Essex County EMS Strategic Plan
Technical Proposal

May 6, 2016

Prepared for:
Essex County, New York

Prepared by:
Paul Bishop, MPA, NRP
Project Director

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Table of Contents

May 5, 2016

Linda M. Wolf, CPA
Office of the Purchasing Agent
Essex County
7551 Court Street
Elizabethtown, NY 12932

Dear Ms. Wolf,

The Center for Governmental Research Inc. (CGR) is pleased to present the attached proposal in response to Essex County's Request for Proposal (RFP) for an Emergency Medical Services Strategic Plan. We have prepared our proposal to match your expressed scope and provided the required materials. Our proposal is a firm and irrevocable offer based on our understanding of the published scope of work. We believe that the methodology we present will provide you with the information needed to assist the Board of Supervisors, EMS agencies and the community to set a policy direction for the County related to EMS service provision.

CGR is an independent non-profit organization that provides strategic research, objective analysis, management guidance and implementation support to local governments. Founded in 1915 to serve the public interest, we have grown to become an industry-leading organization in the analysis of municipal services for the purposes of enhancing their effectiveness and overall cost-efficiency. Proudly based in Rochester, New York, we have recently had engagements in Connecticut, New Jersey, Ohio, Massachusetts, Delaware and Pennsylvania.

Leveraging CGR's inter-disciplinary expertise, these engagements have covered the broad range of services and issues affecting local government today, including public safety functions (i.e. emergency medical services, law enforcement, fire and emergency management), governance structures, fiscal impact, tax collection, assessment, public works and schools. Our project team has particular expertise in EMS including system analysis, planning for changes in operation and the involvement of youth in the EMS system.

We strongly believe that CGR's expert government management and reorganization team, coupled with our team's deep familiarity with the delivery of all aspects of emergency medical services and our experience working in a variety of communities make us the ideal partner on this important project for Essex County.

Please contact me at (585) 327-7068 (phone) or pbishop@cgr.org (email) if you have any questions about our proposal or wish to schedule an interview.

Sincerely,

Paul Bishop, MPA, NRP
Associate Principal

Introduction

Since 1915, CGR has delivered results to the municipal, education, nonprofit and business-civic sectors through objective analysis, mission-critical data and strategic counsel. We have become a thought leadership partner of choice by empowering innovative solutions in the public interest. Trusted for our independence and breadth of experience spanning a century, CGR delivers expert solutions in government & education, economics & public finance, health & human services and nonprofits & communities. Proudly headquartered in Rochester, New York, CGR has served communities throughout the Northeast and Great Lakes regions.

CGR has performed about seventy government service evaluations and strategic plans for municipalities in the past five years. In addition to the specific EMS and fire service efforts presented here, CGR has performed service evaluations in the educational, public housing, law enforcement, nursing home, and public works arenas. While EMS is clearly a unique service with an unusual level of complexity, it requires the same analytical skill set that CGR has utilized for the last century to help community develop their own solutions to their individual problems. A broad listing of our recent work in all arenas is available at our website www.cgr.org.

Project Scope

The information presented below as the project scope is duplicated in an appendix on the requested template and included as a separate electronic file.

What is the business need that the project will address?

Essex County has identified that its current system of providing emergency medical care to its residents and visitors is in need of a long term strategic plan to improve its operations and set the system on a sustainable course.

What will the project accomplish, how will it be accomplished and by whom?

The project will lead to the development of a strategic plan and specific action plans for the county and several agencies that provide EMS in the county. CGR will collaborate with the county and other agencies to develop the plan through a series of workshops and discussions.

What is the end result of the project?

The end result of the project will be a strategic plan document that describes the current state of EMS operations in the County, identifies a mission and vision

statements for EMS operations, specific strategic objectives to guide the operations, and action plans to aid agencies in moving toward the identified objectives.

Provide a list of project deliverables, which, when produced and accepted, indicate project completion.

- Baseline Survey

  CGR will conduct a baseline survey of the existing EMS system in Essex County. The baseline will involve a substantial evaluation of the system's characteristics. The review will be conducted through a series of in person interviews and data requests. Each transport agency will be asked to be a full participant. Non-transporting first responders will be asked to provide limited information. Key information sought in the agency review will include:

  - Review of each agency's summary financials including assets, liabilities, sources of income and member/ employee compensation
    - Analysis of key assets such as vehicles, cardiac monitors, stretchers, radios and other high value items
    - Review of key agency policies on training, mutual assistance, membership, and safety
    - Review of current and historical membership information especially numbers and levels of certification
    - Basic call volume information including recent trend years
  - Other key stakeholders will be interviewed in this phase of the project including elected officials at county and local levels, county officials, NY Department of Health officials, regional EMS council representatives, law enforcement leaders, fire service, and emergency communications. The interviews will focus on long term trends, current performance, public perceptions, goals for levels of service and areas of improvement.
  - The gathered information will be presented in a written report designed for use both by study stakeholders and the general public. Key findings will be included in the report including areas of success, potential best practices, and areas for improvement. The report will be presented to the Advisory Committee and other appropriate audiences.

