development is required to achieve performance expectations.

Each objective is scored with points assigned from 2-5; a score of 2 represents the lowest rating and 5 is the highest. Total points are divided by the number of scored questions. Employee comments to "Discussion Points" are to be typewritten and italicized in black and the Chief's, and / or supervisor's, comments will need to be italicized in blue.

1. Rate your personal performance regarding your specific administrative job assignments. _____ points

Discussion Points

List your contributions to the department during the past year.

Define your mission with each of the administrative assignments with which you have primary responsibility.

Prioritize your short term (12-24 months) objectives.

Prioritize your general long-term goals.

What "cost saving" measures have you implemented or could be implementing within your area of responsibility?

2. Rate you personal performance as an emergency services provider.
   _____ points (as a volunteer) (for those assigned as emergency responders)

Discussion Points

What has been your best scene performance this past year and why?

What has been your least productive performance this past year and why?

Identify your technical strengths.

Identify your technical weaknesses and your plans for improvement.

What measures have you personally implemented to improve the safety of department operations?

3. Rate your performance as a team player with your co-workers.
_____ points

Discussion Points

In what way have your actions, both as an individual and in the scope of your job responsibilities, contributed to building and enhancing the team effort with your co-workers?

In what way have your actions, both as an individual and in the scope of your job responsibilities, detracted from developing and / or enhancing the team effort with your co-workers?

4. Rate your performance as a team player with the volunteers. _____ points

Discussion Points

In what way have your actions, both as an individual and in the scope of your job responsibilities, contributed to building and enhancing the team effort within assigned duty shifts?

In what way have your actions, both as an individual and in the scope of your job responsibilities, detracted from developing and / or enhancing the team effort within your assigned duty shifts?

5. Rate your overall productivity this past year. _____ points

Discussion Points

Identify the critical elements / tasks of your job assignment(s).

Identify the non-critical elements / tasks of your job assignment(s), (those elements / tasks that could be transferred to someone else).

6. Rate your ability to effectively schedule your time. _____ points

7. Rate your ability to "self-motivate" and assume work without supervision. _____ points

8. Rate your ability to professionally resolve issues with co-workers and volunteers. _____ points

9. Rate your ability to "mentor" other co-workers and volunteers. _____ points

10. How would you rate your openness and approachability by co-workers? _____ points

General Discussion Topics

What single issue would you change / influence to improve the overall administrative operations of the department?

What single issue would you change / influence to improve the overall emergency services operations of the department?

What single item, within the work environment, serves as your most frustrating issue?

Rate how you feel you are compensated (i.e. wages and benefits) for work / duties performed as an employee.

What changes / adjustments would need to occur for you to reasonably perform your duties within your 80 or 86 hour allocation?

Overall Evaluation Score

Supervisor's Comments Provide a brief summary statement that characterizes the employee's overall performance and supports your rating. Supervisors should summarize performance strengths and indicate any performance improvement areas needed. Provide additional pages if necessary.

Employee's Comments Do you understand how your performance was evaluated? Provide additional pages as necessary.

NOTE: Employee signature does not necessarily signify the employee's agreement with the appraisal; it simply means the appraisal has been discussed with the employee.

_____ / _____ = _____
Total Score   Total Qualifying Questions   Performance Level

PERFORMANCE LEVELS 2005 - 2006 Evaluation "Category"
4.0 – Outstanding
3.0 - 3.9 – Commendable
2.0 - 2.9 – Effective
1.0 - 1.9 – Need Improvement

Print	Signature	Date
Employee:		
Supervisor:		
Reviewed by:		
Department Head:		

VCOS Position Statements on Fire Service Operational Issues

The following position statements provide basic information to Chief Officers. The full texts are available on the Web at www.vcos.org.

