

**GENESEE COUNTY, NEW YORK
COMPREHENSIVE FIRE & EMERGENCY MEDICAL SERVICE
IMPLEMENTATION PLAN**

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Prepared by:



**Municipal Resources, Inc.
66 Main Street, Suite B
Plymouth, New Hampshire 03264
mrigov.com
Phone 603-279-0352**



INTRODUCTION

*“Fire and EMS **are** in a crisis – right now. Simply put, EMS is woefully lacking in funding – and the number of volunteer firefighters has fallen dramatically over the decades.”*

Those words comprise the first two sentences of a 2018 report that was commissioned by the Pennsylvania state legislature on the status of the fire and EMS delivery systems throughout the commonwealth. The report then states that *“this is not new”* and notes that many of the same issues have been highlighted in multiple other reports over the past four decades or longer. **The same crisis is quietly occurring in New York state and Genesee County.**

These reports – as well as many others that have been completed throughout the United States – often say the same thing about the need to act. Yet definitive action – moving ideas that may make a difference from concept to reality – has been slow to happen. While the need to be deliberative in the legislative and governing process is important, the continued wearing down of the emergency services towards potential systemic failure continues unabated.

New York has one of the strongest and proudest traditions of volunteer firefighters in the United States. It is the goal of this study to build upon that community-centered pride and long-standing tradition by supporting and augmenting the volunteer fire companies that are essential to the level of emergency services provided to the County. We want to be clear that this study does not recommend replacing any volunteer firefighters or volunteer fire companies with career forces.

In March 2000, the Genesee County Legislature established an Emergency Services Task Force through the adoption of Resolution 111. The Task Force was tasked with studying the fire and EMS delivery system in the County and making recommendations for improvements. In a report issued in August 2001, and later updated in 2007, the Task Force developed a series of short- and long-range recommendations. It was noted that some recommendations can be put in place by individual departments while others would be more effective on a regional basis.

The short-range recommendations in the report included:

- Develop a uniform recruitment program.
- Promote individual and department recognition/public awareness programs.
- Provide leadership programs for fire department officers.
- Institute strategic planning programs.
- Revise membership policy concerning residency requirements.
- Develop capital equipment replacement plans.
- Institute mutual-assistance response and consider the use of existing County specialized teams for staffing.
- Maintain and accommodate existing staffing.

The report noted that a significant number of other recommendations will require more in-depth study and evaluation as part of a long-range planning process. Some will necessitate

increased interaction with other fire departments or local municipal officials. Most will require periodic review and occasional "fine-tuning" as part of the analysis or evaluation process to assure their effectiveness. As would be expected, the time factor to successfully implement each recommendation will be based on its complexity.

Among the long-range recommendations were:

- Work toward full operational funding from municipal sources.
- Develop an equipment utilization plan.
- Set up a central purchasing program.
- Provide volunteer member incentives.
- Prepare a plan for the future.

From MRI's perspective, each of these recommendations is reasonable and should continue to be pursued.

The leadership of Genesee County's fire and EMS organizations have proactively recognized that the emergency services delivery system within the county is facing those same pressures as has been noted in multiple other reports across the country and heading toward – and quite possibly arriving at – its own crisis. However, there are still a few stakeholders who are skeptical of this concern referring to it as *"a crisis without evidence"*. **That perception is seriously misguided.** The only reason why the challenges the system is facing both today and looking to the future are not more evident is because of the passion and dedication of the members of the county's fire and EMS organizations who continue to answer the calls for service. But the number of active volunteers is declining in the county as they are everywhere, and many of those who remain are aging. On the EMS side, the service providers are facing growing (and in some cases severe) staffing shortages, and many EMS personnel must work multiple jobs to make ends meet. The lack of staffing limits the ability of EMS providers to staff and deploy sufficient ambulances dedicated to 9-1-1 service which in turn results in longer response times. Long term, the MRI study team does not believe these trends make the current service delivery system and deployment model sustainable.

On March 26, 2020, the Emergency Services Task Force was reestablished to implement changes to the way the fire and emergency services are provided. Genesee County's Request for Proposals (RFP) relative to this study notes, *"numerous studies have been completed in the past identifying the "issues", but limited changes were actually made"*. It further states, *"the goal of the Task Force is to "implement" things that will positively impact the emergency services in the County, not just to simply prepare a study"*. The MRI study team believes that we have completed a comprehensive analysis of fire and EMS operations that resulted in the development of recommendations that are reasonable and can achieve those objectives. It is our goal to provide a road map and template for strengthening the level of fire and EMS that are delivered throughout the County. We now hand those recommendations off to the county stakeholders through the delivery of this report.

Most of the fire and EMS agencies that protect Genesee County are excellent organizations that provide quality service to their communities – when they have sufficient staffing available to respond. However, there are some whose abilities and future viability are more questionable and hard discussions among the stakeholders in those communities will need to be part of the process moving forward. In addition, while service demand in Genesee County is slowly increasing, the County’s continued rural character has made that challenge less immediate than is found in growing suburban areas. Nonetheless, the ability to match resources against service demand is straining many of these organizations. Thirdly, in Genesee County, as throughout the nation, increased training and certification requirements have contributed to a reduction in the number of volunteer personnel that is certified to perform both firefighting and EMS operations. This translates into organizations struggling to keep up with meeting the continued needs of their communities. Finally, being a rural county with limited population and resources – including the all-important financial ones – covering a large geographic area will present challenges for the system’s stakeholders both attempting to achieve various response benchmarks, as well as funding needed system improvements.

It is also important to note that many of the main topics and recommendations in the previous reports – and to an extent this one also - continue to rely heavily on recruitment and retention and providing greater benefits to entice volunteers to join and stay active. These are important initiatives, and every effort should be made to provide as many different potential enticements as possible and support the volunteer emergency services in any way possible. However, the growing reality is that these efforts are not making a significant difference, particularly with success at recruiting new members in the emergency services – personnel who stay long-term. The fire and EMS services need to start planning now to begin to make the transition, to a system that will still be heavily dependent upon volunteer firefighters but will be supplemented by compensated personnel. EMS will probably become more of a career endeavor, possibly still supplemented by volunteer personnel.

It should be clearly understood by all stakeholders that the focus of this report is to augment and not supplant existing fire and EMS resources. Therefore, recommendations are focused on better utilization of existing organizations and resources while maintaining, supporting, and strengthening existing organizations.

This report contains a total of 95 recommendations for Genesee County that provides a path - or paths - for the fire and EMS services moving forward. However, it is the sincere hope of the MRI study team that this report is not viewed as “*different study, same information*” and the proverbial can gets kicked further down the road. While there are invariably going to be similarities to previous reports, and repetition of recommendations, that is because the necessary action has not yet been taken. **We cannot emphasize strongly enough that the time**

is here to finish studying and start taking action to implement the recommendations before the system does experience a domino effect failure.

It is the MRI study team's strong opinion that Genesee County through the Department of Emergency Services is the most qualified entity to coordinate and direct operational assistance with the delivery of fire and EMS services throughout the county. There are multiple factors that contribute to this belief and are discussed in detail in various chapters throughout the report. However, the most significant ones include the level of professionalism, knowledge, and experience at the Department of Emergency Services, and the need for a consistent level of service delivery throughout the county. That is not to say that there are no other options, such as a countywide fire protection district, or regional fire authority. But those options would be time-consuming to establish if they were permitted at all.

Implementing some of these recommendations, particularly at the county level, will require often elusive legislative action. The various stakeholders in the county – as well as surrounding counties in the GLOW region - will need to collectively lobby their legislative delegations with one voice to make the passage of enabling legislation a priority. Any necessary legislation should not mandate a one size fits all approach, it should just increase the number of potential options available for service delivery.

It is important to stress that any program that is implemented will also require a cafeteria-style approach with various options that participants can select that best suit their unique needs. The entire process also needs to be a partnership between a cross-section of stakeholders and that many – although not all – things will involve voluntary participation. All these options should be coordinated, managed, and even implemented at the County level.

Despite the challenges identified in this report, the citizens of Genesee County should feel confident that the majority of the fire and EMS organizations that serve them are competent emergency services providers that continue to provide the best critical service to the community that they can - day in and day out - and they do so with a high level of professionalism. We continue to be impressed with the dedication and commitment of their members. We also commend the various stakeholders in the Genesee County Fire and EMS delivery system for their proactive approach to the challenges that are facing the county, and for their willingness to address these very complex issues openly and positively.

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CHAPTER I - PROJECT OVERVIEW, SCOPE, AND METHODOLOGY

Project Overview



Municipal Resources, Inc. (MRI) was engaged by Genesee County, New York to work in partnership with the recently reestablished Emergency Services Task Force and undertake a comprehensive organizational, effectiveness, and overall operational evaluation, and deliver a comprehensive report and a series of workshops, addressing future countywide fire protection and emergency medical services (EMS) concerns. This study should be viewed as a planning tool for fire chiefs, EMS providers, municipal leaders, and elected officials.

Currently in Genesee County, there is little standardization in the deployment and operation of fire and EMS service resources and a declining number of personnel available to respond to emergencies. Response to a major catastrophic event, such as an act of terrorism, would require a standardized and coordinated effort to save lives. Additionally, both fire and EMS agencies struggle to maintain adequate staffing levels as both volunteer pools and revenue streams continue to decline – negatively impacting their ability to respond to both everyday and catastrophic emergencies. This project was developed to provide an external perspective and a series of strategic recommendations that would assist in addressing these emerging issues.

As this report was being written, Mercy Flight lost a pilot and Bell Helicopter lost a flight instructor in a tragic crash in Genesee County that occurred on April 26, 2022, during a training flight. Through this document we would like to recognize this sacrifice in service to the citizens of Genesee County and the tragedy that Mercy Flight is dealing with as an organization.

Purpose

This analysis included, but was not limited to, standards of cover, response districts and deployment models, staffing levels and needs, volunteer recruitment and retention, apparatus, equipment, fire and EMS standardization, funding, training, fire prevention, integration of fire and EMS operations, regional planning, and automatic/mutual aid pertaining to the fire and EMS services throughout the county.

The County and a growing number of its emergency services providers realize that volunteer fire departments need to provide a consistent level of services to the residents and visitors of Genesee County; being proactive rather than reactive, planning instead of relying on tradition, and being innovative rather than accepting the status quo. They need to improve public awareness and develop working relationships with local municipal officials.

The vision for this project is for an experienced vendor to evaluate how fire and EMS services are currently being provided within Genesee County as compared with other geographical areas of similar size and population, and to provide guidance to address the long-range future of fire and EMS delivery in Genesee County based on emerging trends and best practices in fire protection and EMS. MRI worked with the County stakeholders to develop a roadmap for the future delivery of emergency services within the County. **The goal of the task force regarding this project is to develop a strategic plan that will result in the implementation of recommendations that will positively impact the emergency services in the county, not just to simply prepare another study.**

The project team was also tasked with the development of a “*Tool Kit*” that the various stakeholders can use as a planning tool for the continued delivery of high-quality fire and EMS services throughout Genesee County. We have attempted to produce a report containing recommendations, and the stakeholder “*Tool Kit*”, that will assist the County, its municipal leaders, governing bodies, and its emergency services providers, both fire and EMS, to set a clear course of action for future service improvements and delivery throughout Genesee County.

About MRI



MRI was founded in 1989 by six former municipal and state government managers, with both public and private professional experience. MRI provides professional, technical, and management support services to municipalities, schools, and non-profit organizations throughout the Northeast. MRI provides technical knowledge and practical experience that others cannot offer because we hire the best in the municipal consulting industry. This is evidenced by a high level of implementation of MRI’s recommendations by its clients. Our clients have come to expect MRI to provide for whatever they need, and we fulfill their expectations.

Our dynamic management staff tailors services to specific client needs. Our clients realize that we have been in their shoes; we have the experience, sensitivity, and desire that it takes to develop and deliver services that specifically meet their needs. The depth of MRI’s experience is reflected not only in the experiences of its associates but in the scope of services it provides its clients, from professional recruitment to organizational and operational assessments of

individual municipal departments and school districts or ongoing contracted services for various municipal government and school business support activities. Municipal Resources has a particularly strong public safety group with nationally recognized expertise in fire and emergency medical services.

We are always focused on helping our clients solve problems and provide solutions for their future success. We simply work to gain an understanding of past events to build a framework for future success. We do not put forth idealistic, unachievable, or narrowly focused solutions.

Organizational Philosophy

Municipal Resources, Inc. is committed to providing innovative and creative solutions to the problems and issues facing local governments and the agencies that serve them.

The purpose of MRI's approach is to supplement the efforts of municipal employees and other personnel and enable them to do their jobs well. MRI is committed to supporting and enhancing positive, sustainable communities through better organization, operations, and communication. We achieve this by:

- Supporting towns/townships, cities, counties, school districts, and other community service agencies with management and technical services to facilitate constructive change within client organizations.
- Conducting studies and analyses designed to assist clients in achieving organizational improvement.
- Advocating and advancing cooperation, coordination, and collaboration between government organizations, and related community support agencies.
- Maintaining a staff of highly qualified professional, experienced and open-minded life-long learners to serve as consultants and advisors to our clients.
- Maintaining awareness and understanding of advances in "best practices" for delivery of all levels of core community services and related professional management.
- Developing and refining techniques for effective community engagement, information dissemination, and constructive change.

Our Objectives

- To help municipalities and agencies obtain maximum value for limited tax dollars.

- To identify and help communities manage the risks associated with public safety functions.
- To raise public awareness of the value and professionalism of their municipal resources.
- To help local leaders develop and execute plans that best meet their community's needs, given available resources.



FIGURE I-1: MRI OBJECTIVES

Scope of Work

The evaluation contained herein will provide Genesee County, its municipalities, the Genesee County Emergency Services, Genesee County Emergency Services Task Force, and the County's Fire and Emergency Medical Service (EMS) providers with a comprehensive overview of how fire and emergency medical services are currently being provided throughout the County. This assessment provides the various stakeholders with insight and evaluation regarding whether existing organizational structures, staffing and equipment levels, operational response approaches, coverage areas, and funding levels are adequate to provide a consistent level of services throughout the County that is in line with generally accepted standards, industry best practices, and benchmarks for an area of like character.

Using this review as a basis, our team has developed recommendations for improvement that take into consideration the current and future financial ability of the County, municipalities and districts. We recommend appropriate modifications to the fire and EMS delivery systems to provide optimum service throughout the entire County, adequacy, and appropriateness of apparatus and equipment, efficient use of resources, and whether the current deployment and coverage model is appropriate or should be modified. **It should be clearly understood by all stakeholders that the focus of this report is to augment and not supplant existing fire and EMS resources. Therefore, recommendations are focused on adding resources while maintaining, supporting, and strengthening existing organizations.**

Using this review as a basis, our team has made recommendations for improvements that take into consideration financial ability, and appropriate modifications to the delivery systems. It is our goal to enhance the level of service to the entire County, adequacy, and appropriateness of apparatus and equipment, efficient use of resources, and to consider whether the current deployment and coverage model is appropriate or should be modified. These recommendations will then provide a road map for the County's fire and EMS services that will also provide the wide array of stakeholders, both internal and external, a "tool kit" to address their emergency services needs both now, and in the future.

This project required intensive involvement within the County, and included interviews with a wide range of community stakeholders including, but not limited to, municipal and county elected officials, appointed officials, fire chiefs and officers of each fire department/company, fire department personnel, EMS chiefs and officers of each organization that provides EMS to the County, the Genesee County Emergency Services staff, various other local government officials as appropriate, and other external stakeholders, including members of the public.

As we navigated this project, we focused on providing answers to the seventeen specific questions and concerns listed on pages three and four of the RFP. To address these questions, we utilized the following fifteen-point approach:

1. **SWOT Analysis:** Conducted a SWOT (Strengths, Weaknesses, Opportunities, Threats/Challenges) analysis of the Genesee County Fire and EMS response system.
2. **Community:** Identified major issues and concerns of the community regarding the operations of the fire and EMS services. Developed an understanding and appreciation of the values and "personality" of the county as a whole, and, the individual communities, local governments, and emergency services providers that comprise it. Define the desired fire and EMS response capability
3. **Risk:** Identified potential areas of risk/liability within the county and made recommendations to reduce those exposures. This included an evaluation of the

current first-due response districts throughout the County and the relationship between the threat and the planned response.

4. [Staffing](#): Assessed the fire and EMS service’s staffing, response patterns, and apparatus/equipment compared to service level demands, safety issues, and quality of service considerations inherent in such policies, staffing, and scheduling.
5. [Apparatus and Resources](#): Evaluated the current fire apparatus and EMS unit make-up and distribution from a county-wide perspective and made recommendations regarding potential deployment of additional resources that would better utilize resources or provide for better coverage. Any unreasonable duplication of resources was identified.
6. [Coverage areas](#): Evaluated the current first-due response areas for county fire and EMS providers and utilizing GIS mapping we have illustrated benchmark response times and coverages. This included an assessment of County fire and EMS run cards or dispatch assignments.
7. [Workload Analysis](#): Analyzed the workload of various fire and EMS agencies and developed GIS mapping based on incident locations which contributed to determining the most efficient and effective future deployment of resources.
8. [Organizational Structure and Governance](#): Reviewed organizational structures for appropriateness and effectiveness for providing fire and EMS services within the County. Reviewed policy and decision-making processes.
9. [Internal Communication and Cross Functionality](#): Evaluated management teams, communications, scheduling, and adequacy of staffing to accomplish goals. Evaluated the administration of each unit and made recommendations regarding efficiency and effectiveness.
10. [Organizational, Managerial, and Operational Practices](#): Reviewed existing general orders, standard operating guidelines, policies, rules, and regulations concerning federal and state requirements and guidelines and in relation to contemporary “best” practices and procedures. Evaluated the extent to which SOGs are standardized and provide for interoperability between organizations.
11. [Strategic and Capital Planning, Budgeting](#): Reviewed planning processes and the current processes for establishing budgets. This included reviewing the current master plan and any capital plan(s), including assessment of equipment, and a risk management strategy.

12. [Facilities](#): The evaluation of facilities was limited to an assessment of the fire and EMS station locations and response times.
13. [Various Fire/EMS Services](#): Identified opportunities for how fire and EMS services can potentially be better delivered in Genesee County in a more coordinated and cost-effective manner. Recommended services to be provided by various County companies, including the possibility of companies outside of Genesee County, but closer to specific risks, in the context of a comprehensive response policy to the community as a whole with an attempt to reduce any unnecessary redundancies in service and equipment.
14. [Funding](#): Assessed the current funding levels and mechanisms for providing fire and EMS services throughout Genesee County. This included an evaluation of potential fiscal constraints, as well as opportunities relative to achieving strategic goals and objectives related to the delivery of comprehensive fire and emergency services throughout Genesee County. Attempted to identify cost-effective solutions to issues identified.
15. [The Future](#): Attempted to predict potential future impacts by not addressing current service delivery concerns and staffing challenges.

Recommendations for improvement are based on the applicable nationally recognized standards and best practices, such as ISO (Insurance Services Office), NFPA (National Fire Protection Association), CFAI (Commission on Fire Accreditation International), National Volunteer Fire Council (NVFC), state laws and administrative regulations, and county/municipal codes and ordinances.

[Project Phasing](#)

This project was divided into six phases as detailed below:

[PHASE 1](#) [ORIENTATION, STAKEHOLDER INPUT, DATA GATHERING, AND IDENTIFICATION OF SIGNIFICANT ISSUES FACING THE COMMUNITY AND FIRE AND EMS SERVICES WITHIN GENESEE COUNTY](#)

To fulfill the requirements of this study, members of the study team held an initial orientation meeting with the Emergency Services Task Force which comprises the primary internal stakeholders, and in partnership with them, gathered a large amount of statistical information and data on Genesee County, its 21 municipalities, and the 19 primarily autonomous entities that provide fire, rescue, and EMS services to the County. The MRI study team performed ten

days of on-site work, interviews, and observations in Genesee County over the course of several months.

The MRI study team made multiple visits to Genesee County and completed a wide variety of tasks in the development of this report, including conducting more than 50 interviews and forums throughout the County with internal and external stakeholders. In consideration of the fact Genesee County is staffed primarily by volunteer fire, rescue, and EMS personnel, and to accommodate the varied needs of the county emergency services' external stakeholders the MRI Study Team arranged for a significant portion of our time in Genesee County to be either in the evening or on weekends to accommodate the schedules/needs of these personnel.

We held multiple meetings, during the day (including a weekend) and at night, to provide the opportunity for individual fire and EMS services members and the public & business community to voice their perceived values and concerns and to promote interactive dialogue on the fire and EMS services status and needs for the future.

The team spent time with the key personnel in the County's fire and EMS services to gain an understanding of the organizational, operational, and management systems and approaches currently in place, and then compare and contrast the current structures against contemporary practice and convention.

We engaged the elected leaders including the Genesee County Legislature, the appointed managers and administrators, fire and EMS agency heads, members of the emergency services community, and other elected and appointed municipal officials, including attending two Genesee Association of Municipalities (GAM) meetings, and a wide array of other internal and external stakeholders in discussions about the current emergency services system and structure to identify any concerns or areas requiring special focus and to gather thoughts and ideas about areas of potential improvement and long-range needs, goals, and objectives.

As part of the information gathering process, our team, in consultation with the Genesee County Emergency Services Task Force, developed multiple survey instruments and questionnaires that were distributed to various stakeholders seeking their input on various aspects of the fire and EMS delivery system.

Our team evaluated documents and critical data provided by the County. Requests for specific information were directed through the Director of Emergency Services.

PHASE 2 **INFORMATION REVIEW, INVENTORY, AND ASSESSMENT OF THE EMERGENCY RISKS OF THE COUNTY AND RESPONSE EFFECTIVENESS AND OPERATIONAL READINESS OF THE FIRE AND EMS SERVICES**

In order to assess: (1) the demands on the service delivery systems of the fire and EMS services in the county, and (2) the current status and effective utilization of fire and EMS resources,

Municipal Resources identified the level and magnitudes of risks managed by the fire and EMS services and inventory levels of services provided. Our team evaluated the fire and EMS services response and service in relation to generally accepted firefighting, emergency medical response, and emergency management standards, and in similar-sized counties, and conducted a comprehensive analysis of the following administrative and operational aspects of the fire protection system:

- Reviewed the fire and EMS services, fire company, EMS providers, and overall Genesee County fire protection and EMS delivery system organizational and management structures, operations, and practices.
- Reviewed ordinances, policies, rules and regulations, standard operating procedures/guidelines (SOPs/SOGs), and bylaws utilized by the County, its municipalities, the fire and EMS services, and/or the fire companies.
- Evaluated overall fire prevention, plan review, and code compliance activities.
- Reviewed and evaluate existing short and long-range strategic planning activities, plans, and capital improvement plan(s).
- Analyzed funding related to community fire protection including county, municipality, fire and EMS service, and fire company budgets, both operational and capital.
- Evaluated the current levels of fire and EMS staffing with an emphasis on variations at different times of the day and/or days of the week.
- Reviewed current volunteer recruitment and retention programs and efforts.
- Evaluated fire and rescue services and fire company and EMS training programs and overall operational readiness of emergency response personnel.
- Toured and assessed the location of fire and EMS stations within Genesee County.
- Conducted a comprehensive inventory and evaluated existing apparatus and equipment as they relate to both current and future needs, including any possible gaps and/or unnecessary duplications.
- Conducted a target hazard analysis within the County.
- Evaluated current dispatch procedures, response districts, and response assignments.
- Reviewed automatic and mutual aid agreements and resources/capabilities of those departments/companies.

- Analyzed incident history and incident volume.
- Analyzed response times.
- Evaluated compliance with NFPA 1720 and other appropriate standards.
- Evaluated compliance with the Genesee County’s current standards of cover goals and identify recommendations for improvement.
- Reviewed and evaluated the various current ISO ratings and compliance and made recommendations for potential improvements.
- Comprehensively assessed the overall level of fire and EMS services currently provided to the residents, businesses, and visitors of Genesee County.

In this report, our team included a series of descriptive and statistical analyses, which summarized the risk characteristics for the community and how well prepared the current fire protection and EMS delivery system is to meet current and future demands and challenges.

PHASE 3: DEVELOPMENT OF A COMPREHENSIVE AND DETAILED ASSESSMENT AND INVENTORY OF CURRENT FIRE AND EMS SERVICE OPERATIONS

After completing the inventory and assessment tasks outlined above, our team developed a detailed description of current fire and EMS service operations, organization and management structure, and response data. This inventory and description included, at a minimum, the following elements:

- Documentation of the overall county fire and EMS services plan of organization, organizational structure, and staffing.
- Documentation of firefighting and EMS response characteristics and capabilities.
- Documentation of the operations, practices, and services offered within the fire and EMS services.
- Documentation and evaluation of the working relationship between the various fire and EMS agencies both within Genesee County and in neighboring counties.
- Documentation and inventory of fire and EMS station facilities and deployment points, apparatus, and equipment within the county including locations, adequacy, and appropriateness as far as number, current, and future needs, deployments, etc.

- Documentation of the fiscal appropriations, both operational and capital, for the fire companies, EMS agencies, and the fire and EMS services overall in Genesee County.
- Documentation of fire company, EMS agency, and county-wide fire and rescue service training programs and strategies.
- Documentation of fire and EMS emergency incident call and response volume over the previous four years.
- Documentation of the fire and EMS services staffing procedures, response, and statistics to fires and other emergencies and compliance with NFPA 1720 and the county's existing standards of cover benchmarks (not really applicable).
- Documentation of volunteer recruitment and retention programs and strategies.
- Documentation of the various municipal current ISO ratings and compliance.
- Documentation of the County fire and EMS services county-wide and standardized written communications systems such as policies, and SOPs/SOGs.
- Requested and discussed the County and City of Batavia fire and EMS services' long range strategic planning efforts.
- Documentation of the opportunities that may exist for shared services, or more regional approaches to the provision of fire and EMS services within Genesee County.
- Overall documentation of the current levels of fire and EMS services in Genesee County.

PHASE 4: EVALUATION OF THE EFFECTIVENESS, EFFICIENCY, AND QUALITY OF SERVICE OF THE FIRE PROTECTION SYSTEM WITHIN GENESEE COUNTY

Our team utilized the information gained during the previous phases assess and evaluate emergency services in the following areas in comparison to industry standards and practices, peer communities, and national and statewide standards:

- Staffing, response procedures and statistics.
- ISO, NFPA 1720 and standards of cover compliance.
- Facility, apparatus and equipment appropriateness, adequacy and utilization.
- Fire and EMS service organizational and management structure.

- Fire and EMS services financial management and planning, and capital improvement planning.
- Compliance with mandatory plans, inspections and testing.

We developed a detailed element of the final project report that will fully describe the evaluation methodology, standards and indices used, and the documented conditions, trends, and data.

PHASE 5: PREPARATION OF A FINAL REPORT AND RECOMMENDATIONS FOR GENESSEE COUNTY FIRE AND EMS SERVICES

Upon the completion of all the tasks outlined above, our team prepared a working draft of this report which was delivered to the Genesee County Emergency Services Task Force on May 27, 2022. This working draft summarized:

1. Existing conditions;
2. Evaluation of the county’s fire and rescue services, emergency response capabilities, training, organization, management, and planning;
3. All other relevant data and observations; and
4. Comprehensive listing of strategic recommendations for potential improvements to the county’s fire and EMS delivery system, prioritized as necessary. The recommendations can then be utilized as a foundation to form an implementation action plan.
5. In addition to other photos, diagrams, tables, charts, and other supporting materials to illustrate information in the report, or support findings, MRI, in cooperation with Genesee County Department of Planning developed a set of G.I.S. maps to support study findings and illustrate recommendations for standards of cover. The GIS maps, as appropriate, include both current and recommended or ideal, situations.

The final report and the listed recommendations contain the following elements:

1. The project team has summarized all tasks undertaken, existing conditions, and operations of the fire and EMS services, as well as all evaluations and comparisons of the services provided.

2. The project team has developed a detailed set of recommendations on the service level provided and structure of the fire and rescue services, staffing levels, operations and procedures, and alternate service delivery systems and programs to meet the projected needs of the Genesee County and its municipalities. This includes recommendations on a more centralized and coordinated approach to the county-wide delivery of fire and EMS services.
3. The project team has developed recommendations on the possible future deployment of regional fire/EMS quick response force services as well as the county's current and anticipated future apparatus and equipment needs.
4. The project team has developed a detailed series of appropriate recommendations for fire and EMS Services in Genesee County. Many of the resources we provide are designed to serve as a "toolbox" for the County's emergency services stakeholders to reference as they work to address staffing, major apparatus and equipment purchases, and overall emergency services delivery operations that result in an integrated, well trained, reliable, and cost-effective, all-hazards emergency response system.

PHASE 6: PRESENTATION OF A FINAL PROJECT REPORT AND RECOMMENDATIONS

The final report will be presented by the project team at up to three (3) days of meetings/workshops to satisfy the county's needs in communicating the content of this report to all interested internal and external stakeholders. **We must stress again; it should be clearly understood by all stakeholders that the focus of this report is to augment and not supplant existing fire and EMS resources. Therefore, recommendations are focused on adding resources while maintaining, supporting, and strengthening existing organizations.**

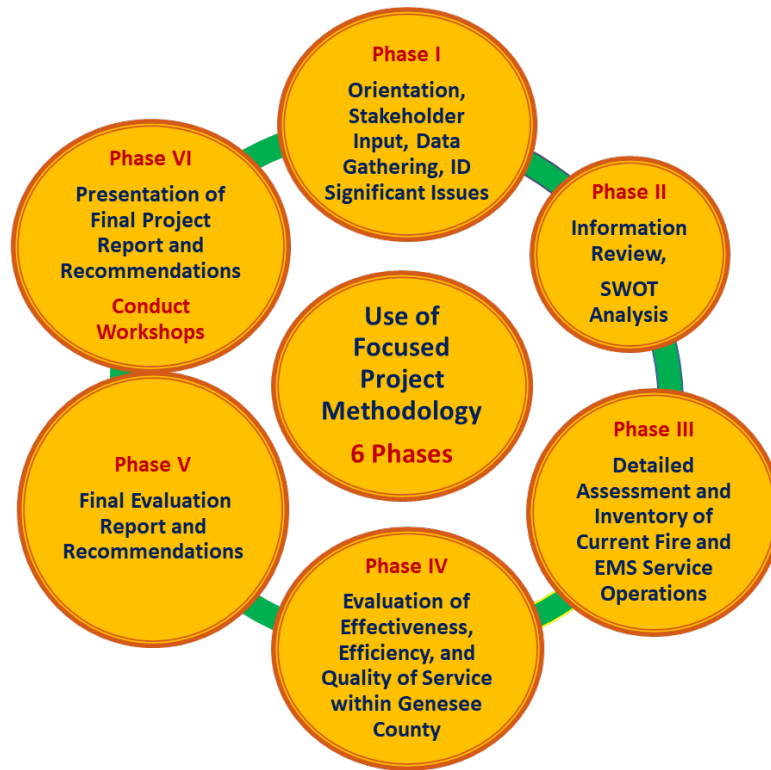


FIGURE I-2: GENESEE COUNTY PROJECT PHASING

Recommendations for improvement contained in this document are based on the applicable nationally recognized standards and best practices, such as ISO (Insurance Services Office), NFPA (National Fire Protection Association), CFAI (Commission on Fire Accreditation International), National Volunteer Fire Council (NVFC), state laws and administrative regulations, county/municipal codes and ordinances, and fire and EMS industry emerging service delivery trends and best practices. However, since every community has unique characteristics, challenges, and resource limitations, our recommendations are specifically designed to address the immediate and long-term needs of Genesee County and the fire and EMS providers that provide service to its communities and citizens.

Methodology

To fulfill the requirements of this study, members of the study team held an initial orientation meeting with the primary internal stakeholders - the Genesee County Emergency Services Taskforce, along with Genesee County Emergency Services – and in partnership with them, gathered a large amount of statistical information and data on Genesee County, its municipalities, and the autonomous entities that provide fire, rescue, and EMS services to the County. Our team performed ten days of on-site work, interviews, observations, and finally presentations in Genesee County over the course of several months.

As noted above, the members of our team made multiple visits to Genesee County and completed a wide variety of tasks in the development of this report including conducting more than 50 interviews and open meetings/forums throughout the county with internal and external stakeholders. In consideration of the fact Genesee County is still staffed primarily by volunteer fire and rescue personnel (City of Batavia Fire, Mercy Flight EMS, and LeRoy Ambulance lean much more to career staffing), and to accommodate the varied needs of the fire and EMS services' internal and external stakeholders the MRI study team arranged our visits so that a significant portion of our time in the county included evening and weekend availability to accommodate the schedules/needs of these personnel.

The team spent a significant amount of time with the senior officers and other key personnel in the fire and EMS organizations, and with key personnel from Genesee County GIS, Genesee County Emergency Dispatch, and Genesee County Emergency Services, to gain an understanding of the organizational, operational, and management systems and approaches currently in place, and then compare and contrast the current structures against contemporary practice and convention.

We also engaged the county legislature, municipal managers/administrators, members of local governing bodies, a wide cross-section of the fire and EMS services community, other appointed senior municipal officials, and, a wide array of other internal and external stakeholders (including the general public) in in-depth discussions about the current fire and EMS delivery system and structure to identify any concerns or areas requiring special focus and to gather thoughts and ideas about areas of potential improvement and long-range visions, needs, goals, and objectives.

All together a vast quantity of major work elements contributed to this analysis and developing the associated *"Tool Kit"*. This includes more than 50 interviews with key stakeholders. These elements include, but were certainly not limited to:

1. A review of compiled data regarding key operational aspects of the Genesee County fire, rescue, and EMS delivery services.
2. Conducted a SWOT (Strengths, Weaknesses, Opportunities, Threats/Challenges) analysis of the Genesee County Fire and EMS response system.
3. Conducted a series of meetings with Genesee County Emergency Dispatch personnel to identify performance metrics, available data, and computer-aided dispatch system capabilities.
4. Through a variety of means worked with the Genesee County Legislature, municipal leaders, and the public to attempt to define a desired level of fire and EMS response capability.

5. Met with several representatives of the Genesee County Chamber of Commerce and business community.
6. Through a variety of means worked to identify major issues and concerns of the various internal and external stakeholders regarding the current operations of fire and EMS services within Genesee County. Part of this process involved the MRI study team achieving an understanding and appreciation of the values and “personality” of Genesee County as a whole, as well as, the individual communities, local governments, and fire and EMS providers that comprise it.
7. A thorough tour of Genesee County to gain a sense of the physical environment, the primary fire, and life safety risk exposures, and the location of population and commercial centers and growth areas, in relation to existing facilities. Part of this process included an evaluation of the relationship between the potential threats and the planned response.
8. Interviewed key Emergency Management personnel.
9. Conducted several meetings with Genesee County 9-1-1 Dispatch Center leaders to attempt to define the capabilities of the computer-aided dispatch system and extract data for mapping and performance metrics.
10. Worked with Genesee County GIS staff members to develop a series of maps and layers that provide a graphic representation of the resource deployment and emergency response operations.
11. Conducted/facilitated multiple initial informational sessions for all interested stakeholders.
12. Interviewed representatives from Mercy Flight EMS, and LeRoy Ambulance as well as other EMS providers.
13. Attended a meeting with the Genesee County Emergency Services Taskforce (12 attendees).
14. Conducted individual interviews with multiple fire and EMS chief officers.
15. Tour and observation of Genesee County public safety 9-1-1 dispatch center.
16. Visited all fire company and EMS facilities, reviewed apparatus, and equipment when access was facilitated.

17. Conducted a review of the locations of existing fire and EMS stations primarily related to an assessment of response times and utilizing GIS mapping to illustrate recommended benchmark response times and coverages.
18. Evaluated the current fire and EMS service staffing and deployment models compared to service level demands, safety issues, and quality of service considerations. Recommendations were made regarding staffing needs necessary to maintain service levels in the future.
19. Analyzed the fire and EMS service's current deployment strategy, response districts, and dispatch protocols.
20. Evaluated Genesee County's fire and EMS run cards and dispatch capabilities, tracked performance metrics and response assignments and made recommendations for revisions and standardization.
21. Reviewed and evaluated automatic and mutual aid capabilities and practices.
22. Analyzed the workload of various fire and EMS agencies (including an analysis by each municipality) and utilized GIS mapping to plot three years of incident locations to assist with determining the most efficient future deployment of resources.
23. Evaluated the current fire apparatus and EMS unit make-up and distribution from a county-wide perspective.
24. Evaluated the existing fire and EMS service's organizational structure and governance for appropriateness and effectiveness for providing fire and EMS services within the county, including an assessment of the sense of common vision.
25. Evaluated the extent to which SOPs/SOGs are standardized and provide for interoperability between organizations.
26. Reviewed and evaluated fire and EMS training documentation, certifications, and interagency involvement.
27. Reviewed and analyzed the fire and EMS services incident/response time statistics, both County wide and by geographic region (east, west, central).
28. Reviewed state and county statutes and municipal ordinances applicable to the fire and EMS services.

29. Reviewed previous studies and evaluations that have been conducted regarding the fire and EMS services.
30. Developed, distributed, and evaluated three computer-based survey instruments to gain input and perspective from a wide range of both internal and external fire and EMS system stakeholders: one for fire and EMS providers, one for local government officials, and one for citizens. The number of responses received for each survey was:

Fire and EMS providers: **226**
Local government officials: **34**
Citizens: **736**

These surveys and their results, including comments, can be found in Appendices B to D.

31. Developed, distributed, and evaluated two detailed questionnaires, one for fire and EMS agency leadership, and one for municipal managers/administrators. The questionnaire for the fire and EMS agencies resulted in an almost 100% return rate. For the municipal managers/administrators, 17 of 21 (80.9%) municipalities completed and returned them. The questionnaires can be found in Appendices E and F.
32. Evaluated opportunities for additional regional or shared services related to fire and EMS response.
33. Developed and conducted analysis of a summary comparative using nationally accepted norms, and practices of other communities of similar type and size.
34. Developed a comprehensive assessment of the current conditions of the Genesee County Fire and EMS delivery system along with recommendations for improvement.
35. Assessed the current funding levels and mechanisms for providing fire and EMS services throughout Genesee County. This included an evaluation of potential fiscal constraints, as well as opportunities relative to achieving strategic goals and objectives related to the delivery of comprehensive fire and EMS services throughout Genesee County.
36. Developed a “*Tool Box*” to address the Genesee County Fire and EMS delivery system needs, both now, and in the future.

Our team investigated areas such as the organizational and command structures of the fire and EMS system and their various component organizations, both individually and collectively, chain of command, span of control, budgeting, staffing, volunteer recruitment, and retention, service demands, fire prevention services, response districts, dispatch protocols and the deployment of personnel, standards of cover, the communications and data processing functions, perceptions within the community, working relationships with other persons and agencies, responsiveness, internal policies and procedures, adequacy and reasonableness of facilities and equipment, and compliance with various state and federal regulations.

Following the on-site visits, the data and documentation collected, and observations made, were subjected to analysis by the project team, both individually and collectively. The information was then compared with contemporary fire service and public safety standards, recommendations, and best practices, in order to formulate the recommendations contained in this report and utilized for the development of the *“Tool Box”*.

This report is the work product of a year of extensive observation, information gathering, research, and analysis. The observations made within this report are believed to be accurate based on the information gathered from Genesee County and the individual entities that comprise the fire and EMS agencies that serve the county, and the combined judgment of the entire MRI fire and EMS study team. However, it should be noted that the level of response performance tracking was limited by the configuration of the CAD system.

The resulting recommendations and *“Tool Box”* are based upon an acknowledgment that fire and EMS services are living and constantly evolving organizations. They must constantly change and adapt to current and anticipated conditions and realities. Every fire and EMS agency, while steadfastly holding onto traditions, is an organization that must be progressive and proactive, and requires a perpetual commitment to improvement. The modern fire and EMS services are constantly besieged with ever-increasing demands from the public and must readily adapt to changes in technology, constantly evolving risks and hazards, and new generations of men and women entering this highly rewarding and challenging public service avocation. The delivery of high-quality fire and emergency medical services requires energetic, enlightened, progressive, and proactive leadership at all levels of the fire and EMS delivery system. Every day must include an effort to improve and move forward.

Acknowledgements

MRI would like to sincerely thank the wide range of stakeholders who were involved in this project, without whose assistance and support, the completion of this final study and report would not have been possible. Specifically, it has been a pleasure to work in partnership with the Genesee County Emergency Services Taskforce, Genesee County Emergency Services, Genesee County Fire and EMS agencies, Genesee County First Responders, Genesee County Sheriff's Department 9-1-1 Dispatch Center and Genesee County Geographic Information Systems (GIS) personnel as well as the other stakeholders that participated in this process.

CHAPTER II - BACKGROUND, DEMOGRAPHICS, AND FIRE AND EMERGENCY MEDICAL SERVICE (EMS) OVERVIEW

Genesee County is located in western New York state (Figure II-1). The county was created in 1802 and organized in 1803. The county seat is in the City of Batavia which is centrally located within the county. Batavia is located approximately 42 miles east/northeast of Buffalo, and 36 miles southwest of Rochester. Genesee County comprises the Batavia, NY micropolitan statistical area, which is also in the Rochester-Batavia-Seneca Falls, NY combined statistical area.



Figure II-1: Location of Genesee County in New York State



**Figure II-2: GLOW Region
(Monroe County is not a part)**

Genesee County is bordered by Orleans County to the north, Monroe County to the northeast, Livingston County to the southeast, Wyoming County to the south, Erie County, to the west, and Niagara County to the northwest. Along with Livingston, Orleans, and Wyoming counties, Genesee County is also part of what is referred to as the GLOW region of the state, adjacent rural counties collaborating to seek solutions to regional challenges (Figure II-2).

A nine-member County Legislature, elected by districts from throughout the County and City of Batavia (Figure II-3), serves as the governing body. The legislature enacts legislation and sets the policy for the county. The legislators have selective policy-

making authority to provide certain local services and facilities on a county-wide basis. The governing body is also assisted by numerous citizen boards and commissions which provide advice and guidance on a wide range of topics. A professional county manager oversees the County's day-to-day operations.

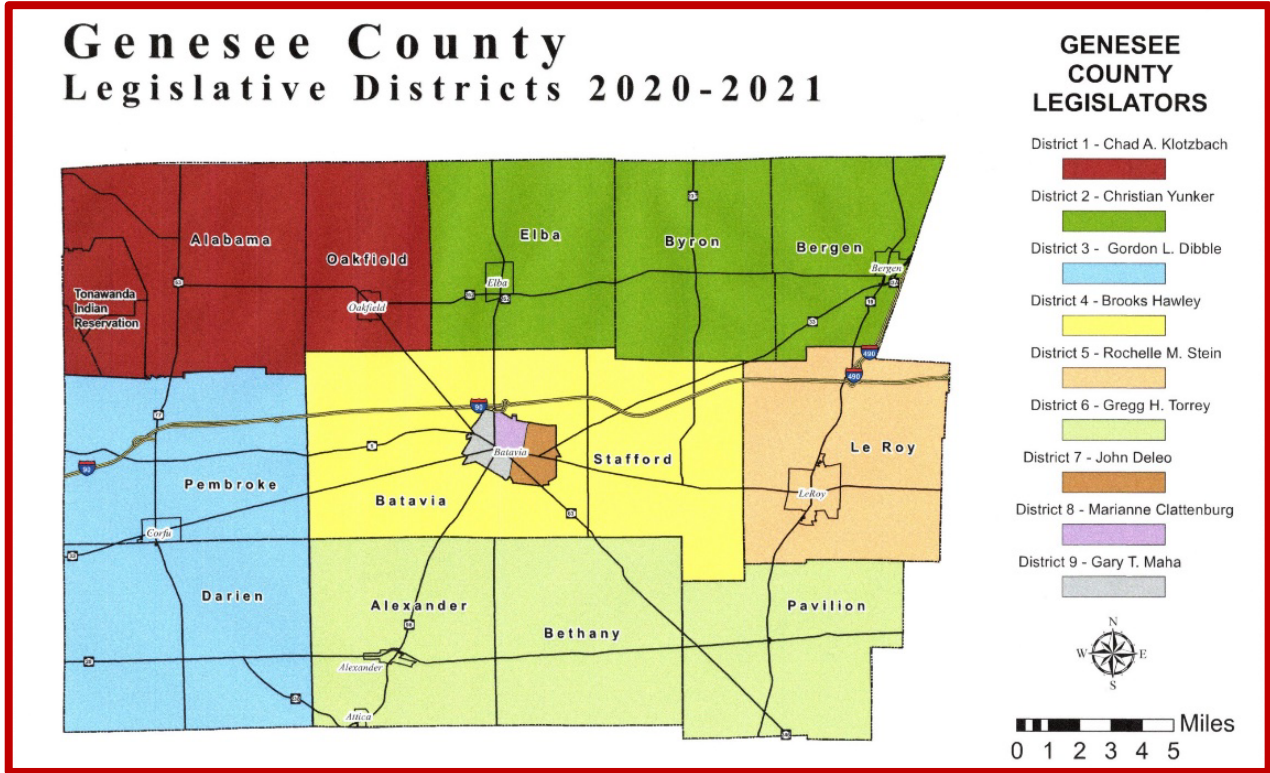


Figure II -3 Genesee County Legislative Districts

Demographics

According to the United States Census Bureau, Genesee County had an official 2020 population of 58,388 in 24,174 households¹. This represents a decrease of 2.8% from the 2010 population of 60,079. The county’s estimated 2021 population was 57,853², an additional decrease of 0.9% since 2020. Since 1950, the county’s net population has only increased by just 10,804, most of which occurred in the 1950s and 1960s. From 1970 until 2000 the population grew slightly, before beginning to decrease, a trend that appears to be continuing.

¹ <https://www.census.gov/quickfacts/fact/table/geneseecountynewyork/PST045221> May 12, 2022

² <https://www.census.gov/quickfacts/fact/table/geneseecountynewyork/PST045221> May 12, 2022

YEAR	POPULATION	POPULATION CHANGE	PERCENTAGE (%) CHANGE
1950	47,584	N/A	N/A
1960	53,994	+ 6,410	+ 13.5%
1970	58,722	+ 4,728	+ 8.8%
1980	59,400	+ 678	+ 1.2%
1990	60,060	+ 660	+ 1.1%
2000	60,370	+ 310	+ 0.5%
2010	60,079	-291	- 0.5%
2020	58,388	-1,691	-2.85
2021	57,853*	-535	-0.9%

Figure II-4: Population 1950 – 2021

* Estimated
Sources: U.S Census Bureau

The 2010 population is 92.9% Caucasian, 3.2% African American, 0.7% Asian, and 3.5% Hispanic³. If national trends evidence themselves in Genesee County, the Asian and Hispanic populations will continue to grow and may eventually necessitate the need for bilingual emergency services personnel. As these changes occur, the fire and EMS organizations that serve Genesee County will need to take steps to recruit personnel from various racial and ethnic backgrounds so that their membership will mirror the community (this is discussed more in Chapter IX - *Volunteer Recruitment and Retention*). The population makeup includes 20.3% under the age of 18 and 19.3% age 65 or older⁴. With the latter age group representing nearly one in five county residents, there could be an impact on the emergency response needs and demands, particularly with potential increases in the EMS call volume due to shifting ages and a population that grows older.

Genesee County covers 495 square miles (1,280 km²), of which 493 square miles (1,280 km²) are land area, and 2.4 square miles is water (6.2 km²) (0.5%)⁵. Based on its overall population density of 118.4 people per square mile (New York average: 411.2⁶) the county is classified as rural according to the U.S Census Bureau.

The average per capita income of county residents from 2016 through 2020 was \$30,846⁷ (New York average: \$40,898⁸) and the median family income was \$60,635⁹ (New York average: \$60,635⁹)

³ <https://www.census.gov/quickfacts/fact/table/geneseecountynewyork/PST045221> May 12, 2022

⁴ <https://www.census.gov/quickfacts/fact/table/geneseecountynewyork/PST045221> May 12, 2022

⁵ <https://www.census.gov/quickfacts/fact/table/geneseecountynewyork/PST045221> May 12, 2022

⁶ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

⁷ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

⁸ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

⁹ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022



\$71,117¹⁰). The county's poverty rate is 10.2%¹¹ about 19% less than half the state average of 12.7%¹².

Genesee County has 25,902 housing units¹³ of which 72.4% are owner-occupied¹⁴. The median value for all units (including newly built and existing stock) for 2016-2020 was \$125,200 (New York state: \$325,000)¹⁵. Just 93 building permits for new construction were issued in the county in 2021¹⁶.

Genesee County is traversed by Interstates 90 (New York Thruway) and 490 with an interchange for the two located in the Town of Bergen in the northwest corner of the county. US Routes 20 and New York Routes 5, 19, 33, 63, 77, and 98 are all major transportation corridors through the county. A major east-west freight railroad line operated by CSX Transportation bisects the county. This is reported to be one of the busiest freight rail lines in New York state. The DePew, Lancaster, and Western Railroad interchanges with CSX in Batavia and provides service to local industries. Amtrak also utilizes the CSX line although the trains do not stop in Batavia. Inter-city bus service is provided by Greyhound and Trailways. Genesee County Airport is a county-owned; public use airport located in the Town of Batavia. It is classified as a general aviation reliever airport. Figure II-5 illustrates major transportation routes and facilities located within the county.

¹⁰ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

¹¹ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

¹² <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

¹³ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

¹⁴ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

¹⁵ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

¹⁶ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

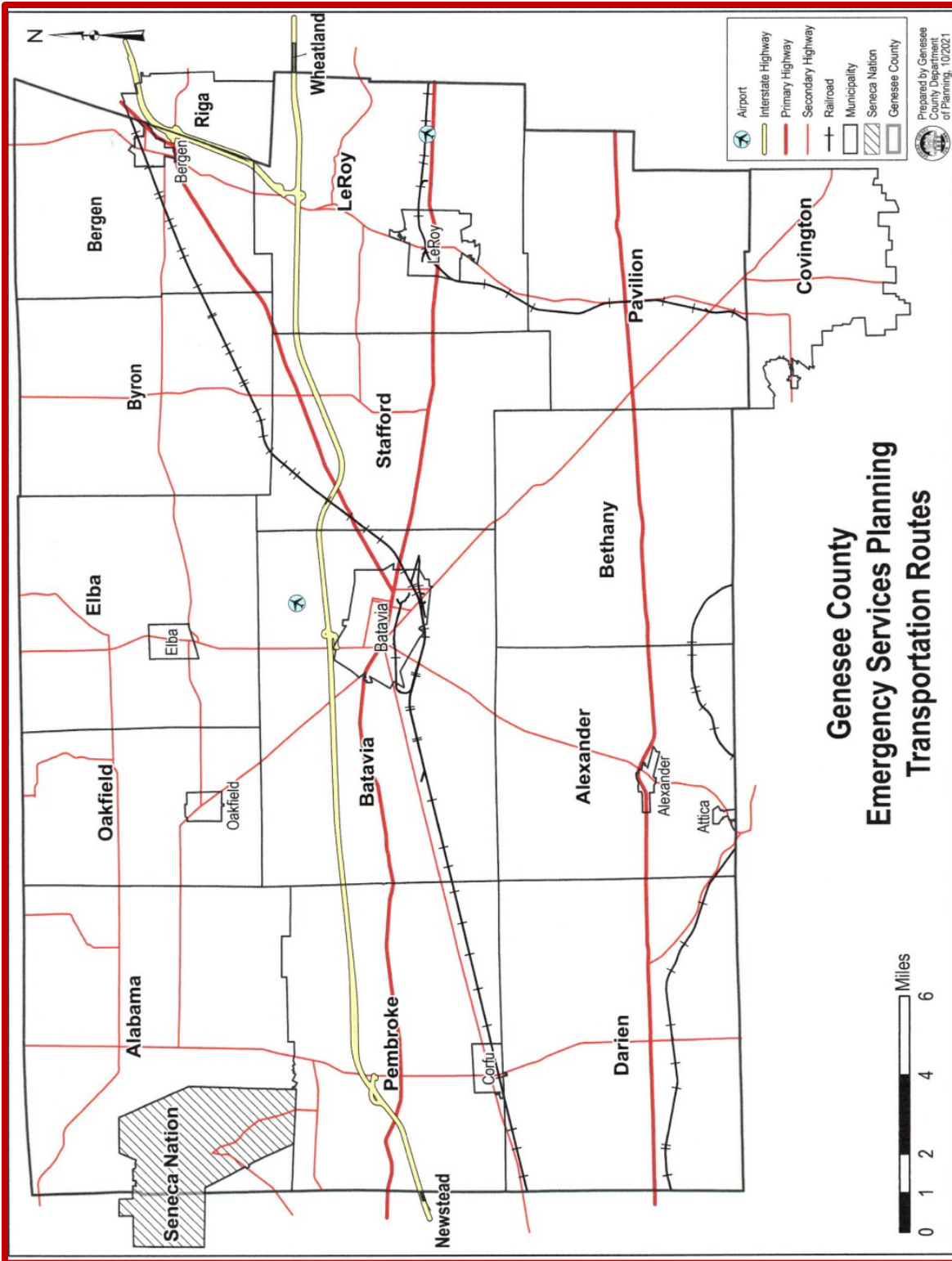


Figure II-5 Major Genesee County Transportation Routes and Facilities

Being less than an hour's drive to both Buffalo and Rochester, a portion of Genesee County residents commute to work in those two cities. In addition, the county is home to nearly 1,250 businesses¹⁷. Total employment in Genesee County in 2020 was 16,611 people¹⁸.

As would be expected with its very rural characteristics, Genesee County's largest industry is still agriculture and dairy farming. According to the USDA, in 2017, the county was home to 485 farms covering 176,943 acres of land¹⁹. The average farm was 365 acres. The market value of the products produced was estimated to be \$234,935,000²⁰. However, the extensive highway and transportation system with easy access has resulted in the county looking to diversify its economy and attract more 21st-century industries and their related employment. Among these initiatives are:

- Western New York Science & Technology Advanced Manufacturing Park (STAMP), Genesee County's 1,250-acre mega site (Figure II-6). STAMP is home to Plug Power's Project Gateway, a \$232 million renewables manufacturing project generating over \$600 million of economic impact to Genesee County²¹.

¹⁷ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

¹⁸ <https://www.census.gov/quickfacts/fact/table/NY,geneseecountynewyork/PST045221> May 12, 2022

¹⁹ https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/New_York/cp36037.pdf May 12, 2022

²⁰ https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/New_York/cp36037.pdf May 12, 2022

²¹ <http://www.gcedc.com/> May 12, 2022

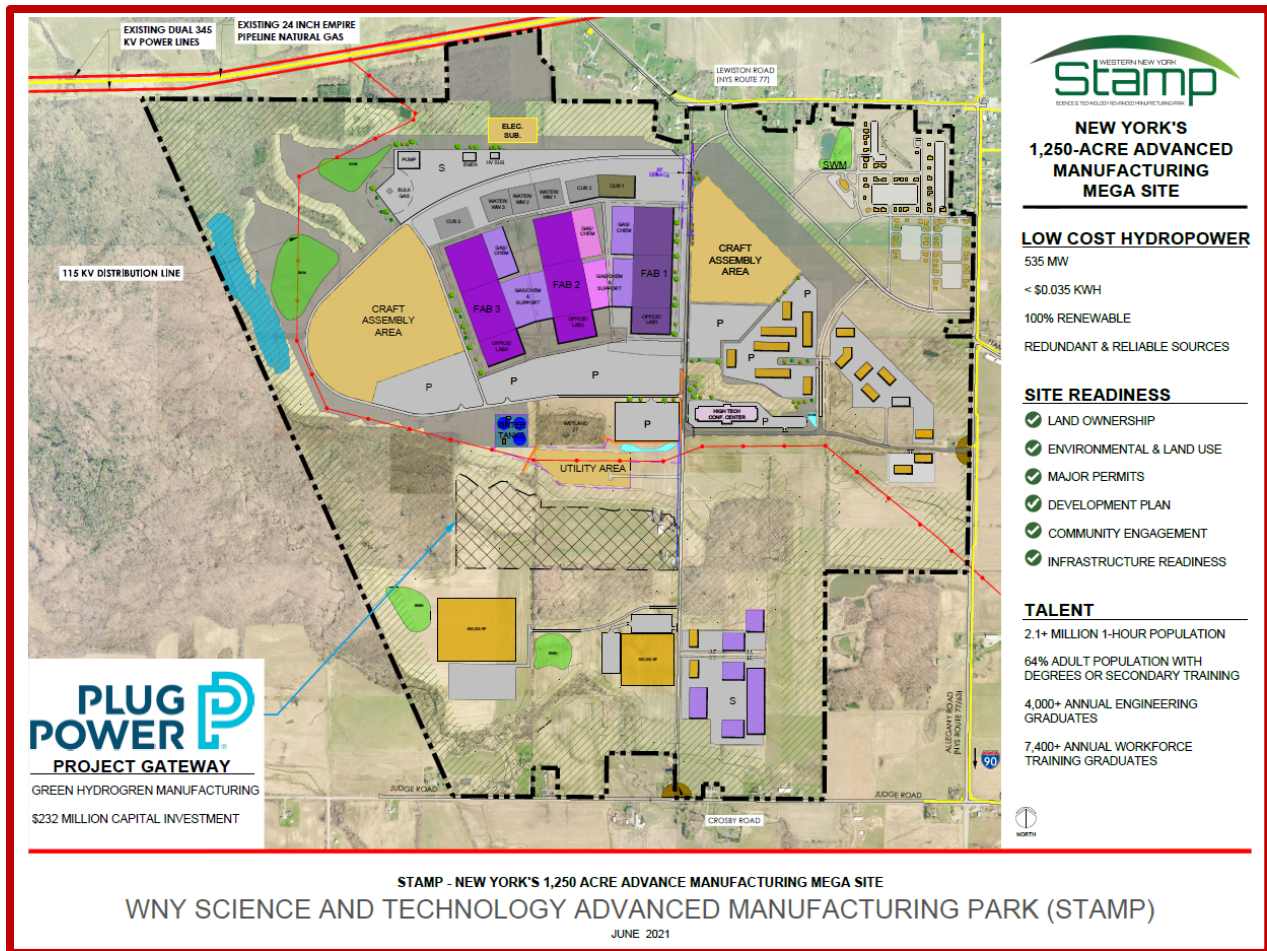


Figure II-6 – Western New York STAMP Project

Map credit: Invest Buffalo Niagara

The 250-acre Genesee Valley Agribusiness Park supports operations with 1.1 million square feet of dairy processing projects, over 900 workers, and over \$500 million of capital investment in Genesee County (Figure II-7)²².

²² <http://www.gcedc.com/> May 12, 2022



Figure II-7: Genesee Valley Agribusiness Park

Image credit: Genesee County Economic Development Center

Genesee County is comprised of 20 municipalities that are wholly located within the county (Attica Village is also partially located within the county). According to New York statutes, four types of incorporated municipalities are permitted: cities, boroughs, townships also called towns, and, villages. Genesee County’s municipalities include one city, 13 towns, and 6 villages (Figure II-8). The Seneca Nation reservation is also located mostly within Genesee County.

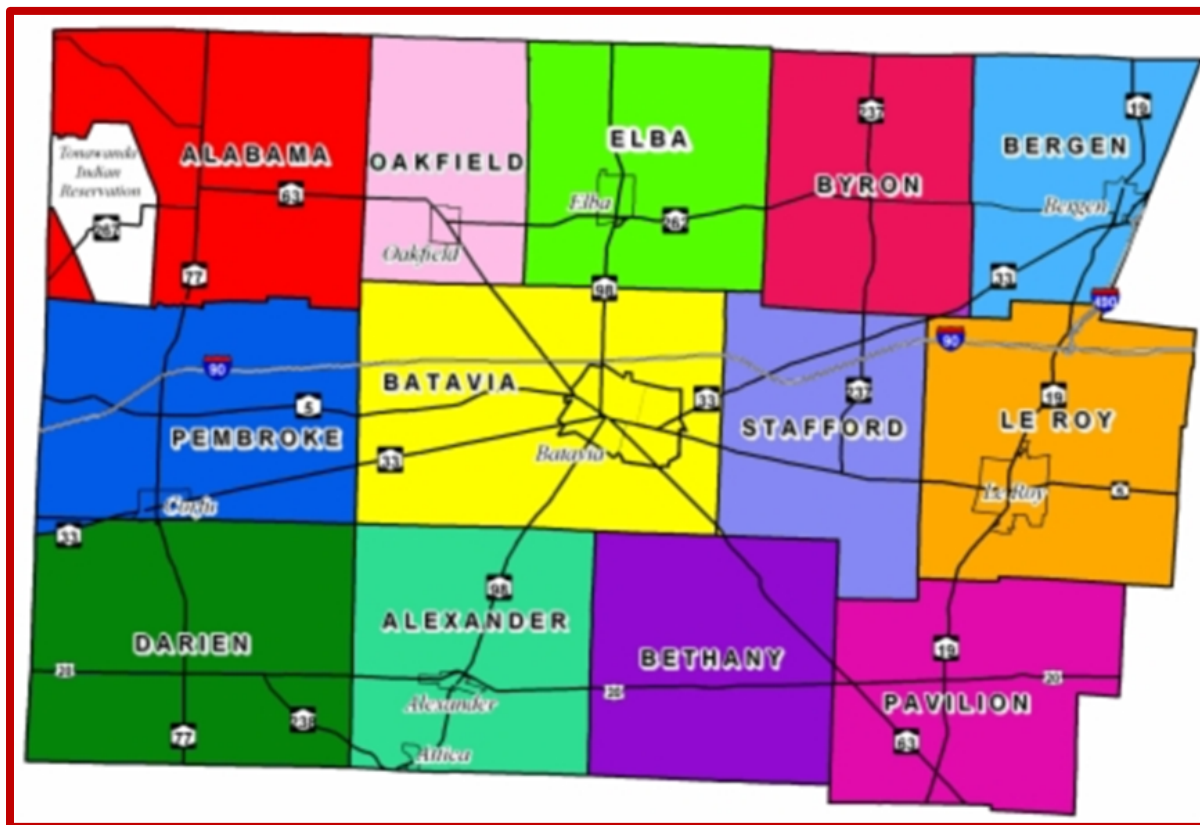


Figure II-8: Genesee County Municipalities

Genesee County’s municipalities present a variety of demographics and characteristics. These include a densely developed city, several villages with urban characteristics, suburban areas around the City of Batavia, and rural sparsely populated towns. The municipal populations range from The City of Batavia with 15,600 residents to Elba Village with just 560 (Attica Village has just 120 residents but is not fully located in Genesee County). Population densities range from 2,943.4 people per square mile in the City of Batavia to the Town of Alabama with just 35.3 residents per square mile. Figure II-9 provides the population, area in square miles, population density, and community characteristics based upon population density according to census bureau designations. For community characteristics these include:

- Urban = Population density great than 1,000 people per square mile.
- Suburban = Population density between 500 and 1,000 people per square mile.
- Rural = Population Density less than 500 people per square mile.