- Strategic Plan Development

  A specific strategic plan development element would complement the Baseline Survey and other analysis to help provide direction for the Essex County EMS system. This aspect of the project will identify the existing successes and gaps in service provision as well as anticipated challenges. CGR would work with the Advisory Committee and other select stakeholders in a planning process that would involve a SWOT analysis and the development of strategic priorities for the EMS community to consider. As part of the planning process, CGR would help facilitate the development of a mission and vision statement for the EMS system in Essex County. A key outcome of this portion of the project would be to develop strategic objectives that fall into immediate, short term and long term time horizons.

- Action Plan Development

  After the development of strategic goals and objectives, CGR would work with the Advisory Committee and local experts to develop action plans for these strategic goals and objectives. The action plans will have specific and realistic timelines for implementation. The plans will identify the involved stakeholders, the costs associated with implementation, potential sources of funding and possible obstacles toward completion. Each action plan will also include measurements to track implementation and enable plan adjustment.

Define how this project will impact the organization/agency.

The project has the potential to substantially modify the operations of the EMS system in Essex County. At a minimum, it will help the agencies coalesce their operations around a common vision and mission statement and develop a series of action plans to improve the EMS system in the community.

Explain if the project requires organizational changes.

The extent of organizational changes is unknown at this stage of the project, but could include the merger or elimination of several agencies and the creation of new organizations. Organization changes will planned with the participation of the impacted agencies based on accomplishing the identified strategic goals and completing the individual action plans.

How will the changes be planned, implemented and managed?

The planned changes will be developed with the involved agencies for the purposes of meeting the identified action plans and strategic goals. An overarching goal of the project will be to create a self-sustaining EMS system that provides excellent service to

the residents and visitors of the county. The planned changes will identify the organization responsible for implementing the change, the costs associated with the change, other resources needed for implementation and how the change will be evaluated to see that it is having the desired outcome.

Describe how this project will benefit the citizens of the State of New York.

The citizens of New York State will benefit initially from the improved EMS system in Essex County, a prime tourist destination in the Adirondacks and a secondary benefit will be the transferability of the findings in Essex County to other rural portions of the state that are struggling with the provision of EMS.

Project Communication Plan

Although the communication plan will not be formalized until the project initiation, the plan will include regular meetings, status update communications, interim reports, and final documents. A shared internet file repository and a public website will also be used to share documents with participants and the interested public. The Advisory Committee will be responsible for communicating with local interest groups and agencies on a routine basis

Project Timeline

The RFP indicates that the project must be completed in 16 months, CGR believes that project plan described above could be accomplished in 10 months or less. The timeline described below would be adjusted based on input from the Advisory Committee.

Proposed Project Timeline

July	Aug	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April
Kickoff Meeting									
Baseline Phase Begins									
Onsite Interviews with agencies and officials									
Data gathering to support baseline report									
		Write Baseline Report							
			Baseline Report to Advisory Cmte / Public						
			Strategic Plan Development workshops and meetings						
				Mission & Vision statements adopted, initial strategic goals estab					
					Strategic Plan Finalized and shared with public				
						Action Plan Development Process			
								Action plans finalized	
									Project Closeout incl estab. of on-going tracking of action plans.

Personnel Biography

The team leader for the project will be Paul Bishop. He is a practicing paramedic with 24 years of service in a variety of EMS settings. He will be the primary contact on this study and will be personally involved in all meetings and conduct most of the interviews. He will be assisted by several members of CGR team including those listed below.

Paul Bishop, M.P.A., NRP, Project Director

Title and Role in Firm: Associate Principal, Government Management and Public Safety.

Expertise: Local government efficiency, public safety operations, municipal management, emergency medical services (EMS), fire service operations

Biography: Paul Bishop is an Associate Principal at CGR. He is a public policy researcher with a passion for addressing public safety issues. He brings his experience of emergency response, system coordination and thorough analysis to each CGR project on which he works. He also brings the perspective of being a supervisor, educator and care provider to each aspect of analysis. His familiarity with the demands of public service allows him to look at situations from multiple points of view.