Alcohol Use

Apparatus Driver Training

Chief Fire Officer Designation

Commercial Product Endorsement

Exhaust System Installation and Use

Fair Labor Standards Act

Financial Impact Analysis Accompanying NFPA Standards

Physical Fitness

Rural Community Fire Protection Funding

Service Awards for Volunteers Performing Fire Protection and EMS

Terrorism Response Performance Objective

Training Programs

Volunteer Training Standards

Wellness and Fitness Programs

Volunteer Firefighters

Contract with America 2005

This document is offered in a spirit of agreement between the Volunteer Firefighters of America, represented by the Volunteer and Combination Officers Section (VCOS) of the International Association of Fire Chiefs (IAFC), the federal, state, local governments and the American public.

The purpose of this document is to recognize the significant and cost-effective role that the Volunteer Firefighters of America play in ensuring public safety within our local communities. As part of this cooperative partnership, the agreement outlines the areas that the American volunteer fire service will continue to improve to safeguard our nation's homeland security. This document also identifies national legislative efforts that will add to the stability and longevity of the American Volunteer Fire Service.

Volunteer Firefighters' Bill of Rights

Article I

Volunteering in the fire service is a benefit to America, and every qualified American should have the right to volunteer. In serving their communities, volunteer firefighters should have their constitutionally protected rights to freedom of speech, equal protection under the law and due process. The U.S. federal, state and local governments shall not pass laws or requirements that abrogate these rights. While we recognize that nongovernmental organizations and private groups have the right to establish rules regarding their governance, these groups should not pass any law or requirement that would restrict the rights of Americans to serve as volunteer firefighters.

Article II

The federal, state and local governments shall strive to create an environment that encourages citizens to volunteer and recognizes volunteers as a community asset.

Article III

Professionalism is not a paycheck. It is a way of life based on education, training and practice. As such, professional persons are not necessarily paid persons. It shall be recognized that professional persons' contributions, whether paid or volunteer, are assets to the community. An environment of cooperation and constructive growth shall be encouraged between paid and volunteer professionals.

Article IV

The federal, state and local governments shall recognize volunteer contributions and shall provide opportunities for volunteers to receive the high-quality training, education and experience necessary to perform expected tasks.

Article V

The federal, state and local governments, in recognition of the value volunteers provide to their communities, shall provide the necessary tools and equipment for volunteers to perform the expected tasks.

Article VI

Volunteers shall commit to devoting the time and resources necessary to obtain education, training and experience to reach a level of professional competence to perform the expected tasks.

Article VII

Volunteers shall expect, and local governments shall commit to, the provision of qualified, certified and competent leaders.

Article IX

Volunteers shall expect, and local governments shall commit to, the provision of healthy and safe work environments for volunteers.

Article X

In the event of a manmade or natural disaster, the federal, state and local governments shall expect, and the volunteers shall commit to, the prevention of loss of life, the reduction of injury and property loss and the minimization of damage to our natural environment. Volunteers shall be recognized as a valued resource and monetarily compensated after the declaration of a state or national disaster in the same method as the personnel from other agencies and organizations.

Volunteer Firefighters Strive for Improvement

The American Volunteer Fire Service shall:

- Continue to provide quality services to our hometown communities, providing America with an annual savings of $37 billion;
- Strive to certify all volunteer firefighters at the state level to verify their public commitment to be the best service providers for their communities;
- Have a commitment to develop training programs that will improve the management skills of the volunteer fire officers and managers;
- Strive to improve the physical fitness of its members to reduce the tragic loss of human life from heart-related emergencies that are a result of poor personal physical conditioning;
- Strive to eliminate the longstanding tradition of serving alcohol in public fire stations managed by volunteer departments;
- Strive to provide each volunteer firefighter with emergency vehicle operation training to reduce the loss of human life from emergency vehicle accidents; and
- Strive for 100 percent incident reporting through the National Fire Incident Reporting System (NFIRS).

Authored and presented by Fire Chief John R. Leahy, Jr. to
The VCOS Board of Directors, February 2003, Lynbrook, Long Island, New York.