MUNICIPALITY AND TYPE	POPULATION *	AREA (SQUARE MILES) *	POPULATION DENSITY/ SQUARE MILE *	CHARACTERISTIC
Alabama (Town)	1,840	52.1	35.3	Rural
Alexander (Town)	2,490	35.6	69.9	Rural
Alexander (Village)	520	0.44	1,181	Urban
Attica (Village)	120	0.22	545.5	Suburban
Batavia (City)	15,600	5.3	2,943	Urban
Batavia (Town)	6,290	48.5	129.7	Rural
Bergen (Town)	3,120	27.6	113.0	Rural
Bergen (Village)	1,200	0.74	1,621.6	Urban
Bethany (Town)	1,780	36.1	49.3	Rural
Byron (Town)	2,300	32.3	71.2	Rural
Corfu (Village)	690	1.0	690.0	Suburban
Darien (Town)	3,010	47.6	63.2	Rural
Elba (Town)	2,160	35.7	60.5	Rural
Elba (Village)	560	1.02	549.0	Suburban
LeRoy (Town)	7,660	42.2	181.5	Rural
LeRoy (Village)	4,310	2.69	1,602	Urban
Oakfield (Town)	3,150	24.0	131.25	Rural
Oakfield (Village)	1,810	0.66	2,742	Urban
Pavilion (Town)	2,290	35.7	64.1	Rural
Pembroke (Town)	4,260	41.8	101.9	Rural
Stafford (Town)	2,240	31.3	71.6	Rural

Figure II-9: Genesee County Municipal Populations and Characteristics

NOTE: The community characteristics identified above will be pertinent when the concepts of Standards of Cover and staffing related to the development of an effective response force (ERF) are introduced and discussed in later chapters of this report.

Figure II-10 illustrates the population density of each fire service area in the county along with future development areas according to the County master plan. Figure II-11 illustrates Genesee County fire service area population densities.

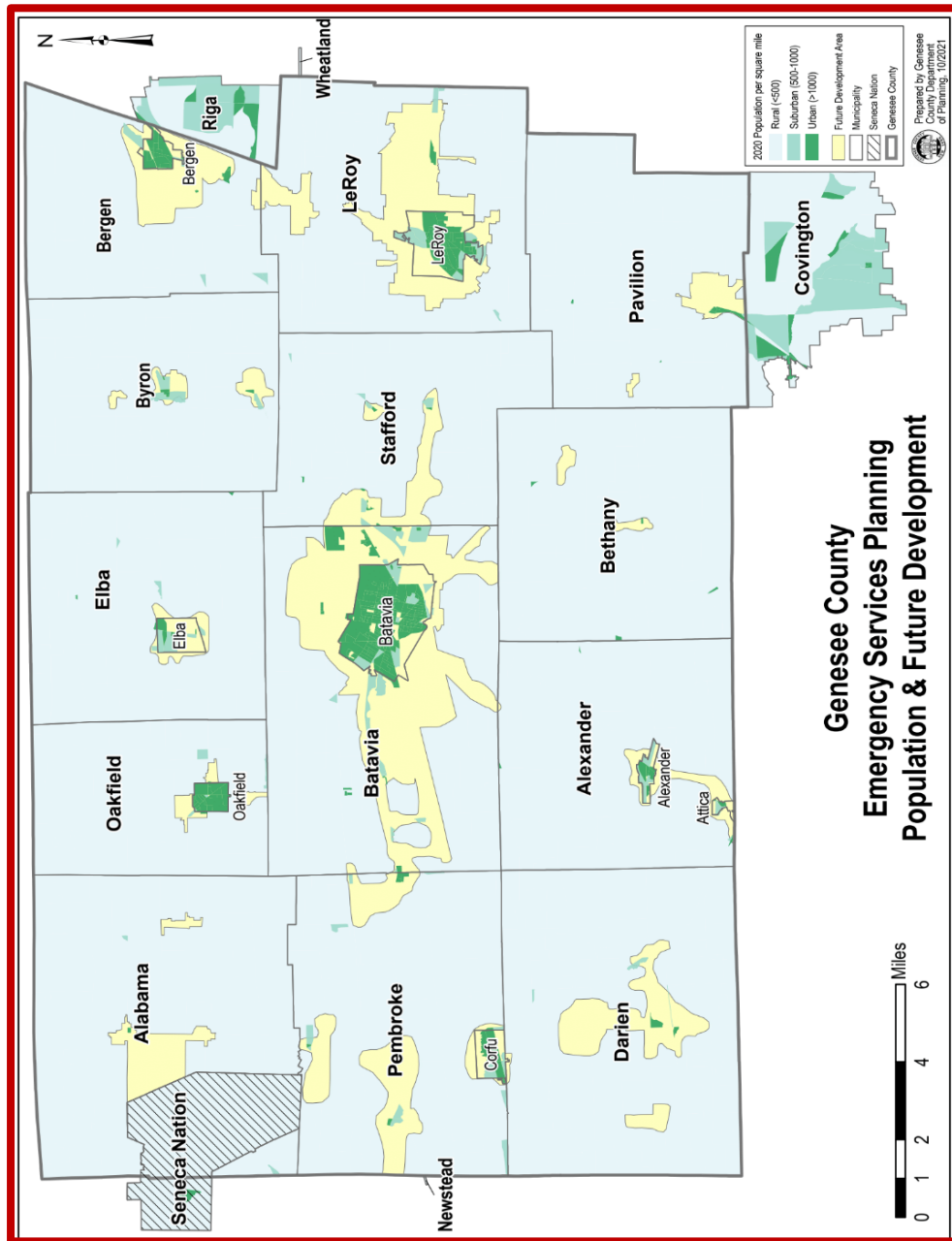


Figure II-10: Genesee County Population Characteristics and Future Development

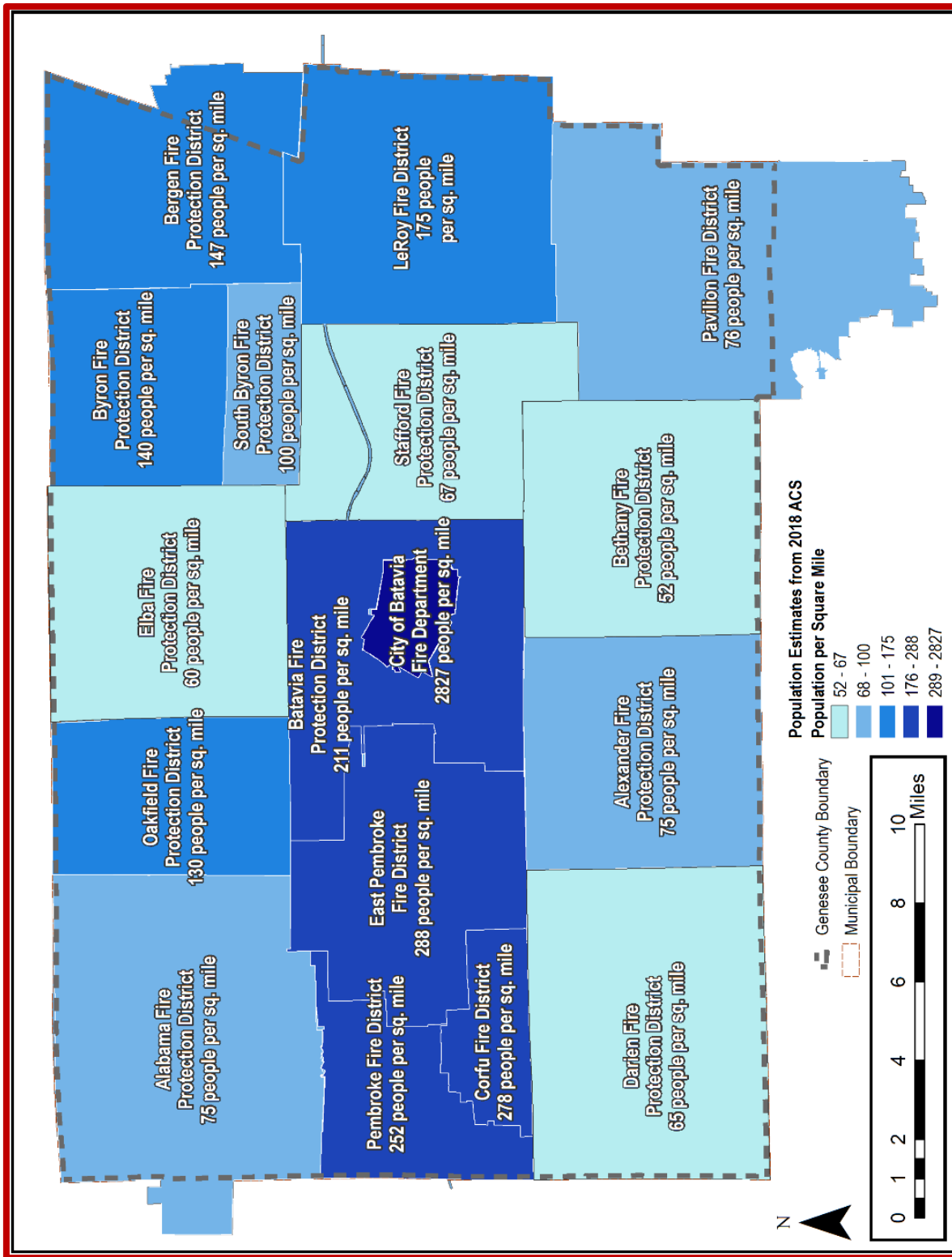


Figure II-11: Genesee County Fire Service Area Population Density

There are several other unincorporated communities that may provide reference to residents or businesses, referred to as a hamlet located in Genesee County. These locations have no legal jurisdiction, and although they may have a post office and a zip code, they are all part of one of the county's municipalities.

The Tonawanda Seneca Indian Reservation is also primarily located in the Town of Alabama in northwestern Genesee County.

Genesee County is served by 8 public school districts that are all regional in nature. Cumulatively, these school districts operate 20 schools

- Alexander Central School District
- Batavia City School District
- Byron-Bergen Central School District
- Elba Central School District
- LeRoy Central School District
- Oakfield-Alabama Central School District
- Pavilion Central School District
- Pembroke Central School District

There are also several private schools at the primary and secondary levels, all located in the City of Batavia.

- St. Joseph Elementary School
- Notre Dame High School
- St. Paul Lutheran School

Genesee Community College has its main campus in the Town of Batavia. The Western New York Tech Academy is located on the Byron-Bergen Central School District campus in Bergen.

Fire and Emergency Medical Services

Genesee County is protected by twenty-one (21) separate and primarily autonomous fire companies/departments and EMS agencies, all of whom have a long and proud heritage and history of service to the community. Many of these organizations are totally independent, however, some are municipally controlled, although often to a limited extent. Several are Fire Protection Districts. The fire departments/companies, including five that still operate ambulances, are still almost exclusively utilizing volunteer personnel to provide fire protection and EMS response (the exception is the City of Batavia which has a full career fire department). As volunteer organizations, most fire company personnel do not normally staff their stations on regular shifts or on a consistent basis. In many cases, fire personnel respond to emergency calls from wherever they may be when an incident is dispatched or "toned out".

As noted above, all of Genesee County's fire companies provide at least some level of response to 9-1-1 medical emergencies. Genesee County utilizes a tiered EMS system, consisting of Basic Life Support First Responder (BLSFR), and both transport and non-transport Advanced Life Support (ALS) levels. There are a total of seven organizations within the county that have EMS transport capabilities. However, over time, as calls for service have increased, and the number

of volunteer personnel has decreased, the primary delivery of BLS and ALS EMS transport services are now provided by two organizations, both of which utilize career staff to cover their responses. Both are independent, EMS-only organizations. Basic Life Support First Responder (BLSFR) providers remain largely volunteer and fire service based.

The management, organization and sophistication of the emergency services providers vary widely. However, due to state regulations and oversight, the organizations that provide EMS services tend to be at the higher end regarding management and operations. Except in a few cases, the municipal governing bodies have little direct oversight, administrative, or command authority over the individual fire and EMS organizations and/or their operations. Funding for the fire and EMS organizations are as varied as the organizations and municipalities themselves. In some cases, there is an annual allocation of funds from the municipality, but even when that occurs, a significant portion of the budget often consists of individual fundraising activities undertaken by the fire companies and EMS organizations. In a few cases, the emergency services leadership and municipal governing bodies must deal with more than one entity within their respective geographic areas of responsibility.

The individual organizations that comprise the fire and EMS services have been recognized for their accomplishments by various training, certification, and oversight agencies including the New York Office of Fire Prevention and Control, New York Department of Health, and Genesee County Emergency Services. The following are the organizations that provide fire and EMS services to Genesee County:

- Alabama Volunteer Fire Department
- Alexander Volunteer Fire Department
- Bergen Fire Department
- Bethany Volunteer Fire Department
- Byron Fire Department
- City of Batavia Fire Department
- Corfu Volunteer Fire Department
- Darien Emergency Medical Services
- Darien Center Chemical Fire Company
- East Pembroke Volunteer Fire Department
- Elba Volunteer Fire Department
- Indian Falls Fire Department
- Leroy Fire Department
- Leroy Ambulance service
- Mercy Flight EMS
- Oakfield Fire Department
- Pavilion Fire Department
- Pembroke Fire Department
- South Byron Volunteer Fire Company
- Stafford Volunteer Fire Department
- Town of Batavia Fire Department

In addition to the fire departments and EMS providers listed above, there is also one facility-based emergency medical services provider located in the county that can provide mutual aid when requested and available.

- Six Flags Darien Lake Amusement Park (Darien) Emergency Services. (Limited/seasonal availability).

Figure II-12 illustrates the location of all Genesee County fire stations. Figure II-13 shows the location of all EMS stations. The pink, blue, and green colors on each map designate the geographic battalions that the county utilizes for operations and radio communications channels for fire and EMS incidents. These include West (pink), Central (blue), and East (green).

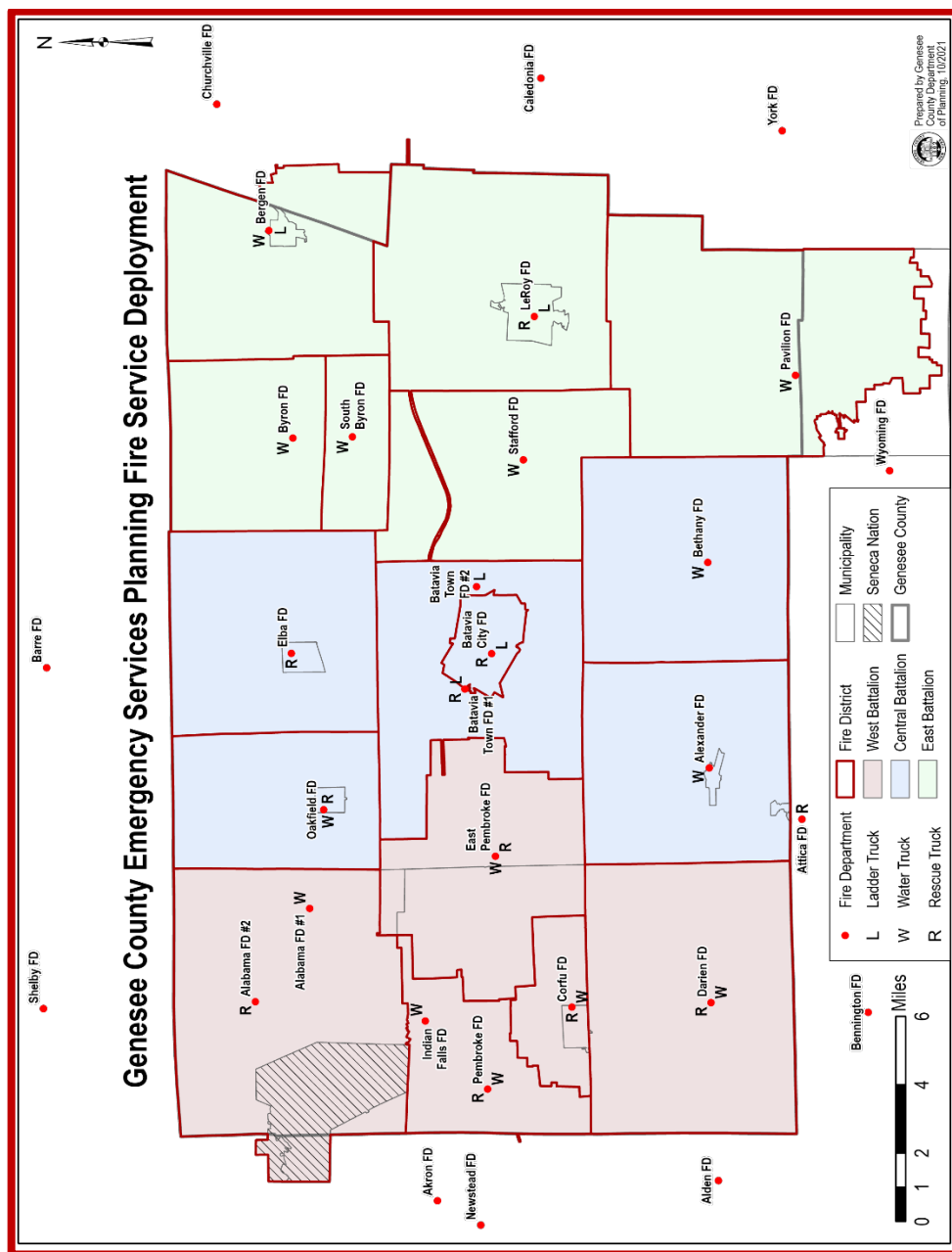


Figure II-12: Genesee County Fire Service Deployment Map

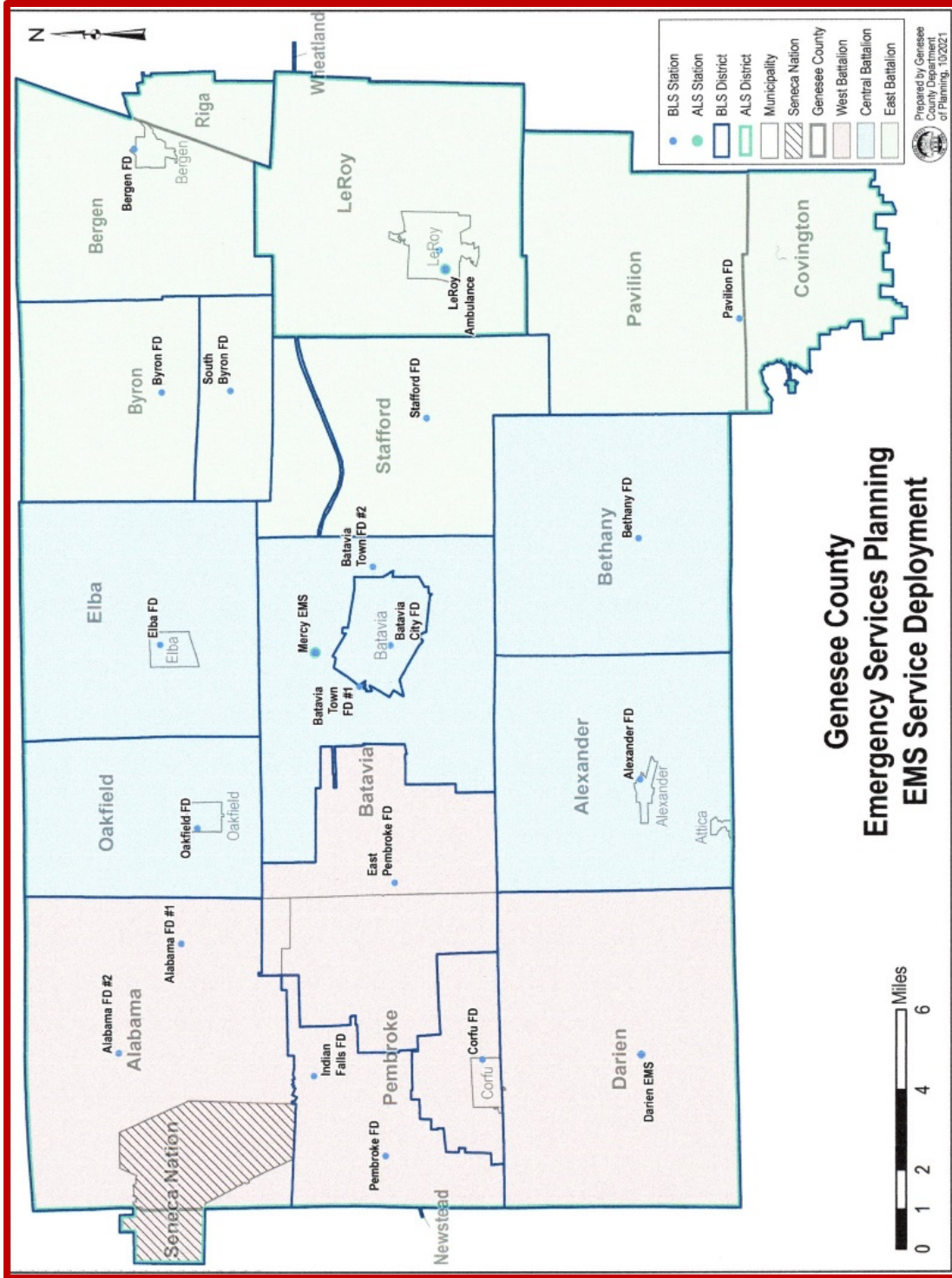


Figure II-13: Genesee County EMS Deployment Map

Department of Emergency Services



The Genesee County Emergency Services (GCEMS) provides support and coordination of the fire and EMS delivery system throughout the county. The office also serves as the liaison between local governments and state and federal agencies during natural disasters and/or manmade emergencies. Additionally, the office provides numerous Fire/EMS training programs required by the New York State Office of Fire Prevention and Control and the New York State Department of Health to both county and regional emergency responders. Genesee

County provides radio communication equipment and dispatch services to all the county's fire and EMS agencies at no cost.

DEMS also assists the county's municipalities to update and revise various emergency response plans that may be activated during times of emergency. In addition, the county provides an Emergency Support Unit (ESU) which includes specialized response teams to jurisdictions during times when local resources have been exhausted or specialized equipment may be required. This includes hazardous materials personnel, as well as, high angle and confined space technical rescue personnel.

CHAPTER III - EMERGING RISK PROFILE OF GENESEE COUNTY FIRE AND EMS SERVICES

Genesee County Risk Profile

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, 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 the timing, magnitude, and location of the hazard or incident. A thorough risk analysis provides insight into the worst fire and life safety problems and the people who are affected. The analysis results create the foundation for developing risk-reduction and community education programs. Conducting a community risk analysis is the first step toward deciding which fire or injury problem needs to be addressed. Risk analysis is a planned process that must be ongoing, as communities and people are constantly changing. Too often, an objective and systematic community risk analysis is a step that is overlooked in the community education process. Many emergency service organizations address risks based on a perceived need for service that isn't there. This approach can be costly (i.e., misdirected resources, continued property loss, injuries, or deaths). In short, a good community risk assessment will produce a picture of what the hazards and potentials for incidents are, identify who is at risk, and attempt to quantify the expected impacts (Figure III-1).

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 III-2).

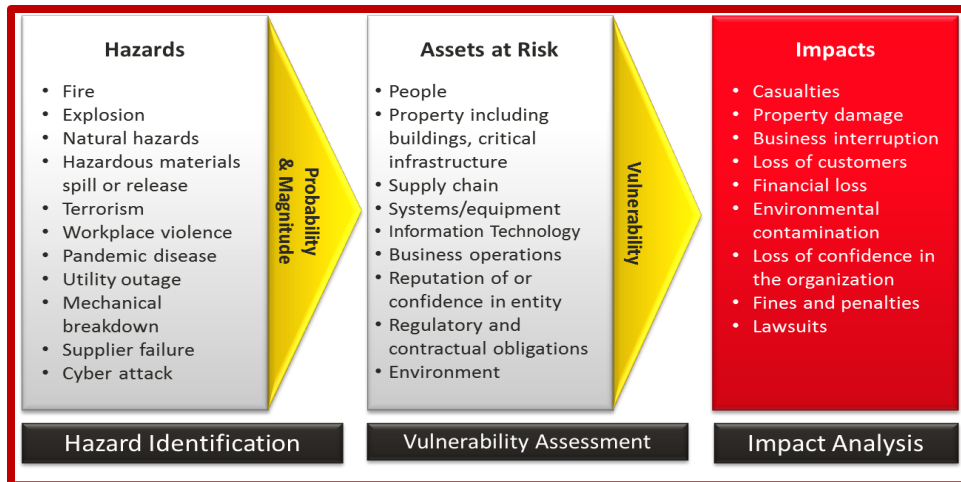


Figure III-1: Risk Assessment Process

Image credit: www.ready.gov/risk-assessment

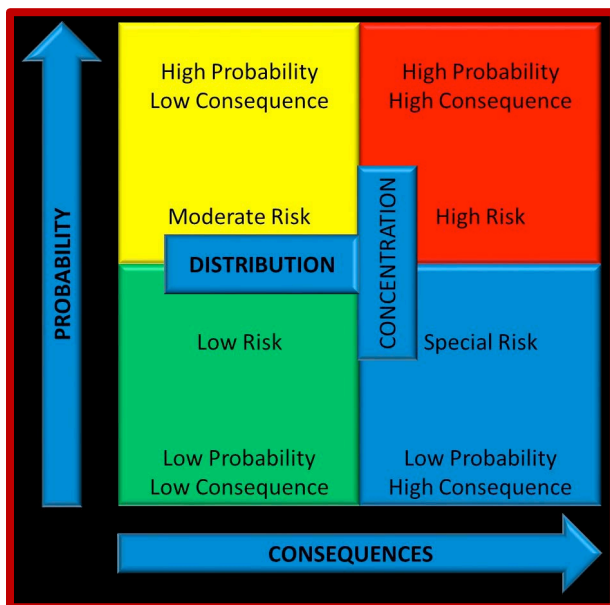


Figure III-2: Fire Probability and Consequences Matrix

Image credit: Commission on Fire Accreditation International

In performing a risk assessment, a community determines which hazard may occur, how often it is likely to occur, and the potential impact from that hazard. According to the Genesee County Hazard Mitigation Plan, the risk assessment for Genesee County and the municipalities within was performed using a countywide, multi-jurisdictional perspective. An integrated approach was employed because many of the same hazards are likely to affect numerous jurisdictions, and, are rarely contained to a single jurisdiction. The vulnerability analysis was performed in a way such that the results reflect vulnerability at both an individual jurisdictional and countywide level.

Genesee County’s Hazard Mitigation Plan addresses numerous natural hazards, including but not limited to, floods, hurricanes, tornadoes, and winter storms. It also covers a

wide variety of human-caused hazards such fire, hazardous materials releases, and transportation incidents. Almost any of the comprehensive list of potential hazards identified in the plan will involve the county’s fire and EMS responders, at least during the initial stages.

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.²³ 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 occupancies²⁴.

The NFPA also identifies a key element of assessing community vulnerability as fire department operational performance which is comprised of three elements: resource availability/ reliability, department capability, and operational effectiveness²⁵.

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.²⁶

The greatest fire safety concern throughout Genesee County 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

²³ *Fire and Emergency Service Self-Assessment Manual*, Eighth Edition, (Commission on Fire Accreditation International, 2009), p. 49.

²⁴ Cote, Grant, Hall & Solomon, eds., *Fire Protection Handbook* (Quincy, MA: National Fire Protection Association, 2008), p. 12.

²⁵ <http://www.nfpa.org/assets/files/pdf/urbanfirevulnerability.pdf>.

²⁶ National Fire Service Data Summit Proceedings, U.S. Department of Commerce, NIST Tech Note 1698, May 2011.

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.

Genesee County provides a mix of challenges and hazards that must be protected by its emergency services. Although the county is overall rural in nature, it does have urban pockets, particularly in the City of Batavia and several of the villages.

Target hazards are defined as significant hazards; those that can strain the fire department response capability. Target hazards could include hospitals, schools, churches, storage facilities, or manufacturing plants. In Genesee County, these could include large dairy operations not only due to their size but because of the financial implications their loss could have to the community.

Fortunately, many of these commercial and industrial structures (not dairy farm barns) are equipped throughout with complete automatic fire suppression (sprinkler) systems, which considerably reduce the overall risk of these structures. 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, in average direct property damage per fire, and especially in the likelihood of a fire with a large loss of life or large property loss. They do so, much quicker, often more effectively, and with less damage than firefighters do. No fire safety improvement strategy has as much documented life safety effectiveness as fire sprinklers because they extinguish the fire, or, at a minimum hold it in check and prevent flashover, until the arrival of the fire department.

In 2007-2011 fires in all types of structures, when sprinklers were present in the fire area of a fire large enough to activate sprinklers in a building not under construction, sprinklers operated 91% of the time²⁷. When they operated, they were effective 96% of the time, resulting in a combined performance of operating effectively in 87% of reported fires where sprinklers were present in the fire area and fire was large enough to activate sprinklers²⁸. **In homes (including apartments), wet-pipe sprinklers operated effectively 92% of the time. When wet-pipe sprinklers were present in the fire area in homes that were not under construction, the fire death rate per 1,000 reported structure fires was lower by 82%, and the rate of property damage per reported home structure fire was lower by 68%²⁹.**

Although the current New York codes prohibit municipalities from requiring residential sprinkler systems in all new occupancies, including single-family dwellings, the fire department can approach the developer/builder/owner to discuss the pros and cons of residential sprinkler systems during the approval process for subdivisions and large single-family residences and

²⁷ U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.

²⁸ U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.

²⁹ U. S. Experience with Sprinklers. John R. Hall, Jr. National Fire Protection Association, June 2013.

encourage them to consider the installation of these life safety systems regardless of where they are located. There are several publications that the fire department can use as resources to market the benefits of residential fire suppression systems including NFPA, which has developed the standards for their design and installation.

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. Large area buildings sometimes referred to as horizontal high rises, such as warehouses, industrial facilities, 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.

Being able to develop an adequate water supply for firefighting purposes is perhaps the most critical, non-safety, aspect of firefighting operations. If an adequate water supply cannot be established quickly and maintained, effective firefighting operations will simply not be possible.

The Insurance Services Office (ISO) also places a high priority on a municipality’s water supply needs and capabilities as part of its periodic evaluations. Unlike many rural counties, Genesee County does have a wide network of positive water supply systems. Figure III-3 illustrates the areas where municipal water systems are available and those where expansion of the water system is proposed. Rural areas that do not have a municipal, pressurized water supply must supply their needs from other sources.

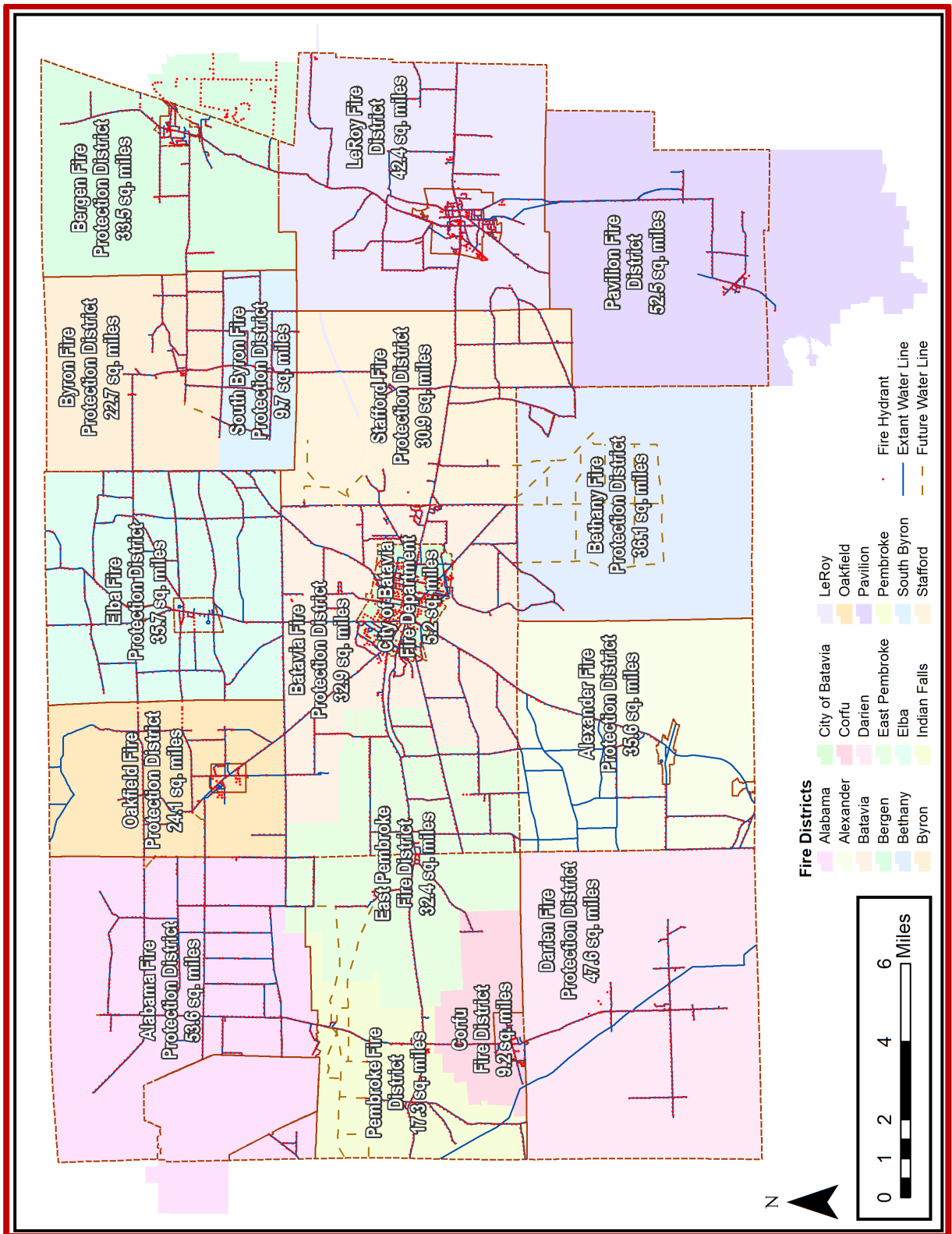


Figure III-3: Genesee County Water Supply System

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 county itself, and the impact on the county's fire and EMS providers' ability to deliver emergency services, which includes automatic aid capabilities as well. The list is not all-inclusive but includes categories most common or that may present to the county as a whole.

Low Risk:

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

Moderate Risk:

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

High Risk:

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

Special Risk:

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

Figure III-4 illustrates the location of industrial and chemical storage sites throughout Genesee County. Figure III-5 shows resource extrication sites including mines/quarries, gas wells, and gas and brine pipelines.

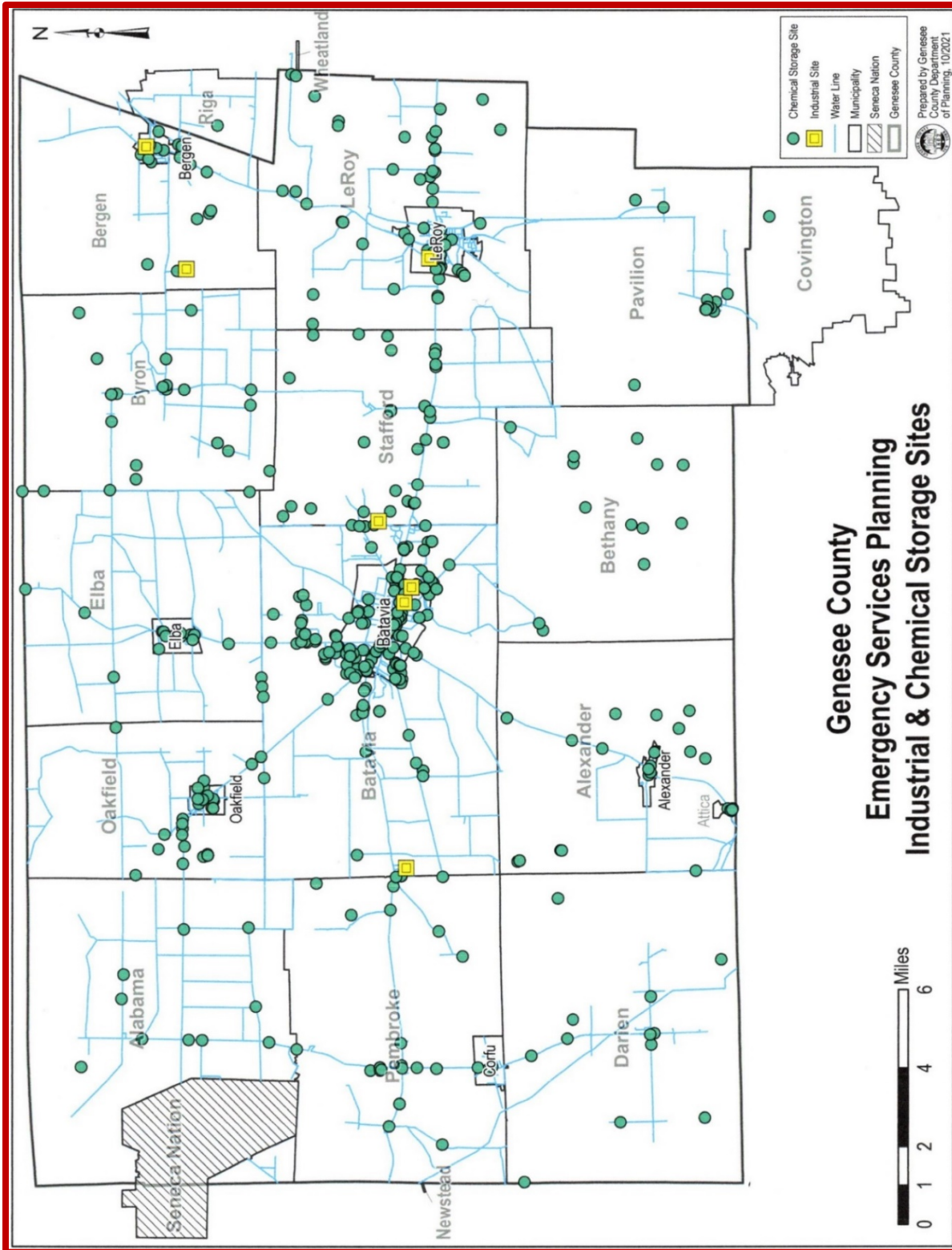
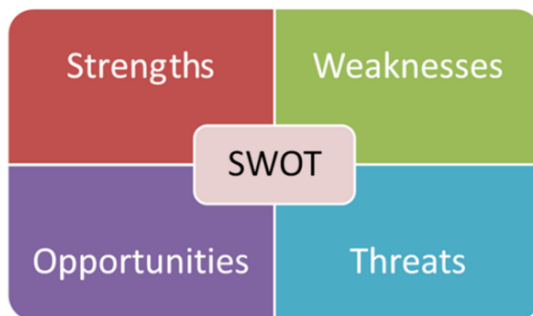


Figure III-4: Genesee County Industrial and Chemical Storage Sites

Aggressive enforcement of fire and building codes in both new and existing facilities will continue to be a critical factor in managing risk throughout Genesee County. This challenge will be significant with the county having 21 municipalities, each with its own boards, priorities, and ordinances involved. Communications regarding major projects need to be kept open and frequent. Any new development projects that are proposed should be sent to the fire company 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.

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. Thunderstorms, strong windstorms, and significant rain events happen several times in an average year. Snowfall is experienced annually and occasionally in amounts that paralyze the region. Although rare, tornadoes have occasionally touched down in western New York.

Fire and EMS 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 achieving that objective.

Figure III-6: SWOT Analysis

- **Strengths:** Characteristics of the agency that allow it to meet its mission, work toward achieving its vision, or provide exceptional service to a community.
- **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.
- **Opportunities:** Elements that the organization could pursue or develop to its advantage.
- **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:

- Explore new solutions to problems.
- Identify barriers that will limit goals/objectives.
- Decide on direction that will be most effective.
- Reveal possibilities and limitations for change.
- To revise plans to refocus on an organization's mission statement.
- As a brainstorming and recording device as a means of communication.
- 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 or not an objective is obtainable, and 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 affect long-lasting change. It also helps organizations gather meaningful information to maximize their potential. Completing a SWOT analysis is a useful process regarding the consideration of key organizational priorities.

This process undertaken by the MRI study included an evaluation of both the external environment, as well as, the Genesee County fire and EMS services internal factors and the interrelationship between the two. This was accomplished through more than 60 in-person and virtual interviews, stakeholder input obtained from multiple group meetings, along with our analysis of data obtained from various sources including online surveys and questionnaires that were distributed to every municipality and fire and EMS agency in Genesee County. By approaching the SWOT analysis in this way, the process continues to reinforce a primarily – but not entirely - stakeholder-driven perspective.

Strengths:

- **Passion and dedication of Genesee County fire and EMS personnel – they care and strive to provide excellent service.**
- High regard for the customer.
- Openness/willingness to examine alternative service delivery methods.
- High level of engagement and support from county administration and legislators.
- A high level of support from the Genesee County Business community.
- An awareness of potential growth and the impact on current fire service models to handle the changing profile of the County.
- Interagency coordination through County dispatch which can handle the coordination of resources from multiple departments.
- A keen awareness and understanding of the challenges that departments are having attracting volunteers.
- A central point of fire service coordination and communication exists through Genesee County Emergency Management.
- Recognition of current and potential challenges.
- Recognition that there is no one solution.
- High level of engagement in this study.
- Development of interagency coalition to address challenges.
- A curiosity to explore regionalization (not necessarily a direct interest yet).

Weaknesses:

- **The fact that EMS is not considered to be an essential service.**
- Societal change and generational differences have changed the value of volunteer participation.
- Many active members are aging out.
- A lack of engagement by some departments.
- A defensive posture by some emergency personnel based on fear of change and loss of personal or organizational power.
- Reduced participation levels by volunteer members.
- Limited/reduced staffing of apparatus especially during daytime weekday hours.
- Response delays necessitate multiple tone outs.
- Inconsistent/varying resource and coverage levels depending on location within the county.
- No standardized run cards or response assignments.
- Poor data tracking and performance metrics for fire service and EMS operations through the Genesee County Dispatch Center - not fire/EMS focused.
- Training is often conducted by individual departments – within their silo - without involving adjacent organizations.
- A lack of consistent organizational policy and training standards.
- A lack of county-wide SOPs/SOGs for standardization of operations.

- Differing standards for training, attendance, participation, and even when personnel are/are not allowed to be in the station.
- A large response area with a rural population often results in elongated response times which can equal increased fire growth and poor medical outcomes.
- Some personnel downplay the need for training and certifications.
- Lack of a formal contract for the delivery of EMS services.
- Too much apparatus for call demand and hazards.
- Limited collaboration on purchasing of vehicles and equipment.
- Lack of education of the public and local officials regarding all facets – including financial – of the fire and EMS delivery systems.

Opportunities:

- Clearly indicate that individual departments will continue to exist and provide fire protection.
- Development of resource and staffing augmentation strategies.
- Development of strategically deployed rapid response forces to supplement response and staffing.
- Development of a more resource intensive and strategically deployed EMS system.
- Development of a stronger regional training presence.
- Development of performance metrics to provide departments with feedback on response.
- Enhance the quality of data tracked through the Genesee County Dispatch Center.
- Potential for regional or county-based collaboration for enhanced response.
- Use of public education for outreach and crowdsourcing for response.
- Potential ability to deliver fire-based EMS and receive reimbursement with new state law in effect.
- 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.
- Create a QRF (quick reaction force) model with regional deployment staffed by volunteers paid as per diems as an interim staffing measure.
- Explore new forms of outreach and marketing to inform the community of the challenges ahead.
- Marketing and communicating the social identity and benefits of volunteering in Genesee County.
- Development of a more county-wide focused fire and EMS delivery system that would bring additional standardization and continuity to emergency operations throughout the County.

Threats:

- **The fact that EMS is not considered to be an essential service.**
- A fear that volunteer forces will be reduced or eliminated.
- A fear that the volunteer's traditional first responder role will be reduced or eliminated.
- A lack of customer service for the fire and EMS providers and at times active resistance to any suggestions for operational change or improvement by the dispatch center senior leadership.
- Ignoring what is an emerging operational crisis.
- Overextending resources to cover operational deficits thus reducing the overall safety of personnel.
- Increased training demands on volunteers.
- Fiscal constraints of local communities.
- Time constraints of all personnel.
- Increasing demand from the public for emergency services.
- Increasing EMS call volume.
- The fire and EMS services' ability to improvise and get a mission accomplished despite the absence of appropriate financial resources.
- The fire and EMS providers see 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 volunteers across the County, part of an overall nationwide reduction in volunteerism.
- Fire and EMS agencies that resist being transparent about their finances even as they request additional public funding.
- Reduction in operational safety based on staffing trends.
- Aging volunteers who in many cases, keep the lights on and the apparatus responding.
- Generational and cultural differences in emergency services that are not always as inclusive as they should be.
- Continued viability of a subset of the county's fire and EMS organizations.
- Declining reimbursement for EMS services placing organizations in financial difficulty.
- The American fire and EMS services have an increased risk profile such as cancer, active shooter incidents, and more recently, COVID-19, which may change the level of interest of traditional candidates.

Looking ahead, the Genesee County stakeholders should use the SWOT analysis to further define the most critical issues and service gaps facing the Genesee County 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.

The Vanishing Volunteer

According to the Pennsylvania Fire and Emergency Services Institute, the number of volunteer firefighters in Pennsylvania have declined from around 300,000 in the 1970s to about 60,000 in the early 2000s and 38,000 in 2018. This is a trend that is being experienced in every state. Yet, New York and its communities (including Genesee County) continue to rely in large measure on volunteers to perform this critical emergency response and public safety service.

Genesee County stakeholders have expressed a desire to retain a strong volunteer firefighting force. MRI concurs and believes that goal is realistic and achievable for the near future, albeit with changes in traditional operational procedures, and the introduction of some new response strategies to supplement the volunteers. However, achieving this goal will require the implementation of program(s) to recruit and then, perhaps more importantly, retain personnel; strong commitments from the County, municipalities, and fire companies; and strong leadership in the fire companies.

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*” (contained within the toolbox assembled for this report). Among other things, the report highlighted the fact that the ranks of volunteer/call firefighters nationwide are declining due, at least in part, to increasing demand for services. There are also various other factors that are prevalent to the reduction in the number of volunteer firefighters in communities such as Genesee County. 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.

MRI has found that on average, for every five volunteer 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 lack a true commitment (whether real or perceived) to the volunteer firefighters.

Making the challenge even greater, in 2022, 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:

1. An overall reduction in leisure time.
2. Employment obligations and the common need to maintain more than one job.
3. The virtual elimination of employers understanding and flexibility relating to this form of community service.
4. Increased family demands.

5. Generational differences.
6. Increasing training requirements.
7. The cost of housing in many affluent communities.
8. Organizational culture.
9. Internal respect.
10. Recognition of personnel.
11. Internal communication.
12. Department leadership styles and commitments.
13. Severe lack of funding.
14. Outdated service delivery models.
15. Internal agency politics.
16. Lack of diversity.

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*" (contained within the toolbox assembled for this report). 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 is reliable?*" The answer was the development of a list of "indicators for change", where fire department managers and local government leaders need to be cognizant of warning signs pointing to potential problems and "prepare for change before it is forced on them by external circumstances". These "indicators" of change include:

- **Community Growth:** Generally speaking, the larger the community, the greater the call volume and the higher the level of service people expect.
- **Community Aging:** Maintaining an appropriate level of service depends on the fire department's ability to recruit new and younger members. This appears to be a major issue in Genesee County 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 citizen and first responder safety at a greater risk.

Most of these issues appear to have growing applicability to Genesee County and its fire service delivery system. These warning indicators are not necessarily an indictment of anything wrong in Genesee County; the same problems are facing volunteer fire companies and departments across the state and the entire country. The challenge is, to find ways to preserve and improve the volunteer fire service in Genesee County for the near future. This would include a combination of identifying and implementing efficient systems, legislative initiatives, and financial incentives with the overarching goals to:

- Sustain a volunteer system where pride and community service build community value and pride.
- Provide necessary services for the protection and well-being of the community.
- Reserve financial assets for other critical services that cannot be provided by volunteers.

Ultimately, under the long time, traditional (and current) emergency services delivery model the reality is that each community is currently left to determine:

- "What is needed to protect the community?"
- "How much will it cost?"
- "What are the funding sources?"
- "How do the services get delivered?"

Based upon the responses from the questionnaires for fire and EMS organizations and municipal governments, in Genesee County it would appear that these questions are being discussed on a limited basis but certainly not to the level which they should, or which will provide realistic answers. Every emergency incident begins locally, and every local fire and EMS agency must be prepared to know what they are dealing with and when to call for assistance. Without approval and implementation of much of the recommended action, the bigger; and more pertinent question will be; "How long will the current service providers be able to hang on?"

The Seven Most Significant Challenges Facing Genesee County Fire and EMS Services

Based upon the findings and analysis of the collective MRI study team, the most significant challenges facing the fire and EMS services in Genesee County are:

1. Diminishing volunteer pool for fire and EMS 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. It will also challenge the continued viability of some of the current fire and EMS organizations.

2. Several municipal agreements are in place for the provision of EMS services throughout the county. Also, the fact that EMS is not considered to be an essential service like fire and law enforcement. As such, there are no requirements that stipulate it must be provided or who is responsible to make sure it is. The shortage of EMS practitioners, both basic and advanced, has impacted service delivery in Genesee County.
3. Critical need to develop new ways to augment and fund fire and EMS operations in a rural county moving forward. Revenue shortfalls from EMS reimbursements will challenge the EMS delivery system and require supplemental governmental funding to achieve adequate coverages and meet response benchmarks. On the fire side, traditional fundraising efforts by volunteer organizations, and the whole concept that they often self-fund most of their own operations, are no longer economically feasible and viable.
4. Lack of standardized operational and response procedures.
5. Concern over the training and qualifications of some fire department personnel and organizations and the fact that overall, there is very limited collaborative training among organizations.
6. Poor data tracking and performance metrics for fire service and EMS operations through the Genesee County Dispatch Center make it very difficult to evaluate operational performance of emergency service providers and identify gaps in service. This situation is aggravated by the lack of customer service for the fire and EMS providers and at times active resistance to any suggestions for operational change or improvement by the dispatch center senior leadership. This makes improving operations, even related to safety, extremely difficult to achieve.
7. Potential resistance to the necessary exploration of more regional or even County-wide provision of fire and EMS services. Operating within individual “silos” is no longer an acceptable way of doing business.

[The Eight Most Important Recommendations for Genesee County Fire and EMS Services](#)

Based upon the findings and analysis of the collective MRI study team, and consistent with the most significant challenges identified, this section includes what is believed to be the most important recommendations regarding the fire and EMS delivery system in Genesee County. The recommendations below are broad-based and will be developed further, with specific suggestions for how to implement or accomplish them, in subsequent chapters of this report.

There is also one caveat, however; MRI did not include any recommendations in this section that require legislative approval due to the uncertainty over getting them approved and implemented.

1. New sources of funding for both fire and EMS operations **MUST** be determined and implemented. To bring consistency to the funding levels for stakeholders throughout the County, consideration should be given to the implementation of taxes at the county level that is dedicated to the fire and EMS service delivery system. Options could include an emergency services tax, creation of a county-wide fire protection district, or the creation of a regional fire authority (if permitted).
2. The EMS delivery system must be improved with multiple EMS units dedicated to Genesee County for EMS service strategically deployed around the county 24/7. This process should include formal contracts with the providers that specify performance benchmarks that must be met. However, these system improvements will almost certainly require governmental subsidy to achieve.
3. Innovative ideas to augment existing systems– many of which have a cost associated with them – must be implemented to attempt to increase recruitment, and perhaps more importantly retention, of members of the volunteer fire service.
4. Working collaboratively, the Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, the Genesee County EMS Council, and the Genesee County Emergency Services should develop and adopt standardized emergency response assignments for various types of emergencies utilizing the closest available qualified resources based upon GIS technology.
5. Working collaboratively, the Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, the Genesee County EMS Council, and the Genesee County Emergency Services should develop and adopt a manual of standard operational procedures or guidelines (SOPs/SOGs) to guide fire and EMS operations throughout the County.
6. Working collaboratively, the Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, the Genesee County EMS Council, and the Genesee County Emergency Services should develop minimum training requirements for fire service personnel to be considered “qualified” for inclusion in the overall County response system.
7. The Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, the Genesee County EMS Council, and the Genesee County Emergency Services should work with their respective stakeholders to explore new regional opportunities for collaboration for the delivery of fire and EMS services in various areas of Genesee County. One regional fire department that MRI completed a study

on several years ago which was formed by the consolidation of three fire companies adopted the slogan or motto, ***“Working Regionally to Survive Locally”***.

8. The Genesee County Emergency Services Task Force, the Genesee County Fire Advisory Board, the Genesee County EMS Council, and Genesee County Emergency Management Services should work with their respective stakeholders to implement human resources support for the County’s volunteer emergency services providers.
 - Assist with streamlining application process.
 - Assist with background and screening process.
 - Assist with development and implementation of policies.
 - Assist with other HR related needs.

Implications of Not Taking Action

The challenges that are facing the fire and EMS services in Genesee County are very real, 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”.

Looking ahead, the implications of not taking action will be quite simple: service levels will continue to diminish, some companies and EMS agencies may fold under financial pressures or because they are just not viable responders any longer, and fewer and fewer most likely aging volunteer members will be trying to respond to an increasing number of requests for service.

The MRI study team wants to thank the municipal officials who were extremely interested and engaged in this study from the beginning. Their input and perspective were both valuable and appreciated. The engagement and support that was received at the County level was also commendable. Although it should be a collaborative effort with the fire and EMS providers that protect them, it is ultimately the responsibility of these municipal officials to determine the acceptable level of risk for their communities and the level of protection they want and can afford. It is also, ultimately, their responsibility to provide adequate funding. Any failure to engage could exacerbate the growing crises.

In the end, **ALL** the various stakeholders need to engage in open, frank, and honest dialogues regarding the fire and EMS delivery systems. There will need to be increased funding allocated, or funding can be re-appropriated. Priority should be given to innovative solutions to the recruitment and retention of volunteer 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 EMS services in the County are going to evolve into more of a combination system with the need for a small contingent of career personnel to supplement the volunteers. This, too, will come with an increased cost. However, this cost will be reasonable and be money well invested, to help support what remains a quality fire and EMS delivery system. The Pennsylvania legislative

report notes, ***“If we lose our volunteer fire and EMS companies and volunteers, the taxpayers will face a very steep price tag.”*** That could eventually be the ultimate implication of not taking action. The choice is up to the stakeholders of Genesee County.

CHAPTER IV - SERVICE DEMAND AND RESPONSE METRICS

Public safety is a critical infrastructure. It includes the EMS service, law enforcement, Emergency Management, and fire departments. Predictably, the fire department's mission is to protect the residents, businesses, and visitors from uncontrolled fires and other emergencies. The communities' expectations set the quality and level of protection. One challenge facing Genesee County and its municipalities is to determine what is the acceptable level of risk and an appropriate level of service.

Although there are industry standards for both fire and EMS, one could argue that there is no "right" amount. It is a constantly changing level based on 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. Elected officials translate community needs into reality through direction, oversight, and the budgetary process. It is their unenviable task to maximize fire, EMS, and other services within the reality of a community's ability and willingness to pay, particularly in today's economic environment.

Communities determine the composition of fire services by balancing the level of risk against the cost to provide these critical services. Based on a review of the Genesee County Fire and EMS delivery system, it is clear the community expects the emergency response organizations to be capable of providing a timely response to both fire and EMS emergencies on a 24/7 basis. Based on survey results, most respondents are satisfied with the overall level of service from their fire department, EMS service, and response times. In fact, of those who have received service, **82%** rated the experience "very good" or "excellent". The survey also clearly showed that it is important to meet national standards (**89%** rated very or extremely important).

The analysis also indicates that most of the departments are struggling to meet the increasing requests for service in a timely manner. This is particularly true regarding fire operations as the fire service remains primarily volunteer and is struggling with a declining base of active members. This chapter, as well as the next several chapters of this report, focus on assessing the fire and EMS delivery system based on the service expectation described above and making appropriate recommendations for improvement

Emergency response data is an effective way to measure a fire department's activity. It shows the current conditions and provides a comparison over time. Types of analysis include:

- Increasing/decreasing call volume
- Types of calls (structure fire, vehicle accidents, EMS, etc.)
- Increasing/decreasing response times
- Frequency of simultaneous incidents
- Frequency of missed calls

Trend analysis is helpful for communities and emergency response providers planning for future needs. However, the information is only as good and/or reliable as the data originally entered and provided for evaluation.

The Genesee County Sheriff’s Department provided most of the response data for analysis. The reports were compiled through the “report generation” features of the 9-1-1 center’s Computer Aided Dispatch (CAD) system. Every emergency incident that occurs, results in the generation of a dispatch report at the 9-1-1 communications center. The study team believes that the data analyzed is accurate as to the overall incident numbers, and general classification of incident types.

The MRI study team evaluated Genesee County fire and EMS incident response data for a four (4) year period covering January 1, 2017, through December 31, 2020. During the four (4) year period the fire organizations responded to a total of 25,852 emergency incidents, an average of 6,463 per year. The number of incidents increased each year from 6,571 in 2017 to 6,624 in 2018, 6,661 in 2019, before sharply declining in 2020 to 5,996. (Figure IV-1). The increase from 2017 to 2019 averages less than 1% before the 10% drop in 2020. The slow rise in call volume is consistent with the population stability of the county. Interestingly, the drop in call volume is consistent with national trends in response to the COVID-19 pandemic.

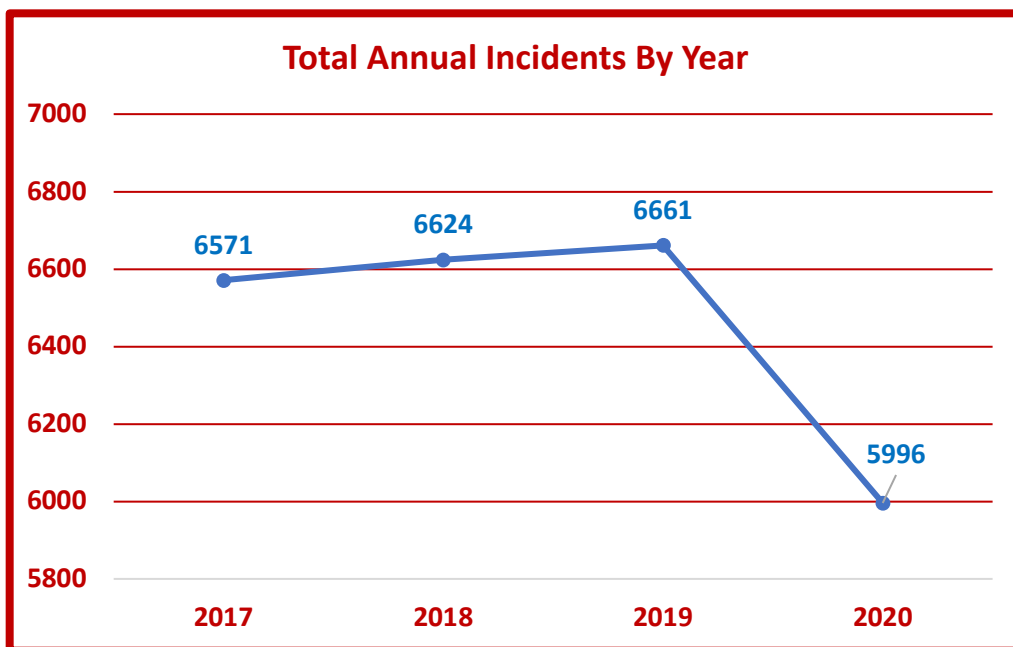


Figure IV-1: Total Annual Incidents by Year – 2017 - 2020

For analysis, the response data was then sorted into broad categories based on the type of emergency.

Emergency Medical Service (EMS) Incidents

Medical calls are broadly classified as either basic life support (BLS) in nature or Advanced Life Support (ALS). ALS-level care refers to prehospital interventions that can be brought into the field by paramedics. Typically, this service level includes the ability to bring much of the emergency room capability to the patient. Paramedics can administer intravenous fluids, manage a patient’s airway, provide drug therapy, utilize the full capabilities of a 12-lead cardiac monitor, and provide a vital communication link to the medical control physician who can provide specific medical direction based on the situation.

They are further classified at the time of dispatch from Alpha (minor/least severe) to Echo (life-threatening/most severe). This was the system that the Sheriff’s Department used in 2017. In 2018, the County implemented a new CAD and RMS system, so from that point forward the dispatch code of “ALS” (Advanced Life Support) has been used. For BLS incidents, the types of dispatch included Emergency Medical Dispatch Alpha, and Bravo, assaults, EMS Alarms, Mental, Medical, non-emergency, and more recently “BLS”.

Fire Incidents

Fire incidents include structure fires, vehicle fires, and outside fires such as trash and brush. It also includes incidents that could have led to fire such as an odor of smoke, wires, explosions, and appliances. Incidents not classified in other categories but included in fire incidents include assisting the citizens, drills, investigations, and other service calls. From 2017 through 2020, Genesee County fire departments responded to a total of 3,490 fire incidents. Figure IV-2 shows these breakdowns.

Structure Fire	Outside Fire	Other	
Structure Fire	Auto Fire	Aircraft	Investigation
	Grass Fire	Animal	Odor of Smoke
	Outside Fire	Appliance	Service
		Assist Citizen	Wires
		Drill	Other
		Explosion	

Figure IV-2: Fire Incident Categories

Other Incidents

The “Other Incidents” category includes Automatic Fire Alarms, Mutual Aid, Hazardous Materials Incidents, and Motor Vehicle Accidents (both rescue and non-rescue). From 2017 through 2020, Genesee County fire departments responded to a total of 7,647 other related incidents. Figure IV-3 shows these breakdowns.

Alarm	Haz Mat	Motor Vehicle Accident Rescue	Rescue Non-MVA
Fire Alarm	Carbon Monoxide (CO)	Accident other	Elevator Rescue
Other Alarm	CO w/ Illness	Property damage auto accident	Extrication-Non MVA
	Haz Mat	Personal injury auto accident	Search & Rescue
	Gas- Natural/propane		Water Rescue

Figure IV-3: “Other” Incident Categories

As with most emergency delivery systems in the United States, Genesee County experiences many more emergency medical Incidents than fire and other incidents. From 2017 to 2020, the data shows that 57% of the emergency incidents were for EMS-related incidents (Figure IV-4).