While at CGR, he lead the analysis of the North East Joint Fire District Evaluation of Operations, the Future of the Fire Service in Byron (NY), the Greene County (NY) EMS Resource Deployment Study, the Operational Analysis of the Dryden Police Department the Evaluation of Law Enforcement Merger for East Goshen, West Goshen, and Westtown (PA), the Proposed Dissolution of the Village of Medina, the Proposed Dissolution of the Village of Hoosick Falls, and the Operational Analysis of the Watkins Glen Police Department. He also was a key team member of the Skinny Ohio – Lake County Capital Equipment Sharing project for the Ohio state auditor, a four municipality shared services study in Cuyahoga County, OH, and the operational review of municipal services in the Township of Hopewell, NJ.

Prior to joining CGR in 2012, Mr. Bishop was the Manager of Emergency Medical Services (EMS) Education at the Public Safety Training Center at Monroe Community College for 10 years. His work focused on all aspects of education for EMS including initial certification for emergency medical technicians (EMTs) and paramedics, as well as leadership development. He was involved in the transition to the new EMS education standards at both the local and state levels. He remains an active adjunct at MCC and a speaker at regional EMS conferences on EMS management topics. He also is the instructor for an EMS Management course at Finger Lakes Community College.

His expertise includes program assessment, strategic planning and accreditation. He has had extensive involvement and leadership roles with regional and state EMS

organizations including as chair of the local regional EMS council and several terms on the regional emergency medical advisory committee. During his tenure at Monroe Community College, he worked collaboratively with many members of law enforcement and the fire service. He was called upon to instruct for their disciplines, including on topics related to organizational leadership, personal development, and medical care. He also served for 7 years as a member of the Monroe County Local Emergency Planning Committee and was a founding member of the Western New York Emergency Management Assistance Team. He continues to work as a paramedic for a suburban Rochester EMS agency.

His publications include coauthor on several peer reviewed papers related to EMS call triage and emergency response. He has been a presenter on numerous EMS topics at multiple regional conferences and several times at the New York State Vital Signs Conference and New York State Volunteer Ambulance and Rescue Squad Association Pulse Check Conference.

Education: He holds a B.A. in Political Science from the University of Rochester and a Master of Public Administration from SUNY Brockport. He is a nationally registered paramedic and holds other relevant EMS certifications.

Kent Gardner, Ph.D., Senior Advisor

Title and Role in Firm: Chief Economist

Expertise: Public Finance and Public Administration to Health Care and Education Reform

Biography: With 25 years of experience, he supports CGR's public service mission across the spectrum of clients. Media frequently seek his comments on economic issues. Of particular relevance to this initiative, Dr. Gardner has led and participated on numerous studies related to municipal consolidation and efficiency. His recent studies include the Town and Village of Malone, the Village of Norwood, and the Village of Potsdam.

Dr. Gardner joined CGR in 1991 as Director of Economic Analysis and served as President from 2005 to 2012. While President he led the expansion of our geographic footprint to areas of the Midwest; directed the development of our special data and analysis tools (Govistics, informANALYTICS) and expanded our offerings to web-based community profiles. Supporting solutions for critical community challenges, the profiles offer provide credible and accessible access to key decision metrics (see ACTRochester and East Tennessee Index).

A significant share of Dr. Gardner's work addresses the fiscal and economic relationships among state and local government, nonprofits and private business. He is frequently called upon to explore the impact of a policy or institutional change on the economy. His analyses span individual institutions—e.g. an established university (see

University of Rochester economic impact) or a proposed casino—and statewide and regional studies—e.g. the state minerals and construction sector, independent colleges and universities, or the nonprofit sector in a large region. His expertise also extends to cost control and management of government services, and consolidation planning for municipalities and school districts.

Education: Dr. Gardner holds B.A., M.A. and Ph.D. degrees from the University of Wisconsin at Madison.

Kate Bell, Information Technology Support

Title and Role in Firm: Information Systems Manager

Expertise: Web design and Geographic Information Systems

Biography: Katherine Bell provides critical support for diverse projects, ranging from cost-of-government analyses to database design for public, private and nonprofit clients. She has played a key role in the development of every online community profile CGR has delivered to clients.