APPENDIX C

Example SOP Index

Emergency Operations – Fire

500 - Fire Ground Operations

500.10 Personnel Accountability System

500.15 Standard Response Procedures

500.20 RIT Procedures

500.30 Evacuation Procedure

500.32 OSHA Two-in – Two-out rule

500.35 Fire Attack - General

500.40 Rules of Engagement / Risk Management

500.45 Initial Fire Ground Operations

570 – Specific Firefighting Situations

Emergency Operations – Medical

600 - Medical Operations – General

600.01 Response Modes

600.04 Medication Restocking

600.05 Drug Security Policy

600.06 Staffing of Ambulances

600.07 Transport/Moving of Dead Bodies

600.08 Parent Rights

600.10 Use of Patient Restraints

600.15 Medical Protective Gear

600.16 Sanitary Practices

600.17 Designated Infection Control Officer

600.18 Bloodborne Pathogen Exposure Control Plan

600.80 Communications

600.90 Certification and Recertification of EMTs

APPENDIX D

Example Standard Operating Procedure (SOP)

Municipal Resources

	Northern Vermont Fire Department Consortium **STANDARD OPERATING PROCEDURES**

Chapter	Organization and Administration
Section:	**200 - Conduct and Responsibilities**
Title:	**Photography and Digital Imaging Policy**
Guide Number:	**200.20**
Date Issued:	**15 September 2020**
Date Effective:	**15 September 2020**
Date Revised:	
Approved by:	***XXXXXXXXXXXXXXX, Chief* of Department**

1   PURPOSE

1.1   The purpose of this policy is to manage photographs and electronic images taken by fire department personnel in accordance with state law, in such a way that the privacy rights of department personnel, patients, fire victims, and the public are preserved; that evidentiary concerns related to such images are protected; and the professional image of the department is maintained.

This policy is for internal use only and does not enlarge an employee's civil liability in any way. The policy should not be construed as creating a higher duty of care, in an evidentiary sense, with respect to third-party civil claims against employees. A violation of this policy, if proven, can only form the basis of a complaint by this department for non-judicial administrative action in accordance with the laws governing employee discipline. It is expected that under emergency conditions, personnel may deviate from these requirements when in their experience and judgment

2   POLICY

2.1   It is the policy of the Fire Department to respect the privacy interests of department personnel, patients, fire victims, and the public, and to comply with the state's Public Record Law.

2.1.1   See related social media policy document (e.g., Internet Postings/Social Networking).

3   RESPONSIBILITY

3.1   This policy applies to all members of Littleton Fire Rescue without regard to whether their

social networking activity is conducted in or outside the workplace, while on or off-duty, or anonymously or through the use of pseudonyms.

4 PROCEDURE

4.1 ON-DUTY PHOTOGRAPHY

4.1.1 Fire department personnel are prohibited from using a non-department-owned camera, video recorder, audio recorder, or the camera/video/audio function or a non-department owned cellular phone, PDA, or any other digital imaging device while on-duty outside of the station.

    4.1.1.1 The Fire Chief may grant an exception to this rule on an individual basis.

    4.1.1.2 Any permission granted by the Fire Chief shall be in writing and shall indicate any conditions or limitations upon the employee.

4.1.2 A basic condition of any employee using a non-department owned camera, video recorder, audio recorder, or the camera/video/audio function of a non-department owned cellular phone, PDA, or any other digital imaging device while on-duty is that the image must be moved from the device to an approved Fire Department location, and the image deleted from the source.

4.1.3 Except as provided in Section above, all images taken by department personnel while on-duty shall be taken using department owned equipment.

4.1.4 Only personnel who have been trained on compliance with this policy and who are approved by the Fire Chief shall be permitted to take images pursuant to this policy.

4.1.5 On-duty personnel shall only take images that are of business-related matters and events for purposes of incident documentation, evidence, training, investigation, and/or public relations.

4.1.6 All images taken shall be preserved on a Department computer within fire or EMS software and shall not be deleted without the written permission of the Fire Chief or his/her designee, except as permitted by the record retention policy.

4.1.7 All images taken by on-duty personnel are the sole property of the department, and are under the control of the Fire Chief or his/her designee.