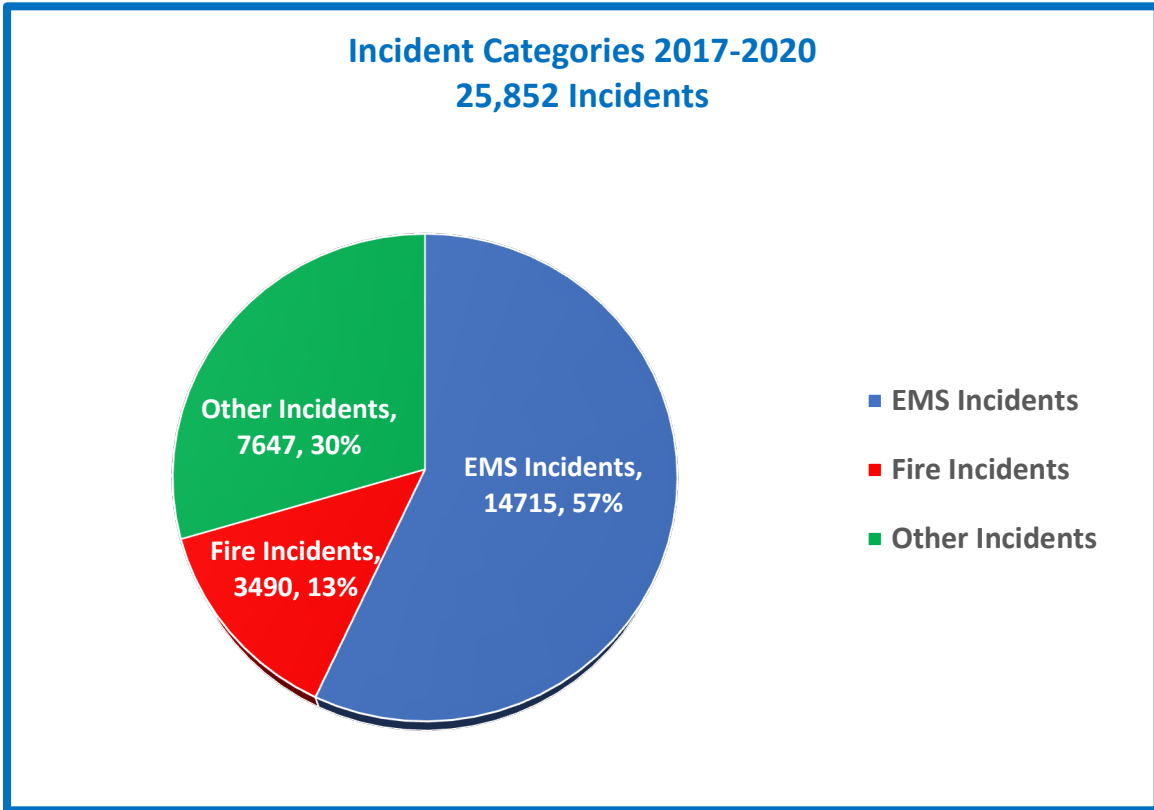


Figure IV-4: Incident Categories by Type and Percentage 2017-2020

Genesee County, unlike many parts of the country, has not experienced dramatic increases in call volume. The relatively flat growth is typical of a community that is not experiencing growth but rather population decline and an aging population. The data shows a slight increase year to year before a significant decline in 2020. This decline is consistent with national response data for the COVID-19 pandemic.

The following figures show the trends for emergency response in the county. Figure IV-5 shows fire department response to EMS calls broken down by Basic Life Support, Advanced Life Support, and system total. Figure IV-6 illustrates the difference between fire and EMS calls.

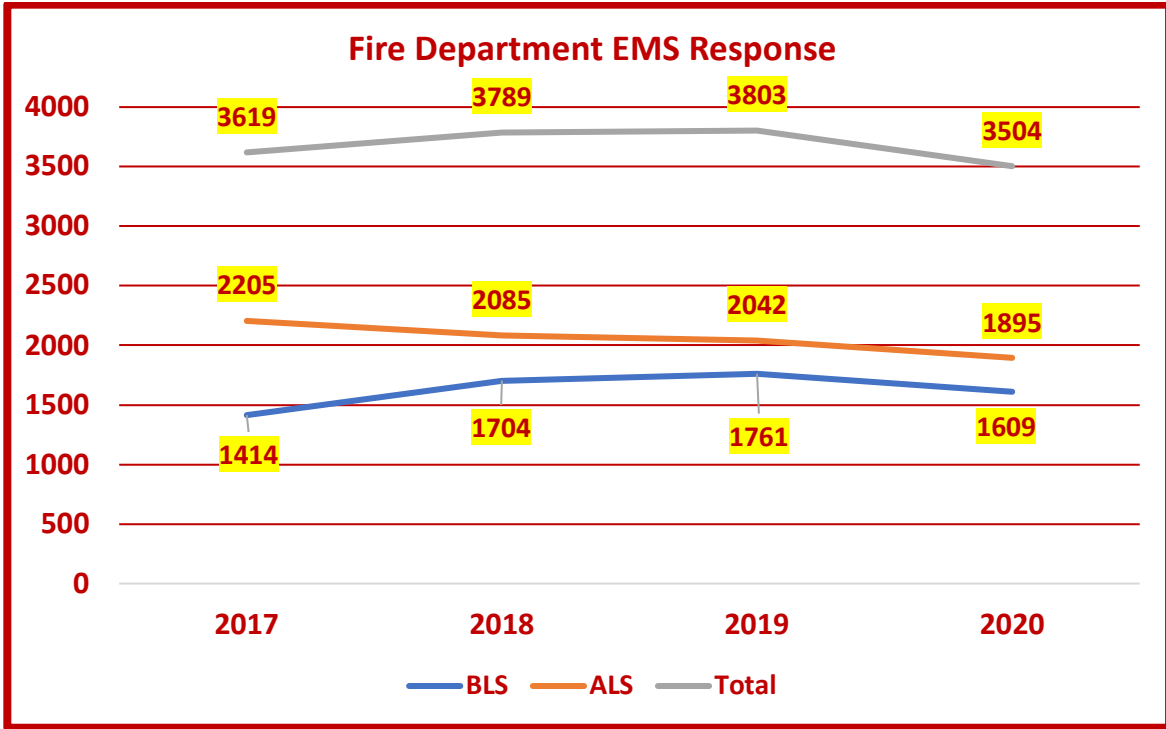


Figure IV-5: Fire Department Responses to EMS Incidents by Classification

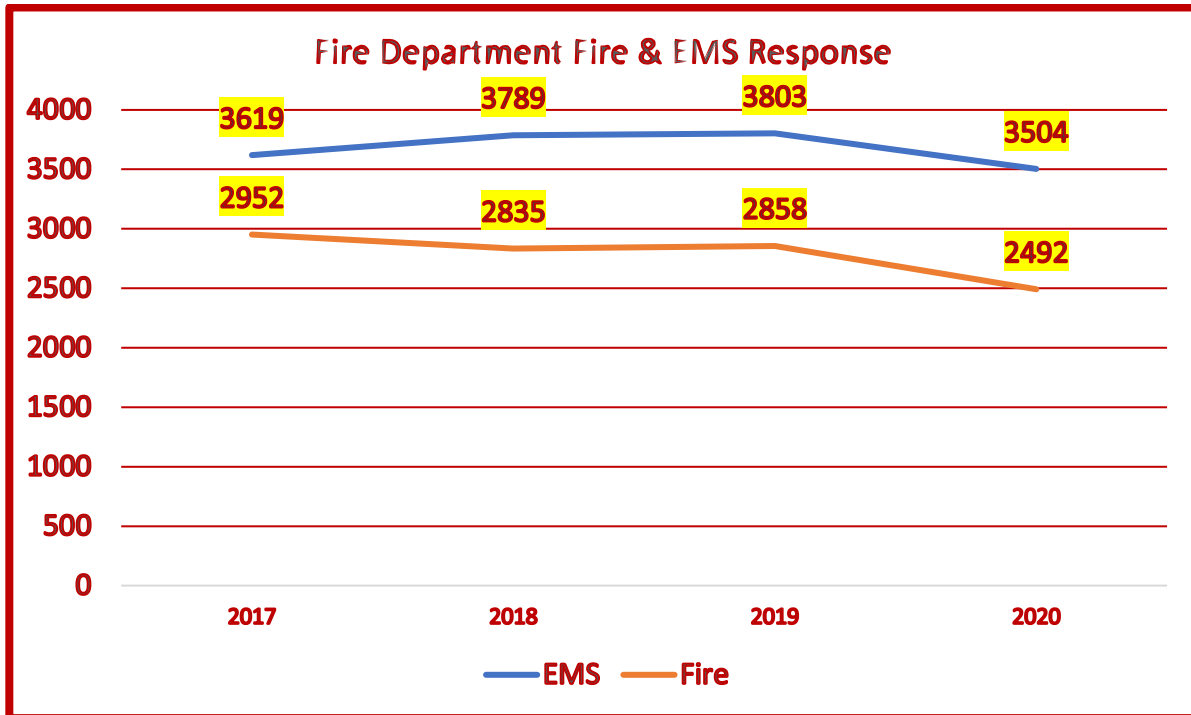


Figure IV-6: Fire Department Responses to Fire and EMS incidents

Figure IV-7 provides a break down for 2017-2020 of the fire and EMS related incidents by major category and municipality.

Municipality	Year	EMS Incidents		Fire Incidents			Other Incidents					Total Incidents
		EMS- BLS	EMS-ALS	Structure	Outside	Other	Alarm	Mutual Aid	Haz Mat	MVA- Rescue	Rescue Non MVA	
Alabama	2017	53	42	3	1	19	0	6	3	21	0	148
	2018	119	74	4	10	52	0	6	4	39	0	308
	2019	94	86	2	10	32	0	9	9	45	0	287
	2020	100	93	5	9	33	1	8	4	24	0	277
Alexander	2017	80	68	3	4	40	7	17	6	37	0	262
	2018	88	76	2	9	39	11	28	5	29	1	288
	2019	90	63	2	4	45	4	28	2	20	1	259
	2020	71	89	1	6	41	9	24	5	29	0	275
Batavia (City)	2017	574	1096	27	24	199	278	21	94	103	0	2416
	2018	681	958	22	46	151	302	28	88	96	6	2378
	2019	676	934	24	53	165	280	18	136	91	8	2385
	2020	655	872	14	70	143	274	20	92	103	3	2246
Batavia (Town)	2017	8	2	5	11	57	121	40	23	62	0	329
	2018	5	7	9	24	29	173	29	36	72	2	386
	2019	4	6	1	24	44	163	29	39	78	1	389
	2020	8	4	2	32	24	135	26	23	58	1	313
Bergen	2017	70	99	6	7	42	30	37	6	53	0	350
	2018	121	108	6	19	15	32	58	17	33	1	410
	2019	115	94	1	21	13	47	38	8	45	0	382
	2020	77	95	5	20	9	48	49	8	44	0	355
Bethany	2017	33	37	2	6	19	1	3	4	23	0	128
	2018	48	35	2	7	9	3	8	3	27	0	142
	2019	63	29	2	6	12	0	11	5	18	0	146
	2020	45	61	3	7	10	3	8	5	18	0	160

Byron	2017	62	80	4	1	24	10	9	6	22	0	218
	2018	66	85	3	12	17	9	18	6	27	0	243
	2019	53	73	3	8	14	9	5	5	26	0	196
	2020	85	86	3	11	14	3	15	8	19	0	244
Corfu	2017	33	50	3	4	12	2	15	7	14	0	140
	2018	34	37	1	5	11	4	15	13	13	0	133
	2019	50	48	0	5	16	8	5	8	21	0	161
	2020	51	48	0	10	7	6	10	5	7	0	144
Darrien	2017	79	107	5	4	24	6	13	11	38	0	287
	2018	65	94	6	7	19	4	10	6	34	1	246
	2019	70	86	1	5	20	6	5	14	27	2	236
	2020	44	56	2	11	8	3	13	4	20	1	162
East Pembroke	2017	110	124	9	4	36	20	19	17	34	0	373
	2018	83	117	5	14	25	14	7	10	37	2	314
	2019	103	94	3	12	28	11	2	15	48	6	322
	2020	101	89	2	18	20	8	4	12	33	3	290
Elba	2017	40	67	5	3	36	4	23	4	19	0	201
	2018	60	67	5	11	16	6	19	3	23	1	211
	2019	76	105	6	7	46	8	13	6	40	0	307
	2020	48	54	3	7	23	4	18	5	16	1	179
Indian Falls	2017	51	74	6	7	16	29	9	4	39	0	235
	2018	52	66	2	10	13	20	8	2	33	0	206
	2019	71	70	1	13	7	15	4	6	41	3	231
	2020	56	57	3	14	8	6	5	9	45	1	204
LeRoy	2017	9	20	10	18	135	63	27	50	78	0	410
	2018	8	14	10	15	56	52	28	45	63	3	294
	2019	3	12	7	13	46	76	18	47	63	1	286
	2020	5	9	4	14	36	43	19	32	52	3	217
Oakfield	2017	104	122	5	5	36	18	13	5	19	0	327
	2018	128	124	3	9	19	29	15	0	15	2	344
	2019	117	103	0	6	17	24	7	4	20	1	299
	2020	105	90	3	3	11	19	8	6	18	2	265
Pavilion	2017	8	56	3	5	34	13	22	15	43	0	199

	2018	13	70	7	11	14	5	21	7	38	0	186
	2019	7	71	5	10	13	9	17	9	44	0	185
	2020	13	57	5	11	8	7	15	13	29	0	158
Pembroke	2017	44	74	6	8	19	27	13	4	39	0	234
	2018	51	66	2	10	12	23	8	2	32	0	206
	2019	71	68	1	13	6	18	4	6	38	3	228
	2020	55	55	3	13	8	5	5	10	43	1	198
South Byron	2017	3	1	4	1	19	9	4	5	21	0	67
	2018	5	3	3	10	15	9	6	7	19	0	77
	2019	1	1	3	6	12	9	6	6	27	0	71
	2020	4	3	3	8	14	3	7	8	9	0	59
Stafford	2017	53	86	3	4	34	9	22	10	26	0	247
	2018	77	84	2	8	10	5	25	12	29	0	252
	2019	97	99	2	8	16	10	16	8	35	0	291
	2020	86	77	5	10	13	7	22	5	25	0	250

Figure IV-7: Fire, EMS and Other Incidents by Type and Municipality 2017-

To illustrate and further evaluate Genesee County’s fire and EMS delivery system, MRI partnered with the Genesee County Department of Planning to provide geographic information system (GIS) maps. These maps illustrate emergency incident response density. The maps on the following pages are “heat” or “bleed” maps that model or illustrate with color the level or density of incident activity or call volume to various categories of emergency incidents. Figure IV-8 illustrates the actual fire incident density. By far the heaviest concentration of these incidents is in the City of Batavia, followed by the Village of LeRoy. That is logical as these are the two largest population centers in the county. There are a few other areas, including Oakfield Village that have a slightly higher incidence of actual fires, however, much of the county has few actual fires.

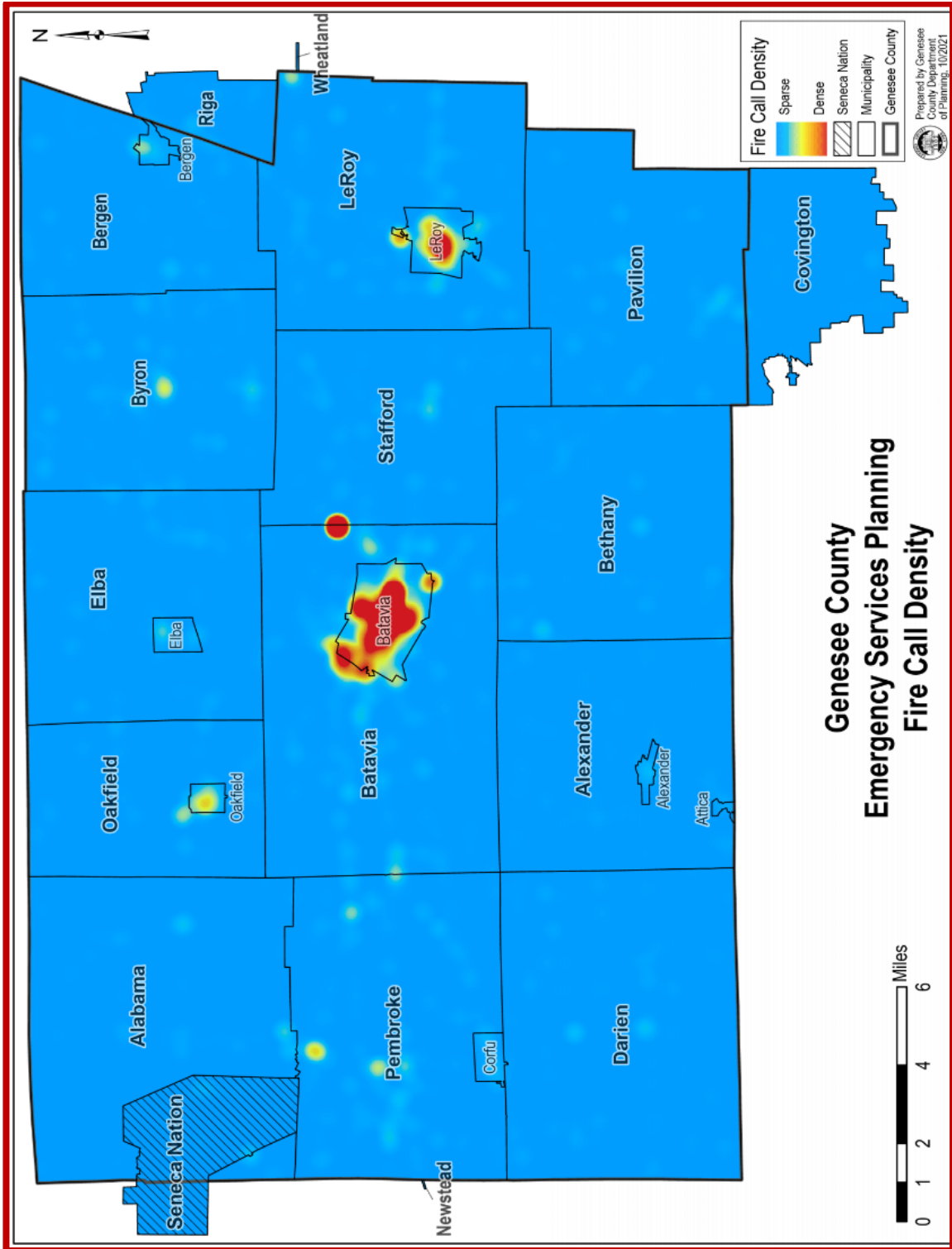


Figure IV-7: 2017-2020 Fire Incident Heat Map

Figure IV-8 illustrates the EMS incident density. Again, the heaviest concentration of incidents is located in and around the City of Batavia, the Town of Batavia, and the Village of LeRoy. Other “hot” spots are scattered throughout the county with most being near more concentrated population centers such as the villages of Bergen, Corfu, Elba, and Oakfield.

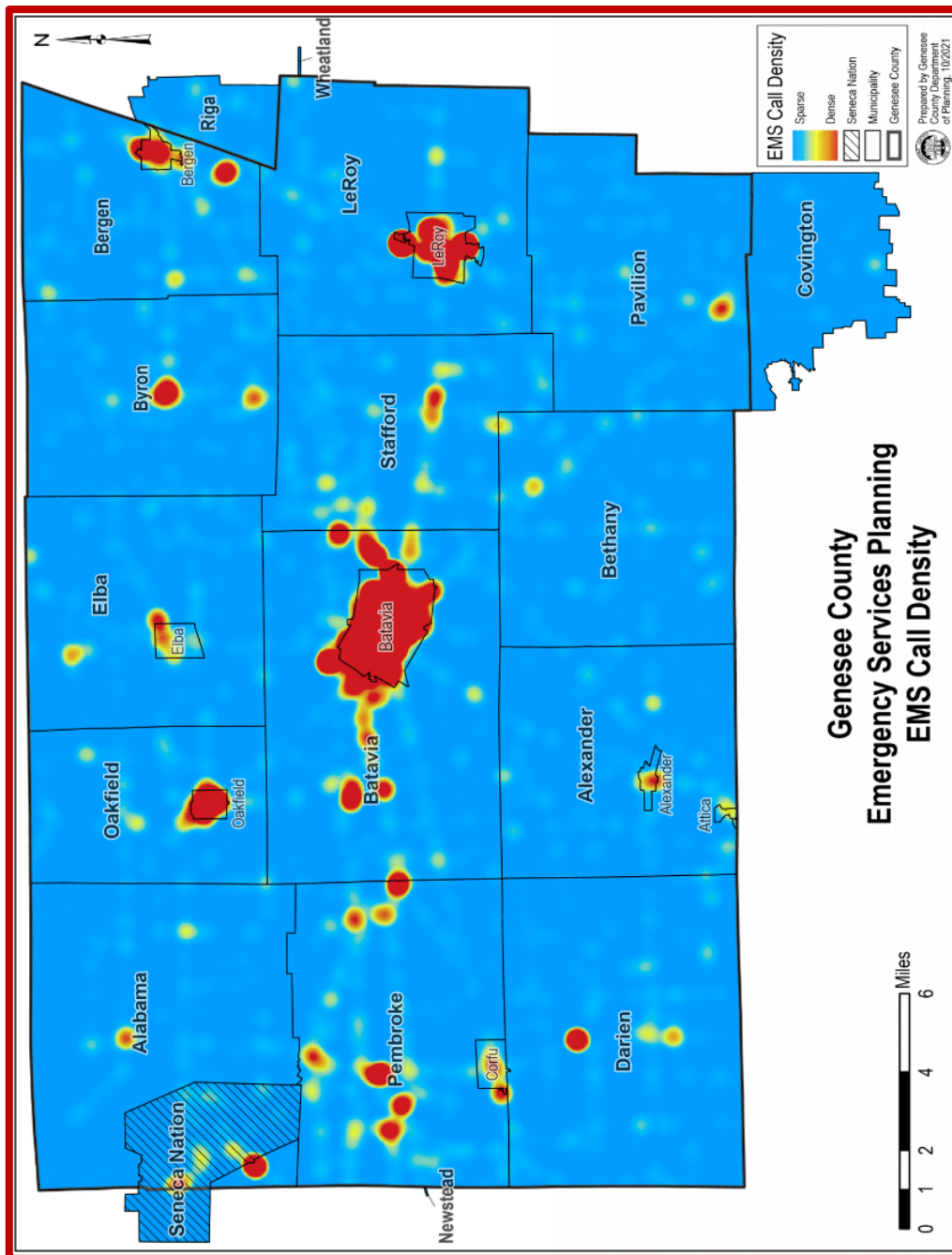


Figure IV-8: 2017-2020 EMS Incident Heat Map

The last map in this series – Figure IV-9 - is a plot map that shows the relative location of working structures and multiple alarm fires throughout Genesee County from 2017 through 2020. Although these actual fires are scattered throughout the county, once again the heaviest concentration of these incidents is in the City of Batavia and the Village of LeRoy.

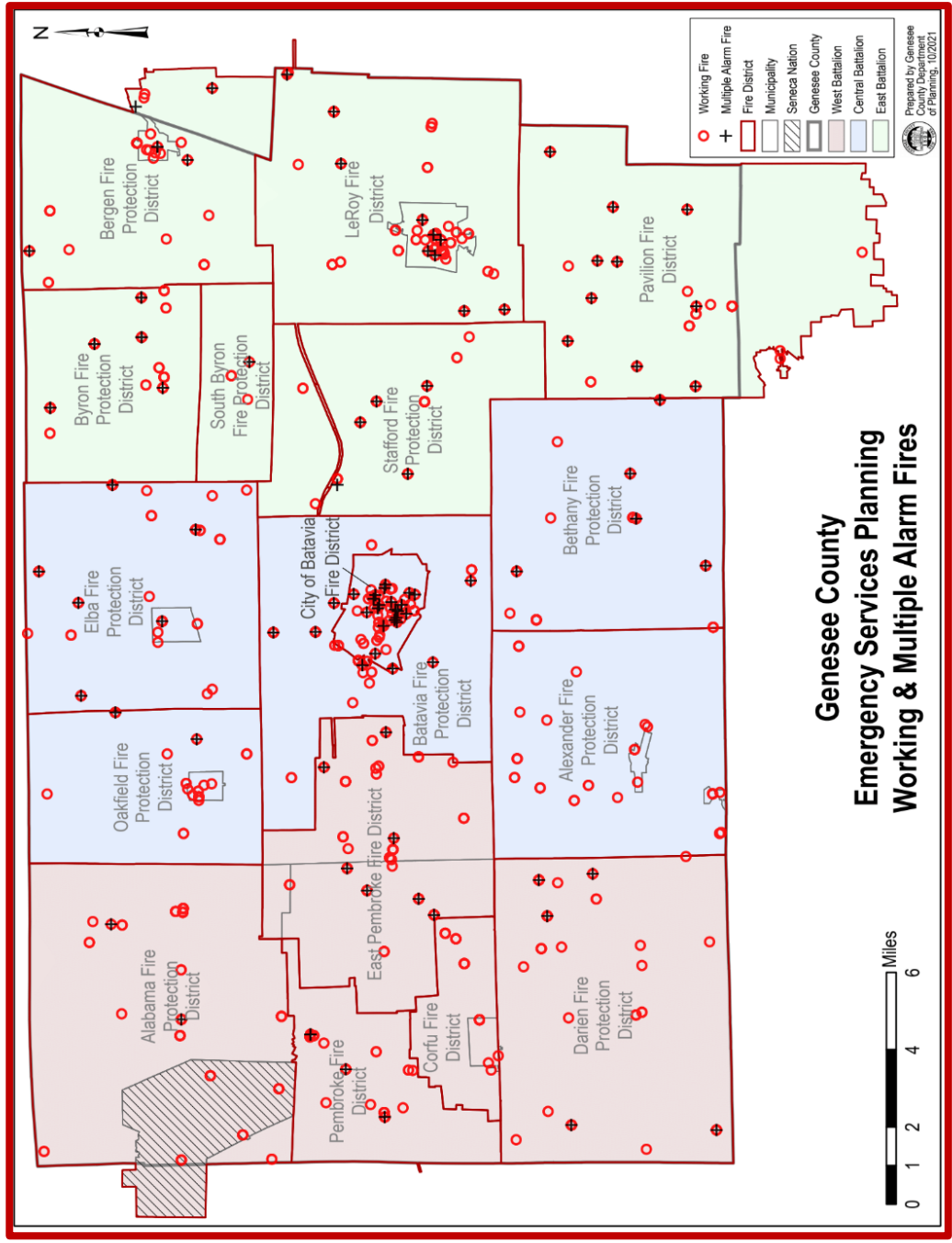


Figure IV-9: 2017 – 2020 Working and Multiple Alarm Fire Map

Three main factors contribute to an effective response to fire and EMS incidents. Those factors are response time, staffing, and equipment. Response time is the most critical of these factors and includes the 911 call, turnout time (how long it takes the firefighters to assemble), travel time, and a period to set up. NFPA 1720 provides a table that shows the staffing and response time requirements for each type of community (Figure IV-10). Genesee County has all three types of demand zones (Figure II-10, Page 41).

In addition to the three factors above, one must also consider water supply, training levels, and operational strategies and tactics. At a building fire, the activities needed to be performed are fire suppression, search and rescue, forcible entry, ventilation, and preservation of property. To accomplish these manpower-intensive tasks, automatic or mutual aid (help from neighboring fire companies) is often used to supplement staffing.

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 %

FIGURE IV-10: Staffing and Response – Structure Fire Timetable from NFPA 1720

1 – A jurisdiction can have more than one demand zone. In Genesee County, each of these demand zones can be found based upon population.

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

To evaluate how a department performs against these criteria, one must note the time when the minimum number of personnel necessary to commence operations has arrived. For example, in a rural area, which comprises most of Genesee County, the department would record the number of members on scene 14 minutes after the completion of the dispatch notification of a structure fire. They would then determine how many times they had at least six members (including from automatic and mutual aid companies) on scene within the 14 minutes and calculate a percentage based on the total number of structure fires in that area. Genesee County does not actively track these statistics.

Response time data for structure fires in Genesee County in 2020 provides a snapshot of the challenges facing the current fire response system. For the purposes of this analysis, structure fires in each jurisdiction's first due area were analyzed. The analysis indicated that most of the jurisdictions in Genesee County fail to meet the NFPA 1720 benchmark for assembling an effective response force in their demand zone type. In fact, due to response data limitations, only the first arriving unit is captured, and this may not even be a unit with fire suppression capabilities (it could be a chief or other officer in a command or personal vehicle). So, even those jurisdictions meeting the average response time, may not always have an effective response force on scene by that time. In the county, excluding the City of Batavia which has a dedicated career staff, departments fail to meet the standard 66% of the time. Put another way, two out of three communities fail to meet even the basic rural fire benchmark.

The situation in Genesee County makes it unlikely to prevent major damage or loss of life and places the firefighters at a greater risk. National Institutes of Standards and Technology (NIST) Technical Note 1661 "Report on Residential Fireground Field Experiments" noted that "delayed response, particularly in conjunction with the deployment of inadequate resources, reduces the likelihood of controlling the fire to prevent major damage and possible loss of life and increases the danger to firefighters".

The MRI study team compared the National Fire Incident Reporting System (NFIRS) data provided by the Department of Emergency Services with CAD data provided by the 9-1-1 dispatch center and found significant discrepancies. The discrepancies in the data are concerning and the jurisdictions must work to get consistent reliable response times. The MRI study team determined that the incident type and associated response times are not accurately portrayed by the NFIRS data due to a lack of consistent coding. For example, fire companies responding to mutual aid incidents for structure fires should not be classifying their response as a structure fire (which only the first due company should do). Rather it should be a mutual aid response. For further example, one department is shown responding to eight (8) fire incidents with an average response time of 00:08:18. However, the CAD data showed a much different picture. The CAD data for the same department's first due fires showed two responses of 2193 seconds and 884 seconds (00:36:33 and 00:14:44 for an average response time of 00:25:38).

Figure IV-11, below, illustrates the response time comparisons between the urban, suburban, and rural demand zones. The response times for each zone are averaged for comparison. The data analyzed showed both the dispatch to enroute time as well as the dispatch to arrival time (in seconds). This table was compiled by converting the dispatch to arrival seconds to minutes for the first arriving engine (or ladder/rescue) to each structure fire, then averaging the time for all structure fire responses for the demand zone.

There are some valid reasons for the difference between the two calculations. In some cases, like the City of Batavia, mutual aid calls can increase their response time. In other cases, being

aware of a fire in a neighboring community may have caused firefighters to preassemble. Also, in most communities, there are only a few structure fires each year. Small data sets increase the potential for outlier data to skew the results. Conversely, more incidents reduce the impact of outlier data. In addition, improper coding of NFIRS data could be impacting the data. For instance, if a structure fire occurs in Alabama, only the Alabama Fire Department should be entering a NFIRS code for a structure fire. The other companies should be coding their reports for the incident as an appropriate assist call (engine, tender, etc.).

Demand Zone	NFIRS Response Time	Calls
Urban	7:59	119
Suburban	8:42	25
Rural	11:26	153

Figure IV-11: NFIRS Response Time Data by Demand Zone

RECOMMENDATIONS:

- IV-1: The Genesee County Emergency Services should work internally with the Genesee County Sheriff’s Department 9-1-1 Dispatch Center leadership to identify any potential ways to reduce call processing time (from receipt of the call to dispatch of the incident) with the goal to achieve a 90th percentile time of not more than 64 seconds as recommended in NFPA 1710. Reducing call processing time can assist with leading to improved overall response times.**

- IV-2: Working collaboratively the Genesee County Emergency Services and the Genesee County Sheriff’s Department 9-1-1 Dispatch Center leadership should establish a method to track response time at the 80th or 90th percentile as required in NFPA 1721 and 1720.**

- IV-3: Working collaboratively, the Genesee County Emergency Services and the Genesee County Sheriff’s Department 9-1-1 Dispatch Center leadership should consider making an evaluation of the 80th and 90th percentile turnout and travel times – for both fire and EMS incidents - as recommended in NFPA 1710 and 1720, part of its routine data analysis and statistical reporting. Having these more conservative times available will provide a more accurate response assessment and allow for better long-range master planning.**



- IV-4: Working collaboratively the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership should consider establishing a Genesee County incident number for each incident rather than individual jurisdiction numbers. This would make it easier to track response times to incidents from mutual aid companies and avoid counting the same incident multiple times.**
- IV-5: Working collaboratively, the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership should implement a procedure to document the number of times that each fire and EMS agency is unable to respond to a dispatched incident or "scratches" a call.**
- IV-6: The Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership must significantly improve its customer service relative to the fire and EMS organizations it serves. These organizations have unique communications and data needs that are very different from those of law enforcement. Reasonable requests for procedural and/or operational changes should be honored and implemented.**

CHAPTER V - FIRE OPERATIONS

Mission-critical components of an emergency services delivery system include the ability to respond to and safely mitigate fires, rescues, hazardous environments, and emergency medical incidents. The governing bodies of the municipalities are responsible for ensuring the departments or companies are operationally prepared, properly equipped, and adequately funded.

Along with structural and other types of firefighting, fire departments are tasked with responding to and managing a broad spectrum of other types of emergencies. These include emergency medical incidents, motor vehicle crashes, building collapses, water and ice rescues, mass casualty incidents, weather-related emergencies, and natural and technological disasters. The more complex types of incidents require specialized equipment and training and in small communities are frequently handled by a regional team or possibly a larger, more capable neighbor. In all types of emergency response, an Incident Command System (ICS) should be utilized that conforms to the National Incident Management System (NIMS) guidelines set by the United States Department of Homeland Security.

For discussion purposes, the City of Batavia Fire Department is much different than the other departments discussed in this section. The city has a full-time career department and as a result does not share all the same challenges as the county fire companies, although staffing is a major concern there also.

The remainder of the Genesee County fire companies are staffed by a 100% volunteer force. Most companies depend on a core group of dedicated individuals (often within a few families) to manage, run, and staff the department. The dedication of the committed volunteers is commendable and at the core of keeping the system from failure. Genesee County, like the rest of the state and country, is experiencing a steep decline in volunteerism. With little or no influx of new people, the core staff dwindles and ages. In addition, in almost any volunteer emergency services organization, there is going to be a percentage of members whose names still appear on the “active” roster (active is response to 25% or more of the calls), yet they no longer truly are, or are minimally so, for a variety of reasons. Maintaining a roster with inactive names is not unique but interferes with the message of needing help.

Genesee County is divided into 18 fire response districts, each independent of the others. These districts are comprised of municipal departments, fire protection districts, and independent fire companies. Where they are municipally operated, a fire protection district, they are the Authority Having Jurisdiction (AHJ) and can dictate what resources are provided to the fire department/company, or, assist in mutual aid scenarios.

Figure V-1 illustrates the county's current fire service deployment with fire districts, station locations, and stations that have ladder trucks, water tenders, and/or rescue trucks.

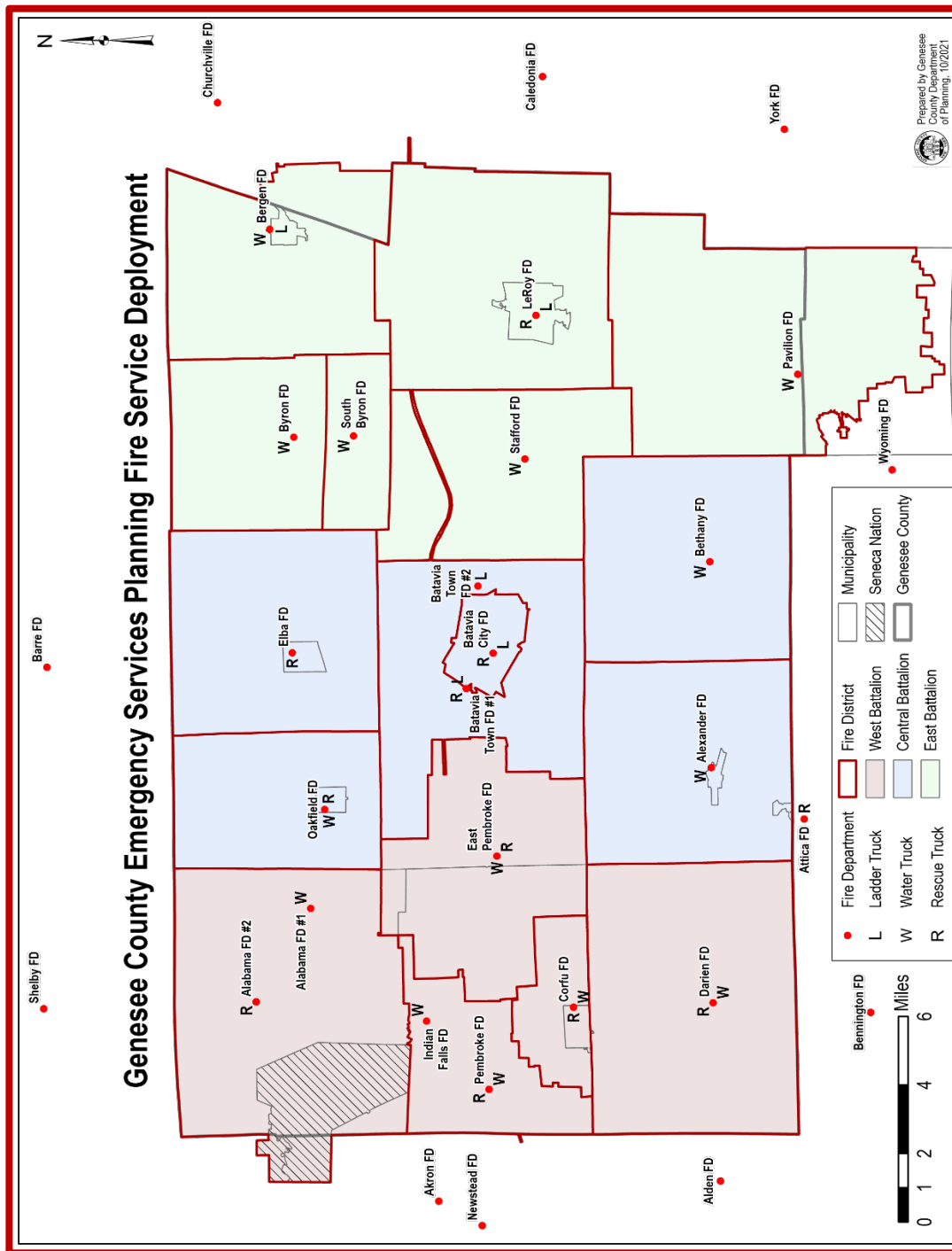


Figure V-1: Fire Service Deployment Map

Most municipalities have legal agreements or contracts in place with the fire departments for the provision of fire and rescue services. However, as is the case in many places, the focus of each fire department or company was on the needs of the individual municipality they serve; there was little regard for the needs of the county as a whole or any consideration of regional efforts. As an example, though there is not an abundance of redundant resources (there are some), the Town of Batavia having two ladders surrounding the City of Batavia (which also has a ladder) appears redundant with three ladder trucks within three miles of one another. Conversely, there is no ladder truck west of the Town of Batavia which is 12-15 air miles from the western portions of the county. Moving forward, the acquisition of expensive resources such as apparatus should consider more regional needs, and such assets should be strategically located and shared.

Genesee County is divided into three geographic zones for fire operations referred to as battalions. There is an East, West, and Center Battalion. The battalions are also allocated specific operational radio channels (Figure V-2). The fire departments have divided their area into zones with run cards established for emergencies and locations. In most, but not all, cases it is the closest resource – even if it is from another county. This interoperability is supported by having an appropriate bank in the radio (Orleans County) or using Mutuallink. However, there are some reports of departments relying on partnerships and “buddy boxes” that ignore the proximity of available resources in favor of some other subjective criteria, decided upon by the chief.

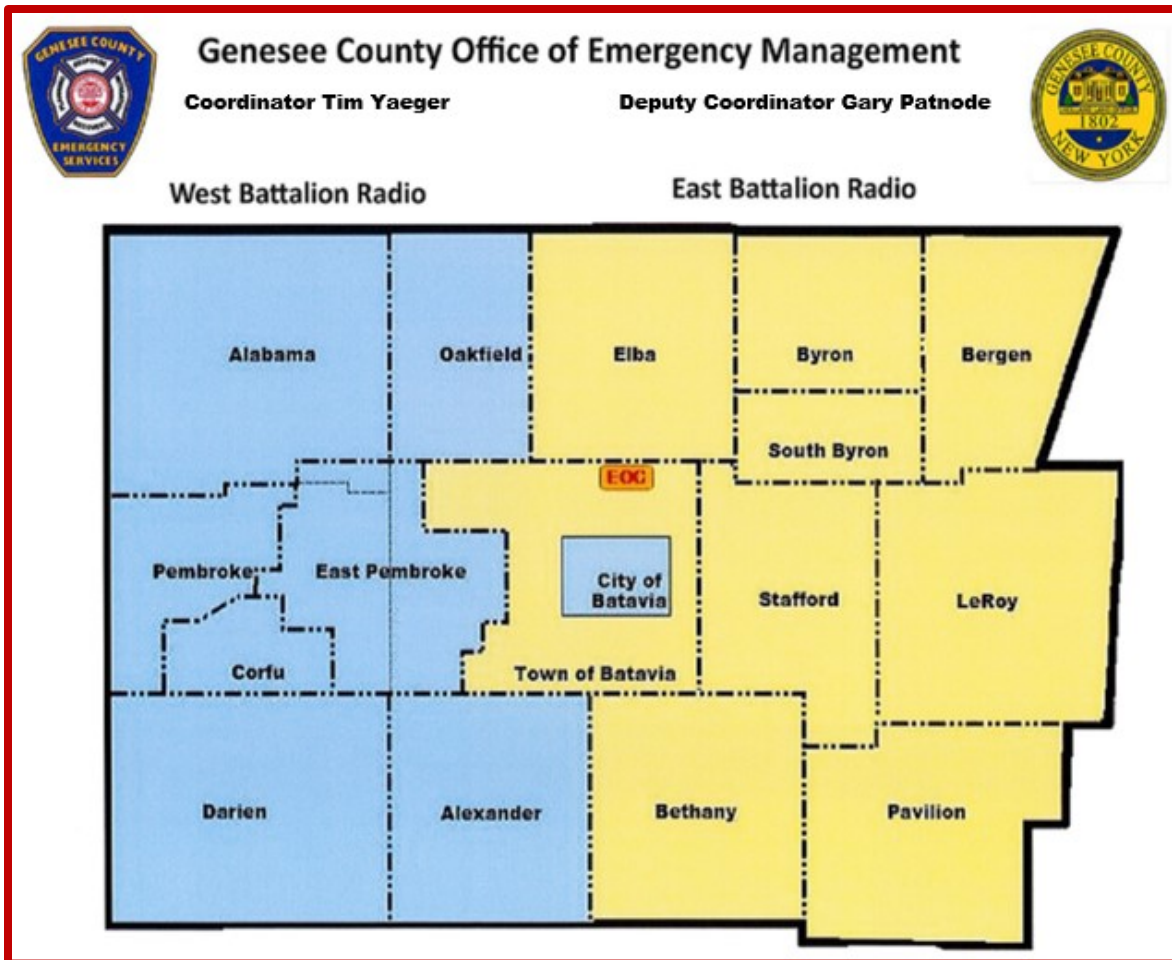


Figure V-2: Fire Service Battalions and Radio Channels

All fire companies in Genesee County are dispatched through the Genesee County 9-1-1 center. At the time of initial dispatch, the incident is dispatched over the County's radios and pagers. An alpha page is also sent to the cell phones of members of the companies that have been dispatched through a third-party application. All companies use Bryx for dispatch. Traditional fire sirens at some fire stations are also activated. After a predetermined period, if there is no response, the incident is dispatched again. After another period if there is no confirmation of resource response, there is a response check. If there is no response after the response check mutual aid (the next appropriate company/resource) is dispatched.

The vast majority of Genesee County fire agencies utilize the Bryx 911 system, whereby members can notify their station that they are responding even if they have not arrived. However, the Sheriff's Department 9-1-1 Dispatch Center informed the MRI study team they have no intention of monitoring it. The issue of tracking how many personnel are responding came up numerous times in interviews and discussions. This is a safety issue for responders and keeps incident commanders unaware of whether or not additional help is coming.

As primarily volunteer fire companies, most Genesee County fire personnel do not normally staff their stations on regular shifts or consistently. One hundred percent (100%) of the respondents on the fire and EMS questionnaire stated that they do not employ any type of duty crew to assist in staffing their respective stations. The MRI study team believes that the utilization of the duty crew concept – perhaps at the battalion level - would relieve stress on responders and increase overall response to significant incidents.

Personnel normally respond to emergency calls from wherever they may be when an incident is dispatched. When the incident has been dispatched, responding personnel normally drive to their station to obtain the appropriate apparatus to successfully handle the emergency. Due to the additional travel time necessary for personnel to respond to the station, which increases with distance and the impacts of traffic conditions, responses by volunteer emergency services providers inherently tend to be longer.

Genesee County does have Incident Management Systems (IMS) in place, and from most accounts, they are effective and are utilized on many incidents, although like many other counties such as Genesee, there are notable exceptions. Use of an IMS is mandated by federal regulations as well as numerous other regulations and standards. It is imperative that the Incident Commander (IC) exercise overall command and control to ensure the proper coordination of incident operations, which prevents freelancing, and/or competing/dangerous strategies and tactics from being employed. A shortage of qualified personnel to fill some ICS roles and responsibilities was mentioned by several stakeholders as a concern.

A critical component of ICS is the establishment of the role of a safety officer to monitor conditions at an incident scene, to ensure that appropriate safety procedures are being followed. It was reported to the team that the assignment of a safety officer on incidents is sporadic. Most companies do have personnel accountability systems.

Regarding incident management and the safety of on-scene operations, other standard incident management practices that are expected to be provided during any significant incident include status updates to the dispatch center, time checks, and personnel accountability reports (PAR).

Rural communities that do not have a municipal, pressurized water supply must supply their needs from other sources. Sometimes static water sources (lakes, rivers, ponds, cisterns) are drafted out either manually or with dry hydrants, to achieve the needed water supply to fight a fire. In cases where static water sources are not readily available, and often even if they are, fire departments must utilize water tenders to carry or shuttle the needed water supply from the source to the incident scene. The county has 13 water tenders ranging in size from 2,000 to 3,000 gallons. As one would expect, the rural communities all have them and are reported to be proficient in their use.

Despite the rural nature of the county, there is a good supply of hydrants. The water system was regionalized in the 1990's and early 2000's to spread the cost and enabled the county to make the necessary improvements. Interestingly, the use of "city water" is preferred to well water in the area because cows produce more milk with the "city water" as compared to the wells. There are two additional phases of upgrades coming to the system as well to keep up with demand (Figure V-3). At some point, the widespread water system, even in the rural areas should permit there to be a reduction in the number of water tenders being maintained by the fire departments.

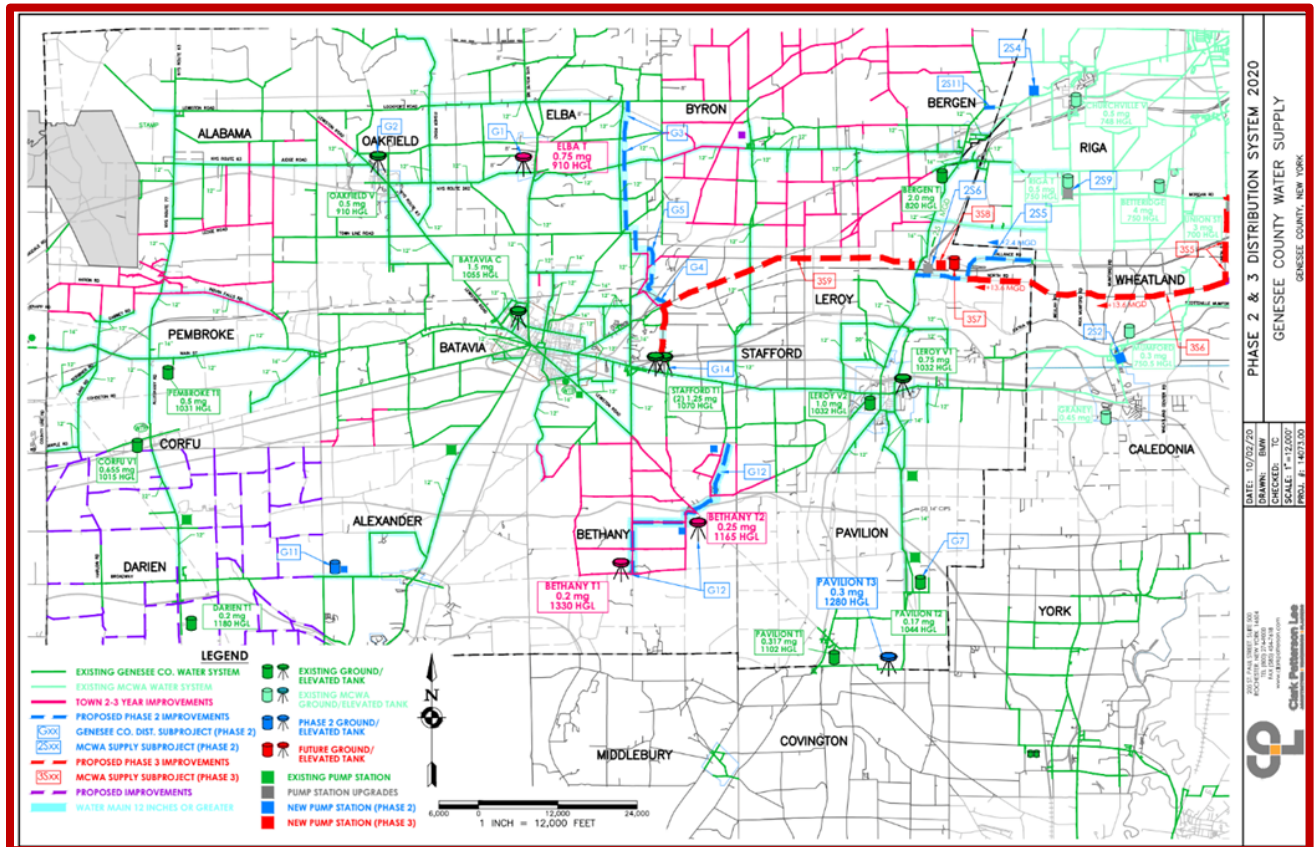


Figure V-3: Planned Future Water System Expansion

The MRI study team noted that most of Genesee County's fire companies have limited specialized operations capabilities. There are several valid reasons for this, and the situation here is quite common with smaller volunteer fire departments that do not have the resources or personnel to undertake these types of endeavors. Specialized operations can include but are not limited to:

- Hazardous material incidents
- Rope rescue including high angle
- Water and ice rescue
- Trench/collapse rescue

➤ Confined space rescue

The specialized technical level resources to handle these relatively rare, but often dangerous (low frequency – high hazard) events are available through a regional County Emergency Services Unit (ESU) response team. This team has capabilities for hazardous material incidents, high-angle rescue, and confined space rescue. This team, which is comprised of approximately 26 emergency responders from throughout Genesee County, is reported to be well trained and equipped. The team is currently awaiting final approvals to have approximately 15 members of the City of Batavia Fire Department become members. It is also awaiting final accreditation from New York state for hazardous materials response. As team members are also local responders many of the challenges relative to training and staffing on the local level extend into the operation of these specialized teams.

Water rescue-swift and static, are supported by the City of Batavia Fire Department. Several jurisdictions have ice rescue capability as well including LeRoy, East Pembroke, Stafford, and Alabama. Incidents involving trench or building collapse would require a response from Buffalo or Rochester.

The ESU is equipped with a rescue truck, a quick response unit for towing trailers, a foam unit, a decon trailer, two spill trailers (including one NY state DES trailer), and a cart trailer for animal responses, and a command post vehicle. Figures V-4 thru V-7 show some of these resources.



Figure V-4 (left): Genesee County ESU Rescue Truck
Figure V-5 (right): Genesee County ESU Quick Response Unit



Figure V-6 (left): Genesee County Spill Response Trailer



Figure V-7 (right): Interior of Genesee County ESU Trailer

Genesee County should be commended for these efforts with the ESU which MRI considers to be a **Best Practice**. It is imperative that fire company personnel understand their roles and responsibilities when responding to these types of incidents, know what operations they can safely perform, as well as be fully aware of what they cannot do. Joint training with the teams should be conducted periodically with regional groups of fire companies.

AUTOMATIC AND MUTUAL AID

Mutual aid is an essential component of almost every fire company's operations. Except for the largest cities, no fire company or department can or should be expected to have adequate resources to respond to and safely, effectively, and efficiently mitigate large-scale and complex incidents. Mutual aid is shared between communities when their day-to-day operational fire, rescue, and EMS capabilities have been exceeded, and this ensures that the citizens of the communities are protected even when local resources are overwhelmed.

Automatic aid is an extension of mutual aid, where the resources from adjacent communities or companies are dispatched to respond at the same time as the units from the jurisdiction where the incident is occurring. There are two basic principles for automatic aid, the first being that all jurisdictional boundaries are essentially erased, which allows for the closest, most-appropriate unit to respond to an incident, regardless of which jurisdiction it belongs to. The second is to provide, immediately and at the time of initial dispatch, additional personnel or resources that may be needed to mitigate the reported incident. Automatic and mutual aid are generally provided without charge among the participants.

Genesee County has a long-standing automatic and mutual aid system with both intra-County and inter-County resources being utilized. This includes both fire- and EMS-related incidents.

The delivery of emergency services through robust automatic and mutual aid agreements is a model for intergovernmental cooperation, efficiency, and customer service, and is considered the “Gold Standard” of emergency service delivery systems.

STAFFING

The fire service has experienced tremendous technological advances in equipment, procedures, and training over the past fifty years. Better personal protective equipment (PPE), the widespread use of self-contained breathing apparatus (SCBA), large diameter hose, better and lighter hand lines, and nozzles, and thermal imaging cameras are just a few of the numerous advances in equipment and procedures that have allowed firefighters to perform their duties more effectively, efficiently, safely, and with fewer personnel. However, the fact remains that the emergency scene in general, and the fire ground involving a structure fire even more so, is a dynamic, dangerous, frequently unpredictable, and rapidly changing environment where conditions can deteriorate very quickly, placing emergency responders, victims, and bystanders in extreme personal danger.

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.** Understanding the community’s risk greatly assists fire department management in planning for, and justification of, staffing and apparatus resources.

The following information was compiled from the information provided by the fire and EMS agencies regarding their current staffing levels. Not all organizations answered all questionnaire questions. This data represents responses to the questionnaires and was not independently verified by the study team. This information should be used as an informative resource.

- Total number of volunteer firefighters: **408**
 - ❖ Range: **21 to 44**
 - ❖ Average: **31.4**

- Number of active volunteer firefighters responding to at least 25% of calls: **142**
 - ❖ Range: **3 to 19**
- Number of volunteer firefighters who are certified at least Firefighter 1: **227**
 - ❖ Range: **7 to 28**
- Number of volunteer firefighters who are currently qualified interior structural firefighters: **182**
 - ❖ Range: **7 to 22**
- Number of volunteer firefighters who are qualified exterior structural firefighters: **198**
 - ❖ Range: **7 to 34**
- Percentage of volunteer firefighters that live in the fire company first due response area: **Average = 80.0%**
 - ❖ Range: **55% to 100%**
- Average number of volunteer firefighters that respond to each call: **5.8**
 - ❖ Range: **2 to 8**
- Average number of volunteer firefighters that respond to each structure fire: **12.2**
 - ❖ Range: **2 to 24**

The information that was provided by the fire companies tells us:

- Just **55.6%** of fire company members are certified at least Firefighter I.
- Just **34.8%** of the volunteer personnel respond to at least 25% of their company's calls.
- Just **44.6%** of the volunteer personnel are considered to currently be a "qualified" interior firefighter.
- **44.6%** of the volunteer personnel are considered to currently be a "qualified" exterior firefighters.
- As indicated by the ranges, some companies are struggling significantly with the number of personnel who respond to each call, and with the number of personnel who are trained and qualified.

When discussing staffing, and as noted above, although many of the members of the fire companies are certified firefighters, many still are not. Personnel who are not certified as

firefighters and up to date in their training, even though they may still arguably be able to contribute, should not be counted toward active “firefighter” numbers. They should not be counted towards unit staffing for incidents and depending upon their level of training (or lack thereof in some cases) could be a liability to their company and/or municipality. In addition, although some may argue that the members who respond to only a few incidents still contribute, their contribution to any given incident is unlikely, and their skill level would probably be questionable, and possibly even detrimental if they showed up on a major incident. However, again this is a common practice in the volunteer fire service.

The MRI study team’s interviews indicated that, as with many volunteer companies today, there is a core group of older, long-time members of the companies with a second group of young, newer firefighters. There is a shortage of personnel who would fall into the middle between the other groups both in age and years of experience. The questionnaires also indicated that about 20% of fire company members do not live within their first-due areas. This is also a fairly common practice in the volunteer fire and emergency services driven by the companies constantly striving to bolster their number of active personnel. However, once a member lives more than a certain distance away from their station their ability to make a timely contribution to emergency operations is questionable. In addition, in almost any volunteer 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.

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 the organization and deployment of operations by volunteer, and primarily volunteer fire departments.

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

- Paragraph 4.3.1 on *Staffing and Deployment* states that the fire department shall identify minimum staffing requirements to ensure that enough members are available to operate safely and effectively.
- Paragraph 4.3.2 on *Staffing and Deployment* states that Table 4.3.2 (Figure V-8) 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 dwelling, 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 %

FIGURE V-8: Staffing and Response Timetable from NFPA

- 1 – A jurisdiction can have more than one demand zone. In Genesee County each of these demand zones can be found based upon population.
- 2 – Response time in this table begins upon completion of the dispatch notification and ends at the time interval shown in the table.

- 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.
- Paragraph 4.6.1 *Initial Firefighting Operations* states that initial firefighting operations shall be organized to ensure that at least four members are assembled before interior fire suppression operations are initiated in a hazardous area.
- Paragraph 4.7.1 *Sustained Firefighting Operations* states that the fire department shall have the capability for sustained operations, including fire suppression; engagement in search and rescue, forcible entry, ventilation, and preservation of property; accountability of personnel; the deployment of a dedicated rapid intervention crew (RIC); and the provision of support activities for those situations which are beyond the capabilities of the initial attack.
- Paragraph 4.7.2 *Sustained Firefighting Operations* also states that the capability to sustain operations shall include sufficient personnel, equipment, and resources to effectively, efficiently, and safely conduct the appropriate operations.

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.

Many 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 and commercial occupancies will require a significantly greater commitment of initial personnel; minimally 27/28, according to the 2020 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 the extent and seriousness of the incident can be determined, a full complement of personnel and apparatus should be dispatched.

Figure V-9 identifies, and Figure V-10 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	3
Aerial Operator (if Aerial is Used)	1
Establishment of an IRIT (Initial Rapid Intervention Team)	2
Effective Response Force	15/17

Figure V-9: Critical Tasking: Low and Moderate Risk Structure Fire

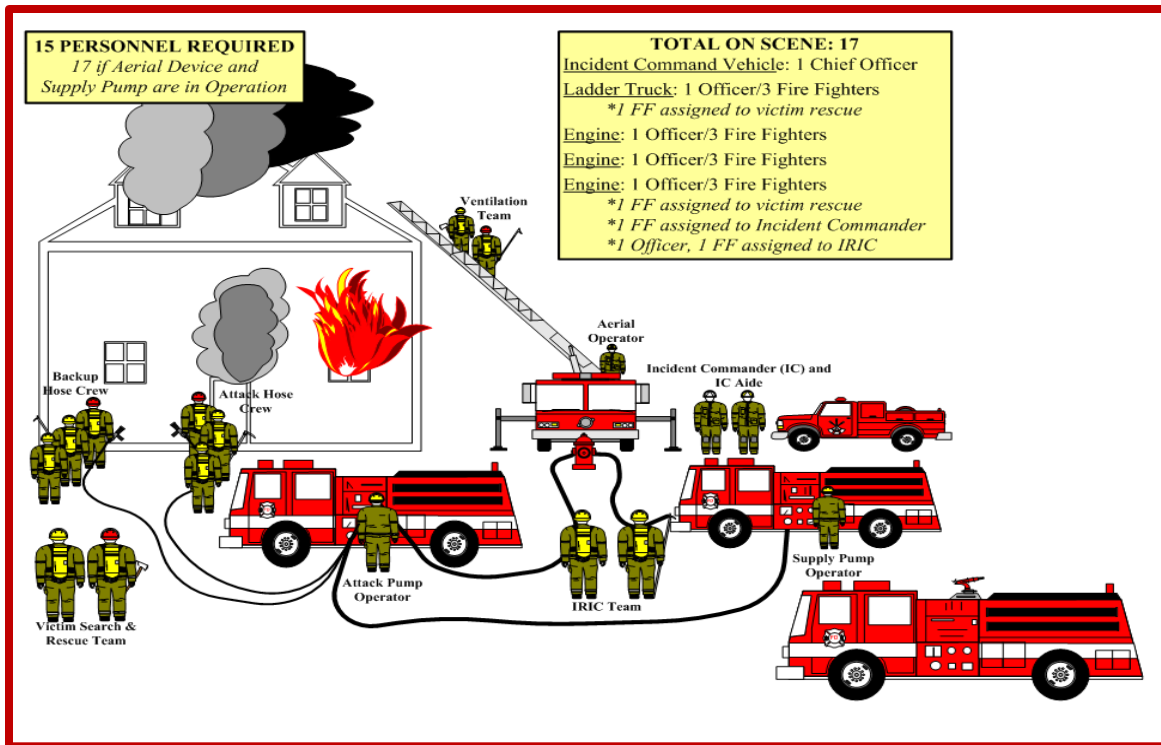


Figure V-10: Typical Basic Staffing Needs for a Single-Family Dwelling Fire

Image credit: IAFF 266

These tasks meet the minimum requirements of NFPA 1720 for the initial full-alarm assignment to a typical low to moderate risk, 2000 square foot, two-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 an average of 71.1% of the time. This ranged from a low of 9% to a reported high of 100%. At the current time, the Genesee County 9-1-1 center does not keep track of the arrival of the entire first alarm assignment for structure fires. The toolbox assembled for this report contains an NFPA 1720 compliance matrix that fire companies can utilize to self-assess their conformity with the standard’s recommendations.

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 V-11).

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 V-11: Critical Tasking: Moderate Risk Structure Fire

Figure V-12 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 V-12: 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 (Appendix G). 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:

- 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.