Her expertise also encompasses data collection; database analysis and management; technical support for program evaluations and needs assessments; data management for online community profiles; and GIS, including interactive mapping. Ms. Bell supports Govistics, our web tool for quickly accessing information on spending for 89,000 government units in the U.S, and is our key contact for the U.S. Census, since CGR is an affiliate data center for New York. In addition, she manages in-house technology, overseeing all purchases, installations and innovations. She joined CGR in 2004, and was named manager in 2008.

Education: Ms. Bell holds a B.S. in management information systems from Rochester (NY) Institute of Technology.

Mike Silva, Data Analysis and System Modeling

Title and Role in Firm: Data Analyst

Expertise: Data analysis and project specific data modeling

Biography: Michael Silva is an innovative researcher who not only provides project support but also designed and regularly updates our special web-based offerings, Govistics and informANALYTICS. Govistics provides rapid access to information on government spending by individual state and local governments and school districts throughout the nation. InformANALYTICS is an economic and fiscal impact tool for economic development professionals and others interested in economic impact

modeling. In addition, Mr. Silva supports web-based community profiles; completes data analyses; and utilizes his skills in web programming, website design and widget development. He joined CGR as an assistant in 2008 after working for the U.S. Bureau of Labor Statistics and was named to his current position in 2012.

Education: Mr. Silva earned his degree in economics with honors from the University of Utah.

Relevant Experience

Greene County, New York EMS Resource Deployment Study

Project Description: In 2014, CGR completed a project for the Greene County (NY) EMS Task Force the focused on enabling the county EMS providers to plan to modify their system based on the demands for service, existing resource availability and geographic constraints. Our role was limited to looking only at calls and resources, we were not asked to evaluate financial operations or gauge public opinion of the EMS services. Our evaluation of existing environment identified substantial gaps in both basic life support and advanced life support that could be addressed by reallocating existing resources or targeting of service hours. An innovative interactive web based tool allowed the study committee to contemplate numerous different scenarios. The tool allows a user to look at the geographic call distribution by time of day and day of week to evaluate the best use of available resources. The app may be viewed at https://msilva-cgr.shinyapps.io/greene-county-ems-data-explorer/. The study created three different models for resource deployment that allowed leadership to determine the appropriate level and location of EMS resources to meet the needs of the community. The work of the Task Force is ongoing with potential some changes adopted in third quarter 2015.

Reference: George June, Task Force Chair, Town of Catskill Ambulance Director, 518-943-1580, gjune@townofcatskillny.gov , Town of Catskill Ambulance, 82 W Bridge St, Catskill, NY 12414

North East Joint Fire District Evaluation of Operations

Project Description: In 2015, officials for the Northeast Joint Fire District in Webster and Penfield, NY contracted with CGR to conduct an analysis of their district and two associated fire departments regarding the quality of operations, fiscal planning and opportunities for efficiency. Key activities during the study included interviews with key officials of the fire district, both fire departments, county emergency communications and the municipalities served by the departments. The study was

particularly sensitive with the smaller fire department that stood to lose their contract and potential go out of business based on the results of the study. CGR staff worked with all parties to present objective information that gave a full picture of the situation. As a result of the study, the board of fire commissioners has chosen to pursue adjusting their service contracts to use only a single fire department and implementing performance improvement measures.

Reference: Steve Small, Executive Director, (585)872-9526, nejfdadmin@rochester.rr.com, North East Join Fire District, 35 South Ave, Webster, NY 14580

Village of Sands Point Evaluation of Fire and EMS Operations

Project Description: In 2014, the Village of Sands Point contracted with CGR to analysis the fire and EMS service that they received from the Port Washington Fire Department. The Village has entered into an annual contract without performance standards with the fire department for many decades. They have recently become dissatisfied with the service and were seeking options to compare their service against national standards and community expectations. CGR worked with the Village's police department and the Port Washington Fire Department (PWFD) to develop a comprehensive evaluation of the PWFD. CGR then developed six different scenarios for the village board to consider to improve their community's level of service. The recommendations ranged from expanding the role of the police department in EMS to the developing their own fire department with a paramedic transport ambulance. For each scenario, projected start up and an ongoing operating costs were developed. The village board accepted the report in October 2014 and is considering their alternatives.

Reference: Marc Silbert, Village Trustee, (516) 883-3044, marcsilb@me.com, Incorporated Village of Sands Point, P.O. Box 188, Port Washington, NY 11050-0109

Town of Byron, New York Future of Fire Study

Name of Organization: Town of Byron, NY (funded by private individuals)

Project Description: In 2014, CGR completed a project identifying the options for the future of fire service and EMS response in the Town of Byron (NY). The town receives fire protection from two independent volunteer fire departments including one that operates a basic life support ambulance. The two departments have a long history of animosity toward each other and the town government. The town was seeking an outside expert to help identify a path toward merging the departments or at a minimum increasing the level of cooperation while reducing costs. The study evaluated several options for the departments including expanded collaboration and

merging of the two departments. Several key findings were identified for immediate implementation and others for longer term consideration.