    4.1.7.1 This specifically includes any images taken inadvertently by an on-duty member with a non-department-owned camera, cell phone camera, or any other digital imaging device.

    4.1.7.2 Any member who inadvertently takes such an image shall report the fact immediately through the chain of command.

    4.1.7.3 Members shall not be disciplined for inadvertent violations that are duly and immediately reported.

4.1.8 Personnel are expressly prohibited from taking any images of another person in any location where a person has a reasonable expectation of privacy, including a bathroom, bedroom, locker room, changing area, or any other location where a reasonable person would believe that he or she could disrobe in privacy, without being concerned that his or her undressing was being photographed, filmed, or videotaped by another; or a place where one would reasonably expect to be safe from hostile intrusion or surveillance.

4.2 RESPONDING TO, OPERATING AT, AND RETURNING FROM INCIDENT SCENES

4.2.1 Fire department personnel are prohibited from using non-department-owned cameras,

video recorder, audio recorder, or the camera/video/audio function of a non-department owned cellular phone, PDA, or any other digital imaging device while responding to, operating at, or returning from, any incident.

    4.2.1.1 Any member who inadvertently takes such an image at an incident scene shall report the fact immediately through the chain of command to the incident commander at the earliest possible opportunity.

    4.2.1.2 Members shall not be disciplined for inadvertent violations that are duly and immediately reported.

4.2.2 On-scene photography/video taken by on-duty personnel shall be for incident documentation, evidentiary, training, investigation, and/or public relations purposes only, and taken by or with the approval of the incident commander in charge of the scene, using approved department equipment, or as approved by the Fire Chief.

4.2.3 The taking of imagery shall not interfere with nor delay operational activities, except to the extent that imagery of a fire's cause and origin may require overhaul to be momentarily delayed.

4.2.4 All photographs and video containing individually identifiable patient information shall be presumed to be covered by HIPAA and state privacy laws and shall be protected in the same manner as patient care reports and medical documentation.

4.3 HANDLING AND PRESERVATION OF IMAGES

4.3.1 No department owned images may be used, printed, copied, scanned, e-mailed, texted, forwarded, posted, uploaded, shared, reproduced or distributed in any manner, except as provided herein.

    4.3.1.1 This prohibition specifically includes the posting of any images on personal Web sites such as, but not limited to: Face Book, My Space, or YouTube; posting to public safety Websites; or e-mailing to friends, relatives, colleagues, or other third parties.

4.3.2 All fire department digital images as described in this policy shall be downloaded from the digital imaging device as soon as possible after they are taken, and will be cataloged and stored in a secure database with controlled access.

    4.3.2.1 After being downloaded and verifying that the downloading is successful, the images on the digital imaging device's memory card shall be erased.

4.3.3 Digital imagery that has evidentiary value, including vehicular accidents involving department vehicles, fire scenes showing evidence of cause and origin, incident scenes showing the locations of victims, fire code violations, etc., require that a Chain of Custody form be initiated by the photographer and forwarded with the imagery.

4.3.4 Digital images in the secured database shall not be accessed by any party, or altered via any software product or utility such as Photoshop, unless express permission is granted in writing by the Fire Chief or his/her designee.

    4.3.4.1 If permission to alter a photo is granted, the original photo shall not be altered in any way, and any copies that are altered shall be appropriately identified and documented as to being an altered copy.

    4.3.4.2 The details of the alteration including what was done (cropped, lightened, darkened, Etc.), the name and rank of the member performing the alteration,

and the time and date of the alteration, shall be noted and preserved.

4.3.5   The use of fire department images shall be subject to approval of the Fire Chief or his/her designee.

    4.3.5.1   Prior to the release of any image, the image shall be evaluated by the Fire Chief or his/her designee to ensure that the release will not result in a breach of patient confidentiality or breach of privacy, and that the release will, in all other respects, be lawful.

4.3.6   The use of unauthorized helmet cams and dash cams is strictly prohibited, and shall be considered a serious disciplinary breach for the employee involved and any officer who permits such use.