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. Adding to the weight of this requirement is that New York is an OSHA Plan state thus making compliance a mandate.

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 V-13). The OSHA rule does provide an exception, however, which states that the rule does not apply in emergency rescue situations where a person is visible and in need of immediate rescue, or there is credible and reasonable information that potentially viable victims are still in need of rescue.

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

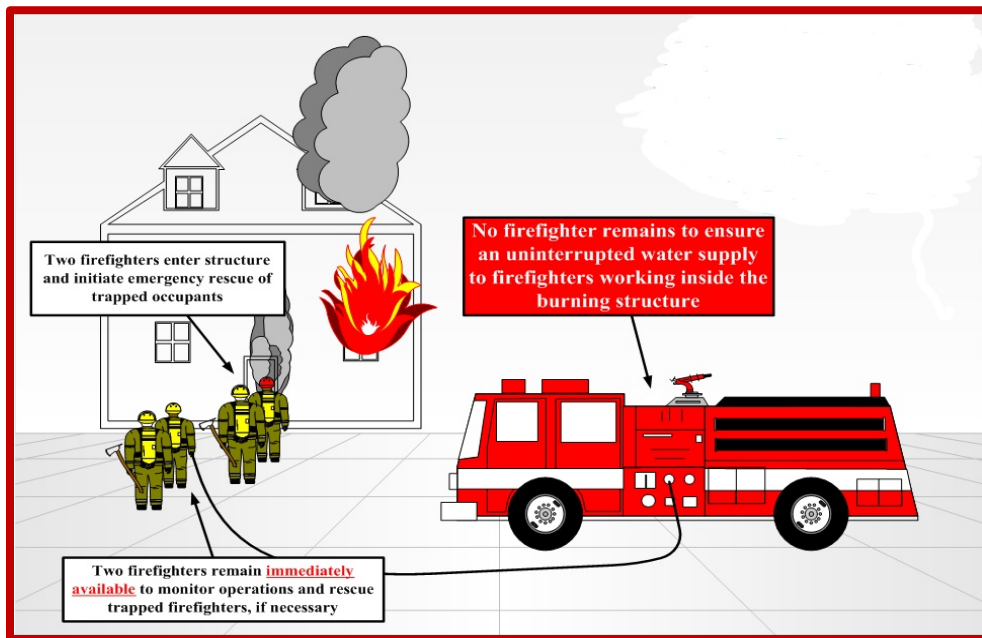


Figure V-13: OSHA Two-in/Two-out
Image Credit: IAFF 266

Standardized Responses

The specific number of people required to perform all the critical tasks associated with an identified risk is referred to as an Effective Response Force (ERF). The goal is to deliver an ERF within a prescribed time frame.

During fire incidents, to be effective, critical tasking must assign enough personnel so that all identified functions can be performed simultaneously. However, it is important to note that secondary support functions may be handled by initial response personnel once they have

completed their primary assignment. Thus, while an incident may end up requiring a greater commitment of resources or a specialized response, a properly executed critical task analysis will provide adequate resources to immediately begin bringing the incident under control.

The community risk and vulnerability assessment previously discussed; evaluates the community and property, and measures all property and the risks associated with that property. The assessment segregates the property as either a high-, medium-or low-hazard as identified below:

- **High-hazard occupancies:** Schools, hospitals, nursing homes, high-rise buildings, and other high life-hazard or large fire-potential occupancies.
 - ❖ **Operations response capability:** At least 4 pumpers, 2 ladder trucks (or combination apparatus with equivalent capabilities), and other specialized apparatus as may be needed to cope with the combustibles involved; not less than 28 firefighters and 2 chief officers, plus a safety officer, and a rapid intervention team. Extra staffing for incidents in high-hazard occupancies is advised.

- **Medium-hazard occupancies:** Apartments, offices, mercantile, and industrial occupancies, not normally requiring extensive rescue by firefighting forces.
 - ❖ **Operations response capability:** At least 3 pumpers, 1 ladder truck (or combination apparatus with equivalent capabilities), and other specialized apparatus as may be needed or available; not less than 20 firefighters and 2 chief officers, plus a safety officer, and a rapid intervention team.

- **Low-hazard occupancies:** One-, two-, or three-family dwellings and scattered small business and industrial occupancies.
 - ❖ **Operations response capability:** At least 2 pumpers, 1 ladder truck (or combination apparatus with equivalent capabilities), and other specialized apparatus as may be needed or available; not less than 12 firefighters and 1 chief officer, plus a safety officer, and a rapid intervention team.

Based upon the need to rapidly assemble an effective response force, accelerated fire growth, and an increased emphasis on firefighter safety, it is an increasingly common practice in the fire service today to use one standard dispatch of resources for initial response to any reported structure fire (except high rises). Genesee County should consider utilizing this approach with an initial default structure fire dispatch of:

- 4 - Engines
- 1 - Ladder/Truck
- 1 - Rescue
- 1 - EMS unit
- 1 - RIT team

In non-hydrant areas we recommend when a working fire is transmitted, the following additional resources should be added to the assignment:

- 3 - Water tankers
- 1 - Engine

Standardized SOPs

Effective communications systems are key to the successful operation of any organization. The use of standard operational procedures or guidelines, and various other forms of written communications are vital parts of a fire company’s overall operations. Operational procedures ensure the consistent, effective, efficient, and safe operation of various aspects of the department’s operations, both emergency and routine. Without them there is a tendency to freelance and personnel may not all be on the proverbial “same page”, or rowing in the same direction regarding those operations. One of many common denominators among the best fire departments across the United States is that they have a comprehensive and up-to-date operational procedural manual, and their personnel are well versed and well-trained in those procedures. The challenge here is that once again, there is no fire company or department in Genesee County that can handle even a house fire, without the need for significant assistance through automatic and mutual aid. These companies all operate together regularly, but they are not utilizing a uniform set of operational procedures or guidelines.

Ultimately, there should be a singular system that is utilized throughout the County, particularly pertaining to fires and emergency scene operations. From a content perspective, the SOPs/SOGs should be consistent with currently accepted standards and best practices in the fire and emergency services.

The Fire & Rescue Departments of Northern Virginia is a regional coalition of 14 member departments (Figure V-14). They include Fauquier County (population 71,000) and Stafford County (population 150,000) which are still protected primarily by volunteer fire companies supplemented by career staff, to Fairfax County (population 1,200,000) with over 1,400 career personnel who are still supplemented by several hundred volunteers. Its mission is to provide the Northern Virginia region with the best possible emergency services through the shared use of resources and coordinated emergency response. These 14 departments operate seamlessly through automatic aid throughout the entire region (Figure V-14). This includes the

development of standardized operational manuals for various types of incidents with unit position and assignment summaries. A complete set of these manuals is included in the resource tool kit provided along with this report. Figure V-15 provides a unit and position summary quick reference list for various types of structure fire incidents (also contained in too box).

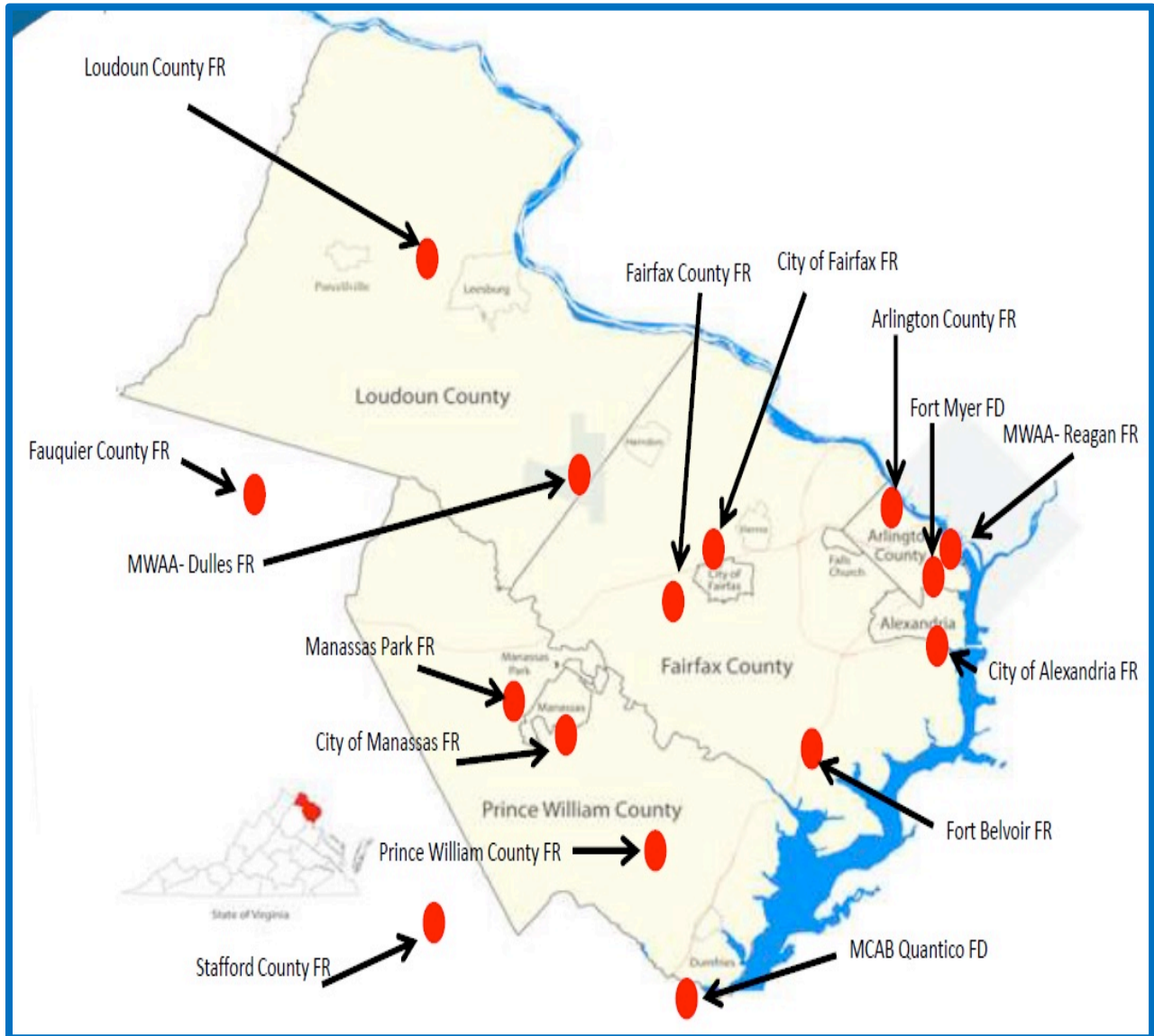


Figure V-14: Fire & Rescue Departments of Northern Virginia

UNIT	SINGLE FAMILY	TOWNHOUSE	STRIP SHOPPING / COMMERCIAL	APARTMENT	HIGH RISE
1 st Engine	Side A, Supply Lines, initial attack line, Command Decision RECON Lap of Side C and announce findings	Side A, Supply Lines, initial attack line, Command Decision RECON Lap of Side C and announce findings	Side A, Supply Lines, initial attack line, Command Decision RECON Lap of Side C, (if possible) announce findings	Side A, Supply Lines, initial attack line, Command Decision RECON Lap of Side C, (if possible) announce findings	Abandon apparatus, entire crew inside, check FACP, identify floor, recall elevators, identify attack stairwell
2 nd Engine	Water supply for first engine, backup line/line above	Water supply for first engine, backup line/line above	Water supply for first engine, backup line, FDC if on Side A	Water supply for first engine, second attack line or backup line	Supply FDC, check FACP for changes, assist first engine, plan for 2 nd hose line
3 rd Engine	RIT Position for second water supply	RIT Position for second water supply	Position on Side C, hose line operation & support Rescue & Truck, FDC if on Side C	RIT Position for second water supply	Water supply to secondary FDC, floor above 1 st engine w/ 2 nd truck
4 th Engine	Check side C, check for extension, exposure line	Check side C, check for extension, exposure line	RIT Supply 3 rd Engine	Check side C, check for extension, exposure line	RIT, attack stairwell (1 floor below fire floor)
5 th Engine					Report to Command Post, assume Lobby Control
1 st Truck	Side A, force entry, search, vent, ladders; vent & utilities if after Rescue	Side A, force entry, search, vent, ladders; vent & utilities if after Rescue	Side A, force entry, search, vent, ladders; vent & utilities if after Rescue	Side A, force entry, search, vent, ladders; vent & utilities if after Rescue	Side A, driver to stay with unit if fire is in reach of aerial, crew with first engine, force entry, primary search
2 nd Truck	Assure Side C is covered, IC's determination	Side C coverage	Side C, roof access, vertical vent	Side C coverage	Position for use at fire floor, crew to floor with 3 rd engine
1 st Rescue	Position out of way, vent, force entry & search Ladders, vent & utilities if after truck	Position out of way, vent, force entry & search Ladders, vent & utilities if after truck	Position Side C Gain access to involved occupancy and immediate exposure	Position out of way, vent, force entry & search Ladders, vent & utilities if after truck	If arriving before 1 st truck, assume 1 st truck tasks – if after, tagline on fire floor, force entry, ID alternative fire attack options, assist w/ 2½ hose line
1 st EMS	Position for rapid egress Treatment of initial patients	Position for rapid egress Treatment of initial patients	Position for rapid egress Treatment of initial patients	Position for rapid egress Treatment of initial patients	Position for rapid egress, treatment of initial patients
2 nd EMS	Report to Command	Report to Command	Report to Command	Report to Command	Report to Command
1 st BC	Assume command	Assume command	Assume command	Assume command	Assume command
2 nd BC	Tactical Command, other duties as assigned	Tactical Command, other duties as assigned	Tactical Command, other duties as assigned	Tactical Command, other duties as assigned	Fire floor division supervisor

Figure V-15: Unit Position and Assignment Summary

The MRI study team encourages Genesee County Fire and EMS agencies to draw upon the policies, practices, and procedures of other organizations, both local and distant. The experiences and lessons learned from other fire and rescue agencies can be extremely helpful in the development of SOPs/SOGs. No emergency services provider should be expected to write a policy or procedure document from scratch or without a template. A sample SOP which establishes a system of written communications and is prepared in a standardized form is contained within the toolbox assembled for this report. A list of suggested SOPs that should be included in the manual is included in the resource toolbox.

Insurance Services Office (ISO)

The Insurance Services Office's (ISO) Public Protection Classification (PPC) program evaluates communities according to a uniform set of criteria defined in the Fire Suppression Rating Schedule (FSRS). This criterion incorporates nationally recognized standards developed by the National Fire Protection Association (NFPA) and the American Water Works Association (AWWA). Using the FSRS, ISO evaluates the fire suppression capabilities of a community and assigns a PPC classification; a number rating from 1 to 10. Class 1 represents exemplary fire protection (by ISO's standards), and Class 10 indicates that the area or community's fire suppression program does not meet minimum recognized criteria or standards. In most cases, this means there is no recognized fire department or formal fire protection. Any building more than five road miles from a fire station or outside the boundary of a fire protection area is rated 10. Generally, areas of a community that are more than 1,000 feet from a fire hydrant, but within five road miles from a fire station, are rated Class 9.

The FSRS lists many items (facilities and practices) that a community should have to fight fires effectively. The schedule is performance-based and assigns/deducts credit points for each item. Using the credit points and various formulas, ISO calculates a total score on a scale of 0 to 105.5. The FSRS allocates credit for fire protection by evaluating these three major categories (Figure V-16):

- Fire Alarm and Communication System
- Fire Department
- Water Supply System

A relatively new addition to the FSRS, the Community Risk Reduction section, offers a maximum of 5.5 points, resulting in 105.5 total points now available in the FSRS. The inclusion of this section for "extra points", allows recognition for those communities that employ effective fire prevention practices, without unduly affecting those who have not yet adopted such measures.

The addition of the Community Risk Reduction section gives incentives to those communities who strive proactively, to reduce fire severity through a structured program of fire prevention activities.



Figure V-16: Four Key Parts of ISO PPC Evaluation Process
Source: ISO

Within the past several years, ISO has significantly revised its FSRS, and as a result, the PPC reflects innovations and technology, and the evolving standards and industry best practices within the fire service. Among these changes are:

- Greater reference to nationally accepted consensus standards; NFPA and AWWA.
- Increased recognition of automatic fire sprinklers.
- Greater reliance on technology-based solutions (e.g., GIS, thermal imaging cameras, etc.).
- Increased emphasis on fire training activities.
- New reference to national standard safety requirements.
- New reference to accreditation; focus on master/strategic planning

Figure V-17 shows the PPC ratings for each municipality in Genesee County.

Community	PPC	Effective Date
Alabama	8B/10	5/1/2017
Alexander	4/4Y	9/1/2020
Attica	5/5Y	9/1/2020
Batavia	3	6/1/2016
Batavia FPD	4/4Y	8/1/2020
Bergen	4/4Y	10/1/2020
Bethany	10-Sep	8/1/2017
Byron	4/4Y	3/1/2019
Corfu	4/4Y	8/1/2020
Darien	6/6Y	2/1/2015
East Pembroke	5/5Y	5/1/2017
Elba	6/6Y	9/1/2020
LeRoy	4/4X	4/1/2016
Oakfield	6/6Y	3/1/2015
Pavilion	10-Jun	2/1/2015
Pembroke	5/5Y	11/1/2015
Stafford	5/5Y	4/1/2015

Figure V-17: Genesee County ISO Municipal PPC Ratings

Recommendations:

- V-1** *The Genesee County Emergency Services should continue to provide and facilitate the purchase of all equipment such as communications and other technology. This should continue to assist to control costs by utilizing bulk purchasing and provide consistency and standardization throughout the County.*
- V-2:** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services should develop standardized responses for various types of incidents, and standardized run cards County-wide. Once developed the standardized responses should be adopted as the Genesee County standard.*
- V-3:** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services should develop a County-wide procedure of dispatching the closest available station(s) with necessary apparatus/resources, and qualified personnel as determined by GPS, rather than permitting the selection of specific companies which may have longer travel distance and response times. Once*



developed, the standardized responses should be adopted as the Genesee County standard response procedure for all agencies.

- V-4:** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services, should develop a procedure for documenting the number of self-contained breathing apparatus (SCBA) qualified interior structural firefighters on each unit. Whenever possible, this information should be entered into the CAD system by the apparatus officer allowing all responding personnel, particularly chief officers, to track the number of responding personnel in real-time.*
- V-5:** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center should develop a procedure for the 9-1-1 center to track and analyze full-first alarm assignment on location times as recommended by NFPA 1720, and any standards of cover responses (SOC) that are established.*
- V-6** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center should develop a procedure for the 9-1-1 center to:*
- Track emergency personnel response utilizing the Bryx 911 system.*
 - Provide time checks to the Incident Commander at various intervals until the incident is under control.*
 - Initiate progress/incident status reports at various intervals until the incident is under control.*
 - Provide reminders to conduct Personnel Accountability Reports (PAR) based upon incident criteria.*
- V-7** *The Genesee County Fire Advisory Board, working collaboratively with the County's fire departments should update their membership rolls to remove inactive members. The continued existence of large membership rolls dilutes the message that a department is in need.*
- V-8** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services should form a committee to begin the development of a comprehensive County-wide Standard Operations Procedures/Guidelines (SOP/SOG) manual utilizing existing SOPs/SOGs as a starting point. They should also consider the development of County-wide operational manuals based on the Northern Virginia Regional Fire Services manuals. This could even be pursued as a regional endeavor with the other counties in the GLOW region. The committee should be comprised of members of various companies and ranks.*

V-9: The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services should adopt a standardized SOP/SOG form that includes the following information:

- ***Title of the SOP/SOG***
- ***Number of the SOP/SOG***
- ***Category of the SOP/SOG (EMS Operations, Training, Administration, etc.)***
- ***Page number and total number of pages***
- ***Effective date***
- ***Revision date (if applicable)***
- ***Approval/signature***

Each SOP/SOG should, at a minimum, contain the following sections:

- ***Purpose***
- ***Scope (if necessary and appropriate)***
- ***Definitions of terms (If necessary and/or appropriate)***
- ***Procedure(s)/Main body***
- ***References (If necessary and/or appropriate)***

CHAPTER VI - EMS OPERATIONS

EMS operations are an important component of the comprehensive emergency services delivery system in any community. Together with the delivery of police and fire services, it forms the backbone of the community's overall public safety life net. In fact, as a percentage of overall incidents responded to, it could be argued that EMS incidents constitute the greatest number of "true" emergencies, where intervention by trained personnel does truly make a difference, sometimes literally between life and death.

Heart attack and stroke victims require rapid intervention 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, 7 to 10%, with each passing minute that cardio-pulmonary resuscitation (CPR) or cardiac defibrillation and ALS intervention is delayed. Few attempts at resuscitation after 10 minutes are successful.

This study initially began as primarily focused on the volunteer fire response system. However, as the MRI study team started to gather information, the current challenges facing the EMS delivery system were noted. The study then evolved into a fire and EMS study as it became evident that the adoption of recommendations to improve the EMS system would most likely have the ancillary benefit of improving the fire system as well.

Emergency medical service (EMS) organizations in New York have been stymied over the years based on significant financial constraints. Funding and reimbursements in the EMS systems across the country have become extremely problematic and to the point where many services are incurring numerous debts providing emergency medical services at a greater cost than they can recuperate from the insurance companies.

These services provided at the community level are dictated by the fee and reimbursement structure established by the local community. It is at this local level, and local option, that helps to underpin the quality of EMS service provided to the communities. Many of these EMS services have had continual challenges with recruitment and retention of personnel, limited training opportunities, lack of resources and equipment, difficulties in the replacement of vehicles, and building and maintaining critical infrastructure such as stations for the deployment of resources.

Typically, when ambulance services affiliated with a fire department provide emergency services and then transport a patient, that emergency service then has the ability to bill the insurance carrier for the patient to recover some of the expenses for providing patient care. Some of these expenses include personnel costs, fuel, vehicle, and equipment use, and cost of

supplies. Unlike other states in the country, New York has never had this legislative ability to recoup these costs leading many smaller communities and organizations into financial deficits requiring the taxpayers to help subsidize these services.

However, in April 2022, through the work and legislative efforts of many state, county, and local officials, the EMS Cost Recovery Act was passed into law. This legislation now allows for fire-based EMS services to bill insurance companies for services provided to patients that are transported. Before the passage of this EMS Cost Recovery Act, General Municipal Law, section 209-b (4) prohibited fire-based EMS from billing for services. The passage of this legislation is a major accomplishment that will serve to shore up the EMS delivery system in many communities, especially smaller ones.

The COVID-19 pandemic certainly created additional challenges for emergency service organizations. Personnel limitations, based on both anxiety and illness, created staffing challenges for many services. Decontamination procedures were heightened and required even greater scrutiny than in pre-pandemic times leading to increased out-of-service times for many ambulances. Staffing shortages in hospitals lead to increased turnover times for patients at the hospital thus keeping the ambulances out of service longer for 911 response. In addition to providing for the highest level of personal protection and safety of all personnel, the costs for supplies increased dramatically during this time. As an example, the cost of a regular box of medical-grade gloves for personal protection quadrupled in price. Increases such as this for all supplies continued to exacerbate and compound the financial struggles already seen in many services.

Response times are always a critical component of any emergency response system. Communities throughout Genesee County currently have a tiered response system in place with their local emergency response agencies to provide quick, reliable medical care and response throughout the region. A tiered EMS response system incorporates ALS-level services providing coverage for a larger geographical area whether that is county-wide or just a large response district. These ALS level services are supported and supplemented by BLS and first responder level services that are more saturated throughout these same areas and arrive on scene providing initial assessment, stabilization, and treatment.

Response times can provide some confusion based on the matrixes being measured and evaluated. Every response has a call processing time, dispatch (notification) time, turnout time (time of notification until personnel are in the vehicle and physically beginning their response to the scene), time of response from their turnout time to arrival on the incident scene, and time of arrival at the patient.

EMS responses are divided into either the BLS or ALS category. The primary caregiver at the BLS level is an EMT, who is the foundation of the basic level of EMS care. At the ALS level, the

primary caregiver is a Paramedic, who has more advanced training and therefore, can accomplish a higher level of pre-hospital care. Emergencies such as fractures and general illness are dispatched at the BLS level, while emergencies such as chest pain and difficulty breathing are dispatched as ALS emergencies.

The National Fire Protection Association (NFPA 1710) standard, *Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, is a nationally recognized consensus standard that helps to define levels of service, deployment capabilities, and staffing levels for substantially career fire departments. This standard outlines the following criteria for EMS responses (excluding alarm handling times) and performance objectives for the first due response areas that are identified by the Authority Having Jurisdiction (AHJ) (Figure VI-1):

- 60-second turnout time for EMS responses 90% of the time.
- 240 seconds (4 minutes) or less travel time for the arrival of a unit with a first responder with an automatic external defibrillator (AED) or higher-level capability at an emergency 90% of the time.
- 480 seconds (8 minutes) or less travel time for the arrival of advanced life support (ALS) unit at an emergency medical incident, where this service is provided by the fire department provided a first responder with an AED for basic life support (BLS) unit arrived in the 240 seconds or less travel time 90% of the time.

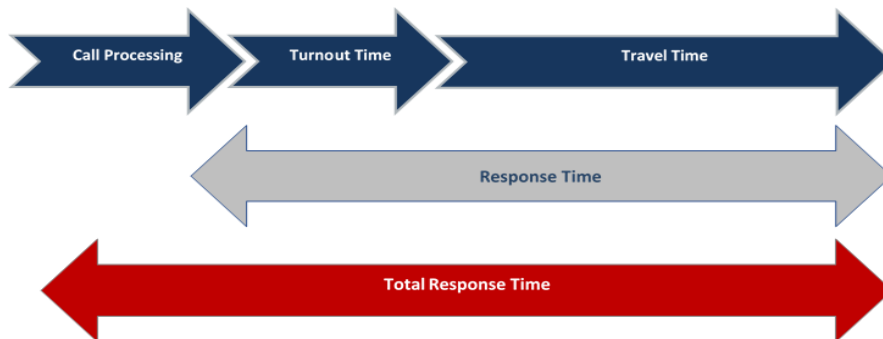


Figure VI-1: NFPA 1710 Total Response Time Components

The Commission on Accreditation of Ambulance Services (CAAS) sets a benchmark response time of eight minutes, fifty-nine seconds (**00:08:59**) for an ambulance to arrive on scene.

Dispatch times have different components that break down specific segments of emergency communications during operations. Typical segments of the communications include:

- **Alarm answering time:** The time interval from when the alarm is received at the communications center and the alarm is acknowledged at the communications center.
- **Alarm handling time:** The time interval from receipt of the alarm at the communications center and to the beginning of the communications center transmitting the information to the emergency response units via voice or electronic means.
- **Alarm processing time:** The time interval from when the alarm is acknowledged at the communications center until the information begins to be transmitted via voice or electronic means to emergency response units.

Given these parameters for alarm handling times, national standards as outlined in 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* (2020), note that calls requiring emergency medical dispatching and pre-arrival medical instructions should have an emergency alarm processing time completed in 90 seconds, 90% of the time and 120 seconds 99% of the time.

Currently, two emergency medical service agencies provide the majority of EMS transport capabilities in Genesee County, NY. These agencies are Mercy EMS and LeRoy EMS. Interviews with both of these agencies found the following significant information:

Mercy Flight EMS:

- Non-profit EMS service that began providing exceptional service to the county as the primary provider in September 2009.
- Mercy Flight EMS services are provided county-wide. They have contracts with several municipalities for the provision of services, but they do not contain any response or performance criterion. No subsidies are provided for their services. Only funds received from the county are thirteen thousand dollars per year for rent on their flight service. Contracts are in place with Batavia Hospital and some other nursing homes for transports.
- Ideally, 3 ambulances and 1 fly (quick response) vehicle should be deployed for Genesee County 9-1-1, 24/7/365.
 - At the time of this study, Mercy was experiencing a severe staffing crisis (not unlike many other EMS organizations, particularly at the basic EMT level) that in an increasing number of times, left no ambulance immediately available for 9-1-1 emergencies. This situation is exacerbated by the fact that Mercy has only a limited number of contracts in the county, and they do not include any minimum staffing or deployment provisions, establish response or performance criteria, or

require periodic reporting. And Mercy does not receive any subsidy for providing services to Genesee County.

- Staffing continues to be a challenge and the pool for paramedics is not increasing substantially in the area.
- Approximately 7,000 transports were completed in 2020.

LeRoy EMS:

- Small, combination 501c3 non-profit organization that is primarily staffed with career personnel. There are some volunteers, but many times are limited in participation based on other time constraints. There is full-time staff on-duty 24/7/365.
- They staff one ambulance 24/7/365. They also have a paramedic fly (quick response) unit and 1 backup ambulance.
- There are about 20 employees. Seven of these are full-time and the rest are per diem.
- Call volume is approximately 1,000 per year.

Analyzing the data from all emergency response organizations from just 2020, a common trend was found for types of responses. This trend showed most organizations had a greater proportion of EMS-related responses than any other types of calls. This theme is consistent with other emergency services across the country and demonstrates the ongoing demand for emergency services pertaining to EMS. It should be understood that data input and coding from each agency may differ but examining the broad categories of EMS demonstrate this common trait.

2020 Call Volume Analysis	300- Rescue Ems Incident	311- Medical Assist	320- Ems Incident	321-Ems Call	322- MVC w/Injuries	324- MVC No Injuries	Total % Overall Call
Alabama	61	6	7	108	13	10	76.50%
Alexander	0	0	1	64	11	9	34.20%
Batavia Town	0	10	0	1	31	21	20.30%
Bergen	0	0	0	188	21	12	62.60%
Bethany	66	28	3	7	10	2	68.70%
Byron	0	0	0	146	8	3	64.10%
Corfu	1	0	0	85	6	0	62.20%
Darien	0	9	9	80	9	8	60.40%
East Pembroke	193	0	0	0	15	14	76.80%
Elba	0	88	1	1	11	0	59.50%
Indian Falls	0	94	0	1	8	21	58.50%
LeRoy	14	10	2	0	1	8	16.20%
Oakfield	0	0	0	201	9	8	79.30%
Pavilion	0	2	0	23	13	0	24.50%
Pembroke	0	1	0	103	36	3	74.80%
South Byron	0	3	5	0	1	2	18.70%
Stafford	165	0	0	0	15	9	69.74%

Figure VI-2: EMS Incident Breakdown by Municipality and General Category

Figure VI-3 illustrates EMS response travel time bleeds, from each Genesee County EMS station. Shown are NFPA 1710 travel times of four minutes or less, along with CAAS travel times of nine minutes or less. The map also illustrates areas of the County that are between nine- and twelve-minute travel times from an EMS station, along with areas that are greater than 12 minutes. Only a relatively small percentage of the County is outside of the nine-minute benchmark established by CAAS. They are primarily areas that are on the fringes of the County and thus would have a significantly lower call volume, and where longer travel times would be expected.

Based on the current BLS deployment points throughout the county, the BLS travel times are mostly under nine minutes for all areas in the county. However, this factor can be a bit misleading. Many of the fire companies which provide BLS first responder services do not have transport capabilities, so this personnel must wait for the arrival of an ambulance. Even the fire companies that have transport-capable BLS ambulances (Alexander, Bergen, Bethany, Byron, and Darien) cannot always provide staffing to allow these units to respond. In these cases, transport is delayed until the arrival of another ambulance. Figure VI-3 illustrates the locations of BLS units, both first responder and transport capable, as deployed throughout Genesee County. It also shows response time bleeds from each station.



Figure VI-3: Genesee County BLS EMS Unit Deployment Map with Response Time Bleeds

Figure VI-4 illustrates ALS response travel time bleeds, from each Genesee County ALS unit deployment point. Shown are NFPA 1710 travel times of eight minutes or less, along with CAAS travel times of nine minutes or less. The map also illustrates areas of the County that are between nine- and twelve-minute travel times from an ALS station, along with areas that are greater than 12 minutes.

As illustrated, Advanced Life Support (ALS) response times throughout the county have proven more challenging to meet. In addition, although Mercy EMS nominally strategically deploys three ambulances in Genesee County, the more recent reality is that there is often only one or fewer units available to 9-1-1 EMS. The two primary deployment points, one for Mercy EMS and one for LeRoy Ambulance do not cover the majority of the county in eight or nine minutes or less. Most notably is the large percentage of the County with ALS – or BLS ambulance responding from Mercy base - travel times on average exceeding twelve minutes or greater. This type of delay in receiving either BLS or ALS care can be significant in the overall positive outcome for a patient having a medical emergency. ALS therapies such as medication administration, IV therapy, cardiac monitor and rhythm recognition, and advanced airway capabilities can prove to be vital procedures that are critical for a positive patient outcome. Delay in any of these therapies could lead to an unsuccessful outcome or a prolonged admittance to the hospital for recovery. Figure VI-4 illustrates both the ALS response times, as well as, the BLS ambulance response times when Mercy is deployed from a single location.

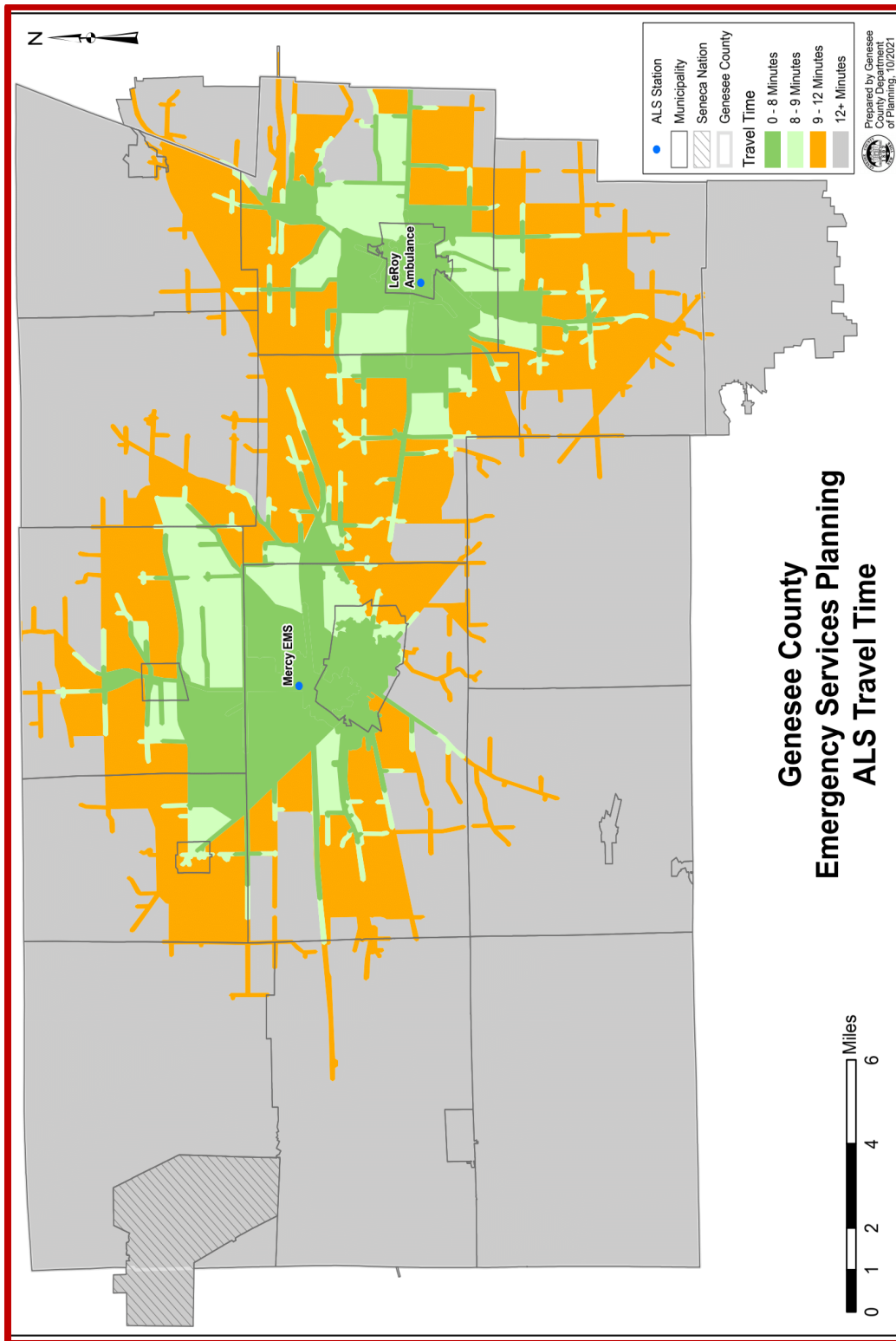


Figure VI-4: ALS and Single Mercy EMS BLS Deployment Response Time Bleeds

Emergency Medical Dispatch (EMD) is a systematic program of handling medical calls. Trained Telecommunicators, using locally approved EMD Guide cards, quickly and properly determine the nature and priority of the call, dispatch the appropriate response, then give the caller instructions to help treat the patient until the responding EMS unit arrives. A comprehensive EMD program can reduce agency liability by providing thorough and consistent dispatch instructions, and can help meet the growing public expectation that when citizens call 911, appropriate medical care will be provided as quickly as possible.

Surveys completed by responders throughout Genesee County outlined their understanding and importance of these same standards. Responses from these surveys found that out of the 226 that responded, 195 or over 86%, felt very important or extremely important that their departments meet these standards. A follow-up question to the same group of respondents was asked if their departments were meeting these standards. Out of the 226 that responded, 96 or just over 42% stated no they were not.

Another pronounced theme in the surveys from responders was the challenge of initial and ongoing training requirements. Contributing factors to this included lack of time for completing the training, lack of opportunities for obtaining the training, and limited funding for training opportunities and continuing education classes. These same topics were highlighted in the Genesee County Emergency Services Task Force Report stating that one of the greatest problems identified is the time demands placed on personnel much of which comes in the form of training.

Below are some direct quotes pulled from responder surveys when asked the question about the three most significant challenges facing fire and EMS organizations that protect Genesee County in the next five to ten years:

- ***Volunteerism is being killed by social changes and increasing training standards for liability reasons. With fire call volumes being low and EMS requests high we are at the point of high-risk low frequency events being a large concern. People don't want to put in the time to train to fight 1-2 fires annually.***
- ***State forcing rules, basically force out members of volunteer department by increasing training requirements.***
- ***My parents come from a family of 5 kids. No one is having 5 kids these days. Less population. Training hours for interior have turned many people away from my department from doing interior training.***

- ***Due to the hourly time for training and personnel working two jobs it is hard to keep up with training demands.***
- ***We are losing more members than we are gaining. It is very concerning. I believe it is a joint issue of the number of training hours required per NYS training is very important, but not all have the same motivation as others.***

These training challenges have been seen across the country for all providers for both initial and ongoing requirements. The State Emergency Medical Services Council adopted the National Educational Standards to be used in New York State. The National EMS Scope of Practice Model has four separate and distinct levels of EMS licensure for all personnel: Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), Advanced EMT (AEMT), and Paramedic. Each of these levels represents a comprehensive knowledge base and skill set that compounds from the previous level to provide a foundation for EMS competency of pre-hospital providers. Initial hours for each level of care are as follows:

- EMR- 48-60 hours
- EMT- 150-190 hours
- *NYS will not change the requirements for Critical Care for now
- AEMT- 160-200 hours
- Paramedic- 1000-1200 hours

For ongoing EMS requirements, currently, providers need to complete the following once every three years:

- CFR- 25 total hours
- EMT- 45 total hours
- AEMT- 50 total hours
- EMT Critical Care- 55 total hours
- Paramedic- 60 total hours

Online training has become more popular over the years particularly given the recent challenges the country has faced with the COVID-19 pandemic. Online learning provides opportunities for individuals to complete initial or continuing education in their respective fields at the convenience of their own homes or departments. Online learning eliminates the need for people to travel to remote areas, out of their coverage and response districts, and take additional time above and beyond the program to attend. Online learning allows participants to complete the programs at their own pace and their own schedule.

One limitation that needs to be considered for the implementation of these types of programs is access to internet capabilities and other technologies as part of the infrastructure for these online platforms. Given the technical components required in the EMS field, there will always need to be a hands-on practical skills evaluation method for most programs that are offered. Many of these programs have hybrid models that enable participants to complete all didactical modules followed by a practical skills evaluation session done face-to-face. Numerous examples of such classes can quickly be found on the website of the American Heart Association (AHA). Classes such as Bloodborne Pathogens, First Aid, CPR/AED, pediatric programs, Advanced Cardiac Life Support (ACLS), and opioid education can all be readily found in hybrid formats.

Many regions around the country have implemented large public training programs with public access defibrillators, stop the bleed kits, and overdose kits to help minimize the time of the medical event occurring until care is initiated by someone. These public access training programs teach those willing, the skills needed to initiate care and begin to stabilize the medical emergency thus narrowing the window of time care otherwise would have been delayed. Many individuals are willing to take these training programs not only to help their communities but also understand that it could potentially help their family members.

Community CPR and Automated External Defibrillator (AED) training programs help to assist with this initiative of early bystander care. Public access defibrillators in or near places of assemblies help to provide greater access and rapid response for an AED when someone experiences an out-of-hospital cardiac arrest.

Technology that is currently available to assist in providing rapid care to patients experiencing a medical emergency is a mobile phone application called PulsePoint. This technology allows subscribers with this mobile application to receive notifications when someone in their immediate vicinity, in a public location, is experiencing a cardiac arrest. The application uses the current location of the subscriber and interfaces with local agencies' communications centers and signals or alerts the users when someone is having a cardiac-related event. This system provides a form of crowdsourcing and enables citizens who are training in cardiopulmonary resuscitation (CPR) the ability to utilize their skills and minimize the time a trained person begins life-saving procedures that would hopefully reduce the potential of sudden death from cardiac arrest. To further support this public application, public access defibrillators can be placed throughout the county, particularly near places of assembly.

Mobile integrated health (MIH) programs have become more pronounced and integrated into geographical areas across the country to help minimize some of the costs associated with emergency medical care and treatment as well as provide alternative solutions for medical events and minimize the demands placed upon emergency rooms in hospitals. These MIH programs have become multi-faceted providing a collaborative approach and partnership between local EMS providers and other public health organizations to prevent illnesses and injuries through proactive measures and delivery systems. These programs can provide pre- and post-hospital services that deliver a coordinated continuum of care that supports the patients' needs in the community and provides an innovative delivery model that addresses any gaps in service to prevent any unnecessary hospitalizations.

Funding and reimbursements in the EMS systems across the country have become extremely problematic, to the point where many services are incurring escalating debt, by providing emergency medical services at a greater cost than they can recuperate from the insurance companies. These services provided at the community level are decided upon and fees are established at the agency level, but reimbursement is dictated by the federal government and private insurers. It is this local level, and local option, that helps to determine the quality of EMS service provided to the communities.

Fees for emergency medical services are currently established by each individual EMS agency based on Medicare rates, industry norms, and individual operating expenses. Autonomy at the local level needs to be maintained for continually establishing these fees thereby allowing communities to determine their level of service. Advancements and changes in technology such as cardiac monitors, tablets, intravenous pumps, or ultrasound technology that is already being used pre-hospital to help diagnose medical emergencies such as a collapsed lung or internal bleeding will all be stymied if reimbursement rates fall any lower, and rates are not allowed to be adjusted.

Payer mix in EMS is a reflection of the diversity of insurance carriers patients have which are transported by ambulance services. This payer mix can significantly impact the amount of revenue collected from patients transported by ambulance services. Medicaid payment rates for ambulance services are often approximately 70% less than the actual cost of providing them. Federal regulations at 42 CFR 447.3000 and Section 1902(a)(30) of the Social Security Act allow states to establish alternative payment methodologies including supplemental payment and certified public expenditures (CPE) methodologies. This discrepancy in reimbursement is so dramatic and damaging to many services that the CPE program was afforded to participating services to help offset some of these challenges. Federal rules allow certain health care provider organizations to utilize CPEs to draw down federal funds to compensate for unreimbursed costs for medical care provided to Medicaid recipients. However, even with the implementation of this program, services are still not realizing reimbursement for their true costs of providing the highest quality of care.

In addition to the Medicare and Medicaid insurance reimbursements, EMS organizations are struggling with many third-party insurance payors, who send payments for EMS services directly back to the subscriber who received the service. Many of these subscribers, knowingly or unknowingly, do not forward these reimbursements back to the EMS organizations. This topic and concern were recently noted in the EMS in Crisis perspective as outlined by Michael Benenati in a presentation to the NYSEMSCO-Systems Committee in 2021 (Appendix H). Complicating the financial picture even more for the EMS service providers is the continuing uncertainty over the future of the Affordable Care Act as it continues to face legal challenges and legislative efforts to dismantle it.

These fiscal challenges inhibit the ability to provide sufficient resources and challenge the sustainability of continuing the current high level of service that has been delivered to residents and visitors in Genesee County. This trend cannot continue, and assurances need to be established to continually improve the operational capabilities and quality of service to the communities.

With state budgets under significant pressure, the prospects for addressing this inequity with traditional measures are dim. The ability for local municipalities to establish their own fees helps to provide that strategic direction and financial forecast to meet the increasing service demands and public expectations. However, as municipal funding for emergency services has stagnated, EMS operations, specifically the fees collected for emergency room transportation, have become an important source of revenue for municipalities and EMS organizations. While the volume of non-emergency calls can strain the capacity of local EMS services and impact their ability to respond to other emergency calls, the additional revenues transport activity generates has generally offset its costs. This is at least partially contributing to the current situation in Genesee County.

Some legislative actions that could be taken to provide EMS organizations with additional means to recuperate some of their operating expenses for providing emergency medical treatment and provide a much-needed financial boost to the EMS delivery system include:

- Require insurance companies and Medicaid to reimburse EMS agencies for responses in which EMS personnel provided medical treatment to the patient but ultimately did not transport them to a healthcare facility.
- Require insurers to submit payments directly to the EMS provider rather than sending it to the patient.

Looking forward, the MRI study team believes there are several options for the county to consider in order to provide a stronger foundation for EMS service to the region:

Option #1- Negotiate signed contracts with Mercy EMS and LeRoy Ambulance for county wide ambulance coverage

Although both Mercy Flight EMS and LeRoy Ambulance have provided professional, reliable, and high-quality patient care to the county for years, the county remains vulnerable to service issues since neither organization provides services under a signed contract. Neither Mercy EMS or LeRoy Ambulance has any obligations and there is no oversight regarding their performance.

The MRI study team believes strongly that consideration should be given to Genesee County issuing an RFP for the provision of countywide EMS services. The county could then enter into formal contracts with both Mercy and LeRoy for their designated areas of primary EMS coverage. The contracts should reference the need to have four ALS units available – and strategically deployed - in the county dedicated to 9-1-1 emergency response based on peak call demand during the day. The number of units could possibly be reduced at night, again, based on call demand. Under this scenario, illustrated in Figure VI-5, Mercy would strategically deploy three units and LeRoy would deploy one. Suggested deployment points in addition to Mercy and LeRoy bases would be South Byron and Pembroke Fire Departments. Deployment from these locations would help minimize arrival times for an ALS unit on the scene of medical emergencies.

Alternative deployment points could include the Byron, Stafford, or Alexander Fire Departments. However, with Alexander, the call volume in that part of the county is low, so if necessary, a quick response unit staffed with a single EMT may be more appropriate.

The contracts for service should have quarterly reporting as part of the parameters with specific response and performance benchmarks in place to be met and reviewed. The quarterly reports should include call volume, incident type and location breakdowns, response times including 80th and 90th percentile achievement of response criterion, number of patients transported, patient outcomes and number of times units were unavailable.

Implementation of this option anticipates that Genesee County would need to provide supplemental funding for the EMS providers to cover at least a portion of the difference between their expenses and the revenue they generate from providing this enhanced level of service.

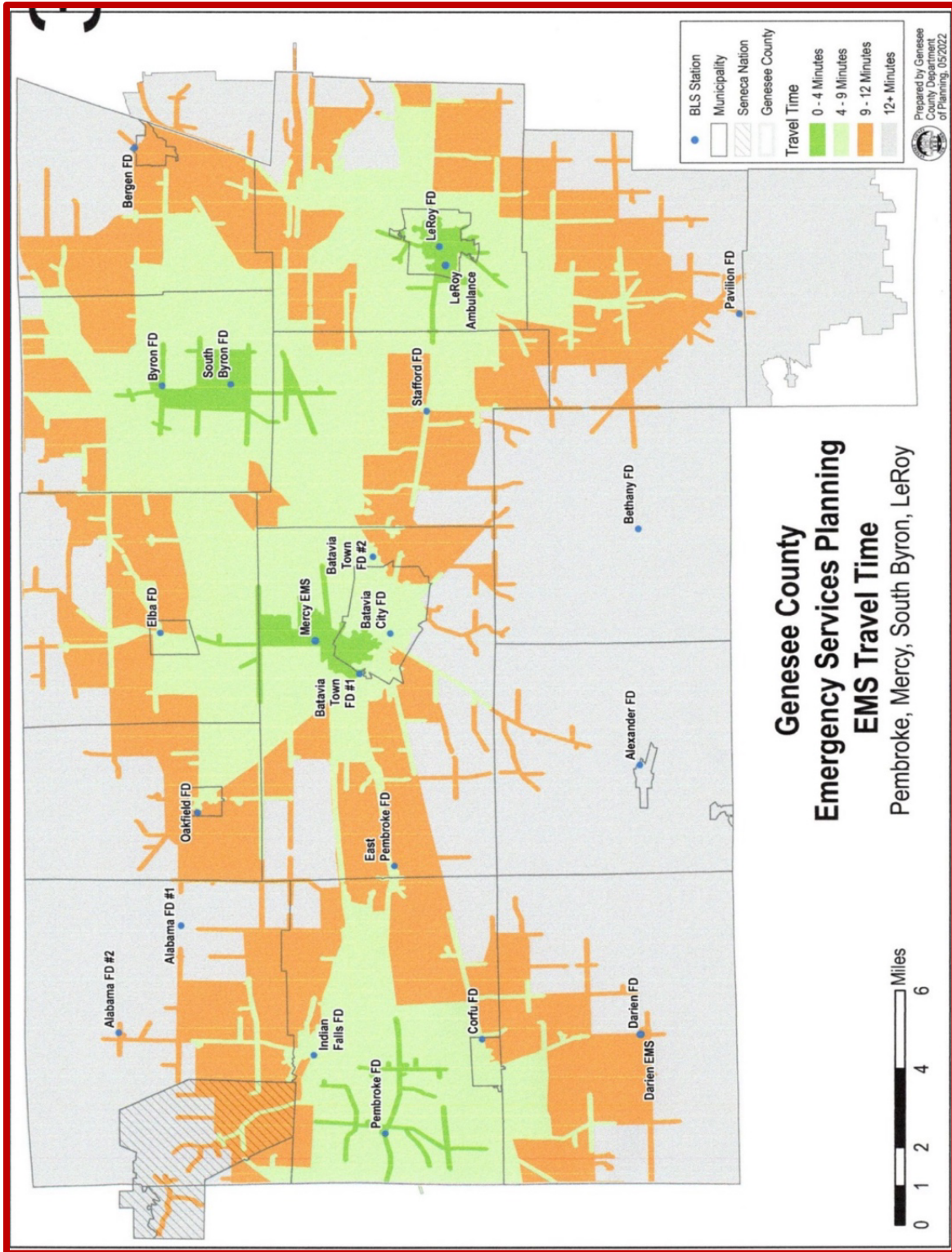


Figure VI-5: Genesee County EMS response Time Bleeds – Four Unit Deployment

Option #2- County to provide all EMS to communities

This model would have the county assume all EMS response and transport responsibilities for EMS. The county would have to hire full-time personnel and purchase all equipment and vehicles to staff four units. These units would need to be housed in strategic locations across the county to meet response time benchmarks county wide. While this concept is relatively new in New York state, several counties have either implemented this type of service or, are exploring the concept.

Neighboring Livingston County has a Department of Emergency Medical Services integrating nine transporting ambulance services, seven fire department first response agencies, four Advanced Life Support services, SUNY Geneseo First Response Agency, and three air medical agencies to provide consistent coverage throughout the county. In January 2022, the Wayne County Board of Supervisors started considering a proposal to implement a county-wide ambulance service. This proposal was precipitated by a study that indicated overall response times county-wide do not meet national standards.

In New Jersey, Gloucester County EMS (GCEMS) commenced operations on September 30, 2007, as the first, and as of mid-2022, still the only County-wide EMS system in New Jersey. Gloucester County has a population of about 300,000 in an area of 337 square miles. It is one of the fastest-growing counties in New Jersey.

The catalyst for the implementation of the system was concern expressed by several mayors in the County over increasing response times for EMS services. The mayors approached the County Board of Chosen Freeholders (NJ equivalent to the County Commissioners or Legislature) who commissioned a study on the feasibility of establishing a County-wide EMS service. As with any regional or County-wide initiative of this type, one of the biggest early hurdles was getting buy-in and support from local officials wary of losing control.

Initially, GCEMS served ten communities that generally had two reasons for deciding to join:

1. They were unable to manage their own service effectively.
2. They already had career staff and wanted to relieve themselves of that direct expense.

The service is funded as a line item in the County budget, so all residents of the County pay for it regardless of whether their municipality participates. Regionalization has also shifted the financial burden from municipal budgets to the County, thus distributing the financial cost of this service in a more equitable way. Since its inception, system efficiency has been perceived as equally important to quality of service. In 2008, the ten municipalities that initially joined in GCEMS in September of 2007 reported budgetary savings of \$2,649,259.00.

As of mid-2022, 22 of the County's 24 municipalities utilize the services of GCEMS. The Chief anticipates that the final two municipalities (two of the county's largest) will join in within the next several years.

The Board of Chosen Freeholders has established the CAAS standard of having an ambulance on scene within eight minutes and fifty-nine seconds (00:08:59) as the service benchmark. However, GCEMS consistently has an average response time of under six minutes (00:06:00).

GCEMS utilizes a dynamic staging model of operation, assisted by AVL, to continuously redeploy available staffed ambulances (those crews that are currently not on a call) in anticipation of additional calls for service. By moving crews around based on call volume, GCEMS can better assure uniform coverage throughout their coverage area. This deployment strategy potentially lowers actual response times to subsequent incidents and permits crews to arrive at the patient's location more quickly and efficiently.

Much the same as Mercy EMS (and many other EMS providers), one of the challenges that GCEMS is facing is finding an adequate number of qualified EMS personnel. To help offset this challenge the County provides a one-year (one day per week) training academy to potential employees at no cost to them. In return for receiving free EMT certification training, the students must agree to work for the agency at least part-time, for a minimum of three years. The final three months of the academy primarily involve the students gaining practical experience by riding as a third crew member on an ambulance at least 16 hours per week. There are three full-time personnel dedicated to the academy and two additional who handle clinical updates and training.

GCEMS also provides a significant amount of provider education to other agencies throughout the County. An annual symposium that was forced to be online in 2020 by COVID-19 still drew 750 participants. They also sponsor "Dialogue with a Doc" monthly where personnel can discuss various topics with doctors and other specialists. An alliance with an organization called MD I allows emergency department physicians to periodically ride with EMS crews to gain a better understanding of street-level care and needs.

Option #3 – Continue to integrate the volunteer EMS transport agencies into the system

Although they are all severely struggling with both staffing and funding, there is a possibility that at least some of the current fire department-based EMS transport agencies might still resist giving up this service entirely. With the new legislation that was recently enacted that allows these entities to bill for transport, that might provide an incentive for them to continue to provide, or even try to expand their services. Figure VI-6 illustrates a deployment model that has Mercy EMS and LeRoy Ambulance each deploying a single unit from their base stations. The

remainder of the coverage would be provided by ambulances responding from fire department locations which right now includes Alexander, Bergen, Bethany, Byron, and Darien.

As noted above, staffing and funding will make the implementation of this option challenging. The proposed Wayne County service would allow the existing EMS agencies to operate and serve their communities when fully available: the county plan would work in conjunction with local EMS agencies. Livingston County also utilizes a similarly integrated system.

In Harford County, Maryland (a suburb of Baltimore) the Harford County Volunteer Fire and EMS Foundation provides career staffing for ambulances to the county's volunteer fire departments. While requests to this organization for information on how they operate and are funded were not answered, it may be an option the county and its EMS providers may want to explore as part of their due diligence.

The Derby Ambulance Corps, a combination organization in Connecticut recently turned to a staffing agency to assist them with finding enough qualified EMTs. While Genesee County's more rural character may not make an option such as this feasible, again it is worth exploring.

Implementation of this option would be more feasible if Genesee County and/or the various municipalities would provide supplemental funding for the EMS providers to cover at least a portion of the difference between their expenses and the revenue they generate from providing this enhanced level of service. This would be the same need as for Option #1.

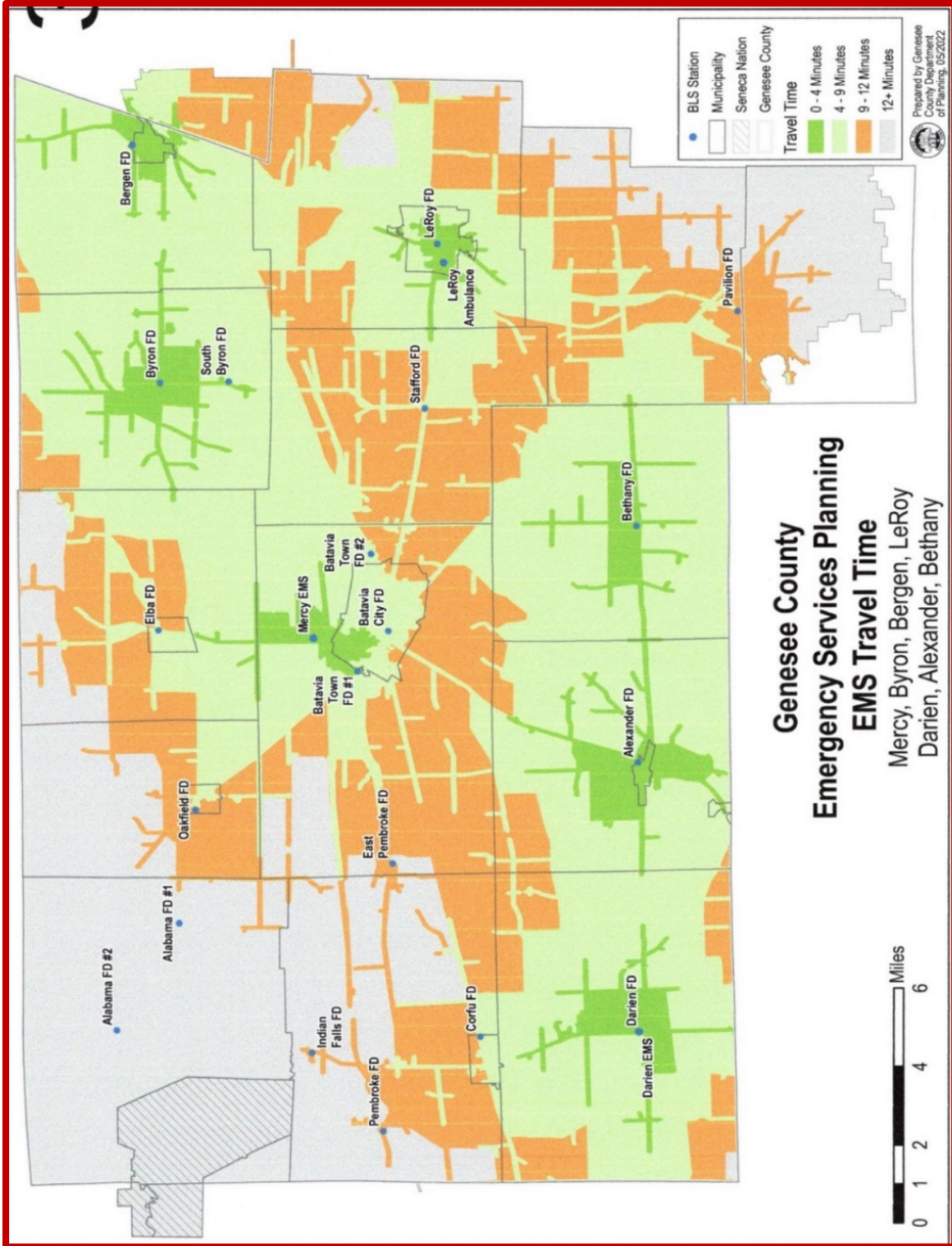


Figure VI-6: Genesee County EMS Response Time Bleeds Including Volunteer Deployment

Option # 4 - County staffs and deploys one ambulance/multi-purpose vehicle available for backup to Mercy EMS and/LeRoy Ambulance

In Chapter VII, Standards of Cover Response, the MRI study team makes a recommendation for the deployment of one or more quick response units to provide supplemental fire protection response, particularly during the day when volunteer personnel are less available. One innovative, and we believe very out-of-the-box option, would be to integrate – at least partially – both the fire and EMS functions into single multi-purpose vehicles.

Under this service model, Mercy EMS and LeRoy Ambulance would still serve as the primary EMS providers for the county, whether there are formalized contracts in place or not. (We recommend there still be contracts.) One of the county quick response units would be a multi-purpose combination fire suppression vehicle/ambulance which could be deployed during peak demand daytime hours, to supplement the EMS units from Mercy and LeRoy (Figure VI-7).



Figure VI-7: Multipurpose Combination Fire Suppression/EMS Transport Vehicle

These units have the following features:

- 500 gallon per minute fire pump
- 300-gallon water tank
- 2 – 1.75” preconnected attack lines
- 300 - 400 feet of supply line
- Compartmentation for rescue tools
- Complete ALS cable patient transport compartment

They can also be equipped with a larger crew cab for additional personnel and compressed air foam systems (CAFS).

This unit could be dispatched on every call to guarantee a response during daytime hours when volunteers are traditionally at work. Anytime Mercy EMS and LeRoy Ambulance were unavailable or would have a delayed response, this unit could also be dispatched to provide patient transport.

This unit would not need to be staffed at the ALS level initially but should be the goal for future considerations, particularly to minimize arrival times of an ALS unit in the western region of the county. If transport was initiated at the BLS level, and ALS therapies are needed, Mercy EMS, LeRoy Ambulance, or another ALS provider can intercept with this unit.

Options #5- County staffs and deploys one ambulance/multi-purpose vehicle available as primary response for western battalion and backup for other communities.

This service delivery model is similar to option #4. This option would have Mercy EMS serving as the primary EMS provider for the county, again with or without a contract. However, they would not station an ambulance in the western battalion thus reducing their required ambulances from three to two. The combination multi-purpose fire suppression/EMS transport vehicle would be deployed in the western battalion of the county and would be the primary ALS response ambulance for all medical calls in this region. Anytime Mercy EMS was not available for medical calls in other areas of the county, this unit would also respond. Suggested deployment locations would be the Pembroke Fire Department with East Pembroke as an alternative.