4.3.7   Use of department cameras to take images for personal purposes is strictly prohibited.

4.3.8   Violation of this policy or failure to permit inspection of any device covered in this policy may result in disciplinary action.

5   DEFINITIONS

5.1   **Images** – photographs, digital photographs, digital images, video recordings, or electronic files containing a graphic image or series of images, as well as any digital reproductions or copies of such photographs, digital photographs, digital images, video recordings, or files.

5.2   **Digital imaging device** – any device capable of producing a digital image, including but not limited to, a digital camera, digital camcorder, cell phones, helmet- or dash-mounted camera, etc.

APPENDIX E

Example Organizational Bylaws

ARTICLE I - DISTRICT

Article I, Section 1   **NAME**

_____ has been established following Vermont Laws, Acts or regulations in effect at the time of the creation of the District.

Article I, Section 2   **PURPOSE**

The purpose of District   shall be:

> To provide Fire Services mutual aid assistance in the District
> area including hazardous materials response and
> other specialized operations.

- To provide coordination of all Fire Services' mutual aid
  activities in the area.

- To interface with existing Civil Defense and provide fire
  mobilization.

- To provide overall planning for coordinated activities in
  times of emergencies and disasters.

- To provide for other common functions for the good of the
  Fire Service in the area served, including (but not limited to):

  1. Group Purchasing and Standardization;
  2. Group Training;
  3. Common Maintenance;
  4. Facilities Communications:
     a. District radio network,
     b. Ten-Alarm Mutual Aid Resource Guide,
     c. Dispatcher training.
  5. Common Insurance

Article I, Section 2   **PURPOSE**

6. Seminars for Exchange of Ideas;
7. Marketing:
   a. Financing,
   b. Grant writing/administration,
   c. Revenue generation,
   d. Donations,
   e. Public relations.
8. EMS Development:
   a. Regional ALS,
   b. Training.
9. Hazardous Materials Coordination and Development;
10. Research and Development
11. Said organization is organized exclusively for charitable, religious, educational, and scientific purposes, including, for such purposes, the making of distributions to organizations that qualify as exempt organizations under section 501(c)(3) of Internal Revenue Code, or corresponding section of any future federal tax code.

Article I, Section 3   **OFFICE**

An office shall be established within the District where all documents shall be maintained.

Article I, Section 4   **MEMBERSHIP**

The Head of the Fire Department and one member from the community Board of Selectmen from each community listed below shall represent the department and the community as a voting member.

Barnet, Concord, Danville, Groton, Lyndonville, Saint Johnsbury, and Waterford

The Head of the Fire Department may appoint delegates from within his/her department to represent him/her at meetings. Said delegates so appointed will have full authority at such meetings.

Article I, Section 5   **COORDINATOR-SECRETARY**

A Coordinator shall be appointed by the District Chairman with a majority vote of the membership. The Coordinator's duties shall be as directed by the District Chairman and shall include the preparation of the Annual Report which will be presented at the August monthly meeting.

Article I, Section 6   **DISSOLUSION**

Upon the dissolution of the organization, assets shall be distributed for one or more exempt purposes within the meaning of section 501(c)(3) of the Internal Revenue Code, or corresponding section of any future federal tax government, for a public purpose. Any such assets not disposed of shall be disposed of by a court of competent jurisdiction in the county in which the principal office of the organization or organizations, as said Court shall determine, which are organized and operated exclusively for such purposes.

ARTICLE II - OFFICERS

Article II, Section 1   **NUMBER**

The officers of the District shall consist of a Chairman, Vice Chairman, a Secretary, and a Treasurer.

Article II, Section 2   **TERM**

The Officers shall hold office from the fourth Thursday in June for a period of one year or until his/her successors have been duly elected and qualified.