RECOMMENDATIONS:

VI-1 *Genesee County should seriously consider issuing an RFP for the provision of EMS services throughout the entire county (Option #1). The RFP should include expected levels of performance and establish benchmarks for the delivery of services. Signed contracts should be executed with the successful bidder(s).*

- VI-2** *The current emergency responders are dedicated individuals who have provided an immeasurable service to their communities. This resource should not be overlooked. For the foreseeable future, any response from a county or county contracted resource should still incorporate the tiered response from local responders – based upon their availability - to begin initial assessment, treatment, and care prior to the arrival of any additional units.*
- VI-3** *Genesee County should, at a minimum receive quarterly reports from each of the County’s EMS transport agencies. The quarterly reports should include call volume, incident type, location breakdowns, response times including 80th and 90th percentile achievement of response criterion, number of patients transported, patient outcomes, and number of times units were unavailable.*
- VI-4** *Genesee County should establish a fund for collection of revenue for any response for emergency medical services. These funds for service should be available to be put towards future operations of a county supplemented (or funded) EMS system, including to assist the volunteer EMS providers offset their expenses including for personnel, and not back into the general fund of the county.*
- VI-5** *Training for EMS responses needs to be implemented within the organizations. Examples of EMS training can include CPR, AED, selective spinal immobilization, oxygen therapy, splinting & immobilization, use of stretcher and stair chair operations, report writing and documentation, and taking vital signs along with patient assessments. These need to be documented and continued as part of department ongoing training. Over 60% of the department calls within the county are EMS-related and proficiency needs to be maintained. This training needs to have online components to allow personnel the flexibility to complete at their convenience*
- VI-6** *Mobile Integrated Health (MIH) / Community Paramedic programs should be explored and implemented after conducting a county analysis for areas of vulnerability such as the elderly having repeated slips and falls, or young children involved in motor vehicle collisions and the need for a child car seat program. The inclusion of this program could potentially be an addendum or option on a county contract for EMS services.*
- VI-7** *Genesee County should continue to provide and facilitate the purchase of all equipment such as communications, and maintenance agreements for all services. This should continue to control costs utilizing bulk purchasing and provide consistency and standardization throughout the region.*

- VI-8** *EMS technology should be enhanced and integrated into the operations. In particular, the county should acquire and distribute automated CPR machines to assist crews with patient care particularly given the extended response times for an advanced life support unit to arrive on scene.*
- VI-9** *Genesee County should consider the purchase a multi-purpose combination fire suppression/EMS transport unit vehicle to provide a supplemental county response framework. This purchase could be done as a lease in arrears so delivery of the unit could occur and the first payment for the unit would be one year after delivery enabling revenue to be generated from transports throughout the year.*
- VI-10** *Initial staffing of a multi-purpose vehicle unit should be based on peak call volume for the region. Typically, these units are staffed Monday-Friday from 0800-1600 or 1800 hours during peak hours and at times when volunteers are out of the area at their primary jobs and unable to respond. It should be staffed at a minimum to allow transport at the BLS level. Hours, when this unit is not staffed, will default to current local protocols and procedures until the system is further built out in phases over the years.*
- VI-11** *The Genesee County EMS Council should be reactivated to meet monthly with representatives from local fire departments, Genesee County Sheriff's Department 9-1-1 Dispatch Center, Genesee County Emergency Services, Mercy EMS, and LeRoy Ambulance. This group would meet and discuss any documented concerns or thoughts from the previous month to help enhance services in the future. The EMS Council should not be considered as a forum just for the airing of any grievances but an open forum for communication and feedback to improve the quality of EMS service to Genesee County.*

CHAPTER VII - STANDARD OF COVER RESPONSE

The Commission on Fire Accreditation International defines “Standards of Response Coverage” (SOC) as being written and adopted policies and procedures that determine the distribution, concentration, and reliability of fixed and mobile response forces for fire, EMS, hazardous materials, and other forces of technical response.³⁰ It is described as a “tool” to:

- Assess community fire and non-fire risk.
- Define baseline emergency response performance standards.
- Plan future station locations.
- Determine apparatus and staffing patterns.
- Evaluate workload and ideal unit utilization.
- Measure service delivery performance.
- Support strategic planning and policy development relative to resource procurement and allocation.³¹

This process is reliant upon the accuracy and comprehensiveness of a local fire agency’s needs, data, and policies.³² A SOC template guide is contained within the toolbox assembled for this report.

The SOC assessment process includes the following major components:

- Community baselines
- Risk assessment
- Standards, goals, and objectives
- Discussion of critical task capability of department
- Setting service level objectives
- Evaluation of reliability of fire companies
- Policy recommendations

³⁰https://www.iafc.org/files/1VCOS/sop_CPSE_CFAI_Standard_of_Cover_Template.pdf

³¹ http://www.iafc.org/associations/4685/files/downloads/CONFERENCES/FRI/FRI10/FRI10_sprSeminar33-StandardsOfCoverBasic.pdf

³² https://www.iafc.org/files/1VCOS/sop_CPSE_CFAI_Standard_of_Cover_Template.pdf

The appropriate deployment of resources is critical to any fire and EMS service being able to fulfill its core mission(s) safely and effectively. Some of the most important risk management decisions facing elected officials are:

- 1) How many fire and EMS resources do we need?
- 2) How many fire and EMS resources can we afford?
- 3) How should they be stationed/ positioned/ deployed **to provide maximum benefit to the community as a whole?**

These are never easy decisions considering that decisions on emergency service deployment that involve moving and/or relocating a resource may have a negative effect on at least a small percentage of the population.

There is no “right” amount of fire protection and EMS delivery; it is a constantly changing level based on the expressed needs of the community, community risk, and population change. In many ways, it is an economic decision. Response time, service demand, and response metrics are important measures to determine the health of a system and predict future needs. Getting emergency assistance on scene in the quickest time possible may be critical to the survival of the patient, and/or successful mitigation of an incident. Achieving the quickest and safest response times possible should be a fundamental goal of every fire and EMS provider.

When looking at response times, one must design a deployment strategy around the actual circumstances that exist in the community. The strategic and tactical challenges facing a department need to be identified and planned for through a community risk analysis. It is ultimately the responsibility of elected officials to determine the level of risk that is acceptable to their community. Once the acceptable level of risk has been determined, then operational service objectives can be established.

Genesee County’s fire and EMS protection system developed over time as each community grew and needed the service. It is also important to note that in many cases volunteer fire companies originally formed 75 or more years ago were based upon the need at that time. Today’s environment is different in terms of fire protection and EMS needs. Although community fire stations are often located well, the lack of staffing often renders them ineffective. With regards to EMS, the central hub deployment model prevents an adequate response to all locations in the county.

The community risk and vulnerability assessment that is part of establishing an SOC, evaluates the community as a whole, and with regards to property, measures all property and the risks associated with it, and then segregates the properties as either a high, medium or low hazard, which are further broken down into varying degrees of risk. These risk factors were expanded upon previously in *Chapter V, Fire Operations*.

Although Genesee County has performed a County-wide risk assessment as part of the County's emergency operations plan, and a few municipalities have completed more comprehensive risk assessments, many others have not. MRI also includes a basic assessment in *Chapter III, Emerging Risk Profile of Genesee County Fire and EMS Services*. Overall, Genesee County enjoys a low incidence of fire.

From the perspective of stations and apparatus, there are three (3) 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 driving factor as time; more so than any other factor, is a critical consideration in emergency incident response, whether the situation involves a fire or an emergency medical event. This fact makes the fire or EMS station a critical link in service delivery; where these facilities are located, is the single most key factor in determining overall response times. The current response times in Genesee County were discussed and analyzed in detail in *Chapter IV, Service Demand and Response Metrics*.

Response times are typically the primary measurement for evaluating fire and EMS services. Response times can be used as a benchmark to determine how well a fire department is currently performing, to help identify response trends, and to predict future operational needs. Achieving the quickest and safest response times possible should be a fundamental goal of every fire department. At the same time, the actual impact of a speedy response time is limited to very few incidents. For example, in a full cardiac arrest, analysis shows that successful outcomes are rarely achieved if CPR is not initiated within four minutes of the onset. However, cardiac arrests occur very infrequently, on average they are 1 to 1.5% of all EMS incidents.³³ There are also other EMS incidents that are truly life-threatening, and the time of response can clearly impact the outcome. These involve full drownings, allergic reactions, electrocutions, and severe trauma (often caused by gunshot wounds, stabbings, severe motor vehicle accidents, etc.). Again, the frequency of these types of calls nationally is limited.

Regarding response times for fire incidents, the criterion is based on the concept of "flashover." This is the state at which super-heated gasses from a fire are released rapidly, causing the fire to burn freely and become so volatile that the fire reaches an explosive state (simultaneous ignition of all combustible materials in a room). In this situation, usually after an extended period (often eight to twelve minutes after ignition, but at times as quickly as three to five minutes), and a combination of the right conditions (fuel and oxygen), the fire expands rapidly and is much more difficult to contain. When the fire reaches this extremely hazardous state, initial firefighting forces are often overwhelmed, a larger and more destructive fire occurs, the fire escapes the room and possibly even the building of origin, and significantly more resources

³³ Myers, Slovis, Eckstein, Goodloe et al. (2007). "Evidence-based Performance Measures for Emergency Medical Services System: A Model for Expanded EMS Benchmarking." Pre-hospital Emergency Care.

are required to affect fire control and extinguishment.

Flashover occurs quicker and more frequently today and is caused at least in part by the introduction of significant quantities of plastic and foam-based products into homes and businesses (e.g., furnishings, mattresses, bedding, plumbing and electrical components, home and business electronics, decorative materials, insulation, and structural components). These materials ignite and burn quickly and produce extreme heat and toxic smoke.

Flashover occurs quicker and more frequently today and is caused at least in part by the introduction of significant quantities of plastic and foam-based products into homes and businesses (e.g., furnishings, mattresses, bedding, plumbing and electrical components, home and business electronics, decorative materials, insulation, and structural components). These materials ignite and burn quickly and produce extreme heat and toxic smoke.

NFPA and ISO have established different indices in determining fire station distribution. The company travel distance model is employed by ISO to assist them with determining the Public Protection Classification (PPC) rating that is utilized for determining fire insurance rates by participating insurance companies. The ISO Fire Suppression Rating Schedule, section 560, indicates that in order to obtain maximum point value for this component of an evaluation, the first-due engine companies should serve areas that are within a 1.5-mile travel distance. The placement of fire stations that achieves this type of separation, creates service areas that are approximately 4.5 square miles in size, depending on the road network and other geographical barriers (rivers, lakes, railroads, limited access highways, etc.). For ladder companies, ISO suggests a 2.5-mile travel distance.

The National Fire Protection Association (NFPA) references the placement of fire stations in an indirect way. It recommends that fire stations be placed in a distribution that achieves the desired minimum response times. NFPA Standard 1710, section 4.1.2.1 (3) and (6), suggests an engine placement that achieves a 240-second (four-minute) travel time for the first arriving unit. Using an empirical model called the “piece-wise linear travel time function,” the Rand Institute has estimated that the average emergency response speed for fire apparatus is thirty-five mph. At this speed, the distance a fire engine can travel in four minutes is approximately 1.97 miles.³⁴

It is important to make several notes regarding the polygon models and the associated travel distances and times. First, the model often assumes that resources are distributed equally throughout a service area, which is generally not the case. In addition, the road network, and geographical barriers such as a railroad, a limited weight bridge, or limited access highways, can

³⁴ University of Tennessee Municipal Technical Advisory Service, Clinton Fire Location Station Study, Knoxville, TN, November 2012. p. 8

impact the distance units can cover over the same amount of time. Rural areas present longer travel distances to emergencies which translates into longer response times. This is the case in Genesee County.

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:

- Paragraph 4.3.2 on Staffing and Deployment states that Table 4.3.2 (Figure VII-1) shall be used by the 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 dwelling, 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. In Genesee County each of these demand zones can be found based upon population.

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

FIGURE VII-1: Staffing and Response Time Table from NFPA 1720

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. When applying any standard, including the NFPA standards, it is important to apply the document in its entirety. One should not selectively extract requirements to the exclusion of others or take a requirement out of context.

EMS responses are generally almost completely based on response times rather than travel distances. This is because a higher percentage of EMS incidents represent true emergencies

where time truly does matter. Paragraph 4.1.2.1 of 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*, 2016 states, "The fire department shall establish the following objectives":

- 240 seconds (four minutes) or less travel time for the arrival of a unit with first responder with an automatic external defibrillator (AED) or higher-level capability at an emergency medical incident.
- 480 seconds (eight minutes) or less travel time for the arrival of advanced life support (ALS) unit at an emergency medical incident where this service is provided by the fire department provided a first responder with AED or basic life support (BLS) unit arrived within 240 seconds or less travel time.

Although trying to reach the NFPA benchmark for travel time may be a goal, the question is, at what cost? What is the evidence that supports such recommendations? NFPA 1710's travel times are established for two primary reasons: (1) the fire propagation curve; and (2) sudden cardiac arrest, where brain damage and permanent brain death occur in four minutes.

Figure VII-2 shows the fire propagation curve relative to fire being confined to the room of origin or spreading beyond it and the percentage of destruction of property by the fire.

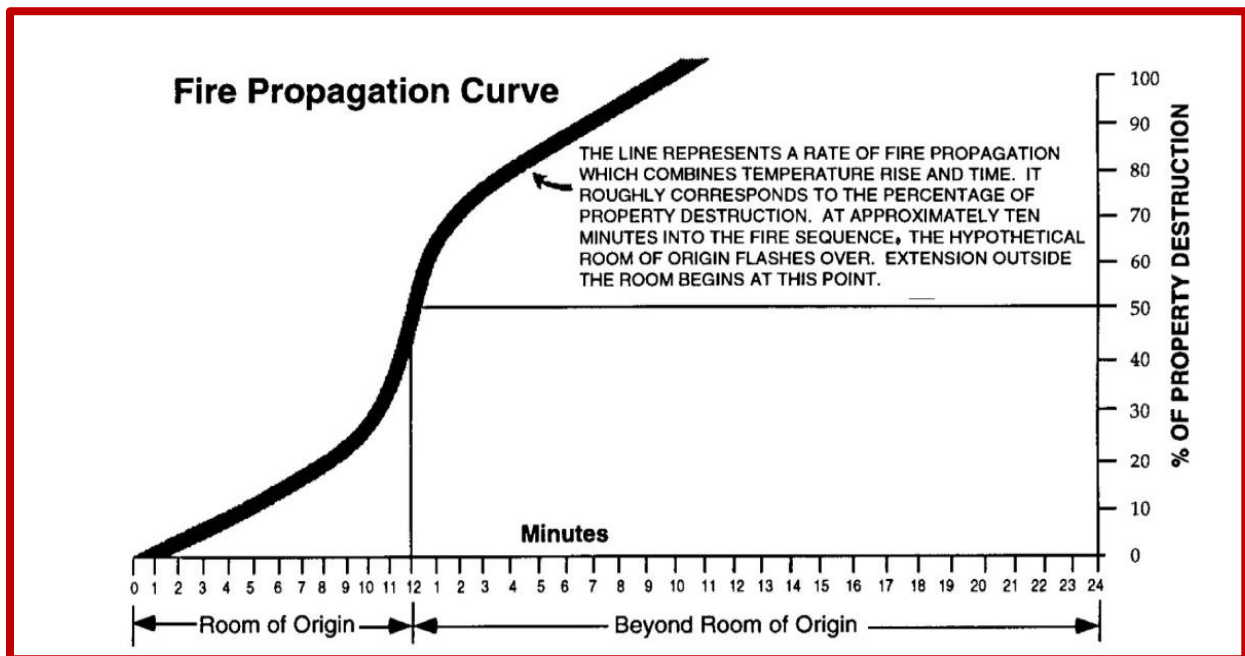


Figure VII-2: Fire Propagation Curve

Source: John C. Gerard and A. Terry Jacobsen, "Reduced Staffing: At What Cost?"

According to fire service educator Clinton Smoke, the fire propagation curve establishes that temperature rise and time within a room on fire corresponds with property destruction and potential loss of life if present³⁵. At approximately the eight-minute mark of fire progression, the fire flashes over (due to superheating of room contents and other combustibles) and extends beyond the room of origin, thus increasing proportionately the destruction to property and potential endangerment of life. The ability to quickly deploy adequate fire staff prior to flashover thus limits the fire’s extension beyond the room or area of origin.

From the EMS perspective, figure VII-3 illustrates the chain of survival, which is a series of actions that, when put in motion, reduce the mortality of sudden cardiac arrest. Adequate response times coupled with community and public access defibrillator programs potentially can impact the survival rate of sudden cardiac arrest victims by deploying early CPR, early defibrillation, and early advanced care.



Figure VII-3: Sudden Cardiac Arrest Chain of Survival

Source: “Out of Hospital Chain of Survival,”

The CAAS also promulgates standards that are applicable to their accreditation process for ambulance services. CAAS recommends that an ambulance arrives on scene within eight minutes, fifty-nine seconds (00:08:59) of dispatch.

It is important to remember that whatever travel time benchmark is established, that time is from when the emergency vehicle (fire truck or ambulance) is responding to the incident. Traffic conditions at various times of the day, weather, and call volume can all adversely impact emergency vehicle response times. In addition, most Genesee County fire stations are not

³⁵ Clinton Smoke, *Company Officer*, 2nd ed. (Clifton Park, NY: Delmar, 2005).

normally staffed for fire responses. The time it takes personnel to respond to the station after an incident is dispatched can add a considerable amount of time to the four-minute response. Again, traffic and weather conditions can further impact these times as well. Long travel distances to reach wide dispersed rural fire stations can also play a role.

At the time of this assessment, Genesee County did not have a defined standard of cover, nor was the MRI study team informed of any municipalities that have one, although some have response goals they try to obtain.

Meeting the benchmark standards recommended in NFPA 1710 and NFPA 1720, was important to all three of the stakeholder groups that participated in the online survey instruments, as well as the municipal officials who completed and returned the detailed questionnaires. Figures VII-4 and VII-5 provide a summary of those responses.

On the question: *National Fire Protection Association (NFPA) Standard 1710, sets a benchmark for career EMS services for a unit with Basic Life Support (BLS) capabilities to be on the scene of a medical emergency within 6 minutes of receipt of the call in the 9-1-1 dispatch center, and a unit with Advanced Life Support (ALS) capability within 10 minutes. And/or National Fire Protection Association (NFPA) Standard 1720 for volunteer fire response sets the following benchmarks for structure fire responses by volunteer companies:*

- *Urban communities: 15 personnel on scene in 9 minutes (population density > 1,000 per square mile)*
- *Suburban communities: 10 personnel on scene in 10 minutes (population density 500 - 1,000 per square mile)*
- *Rural communities: 6 personnel on scene in 14 minutes (population density < 500 per square mile)*

How important is it that your providers meet these standards in your local jurisdiction?

Overall, **85%** or more of the respondents to these instruments believe that meeting these standards are either very important or extremely important.

	CITIZENS	FIRE AND EMS PROVIDERS	LOCAL OFFICIALS	MUNICIPAL QUESTIONNAIRES
EXTREMELY IMPORTANT	58.7%	44.44%	45.45%	33.3%
VERY IMPORTANT	31.32%	42.22%	45.45%	27.8%

Figure VII-4 Importance of NFPA 1720 Compliance



On the question: ***Do you believe the fire and EMS providers that serve your local jurisdiction are meeting the standards described in the questions above?***

The most revealing response from this question, particularly from the citizens and the municipal officials who completed the questionnaires is the high percentage who replied that they did not believe they were. Less than half of all respondents in all categories believe that local emergency providers are currently meeting the referenced standards. Significant percentages also responded that they did not know. These responses suggest that both education, and better communications with, both the local officials and the citizens will be an important part of the process of continuing to develop and improve the delivery of fire and EMS services in Genesee County.

	CITIZENS	FIRE AND EMS PROVIDERS	LOCAL OFFICIALS	MUNICIPAL QUESTIONNAIRES
YES	41%	48%	45%	29.4%
NO	25%	43%	22%	29.4%
DO NOT KNOW	33%	9%	32%	41.2%

Figure VII-5 – NFPA 1720 Perceived Compliance

Response times and Standard of Response Cover along with illustrative maps were presented and discussed in *Chapter VI, EMS Operations*.

Figure VII-6 illustrates fire response travel time bleeds, from each Genesee County fire station. Shown are NFPA 1710 travel times of four minutes or less, along with NFPA 1720 travel times for urban (nine minutes or less), suburban (10 minutes or less), rural (14 minutes or less), and remote (more than 14 minutes) areas. As would be expected the areas closest to each fire station have the shortest travel times. However, even though it is very rural, most of the County still falls within the suburban response travel time of 10 minutes or less. Only relatively small areas of the County fall into the rural and remote travel time categories. Even in these areas, multiple units will probably be responding to incidents from various directions.

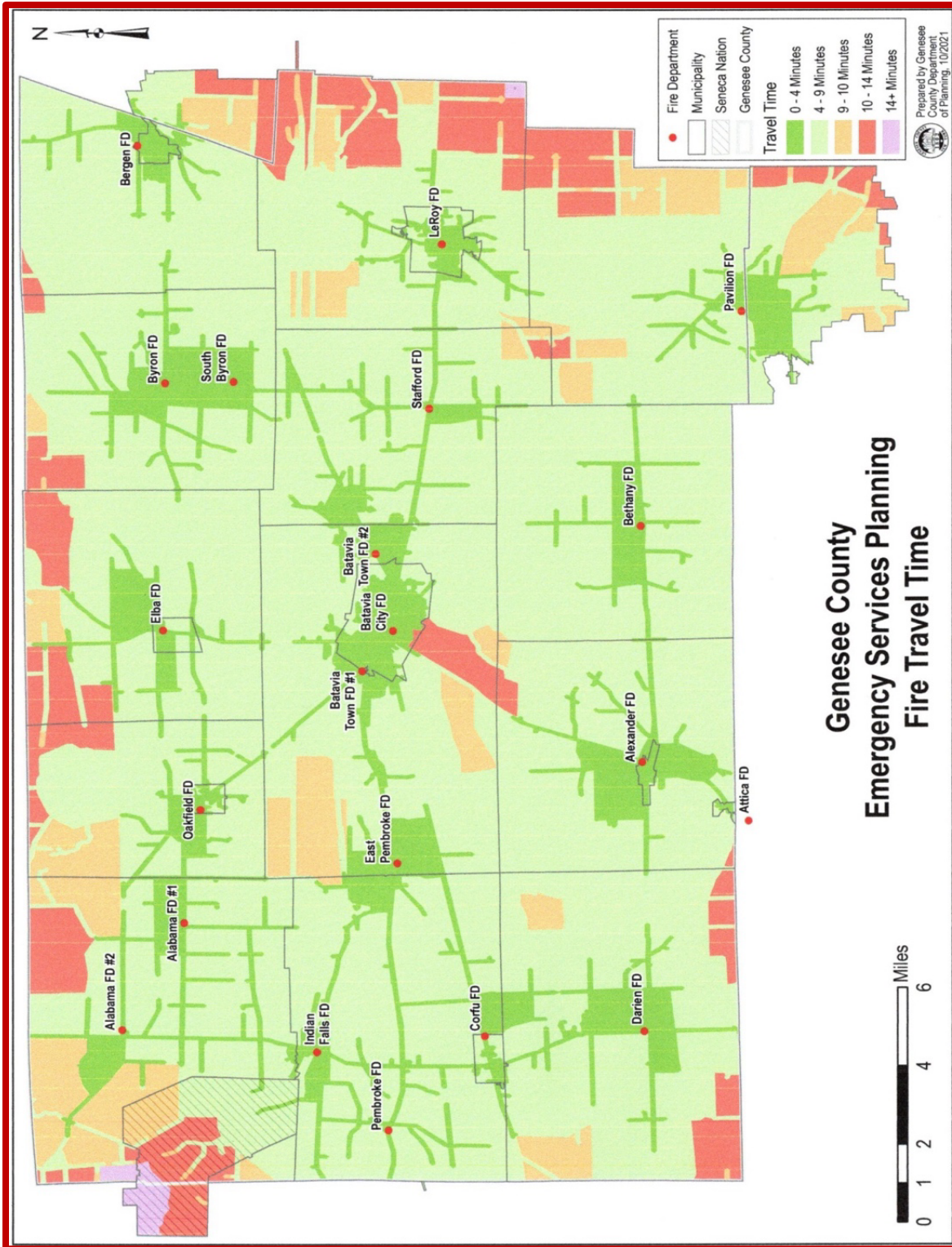


Figure VII-6: Genesee County Fire Response Time Bleeds

MRI fully supports the continued use of a strong primarily volunteer fire service in Genesee County, and, believes that this model can continue to serve the needs of the County for the foreseeable future. However, it is also clear that an aging and shrinking core volunteer group, indicate that the time has arrived for the County as a whole, to consider the transition to a combination fire service initially utilizing part-time per diem staff to supplement the volunteer personnel.

While effective, efficient, and safe emergency scene operations, particularly initial fire attack operations, is the overriding reason for considering the addition of part-time career staffing, that is not the sole justification. Some of the other benefits of having compensated staff in place, particularly during the day when most of the volunteer force is at their primary jobs, include, but would certainly not be limited to:

- Quicker and guaranteed compliance with the OSHA Two in-Two Out requirement for initial fire attack.
- Guaranteed, and usually immediate, EMS response by trained first responders to get lifesaving help to the 9-1-1 caller quicker if nearby ambulances are committed.
- Performing fire prevention inspections and other fire prevention activities.
- Developing pre-fire/incident plans.

To this end, the MRI study team proposes a phased approach. A discussion on funding for the recommendations contained in this and other chapters is found in *Chapter XII, Funding and Finance*.

1. At this time, and for the foreseeable future, the career staffing should be comprised solely of part-time per diem personnel.
2. The career staff should be hired by Genesee County and be under the direct supervision of the Department of Emergency Services, rather than any specific fire company chief. However, the fire company officers would have their normal authority to direct all subordinate personnel on any emergency incident in their response area, or where they are the incident commander.
3. The initial step in this process should be the establishment of a pilot program consisting of several daytime, quick response units; fire apparatus staffed with an officer and three firefighters, positioned strategically around the County in fire stations that wish to host them.
 - a. These units should initially be staffed with qualified volunteer personnel being paid a per diem.
 - b. The concept is that the force is for staffing only. The apparatus, stations, and equipment would belong to the local fire companies.

- c. Units should be in service from 6:00 AM to 6:00 PM, Monday to Friday.
- d. Initially, staff one unit, centrally located in the County. If the program is successful, the following year a second unit could be staffed, followed by a third unit in Year Three. At this point, there should be a unit in each geographic region of the County or battalion. Suggested deployment locations would be Town of Batavia Station 2, Leroy Fire Department, and East Pembroke Fire Department. Deployment locations and hours could be adjusted, based on data analysis.
- e. Because these units will provide wide area coverage throughout the entire County during times of reduced volunteer availability, the MRI study team believes that again, as part of a pilot program, these units should be funded through the County. If the personnel are paid \$25.00 per hour, and personnel provides a total of 720 staff hours per week (3 units x 4 personnel each x 60 hours per week), the first-year cost for salary would be approximately \$936,000.00.
 - 1. Cost to staff three units with full time staff = approximately \$1,350,000.00
 - 2. In New York state full-time career firefighters are limited to a maximum of 42 hours per week without receiving overtime.
 - i. Cost for one unit – 1st year = \$312,000.00
 - 3. Cost to staff same unit with full-time staffing = approximately \$450,000.00
 - ii. Cost for two units – 2nd year = \$624,000.00
 - 4. Cost to staff same units with full-time staffing = approximately \$900,000.00
 - iii. Total cost for all three units could be reduced to \$780,000.00 per year if in-service time was reduced from 12 hours to 10.
- f. Consideration should be given to the County applying for a FEMA Staffing for Adequate Fire and Emergency Response (SAFER) grant as a County-wide endeavor to improve compliance with NFPA 1720.

This plan ultimately calls for three units staffed with four personnel each. One big unknown factor here is, in the central battalion, is the City of Batavia willing to assume the role?

How many units can realistically be deployed? This is based on a willingness to pay. The MRI survey data suggests that the willingness is there but unknown to what extent.

Figures VII-7 through VII-9 illustrate the impact the quick response units would have on response times with a one-, two-, and three-unit configuration.

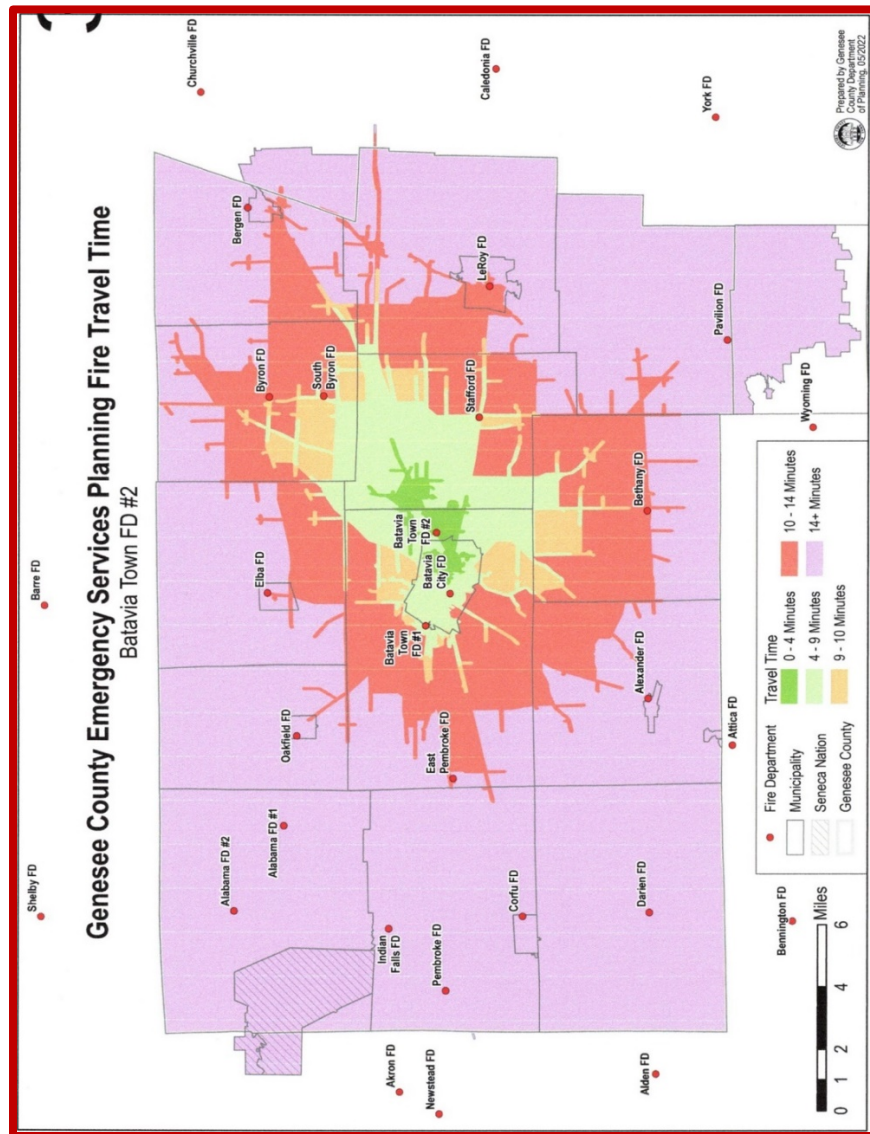


Figure VII-7: Quick Response Unit Coverage – 1 Unit

Under this scenario, it appears that slightly less than 50% of the County would be within a 14-minute response time by a single quick response unit.

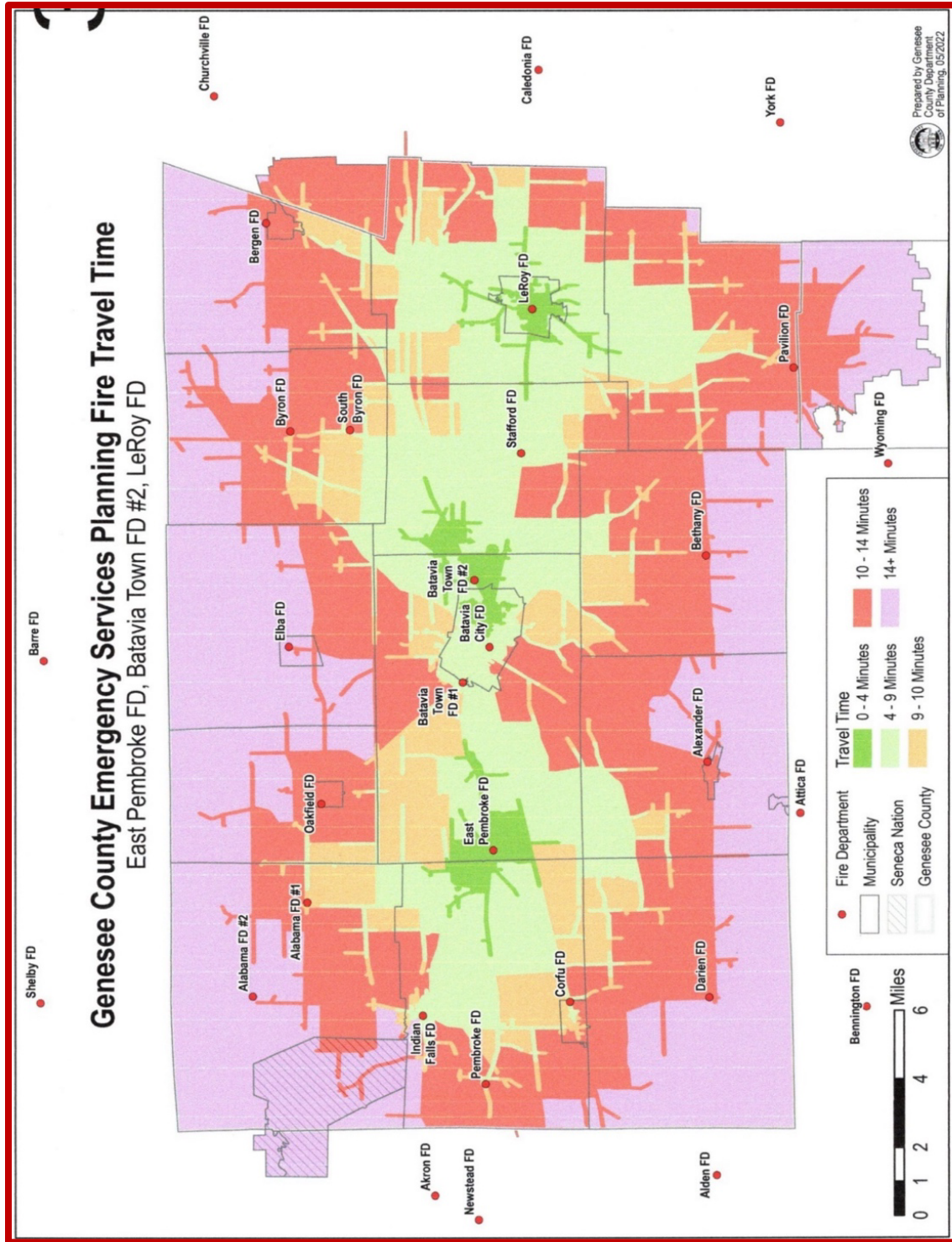


Figure VII-9: Quick Response Unit Coverage – 3 Units

With the three-unit deployment model, it appears that up to 75% of the county would be with a 14-minute response time for the closest unit. This is the best-case scenario. The same result

could be achieved with two units if the City of Batavia was willing to assume the role in the Center Battalion.

Another viable solution to the staffing challenges, one that has been successful in many other call/volunteer or combination fire departments, is the implementation of a duty crew system. Under the duty crew system, each fire department in every battalion could take a turn being the “duty” response unit that will be dispatched to every incident within that battalion. Each duty crew would have their own separate alert tone and would function on some type of a rotational system with the other departments’ crews, perhaps one week on and three or four weeks off. Each department could further divide its personnel into crews who handle certain nights or days. Only the “duty crew” would be called initially on minor incidents often referred to as “still alarms”. Statistical analysis of incident response data and trends, once the program is operational, would provide guidance on what adjustments to the program may be required to optimize its effectiveness.

It is critically important to stress that in the context of staffing requirements for fire and emergency response operations that certain minimum standards of training and certification must be met. Just because an individual has been in the Fire Department roles for many years, has a set of personal protective equipment (PPE), and responds to calls does not necessarily make them a “qualified” firefighter by modern-day standards and best practices.

RECOMMENDATIONS:

- VII-1: *Working collaboratively with their memberships, the Genesee County Fire Advisory Board, and Genesee County EMS Council should continue to explore ways to reduce all aspects of response time, but particularly turnout time as this is the aspect that the fire and EMS providers have the most direct control over.***

- VII-2: *Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services should establish fire demand zones throughout the County, based on the urban, suburban, and rural components of the diverse fire service coverage area. They should then work to develop a Standard of Response Cover based upon the recommendations contained in NFPA 1720 for the established fire demand zones, with adjustments as appropriate for Genesee County’s unique needs.***

- VII-4: *Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services, and based upon the GIS mapping, consideration should be given to part of the Standards of Response Cover benchmarks seeking to have the first unit on scene within 10 minutes after responding to all fire type incidents, County-wide, 80% of the time.***

VII-5: Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services, and based upon the GIS mapping, consideration should be given to part of the Standards of Response Cover benchmarks seeking to have the entire first alarm assignment for reported structure fires; even the rural areas of the County, with at least 15 personnel, on scene within 15 minutes from dispatch, 80% of the time. For the more urban and suburban areas of the County the more conservative benchmark of 10 minutes, 80% of the time should be considered.

VII-6: Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services should consider the development of a “performance improvement” process for fire suppression operations. The process should include the adoption of performance standards such as NFPA 1720, including on-scene performance indicators such as:

- **On-scene to the charged line at the front door of a structure fire: two minutes or less, 90% of the time.**
- **Water from the hydrant to supply engine: three minutes or less, 90% of the time.**

The point of the performance measures is to identify the community’s expectations in a quantifiable way and to use the measurement of the fire company’s performance against these objectives to identify areas that may need improvement or additional resources.

VII-7: Working collaboratively, the Genesee County EMS Council and the Genesee County Emergency Services should establish EMS demand zones throughout the County based on the urban, suburban, and rural components of the diverse EMS coverage area.

VII-8: Working collaboratively, the Genesee County EMS Council and the Genesee County Emergency Services should develop a Standard of Response Cover for BLS level response, based upon the established EMS demand zones and response/travel time recommendations contained in NFPA 1710 and/or the CAAS standards, with adjustments as appropriate for Genesee County’s unique needs. The SOC adopted should attempt to have benchmark achievement rates of 90% for urban and suburban areas and 80% for rural and remote areas.

VII-9: Working collaboratively, the Genesee County EMS Council and the Genesee County Emergency Services should develop a Standard of Response Cover for ALS level response, based upon the established EMS demand zones and response/travel time recommendations contained in NFPA 1710 and/or the CAAS standards, with adjustments as appropriate for Genesee County’s unique needs. The SOC adopted

should attempt to have benchmark achievement rates of 90% for urban and suburban areas and 80% for rural and remote areas.

VII-10 *Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services should develop a plan to deploy several daytime quick response units; fire apparatus staffed with an officer and three firefighters, positioned strategically around the County in fire stations that wish to host them.*

VII-11 *The Genesee County Fire Advisory Board should consider the implementation of a battalion duty crew program primarily between 6:00 PM and 6:00 AM daily, and, all day on the weekends. When on-duty personnel could also complete their required training, participate in various department/station projects, pre-fire planning, etc., and possibly even membership recruitment activities.*

Under the duty crew system, calls of less severe acuity would be handled by the duty crew alone, or in conjunction with the fire company in whose district the incident occurred.

VII-12 *Working collaboratively, the Genesee County Fire Advisory Board, Genesee County EMS Council, and the Genesee County Emergency Services should work on a program that can be used to educate the public on the importance of reasonable response time standards in order to enlist their support for funding necessary for emergency response system improvements.*

CHAPTER VIII - RELATIONSHIPS BETWEEN STAKEHOLDERS

An important factor in any emergency services analysis that MRI conducts, is determining how the organization, or in this case organizations, are perceived and viewed within the community, and to some extent the region, that it serves. It is also important to try to determine what the community's expectations are with regard to the types and levels of service that the department provides to its customers, primarily the taxpaying citizens of the community. Every municipality, and the fire and EMS organizations that protect them, have several different stakeholders, whose opinions, perceptions, and input are important for the study team to know as they try to develop recommendations that are most applicable to that community's specific circumstances.

The relationship between the fire and EMS leadership, and to a lesser extent the emergency services organizations and elected officials is critical to the effective delivery of public safety services and the ultimate success of the mission of the organization. It is vitally important that the organizational leadership, and again to a lesser extent, the entire organization, have an honest and positive relationship and open productive communications with their local governing body or bodies.

Interviews with various internal and external stakeholders including members of the fire and EMS organizations and local government officials suggest that the range in relationships in Genesee County is generally good. All the local government officials and members of the public that were spoken to were very positive about the high quality of services that the fire and EMS agencies within Genesee County provide. They were also highly complimentary of the time and commitment of the volunteer personnel who serve their communities. Conversely, though, the officials had significant concerns about the rising costs of providing these services. From the fire and EMS leadership perspective, many chiefs reported good relationships with some or all the local officials they needed to deal with.

A common concern from the fire and EMS leadership was the whole issue of who is responsible for funding emergency services operations. There is at least some perception from the municipal officials that in keeping with long-held traditions and practice that the fire and EMS organizations are primarily responsible for funding their own operations, with minimal assistance from the municipality.

During this study, MRI developed two questionnaires, one focused on the fire and EMS agencies, the other on the municipal governments. The respective questionnaires were provided to every fire and EMS organization in Genesee County. It was also sent to every municipality in Genesee County (including the county). The fire and EMS agencies had a **100%** return, while the municipalities/county had an **81.8% (17 of 21)** return rate.

These questionnaires, along with summaries of the responses and narratives provided, are included on Appendices E and F.

During the period of January 23, 2022, to April 19, 2022, MRI developed and conducted three online surveys to obtain perspectives from 1) local officials, 2) fire and EMS responders, and 3) citizens of Genesee County. These surveys were distributed to a wide range of stakeholders throughout Genesee County to provide the blanket notification. Participation was both anonymous and voluntary. The comprehensive results of these surveys are found in Appendices B through D.

- A total of **36** local officials completed the survey, representing **16** different municipalities and Genesee County (**72.7%**).
- A total of **226** fire and EMS providers completed the survey representing every agency in Genesee County. The number of responses per organization ranged from one to 20.
- **736** citizens participated in the survey representing every municipality in Genesee County except one. The number of responses per municipality ranged from five to 115.

In the questionnaires, both groups were asked to rate the communications and relationships between their respective groups.

- From the fire and EMS perspective, **43.8%** stated excellent, **18.8%** reported very good, **25%** felt good, and **12.6%** believed it was fair or poor.
- From the municipal perspective, **36.8%** stated excellent, **26.3%** reported very good, **26.3%** felt good, and **10.6%** total stated fair or poor.

In the local officials' survey asking the same question:

- **24.2%** stated excellent, **36.4%** felt it was very good, **27.3%** reported adequate, **3.0%** believed it was just fair, and **9.1%** stated poor.

In the fire and EMS responder survey asking the same question:

- **19.2%** stated excellent, **38.4%** felt it was very good, **27.2%** reported adequate, **8.9%** believed it was just fair, and **6.3%** reported it as poor.

To the question in the municipal questionnaire, “do you feel that the fire and EMS agencies that serve your local jurisdiction are providing you with complete and accurate information regarding their operational capabilities, staffing, and financial needs?”

- **70.6%** stated Yes, while **29.4%** responded No. Several noted that they did not believe that the fire and EMS organizations were being totally open and truthful about their finances.

In the local officials’ survey asking the same question:

- **68.8%** stated Yes, while **31.2%** responded No.

Perceptions of Fire and EMS Services

Obtaining feedback on the quality of the services that are being provided to the emergency services’ most important external stakeholders, its customers - the taxpayers of the community - is important to the long-term success of any organization, whether public or private. When there is no mechanism in place to evaluate customer satisfaction, there is no way to measure service levels being provided against customer expectations and/or satisfaction. While there are many ways to identify strengths and weaknesses in emergency operations, obtaining feedback from those who requested the services of the fire department or EMS is one method that can assist with what should be an ongoing and continuous evaluation process. It is also extremely important that the fire and EMS organizations’ leadership appropriately handle the occasional, but inevitable, complaint about the service that was provided. Citizen complaints should be documented, investigated, and brought to a logical conclusion with the complainant informed of the outcome, provided they identified themselves. Conversely, formal letters or other acknowledgments by customers that personnel did a good job should be addressed in a positive manner within the organization and to the person making the compliment.

The questionnaires and the online surveys that were utilized during this study asked the stakeholders several questions regarding their perceptions of the fire and EMS service delivery system in Genesee County.

On the municipal officials’ questionnaire:

- **64.7%** of those that responded believe the fire and EMS organizations that protect their local jurisdiction provide an acceptable level of fire and EMS protection, while just **11.8%** do not. An additional **23.5%** indicated they did not have the information necessary to answer.

- **52.9%** of the respondents felt that the overall level of fire protection provided to their jurisdiction was excellent, while **29.4%** believe it is very good. About **11.8%** stated that was adequate while another **11.8%** it needs improvement.
- **17.6%** of the respondents felt that the overall level of EMS service provided to their jurisdiction was excellent, while **35.3%** believe it is very good, and **29.4%** stated that it is adequate. **17.6%** believe it needs improvement.

On the local officials' survey:

- **21.9%** of those that responded strongly agree the fire and EMS organizations that protect their local jurisdiction provide an acceptable level of fire and EMS protection based upon NFPA standards, **53.1%** agree, and **12.5%** are neutral. An additional **12.5%** disagree.

On the fire and EMS provider survey:

- **38.6%** of those that responded strongly agree the fire company they are a member of, provides the community with an acceptable level of fire protection, **35.9%** agree, **12.6%** are neutral, **10.8%** disagree, and **2.2%** strongly disagree.
- **21.7 %** of those that responded strongly agree the EMS agency they are a member of, provides the community with an acceptable level of emergency medical service, **33.5%** agree, **22.2%** are neutral, **15.4%** disagree, and **7.2%** strongly disagree.
- **24.8 %** of those that responded strongly agree that the organization(s) they are a member of, is/are well regarded and appreciated by the residents of the municipality/municipalities they serve, **49.6%** agree, **12.9%** are neutral, while **2.7%** either disagree or strongly disagree.
- **25.5 %** of those that responded strongly agree that the organization(s) they are a member of, is/are well regarded and appreciated by the governing body/bodies of the municipality/municipalities they serve, **45.5%** agree, **18.3%** are neutral, **7.1%** disagree, and **3.6%** strongly disagree.

On the citizen survey:

- **55.3 %** of those that responded they had received fire or EMS service from a Genesee County organization rated the service as excellent, **27.5%** felt it was very good, **7.8%** stated adequate, **5.6%** reported fair, and **3.9%** listed poor.
- **13.6%** of respondents felt the overall level of community interaction and involvement by the fire companies and EMS agencies, including educating the public about what they do and why they need adequate funding and training is excellent, **24.1%** very good, **23.1%** adequate, and **23.1%** needs improvement. An additional **9.5%** stated they did not know.

Overall, these responses indicate that the fire and EMS services that protect Genesee County are perceived well by the various stakeholders, an overwhelming majority of whom, feel they are doing a good job. However, nearly one in four citizens feel the level of interaction with the community including information regarding what the fire and EMS services do, needs improvement. Also of concern, one in five emergency providers feel they are not providing adequate EMS service to the communities they serve. The challenges with the EMS system have been a common thread throughout this study.

Sense of Common Vision

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 in the spirit and passion that the work of the organization is accomplished.

The perceptions shared by members of an organization, and its various stakeholders, both internal and external, can be extremely important in either establishing or conversely, distorting that sense of a unified common vision. Whether accurate or not, and regardless of the myriad of factors that can influence them, the individual and/or shared perceptions of members of an organization can, and often do, become their reality. If there is a perception of distrust, or, lack of mutual respect, between members of the organization, and/or between

different stakeholders such as fire or EMS agency leadership, and the local governing body, the goal of successfully achieving that sense of common vision will be difficult, if not impossible.

Development of a shared vision for the delivery of emergency fire and EMS services in Genesee County should not be based on a single idea or initiative by one organization, it should not be imposed by one person, and not as a mandate. **The vision for the future needs to be shared by all stakeholders, and at all levels of government. The driving force for all stakeholders needs to be the best interest of the 9-1-1 caller.**

By studying and understanding the past, a vision for the future can be developed that inspires stakeholders to find their roles and actively participate in achieving the vision. This concept will be significant in Genesee County as this vision for the future may result in rather significant changes to the way emergency services are delivered, driven by financial hardships, recruitment and retention issues, and the public's expectation for the delivery of emergency services. An ongoing X factor or big unknown is what the long-term implications of the COVID-19 pandemic will be.

The MRI study team conducted numerous interviews with various stakeholders representing the fire and EMS organizations, local officials, and the general public during multiple site visits in the Summer, and Fall of 2021. As has been mentioned previously, questionnaires and survey instruments were also developed and distributed.

Our interactions with the various stakeholders revealed different opinions when the topics of regionalization, consolidation or even group purchasing of like equipment or standardizing of equipment to benefit from economies of scale were introduced. There was a higher level of consistency in the responses to challenges at the local level encompassing subjects such as Standards of Cover, fundraising, financial support from local governments, recruitment and retention, automatic and mutual aid, facilities, apparatus, and equipment.

The questionnaires and/or surveys asked a number of questions to gauge the opinion of the various stakeholders on some of the identified issues regarding the emergency service delivery system, along with some of the potential solutions. The same question was often asked on different questionnaires or surveys to gain perspective on the same question from different groups.

- Regarding whether the leadership of the fire and EMS agencies and the manager and/or local governing bodies of the municipalities they serve meet on a minimum of an annual basis to review progress, discuss operational and budgetary needs, and discuss goals and objectives for the next year:

- ❖ **87.5%** of fire and EMS providers stated Yes while just **12.5%** replied No.
- ❖ **66.7%** of the municipalities stated Yes, while **33.3%** stated No.
- Regarding whether the level of risk within their local jurisdiction has ever been considered or discussed just **23.5%** of the municipal questionnaire respondents answered Yes, while **76.5%** stated No.
- All the questionnaires and surveys asked who/what should determine the level of services to be provided by the emergency services organizations (multiple responses were possible so totals may not equal 100%).

	Fire EMS Agency Questionnaire	Fire EMS Provider Survey	Municipal Questionnaire	Local Officials' Survey	Citizen Survey
The department/ company/ agency leadership	13.6%	42.0%	12.9%	9.4%	20.0%
The local governing body	4.5%	4.5%	6.5%	21.9%	10.7%
Consensus agreement between department/ company/agency leadership and the local governing body	45.5%	43.8%	48.4%	68.8%	60.8%
Research based needs assessment	18.2%	9.8%	22.6%	0%	8.5%
Benchmark standard (NFPA 1710/1720; PA Dept. of Health) driven	18.2%		6.5%		

Figure VIII-1: Determining Level of Service

- All the questionnaires and surveys except for the citizen survey asked if *there should be a more regionalized approach to both the funding and operational control (such as standardized response assignments, minimum training standards, AVL based dispatching, etc.) of the fire and EMS delivery system in the County based upon consensus procedures*

and protocols developed by the Genesee County Fire Advisory Board or Emergency Services Task Force?

	Fire EMS Agency Questionnaire	Fire EMS Provider Survey	Municipal Questionnaire	Local Officials' Survey
Strongly Agree	6.3%	16.1%	22.2%	25.0%
Agree	62.5%	38.8%	27.8%	31.3%
Neutral	12.5%	31.6%	38.9%	37.5%
Disagree	12.5%	8.5%	5.5%	0%
Strongly Disagree	12.5%	5.4%	5.5%	6.3%

Figure VIII-2: Regionalization Opportunities

- Since state law states the municipalities are ultimately responsible for the provision of fire and EMS services, the municipal questionnaire asked the question, *“If there are individual fire companies or EMS agencies who do not want to comply with County-based standards such as those listed above, should they be required to do so for the greater good of the entire system and County?”*

❖ **57.1%** of those who responded said Yes, while **42.9%** said No.

The results of these surveys provide some qualified encouragement regarding the future direction that the MRI study team believes the fire and EMS delivery system in Genesee County should head in the future. The concept of the future delivery of emergency services more at the regional or County level is far from developed and has not been fully accepted which makes sense as it would not likely even be possible without enabling legislation. However, while the results of these surveys and questionnaires present some cautious optimism that the majority of the primary stakeholders, particularly those who are most involved and engaged, are willing to at least see what concept develops and whether it is feasible and beneficial to work toward building a new, more regional system, it also points out that there will be many challenges and at least some level of resistance to pursuing these initiatives.

The MRI team believes that the engagement of the local fire and EMS services in developing the vision for the future of their services is paramount to addressing the delivery of services in the County. MRI believes the time for starting those discussions is now and they must incorporate the *“local”* concerns expressed by stakeholders. MRI does not suggest that the delivery of

emergency services be conducted in a single delivery model, or that there is one right answer. Any model adopted must have sufficient flexibility to accommodate the various local fire and EMS services' unique organizational needs. Like any successful endeavor, a regional or County-wide system will start small and then expand and develop as it demonstrates its success and ability to enhance services.

Recommendations:

- VIII-1: *The Chief of every fire and EMS agency in Genesee County should provide regular briefings and reports to the Mayor/Administrator and/or governing body of every municipality they serve concerning the operations of their organization or fire department. The Chief should communicate regularly with the Mayor/Administrator and/or governing body to receive feedback on the performance of the department.***
- VIII-2: *The Mayor/Administrator and/or governing body of each municipality should take an active role in setting appropriate goals and a vision for the fire and EMS providers that serve them. Municipal officials should include residents and the emergency services in an open and honest discussion within the goal-setting process.***
- VIII-3: *Every fire and EMS agency should consider offering building tours and ride-a-longs to the members of their local governing bodies and other municipal officials to further familiarize them with fire and EMS operations. Officials could also be encouraged to participate in or observe training activities.***
- VIII-4: *Fire and EMS agency leadership and the municipal governing bodies should publicly recognize the achievements of their emergency services organizations and their members in reaching the various established goals as they are accomplished.***
- VIII-5: *Based upon the recommendations contained in this report, the Genesee County Legislature, the governing bodies of the County's municipalities, the Genesee Association of Municipalities, Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, Genesee County EMS Council, and other interested stakeholders assisted by the Genesee County Emergency Services should begin discussions ASAP on the direction that the County's fire and EMS delivery system will take moving to the future. It will be imperative that all stakeholders speak with a unified voice when lobbying local legislators to introduce or support enabling legislation that will be necessary for several recommendations to be implemented.***

CHAPTER IX - VOLUNTEER RECRUITMENT AND RETENTION

A tangible and emerging risk within Genesee County is the ongoing reduction in the number of active and trained volunteer firefighters. Although this is not unique to Genesee County as this shift in volunteerism is a nationwide trend, diminished staffing often frustrates local efforts to provide a consistent response and standard of cover.

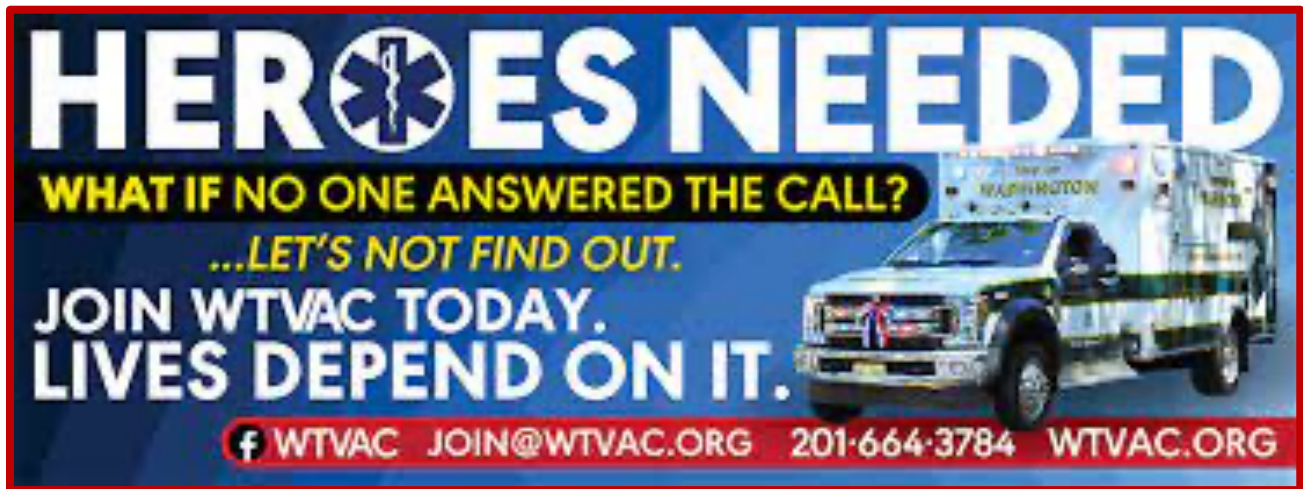


Figure IX -1 – An example of an innovative recruitment poster that illustrates the reality facing many Fire/EMS organizations

A review of current literature and documentation indicates that demographic shifts away from volunteerism have impacted almost every volunteer fire and EMS organization within the United States. The 2018 National Fire Protection Association (NFPA) Fire Department Profile found that the number of volunteer firefighters has declined from a high of 8.05 per 1,000 in 1987 to a low of 5.8 per 1,000 people protected in 2017. As depicted in figure IX-2, this reduction of human resources represents a 27.5% decrease over 30 years, or a loss of approximately 1% of America's volunteer firefighters per year.

It is also expected that this downward trend will increase based on the Covid-19 pandemic. Based on the study team's interaction with rural and suburban volunteer fire departments, a 10% reduction in volunteer forces based on the pandemic would be a reasonable expectation. This will further frustrate many organizations' operational capability and in some cases result in scratched calls (calls not being answered by the closest fire/EMS resources as no personnel is available to respond in their first due district). This challenge relates to service level as it will inevitably lead to an elongation of some response times.

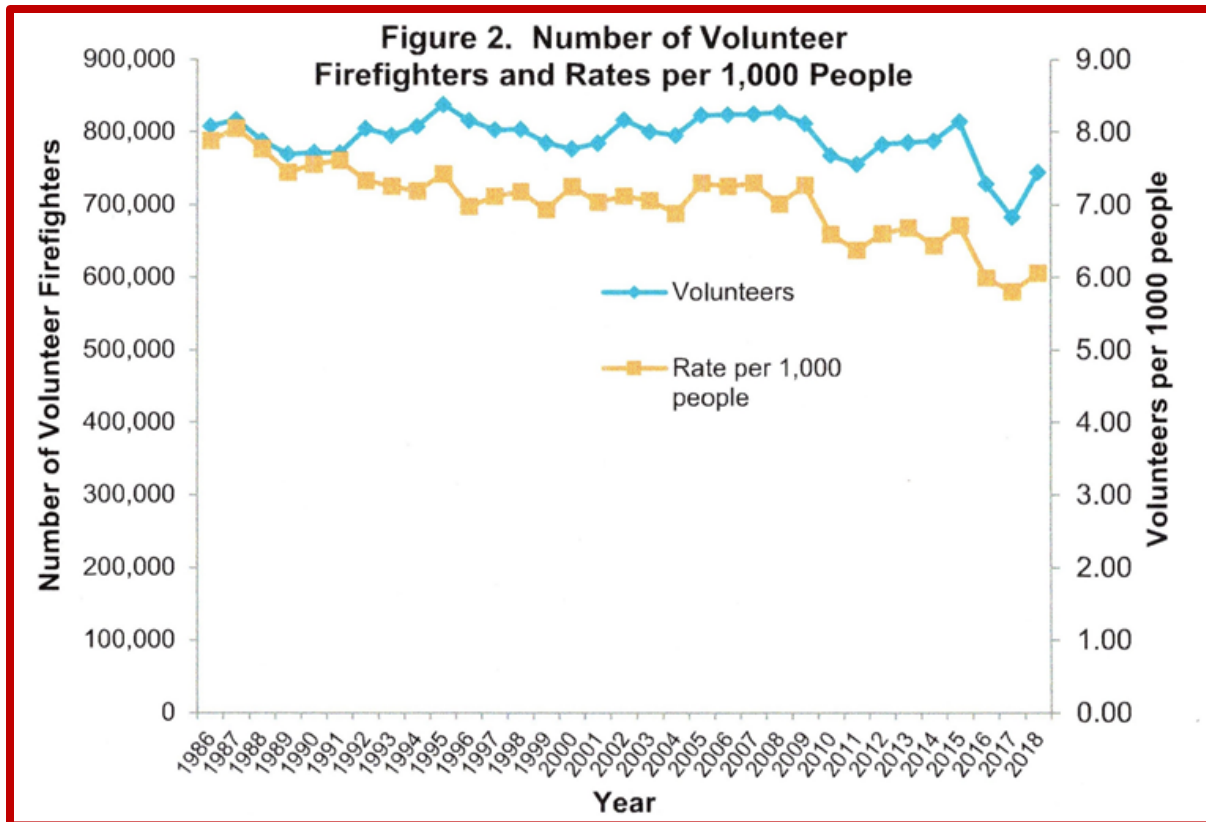


Figure IX-2 Trend Analysis of the Decrease of Volunteer Firefighters per 1,000 People Protected 1987-2017

Source: NFPA U.S. Fire Department Profile – 2018



Genesee County Fire and EMS services are aware of this trend and the operational implications that a lack of personnel creates. It is clear that the County has been proactive in its approach to this ongoing challenge. To address this situation Genesee County Department of Emergency Services (GCOEMS), Genesee County Fire Advisory Board, and the Genesee County Recruitment and Retention Task Force applied for and received a \$288,680 Staffing for Adequate Fire and

Emergency Response (SAFER) grant to support Countywide recruitment and retention efforts over a four-year cycle (2011 – 2015). This grant focused on recruitment through the following efforts:

- Marketing/advertising (radio ads, billboards):
- Provided HR training for fire/EMS leaders through contracted services:
- Hired a per diem recruitment coordinator.

This grant resulted in approximately 100 referrals to fire/EMS agencies. It is unknown how many of those referrals became long-term active first responders. It is the observation of the study team that representatives of County Fire and EMS services have tried to recruit new personnel but have become frustrated at the overall lack of response and limited success. A theme of many of the interviews that we conducted revealed that most of the fire and EMS leaders believe they have tried to attract new members but that ultimately solutions to the emerging operational staffing crisis will need to come from another source.

New York has one of the strongest and proudest traditions of volunteer firefighters in the United States. It is the goal of this study to build upon that community-centered pride and long-standing tradition by supporting and augmenting the volunteer fire companies that are essential to the level of emergency services provided to the County. We want to be clear that this study does not recommend replacing any volunteer firefighters or volunteer fire companies with career forces.

While our team recognizes proactive actions that have been taken, we believe that there needs to be a singular county-based recruitment and retention program that delivers a consistent message and serves as an advocate to help an interested individual become settled in a Genesee County Fire or EMS agency.

General Recruitment and Retention Programmatic Tips:

A review of several successful recruitment and retention programs resulted in the development of the following fifteen tips on how to create a successful and sustained recruitment program.

1. Enhance the level of honest communication with the community served.
2. Create partnerships with school districts, colleges and other fire departments.
3. Consider generational differences and develop marketing for millennials and IGen candidates.
4. Be aware and advertise program benefits developed through SAFER Grants or other local resources. The FireVest program is an example best practice that would need to be properly marketed to produce an effective response. This program is detailed later in this chapter.

5. Make joining the fire department a user friendly and quick process – one department reduced the application to a single page and granted temporary memberships after a brief police background check.
6. Host a citizens' fire academy.
7. Use selective paging (duty crews) to avoid unnecessary runs.
8. Administer periodic surveys on department culture.
9. Create a rewards system for years of service, hours of training, response participation.
10. Offer online training resources.
11. Encourage leadership professional development.
12. Reduce bureaucracy as much as possible.
13. Assign a mentor to every new member.
14. Recognize that firehouse politics and internal factions are often listed as the prime reason volunteers resign.
15. Recognize that onerous fund-raising requirements serve to discourage prospective volunteer firefighters.

It is essential that recruitment and retention programs continue as an ongoing effort to communicate to the public the need and opportunity to become a local hero. Many of the issues identified in the March 2004 report issued by the Volunteer and Combination Officers Section of the International Association of Fire Chiefs (IAFC) titled *“A Call for Action: Preserving and Improving the Future of the Volunteer Fire Service”* (Contained within the toolbox assembled for this report) and the subsequent November 2005 report, *“Lighting the Path of Evolution: Leading the Transition in Volunteer and Combination Fire Departments”* (Contained within the toolbox assembled for this report) and noted in Chapter III, *Emerging Risk Profile of Genesee County*, appear to have growing applicability in Genesee County. As previously mentioned, these warning indicators are not necessarily an indictment of anything wrong in Genesee County; the same problems are facing volunteer fire departments across the country.



Figure IX-3 – Example Recruitment Outreach Poster



Figure IX -4 – Example Maryland Recruitment Billboard.



Figure IX -5 – Example Hometown Hero Recruitment Poster

Over the next three to five years, a significant effort will need to be put forth to recruit new members, perhaps more importantly retain existing personnel, and, enhance the participation of those who become inactive, and ensure that those who remain on the roll call sheets are truly active and not just filling a space. To attain success will require the development of new strategies and monetary investment to maintain the long-term viability of the primarily volunteer fire and EMS delivery system in Genesee County.

The fire and EMS agency questionnaire that was completed by all the organizations that serve Genesee County indicated that approximately one out of three (31.3%) have active volunteer recruitment and retention program while 2/3 do not. In the online survey for fire and EMS responders, just under 1/3 (33.1%) felt recruiting and retention efforts are adequate for the organization(s) they are a member of while 41.0% disagreed and 25.9% were neutral.

To the question on the citizen survey, “would you be willing to volunteer for your local fire department or EMS agency either as an active emergency responder or in a support/administrative role?”, just 23.1% stated yes, while 46.4% answered no and 30.4% said they had never thought about it. The responses to this question may provide the most accurate snapshot of the recruitment challenges that the fire companies of Genesee County face, and the fact that

the traditional look of the service delivery system in the County will, out of necessity, need to evolve.

The responses to the question on the fire and EMS organization questionnaire though provided some unexpected results. The organizations that answered that question reported that a total of 37 personnel left their organizations (an average of 2.8 per organization) over the previous 12 months. They also reported that a total of 36 new volunteer personnel had joined their organizations (an average of 2 per organization) producing a zero net gain. The MRI study team attributes this stagnation, at least in part, to the county's ongoing shift in volunteerism. It is also important to note that these numbers do not in any way suggest that there are going to be only a few of these personnel will become longer-term contributing members of their respective organizations. However, **the citizens survey indicated that 72 respondents may be willing to join their local fire or EMS agency.**

Barriers to Effective Recruitment:

Recruitment itself is a labor-intensive and often relationship-based process that has several challenges. In general, it is the experience of the project team that several barriers to effective recruitment exist. These include:

- Prospective members sometimes have difficulty connecting with volunteer fire companies to join due to stations not being staffed and not having connections.
- Internal division including the development of vocal factions and cliques result in internal conflict that deteriorates the experience of membership.
- Websites often do not market properly. A random sampling of fire company and municipal websites by the MRI study team found that almost none have the need for volunteer firefighters and EMS personnel displayed prominently in a pinned or scrolling heading on the home page of their websites. Many have a tab, but they are often in with the website's other tabs.
- **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.

- Cost of housing/rent in many communities is a deterrent to volunteering.
- The increasing cost of fuel and transportation may deter some people from volunteering.

It was also noted that the fire chiefs need to be the number one advocate for their companies and be active participants in recruiting efforts. The chiefs must also quickly respond to and answer inquiries from prospective members.

In short, there is no easy solution or universal solution to identifying and recruiting new members of fire companies. It is essential that recruitment be a sustained effort that set reasonable expectations and celebrates small wins. One fire chief that we talked to indicated that although his program did produce a few new firefighters the major benefit of the program was centered on the stronger connection and higher level of communication that was created with the community. The study team has found that a recruitment effort needs to be custom-fit to determine what programs will work in each fire company.

Recruitment and Retention Best Practice Concepts

Recruitment and retention efforts need to be customized to motivate potential first responders. Often what is effective in one company is found to be ineffective, prohibited or resisted in another company or community.

High School outreach and creation of an internal challenge – One fire company found success in reaching out to a local technical high school and developing a class project to challenge students to develop an advertising campaign to convince their classmates to join their local, fire station as junior volunteer firefighters.

College tuition payments – provide financial support for education through regional programs or as a portion of a SAFER Grant.

Student loan assistance – This concept is gaining traction as a viable strategy. Utilizing this concept, the host organization would pay a tiered amount of an outstanding student loan based on the level of training and response participation.

Low-interest mortgages – Provide active personnel with a low-interest loan based on long-term participation at or above established minimum standards.

FirstNet phones and service plans –The FirstNet cellular network is a wide reaching hardened cellular infrastructure designed for first responders. This system increasing functionality is positioned to offer the primary means of alerting volunteer fire companies. Using this system provides first responders with a singular device that maximizes alerting and enhances operational communication. Providing high participation responders with this hardening alerting system also produces a personal benefit by eliminating the need for purchasing personal cell phones and or paying for monthly service. This technology should be managed through a tiered incentive program.

- 10% participation or greater – Basic FirstNet service provided through their fire company.
- 20% Unlimited talk, text and data provided through their fire company.
- 25% or higher participation – FirstNet phone service and monthly phone hardware purchase provided through the Department.

Free dump stickers – Although a small incentive this strategy provides first responders with recognition and a tangible reward for their service to community. Provide active personnel with a low-interest loan based on long-term participation at or above established minimum standards.

Free gym memberships or outdoor activity passes – This incentive strategy provides first responders with recognition and a tangible reward for their service to community.

Property tax reduction/credit program – although often controversial, this program reduces the property tax burden on a first responder by a set amount. Several programs have settled on a \$2,500 property tax credit as an incentive for active service.

Participation awards – One program suggestion was to create a rewards system that provides high demand and generationally appropriate items such as an X-Box as a reward for exceptional service and participation.

Providing access to health insurance group rates – This program matches participation to health insurance access and incentives and is listed as an example later in this chapter.

Expense Reimbursement – Volunteer firefighters often purchase additional equipment and pay for their own transportation for both response and training. A formal program that provides a tiered equipment allowance tied to the level of participation should be considered. In addition,

based on the dramatic economic shifts within our society has become more essential that firefighters are reimbursed for the use of their private vehicles.

Student live-in programs – Partnering with a college, these programs reduce student living expenses and provide a structured method of enhancing response and operational coverage.

Even if the recruitment obstacles can be overcome, hurdles remain before a new member is a productive member of the fire company. Once an individual becomes interested in becoming a volunteer 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 volunteer 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 of training annually, maintaining firefighter and possibly EMT or paramedic skills and certifications. Younger volunteer 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.

It is easy to believe that increasing the number of volunteer firefighters can be a cure-all to eliminate all staffing, and thus response problems. Unfortunately, in 2022, this is an increasingly difficult problem to overcome. A big question is, to what level is there still a sense of community in Genesee County. This is a key attribute that may increase the likelihood of success for any volunteer firefighter recruitment and retention program. The MRI study team strongly believes that are undiscovered members of communities throughout Genesee County who would be excellent candidates to be members of a fire company. The challenge for the fire companies, however, is not always so much recruiting personnel as much as it is retaining them as active, participating members of the company.

Tactical Actions to Bolster Recruitment:

As most suburban, and even many rural communities across the United States are dealing with the reduction of volunteer 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 volunteer personnel is the best and more cost-effective practice and, to that end, they have pursued some of the following strategies:

1. Placing a prominent banner or link on the home page of each fire company and municipal website and along with on all social media platforms. This should be done as a priority that can be accomplished for little to no cost.
2. Conducting a recruitment mailing to all residential properties in each municipality with information about the fire company and recruiting new members.
3. Placement of temporary signboards at various locations throughout the county in addition to purchasing space on billboards.
4. Placement of a recruitment message on the signboard at the various municipal buildings and fire stations.
5. Working with local businesses in an attempt to form partnerships that would allow employees to leave work to respond to emergency incidents when needed.
6. Hire a volunteer firefighter “Recruitment and Retention Coordinator” to develop, implement, and coordinate these activities. This should be undertaken as a county endeavor.
7. Provide a reduction in property taxes, or a tax abatement incentive, for volunteer service.
8. Provide volunteer firefighters with community-based benefits such as free dump stickers, etc.
9. Provide community-based awards and recognitions such as implementing an incentive for members that attain a level of more than 25% response. An example would be to provide gift certificates for local restaurants, concerts, or other entertainment as a reward for attaining a high level of response.
10. Distribute posters to convenience stores, gas stations, restaurants, and other high-traffic locations seeking to recruit new members (Figures IX-6 and IX-7).
11. Hold well-advertised recruitment events at local fire stations (Figure IX-8).

12. Hold community events such as *Have Pizza with a Firefighter* (Figure IX-9) or *We Deliver for You* where firefighters deliver pizza or other take-home foods.



Figure IX-6: Is there a Fire in You Poster from Recruit NY Volunteer Recruitment Program

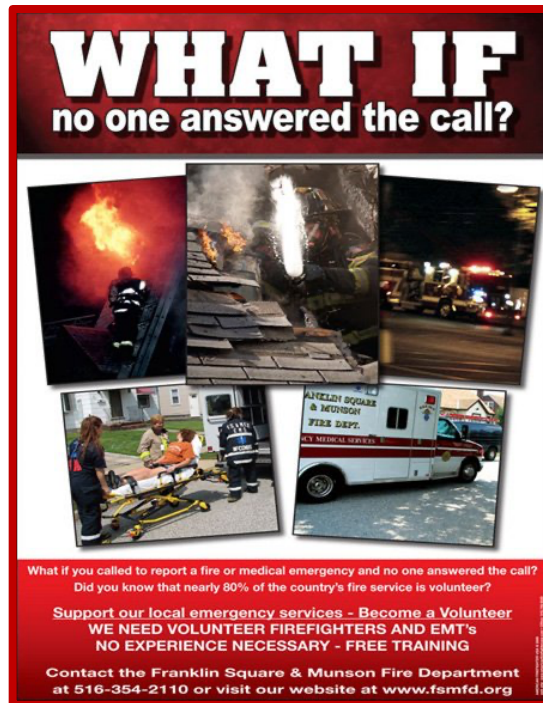


Figure IX-7: What if No One Answered the Call Poster



Figure IX-8: Volunteer Firefighter Recruitment Day Poster

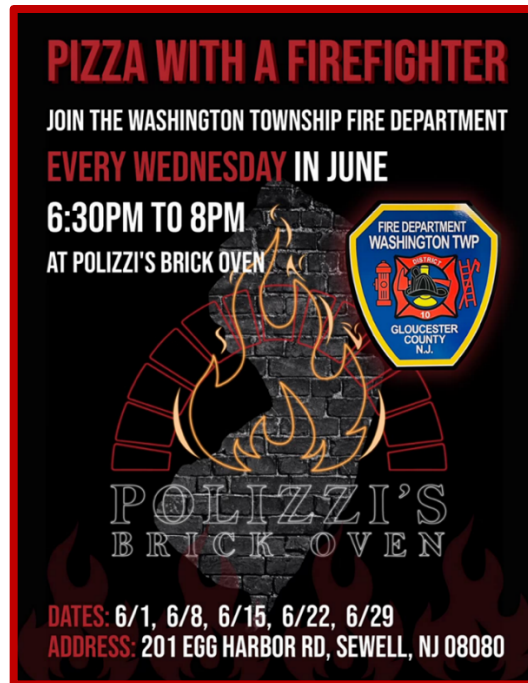


Figure IX-9: Pizza with a Firefighter Recruitment Event Poster

Retention Strategies:

One of the challenges that many volunteer organizations face today is that the motivation of newer members is much different than the older, long-time members. The newer members tend to need to receive something tangible to show that their service is appreciated. An associated concern that the MRI study team often hears is the need for better communications within the fire company. This is usually not referring to the company's formal communications system, but more so, the interpersonal levels of communication that occur within the company and at the station level. This is frequently an area of concern in volunteer 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 generational 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 ALL 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 Genesee County becomes more diverse, the fire companies in the county will need to adjust accordingly to be more inclusive and welcome 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 volunteer organizations are often more successful than those where there is little to no discipline and the attitude is, “we’re only volunteers, so leave us alone”.

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

Some other volunteer recruitment and retention programs that have been implemented elsewhere and might be considered in Genesee County include:

- Connecticut has a property tax relief program in the form of a \$1,000 per year abatement on property taxes for volunteer emergency services personnel.
- Illinois has filed legislation to create a \$500 income tax credit after a volunteer works for at least nine months with a fire department or fire protection district.

- A program in Wisconsin brings together fire departments, high schools, and a college working to target future volunteer 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 get them college credits.
- 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 to their eligibility list scores. Several community colleges are working to develop three-year apprenticeship programs.
- North Carolina provides free hunting licenses to volunteer firefighters, a benefit that would probably have significant appeal in New York.
- The Ocean City, Maryland Fire Department gives preference to, and almost exclusively hires members of the volunteer fire department for public works and related positions with the city.

In the smaller government, anti-taxes, and benefits climate of today, the awarding of free “benefits” even to volunteer personnel can be controversial. **However, it is imperative that we stress that having a volunteer fire service, particularly a top-tier one does not mean that fire protection is free.** There are still significant operating costs that need to be properly funded to keep the organization functioning. This is true even with volunteer recruitment and retention initiatives. Successful programs require an investment of both money and...again that valuable commodity...time from personnel. However, the importance of these efforts suggests that they should be made a priority.

Best Practice Example – [FireVest College Tuition](#)

FireVEST: Training Tomorrow’s Heroes

In Allegheny County, PA volunteer firefighters protect over 910,000 people. In addition, volunteer firefighters save the county an estimated 60 million dollars a year. There are 203 volunteer fire companies in Allegheny County and the challenge of keeping these companies fully staffed, well trained, and ready to respond at a moment’s notice is one that nearly every fire company in the region addresses regularly.

Because fire companies are essential to ensuring safe and well-protected communities, Allegheny County Executive Rich Fitzgerald, the Allegheny County Fire Academy and CCAC are working together to offer the Allegheny County Fire Volunteer Education, Service & Training Scholarship Program (FireVEST) that provides full scholarships for an Associate's degree or certificate program at CCAC, as well as training at the Allegheny County Fire Academy. Of the 200 scholarships offered per year, 150 are for new recruits in exchange for a commitment of five years of service to a volunteer fire department in Allegheny County, while 50 scholarships will be awarded to existing volunteers in exchange for a commitment of five additional years of service.

Program Requirements

Scholarship applicants must be residents of Allegheny County and either be a current volunteer or have joined a volunteer fire department in Allegheny County. Applicants must apply and be accepted to CCAC, file for federal and state financial aid and complete the financial aid process on time and in its entirety.

If awarded a scholarship, recipients are required to meet certain obligations. These include:

- Serving as a volunteer firefighter for five years in Allegheny County.
- Maintaining an acceptable level of service as monitored by recipient's fire department.
- Completing required courses at the Allegheny County Fire Academy – see list of courses on the FireVEST application.
- Maintaining a minimum FireVEST scholarship cumulative grade point average of 2.00 for the duration of the recipient's studies.
- Repaying a portion of the scholarship if service and academic requirements are not met.

Best Practice Example – [Helpfightfire.com](https://www.helpfightfire.com)

An example marketing program that has had some documented success exists in Genesee County, Pennsylvania. In this case, the County has an active recruitment and retention committee has developed an advertising and marketing campaign called Help Fight Fire (Figure XI-9). A website dedicated to this effort is located at <https://www.helpfightfire.com/>.



Figure IX-10 – Help Fight Fire Website Header

The Help Fight Fire initiative has also developed a multi-media campaign that includes things such as:

- Brochures/mailers
- Movie theater advertising
- Highway billboards (Figure IX-11)
- Attendance at community events
- Social media
- Recruitment at schools



Figure IX-11: Chester County, PA fire and other emergency responders operate at an incident under a billboard for the Help Fight Fire initiative

Best Practice – Health Insurance Participation

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

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

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

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

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

- *Chief Cassidy stated that approximately 55% of the current membership elects to take the health insurance benefit. Additional compensation is provided to the call firefighter should he or she elect not to participate in the benefit group.*
- *Chief Cassidy stated that most all the members that participated were self-employed tradesmen. Many of those who elect not to participate are young adults who might still be on their parents' health insurance. Since members can become call firefighters at age 18, and the department also has a very active Explorer post, which acts as a feeder pool for the department, a sizable number of the current call force are within the 18 to 26-year-old category, and, may still participate in their parents' health insurance program.*
- *All call firefighting personnel must first successfully complete firefighter I/II training, no compensation is provided until after successful completion. If selected for employment, the call firefighter has the option of participating in the town's health insurance program.*

- *Those that elect to enroll in an HMO program have 60% of their expenses covered by the employer (family or individual plan). Members that prefer a PPO-style plan have 50% of that cost paid by the employer.*
- *Holliston call firefighters also enjoy a very generous compensation program. Active members receive a base retainer, as well as hourly compensation for time spent working at incidents. Recently, the compensation package was expanded to provide a flat fee of \$75 per month for those who regularly attend the bi-monthly training sessions.*

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

Obviously, health insurance is expensive, and costs seem to escalate on an annual basis. However, landscapers, tradespeople, stay-at-home parents, and self-employed professionals that work from home are also confronted with this cost. The ability to join a municipality’s insurance in itself may reduce their cost. Furthermore, the municipality could develop a sliding scale that would pay a percentage of the health insurance cost equal to the level of response and training provided by the responding firefighter (Figure IX-12). The project team suggests rate cost-sharing as follows:

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

FIGURE IX -12: PROPOSED HEALTH INSURANCE PERCENTAGES



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 Fire Chiefs 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.
- Provide them with a clear point of contact if they have any questions, 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:

- 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”.
- 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 help you track key certifications, schedule duty shifts, hold emergency contact information, and more.

- 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 your fire company (Example found in toolbox). Solicit the “what” goes into that document from both your longstanding members (*what do they wish new members knew sooner?*) — and your 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, then 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 volunteer fire companies in acknowledgment of the diversification of society will be critical to the long-term survival of the volunteer fire service.

There are no easy or guaranteed solutions to the declining number of volunteer firefighters and the related staffing quandary facing Genesee County and many other communities throughout the country. It is also important to stress that what may work in one community or fire company with regards to staffing and volunteer recruitment and retention may not work in another nearby community or the fire company next door. Each community and fire company must individually determine what programs, incentives, and motivations will work, and be most effective in their community or company. It is also very important to advise the stakeholders in the Genesee County fire service (more so than EMS) delivery system that should they decide to transition from a mostly volunteer fire service to a more combination one, the process may be a difficult one. 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 Genesee County.

One huge unknown for the fire and EMS services is the long-term implications of COVID-19 from a personnel standpoint. The implications here could be particularly acute to the volunteer services. In New Jersey, as well as other states, several volunteer EMS organizations were forced to suspend operations due to a lack of personnel to provide coverage and respond to calls. The volunteer emergency services are aging – the average age for a volunteer firefighter

in several states is mid to late 40s – so a significant percentage of volunteer responders are going to be at, or close to, being higher risk just based on their age, and without factoring in any other underlying health issues. This 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 volunteer services and conclude that it is too great and step away. The pandemic is also certain to impact future recruitment efforts. Genesee County’s fire and EMS providers need to monitor this situation and be prepared for whatever the results of their memberships ultimately are.

RECOMMENDATIONS:

IX-1: *The Genesee County Emergency Services Task Force and Genesee County Fire Service Advisory Board, assisted by the Genesee County Department of Emergency Services, should establish, and recommend the use of a uniform application and screening process for all new members of the fire and EMS services throughout Genesee County. Although these personnel are volunteers, they still enjoy all of the rights of full-time public safety personnel and possess the same high ethical and moral character. At a minimum the screening process should include:*

- ***Possession of a valid driver’s license (all personnel should have their driver’s licenses checked on an annual basis)***
- ***State and federal criminal background checks including fingerprinting***
- ***Drug testing***
- ***Credit, employment, and reference checks***

IX-2: *The Genesee County Emergency Services Task Force should convene focus groups to determine what concepts and recruitment and retention strategies are feasible and most attractive to both current members and potential candidates. Once these concepts are ranked a paced schedule of implementation should be adopted.*

IX-3: *Genesee County’s fire and EMS providers should consider the adoption of FirstNet technology and develop a consistent tiered approach to providing this technology to active members.*

IX-4: *Genesee County’s fire and EMS providers should make a concerted effort to reach out to inactive and former members and attempt to recruit/motivate them back to active status.*

- IX-5:** *Genesee County’s fire and EMS providers should consider the implementation of a rewards, recognition or incentive program 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.*
- IX-6:** *Genesee County’s fire and EMS providers should attempt to enter into partnerships with local businesses to allow their personnel to respond, when needed, to emergency incidents during working hours, without any financial penalty.*
- IX-7:** *Genesee County’s fire and EMS providers, in cooperation with their municipalities, should explore the feasibility of utilizing, and in fact encouraging, municipal employees to perform “dual roles” by serving not only in their full-time positions but also serving the fire company as volunteer firefighters.*
- IX-8:** *Genesee County’s fire and EMS providers, in cooperation with their participating municipalities, should encourage giving priority attention for hiring to selected municipal positions, such as public works, to personnel who are currently serving as active volunteer firefighters.*
- IX-9:** *Genesee County’s fire and EMS providers, in cooperation with their participating municipalities, should consider the development of a program that would provide active responders with the opportunity to obtain health insurance. The municipality should pay a graduated percentage of this program based upon response and training participation levels suggested in figure IX-12.*
- IX-10:** *With support from the Genesee County Emergency Service Task Force, the Genesee County Fire Advisory Board, the Genesee County EMS Council, and the Genesee Association of Municipalities funding should be sought from the Genesee County Legislature for the Department of Emergency Services to hire a full-time volunteer recruitment and retention coordinator to coordinate and organize efforts throughout the County.*
- IX-11:** *The Genesee County Emergency Service Task Force and Genesee County Fire Advisory Board, with assistance from the Genesee County Emergency Services, should approach technical schools and colleges in Genesee County, as well as areas of nearby counties that are within a reasonable distance, to explore the possibility of implementing live-*

in firefighter programs with fire companies that have adequate facilities and wish to participate. This program could also be extended to young new residents of Genesee County who have relocated to the area for work.

IX-12: *Genesee County fire and EMS providers and/or municipalities who can afford to do so should consider offering premium benefits for their highest performing members who make long-term commitments to the company and meet stringent eligibility criteria such as college scholarships and/or low or no-interest student loans, and low-interest mortgages.*

IX-13: *Genesee County fire and EMS providers who implement in-station duty crew programs should explore ways to incentivize those personnel and the program, such as purchasing dinner for the on-duty personnel, with the goal of maximizing buy-in and participation of company members while simultaneously easing the emergency response burden on all members of the company (and perhaps adjacent companies as well).*

IX-14: *The recruitment and retention coordinator should deliver marketing information to new residents and, if possible, make direct contact with these potential first responders.*



Figure IX-13: Volunteer Firefighter Recruitment Door Hanger

CHAPTER X - FACILITIES AND APPARATUS

Emergency Services facilities

Emergency services stations (for both fire and EMS) are a critical community asset. The station facilities of a modern fire and/or EMS provider are designed to do much more than simply provide a garage for apparatus or other vehicles and a place for on-duty personnel to wait for a call. Well-designed fire and EMS facilities enable staff to perform their duties effectively, efficiently, and safely. A fire/EMS station should, at a minimum, provide adequate, efficiently designed space for the following functions:

- The housing of fire apparatus and other emergency response vehicles such as ambulances, with adequate space for apparatus length and height (and the housing of all equipment, including staff, and service and support vehicles, including trailers).
- On-duty crew quarters, with sufficient toilet/shower/locker room space for both sexes.
- Adequately sized sleeping facilities.
- Personnel and equipment decontamination areas.
- Capability to decontaminate, launder, and dry personal protective equipment and station uniforms.
- Kitchen and eating area.
- Training, exercise, and meeting spaces.
- Administrative offices.
- Vehicle maintenance (as necessary).
- Hose drying and storage (as necessary for fire stations).
- Adequate storage for supplies and equipment including medical and disaster supplies (this includes secure store for drugs used by ALS providers).
- Public entrance/reception area.

Fire and EMS stations are unique facilities in that they must accommodate extremely diverse functions, including living quarters, recreation, administration, training, community education, equipment and vehicle storage, equipment and vehicle maintenance, and hazardous materials storage. While it is usually only occupied by emergency response personnel, the facility may also need to accommodate the members of the public who visit for station tours, public education presentations, blood pressure checks, other health screenings, etc. Many communities find that an emergency services station is an ideal place to locate the community's emergency operations center (a large room, such as a training classroom, which can be designated to serve as the EOC when needed). Meeting rooms are also frequently made available to community organizations, thus increasing their versatility. However, in today's environment, serious consideration must be given to station security and whether allowing members of the public who are not members of the organization to utilize these facilities is appropriate, particularly if there is open or easy access to the operational areas of the facility.

Fire and EMS facilities are exposed to some of the most intense and demanding uses of any public local government facility. The very nature of the fire and EMS operations necessitate that all stations be functional, adequate to fulfill the organization's core missions and be well maintained.

The adequacy, quality, and appearance of fire and EMS station facilities have a significant impact on the performance of the organization. Stations support the needs of the fire and/or EMS provider and the community in which they are located. Fire and/or EMS stations that meet those needs now, and in the future, are built and maintained with quality products and systems. An attractive, well-maintained, functional, clean, and well-designed emergency services station can contribute to the morale and operational effectiveness of the organization. In addition, most citizens have little contact with their local fire or EMS provider and often make judgments that are, at least partially, based upon their impression of station facilities.

It is important that the existing fire and EMS stations are properly maintained, and any future stations are designed and constructed in such a manner that personnel can perform their duties efficiently and effectively. Emergency services stations often have an anticipated useful life of 50 to 75 years, depending upon the patterns of the community. As a facility ages, it may no longer meet the needs of an evolving organization and/or community, thus negatively affecting morale, efficiency, safety, security, technology, and overall efforts to provide quality fire, EMS, and rescue services. Older and/or obsolete facilities are also expensive to maintain due to inefficient energy systems. When these conditions occur, typical remedies include expanding, renovating, and replacing the existing facilities.

There is no specific template for fire and EMS station design and construction. Each station must be designed to meet the unique needs of the community, or area of the community it will

serve, and the mission it has been tasked with providing. National best practices, such as guidance provided by the National Fire Protection Association (NFPA) and the Federal Emergency Management Agency (FEMA) recommend that the following features be included in fire and EMS station capabilities:

- Seismic-resistant construction (based on local risk assessment).
- Flood hazard protection (based on local risk assessment).
- Automatic fire sprinkler system and smoke detection system.
- Carbon monoxide detectors.
- Vehicle exhaust extraction system.
- Facility security.
- Emergency power supply.
- Compliance with the Americans with Disabilities Act (ADA).
- Compliance with current fire and building codes.
- Adequate parking for on-duty personnel, administrative staff, and visitors.
- Capability for future expansion.

Fire station facilities should be an important component of a municipal capital improvement plan (CIP). A long-term plan should be in place that takes into consideration the expected life expectancy of a facility, space needs, technology needs, and location requirements, based on response times, travel distance, changes in community development patterns, and regional fire protection capabilities. The construction or renovation of fire stations is a costly proposition that should be planned well in advance to balance other community needs for capital projects.

Genesee County currently has 22 emergency services (fire and EMS) deployment locations situated strategically throughout the County. All organizations have a single facility except for the Town of Batavia Fire Department and Alabama Fire Department each of which has two stations. These include facilities that are solely for either fire or EMS operations, as well as several facilities that provide for the deployment of both types of resources. The facilities and apparatus in the county offer a wide spectrum of realities. The facilities run the spectrum from

a simple garage to modern fire stations with live-in quarters, training areas, meeting space, and offices.

The MRI study team had the opportunity to visit multiple fire and EMS stations in Genesee County during this study. In the questionnaires that were distributed to all fire and EMS provider organizations the team also asked them to evaluate the condition of their stations. The number of respondents that each classified the condition of their station(s) is as follows:

- Excellent = 3
- Very Good = 2
- Good = 11
- Fair = 2
- Poor = 1

Site visits to the stations by the MRI study team showed that the stations appear to be clean and generally well maintained, at least to the extent that the personnel who are members there can accomplish. Despite their limitations, and in some cases, the age which makes maintenance and functionality more of a challenge, the members take great pride in the stations where they belong. That perception notwithstanding, several stations are undersized and not adequate for a modern-day fire station. The older stations that were visited lack sufficient storage space and are not outfitted with any living, shower, locker room, sleeping, and physical fitness facilities for members, or those who may be staffing the stations for other reasons.

Many of the older stations that were visited are not fully in compliance with the requirements and recommendations of the NFPA Standard 1500, *Standard on Fire Department Occupational Health Program*, 2018 edition. NFPA 1500 is the nationally recognized standard for health and safety in fire departments and includes recommendations for fire station facilities. Selected examples include, but may not be limited to, the need for isolated areas for decontamination of personnel and equipment, vehicle exhaust systems, and life safety code requirements.

The photos on the following pages (Figures X-1 thru X-3) illustrate a few of the stations in Genesee County that are probably nearing – or have reached – the end of their useful life as a fire/EMS station. **The MRI study team stresses though that the shortcomings identified in these stations are in no way a reflection of the individual fire company or its membership.** Rather, it is to again drive home the point that if the quality of fire and EMS services currently enjoyed by the residents of Genesee County are to be maintained in the future, and perhaps even enhanced, adequate funding is going to be critical to the companies' continuing to fulfill their missions.



Figure X-1: Alexander Fire Station



Figure X-2: Byron Fire Station



Figure X-3: Elba Fire Station

Genesee County has several newer, much more adequate, and functional stations such as Town of Batavia Station 2 (Figure X-4). Built in 2020, this station has spacious apparatus bays, sufficient storage areas, adequate living quarters such as a kitchen and day room, bunk rooms, shower facilities, spaces for training with props, administrative offices, meeting space, etc. The LeRoy Fire District also has a modern, up-to-date facility (Figure X-5).



Figure X-4: Town of Batavia Fire Station 2



Figure X-5: LeRoy Fire District Fire Station
Image credit: Firedepartment.net



X-6: Fire apparatus connected to a source capture vehicle exhaust extraction system.

Photo credit: David Wayne on Quora

All fire stations in Genesee County are equipped with emergency generators which allows for continuity of operations during times when there are power outages. The MRI study team was informed and personally observed, that not all fire stations are equipped with source capture vehicle exhaust extraction systems (Figure X-6). These systems are designed to enable apparatus operators to attach a large flexible hose to the exhaust pipe before backing into the station. The system fan automatically discharges vehicle exhaust to the outside atmosphere. When the vehicle is driven out of the station, the discharge hose is automatically released once the apparatus clears the station. As a result of the lack of this type of system, the station's personnel are exposed regularly to the harmful effects of breathing in both diesel and gasoline engine exhaust emissions (Figure X-7). This exposure occurs during the response to, and return from emergency responses, during training exercises, routine

vehicle inspections, and any other time that any vehicle in the station must be started and driven either out of or backed into, the station.

Short-term, breathing in diesel and gasoline fumes can cause coughing, itchy or burning eyes, chest constriction, wheezing, and difficulty breathing. Over the long-term exposure to these fumes may increase the risk of lung cancer and possibly bladder and other cancers. There is additional evidence that the fine particles found in diesel emissions, particularly soot, can aggravate heart problems and respiratory illnesses such as asthma. In addition, the members' PPE, which is often stored in the apparatus bays for easy access, is continuously exposed to deposits of soot and other exhaust emission products that are released every time a vehicle is started in the station, resulting in a secondary exposure hazard to personnel as they perform their emergency response duties. At least one major study has concluded that diesel exhaust can penetrate, and be absorbed by clothing, furniture, and other items that firefighters routinely are in contact with, where it can later be absorbed into the firefighter's skin³⁶. Every time the firefighters put on this PPE, they are being exposed to these contaminants and potential carcinogens.

³⁶ <https://www.osha.gov/SLTC/dieselexhaust/>
<https://www.arb.ca.gov/toxics/dieseltac/factsht1.pdf>



Figure X-7: Source capture vehicle exhaust systems can be utilized for both diesel and gasoline powered vehicles, and, can be attached to multiple vehicles parked in the same bay.

Photo credit: Plymovent

A National Institute for Occupational Safety and Health (NIOSH) study completed in 2016 (HHE Report No. 2015-0159-3265), continues to recommend a local exhaust ventilation system for fire and EMS stations, even if that station has apparatus equipped with modern engines that employ ultra-low sulfur diesel fuel and contain diesel particulate filter and regeneration systems. The report notes: *“Although exposures are lower in these stations, efforts to further reduce exposures are appropriate because of the potential health risks from exposures to diesel exhaust.”*

The MRI study team was informed and observed that not all stations are equipped throughout with automatic fire detection systems and carbon monoxide detectors. The MRI study team was informed that fire protection in a few stations may consist solely of one or two battery-operated smoke detectors. While these stations are not staffed on a regular basis, CO detectors are an important life safety device. Automatic alarm systems can help protect the investment of the community in the facility and apparatus.

Assisting with regional or County-wide Assistance to Firefighters Grant (AFG) applications to ensure all fire and EMS stations are equipped with a minimum of fire and CO detection systems, and source capture vehicle exhaust extraction systems is an area where Genesee County could provide valuable support and assistance to various fire and EMS providers. If the grant applications are unsuccessful, the County may also be able to assist companies with the installation of these systems by bidding on the projects on a County-wide basis, to take advantage of the economies of scale for any organization that wished to take advantage of a lower cost for installation.

Periodic inspections of all fire and EMS stations and facilities should be conducted on a regular basis. These inspections can be used to identify potential maintenance, as well as safety issues, and allow them to be addressed before they become problematic. The fire station grounds should also be included in these inspections. The toolbox assembled for this report includes a sample fire station inspection form.

Emergency Apparatus and Vehicles

The resources that fire departments and EMS providers use to perform their core missions, and mitigate a wide range of emergency incidents, are generally divided into two major categories, apparatus and tools/equipment. Apparatus generally includes the department's motorized vehicle fleet and major emergency response apparatus such as engines (pumpers), aerial apparatus/tower ladders, rescue vehicles, and ambulances. Specialized apparatus includes emergency units such as marine units/boats, lighting units, water tankers, brush trucks, traffic units, and other off-road vehicles. They also often include trailers for specialized applications such as technical rescue, hazardous materials response/equipment, hazardous material decontamination, structural collapse rescue equipment, breathing air/light support units, foam units/supplies, and mass casualty incident supplies. Support vehicles that are critical to the fire department and EMS operations, both routine and emergency, include command post and emergency communications units, command/staff vehicles, paramedic units, and maintenance trucks.

The geography, infrastructure, hazards, and construction features within the community all play a major role in determining the composition of each organization's unique and individualized apparatus/vehicle fleet and equipment inventory. Genesee County's environment presents the fire companies/departments and EMS providers with a wide variety of strategic and tactical challenges related to emergency response preparedness and mitigation. For many locations or facilities, these challenges may include but are not limited to, firefighting, emergency medical responses, and complex incidents requiring special operations capabilities such as technical rescue and hazardous materials emergencies.

Commercial buildings and target hazards present many different hazards and challenges, particularly during firefighting operations, than those required for operations in single-family dwellings. In some areas, the need to travel long distances to obtain a water supply and refill water tenders can complicate operations in some parts of the County. All these factors, as well as projected future needs, must be taken into consideration when specifying and purchasing fire department and EMS apparatus/vehicles and equipment. Every effort should be made to make new apparatus and vehicles as versatile and multi-functional/capable as possible and practical.

Genesee County has provided a wide array of equipment to local agencies. These resources are deployed throughout the County to address the diverse needs of the various hazards they must protect. According to the County's CAD system, the following major types and quantities of apparatus are dispatched throughout the County. The detailed questionnaire that was completed by every fire and EMS agency in Genesee County also asked for their information which is also included for reference purposes (Figure X-8). However, not all companies answered all questions. MRI considers the CAD-provided information to be the most accurate.

APPARATUS TYPE	NUMBER IN SERVICE CAD	NUMBER IN SERVICE QUESTIONNAIRE
ENGINES/PUMPER	30	28
LADDERS/TRUCKS	5	3
WATER TANKERS	14	11
RESCUES	13	10

Figure X-8: Major Apparatus Types and Quantity

In addition, according to the CAD, there are seven brush trucks, eight squads, and 12 command vehicles. For EMS units, there are six fire department-based ambulances in Genesee County. These numbers also do not align with the numbers listed on the fire and EMS questionnaires. This does not include Mercy Flight EMS or LeRoy Ambulance.

It should be noted that not all of these units are necessarily in service at all times, and, that every fire and EMS system also requires a certain number of reserve or spare units that are available in ready condition, when primary response units are out of service for maintenance or repair, or during times of extremely high incident activity such as during severe weather.

The apparatus set that exists within Genesee County is well above national averages regarding the current size and configuration of its fleet when compared to communities with comparable populations. However, in the case of Genesee County, the fact that we are looking at an entire county, one that covers a large geographic area, a somewhat larger apparatus fleet can be justified. However, even with that justification in place, the apparatus fleet is too large for the risk and number of fires in the County.

The apparatus that the MRI study team had an opportunity to view during the field visits, even the older units, all appear to be in good or better condition. For the most part, the vehicles that the team examined were well maintained, and with the equipment stowed in an orderly fashion. As has become a common theme with this study, some companies have new apparatus and future replacement plans in place. Other companies have older apparatus and no tenable plan for replacement.

Despite the lack of clear guidance in the various NFPA standards, there is a significant body of knowledge that suggests that fire apparatus has a finite life span. The reasonable serviceable life span of fire apparatus will depend on many 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 rural or suburban in nature, might still be mechanically sound after twenty years or more, due to their lower frequency of use. However, when considering apparatus usage, hours on the motor and pump hours must be taken into consideration. Fire apparatus typically spend more time idling while at emergency scenes, or, throttled up when operating the fire pump. A rule of thumb that can be used is that each hour on the motor is the

equivalent of thirty to thirty-five miles of actual road usage. In addition, after twenty years, technical and functional obsolescence may make apparatus less desirable to use, even if mechanically sound and serviceable. However, that does not mean that it will still not be serviceable as a spare or reserve apparatus.

A white paper developed by the Fire Apparatus Manufacturer's Association (FAMA) suggests that the front-line life span 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 status³⁷. The International City/County Management Association (ICMA) suggests that the life span of a fire pumper should be 20 years, and the life span of an aerial ladder should be 25 years.

Like many other things today fire apparatus lasts longer than it did in the past particularly if it receives proper maintenance and is not subject to heavy use. The MRI study team cannot speak definitively to the maintenance question; however, stakeholder interviews indicated that the service and maintenance programs in place varied from company to company throughout the County. From a use perspective, in 2020, with the exception of the City of Batavia the busiest fire company in the County responded to 353 incidents which included EMS calls. Many companies respond to fewer than 200 incidents each year.

In today's economic environment, it does not make fiscal sense to continue to just replace low-use apparatus at intervals that may be more frequent than necessary, particularly if that is the only criterion that is being utilized. Extending out useable the life span of the County's apparatus fleet will relieve some pressure off the capital equipment purchase account in the various companies and municipalities and make better use of those tax dollars for other needs such as staffing. 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 mentioned briefly earlier in this chapter, one of the biggest factors that can impact the serviceable life of fire apparatus is the level of preventative maintenance that it receives. NFPA 19-1-1: *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus* (2017 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 proactive preventative maintenance program can assist with holding costs to an acceptable level. The toolbox assembled for this report includes a sample vehicle

³⁷Fire Apparatus Duty Cycle White Paper, Fire Apparatus Manufacturer's Association. August 2004.

inspection form that should be completed by a certified emergency vehicle technician (EVT) on a periodic basis. Other entities such as Volunteer Firemen’s Insurance Service, Inc. have similar forms available for their clients.

Currently, each fire company in the County determines how they will provide maintenance and repairs to their apparatus and vehicle fleet. This includes a combination of local repair facilities and manufacturer’s authorized service centers. The levels and types of maintenance and service vary throughout the County. Utilizing outside vendors to perform routine repairs and preventive maintenance activities, as well as some major repairs to emergency vehicles is not always the most cost-effective manner to maintain the operating fleet. In addition, depending upon the type of facility they are sent to, the personnel may not possess the recommended EVT certification for working on emergency vehicles. Regardless of where service and maintenance are performed, fire companies should ensure that any mechanics performing these tasks are professionally trained and capable of performing the specialized mechanical repairs that are required with fire apparatus and emergency vehicles.

There are several ways that the fire and EMS agencies in Genesee County can better address the service and maintenance of the large emergency vehicle fleet. Some ideas that might be considered, and result in potential improvements in the consistency of quality and efficiency, while providing cost savings, include but are certainly not limited to:

- Sharing a fully trained and EVT-certified mechanic between multiple fire companies and/or municipalities.
- Developing several vendor contracts for County-wide maintenance services for the fire companies.
- Genesee County provides repair and maintenance services to the fire and EMS agencies either as a service, or, on a cost basis.

Whether more complex tasks and specialized repairs (i.e. drive train, fire pumps, aerial ladder systems, etc.) should continue to be contracted out to specialized repair shops or could be performed in-house would be a decision that the participants would need to make.

During this assessment, the MRI study team was informed during interviews that annual pump and ladder testing on the apparatus is performed by some, but not all fire companies utilizing outside vendors. These tests are required by various NFPA and ISO standards³⁸. Test results provide an indicator of apparatus condition and are a valuable tool in budget planning. Often, because of this testing, minor maintenance issues can be resolved which will delay or eliminate the need for major repairs in the future. It is also important to remember that from a safety and performance perspective, this annual testing needs to be completed to ensure the overall

³⁸ NFPA 19-1-1, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles, 2017 Edition

<https://www.isomitigation.com/ppc/fsrs/items-considered-in-the-fsrs/>

rating, capacity, and functionality of the pumps and ladders are reliable during emergency incidents.

It is also the opinion of the MRI study team that Genesee County has an abundance of apparatus for the size of the County, its level of fire incidence, and the fire companies' decreasing active staffing levels. Many of the stakeholders that were interviewed also expressed that the County has too much fire apparatus. In some cases, the apparatus configuration is probably a throwback to a previous era when each fire company attempted to be fully self-sufficient and had everything they needed to handle most incidents. That is no longer the case today, as often between four and six different companies should be initially dispatched to incidents like reported structure fires. As times have changed, the process for apparatus deployments has not evolved with the County's more wide-ranging approach and what should be a much more unified fire protection focus moving forward. Several companies have an abundance of apparatus and there is no doubt that the apparatus fleet should be the right-sized, particularly the more expensive, specialized types of units such as rescue trucks. As noted previously, multiple vehicles are being maintained for infrequent responses.

One type of apparatus where there is both an abundance of, and lack of, simultaneously is ladder trucks. The City of Batavia has one ladder, and the Town of Batavia has two. This places three ladders in close proximity to each other in or near the city. Although the city, in particular, has a significant level of risk, this concentration is high and creates some costly redundancy. There is a 75' ladder in Bergen as well as a ladder in LeRoy which covers the eastern end of the county. However, there is no ladder west of the Town of Batavia. This places the westernmost ladder in the County 12 - 15 miles from some areas in the western portion of the county. The acquisition of a ladder – even a well-maintained used ladder – for deployment in the West Battalion would be an excellent cooperative or regional endeavor between several fire companies and/or municipalities.

Moving forward, the various stakeholders in the Genesee County Fire and EMS delivery system should work collaboratively to right-size the apparatus fleet. No one fire company needs to have at least one of every type of apparatus. In addition, unless they are operating from multiple stations, which only two are, MRI believes that few, if any, fire companies need to have three or four engines in service as it is unlikely they have the personnel to properly staff them. Resources would be better allocated, and the study team believes operational proficiency increased, by various companies adopting a single specialty that they provide for a wider geographic area of the County.

In addition, the various stakeholders in the Genesee County Fire and EMS delivery system should work collaboratively to develop standardized specifications for the purchase of new apparatus. Although the specifications can be revised and updated, as necessary, standardization will assist with training, personnel familiarity, and maintenance to name just a few potential benefits. In addition, if multiple entities are purchasing new apparatus or

vehicles, whether for fire or EMS use, there should be cost-saving for the purchase of multiple identical units.

Some of the possibilities that several fire companies might consider, is to combine an engine and rescue into a rescue engine which can provide both firefighting and vehicle extrication capabilities in a single vehicle. Combining an engine and rescue into a single unit can satisfy operational needs that may be difficult to meet by attempting to staff two separate pieces of apparatus, particularly in limited staffing situations. Long-term, replacing some of the rescues with rescue engines will provide companies with diverse multi-purpose resources that provide maximum operational flexibility and options for safe, effective, and efficient options, particularly when operating with the minimal staffing levels with which many companies now operate. Full-size rescues should continue to be deployed strategically around the County, perhaps one in each battalion. Figures X-9 through X-11 illustrate a well-designed, multi-functional rescue engine. This unit has the following features:

- 2,000 GPM pump
- 1,000-gallon tank
- 15KW generator
- Will-Burt Night Scan vertical light tower
- 7 – pre-connected lines from 1 ¾” to 3”
- 1,100 feet of 5” LDH
- 3 pre-piped hydraulic lines with Hurst combination tool on the bumper.
- 4 - Auto Cribs
- Electric Reel with reciprocating saw on bumper.
- 2 Sets of Res-Q Jacks
- CMC Truck Cache and Rope for Confined Space Rope Rescue
- Stokes Basket and Fast Board
- RIT Pack and Pac Tracker
- Ice Water Rescue Suits
- Water Rescue sling and rope
- Life Vests



Figure X-9: Multi-functional rescue engine.
Photo credit: Edan Davis @ South Jersey Fire News
thru Millville, NJ Fire Department.



Figure X-10: Rescue engine front bumper with pre-connected fire line, rescue tool, and reciprocating saw.
Photo Credit: Captain Alex Hess,
Millville Fire Department



Figure X-11: Rescue engine operating at a serious motor vehicle crash.
Photo credit: Edan Davis @ South Jersey Fire News thru Millville, NJ Fire Department.

For companies that operate in areas with limited or no municipal water supply systems where the use of water tankers for fire operations is mandatory, pumpers, tankers, and even a rescue can be combined into a single multi-functional vehicle. An article on the Washington Fire Chiefs Association website notes:

“Tankers are quickly taking on additional roles in fire operations, many of them being not only capable of supplying and shuttling large quantities of water, but also serving in the roles of pumpers and rescues. Manufacturers report they are building

more tankers that can be classified as multi-purpose vehicles, and departments are using these multi-role tankers to handle situations traditionally dealt with by other types of apparatus.”³⁹

The article also notes that over the past two decades or so, water tankers have evolved from vehicles used just for shuttling water that was equipped with large water tanks, small pumps, and low-side compartments into multi-functional units outfitted with similar-sized water tanks but much larger pumps, multiple pre-connected hose lines, full-size hose beds, hydraulic ladder and folding tank racks, and high side compartment space that can accommodate hydraulic rescue equipment.

As with the rescue engines, combining an engine, water tanker, and rescue into a single unit can satisfy multiple operational needs for companies that may be difficult to meet, by attempting to staff multiple pieces of apparatus. A unit such as this could be deployed as the first-out engine by fire companies whose areas with limited or no fire hydrants provide full engine capabilities, along with increased water carrying capacity. It can also provide the necessary extrication equipment for handling most motor vehicle crashes. MRI believes that a unit such as this will provide companies with diverse firefighting and basic vehicle extrication resources that provide maximum operational flexibility and options for safe, effective, and efficient options, particularly when operating with the minimum staffing levels that many companies are now faced with. Figures X-12 and X-13 illustrate a well-designed, multi-functional rescue engine/water tender combination. This unit has the following features:

- 2000 GPM pump
- 2500-gallon water tank
- Foam system with 20-gallon foam tank
- Multiple pre-connected hose lines
- 185 cubic foot hose bed
- 30kw hydraulic generator
- Will-Burt 6000-watt light tower
- Front bumper hydraulic rescue tool
- Res-Q-Tec strut system
- Rescue style compartments – 300 cubic feet of compartment space

³⁹ <https://www.washingtonfirechiefs.com/Sections/PublicFireEducators/TabId/2346/ArtMID/7884/ArticleID/6573/Tanker-Designs-Reflect-Expanding-Roles.aspx>



Figure X-12



Figure X-13

Multi-functional rescue engine/water tender.

Image credits: Left - New England Fire Equipment and Apparatus and right – Zacks Fire Truck Pics

A word of caution is warranted here. Any type of emergency vehicles carrying large quantities of water are going to be large, long and heavy vehicles, (over 65,000 pounds, gross vehicle weight [GVW]). These vehicles also tend to be somewhat top-heavy. These factors combined with rural roads sometimes being narrow or otherwise less than optimal, require the drivers to be well trained with a thorough understanding of rollover prevention to ensure that operations are always conducted safely.

The MRI study team was informed during interviews that few apparatuses in Genesee County have the capabilities of delivering compressed air foam on the fireground. Compressed Air Foam Systems (CAFS) are a method by which a foam-producing agent and air are added to water, which creates a far more effective tool to extinguish fires. Equipment is available to retrofit most existing fire apparatus. The use of these foam systems in fire suppression has been well documented to reduce fire knockdown time by up to 78%, compared with the use of just water. This means that when using compressed air foam, firefighters are exposed to dangerous operating conditions for less time and can operate at a safer distance from the fire.

CAFSs require about 15 gallons of water to achieve the same knockdown that 70 gallons of straight water achieves. This means that much less water is required with foam. This reduction in water translates into far less structural, smoke, and water damage, which are the typical kinds of damage sustained in a structure fire. Using a CAFS also reduces overhaul and cleanup operations because there is less damage and more evidence preserved for fire investigation.

In addition, it is well documented in the fire service each year that physical fitness and cardiovascular disease continue to be leading contributors to line of duty injury and death

for fire service personnel⁴⁰. ***CAFSs minimize the weight in these attack lines and thus lessen the physical strain placed upon personnel during limited staffing situations. This is a particularly important consideration for volunteer fire service organizations and personnel who may initially be deployed to structure fires.***

As independent, non-government organizations, many of Genesee County's fire and EMS agencies are not bound by government bidding requirements, even though government funding allocated for capital purchases can be involved. In most cases, each agency has a preferred brand for fire apparatus and deals just with that specific vendor throughout the process. With no competition for the sale, there is no incentive for the vendor to "sharpen their pencil" on the proposed price. This can lead to higher purchase costs.

Public bidding laws are the set of laws that govern contracts for public works and the purchase of materials and supplies by public entities that meet certain threshold requirements. The purpose of the public bid law is to ensure that public entities receive the best possible price when using public funds for the procurement of materials and supplies or public works.

In any purchasing process that utilizes public funds, it is imperative to maintain a system of competitiveness and equal access without any indication of favoritism or preference for an individual dealer or vendor. While many volunteer fire departments and EMS agencies develop specifications for an apparatus manufacturer and purchase from their vendor of choice, this practice is generally not allowed in most local and state governments. The process often gets complex and political, when public entities provide funding to independent volunteer organizations that provide emergency services to the community. However, if public funding is being utilized it is essential that a request for proposal (RFP) and an invitation to bid (ITB) are developed to ensure the product or service provides the intended results, and that technical specifications are written in a way that provides fairness and competitiveness. Unless there are compelling and justifiable reasons to do otherwise, the contract should be awarded to the lowest responsible bidder.

A procurement process for major acquisitions that is rapidly gaining popularity in the public sector, is making purchases through soliciting multiple written bids. In addition to obtaining bids as a method of cost comparison on the local level, many communities are utilizing a regional approach to create a larger economy of scale. Examples of these purchasing consortiums include the Houston Galveston Area Council (H-GAC) Buy program (HGACBuy) which is a government-to-government procurement service that is available nationwide. According to its website, the H-GAC is a regional organization through which local governments consider issues and cooperate in solving area-wide problems. Through H-GAC, local governments also initiate efforts in anticipating and preventing problems, saving public funds.

⁴⁰<https://www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Emergency-responders/osFFF.pdf>

The HGACBuy website⁴¹ states, “As a unit of local government assisting other local governments, HGACBuy strives to make the governmental procurement process more efficient by establishing competitively priced contracts for goods and services and providing the customer service necessary to help members achieve their procurement goals. All contracts available to members of HGACBuy have been awarded by virtue of a public competitive procurement process compliant with state statutes.”

The benefit to communities and government-funded entities is that the time-consuming and complex process of putting specifications out for public bids has already been completed. As a result, the procurement process for capital acquisitions, while still completely transparent, is greatly simplified.

Equipment

The tools and equipment that a fire department utilizes cover a wide assortment of resources necessary to effectively, efficiently, and safely respond to, and mitigate a wide range of emergency incidents. These resources include, but are certainly not limited to, the firefighters’ PPE, SCBA, hose, nozzles, adapters, master stream appliances, ground ladders, radios, hydraulic rescue tools, and equipment, and various hand and power tools.

The fire service has experienced tremendous technological advances in equipment, procedures, and training, over the past fifty years. Improved PPE, the mandatory use of SCBA, large diameter hoses, better and lighter hose lines, and nozzles, and thermal imaging cameras are just a few of the numerous advances in equipment that have enabled firefighters to perform their duties more effectively, efficiently, safely, and with fewer personnel. However, the fact remains that emergency scenes present a dynamic, dangerous, frequently unpredictable, and rapidly changing environment where conditions can deteriorate very quickly and place firefighters in extreme personal danger. The technology and standards for fire department equipment are constantly evolving to improve the effectiveness, efficiency, and safety of firefighters.

NFPA 1901, *Standard for Automotive Fire Apparatus* (2016 edition), and ISO, provide standards for the minimum complement of equipment carried on fire apparatus. However, most apparatus carry much more equipment than these minimums. It is important to recognize that each agency has different requirements for apparatus and equipment. NFPA focuses broadly on the safety and performance of the apparatus, while ISO focuses specifically on the fire suppression capabilities of the apparatus as it potentially can impact the fire insurance rating for a community. These differences are most significant for equipment carried on pumpers and aerials. Differences between NFPA and ISO equipment for pumpers include hoses, monitors,

⁴¹ <https://www.hgacbuy.org/>

ground ladders, foam, and radios. Differences in aerial equipment include SCBA, ground ladders, and radios.

PPE includes the full ensemble that encapsulates a firefighter who will be engaging in firefighting operations: helmet, Nomex® hood, turnout coat, turnout pants, boots, SCBA, gloves, eye shield, and station uniform. The specifications and related requirements for PPE can be found in various NFPA standards. The use of PPE is regulated by OSHA. The current edition of NFPA 1851, *Standard on Selection, Care and Maintenance of Protective Ensemble for Structural Firefighting and Proximity Firefighting* recommends that firefighter PPE be replaced at no greater than 10-year intervals.

Annual flow testing of SCBA is required by NFPA Standard 1852, *Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA)* and manufacturer's recommendations. NFPA and ISO also both require the annual testing of all fire hoses. The MRI study team was informed that while many of the fire companies in Genesee County do perform these annual tests, there are still some which do not.

It is the current best practice in the fire service that every firefighter who is wearing SCBA and/or entering an atmosphere that is IDLH should be equipped with a portable radio. Should a firefighter become trapped, lost, disoriented, or experience any other type of emergency, he/she can summon help on the portable radio. Many departments now have a portable radio assigned to either every riding position on every piece of apparatus and/or to every on-duty member. Genesee County has provided enough radios to every fire company to provide most of those required to fulfill this important life safety recommendation. Genesee County should be commended for this effort which MRI considers to be a **Best Practice**.

Most of the fire companies in the County have hydraulic rescue tools for use in motor vehicle crashes. This equipment is important to these departments' overall operations due to the traffic throughout the County. To ensure that they are maintained in proper working order, these units should be covered under an annual service/maintenance contract and serviced on an annual basis as outlined in NFPA 1936 *Standard on Powered Rescue Tools* (2015 edition).

Thermal Imaging Cameras (TICs) are valuable pieces of equipment used by firefighters during fire incidents. By rendering infrared radiation as visible light, such cameras allow firefighters to see areas of heat through smoke, darkness, or heat-permeable barriers. Thermal imaging cameras pick up body and other types of heat and are used to locate and remove trapped fire victims more quickly. They are also often used to find hidden fire behind closed walls. Most thermal imaging cameras are handheld but may also be helmet mounted. Every fire company in the County has at least one of these units, with many having them on multiple pieces of apparatus. Again, to ensure that they are maintained in proper working order, these units should be covered under an annual service/maintenance contract and serviced on an annual basis.

The multi-gas meter is a small hand-held device that can detect lower explosive limit (LEL), CO, and oxygen-depleted environments allowing firefighters to identify and monitor hazardous environments. There are numerous types of combustible 5 gas detectors/meters, four gas meters, and single gas detection meters. Every fire company in the County has at least one of these meters, again, with many having several.

Recommendations:

- X-1: *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Legislature and Genesee County Emergency Services, the Genesee County Fire and EMS agencies should consider applying for an Assistance to Firefighters Grant (AFG) to attempt to obtain funding to assist with the installation of automatic fire alarm and carbon monoxide detection systems in all fire and EMS stations. These systems should not only be equipped with both audible and visible warning devices, they should automatically transmit an alarm to an approved central monitoring station.***

- X-2: *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Legislature and Genesee County Emergency Services, the Genesee County Fire and EMS agencies should consider applying for an Assistance to Firefighters Grant (AFG) to attempt to obtain funding to assist with the installation of direct capture vehicle exhaust extraction systems in all fire and EMS stations.***

- X-3: *Working collaboratively, the appropriate stakeholders involved in any proposals for new and/or replacement fire or EMS stations should include a thorough needs assessment including whether multiple stations could be consolidated at a single more operationally appropriate location.***

- X-4: *Inspections of all fire and EMS stations and facilities should be conducted on a regular basis. These inspections can be used to identify potential maintenance, as well as safety issues, and allow them to be addressed before they become problematic.***

- X-5: *As part of a proactive preventative maintenance program that can assist with reducing maintenance costs, all fire and EMS vehicles should be thoroughly inspected by a certified emergency vehicle technician (EVT) on a periodic basis, but no less than annually.***

- X-6: *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Legislature and Genesee County Emergency Services, the Genesee County Emergency Services Task Force, and Genesee County Fire Advisory Board should consider ways that the fire and EMS agencies in the County can***

better address the service and maintenance of the large emergency vehicle fleet. This can include the development of standard preventative maintenance and repair protocols. Some ideas that might be considered and result in potential improvements in consistency in quality and efficiency while providing cost savings, include, but are certainly not limited to:

- *Sharing a fully trained and EVT-certified mechanic between several area fire companies and/or municipalities.*
- *Develop several vendor contracts for County-wide maintenance and repair services for all the fire companies and EMS agencies.*
- *Genesee County providing repair and maintenance services to the fire and EMS agencies either as a service or on a cost basis.*

X-7: *As required by various NFPA and ISO standards, annual testing of the following apparatus components and equipment should continue to be a high maintenance priority including for fire companies who do not currently have these tests performed:*

- Fire pumps
- Fire hose
- Aerial ladders
- Ground ladders
- Self-contained breathing apparatus (SCBA)
- Hydraulic rescue tools
- Thermal imaging cameras
- Combustible gas meters

X-8: *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Legislature and Genesee County Emergency Services, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should consider developing several vendor contracts for County-wide inspection and testing services for the all the fire companies and EMS agencies for the apparatus components and equipment listed in Recommendation X-7, above.*

X-9: *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Emergency Services, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should attempt to develop a standardized set of specifications for apparatus such as engines, rescue engines, engine tankers, brush trucks, command vehicles, and traffic units. The apparatus should have similar compartmentation and equipment (even if different manufacturers are selected) which will improve efficiency in emergency operations.*

X-10: *During the development of the standardized apparatus specifications, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should consider equipping new pumping apparatus with Compressed Air Foam System (CAFS)*

capability to improve fire knockdown capabilities, especially in limited staffing conditions.

X-11: Working collaboratively with their partners at Genesee County, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should explore the feasibility of advertising a County-wide bid specification periodically, for units such as engines, rescue engines, and command vehicles where the economy often provided by purchasing multiple very similar units can result in significant cost savings for the companies making the purchases.

X-12: Since most major apparatus and vehicle purchases involve at least some public funding, and in consideration of potential cost savings that could be realized even if they are funded otherwise, all major purchases should be publicly advertised as part of a fair and open competitive bidding process.

X-13: When making capital purchases such as apparatus any entity, whether an individual fire company up to a County-wide process should explore the significant cost savings benefits that may be obtained by participating in cooperative purchasing consortiums such as the Houston Galveston Area Council (H-GAC) Buy program (HGACBuy).