Article II, Section 3   **NOMINATION COMMITTEE**

At least thirty days prior to the June meeting or prior to any meeting called for the purpose of electing officers, the Chairman shall appoint a Nominating Committee of three members, none of whom shall be an officer of District. The Chairman shall advise the membership of his appointments to the Nominating Committee. The members of the Nominating Committee shall elect their own Chairman. It shall be the responsibility of the Nominating Committee to nominate candidates for Chairman, Vice Chairman, Secretary, and Treasurer. The report of the Nominating Committee shall be sent to each member of District at least ten days prior to the June meeting or any meeting called for the purpose of electing officers

Article II, Section 4   **ELECTION OF OFFICERS**

The officers of Fire District Fourteen shall be elected by a majority of the members present and voting at the June meeting or at any meeting called for the purpose of electing officers.

Article II, Section 5   **VACANCIES**

If any office shall become vacant for any reason, an election to fill that office shall be held at the next regular or special meeting of District, subject to the procedures of Section 3 of this article. Any officer so elected shall complete the unexpired term of the officer succeeded.

Article II, Section 6   **CHAIRMAN**

The Chairman shall serve as the Chief Officer of District and Chairman of the District Executive Board and shall have the right to vote. He is authorized to appoint members to all committees consistent with the requirements of District. He shall perform such other duties as are incidental to his office or may be required of him by the District. The Chairman shall be a member of all committees of District ex-officio.

Article II, Section 7   **VICE CHAIRMAN**

The Vice Chairman shall serve as an officer of District and be a voting member of the District Executive Board. The Vice Chairman shall preside in the absence from the Chair of the Chairman and shall perform such duties as are incidental to this office and required by District.

Article II, Section 8   **SECRETARY**

The Secretary of District shall also serve as Secretary of the District Executive Board. The Secretary shall keep and preserve all minutes of District and of the District Executive Board and shall keep and preserve all resolutions, transactions, findings, and determinations of District and the District Executive Board. The Secretary shall preside in the absence from the Chair of the Chairman and the Vice Chairman and shall perform such duties as are incidental to this office and required by District.

Article II, Section 9   **TREASURER**

The Treasurer of District shall also serve on the District Executive Board. The Treasurer shall keep and preserve the financial records and shall act as the Chairman of the Finance Committee. He shall present the financial report at each regular meeting and shall be responsible for the performance of an annual audit, the results of which shall be presented at the annual meeting. He shall perform such duties as are incidental to this office and required by District.

ARTICLE III - MEETINGS OF DISTRICT FOURTEEN

Article III, Section 1   **REGULAR MEETINGS**

Regular meetings of Fire District shall be held monthly on the third Thursday of each month, at the direction of the Executive Board, and at such other times as may be required. The annual meeting shall be held in the month of June.

Article III, Section 2   **SPECIAL MEETINGS**

Special meetings may be called at any time by the Chairman or the District Executive Board. Special meetings shall also be called on written request of three or more members of District Fourteen.

Article III, Section 3   **NOTICE OF MEETINGS**

Each member of District shall be given at least seven days' written notice of the date, time, and place for each meeting.

Article III, Section 4   **QUORUM**

One-third of the total district membership or a minimum of eight members or their representatives shall constitute a quorum at any meeting. In the absence of a quorum, a lesser number can adjourn meetings.

Article III, Section 5   **VOTING**

Each member or delegate present at a meeting shall have one vote. A majority of those present and voting is required for the adoption of any motion or resolution, except for the amendment of these bylaws, which is covered under Article VII.

Article III, Section 6   **CONDUCT OF MEETINGS**

Except as otherwise required by these bylaws, the rules of order of District shall be in accordance with the latest revised edition of ROBERTS RULES OF ORDER.

ARTICLE IV - DISTRICT EXECUTIVE BOARD

Article IV, Section 1   **DUTIES, RESPONSIBILITIES, AND POWERS**

The District Executive Board shall act as the advisory committee for the operation of District and shall assume the duties, responsibilities, and powers of the District Fire Mobilization Advisory Committee authorized by the Massachusetts Civil Defense Agency.

Article IV, Section 2   **ELECTION OF DISTRICT EXECUTIVE BOARD**

The District Executive Board shall be elected from District members by a majority vote of the members present and voting at the June meeting. Executive Board members shall serve a three-year term and may not hold consecutive terms. Three members shall make up the Executive Board with rotating vacancies of 3, 2, 1 members in consecutive years. The officers shall also serve on the Executive Board in accordance with their term of office.