X-14: Working collaboratively with their partners at Genesee County, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should explore the feasibility of standardizing many of the tools and equipment utilized by the County's fire departments to allow for cost savings generated by group purchasing arrangements.

- Fire hose
- Nozzles and appliances
- Ground ladders
- Combustible gas meters
- Various hand tools and equipment
- Firefighter PPE
- Ventilation fans
- Saws
- Fire extinguishers
- Self-contained breathing apparatus (SCBA)
- Hydraulic rescue tools
- Thermal imaging cameras
 - Automatic External Defibrillators (AEDs)
- Portable suction units
- Oxygen equipment
- EMS disposable equipment
- EMS PPE
- EMS patient moving equipment (stair chairs, Reeves stretchers, etc.)

X-15: The overall size of the fire apparatus and vehicle fleet of Genesee County should be right-sized to make it appropriate for the county, the Genesee County Emergency Services, and the Board several fire companies and/or municipalities.

even a well-maintained used vehicle – of a ladder truck that would be deployed in the West Battalion to provide coverage to the western part of the county.

CHAPTER XI - FUNDING AND FINANCE

Three characteristics are most aligned with the fire service including its traditions, the deep-seated dedication to service, and the significant amount of time focused on readiness to respond to an all-hazards type of public safety service. Similar in its mission, EMS has followed the same characteristics, however, its growth and general level of support have not been at the same pace as the fire service. This is despite the twin facts that its call volume often is three to four times greater, and EMS probably responds to the greatest numbers of true emergencies where intervention by trained personnel does make a difference.

Both services are further challenged in meeting their service delivery commitments to the community due to the amount of time spent lobbying leaders and governing bodies, often at multiple levels of government, in pursuit of adequate funding and political support in a rapidly changing service environment. Declining revenue streams developed through the once routine and expected volunteer fundraising efforts, competing requests for funding from municipal governments, changes in government Medicare and Medicaid reimbursements, and the future impact that the COVID-19 pandemic will have on the economy and future funding available will all have a significant impact on the emergency services delivery system. Early signs of the pandemic's effect on budgeting have shown local and state governments have lost considerable revenues due to the need to close the country. This brings an immediate concern as to the impact on emergency services delivery. All the elements have created the perfect storm for emergency services throughout the United States and are also evident here in Genesee County. The MRI study team heard directly from several volunteer fire service companies during site visits, and all in some form or another described the concern of the declining volunteer fire service in the County. This same concern has been occurring nationwide over the past few decades.

MRI focused its study and research on finance areas based on input received during the group public input sessions, on-site visits to a number of volunteer fire companies, discussions with local and County leadership, and input obtained during a visit to a Genesee Association of Municipalities (GAM). Questions regarding funding and finance were also included in the online surveys and questionnaires that were widely disseminated to various stakeholders.

As an extremely difficult economic environment lingers, and the number of firefighters in volunteer fire companies continues to decline more than ever before, fire companies are approaching local governments for assistance. The EMS services are woefully lacking in funding. Funding at the local level in some areas has remained a supplement to fundraising rather than providing adequate funding. Those municipalities that have provided funding at adequate levels are struggling to keep up due to staffing and operational needs.

Small communities have traditionally gotten great value from their volunteer fire and EMS services. In addition to the fact that their personnel costs are extremely low, in many cases, the

local municipality or, in this case, municipalities, provides only a fraction of the amount of funding necessary for the department to operate effectively. The expectation, perhaps driven by long-established fund-raising traditions in the volunteer services and the communities they serve, continues to this day. In 2010, during the preliminary discussions on the formation of the Keystone Valley Fire Department in Genesee County, PA, a Pennsylvania Department of Community and Economic Development (DCED) *representative estimated that the average volunteer spends about 80% of their time commitment to the fire department raising funds rather than training or responding to emergencies.* Compounding this issue is the very real fact that volunteerism is declining at a time when the number of incidents continues to increase along with the time required for training.

It is the MRI study team's belief that the current hybrid system notwithstanding, ultimately it is each municipality's responsibility to provide for, and ADEQUATELY fund, the emergency services that protect its residents. Fundraising is a time-consuming effort that in the study team's opinion, does not make effective use of the valuable time of volunteer personnel.

Traditional fundraising activities such as breakfasts, dinners, and bingo no longer provide any significant return on the time and effort it takes to hold them. In addition, most younger members of the volunteer fire and emergency services have little interest in participating in traditional fund-raising activities, believing instead that they are making a significant contribution of time just to train and respond to emergencies. These are not trends that are going to be reversed and municipal governing bodies will need to adjust to these new realities.

When dealing with volunteer emergency services personnel, municipal governing bodies need to be certain to fully include them in the budgetary and decision-making process and be aware of the potential ramifications of making changes they do not fully support or buy into. While the governing body should not be held "hostage" by threats to quit, reduce, or eliminate services, if decisions do not go their way, they do need to understand that volunteers have a much different level of investment than career staff, and thus it is more difficult to mandate change or force them to continue to provide services if they do not feel the services they provide are appreciated or being adequately funded.

Fire and EMS agencies need to understand that scarce tax dollars that have been stretched to the limit are now in real danger of tearing or breaking. Smaller communities that have far fewer resources and options than their larger neighbors will find it especially difficult to cope with the limitations imposed by the new financial reality. The continuing trend of declining volunteerism will create simultaneous challenges that will stretch the provision of emergency services in many communities even further. In addition, the fire and EMS providers need to understand that with increased taxpayer-supported funding is going to come with an increased demand for accountability and transparency.

Based on the confluence of these sometimes-competing interests, a commitment to strategic planning can be one of the most beneficial instruments today in a fire chief's tool kit. Described another way it is the idea of "telling a story". Not only will strategic planning lay the groundwork for the future and what the agency's needs will be both short and long term, the

appearance of this leadership style and robust commitment to the delivery of public safety will pay dividends with the stakeholders, by embracing the community's commitment to fire protection.⁴² Current and future budgets should be linked directly to the strategic plan and level of service.

A fire and EMS agency budget is more than the dollar amount allocated for the operation of the emergency services. The budget is the document that reflects the goals and objectives that agency leadership and local governing bodies should collaboratively be establishing for the delivery of services to the community. The budget should be used as a planning tool by the fire and EMS agency leadership and should represent their needs to serve the public properly and safely.

Budget preparation and management must be an ongoing process in every aspect of the organization. Before one budget cycle is completed, the next must already be in process. The agency leadership must continuously monitor its operations and its ongoing needs, as well as anticipate the demands that will be placed upon it in the future.

The fire and EMS agencies should understand the budget impacts of current and long-range apparatus replacement, major station maintenance, and major capital projects. It is important that each organization develop a capital improvement plan that includes all future capital expenses including apparatus, vehicles, equipment, facility repairs and upgrades, and any project that meets the general definition of a capital purchase or project; generally anything with an expected serviceable life span of greater than five years.

While performing this study, the MRI study team obtained data from various sources regarding the amount of money being spent on the fire and EMS delivery systems in Genesee County, including both the fire and EMS agency and municipal managers' questionnaires.

According to the fire and EMS agency questionnaire:

- The cumulative fire and EMS budgets of all Genesee County providers is **\$8,548,078 of which \$3,790,000.00** is the city of Batavia, leaving a total of **\$4,758,078.00** for the remainder of the county.
 - ❖ This equates to a per capita expenditure of about **\$110.91** for municipalities other than the City of Batavia.
 - ❖ Based upon **3,750** calls responded to by organizations other than the city, the per incident cost is **\$1,268.83**.

- Annual fire and EMS budgets for individual organizations range from **\$90,500.00** to **\$3,790,000.00**. Removing the City of Batavia, the highest organizational budget is **\$1,185,265.00**.

⁴² Pennsylvania Senate Resolution 6 Final Report (November 2018)

- For organizations that do both fire and EMS, **27%** have separate budgets for each operation, while **73%** do not.
- Fire budgets (for those that reported) range from **\$88,000.00** to **\$317,000.00**.
- EMS budgets (for those that reported) range from **\$6,000.00** to **\$613,9220.00**.
- Percentage of budget derived from (**based upon information reported, NOT all municipalities and/or providers**):
 - ❖ Direct funding from municipalities – Range: **0 %** to **100%**
Average: **76.4%**
 - ❖ Emergency Services Tax (**4 responses**) – Range: **0%** to **100%**
Average: **52.4%**
 - ❖ Organizational fundraising (**6 responses**) – Range: **1%** to **57%**
Average: **19.6%**
 - ❖ Subscriptions/memberships – No responses
 - ❖ Other sources of fundraising (**4 responses**) – Range: **1%** to **3%**
Average: **2.0%**
 - One response reported **90%** to **95%** from EMS third party billing.

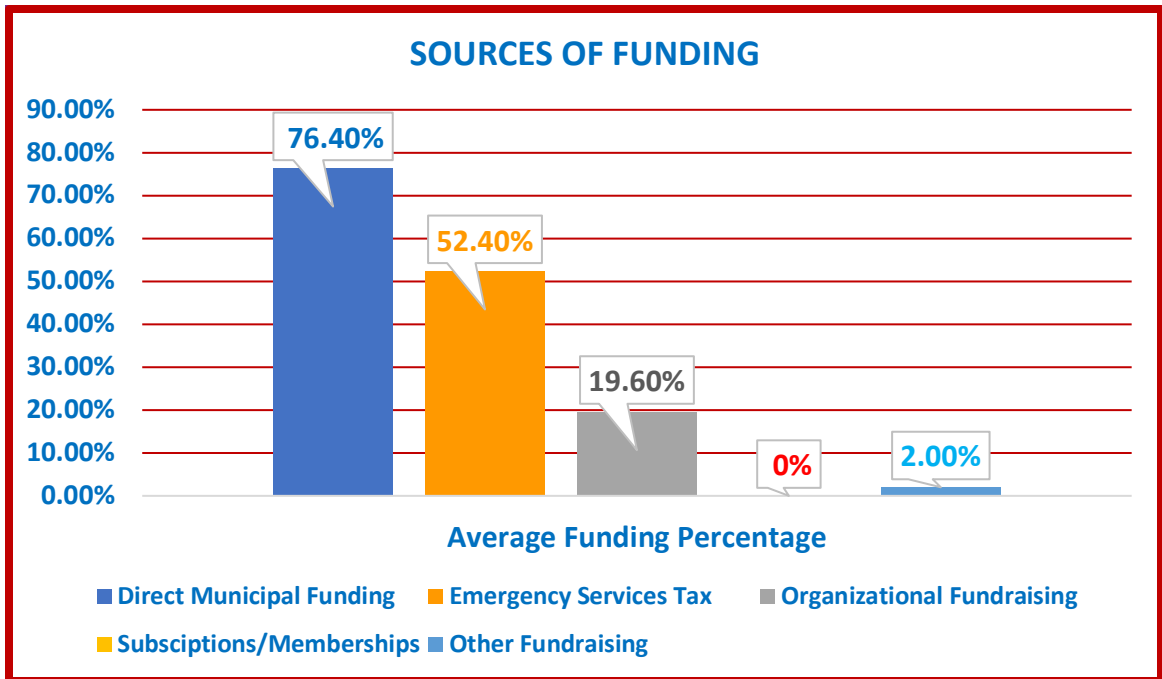


Figure XI-1: Average Funding Sources as Reported by Fire and EMS Organization Questionnaire

- **80.0%** of the respondents have a separate capital budget for apparatus purchases and other major expenses while **20.0%** do not.
- For those that have a capital budget, ways it is funded include:
 - ❖ Fund Drives (2)
 - ❖ Capital Reserve Account (3)
 - ❖ Through municipality (2)
 - ❖ Fire District
 - ❖ Tax Money (2)
- For those that have a capital budget, **50%** reported that all municipalities contributed to it, while **50%** stated they did not.
- For those that do not have a capital budget, ways they fund capital purchases include:
 - ❖ Fund Raising
 - ❖ Set money aside from year’s budget toward Capital Expenditures
 - ❖ General Funds placed into reserve account
 - ❖ Taxes (3)
 - ❖ Thru Town (2)

According to the municipal managers/administrators' questionnaire:

- The cumulative FY 2022 budget contribution for fire and EMS services by the municipalities is **\$7,007,586.00**. This equates to **81.9%** of the money spent in the County to provide these services.
- Just **7.7%** (in reality, one) of the municipalities have separate budgets for fire and EMS while **92.3%** do not.
- Just one (**5.6%**) of the respondents contribute to a separate capital budget for apparatus purchases and other major expenses while the remaining **94.4%** do not.

For fire and EMS organizations that still attempt to conduct their own fundraising activities, it is becoming well documented that traditional activities such as bingo and comedy nights, chicken dinners and pancake breakfasts, and direct mail campaigns to appeal for donations are in steep decline, if not already eliminated. The COVID pandemic also resulted in the cancellation of many of these activities for two years and maybe ultimately result in their final demise. In addition, a lack of volunteer members and the economic downturn has placed a strain on the ability of citizens to donate to their local volunteer fire service. This in turn changes the amount of funding now being requested by the fire companies to the local municipality. To some municipalities, this has become a sticker shock scenario that has resulted in a fiscal crisis for public safety. Further contributing to the funding crisis is the loss of revenue to local, county, and state governments also caused by the pandemic-induced economic crises. Conversely, some government entities have received additional discretionary funding through the CARES act that they can spend as needed.

Fire department fund raising should not be required to meet operational budgets for a public safety organization. The volunteer fire service is the only organization that either feels obligated or is asked by their municipality to raise funds to support a public safety service. Fund raising efforts should provide direct compensation benefits to the volunteer members of the organization. Many fire department and EMS members embrace these events today due to the social aspect they offer the membership as well as the beneficial community engagement; both of which are very commendable and valuable. Typically, fire service fund raising is easily supported by their membership because it is a scheduled event.

If you have experienced the fact that more members support fund raising events than Fire /EMS operations, you have a problem.

Emergency Medical Services (EMS) Funding

As with the fire services, a mix of long-term stagnant and declining reimbursements, limited alternate sources of financial assistance, and changes to a societal view of volunteerism, have significantly impacted EMS throughout New York, leading to EMS agency failures and closures. These changes to the vital resource of emergency medical care, have not only forced service delivery reductions to communities but, have put the ability of EMS to respond effectively to large-scale incidents into question.

Reduced staffing levels are linked to financial losses as EMS providers cannot staff vehicles resulting in the loss of both emergency and non-emergency revenue. Continually rising costs for EMS personnel, benefits, vehicles, equipment, fuel, insurance, utilities, and facilities coupled with a lack of adequate payment for services are challenging agencies state-wide. Many municipalities provide minimal support for the cost of readiness, including the hard costs of being legally staffed and always equipped to respond. An additional burden on agencies that should be changed is their inability to collect payment for services except when a patient is transported to an emergency department, regardless of treatments and other services rendered on scene.

The agency-level support is only one aspect of the funding situation. For the system to continue to grow from both a systems perspective and a clinical one, the funding of the state's structure must be increased to support federal initiatives, clinical research for patient care, and needed state-wide system development.

State Funding Assistance to Fire and EMS

According to a 2001 Pennsylvania Fire and Emergency Services Institute Study⁴³, the value of the service that volunteers in Pennsylvania provided to that state was estimated at **\$6 billion**. That figure may be as high as **\$10 billion** in today's dollars. The importance of service provided by the volunteers is invaluable. The same – or perhaps even more – could be anticipated in New York state which is larger but boasts the same proud volunteer traditions.

To ensure that service levels are maintained, fire and EMS agencies will need to partner with elected officials to develop future funding strategies. The surveys and questionnaires indicate that elected officials had varying levels of understanding of their local emergency services delivery models. A training program that provides elected officials with an improved understanding and overview of fire and EMS operations, funding, and the responsibility of local government should be developed and delivered.

Legislative action to address some of the levels of service and fiscal issues will be needed to resolve some of the issues outlined within this report. The issues and concerns of these service

⁴³ Pennsylvania Fire and Emergency Services Institute Study (2001)

providers vary by location, funding, and community uniqueness. Therefore, a single approach solution will not benefit all organizations. Thus, this report uses a cafeteria-style solution approach, allowing each organization the ability to select solutions best able to solve their issues or concerns.

The reality is that each community is left to determine:

- "What do I need to protect the community?"
- "How much will it cost?"
- "What are my funding sources?"
- "How do I deliver these services?"

New York State does have a program that provides local efficiency grants for the regionalization or consolidation of services. Our review of the parameters of this program indicates that it might be feasible for Genesee County to obtain funding from this program to assist with start-up costs for either the fire quick response units, and/or, a county-operated EMS system.

Local Funding Sources and Alternatives

The funding alternatives available at the local level vary widely, though the ability of the fire chief to influence changes in these sources will vary considerably based on local preferences, politics, and to some extent even state and local laws. Some enterprising departments have found new revenue streams through the sale of services, or a more user-based fee schedule. A growing number of fire and EMS providers now offer subscriptions that their customers can pay annually that will relieve them of additional fees such as paying the balance that insurance companies will not pay for hospital transport.

The traditional local revenue sources include:

- Taxes: These include taxes on real property, personal income, and sales transactions. Other taxes include real estate transfer taxes and utility-user taxes. New taxes can go into a municipality's general fund to be allocated by elected officials or can be earmarked specifically for EMS and fire services.
- Development Impact and User Fees: These fees are charged to ensure that those benefitting from an activity pay their fair share of the costs related to that activity.
- Fines, Forfeitures, and Citations: Some jurisdictions now issue citations to those who engage in high-risk activities that may later require a rescue. Other areas dedicate a portion of fines to fund EMS and fire services.

- Enterprise Funds and Utility Rates: Local governments may establish an enterprise fund for municipally operated services. Ambulance service, for example, may be run like a municipal business where it is expected to earn revenue to support its operations.
- Sale of Assets and Services: Some EMS and fire agencies sell used equipment or services to produce revenue.
- Benefit Assessments: Special districts may be established for the purpose of supporting EMS and fire services. These districts can assess a benefit assessment like a property tax but based on the “benefit” received by each property. These charges are a way to circumvent property-tax limitations and can also improve the equity of charges for EMS.
- Borrowing: Municipalities have several options for borrowing revenue needed to purchase capital equipment and facilities including General Obligation bonds and Certificates of Participation.
- Not-for-profit organizations may have access to low-cost 501(c)(3) revenue bond financing or may take out a traditional bank loan.
- Other creative ways fire chiefs and EMS administrators have raised revenue for their agency include creating private ambulance company contracts to reimburse for fire-based EMS, billing for department-operated ambulance services, offering subscription programs, providing inter-facility transports, creating paramedic intercept agreements with surrounding communities, and piloting innovative healthcare programs.
- Time-tested fundraising efforts for rural and volunteer fire and EMS agencies include Bingo, Monte Carlo Nights, Donut Days, Country Fairs, direct mail campaigns, firehouse dinners, auctions, rental of fire halls for weddings and other social events, and door-to-door fundraising activities.⁴⁴ However, as has been noted in several locations in this report, these types of typical fundraising activities no longer interest the new generation of volunteer firefighters and EMTs, and, are rarely cost-effective today. Any fundraising that the fire companies or EMS agencies engage in today should be to raise supplemental funding, not mission-critical to their operations.

The online surveys and municipal questionnaires asked the question, “*who should be responsible for the primary funding for the provision of fire and EMS services?*”

⁴⁴ F. (Ed.). (n.d.). *Funding Alternatives for Emergency Medical and Fire Services, April 2012* (Rep. No. FA-331). U.S. Fire Administration. doi: https://www.usfa.fema.gov/downloads/pdf/publications/fa_331.pdf

	Fire EMS Provider Survey	Municipal Questionnaire	Local Officials' Survey	Citizen Survey
Genesee County	9.3%	10.0%	6.1%	11.0%
Local government/municipalities	32.4%	30.0%	24.2%	15.8%
Fire and EMS agencies through fundraising	0.4%	5.0%	6.6%	1.3%
Combination of the above	57.8%	55.0%	63.6%	71.9%

Figure XI-2: Survey Question Results

Who Should be Responsible for Primary Funding for the Provision of Fire and EMS Services?

All three of the surveys asked a variation of the question, *“In your opinion are the fire department(s) and EMS agency/agencies that serve your local jurisdiction adequately funded and equipped?”*

- Local Officials: 67.5% replied Yes, and 37.5% replied No.
- Fire and EMS Providers: 60.1% replied Yes, 39.9% replied No.
- Citizen Survey: 38.8% replied Yes, 30.4% replied No, while 30.8% stated they did not know.

The citizen survey asked the question, *“would you be willing to pay higher taxes if your additional tax dollars were used to ensure the fire department(s) and EMS agency/agencies that serves you are adequately funded and enhance the level of service to the community?”*

- 58.3% stated Yes, while 41.7% stated No.

While a comparative study can evaluate the level of effort and ability of residents to pay, it is still difficult to measure residents’ willingness to pay over the long run. Caution should be used if looking for fixed answers using statistical comparisons on their face value alone. Every emergency service and every municipality has developed creative methods for service delivery and cost labeling based on specific needs.

The municipal managers' questionnaire asked several questions about an emergency services tax.

- 38.9% stated their municipality has a local emergency services tax, while 61.1% do not.

The local officials' survey asked if, *“consideration should be given to an emergency services tax to assist with funding fire and EMS services throughout Genesee County?”*

- 51.6% stated Yes, with 26.3% stating at the local level and 73.7% stating at the county level.
- 48.4% stated No.

As with the level of fire and EMS protection provided, the determination of the exact amount of funding that each community contributes is usually a local decision. It is also important for the municipalities to remember that, without exception, fire companies and ambulance services are not profitable, similar to highway, police, and school districts. They provide a necessary service, which a portion of can be billed to insurance companies for EMS transport services.

On the EMS particularly, several external environmental factors such as the structure of insurance payments and approved Medicare rates may produce substantial fluctuations in revenue as several changes are currently being considered. This includes both the national, as well as state level, where discussions are always ongoing regarding initiatives that are proposed to curb the escalating cost of healthcare. Every EMS provider must closely monitor these changes and develop contingency plans should any change negatively impact the revenue stream.

Although significant opposition would probably be expected, and it is far from an overwhelming majority who support it – at least initially - it is the opinion of the MRI study team that a County-wide tax to fund the provision of fire and EMS services in Genesee County is the most equitable way to proceed. A County-based tax would ensure that everyone who lives in the County and is protected by the fire and EMS agencies is contributing a share to the provision of those services. We believe that doing so would also bring more consistency to the delivery of services throughout the entire County rather than having different levels on different sides of the same street due to municipalities with different perspectives on funding their emergency services.

While there are various formulas utilized to determine how funding from these types of assessments is allocated to various entities, in this case, the service providers, the most common one includes population, incident volume, and assessed valuation. Another method assesses a per-capita cost while others just apply a flat tax assessment.

While no governing body likes to increase taxes, the fire and EMS services are a critical part of the safety net for citizens at the local level. But today, that safety net is being severely strained by multiple factors, not the least of which is the need for additional, consistent sources of revenue to fund operations and an ever increasing number of requests for service. The surveys

that the MRI study team conducted during the course of this project indicate that the majority of those who participated would be willing to pay some level of increased taxes if they were dedicated to the fire and EMS delivery system. While education would need to be a big part of the process leading up to decisions regarding the implementation of new or additional taxes, in the end, MRI once again believes that the County is best positioned to ensure that the funding mechanisms are equitable and fair. We believe the potential long term benefits would significantly outweigh any negatives.

There are alternatives to direct funding (and ultimately control) are discussed below. However, it is not clear that these could be implemented at the county level. However, they could possibly be implemented county wide if all municipalities were to agree to participate. More realistically, these would need to at least begin as regional endeavors in certain areas of the county.

[Fire District](#)

Fire districts are separate political subdivisions established for the purpose of providing fire protection and responding to certain other types of emergencies in an area of a town. A fire district usually has its own fire department, and the members of the fire department are organized into one or more fire companies. However, it may contract with a city or village, fire district, or an incorporated fire company headquartered outside the district for fire protection services. A fire district may also provide coverage outside of the fire district pursuant to the contract. Fire districts are overseen by an elected Board of Fire Commissioners, can levy taxes, and incur debt without approval from any other governmental entity. They are responsible for adopting an annual budget – subject to certain expenditure limitations – after a public hearing. Fire district taxes are levied by the county, collected by the town they serve, then turned over to the fire district. Fire districts are subject to the State’s property tax cap legislation, which requires local governments to limit their annual increase on property taxes to the lower of 2 percent or the rate of inflation.

[Joint Fire Districts](#)

State law authorizes towns and villages to establish “joint fire districts.” A joint fire district is established to provide coverage in an area that includes at least one village and one area of a town outside of villages. A joint fire district is governed by a board of fire commissioners, comprising three to seven members who are either appointed in a joint session by the town board and village board of trustees, or elected, as is the case with other fire districts.

[Regional Fire Authority](#)

In Washington State, a popular form of fire and EMS service delivery and governance is through the formation of a Regional Fire Authority (RFA). Officially designated as a Regional Fire Protection Service Authority (RFPSA abbreviated to RFA) is a special-purpose district created by the vote of the people residing in the proposed district. Its boundaries are coextensive with two or more adjacent fire protection jurisdictions (fire district, city, town, port district, municipal airport, or Indian tribe). It is a municipal corporation, and an independent taxing authority and district. Under Washington law, if two or more entities can agree on a recommendation to form an RFA, voters decide whether to form it and if so, approve how it is funded. RFAs are generally governed by a commission appointed by the elected officials of the municipalities involved and are usually proportional to the population and financial investments of the member jurisdictions. It is not uncommon after several years of operation for multiple RFAs to then consolidate into a single larger RFA that can provide even more enhanced levels of service.

Under the authority model, the provision of services could be governed by a contract or shared services agreement. Conceptually the regional fire authority could provide:

- Funding
- Centralized purchasing
- Administrative and financial Services
- Grant support
- Regional coordination or direct management

Fire and EMS agencies that are participants could provide:

- Direct services
- Standards of cover
- Higher degree of regional cooperation

[Federal Funding Sources](#)

In addition to sources of local revenue derived from taxes and other local government financial mechanisms, EMS agencies and fire companies may be able to obtain considerable funding from federal programs.

Grants are available from key federal agencies that can be used to secure alternative funding for fire protection, EMS, and disaster preparedness and recovery. The federal government is the largest source of grants for fire and EMS services. There are more than 1,000 grant programs offered by 26 federal grant-making agencies. Since 9/11, billions of federal dollars have been made available to states, local fire departments and companies, and EMS

organizations in the form of grants and funding programs for homeland security and related programs, including EMS.⁴⁵

Much of the Federal grant budget is passed to the states through formula or block grants. Examples include the Emergency Management Performance Grants (EMPG) and the Homeland Security Grant Program (HSGP). From there, it is up to the states to decide how to use the money. Although these grants are declining in recent years they should continue to be evaluated and if viable pursued.

There are, however, direct Federal grant programs to fire and EMS agencies such as the Assistance to Firefighters Grant (AFG), Fire Prevention and Safety Grants (FPSG), and the Staffing for Adequate Fire and Emergency Response (SAFER) Grant programs. These programs have been instrumental in providing funding to fire departments for apparatus, equipment, fire prevention and safety, and staffing through the SAFER Grant. The SAFER grant also provides funding to communities for the recruitment and retention of volunteer firefighters and EMTs.

Many federal government agencies have their own grant or loan program. Each is intended to serve a particular purpose and comes with its own set of rules and program guidance. Understanding the various types of federal grants is important because the funding mechanism selected will influence the strategy employed to access the funds and how funds can be used. For example, many of the grants identified are competitive grants. A competitive grant, or project grant, is one where applicants vie for limited funds. Peer-reviewers score applications and money are awarded to those applicants with the highest scores. Federal grants may be direct or pass-through. Direct grants are given directly to the agency applying for it; whereas pass-through grants require the state to apply to the federal government, then the state hands out grant money to agencies that request it. Grants may be unrestrictive in terms of use but usually, come with specific guidelines stated in the program guidance.

Federal loan programs are also available as an alternative-funding source. Loan funds go directly to the applicant, which is responsible for repayment. The main advantage of a grant is that it does not have to be paid back if the conditions of the grant program are met.

Federal grants can be grouped into the following major categories.

Block Grants

A block grant does not involve competition. The federal government simply distributes funds to the states based on an established formula. Formula grants flow directly to state agencies that

⁴⁵ F. (Ed.). n.d.). *Funding Alternatives for Emergency Medical and Fire Services, April 2012* (Rep. No. FA-331). U.S. Fire Administration. doi: https://www.usfa.fema.gov/downloads/pdf/publications/fa_331.pdf

sub-grant the funds through a proposal process or otherwise turn the funds over to local governments or nonprofit agencies.

[Project Grants](#)

Project grants are the most common form of federal grants. Depending on the program requirements, EMS organizations gain access to the funds through a competitive bidding process. Application to a project grant does not guarantee an award and the amount received by grantees is not predetermined by a formula.

[Demonstration Grants](#)

Demonstration grants are pilot projects generally involving a small number of sites to learn more about the effectiveness of a new program. An effective demonstration grant program may lead to further funding in the form of discretionary or project grants. Demonstration grants are awarded competitively and can go to State or local governments or community-based organizations depending on the eligibility requirements.

[Congressional Earmarks](#)

Earmarks are explicitly specified in appropriations by the U.S. Congress. They are not competitively awarded and have become highly controversial because of the role of paid political lobbyists in securing them.

The document *Funding Alternatives for Emergency Medical and Fire Services by the U.S. Fire Administration FA-331/April 2012* contains several other funding resources and information relative to funding opportunities for the fire service. This manual is in the tool kit.

[American Rescue Plan Act](#)

The American Plan Act was passed in response to the severe, and in some cases ongoing, economic downturn due to the COVID pandemic. Government entities have wide latitude regarding what to use these funds for based on each community's unique needs. Wayne County is planning to use these funds in part to fund the start-up of their county-wide EMS service.

[Conclusions](#)

Costs to maintain a level of service that citizens have come to rely on will continue to escalate based upon several factors including:

- Declining revenues from fundraising by fire and EMS companies.
- Loss of volunteers to actively participate in fundraising efforts.

- Diminishing availability of volunteers to respond to emergency incidents necessitating the hiring of career personnel to supplement staffing.
- Limited funding from state and federal resources.
- Inconsistent, and in some cases, inadequate local funding.
- The continued economic downturn based on the recent pandemic and other world events.

The need to change to part-time staffing will create an additional fiscal burden on taxpayers and produce added costs for municipalities (or the county). The funding models currently in place have provided funding to volunteer fire and EMS services for decades and have allowed this service model to continue to function. Clearly, the need for change in the way funding is provided at the state and local levels must be developed to prepare for the need to reconfigure emergency service models within Genesee County. The funding sources available to volunteers should be centralized to assure all potential resources are known, made available, and benefit the stakeholders in Genesee County. Developing a new strategic funding strategy is essential to support fire and EMS delivery agencies in Genesee County.

In this era of extremely tight budgets, where every governmental entity is looking for alternative revenue streams to offset declining tax receipts, there are many other sources of potential revenue that the fire companies, EMS agencies, and the municipalities that they serve may want to explore and consider implementing. Among these are grants, both public and private, public/private partnerships, fire prevention business registration, inspection and permit fees, billing insurance companies for response to motor vehicle accidents, registration fees for fire alarm systems, and the issuance of penalties for those whose systems generate repeat false alarms.

The fire companies and EMS providers also need to recognize that if they are going to request and be the recipients of, additional public funding regardless of the source, they may need to increase the transparency of their financial records. They will need to fully open their books to public review, file detailed annual budgets and financial reports with whatever governmental entity is providing the funding, and implement internal procedures and controls to ensure they are making the most effective and efficient use of the funds they are provided. There is little chance that many municipalities will agree to increased funding of the fire and EMS delivery systems without also greater control over how those funds are expended.

Recommendations:

XI-1: *The fire companies and EMS agencies of Genesee County should continue to attempt to negotiate for increased levels of funding for fire operations, EMS operations, and capital projects from the municipalities (and the county) they serve in order to adequately fund long-term operational and capital funding needs of their*

organizations. Increased funding levels will be critical to the continued success of every fire and EMS organization.

- XI-2: The fire companies and EMS agencies of Genesee County should, with their member municipalities, explore the feasibility of developing and implementing more equitable funding formulas to better balance overall funding between municipalities. One possible formula could use assessed value, population, and call volume, or a per capita cost, to determine funding. This is an area where the Genesee County Association of Municipalities can provide assistance and support.**
- XI-3: The fire companies and EMS agencies of Genesee County should continue to explore alternative sources of funding for the company such as grants, public/private partnerships, etc. stressing the increasing costs of their operations.**
- XI-4: The fire companies and EMS agencies of Genesee County should continue to actively search for 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. Whenever possible, and with the support and assistance of the Genesee County Legislature, Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, Genesee County EMS Council, Genesee County Association of Municipalities, and The Genesee County Emergency Services, the grant applications should be submitted collaboratively to increase the chances of success, if applicable.**
- XI-5 The fire companies and EMS agencies of Genesee County should actively seek out businesses in their response areas that may be interested in establishing public/private partnerships that could provide, or assist with, funding for various programs, projects, or initiatives.**
- XI-6: Working collaboratively the Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, Genesee County EMS Council, and the Genesee County Association of Municipalities with support from the Genesee County Department of Emergency Services should develop strategic options to encourage regional service delivery and support local staffing needs during the low availability of personnel. Based upon the level of support needed, a financial cost analysis can be used to develop financial resource identification and if necessary seek an increase in revenue to support fire companies and EMS agencies that are forced to change their emergency service delivery models due to the inability to continue providing the services currently in place.**

- XI-7: *If future legislation allows, Genesee County should explore the feasibility of enacting a fire and EMS tax to provide centralized support for County wide fire and EMS operations.***
- XI-8: *If future legislation allows, the Genesee County should explore the feasibility of establishing either a county-wide joint fire district, or a regional fire authority. In the interim, local municipalities are urged to consider the formation of joint fire districts between several towns that could eventually provide the foundation for a larger endeavor.***

CHAPTER XII - REGIONAL FIRE AND EMS OPPORTUNITIES

Government is a monopoly usually defined by geography, and our geographic boundaries, often laid-out a century or more ago that frequently determine what services we receive and who provides them. In some cases, the provision of services, particularly volunteer emergency services, commenced in response to a community void that was filled by the local citizens. This protection was often targeted to small, specific areas with little to no consideration given to the larger area or “big picture”. In many cases, the traditional deployment of resources and provision of services has not kept pace with the changing and evolving needs of the community.

In most forms of municipal government residents of the community, the voters/stakeholders/taxpayers, choose the elected officials who will represent their interests and serve as the governing body. A key question that should be asked is: *“If taxpayers could choose their public services, would they choose the services they receive today?”* This question can grow even more complicated when the emergency services providers, both fire and EMS, are autonomous or independent organizations.

The idea of giving up total local control is always a proposition that gives elected officials, and their constituents pause and have been one of the obstacles to true regionalization or consolidation, particularly in the northeast where small communities, and the time-honored concept of home rule, are deeply ingrained in their cultures. However, the constantly escalating costs of attempting to provide the same level of service is becoming a more and more difficult task. Scarce tax dollars that have been stretched to the limit are now in real danger of tearing or breaking. And no one can predict the long-term economic costs and implications of the COVID-19 pandemic. Smaller communities that have far fewer resources and options than their larger neighbors will find it especially difficult to cope with the limitations imposed by the new financial reality. The continuing trend of declining volunteerism will create simultaneous challenges that will stretch the provision of emergency services in many communities even further.

It is important to understand that regionalization and consolidation although often used interchangeably are quite different. Regionalization occurs when two or more jurisdictions share the cost of a service or item. Consolidation occurs when jurisdictions combine their personnel and their inventory into a single entity. Consolidations are typically more costly than just leaving things as they were (although there still may be good reasons for them). The reason is that any labor costs involved in a consolidation trend toward those of the highest-paying entity being consolidated, and the “overhead” savings from shedding management and administrative staff are seldom realized⁴⁶.

A series of articles in June 2019 in the Sentinel of Carlisle, PA examined issues related to fire company consolidation in Cumberland County, PA. From an article in the series titled, *“Better*

⁴⁶ <http://mrsc.org/Home/Stay-Informed/MRSC-Insight/November-2012/Regionalizing-Local-Government-Services.aspx>

together?: Fire companies try to overcome the fear of mergers” noted that when many people hear “merger”, they hear obliteration of tradition and history, power struggles, and inter-municipal squabbling⁴⁷. According to Carlisle Fire and Rescue President Michael Snyder, firefighting is primarily about keeping the public safe, but there is also a communal aspect that makes firehouses feel like family and is part of what some volunteer firefighters value. He believes it is critical to have the ability to explain and change gradually, instead of issuing top-down edicts, because that often results in increased opposition and pushback⁴⁸. **It has been well documented that when mergers are forced upon emergency services entities, they often do not go smoothly.**

In the same article, Jerry Ozog, Executive Director of the Pennsylvania Fire and Emergency Institute, states that consolidation or merger issues often come down to control. He states, **“For consolidation of different organizations to come together, everyone has to give something up”**⁴⁹. Taking a step back from the details that can bog down mergers, Ozog believes fire company leaders should not forget a simple fact: the goal is to serve the public, which needs effective fire and emergency services no matter where it comes from⁵⁰. Ozog goes on to state that, **“If done right, regionalization can actually help with recruitment and retention because there is a centralized administration that can focus its resources on that goal. That’s particularly true when it comes to recruiting millennials who are less concerned about local history and identity”**⁵¹. *“The young guys don’t care about that stuff,”* he said. *“They like the physical aspect of being a firefighter”*⁵².

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 is also a strong thought that regionalization will cost a community less than they are currently paying and they will get more. Although indeed, 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.

Factors that influence the merits of regionalization or mergers include continuous increases in the requests for emergency services, increased productivity, and more logical distribution of resources, economics of scale in terms of purchasing, cost avoidance, redundancy in

⁴⁷ https://cumberland.com/news/hold/better-together-fire-companies-try-to-overcome-the-fear-of-mergers/article_8fc13332-0350-5dcd-8407-7daf282dfc95.html

⁴⁸ https://cumberland.com/news/hold/better-together-fire-companies-try-to-overcome-the-fear-of-mergers/article_8fc13332-0350-5dcd-8407-7daf282dfc95.html

⁴⁹ https://cumberland.com/news/hold/better-together-fire-companies-try-to-overcome-the-fear-of-mergers/article_8fc13332-0350-5dcd-8407-7daf282dfc95.html

⁵⁰ https://cumberland.com/news/hold/better-together-fire-companies-try-to-overcome-the-fear-of-mergers/article_8fc13332-0350-5dcd-8407-7daf282dfc95.html

⁵¹ https://cumberland.com/news/hold/better-together-fire-companies-try-to-overcome-the-fear-of-mergers/article_8fc13332-0350-5dcd-8407-7daf282dfc95.html

⁵² https://cumberland.com/news/hold/better-together-fire-companies-try-to-overcome-the-fear-of-mergers/article_8fc13332-0350-5dcd-8407-7daf282dfc95.html

equipment, redundancy in services provided, and standardization. Community expectations for the level of services are continually increasing creating more challenges for smaller organizations to keep pace. Many times, the unfortunate reality is many organizations won't consider any type of collaboration or regional approach until they are forced to due to a financial crisis or operational demands that cannot be met.

Numerous national reports and case studies have documented the advantages and benefits that fire service regionalization can provide. Mergers, consolidations, and other regional partnerships can result in more efficient use of scarce resources, reduce equipment needs and duplicative efforts, and provide for greater staff flexibility and capability. Such actions can also improve service levels, allow departments to develop specialized units, promote the development of standard operating procedures, and work to overcome political boundary issues. These changes can then increase the likelihood that the closest unit responds in an emergency, thereby creating more comprehensive service protection areas and the opportunity for faster response times. Common methods promoting the concept and some forms of regionalization are:

- [Consolidation](#) - The combination of two or more companies which results in the termination of all companies and the creation of a new company with a new name. All assets and liabilities of the former companies are transferred to the new company or organization.
- [Merger](#) - The combination of two or more companies which results in all but one relinquishing its name. All assets and liabilities of joining companies are transferred to the remaining company.
- [Association](#) - Agreement of two or more companies to combine and administer similar activities through an umbrella organization. Does not normally involve transfers or a combination of assets, as most costs of operations or programs are shared. In some instances, associations may be a prelude to a merger or consolidation.

The continued fiscal constraints on all communities coupled with the ongoing operational challenges experienced by many fire departments necessitate a detailed examination of the concept of regionalization. The exploration of regionalization does not require a full administration and operational transition but could also have specific components that are just merged or phased in over a period of time.

It has been clearly documented that ***"Fire and EMS service agencies are failing or are going to fail. While it is important to do what is possible to shore up the existing system, we must also look to the future of potential regional or county-wide emergency services."*** The study team recommends looking to other states, like Maryland or Virginia, as a model for a system.

The size of the departments and the rural geography of Genesee County necessitates at least a consideration for collaboration. Direct observations found that a strong level of partnerships and collaborations currently exists between departments. This ranges from mutual aid to joint training for firefighters. The current high level of collaboration is a strong base for departments moving forward in exploring other potential shared services to meet present and future needs. It should be understood that regionalization of departments will never have an exact equal value in return. However, there needs to be an understanding of what each organization will gain from the relationship that it otherwise wouldn't have been able to if on their own.

Regarding automatic and mutual aid, when they become an integral and in fact mission-critical component of daily operations it is probably time to consider what the next logical step is to better integrate those operations. During another fire department study that we conducted several years ago, a firefighter in the community informed us that through frequent inter-jurisdictional training and exercises, and strong automatic and mutual aid agreements and responses, *“we already are in reality a county fire department, we just need to change the names on our trucks and the patches on our sleeves”*.

There are significant areas where further collaboration or sharing services would benefit fire departments throughout Genesee County. Through direct observations and interviews, our team observed several areas that are currently being exercised using a collaborative approach. Examples of this include the county paying for the fire reporting systems and service on the software for this program. In addition, portable radios, mobile radios, and pagers were all given to the fire companies and programmed for each of them. However, it was noted that this communications equipment was a one-time project, and it is understood that all future purchases will be the responsibility of the fire companies.

Responses from surveys sent to responders found relatively high consideration for a more regionalized approach to emergency services.

Responders were asked *if a more regionalized approach to funding and operational controls should occur* and out of the **226** total respondents, only **31** disagreed. This equated to approximately **14%** of the overall respondents. Conversely **86% agreed**.

Furthermore, the survey asked *if responders would support a county-led regional response organization*. Out of the **224** that responded, just **40** responders noted that they would not support a county response organization. **82.1%** suggested that they would.

Some additional comments directly out of the surveys pertaining to regionalization are as follows:

- *The fire service should go to a paid county department.*

- *Regional approach will only work if all parties "buy-in" with sharing resources - this applies to the municipalities and the fire companies and districts. Too many departments will not want to give up control of their kingdom.*
- *I'm a big fan of combining districts. The issue that will occur are old timers with old district money will not want to give it up.*
- *Consolidation of fire departments and standard SOGs throughout the County.*
- *Having more interdepartmental training. The multi-department drill at the training center was a good County wide driver training course. Better cooperation between departments and automatic mutual aid.*

The largest benefit derived from the development of consolidation, or shared service model, is most often an increase in the level of service provided to both communities. Although many believe that the primary benefit is a cost reduction created by the economy of scale, MRI's collective experience indicates that consolidation and shared services projects are usually developed based on a service level issue. Therefore, cost reduction may be a secondary benefit. It should be noted that the level of savings attained is usually well below the expectations of those that believe consolidation of operations is a fiscal silver bullet.

Benefits of consolidation or shared service development often include the following:

- A larger pool of personnel to respond to emergencies.
- Elimination of municipal service boundaries.
- Decreased response times.
- During periods of high activity, a consolidated organization may allow for more effective deployment of apparatus and avoidance of extended response times.
- The ability of consolidated departments to create uniform procedures to serve a larger geographic area (as opposed to several independent companies with their own procedures covering the same area) produces higher efficiency and enhanced safety for firefighters, EMTs, and paramedics.
- Proponents also argue that the consolidation of several small companies can present an important opportunity to establish a strong organizational culture in a new department that replaces outdated standards and norms and emphasizes best practices.

Although many fire departments in Genesee County have a decent foundation for some collaborative approaches, there are other significant areas that should be examined for future collaboration, partnerships, and regional approaches:

[County-wide Standard Operating Procedures/Guidelines](#)

Establish boiler-plate Standard Operating Procedures/Guidelines (SOPs/SOGs) based on developed standards, allowing for similar operating procedures across the County. This would benefit departments that already work closely together so that all departments are at least working from the same baseline of operating procedures. These SOP/SOG's would provide a consistent framework for all emergency responders allowing for a seamless transition in all communities throughout the county.

[Self-Contained Breathing Apparatus \(SCBA\) Requirements](#)

Compatibility of SCBA across communities in the county makes training and mutual aid firefighting easier. This would also guarantee that when apparatus respond, they have SCBA on board. Compatibility with this equipment across the county would help with operations, familiarization for filling the units, maintenance, and repairs. In addition, training would also be consistent on this equipment and skill set across the region and provide and enhance safety features in the event of a "Mayday" situation or downed firefighter that would need rescuing.

[Procurement and Purchasing](#)

Joint procurement offers the possibility of price reduction of equipment and vehicles, as well as services and maintenance. Explore pursuing joint procurement of equipment to get a better price and help reduce costs. Service contracts and maintenance costs can be a significant cost for many communities to keep the equipment functioning properly and meeting national standards and industry best practices. Examples in this category could include annual service and testing on all pumps, hoses, ground ladders, aerial ladders, fire extinguishers, and air pack flow testing. Any move in this direction would start small with the goal of building up to a more robust and comprehensive program.

[Automatic Aid Agreements](#)

Automatic aid agreements would allow a fire department outside the town where the call for service originates to respond due to its closer proximity to the incident location. With an automatic aid agreement in place, the fire department closest to the incident responds automatically, generally providing quicker response times. A major issue in establishing automatic aid agreements is determining the types of responses that would trigger automatic aid.

Shared Specialty Apparatus & Equipment

Explore types of equipment that can be shared between departments in order to prevent each department from having to all purchase the same equipment. Each community does not need their own ladder truck or rescue truck. A cost/benefit analysis examining call volume and call type would not find the need for each community to have their own ladder truck or rescue truck let alone the personnel who are properly trained and able to staff these vehicles.

Shared Maintenance

Develop a shared maintenance program between fire departments. Among other things, this would ensure all vehicles and equipment were being maintained at the same level. In addition, these services should be completed by an individual who is certified as an Emergency Vehicle Technician (EVT) shared throughout the county.

Fire Inspection & Education

A shared fire inspection & education program would help resolve the issue of each department devoting time, money, and personnel for inspections, public outreach, and education, and help reduce costs for training and time spent conducting inspections. Public education and outreach could be completed county wide conducting public training on CPR/AED, fire extinguisher classes, regional car seat safety checkpoints, and fire safety education for seniors and school children who continue to be vulnerable populations across the country.

Fire Operations Officer

A shared fire operations officer would provide shared administrative and support services to county departments and focus on developing regional policies and procedures. The goal would be to increase the overall efficiency of existing staff by reducing administrative tasks for firefighters and officers. In covering administrative tasks, a shared operations officer would also work to any state requirements or standards and national standards for county departments. This position would also provide operational support on emergency scenes and help build out the incident command structure for long-term operations.

Regional Firefighter Training and Training Officer

The demands on firefighters and upkeep and maintenance of their skills and training have become increasingly important over the years. The changing environment and challenges on the emergency scene continue to be more complex than ever. Changing fire dynamics, fuel loads, technology, building construction, and research on proper fire suppression techniques continue to challenge firefighters with keeping up with all these advancements and changes. Not only is the initial training for firefighters challenging, but the ongoing training requirements also are time-consuming to remain proficient and operate safely on the fireground. Many factors contribute to this lack of training including lack of overall training opportunities, costs associated with the training programs, costs associated with sending firefighters to train, the

need for many volunteers to work more than one job because of financial needs, and the increasing demand for time on individual's home life and family commitments.

A shared county Training Officer would have the ability to focus on training needed for the various companies and provide training at different locations and at different times of the day. This would help accommodate all of the varying schedules of the volunteers. This position could create lesson plans, outlines, and instructor notes to be shared across all agencies in order to help facilitate the required training.

The Training Officer could also help coordinate online training. Online training has become more popular over the years particularly given the recent challenges the Country has faced with the COVID-19 pandemic. Online learning provides opportunities to individuals to complete initial or continuing education in their respective fields at the convenience of their own homes or departments. Online learning eliminates the need for people to travel to remote areas, out of their coverage and response districts, and take additional time above and beyond the program to attend. Online learning allows participants to complete the programs at their own pace and at their own schedule. One limitation that needs to be considered for implementation of these types of programs is access to internet capabilities and other technologies as part of the infrastructure for these online platforms. It should be understood that the fire service is a hands-on profession, and this online learning still would need to be supplemented with in-person practical components.

The MRI study team believes that a tremendous opportunity to enhance operations lies within a coordinated approach to increase the level of inter-agency training activities. It is apparent that although departments work together based on operational necessity they do not frequently train together, and this presents a risk to operational capability and coordination.

[Regional Health and Safety Officer](#)

A shared health and safety officer would provide shared administrative and support services to county departments and focus on developing regional policies and procedures. The goal would be to increase the overall efficiency of existing staff by reducing administrative tasks for firefighters and officers. In covering administrative tasks, a shared health and safety officer would also work to any state requirements or standards and national standards for county departments. Examples of the duties of a shared health and safety officer would encompass the following responsibilities:

- PPE management and inspection
- Fit testing and documentation
- Delivery of mandated health, safety, and human resources training
- Management of vaccinations and documentation
- Management of injury reporting and firefighter assistance

This position would also provide operational support on emergency scenes and help build out the incident command structure for long-term operations.

Grants

There are a number of existing grant opportunities available for fire departments to apply. Most, if not all, of the governmental programs, strongly encourage regional applications. This allows the funding to be utilized not only in a cost-effective manner but to reach a greater percentage of the population. Also, all these grants are of a competitive nature, so regional applications are given priority status in most cases. The county departments, working together, make an effective regional grant candidate. Examples include the Assistance to Firefighter's Grants, which is a nationwide grant program to specifically address the needs of fire departments with a priority on safety, replacing outdated equipment, and supporting the health of the firefighter. Staffing for Adequate Staffing and Response (SAFER), targets staffing levels by furnishing funds to pay for additional staffing or rehiring laid-off staff. It also supports the volunteer service by offering monies for recruitment campaigns, costs associated with new firefighters, and programs to retain existing firefighters.

There are many obstacles to overcome in attempts to consolidate or merge two or more organizations. The most prevalent ones include lack of a clearly articulated vision and understanding, a lack of trust of parties involved, failure to involve both internal and external stakeholders of the affected organizations, insufficient information or reasons outlining the purpose of the proposed merger, a lack of communication, hidden agendas, and not consulting with the appropriate legal and financial experts for guidance. A merger or consolidation could be the most logical solution to the problem for two or more agencies, but if these obstacles are not successfully addressed, the potential for failure is great.

As discussions are initiated between the potential partners regarding consolidation or shared services, current organizational configurations and costs should be documented. The second level of consideration is to determine the extent and configuration of a shared services model. Finally, the potential partners would need to determine how a proposed consolidation or shared services model would impact their respective communities. This includes determining budgets, staffing levels, coverage in the community, response times, and the use of existing resources. This will entail a multi-phase process:

- **Planning Phase** – Decisions regarding participation, funding formulas, organizational structure, governance model, and human resources issues occur in this phase.
- **Implementation/Transition Phase** – Activating the newly agreed upon consolidation or shared service model.

- *Post Consolidation/Shared Services Phase* – This is the time immediately after activation of the newly consolidated system or shared service.
 - ❖ Service and technology issues are common during this phase.
 - ❖ Not usually indicative of the long-term success of the shared service model.
 - ❖ Keeping these issues in proper perspective is vital.

There are potential advantages to consolidation. However, there are significant obstacles as well. They include the following:

- Consolidation is a delicate and difficult undertaking. It requires strong political will and consensus throughout – from the initial proposal and review through conclusion and implementation.
- It will require community support, which should be assessed before taking any formal steps.
- It is critical that each of the communities bear a proportional, if not equitable, share of the costs associated with the consolidated department, both during the merger process and in future years.
- It is also important that the consolidation benefits all departments, and that none are negatively impacted by its terms.
- Any current collective bargaining agreements need to be examined. Members’ rights must be respected throughout the process, and negotiation will be required regarding changes in salary or benefit structures.
- The rights of any current employees and their years of service to their respective departments must be respected in determining the impact of consolidating their positions.
- All agencies will have to be integrated into the same operational procedures.
- Geographical issues will have to be examined for any negative impact on response time.
- Space and functional analysis will be needed to determine appropriate locations for deployment of resources and housing of staff.

While we certainly understand that true regionalization of services in Genesee County is realistically probably at least several years away, and maybe longer, these are major decisions that will affect generations to come. The time to start discussions and exploring possible

options is now, not five to ten years into the future. Entering discussions now is particularly important for any community that is looking at major capital investments as it may help to determine the correct course of action to take regarding new, existing, and/or relocated/consolidated stations, and, to a lesser extent the purchase of fire apparatus. While there are many hurdles to be overcome toward regionalization it is a path definitely worth traveling down. Perhaps the need to consider these options is best summed up by Shippensburg, PA Fire Chief Randy O'Donnell when he stated, ***"We recognize that if we don't make significant changes in how we operate, we're going to fail as leaders"***⁵³.

Conclusion:

Regionalization in the fire service is a subject that must continue to be investigated. The cost of equipment, volunteer personnel shortages, ever-increasing training requirements, and liability issues are just a few of the concerns driving this. Serving our populace, our customers should be the main focus of both fire department officials, as well as municipal officials. The contributions of the volunteers must be recognized for the pride and dedication that all continue to have in order to serve their communities. The concept of regionalization can work in this area, but it will not be a quick, painless, or inexpensive endeavor. Each department must start working with each other, as suggested above, in an effort to start this process. The relationships between the municipality, county, and fire department must become stronger with the ultimate goal of serving the public as the guiding rule.

Recommendations:

XII-1: *The municipalities of Genesee County and fire and EMS organizations that serve them should try to identify potential partners, and then attempt to enter into discussions on more regional approaches, including shared services, to the provision of fire and EMS services.*

XII-2: *The Genesee County Legislature should consider funding regional or county positions that would reduce the overall burden on local fire and EMS organizations and enhance operational capability and efficiency. Examples include the development of the following regional or county positions:*

- ***Training Officer***
- ***Fire Operations Officer***
- ***Health and Safety Officer***
- ***Fire Prevention Officer***
- ***Recruitment and Retention Officer***

⁵³ https://cumberlink.com/news/hold/better-together-fire-companies-try-to-overcome-the-fear-of-mergers/article_8fc13332-0350-5dcd-8407-7daf282dfc95.html

➤ **Human Resources Officer (may be able to be combined with Recruitment and Retention Officer)**

- XII-3: Any municipalities and/or fire and EMS organizations that are interested in exploring consolidations and/or shared services should seek to identify additional potential partners/opportunities for regionalization and/or shared services and then work collaboratively with them to attempt to move them from vision to reality.**
- XII-4: Any discussions regarding opportunities to regionalize or share services by the fire and EMS services MUST involve fire company and EMS stakeholders in every aspect of the process and must get their buy-in for there to be any realistic chance of success.**
- XII-5: The potential formation of any regional fire and/or EMS delivery system in Genesee County, even eventually a possible County-wide configuration, should allow the individual fire companies and/or EMS agencies to maintain their own unique identities as part of the overall system.**
- XII-6: Any potential consolidation of multiple fire and EMS entities into new regional fire and EMS organizations should be handled as a merger of equals rather than an acquisition.**
- XII-7: Genesee County fire departments should work with the departments/communities listed on each of their “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 and ensure that they are qualified.**
- XII-8: Several Genesee County municipalities and/or fire departments should give consideration to the creation of a regional fire inspector/public educator position. This position would assist with fire inspections and teach fire safety lessons throughout the region. This position could also assist with community outreach and education through social media and other media forms.**
- XII-9: Genesee County municipalities and/or fire departments should develop a regional strategic planning working group to build out a shared services vision. The goal would be to provide a forum for those interested parties to begin the development of a shared mission, value, goals, and implementation strategies with timelines.**

CHAPTER XIII - STRATEGIC PLANNING, CONCLUSIONS AND LOOKING TOWARD THE FUTURE

Strategic Planning

The future delivery of fire and EMS services in Genesee County requires an innovative approach, active stakeholder-driven participation, and the ability to implement long-term strategic plans within a manageable timeframe that delivers quantifiable results.

Strategic planning is an organizational management tool that produces fundamental decisions and actions that:

- Shapes and guide what an organization is,
- who it serves,
- what it does,
- and why it does it, with a focus on the future.



Figure XIII-1: Strategy Plan Development

Image credit: MTDTraining.com

Strategic planning is an organization’s process of defining its direction and making decisions relative to the optimization of limited resources to pursue a strategy. During the strategic planning process priorities are established and set. The strategic plan is also instrumental to identify control mechanisms which guide implementation of the strategy. Effective strategic planning articulates not only where an organization is going and the actions needed to make progress, but also how it will know if it is successful.

The history of strategic planning dates back hundreds of years and was derived from the word “strategy,” which was used heavily in warfare. Originating from the military leaders’ strategic planning, two critical facts that remain unchanged through generations are the emphasis in thinking about the big picture, watching closely as things vary, bearing in mind all possibilities, and concentration on absolute and steady enduring aims to be attained.

Strategic planning became prominent in corporations during the 1960s as the business world caught on to the positive attributes of strategic planning, and corporations both large and small began to plan intrinsically. Nearly a half-century later it remains an important aspect of strategic management. It is executed by strategic planners or strategists, who involve many parties and research sources in their analysis of the organization and its relationship to the environment in which it competes.⁵⁴ As the process developed corporations started to engage

⁵⁴ Mintzberg, Henry; Quinn, James B. (1996). *The Strategy Process: Concepts, Contexts, Cases*. Prentice Hall.

lower-level leaders and division supervisors with the executive or senior-level management in planning. This led to a broader cross-section of stakeholders being engaged in the planning process, which is a remarkable difference from the military models of yesteryear.⁵⁵

In the 1980s, as the reform of public sector agencies was in the air, people were seeking a more result-oriented and cost-conscious approach to public management practices, and strategic planning was introduced. This was a result of the recognition that business and government are alike in that goals and objectives should be embraced for any progressive results.⁵⁶

Strategic planning has many definitions but generally involves setting strategic goals, determining actions to achieve the goals, and mobilizing resources to execute the actions. A strategy describes how the ends (goals) will be achieved by the means (resources). The senior leadership of an organization is generally tasked with determining strategy, however, the input of all stakeholders in shaping the strategy must become part of the strategic planning process. Strategy can be planned (intended) or can be observed as a pattern of activity (emergent) as the organization adapts to its environment or competes.⁵⁷ The strategy currently in place in Genesee County appears to be a progressive and forward-thinking one, because the County's main fire and EMS organizations were the ones who requested this study be performed. Through this document, it is our goal to assist Genesee County's fire and EMS organizations in moving toward an even more planned, or intended, strategic posture.

Strategy includes processes of formulation and implementation; strategic planning helps coordinate both. However, strategic planning is analytical in nature (i.e., it involves "finding the dots"); strategy formation itself involves synthesis (i.e., "connecting the dots") via strategic thinking. As such, strategic planning occurs around the strategy formation activity.⁵⁸

Strategic implementation is analytical and involves identifying how to best reach a goal or desired outcome. The recommendations contained in this document form the framework for action and indicate where change is necessary. The strategic implementation process considers the intricacies of the organizational environment including the following:

- **Inputs** – information utilized to formulate recommendations
- **Outputs** – development of a plan of implementation
- **Outcomes** – that require evaluation

⁵⁵ Lentz, J. (2019, September 23). Benefits of Strategic Planning in Today's Fire Service. FIRERESCUE. com: <https://firerescuemagazine.firefighternation.com/2019/09/23/benefits-of-strategic-planning-in-todays-fire-service/#gref>

⁵⁶ Lentz, J. (2019, September 23). Benefits of Strategic Planning in Today's Fire Service. FIRERESCUE. com: <https://firerescuemagazine.firefighternation.com/2019/09/23/benefits-of-strategic-planning-in-todays-fire-service/#gref>

⁵⁷ Mintzberg, Henry; Quinn, James B. (1996). *The Strategy Process: Concepts, Contexts, Cases*. Prentice Hall.

⁵⁸ Mintzberg, Henry; Quinn, James B. (1996). *The Strategy Process: Concepts, Contexts, Cases*. Prentice Hall.

Inputs

Data is gathered from a variety of sources, such as interviews with key fire and EMS service personnel, review of pertinent data and documents on the community, service demand, desired service level, standard of response cover selected, organizational performance, and observations gathered through field visits. Inputs are then collected to help support an understanding of the environment and its opportunities and risks. Other inputs include an understanding of the values of stakeholders. These values may be captured in an organization's mission statement, and in the observed organizational culture which provides an emergent perspective on the actual values present within an organization. The inputs gathered during the organizational analysis form the basis for each of the recommendations that have been developed.

Outputs

The output of strategic planning includes documentation and communication describing the organization's strategy and how it should be implemented, sometimes referred to as the strategic plan. The strategy may include a diagnosis of the competitive situation, a guiding policy for achieving the organization's goals, and specific action plans to be undertaken for the implementation of the recommendations listed. A strategic plan may cover multiple years and is a flexible document that should be updated periodically.

Outcomes

The strategic planning process produces outputs, as described above; the implementation of the strategic plan produces outcomes. Ultimately, the implementation of the recommendations contained in this report will produce significant change and place the organization on an intended path. Change within a public sector organization typically produces some level of initial skepticism, discomfort, and places personnel in a situation that is unfamiliar. As the process of implementing change moves forward, each action often elicits a reaction. Therefore, the team working to implement desired organizational change should be ready to address unanticipated outcomes, which often manifest themselves as barriers to continuous change. The process of implementing change should be considered a learning process.

Performance measures should be easily understood and easily calculated. Suggested performance measures for the fire and EMS services often have a range depending on local factors. The point of the performance measures is to identify the community's expectations in a quantifiable way and to use the measurement of the fire and rescue's performance against these objectives to identify areas, which may need improvement, or require additional resources.

One approach to safeguarding support from all stakeholders, especially officials charged with producing an annual budget, is the implementation of a strategic plan. The engagement of all

stakeholders in this process provides inclusion, which leads to buy-in and support for the agency.⁵⁹

Fire, rescue, and EMS operations and service delivery can be dramatically improved in those departments that commit resources to goal setting, strategic planning, risk assessment, and performance measurement. Numerous tools and resources are available to guide management in these efforts from organizations such as the US Fire Administration (USFA), National Fire Protection Association (NFPA), International Association of Fire Chiefs (IAFC), International Association of Fire Fighters (IAFF), Center for Public Safety Excellence (CPSE), and U.S. Department of Transportation (USDOT). Resources are also available at the state level. A 2006 Volunteer Fireman’s Insurance Service (VFIS) report notes:

“No business is successful without some type of strategic planning – making sure that the business will survive. The emergency service organization (ESO) is no different. Strategic Plans in business (and ESOs) lay the groundwork for effective organizational management and performance.”⁶⁰

The fire service, particularly the volunteer fire service, has a long and proud history which is based on traditions, dedication, and a steadfast sense of pride. The journey the volunteer fire service has taken over many decades has served their communities well. Today, many of the customs the fire service has developed over the years struggle to be maintained and considerable effort continues to be expended to maintain these tenets, particularly in volunteer organizations. The fire and EMS services will continue to embrace these traditions and customs, some of which provide the very foundations of the emergency services; however, that realization will need to be integrated with the reality that to continue meeting the demands of today’s emergency services will require innovation, forward-thinking, and a commitment to embrace the inevitable changes with the same commitment and drive as demonstrated over the many decades of service to the community. Organizations that do not anticipate and embrace change will end up being reactive, and the changes will be forced upon them.

Lentz in his 2019 article, *“Benefits of Strategic Planning in Today’s Fire Service”* opined that in today’s fire service and economic times, the need for strategic planning is greater than ever before. From large metropolitan fire departments receiving grants in the millions to hire firefighters all the way to Irwin, New York, where the fight over a proposed \$16,000.00 budget cut will force a small rural fire company to cut services, firefighters are feeling the budget squeeze, but the service demands often continue to increase.

⁵⁹ Lentz, J. (2019, September 23). Benefits of Strategic Planning in Today's Fire Service. FIRERESCUE. com: <https://firerescuemagazine.firefighternation.com/2019/09/23/benefits-of-strategic-planning-in-todays-fire-service/#gref>
⁶⁰ <http://www.msfa.org/content/recruit/file/CEO%20MANUAL%20ARIAL%20-%20disc.pdf>

As has been previously discussed in this report, traditionally, many municipalities in New York have provided only limited financial support to their local fire and EMS providers. Because the amounts they contributed were generally small and it was to a highly regarded community organization, oversight of those funds was typically minimal. However, as costs for apparatus and equipment have skyrocketed and traditional fundraising is often no longer cost-effective, an increasing number of organizations have come to the realization they lack the means to accomplish what needs to be done, and the local governing body gets more involved or engaged. That results in a reactive, crisis management approach that can impact the credibility of the emergency services provider.



Figure XIII-2: The Strategic Planning Roadmap

In 2022, to garner the support of local government, the fire and EMS leadership must educate all stakeholders in what the needs of the fire company or EMS squad are and how they relate to service to the community. This does not appear to be consistently happening in Genesee County. The most progressive means to accomplish this is by sharing a vision – telling a story - of what the organization’s needs will be, and what it should look like in one, three, five, or even ten years into the future. This is the foundation of a “strategic plan”

and is a means to simply provide a road map that outlines goals and objectives to be achieved, a destination they would like to arrive at, and how long the trip will take to accomplish. It also contains tools to navigate along the way, concluding in a living document that must be continually evaluated and updated, as necessary.

There are various approaches to strategic planning which may include, but are not limited to, the following:

- Understanding and engaging in a process by which members of the organization envision what its future holds and the ability to develop the necessary procedures and operations to achieve that future.
- Identifying the organization’s long-term goals and objectives and then determining the best approach for achieving those goals and objectives.
- Planning for a set of managerial decisions and actions that determine the long-term performance of the organization.

Regardless of which approach to strategic planning a fire company chooses, a substantial challenge is getting the enthusiastic engagement of the members, especially in volunteer departments. All too often, members try to avoid involvement in these types of endeavors. There are several reasons for this, the most common being a lack of available time to complete

such a daunting task, and a belief that it is a waste of time as the final product will never get implemented. But it is imperative for the rank-and-file to recognize that for the process to work, a wide cross-section of stakeholders must be involved, and progressive thinking must take place, incorporating the most efficient application of resources by identifying priorities and chief officers receiving buy-in from all stakeholders⁶¹.

The strategic planning process can provide many tangible and non-tangible benefits to an organization. The tangible element is the ability to develop short- and long-term identification of personnel, fire apparatus, facilities, and equipment needs by providing an analysis of operational needs as seen from a span of time rather than requesting those resources annually. In other words, it helps to tell a story and allows other stakeholders who may need to provide funding the opportunity to plan for major expenditures through their budgetary process. The strategic planning process also strengthens an organization's ability to learn how to anticipate and plan with the development of strategies for future use in many initiatives as part of a tool kit for organizational growth. When an organization learns to think strategically, develop solutions to problems before they arise, and encourage participation from all stakeholders the organization becomes more productive and balanced. Most importantly, the bigger picture or vision which emerges will better result in ensuring that the organization's members are all rowing in the same direction.

The strategic planning process can also teach fire and EMS personnel, particularly senior leadership, techniques, and procedures to develop future planning. Another benefit is the feeling of inclusion from all participants which is key to obtaining the all-important buy-in. A critical part of the strategic planning process is also the workshops that engage not only the members of the emergency services but government leaders, managers/administrators, residents, and business owners, all of whom have an interest in the future of the emergency services delivery system in their communities. With group participation of key stakeholders, the implementation of the plan should be more streamlined, as any costs associated with the plan have been previously reviewed, and at least tentatively, been approved by the stakeholders. This early involvement and support can assist an organization with obtaining the financial resources it needs to not only operate but to grow and improve, as dictated by the plan. Planning is the only means by which an emergency service organization will thrive; without it, companies risk a grim future.⁶² In a broader sense participation in workshops also provides stakeholders at the organizational level an opportunity to interact with external stakeholders at the leadership level and with various levels of interest and need.

Lentz in his 2019 article "*Benefits of Strategic Planning in Today's Fire Service*" noted how significantly the fire service has changed over the past several decades. Clearly, the decline in the number of volunteers has forced government agencies in many places to pay more

⁶¹ Lentz, J. (2019, September 23). Benefits of Strategic Planning in Today's Fire Service. FIRERESCUE. com: <https://firerescuemagazine.firefighternation.com/2019/09/23/benefits-of-strategic-planning-in-todays-fire-service/#gref>

⁶² Lentz, J. (2019, September 23). Benefits of Strategic Planning in Today's Fire Service. FIRERESCUE. com: <https://firerescuemagazine.firefighternation.com/2019/09/23/benefits-of-strategic-planning-in-todays-fire-service/#gref>

attention to volunteer fire companies, subsequently questioning their financial and operational stability as they simultaneously face recruitment and retention challenges. Concerns regarding the continued viability of traditional fire and EMS delivery systems are resulting in an increasing number of governing bodies more closely examining their local fire and EMS organizations and their ability to continue to provide one of the primary responsibilities of local government.

During our field visits, and in our interactions with the fire and EMS providers, the MRI study team was informed multiple times how the revenue generated for their organizations through fundraising was substantially diminished.

In his 2019 article, Lentz further opined that organizations without a plan will be stifled by the response of stakeholders, ultimately forcing additional oversight, or even disbanding of volunteer organizations resulting in the loss of critical public safety services⁶³. Whether in small fire companies or large metropolitan fire departments, strategic planning has the same positive effect, but regardless of the size of the community the stakeholders are in, they are key in determining the final direction.

When thinking of the fire service, the words tradition and culture are commonly used. However, enlightened emergency service leaders today realize there is a growing demand for a progressive approach to strategic planning. As operational costs increase in all areas, local governments are forced to scrutinize and prioritize every dollar allocated more than ever before, forcing the emergency services, including volunteer fire companies, into a new age of fiscal justification that they have not been previously subjected to. Technology-driven data has created an increased emphasis on the use of statistics, and if these statistics do not support the vision of even volunteer fire and EMS organizations, the risk of losing critical support quickly becomes more likely. Without a plan, an organization is doomed, and this hypothesis is an accurate reflection of what is already occurring in places nationwide with, no doubt, more to follow.⁶⁴

When organizations can justify the annual requests for support, local governments will be more inclined to promote the means necessary to meet their needs. By providing a written plan of where the organization is going, supported by performance-based results and future goals, stakeholders will be much more likely to maintain a high level of trust and satisfaction in any fire or EMS organization. It then follows that it is more likely the stakeholders will support funding and other improvements needed by the organization moving forward.

As difficult economic forecasts continue – and may in fact grow direr with the impacts of COVID-19 - and the number of volunteer firefighters continues to decline, volunteer fire companies are being forced to approach their local governing bodies for increased financial

⁶³ Lentz, J. (2019, September 23). Benefits of Strategic Planning in Today's Fire Service. FIRERESCUE. com: <https://firerescuemagazine.firefighternation.com/2019/09/23/benefits-of-strategic-planning-in-todays-fire-service/#gref>

⁶⁴ Lentz, J. (2019, September 23). Benefits of Strategic Planning in Today's Fire Service. FIRERESCUE. com: <https://firerescuemagazine.firefighternation.com/2019/09/23/benefits-of-strategic-planning-in-todays-fire-service/#gref>

assistance. The cost of apparatus, safety equipment, and in some cases, personnel costs continue to climb, in many cases at rates above inflation, making it difficult to balance budgets. Once this door opens, managers and administrative leaders are forced to hold the organizations and their leadership more accountable regarding the allocation of resources provided through tax revenues and the levels of service being provided. This new reality makes strategic planning one of the most beneficial instruments in a Fire Chief's Tool Kit. Not only will strategic planning lay the groundwork for the future, the appearance of this leadership style and robust commitment to the delivery of public safety, will pay dividends to the stakeholders by embracing the community's commitment to fire protection and emergency medical services.⁶⁵

One of the greatest challenges when agencies attempt to utilize customer feedback as part of the development of a strategic plan is a lack of clarity of the services provided. This is particularly true when dealing with volunteer fire and EMS organizations in a rapidly growing area where just keeping up with increasing requests for service while attempting to prepare for future needs can be all-consuming. For this reason, we encourage the fire and EMS organizations who serve Genesee County to attempt to understand the value and importance of the community's perceptions and beliefs of the services they provide and to identify opportunities to improve the transparency in operations to bolster an ongoing dialogue. Doing so can only be beneficial to the process.

Early in the strategic planning process, two questions should be asked:

- What do you believe your external customer expectations are?
- What feedback do you get from your customers?

As the process of strategic planning develops, the following are important:

- Conducting a review of the agency's history, culture, and evolution.
- **Objective** Identification of the current status of the organization.
- Determining where and what the agency desires to be in the future.
- Organizational Mission Statement:
 - ❖ What is it?
 - ❖ Is it accurate? (Key elements to guide organizational efforts)
 - ❖ Does it accurately reflect the organization's overall mission?
 - ❖ Does it need revision?
- Department Vision (Statement):
 - ❖ Where is the organization now?
 - ❖ Where do you see the organization in:

⁶⁵ Lentz, J. (2019, September 23). Benefits of Strategic Planning in Today's Fire Service. FIRERESCUE. com: <https://firerescuemagazine.firefighternation.com/2019/09/23/benefits-of-strategic-planning-in-todays-fire-service/#gref>

- ✓ 5 years?
- ✓ 10 years?
- ✓ 15 years?

- Organizational Values Statement:
 - ❖ Values that represent the beliefs, behaviors, and actions of all the members of the organization.
 - ❖ What are they?
 - ❖ Are they accurate?
 - ❖ Do they accurately reflect the organization’s values?
 - ❖ Do they need revision?

The mission and values are the foundation of any successful organization. Every effort should be made to keep these current and meaningful so that the individuals who make up the organization are well guided by them in the accomplishment of the organization’s goals, objectives, and day-to-day tasks. Other key questions including conducting a SWOT analysis include:

- Why is the organization’s work important?
- What are the organization’s core services and what are its support services?
- Organizational Strengths.
- Organizational Weaknesses.
- Organizational Opportunities:
 - ❖ Organizational
 - ❖ Apparatus/Equipment
 - ❖ Response Capabilities
 - ❖ Programs
 - ❖ Community Engagement
- Organizational Threats.

Upon completion of the SWOT Analysis, the stakeholders should then refine their lists to capture the most critical issues and service gaps. These service gaps and critical issues should then be utilized as the framework for establishing the goals for the strategic planning period.

- Critical issues facing the organization.
- Service gaps.

- Goals and objectives:
 - ❖ Goals and objectives that are reasonable and obtainable over the next five/10-year, possibly 15-year planning period. Select, through consensus, the critical issues and service gaps with the highest priority.

- How will the organization get to where it wants to be in 5-10-15 years?
 - ❖ Station configuration
 - ❖ Staffing levels
 - ❖ Response capabilities
 - ❖ Regional player
 - ❖ Organizational programs

One sometimes overlooked, or perhaps more accurately neglected part of the strategic plan is the inclusion of a Capital Improvement Plan (Program), or CIP. A CIP is a plan of varying duration, in government usually five (5) to ten (10) years in duration, which identifies major (capital) projects and equipment purchases, organizes long-term projects, provides a planning schedule, and identifies options for financing the plan. The plan serves as a mechanism for decision-making, to identify priorities early to allow for more deliberate planning of financial resources. It can provide an important link to Genesee County's long-range fire and EMS strategic plan, and communicate those plans and needs to businesses and the community.

Budgetary pressures often divert government resources away from capital renewal. At a time when many governments are challenged by citizen demands for additional or improved services and taxpayer resistance to higher tax levies to pay for these services, the capital budget is often the first to be cut to balance the budget. Careful planning is required to ensure that strategic and capital needs receive the full attention and commitment of government officials. A well-planned CIP is a crucial tool to systematically plan for and manage capital needs. On-going service delivery can be assured only if adequate consideration is given to capital needs. If facilities and infrastructure are not maintained, they will deteriorate until costly maintenance is required, services are threatened, and community growth stagnates or declines.

The MRI study team strongly believes that a major key to the delivery of emergency services in Genesee County in the future will be driven by comprehensive strategic plan(s) developed by all stakeholders responsible for providing fire and EMS services. The strategic planning roadmap should be completed as part of the process for a very long-term, more than 10 years, consideration of a fire and EMS service delivery model for the County. There is a multitude of similar documents that can be easily found online and should, be referenced to gain ideas and suggested formats that can be used as the basis for plan development. Other alternatives include seeking the assistance of a consultant as some organizations have done, or more recently to purchase software that uses a template and inputting of information that results in the development of a complete strategic plan.

A word of caution is warranted here. Once an organizational analysis has been completed, implementation often stalls as the client is overwhelmed with the amount of change necessary for substantive implementation. This appears to have occurred previously in Genesee County. The process of introducing change into a public-sector organization needs to be carefully developed and monitored. Implementing a strategy needs to involve stakeholders, contain established priorities for action, and realistically pace change. It is our belief that through considering and implementing the recommendations outlined within this document, the effectiveness of the fire and EMS delivery system, and efficiency related to the use of resources throughout Genesee County will be enhanced for years to come.

Looking toward the Future

The missions performed by fire and EMS 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 Genesee County, the County's fire and EMS agencies, and the municipalities they serve, is to determine an acceptable level of risk and then define an appropriate level of service for the community. There is no "right" amount of fire protection or EMS delivery. It is a constantly changing level based upon the expressed needs of the community. Determining the appropriate level of service also involves deciding upon the communities' fiscal ability and willingness to pay for the desired level of service. But to do that as the system is currently structured requires that all the municipalities must be actively engaged and involved in the process.

Based on our analysis of the current operations of the Genesee County Fire and EMS service delivery systems, the MRI study has found a range of organizations, from ones that are, for the most part, well-equipped, well-managed, and appear to be well-trained, to those that appear to have significant deficiencies in one or more of those areas. As would be expected, most fire companies have a dedicated core group of members who are trying to make their organization one that provides dependable, high-quality, emergency services to the municipalities that it serves. **They should be commended for their efforts and given the support they need to continue to try to be successful.**

However, although the fire companies possess many very definitive, positive attributes, they are also facing some significant challenges both today and looking toward the future. With volunteerism declining, and the ranks of volunteer emergency services personnel dwindling nationwide, Genesee County's fire companies face the challenges of attempting to balance a credible emergency response system that is still staffed primarily with volunteer members (almost exclusively so on the fire side). It is essential that emergency services providers are proactive, and prepare for the inevitable increases in call volume, and potential expansion of their mission, before they occur. Not doing so leads to a reactive approach to operations, which can result in diminished service levels while the emergency services attempt to "catch up", something that is exceedingly difficult to do.

As with many emergency response organizations in 2022, the biggest challenge facing the fire companies of Genesee County is continuing to be able to field sufficient personnel, consistently and in a timely manner, to respond to the emergency incidents they are called upon to mitigate. For many companies, this challenge is becoming increasingly difficult, particularly during the day when most members are at work. In addition, the senior fire company members, who have provided the backbone of many response forces, particularly during the day, are getting older and will eventually not be able to continue to respond at the level they once did. This has placed several of the organizations in Genesee County on the precipice of continuing to be able to function as a viable emergency response organization, which in turn can result in a false sense of security within the community. The ability to properly fund the necessary operational expenses - a standard pumper costs upward of \$500,000.00 and personal protective equipment for a single firefighter can cost between \$2,000.00 and \$2,500.00 - of each company will present significant competing challenges.

Most fire companies that provide EMS have found that over time the number of EMS incidents grows to far outnumber those that are fire-related. It is the belief of the MRI study team the challenges that are facing the EMS delivery system primarily from a staffing and deployment standpoint have increased the pressure on the volunteer fire companies. With Mercy EMS often only able to provide a single EMS unit for 9-1-1 service in Genesee County, the fire companies are often dispatched as first responders to incidents that would not normally require their response. They then often must wait an extended period of time for the arrival of an ambulance. Complicating the challenge facing them is that they are doing so during an era when the number of volunteers is decreasing substantially, recruitment and retention efforts are challenging, and do not produce enough new, and active, personnel, particularly since the start of the COVID pandemic people are warier of being involved in EMS operations.

To adequately address the ongoing staffing issues, both short- and long-term, Genesee County fire companies need to undertake a multi-pronged strategy. First, and perhaps most importantly, they need to continue to expand their volunteer recruitment efforts. They also need to focus heavily on retaining active members and attempting to motivate personnel to be more involved and respond to more incidents. Fire companies also need to seriously consider the implementation of some type of duty crew – including looking at them from a battalion level - to relieve the burden on their entire company to respond to potentially less serious incidents or still alarms.

MRI fully supports the continued use of a strong primarily volunteer fire service delivery system in Genesee County and believes that this model can continue to serve the needs of the County for the foreseeable future. However, the project team also believes that the continued decline of volunteers, particularly during the day, along with the multitude of other daily tasks which need to be performed indicate that the time has arrived for the transition to a more combination - of career and volunteer - fire protection delivery system utilizing part-time per diem staff to supplement the volunteer force. The need for part-time staffing, particularly

during the day is becoming more apparent. The biggest questions here will be who will hire them, how will they be paid for, and how will they be deployed?

Within each municipality, the powers and privileges designated by the state are exercised by a governing body elected by the people. Municipal government is basically the response of the state government to the individualized local need for certain public services (*i.e.*, waste disposal, police and fire protection, water supply, health services, etc.) in addition to what is available from the state and/or county. The municipal governing body is the one that is tasked with providing emergency services or designating which entity, or entities, are authorized to provide them on their behalf. As permitted by statute, most - but not all -municipalities in Genesee County have traditionally delegated the provision of fire and EMS services in their respective municipalities to the independent fire and EMS providers. However, under all the state codes, the municipality is ultimately responsible for providing fire service including the means, extent, and financing. It is important to note that in New York state (as in many others) EMS has never been formally designated as an essential service and therefore there is no mandate that anyone provides it.

During this project, the MRI study team had the opportunity to interview representatives of the governing bodies of several municipalities and receive feedback from them through a questionnaire, and an online survey. For the most part, these representatives are very happy with the services they receive from their local fire and EMS agencies. They stated that the majority of what they hear about them is positive. The MRI team was informed by several of the municipal stakeholders that although their fire and EMS providers generally provide a monthly report to the municipality, there may be a perception that the community, in general, is not as well informed about the organizations and their operations as they should be. Moving forward, the fire and EMS organizations that this applies to will need to take steps to eliminate that perception. However, the reality of the time commitment necessary to effectively communicate, and personally interact with the governing bodies of multiple municipalities can be substantial.

From a fiscal perspective, small communities have traditionally gotten great value from their volunteer fire and EMS services. In addition to the fact that their personnel costs are extremely low, in many cases, the local municipality or, in many places in Genesee County, municipalities provide only a fraction of the amount of funding necessary for the organization to operate effectively. The expectation, perhaps driven by long-established fundraising traditions in the volunteer emergency services and the communities they serve, continues to this day. In 2010, during the preliminary discussions on the formation of the Keystone Valley Fire Department in Pennsylvania, a Pennsylvania Department of Community and Economic Development representative estimated that the average volunteer spends about 80% of their time commitment to the fire department raising funds rather than training or responding to emergencies. Compounding this issue is the very real fact that volunteerism is declining at a time when the number of incidents continues to increase...albeit slowly in Genesee County... along with the time required for training. **It is the MRI study team's belief that at the present**

time, it is ultimately each municipality's responsibility to provide for, and ADEQUATELY fund, the emergency services that protect its residents. Fundraising is a time-consuming effort that in our opinion, does not make effective use of the valuable time of volunteer personnel.

Traditional fundraising activities such as breakfasts, dinners, and bingo no longer provide any significant return on the time and effort it takes to hold them. In addition, most younger members of the volunteer fire and emergency services have little interest in participating in traditional fund-raising activities, believing instead that they are making a significant contribution of time just to train and respond to emergencies. These are not trends that are going to be reversed and municipal governing bodies – even in small towns - will need to also adjust to these new realities.

It is the opinion of the MRI study team that not all the municipalities in Genesee County are paying what would be considered a fair share for the services that are provided to them. Based on our collective experiences, the per capita cost that some municipalities are contributing toward fire and EMS services are below average. However, for both fire and EMS, the determination of the exact amount that each community contributes is a local decision. However, just as an example, in another study we did of a rural community with a population of about 2,866 that was slowly transitioning to suburban had a fire budget of \$120,121.00, and a per capita cost for fire protection of \$41.91.

It is also important for the municipalities to remember that, without exception, fire companies and EMS agencies regardless of their organizational structure are not profitable, similar to public works, police, and school districts. They provide a necessary service, a portion of which can be billed to insurance companies (for EMS). In the long run, the municipal governing bodies will need to determine the exact level of contribution they are willing to make to supplement other sources of emergency services revenue, such as ambulance third-party insurance billing, and determine the level of service that will be supported by the community.

When dealing with volunteer emergency services personnel, municipal governing bodies need to be certain to fully include them in the budgetary and decision-making process and be aware of the potential ramifications of making changes they do not fully support or buy into. While the governing body should not be held “hostage” by threats to quit, reduce, or eliminate services, if decisions do not go their way, they do need to understand that volunteers have a much different level of investment than career staff, and thus it is more difficult to mandate change or force them to continue to provide services if they do not feel the services they provide are appreciated, or being adequately funded.

On the other hand, the fire and EMS organizations need to understand that scarce tax dollars that have been stretched to the limit are now in real danger of tearing or breaking. The COVID-19 pandemic and other world events continue to make finances even more dire. Smaller communities that have far fewer resources and options will find it especially difficult to cope with the limitations imposed by the new financial reality. The continuing trend of declining

volunteerism will create simultaneous challenges that will stretch the provision of emergency services in many communities even further. **This will of necessity require a serious and objective look at the benefits that can be realized by consolidations or mergers of companies that are struggling into a new, stronger organization.**

Looking ahead, planned growth of the fire and EMS delivery system throughout Genesee County is essential to provide a consistent service level to the diverse communities that make up the County, while keeping pace with slowly increased demands for service. Currently, it is the responsibility of the local governing body in each municipality to determine how fire and EMS services are provided. In theory, it is their unenviable task to translate needs into reality, maximize the delivery of fire, rescue, and EMS services, and do so in the most fiscally responsible manner possible. However, a major challenge that will need to be overcome is convincing the governing bodies of all municipalities that their involvement is critical, and their support, particularly fiscally is a good investment.

The MRI study team strongly believes that as permitted by law Genesee County needs to take a much more active role in the delivery of fire and EMS services throughout the County. We believe that doing so will provide for adequate and level funding of these critical public safety services, as well as allow for the most consistent delivery of fire and EMS services to all the citizens of the County. For areas where County involvement is not currently permitted, lobbying should occur to push for the passage of legislation that will permit such involvement if all stakeholders believe it is in their best interest.

To that end, the MRI study team envisions the creation of an emergency services delivery model (spanning a number of years) that would consist of the following:

- The Emergency Service Task Force along with other and local stakeholders should continue to meet to develop a vision and strategic plan focused on the implementation of the recommendations contained within this report, including the implementation of a County-wide system of fire and EMS service delivery for municipalities and organizations who wish to change their local emergency services delivery model. Any recommended service delivery model should contain priority provisions for attempting to maintain a strong volunteer firefighting force as part of the system for those dedicated personnel who choose to continue to serve their community.
- Work on the implementation of necessary legislative changes that will allow county governments to expand upon the delivery of services to local fire and EMS agencies to support their unique local needs.
- Genesee County assumes a more supportive role in the delivery of emergency services by expanding its services within the Department of Emergency Services. The Department of Emergency Services could then provide part-time personnel, apparatus, equipment, and contractual services to develop and supplement local area, regional, or

County-wide fire and emergency medical services delivery to those municipalities that need – or desire – the support to continue protecting the community. Any initiative would be on a voluntary basis and contain a governance provision that allows the local municipality to engage in oversight of the program as part of a commission or board established at the County level.

- The establishment of a County-wide Standard of Cover with different demand zones that will provide consistent and improved response to emergencies based partly on GPS technology, and the response of incident-specific apparatus that meets the needs of the type of incident occurring.
- Genesee County has an increased ability to obtain federal and state funding and grants through various programs currently available to support the delivery of these services, particularly for regionalization efforts. Funding for this endeavor would also encompass the creation of one or more County-level tax assessment(s) for the sole purpose of funding the delivery of fire and emergency medical services.
- Development of a single standardized manual of standard operating procedures or standard operating guidelines (SOPs/SOGs), and response assignments for use by all fire and EMS organizations throughout Genesee County.
- Development of standardized fire apparatus specifications that provide similar fire apparatus models and capacities throughout Genesee County to benefit from economies of scale and to have consistent apparatus configurations and procedures which will contribute to efficient fire scene operations.

Change in the way fire and EMS services are delivered in Genesee County is inevitable. Most of the stakeholders agree that the need for a different model is quickly approaching, yet they continue giving their best efforts to slow the decline of services and prolong the time when the major change in service delivery models becomes unavoidable.

It is our sincere hope that this report and the accompanying “Tool Kit” will be used by Genesee County, its municipalities, the fire and EMS organizations’ leadership, the dedicated firefighters and EMS personnel who faithfully serve the County and the many other interested stakeholders who have a vested interest in the emergency services as a road map for improving the delivery of fire and emergency medical services throughout Genesee County. **The citizens of Genesee County should feel confident that the fire and EMS organizations that proudly and faithfully serve the County are professional public safety organizations that are continuing to try their best to provide a high-quality level of service to the community 24/7/365. We continue to be impressed with the dedication and commitment of the members of the Genesee County Fire and EMS services.**

Looking forward, the MRI study team further believes that the fire and EMS services of Genesee County, assisted by the Department of Emergency Services have the skills, capabilities, and motivation to become an effective, well-trained, and motivated County-wide delivery system.

To be sure, there are challenges ahead, but we are also quite confident the members of the fire and EMS community will rise to the occasion. We hope that the municipal governing bodies will do the same, by making long-term commitments to the fire and EMS delivery system, and, most importantly, by providing adequate funding that allows fire and EMS personnel to concentrate their efforts on training and emergency response, while simultaneously being confident they will have the financial resources they need to perform their duties effectively, efficiently, and safely.

This report should be studied and considered in its entirety to gain a complete picture of MRI's recommendations. While the recommendations are numbered in each section, they have NOT been listed in any preferential manner or order of importance. The numbering is for reference purposes only. The areas that need improvement are by no means insurmountable, or beyond the County, its municipalities, the leadership of its fire and EMS organizations, and their representative organizations' ability to deal with them. To address the recommendations that have been identified in this report, and implement the strategic plan, Genesee County and its fire and EMS organizations and partners should:

1. Approach them strategically and systematically.
2. Use them as the basis for the development of a long-range strategic plan for change and improvement.
3. Break them down into reasonably sized components. Categorize them as short-term and long-term goals, i.e., items that can be accomplished within existing resources and items that will require additional funding and/or time to accomplish in the coming years.
4. Refer to them when making recommendations, check them off as they are accomplished, revise the plan as necessary moving forward just making sure to maintain forward progress, and most importantly, recognize the positive achievements publicly.

Throughout this report, the MRI study team has made multiple recommendations that could, if adopted, increase expenditures of the fire and EMS organizations and the overall emergency services delivery system. We believe that these recommendations are essential for the effective, efficient, and safe operation of the fire and EMS delivery systems throughout Genesee County. Other recommendations are intended to reduce overall financial risk and liability. Ideally, fire and EMS expenditures should result in programs that are well-justified and cost-effective, and that have measurable outcomes that result in an improved level of safety and protection for the citizens and visitors of Genesee County.

Recommendations:

- XIII-1:** *Each fire and EMS organization in Genesee County should consider the development of a strategic plan to guide their organization for the next three to five years and assist them with planning for future needs and meeting the challenges they may confront. The development of these plans should include input from a wide range of both internal and external stakeholders.*
- XIII-2:** *As part of the strategic planning process, and working collaboratively with their member organizations, the Genesee County Emergency Services Task Force, and the Genesee County Fire Advisory Board., assisted and supported as appropriate by other stakeholders such as the Genesee County Legislature, Genesee County Emergency Services, Genesee County Association of Municipalities, and the local governing bodies of municipalities that are interested, should explore areas where more regional systems for the delivery of emergency services can be developed. These opportunities should then be included in the strategic plans of the potential partners/participants.*
- XIII-3:** *Working collaboratively with the Genesee County Emergency Services Task Force, and the Genesee County Fire Advisory Board., assisted and supported as appropriate by other stakeholders such as the Genesee County Legislature, Genesee County Emergency Services, Genesee County Association of Municipalities, should begin the development of a longer-range strategic plan that provides for the County to assume a greater role in the provision of fire and emergency medical services.*
- XIII-4:** *Every strategic plan should be considered a living – not static – and flexible document that should be reviewed on an annual basis to evaluate progress toward established goals. The plan should also be revised periodically to remain both current and forward-looking.*
- XIII-5:** *Working collaboratively, the Genesee County Emergency Services Task Force, and the Genesee County Fire Advisory Board., assisted and supported as appropriate by other stakeholders such as the Genesee County Legislature, Genesee County Emergency Services, Genesee County Association of Municipalities and other interested stakeholders should make it a priority to build on the momentum from the delivery of this report to bring forth and implement recommendations that have been made throughout this report. The task force should identify and prioritize elements of this initiative that can be implemented immediately, and those elements which must involve a higher level of county involvement, or legislative changes to provide higher levels of service to communities. It should also include task groups that will be assigned the implementation of various recommendations. The recommendations of the task force should be presented by June 30, 2023.*

CHAPTER XIV – SUMMARY OF RECOMMENDATIONS

Chapter IV - Service Demand and Response Metrics

- IV-1:** The Genesee County Emergency Services should work internally with the Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership to identify any potential ways to reduce call processing time (from receipt of the call to dispatch of the incident) with the goal to achieve a 90th percentile time of not more than 64 seconds as recommended in NFPA 1710. Reducing call processing time can assist with leading to improved overall response times.
- IV-2:** Working collaboratively the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership should establish a method to track response time at the 80th or 90th percentile as required in NFPA 1721 and 1720.
- IV-3:** Working collaboratively the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership should consider making an evaluation of the 80th and 90th percentile turnout and travel times – for both fire and EMS incidents - as recommended in NFPA 1710 and 1720 part of its routine data analysis and statistical reporting. Having these more conservative times available will provide a more accurate response assessment and allow for better long-range master planning.
- IV-4:** Working collaboratively the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership should consider establishing a Genesee County incident number for each incident rather than individual jurisdiction numbers. This would make it easier to track response times to incidents from mutual aid companies and avoid counting the same incident multiple times.
- IV-5:** Working collaboratively the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership should implement a procedure to document the number of times that each fire and EMS agency is unable to respond to a dispatched incident or “scratches” a call.
- IV-6:** The Genesee County Sheriff's Department 9-1-1 Dispatch Center leadership must significantly improve its customer service relative to the fire and EMS organizations it serves. These organizations have unique communications and data needs that are

very different from those of law enforcement. Reasonable requests for procedural and/or operational changes should be honored and implemented.

Chapter V - Fire Operations

- V-1** *The Genesee County Emergency Services should continue to provide and facilitate the purchase of all equipment such as communications and other technology. This should continue to assist to control costs utilizing bulk purchasing and provide consistency and standardization throughout the County.*
- V-2:** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services should develop standardized responses for various types of incidents, and standardized run cards County-wide. Once developed the standardized responses should be adopted as the Genesee County standard.*
- V-3:** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services should develop a County-wide procedure of dispatching the closest available station(s) with necessary apparatus/resources, and qualified personnel as determined by GPS, rather than permitting the selection of specific companies which may have longer travel distance and response times. Once developed, the standardized responses should be adopted as the Genesee County standard response procedure for all agencies.*
- V-4:** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services, should develop a procedure for documenting the number of self-contained breathing apparatus (SCBA) qualified interior structural firefighters on each unit. Whenever possible, this information should be entered into the CAD system by the apparatus officer allowing all responding personnel, particularly chief officers, to track the number of responding personnel in real-time.*
- V-5:** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center should develop a procedure for the 9-1-1 center to track and analyze full-first alarm assignment on location times as recommended by NFPA 1720, and any standards of cover responses (SOC) that are established.*
- V-6** *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services and the Genesee County Sheriff's Department 9-1-1 Dispatch Center should develop a procedure for the 9-1-1 center to:*

- *Track emergency personnel response utilizing the Bryx 911 system.*

- *Provide time checks to the Incident Commander at various intervals until the incident is under control.*
- *Initiate progress/incident status reports at various intervals until the incident is under control.*
- *Provide reminders to conduct Personnel Accountability Reports (PAR) based upon incident criteria.*

V-7 *The Genesee County Fire Advisory Board, working collaboratively with the County's fire departments should update their membership rolls to remove inactive members. The continued existence of large membership rolls dilutes the message that a department is in need.*

V-8 *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services should form a committee to begin the development of a comprehensive County-wide Standard Operations Procedures/Guidelines (SOP/SOG) manual utilizing existing SOPs/SOGs as a starting point. They should also consider the development of County-wide operational manuals based on the Northern Virginia Regional Fire Services manuals. This could even be pursued as a regional endeavor with the other counties in the GLOW region. The committee should be comprised of members of various companies and ranks.*

V-9: *The Genesee County Fire Advisory Board, working collaboratively with the Genesee County Emergency Services should adopt a standardized SOP/SOG form that includes the following information:*

- *Title of the SOP/SOG*
- *Number of the SOP/SOG*
- *Category of the SOP/SOG (EMS Operations, Training, Administration, etc.)*
- *Page number and total number of pages*
- *Effective date*
- *Revision date (if applicable)*
- *Approval/signature*

Each SOP/SOG should, at a minimum, contain the following sections:

- *Purpose*
- *Scope (if necessary and appropriate)*
- *Definitions of terms (If necessary and/or appropriate)*
- *Procedure(s)/Main body*
- *References (If necessary and/or appropriate)*

Chapter VI - EMS Operations

- VI-1** *Genesee County should seriously consider issuing an RFP for the provision of EMS services throughout the entire county (Option #1). The RFP should include expected levels of performance and establish benchmarks for the delivery of services. Signed contracts should be executed with the successful bidder(s).*
- VI-2** *The current emergency responders are dedicated individuals who have provided an immeasurable service to their communities. This resource should not be overlooked. For the foreseeable future any response from a county or county contracted resource should still incorporate the tiered response from local responders – based upon their availability - to begin initial assessment, treatment, and care prior to the arrival of any additional units.*
- VI-3** *Genesee County should, at a minimum receive quarterly reports from each of the County’s EMS transport agencies. The quarterly reports should include call volume, incident type, and location breakdowns, response times including 80th and 90th percentile achievement of response criterion, number of patients transported, patient outcomes, and number of times units were unavailable.*
- VI-4** *Genesee County should establish a fund for collection of revenue for any response to emergency medical services. These funds for service should be available to be put towards future operations of a county supplemented (or funded) EMS system, including to assist the volunteer EMS providers offset their expenses including for personnel, and not back into the general fund of the county.*
- VI-5** *Training for EMS responses needs to be implemented within the organizations. Examples of EMS training can include CPR, AED, selective spinal immobilization, oxygen therapy, splinting & immobilization, use of stretcher and stair chair operations, report writing and documentation, and taking vital signs along with patient assessments. These need to be documented and continued as part of the department's ongoing training. Over 60% of the department calls within the county are EMS-related and proficiency needs to be maintained. This training needs to have online components to allow personnel the flexibility to complete at their convenience*
- VI-6** *Mobile Integrated Health (MIH) / Community Paramedic programs should be explored and implemented after conducting a county analysis for areas of vulnerability such as the elderly having repeated slips and falls, or young children involved in motor vehicle collisions and the need for a child car seat program. The inclusion of this program could potentially be an addendum or option on a county contract for EMS services.*
- VI-7** *Genesee County should continue to provide and facilitate the purchase of all equipment such as communications, and maintenance agreements for all services.*

This should continue to control costs utilizing bulk purchasing and provide consistency and standardization throughout the region.

- VI-8** *EMS technology should be enhanced and integrated into the operations. In particular, the county should acquire and distribute automated CPR machines to assist crews with patient care particularly given the extended response times for an advanced life support unit to arrive on scene.*
- VI-9** *Genesee County should consider the purchase of a multi-purpose combination fire suppression/EMS transport unit vehicle to provide a supplemental county response framework. This purchase could be done as a lease in arrears so delivery of the unit could occur and the first payment for the unit would be one year after delivery enabling revenue to be generated from transports throughout the year.*
- VI-10** *Initial staffing of a multi-purpose vehicle unit should be based on peak call volume for the region. Typically, these units are staffed Monday-Friday from 0800-1600 or 1800 hours during peak hours and at times when volunteers are out of the area at their primary jobs and unable to respond. It should be staffed at a minimum to allow transport at the BLS level. Hours, when this unit is not staffed, will default to current local protocols and procedures until the system is further built out in phases over the years.*
- VI-11** *The Genesee County EMS Council should be reactivated to meet monthly with representatives from local fire departments, Genesee County Sheriff's Department 9-1-1 Dispatch Center, Genesee County Emergency Services, Mercy EMS, and LeRoy Ambulance. This group would meet and discuss any documented concerns or thoughts from the previous month to help enhance services in the future. The EMS Council should not be considered as a forum just for the airing of any grievances but an open forum for communication and feedback to improve the quality of EMS service to Genesee County.*

Chapter VII – Standard of Cover Response

- VII-1:** *Working collaboratively with their memberships, the Genesee County Fire Advisory Board, and Genesee County EMS Council should continue to explore ways to reduce all aspects of response time, but particularly turnout time as this is the aspect that the fire and EMS providers have the most direct control over.*
- VII-2:** *Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services should establish fire demand zones throughout the County, based upon the urban, suburban, and rural components of the diverse fire service coverage area. They should then work to develop a Standard of Response Cover based*

upon the recommendations contained in NFPA 1720 for the established fire demand zones, with adjustments as appropriate for Genesee County's unique needs.

VII-4: *Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services, and based upon the GIS mapping, consideration should be given to part of the Standards of Response Cover benchmarks seeking to have the first unit on scene within 10 minutes after responding to all fire type incidents, County-wide, 80% of the time.*

VII-5: *Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services, and based upon the GIS mapping, consideration should be given to part of the Standards of Response Cover benchmarks seeking to have the entire first alarm assignment for reported structure fires; even the rural areas of the County, with at least 15 personnel, on scene within 15 minutes from dispatch, 80% of the time. For the more urban and suburban areas of the County the more conservative benchmark of 10 minutes, 80% of the time should be considered.*

VII-6: *Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services should consider the development of a "performance improvement" process for fire suppression operations. The process should include the adoption of performance standards such as NFPA 1720, including on-scene performance indicators such as:*

- *On-scene to the charged line at the front door of a structure fire: two minutes or less, 90% of the time.*
- *Water from the hydrant to supply engine: three minutes or less, 90% of the time.*

The point of the performance measures is to identify the community's expectations in a quantifiable way and to use the measurement of the fire company's performance against these objectives to identify areas that may need improvement or additional resources.

VII-7: *Working collaboratively, the Genesee County EMS Council and the Genesee County Emergency Services should establish EMS demand zones throughout the County based upon the urban, suburban, and rural components of the diverse EMS coverage area.*

VII-8: *Working collaboratively, the Genesee County EMS Council and the Genesee County Emergency Services should develop a Standard of Response Cover for BLS level response, based upon the established EMS demand zones and response/travel time recommendations contained in NFPA 1710 and/or the CAAS standards, with adjustments as appropriate for Genesee County's unique needs. The SOC adopted*

should attempt to have benchmark achievement rates of 90% for urban and suburban areas and 80% for rural and remote areas.

VII-9: *Working collaboratively, the Genesee County EMS Council and the Genesee County Emergency Services should develop a Standard of Response Cover for ALS level response, based upon the established EMS demand zones and response/travel time recommendations contained in NFPA 1710 and/or the CAAS standards, with adjustments as appropriate for Genesee County's unique needs. The SOC adopted should attempt to have benchmark achievement rates of 90% for urban and suburban areas and 80% for rural and remote areas.*

VII-10 *Working collaboratively, the Genesee County Fire Advisory Board and the Genesee County Emergency Services should develop a plan to deploy several daytime quick response units; fire apparatus staffed with an officer and three firefighters, positioned strategically around the County in fire stations that wish to host them.*

VII-11 *The Genesee County Fire Advisory Board should consider the implementation of a battalion duty crew program primarily between 6:00 PM and 6:00 AM daily, and, all day on the weekends. When on-duty personnel could also complete their required training, participate in various department/station projects, pre-fire planning, etc., and possibly even membership recruitment activities.*

Under the duty crew system, calls of less severe acuity would be handled by the duty crew alone, or in conjunction with the fire company in whose district the incident occurred.

VII-12 *Working collaboratively, the Genesee County Fire Advisory Board, Genesee County EMS Council, and the Genesee County Emergency Services should work on a program that can be used to educate the public on the importance of reasonable response time standards in order to enlist their support for funding necessary for emergency response system improvements.*

Chapter VIII- Relationships Between Stakeholders

VIII-1: *The Chief of every fire and EMS agency in Genesee County should provide regular briefings and reports to the Mayor/Administrator and/or governing body of every municipality they serve concerning the operations of their organization or fire department. The Chief should communicate regularly with the Mayor/Administrator and/or governing body to receive feedback on the performance of the department.*

VIII-2: *The Mayor/Administrator and/or governing body of each municipality should take an active role in setting appropriate goals and a vision for the fire and EMS providers that*

serve them. Municipal officials should include residents and the emergency services in an open and honest discussion within the goal-setting process.

VIII-3: *Every fire and EMS agency should consider offering building tours and ride-a-longs to the members of their local governing bodies and other municipal officials to further familiarize them with fire and EMS operations. Officials could also be encouraged to participate in or observe training activities.*

VIII-4: *Fire and EMS agency leadership and the municipal governing bodies should publicly recognize the achievements of their emergency services organizations and its members in reaching the various established goals as they are accomplished.*

VIII-5: *Based upon the recommendations contained in this report, the Genesee County Legislature, the governing bodies of the County's municipalities, the Genesee Association of Municipalities, Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, Genesee County EMS Council, and other interested stakeholders assisted by the Genesee County Emergency Services should begin discussions ASAP on the direction that the County's fire and EMS delivery system will take moving to the future. It will be imperative that all stakeholders speak with a unified voice when lobbying local legislators to introduce or support enabling legislation that will be necessary for several recommendations to be implemented.*

Chapter IX – Volunteer Recruitment and Retention

IX-1: *The Genesee County Emergency Services Task Force and Genesee County Fire Service Advisory Board, assisted by the Genesee County Department of Emergency Services, should establish, and recommend the use of a uniform application and screening process for all new members of the fire and EMS services throughout Genesee County. Although these personnel are volunteers, they still enjoy all of the rights of full-time public safety personnel and possess the same high ethical and moral character. At a minimum the screening process should include:*

- *Possession of a valid driver's license (all personnel should have their driver's licenses checked on an annual basis)***
- *State and federal criminal background checks including fingerprinting***
- *Drug testing***
- *Credit, employment, and reference checks***

IX-2: *The Genesee County Emergency Services Task Force should convene focus groups to determine what concepts and recruitment and retention strategies are feasible and most attractive to both current members and potential candidates. Once these concepts are ranked a paced schedule of implementation should be adopted.*

- IX-3: Genesee County’s fire and EMS providers should consider the adoption of FirstNet technology and develop a consistent tiered approach to providing this technology to active members.**
- IX-4: Genesee County’s fire and EMS providers should make a concerted effort to reach out to inactive and former members and attempt to recruit/motivate them back to active status.**
- IX-5: Genesee County’s fire and EMS providers should consider the implementation of a reward, recognition, or incentive program 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.**
- IX-6: Genesee County’s fire and EMS providers should attempt to enter into partnerships with local businesses to allow their personnel to respond, when needed, to emergency incidents during working hours, without any financial penalty.**
- IX-7: Genesee County’s fire and EMS providers, in cooperation with their municipalities, should explore the feasibility of utilizing, and in fact encouraging, municipal employees to perform “dual roles” by serving not only in their full-time positions but also serving the fire company as volunteer firefighters.**
- IX-8: Genesee County’s fire and EMS providers, in cooperation with their participating municipalities, should encourage giving priority attention for hiring to selected municipal positions, such as public works, to personnel who are currently serving as active volunteer firefighters.**
- IX-9: Genesee County’s fire and EMS providers, in cooperation with their participating municipalities, should consider the development of a program that would provide active responders with the opportunity to obtain health insurance. The municipality should pay a graduated percentage of this program based upon response and training participation levels suggested in figure IX-12.**
- IX-10: With support from the Genesee County Emergency Service Task Force, the Genesee County Fire Advisory Board, the Genesee County EMS Council, and the Genesee Association of Municipalities funding should be sought from the Genesee County Legislature for the Department of Emergency Services to hire full-time volunteer recruitment and retention coordinator to coordinate and organize efforts throughout the County.**

- IX-11:** *The Genesee County Emergency Service Task Force and Genesee County Fire Advisory Board, with assistance from the Genesee County Emergency Services should approach technical schools and colleges in Genesee County, as well as areas of nearby counties that are within a reasonable distance, to explore the possibility of implementing live-in firefighter programs with fire companies that have adequate facilities and wish to participate. This program could also be extended to young new residents of Genesee County who have relocated to the area for work.*
- IX-12:** *Genesee County fire and EMS providers and/or municipalities who can afford to do so should consider offering premium benefits for their highest performing members who make long-term commitments to the company and meet stringent eligibility criteria such as college scholarships and/or low or no-interest student loans, and low-interest mortgages.*
- IX-13:** *Genesee County fire and EMS providers who implement in-station duty crew programs should explore ways to incentivize those personnel and the program, such as purchasing dinner for the on-duty personnel, with the goal of maximizing buy-in and participation of company members while simultaneously easing the emergency response burden on all members of the company (and perhaps adjacent companies as well).*
- IX-14:** *The recruitment and retention coordinator should deliver marketing information to new residents and, if possible, make direct contact with these potential first responders.*



Figure IX-13: Volunteer Firefighter Recruitment Door Hanger

Chapter X - Facilities and Apparatus

- X-1:** *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Legislature and Genesee County Emergency Services, the Genesee County Fire and EMS agencies should consider applying for an Assistance to Firefighters Grant (AFG) to attempt to obtain funding to assist with the installation of automatic fire alarm and carbon monoxide detection systems in all fire and EMS stations. These systems should not only be equipped with both audible and visible warning devices, they should automatically transmit an alarm to an approved central monitoring station.*
- X-2:** *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Legislature and Genesee County Emergency Services, the Genesee County Fire and EMS agencies should consider applying for an Assistance to Firefighters Grant (AFG) to attempt to obtain funding to assist with the installation of direct capture vehicle exhaust extraction systems in all fire and EMS stations.*
- X-3:** *Working collaboratively, the appropriate stakeholders involved in any proposals for new and/or replacement fire or EMS stations should include a thorough needs assessment including whether multiple stations could be consolidated at a single more operationally appropriate location.*
- X-4:** *Inspections of all fire and EMS stations and facilities should be conducted on a regular basis. These inspections can be used to identify potential maintenance, as well as safety issues, and allow them to be addressed before they become problematic.*
- X-5:** *As part of a proactive preventative maintenance program that can assist with reducing maintenance costs, all fire and EMS vehicles should be thoroughly inspected by a certified emergency vehicle technician (EVT) on a periodic basis, but no less than annually.*
- X-6:** *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Legislature and Genesee County Emergency Services, the Genesee County Emergency Services Task Force, and Genesee County Fire Advisory Board should consider ways that the fire and EMS agencies in the County can better address the service and maintenance of the large emergency vehicle fleet. This can include the development of standard preventative maintenance and repair protocols. Some ideas that might be considered and result in potential improvements in consistency in quality and efficiency while providing cost savings, include, but are certainly not limited to:*
- *Sharing a fully trained and EVT-certified mechanic between several area fire companies and/or municipalities.*

- *Develop several vendor contracts for County-wide maintenance and repair services for all the fire companies and EMS agencies.*
- *Genesee County provides repair and maintenance services to the fire and EMS agencies either as a service or on a cost basis.*

X-7: *As required by various NFPA and ISO standards, annual testing of the following apparatus components and equipment should continue to be a high maintenance priority including for fire companies who do not currently have these tests performed:*

- | | |
|------------------|---|
| ➤ Fire pumps | ➤ Self-contained breathing apparatus (SCBA) |
| ➤ Fire hose | ➤ Hydraulic rescue tools |
| ➤ Aerial ladders | ➤ Thermal imaging cameras |
| ➤ Ground ladders | ➤ Combustible gas meters |

X-8: *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Legislature and Genesee County Emergency Services, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should consider developing several vendor contracts for County-wide inspection and testing services for the all the fire companies and EMS agencies for the apparatus components and equipment listed in Recommendation X-7, above.*

X-9: *Working collaboratively as a regional or county-wide endeavor, and with the support and assistance of the Genesee County Emergency Services, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should attempt to develop a standardized set of specifications for apparatus such as engines, rescue engines, engine tankers, brush trucks, command vehicles, and traffic units. The apparatus should have similar compartmentation and equipment (even if different manufacturers are selected) which will improve efficiency in emergency operations.*

X-10: *During the development of the standardized apparatus specifications, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should consider equipping new pumping apparatus with Compressed Air Foam System (CAFS) capability to improve fire knock down capabilities, especially in limited staffing conditions.*

X-11: Working collaboratively with their partners at Genesee County, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should explore the feasibility of advertising a County-wide bid specification periodically, for units such as engines, rescue engines, and command vehicles where the economy often provided by purchasing multiple very similar units can result in significant cost savings for the companies making the purchases.

X-12: Since most major apparatus and vehicle purchases involve at least some public funding, and in consideration of potential cost savings that could be realized even if they are funded otherwise, all major purchases should be publicly advertised as part of a fair and open competitive bidding process.

X-13: When making capital purchases such as apparatus any entity, whether an individual fire company up to a County-wide process should explore the significant cost savings benefits that may be obtained by participating in cooperative purchasing consortiums such as the Houston Galveston Area Council (H-GAC) Buy program (HGACBuy).

X-14: Working collaboratively with their partners at Genesee County, the Genesee County Emergency Services Task Force and Genesee County Fire Advisory Board should explore the feasibility of standardizing many of the tools and equipment utilized by the County's fire departments to allow for cost savings generated by group purchasing arrangements.

- Fire hose
- Nozzles and appliances
- Ground ladders
- Self-contained breathing apparatus (SCBA)
- Hydraulic rescue tools
- Thermal imaging cameras
- Combustible gas meters
- Various hand tools and equipment
- Firefighter PPE
- Ventilation fans
- Saws
- Fire extinguishers
- Automatic External Defibrillators (AEDs)
- Portable suction units
- Oxygen equipment
- EMS disposable equipment
- EMS PPE
- EMS patient moving equipment (stair chairs, Reeves stretchers, etc.)

X-15: The overall size of the fire apparatus and vehicle fleet in Genesee County should be right-sized to make it appropriate for the community, as well as, provide increased efficiency in operations.

X-16: Working collaboratively as a regional endeavor, and with the support and assistance of the Genesee County Emergency Services, and the Genesee County Fire Advisory Board several fire companies and/or municipalities should consider the acquisition – even a well-

maintained used vehicle – of a ladder truck that would be deployed in the West Battalion to provide coverage to the western part of the county.

Chapter XI - Funding and Finance

- XI-1:** *The fire companies and EMS agencies of Genesee County should continue to attempt to negotiate for increased levels of funding for fire operations, EMS operations, and capital projects from the municipalities (and the county) they serve in order to adequately fund long-term operational and capital funding needs of their organizations. Increased funding levels will be critical to the continued success of every fire and EMS organization.*
- XI-2:** *The fire companies and EMS agencies of Genesee County should, with their member municipalities, explore the feasibility of developing and implementing more equitable funding formulas to better balance overall funding between municipalities. One possible formula could use assessed value, population, and call volume, or a per capita cost, to determine funding. This is an area where the Genesee County Association of Municipalities can provide assistance and support.*
- XI-3:** *The fire companies and EMS agencies of Genesee County should continue to explore alternative sources of funding for the company such as grants, public/private partnerships, etc. stressing the increasing costs of their operations.*
- XI-4:** *The fire companies and EMS agencies of Genesee County should continue to actively search for 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. Whenever possible, and with the support and assistance of the Genesee County Legislature, Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, Genesee County EMS Council, Genesee County Association of Municipalities, and The Genesee County Emergency Services, the grant applications should be submitted collaboratively to increase the chances of success, if applicable.*
- XI-5:** *The fire companies and EMS agencies of Genesee County should actively seek out businesses in their response areas that may be interested in establishing public/private partnerships that could provide, or assist with, funding for various programs, projects, or initiatives.*
- XI-6:** *Working collaboratively the Genesee County Emergency Services Task Force, Genesee County Fire Advisory Board, Genesee County EMS Council, and the Genesee County Association of Municipalities with support from the Genesee County Department of Emergency Services should develop strategic options to encourage regional service*

delivery and support local staffing needs during the low availability of personnel. Based upon the level of support needed, a financial cost analysis can be used to develop financial resource identification and if necessary seek an increase in revenue to support fire companies and EMS agencies that are forced to change their emergency service delivery models due to the inability to continue providing the services currently in place.

XI-7: *If future legislation allows, Genesee County should explore the feasibility of enacting a fire and EMS tax to provide centralized support for County wide fire and EMS operations.*

XI-8: *If future legislation allows, Genesee County should explore the feasibility of establishing either a county-wide joint fire district, or a regional fire authority. In the interim, local municipalities are urged to consider the formation of joint fire districts between several towns that could eventually provide the foundation for a larger endeavor.*

Chapter XII - Regional Fire and EMS Opportunities

XII-1: *The municipalities of Genesee County and fire and EMS organizations that serve them should try to identify potential partners, and then attempt to enter in discussions on more regional approaches, including shared services, to the provision of fire and EMS services.*

XII-2: *The Genesee County Legislature should consider funding regional or county positions that would reduce the overall burden on local fire and EMS organizations and enhance operational capability and efficiency. Examples include the development of the following regional or county positions:*

- *Training Officer*
- *Fire Operations Officer*
- *Health and Safety Officer*
- *Fire Prevention Officer*
- *Recruitment and Retention Officer*
- *Human Resources Officer (may be able to be combined with Recruitment and Retention Officer)*

XII-3: *Any municipalities and/or fire and EMS organizations that are interested in exploring consolidations and/or shared services should seek to identify additional potential partners/opportunities for regionalization and/or shared services and then work collaboratively with them to attempt to move them from vision to reality.*

- XII-4:** *Any discussions regarding opportunities to regionalize or share services by the fire and EMS services MUST involve fire company and EMS stakeholders in every aspect of the process and must get their buy-in for there to be any realistic chance of success.*
- XII-5:** *The potential formation of any regional fire and/or EMS delivery system in Genesee County, even eventually a possible County-wide configuration, should allow the individual fire companies and/or EMS agencies to maintain their own unique identities as part of the overall system.*
- XII-6:** *Any potential consolidation of multiple fire and EMS entities into new regional fire and EMS organizations should be handled as a merger of equals rather than an acquisition.*
- XII-7:** *Genesee County fire departments should work with the departments/communities listed on each of their “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 and ensure that they are qualified.*
- XII-8:** *Several Genesee County municipalities and/or fire departments should give consideration to the creation of a regional fire inspector/public educator position. This position would assist with fire inspections and teach fire safety lessons throughout the region. This position could also assist with community outreach and education through social media and other media forms.*
- XII-9:** *Genesee County municipalities and/or fire departments should develop a regional strategic planning working group to build out a shared services vision. The goal would be to provide a forum for those interested parties to begin development of a shared mission, value, goals, and implementation strategies with timelines.*

Chapter XIII - Strategic Planning, Conclusions, and Looking Toward the Future

- XIII-1:** *Each fire and EMS organization in Genesee County should consider the development of a strategic plan to guide their organization for the next three to five years and assist them with planning for future needs and meeting the challenges they may confront. The development of these plans should include input from a wide range of both internal and external stakeholders.*
- XIII-2:** *As part of the strategic planning process, and working collaboratively with their member organizations, the Genesee County Emergency Services Task Force, and the Genesee County Fire Advisory Board., assisted and supported as appropriate by other stakeholders such as the Genesee County Legislature, Genesee County Emergency Services, Genesee County Association of Municipalities, and the local governing bodies of municipalities that are interested, should explore areas where more regional*

systems for the delivery of emergency services can be developed. These opportunities should then be included in the strategic plans of the potential partners/participants.

- XIII-3:** *Working collaboratively with the Genesee County Emergency Services Task Force, and the Genesee County Fire Advisory Board., assisted and supported as appropriate by other stakeholders such as the Genesee County Legislature, Genesee County Emergency Services, Genesee County Association of Municipalities, should begin the development of a longer-range strategic plan that provides for the County to assume a greater role in the provision of fire and emergency medical services.*
- XIII-4:** *Every strategic plan should be considered a living – not static – and flexible document that should be reviewed on an annual basis to evaluate progress toward established goals. The plan should also be revised periodically to remain both current and forward-looking.*
- XIII-5:** *Working collaboratively, the Genesee County Emergency Services Task Force and the Genesee County Fire Advisory Board., assisted and supported as appropriate by other stakeholders such as the Genesee County Legislature, Genesee County Emergency Services, Genesee County Association of Municipalities and other interested stakeholders should make it a priority to build on the momentum from the delivery of this report to bring forth and implement recommendations that have been made throughout this report. The task force should identify and prioritize elements of this initiative that can be implemented immediately, and those elements which must involve a higher level of county involvement, or legislative changes to provide higher levels of service to communities. It should also include task groups that will be assigned the implementation of various recommendations. The recommendations of the task force should be presented by June 30, 2023.*

CHAPTER XV – PROJECT TEAM PROFILES

Project Manager

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

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

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

Project Team

Christopher W. Norris has been involved in the fire service since April 1994 and currently serves as the Fire Chief for the City of Easthampton, MA. Chief Norris completed his Master's Degree in Fire Science and Administration from Anna Maria College, a Master's Degree in Public Administration from Westfield State University, and his PhD in Public Policy and Administration with a concentration in Emergency Management. Mr. Norris has completed the *Executive Fire Officer Program* through the United States Fire Administration and also the prestigious *Senior Executive in State and Local Government Program* through the Kennedy School of Government at Harvard University. Most recently, Chief Norris was recognized by the Center for Public Safety Excellence (CPSE) as only one of thirty-one individuals in the entire Country to earn both International designations as a Chief Fire Officer (CFO) and Chief Emergency Medical Services Officer (CEMSO). In addition, Mr. Norris has been recognized as a Chief Training Officer (CTO) and Fire Marshal (FM) through the Center for Public Safety Excellence. In 2014, Mr. Norris was selected as one of twenty fire service personnel across the Country to participate in the Fire Service Executive Development Institute (FSEDI) Program through the International Association of Fire Chiefs sponsored by Motorola. This is a year-long program that examines current issues, challenges, innovations, and leadership models in the fire service. Mr. Norris also teaches for the Massachusetts Firefighter Academy as one of the Lead Instructors in the Structural, Flashover, and Instructor Methodology Programs, and is the Statewide Program Coordinator for the Call/Volunteer Recruit Training Program. Mr. Norris is a member of the International Association of County/City Managers Association (ICMA), Fire Chiefs Association of Massachusetts (FCAM), New England Association of Fire Chief's (NEAFC), National Fire Protection Association (NFPA), Hampshire County Fire Chiefs, Western Massachusetts Fire Chief's Association (WMFCA), Hampshire County EMS, and the International Association of Fire Chiefs (IAFC).

Raymond Gretz recently retired as a Deputy Fire Chief in the Washington, D.C. Fire & EMS Department. His firefighting career began as a volunteer firefighter in 1990 at the College Park Volunteer Fire Department in College Park, Maryland. His volunteer service included serving as a line officer to the rank of Captain and being an elected member of the Board of Directors. Ray still retains a volunteer affiliation with this organization.

In the District of Columbia Fire and EMS Department, he held many positions, most recently, the Deputy Chief directing the Risk Management Division. He has considerable experience in operations, as well as training, special operations, and a variety of administrative positions. Other experience includes serving as the agency Finance Section Chief at National Security Special Events such as Presidential Inaugurations. He is a certified public manager and a graduate of the National Fire Academy's Executive Fire Officer program. He holds a Master's Degree in Homeland Security from the Naval Postgraduate School in Monterey, California.

Ray has been involved with MRI for over seven years and has been involved in several organizational studies and regional projects.