Article IV, Section 3   **VACANCIES**

If any member of the District Executive Board can no longer serve, his replacement shall be elected in the same manner and under the same conditions provided in Section 2 of this article at the next regular meeting of District. Such replacement shall complete the unexpired term of the person succeeded.

Article IV, Section 4   **REGULAR MEETINGS**

The District Executive Board shall meet at the call of the Chairman.

Article IV, Section 5   **SPECIAL MEETINGS**

Special meetings may be called at any time by the Chairman. Special meetings may also be called upon written request therefore by three or more members of the District Executive Board.

ARTICLE IV - DISTRICT EXECUTIVE BOARD

Article IV, Section 6   **NOTICE OF MEETINGS**

Each member of the District Executive Board shall be given at least seven days' written notice of the time, place, and date for each meeting except for emergency meetings for which this section may be waived.

Article IV, Section 7   **QUORUM**

The majority of the members of the District Executive Board shall constitute a quorum at any meeting. In the absence of a quorum, a lesser number can adjourn a meeting.

Article IV, Section 8   **VOTING**

Each member present at a meeting shall have one vote. A majority of those present and voting is required for the adoption of any motion or resolution.

Article IV, Section 9   **CONDUCT OF MEETINGS**

Except as otherwise required by these bylaws, the rules of order for the District Executive Board shall be in accordance with the latest revised edition of ROBERTS RULES OF ORDER.

ARTICLE V - FINANCIAL

Article V, Section 1   **FISCAL YEAR**

The fiscal year of District shall be from July 1 to June 30.

Article V, Section 2   **ASSESSMENTS**

Each member of District shall be assessed a sum of money per year for the operation of District. The amount of the annual assessment shall be determined by a vote of the membership at the Annual Meeting in June. The Treasurer shall bill each community during July with payment due by September 30 of each year

ARTICLE V - FINANCIAL

Article V, Section 3   **BUDGET**

The Chairman of each District committee shall prepare a budget of expenditures for his committee for each fiscal year and said budgets shall be submitted for approval by the membership at a regular meeting at least thirty days prior to the beginning of each fiscal year.

Article V, Section 4   **DISBURSEMENT OF FUNDS**

Funds of District will be held in a bank chosen by the Treasurer with the approval of the Executive Board. Disbursement of funds will be by voucher approved as follows:

1.   **Budget Items** - Signature of the Treasurer or of the Chairman
      in the absence of the Treasurer.

2.   **Non-Budget Items** - Signature of the Treasurer or of the
      Chairman in the absence of the Treasurer, for sums up to $ 1000.
      Sums over $300 require the approval of the membership at the
      next regular meeting, except in cases of purchases of equipment
      previously approved by the Executive Board and general membership of District.

Article V, Section 5   **ANNUAL REPORT**

An annual report outlining the activities for the year and containing the year-end fiscal report shall be prepared and distributed to District members no later than the August following each year's end.

ARTICLE VI - NEW MEMBER COMMUNITIES

Article VI, Section 1   **NEW MEMBERSHIP**

New communities will be considered for membership. Approval for membership requires a two-thirds vote of the membership of District at a regular meeting.

Article VI, Section 2   **ASSOCIATE MEMBERSHIP**

Associate members would border existing communities in District, pay half the established dues, and may vote at meetings. Any communities wishing to become associate members of District shall make a request in writing and will then be put on the agenda for approval at the next regular meeting.

ARTICLE VII - AMENDMENTS

Article VII, Section 1   **AMENDMENTS**

These bylaws may be amended at any regular meeting of District or at any special meeting called in accordance with these bylaws for that purpose. The Chairman shall deliver to each member a copy of the proposed amendment(s) or changes to these bylaws at least three (3) days prior to the date of the meeting. Amendments of these bylaws requires a two-thirds vote of the District members present and voting.