Reference: Paul Boylan, Town of Byron Attorney, 585-768-8148, pboylan@boylanlawoffice.com, Byron Town Hall, P.O. Box 9, 7028 Byron Holley Rd., Byron, NY 14422

Consensus CNY – Onondaga Study on Local Government Modernization

In 2014, the Onondaga County Commission on Local Government Modernization engaged CGR to provide analytical and planning assistance for a municipal reorganization effort spanning 36 governments: One county, one city, nineteen towns and fifteen villages. The effort is designed to evaluate current approaches to delivering services and develop recommendations for improving micro- and macro-level efficiency and effectiveness. As part of the project, CGR is responsible for data assembly and analysis, the development and evaluation of options, and facilitation of the Commission's final recommended plan. As part of the study, CGR has conducted an evaluation of the delivery all local services, including EMS and fire departments. CGR worked with a local group of public safety officials and community members to identify recommendations for the community to consider to adjust their services in the future. This broad effort has involved the coordination of multiple committees and substantial data analysis. A key component has been the prioritization of public engagement to ensure that any final recommendations have been discussed in public forums before they move toward implementation. In all areas of the study, but particularly EMS and fire services, the commission has been careful to balance the competing interests of those inside the profession with the demands of the public for high quality cost effective service. The effort is scheduled to be completed in early 2016.

Reference: Robert Simpson, Chief Executive Officer, CenterStateCEO Chamber, (315) 470-1800, rsimpson@centerstateceo.com, CenterStateCEO, 115 W Fayette St, Syracuse, NY 13202

Appendix 1- DOS Project Management Plan Document

PROJECT IDENTIFICATION	
Project Name: Essex County EMS Strategic Plan - CGR Proposal	
Lead Local Government: Essex County	**Date:** 5/5/2016
County: Essex	**Region:**
Lead Contact: Paul Bishop	
Contact Telephone: 585-327-7068	
Contact Email: pbishop@cgr.org	
Project Manager: Paul Bishop	
Project Purpose: Conduct a strategic plan for the provision of emergency medical services in Essex County	

REVISIONS		
Date:	**Author:**	**Version:**
Description:		
Date:	**Author:**	**Version:**
Description:		
Date:	**Author:**	**Version:**
Description:		

CONTENTS

SCOPE

Project Scope:

What is the business need that the project will address?

Essex County has identified that its current system of providing emergency medical care to its residents and visitors is in need of a long term strategic plan to improve its operations and set the system on a sustainable course.

What will the Project accomplish, how it will be accomplished, and by whom?

The project will lead to the development of a strategic plan and specific action plans for the county and several agencies that provide EMS in the county. CGR will collaborate with the county and other agencies to develop the plan through a series of workshops and discussions.

What is the end result of the project?

The end result of the project will be a strategic plan document that describes the current state of EMS operations in the County, identifies a mission and vision statements for EMS operations, specific strategic objectives to guide the operations, and action plans to aid agencies in moving toward the identified objectives.

Provide a list of project deliverables, which, when produced and accepted, indicate project completion.

Baseline Survey

CGR will conduct a baseline survey of the existing EMS system in Essex County. The baseline will involve a substantial evaluation of the system's characteristics. The review will be conducted through a series of in person interviews and data requests. Each transport agency will be asked to be a full participant. Non-transporting first responders will be asked to provide limited information. Key information sought in the agency review will include:

•Review of each agencies summary financials including assets liabilities, sources of income and member/ employee compensation
• Analysis of key assets such as vehicles, cardiac monitors, stretchers, radios and other high value items
• Review of key agency policies on training, mutual assistance, membership, and safety
• Review of current and historical membership information especially numbers and levels of certification
• Basic call volume information including recent trend years

Other key stakeholders will be interviewed in this phase of the project including elected officials at county and local levels, county officials, NY Department of Health officials, regional EMS council representatives, law enforcement leaders, fire service, and emergency communications. The interviews will focus on long term trends, current performance, public perceptions, goals for levels of service and areas of improvement.

The gathered information will be presented in a written report designed for use both by study stakeholders and the general public. Key findings will be included in the report including areas of success, potential best practices, and areas for improvement. The report will be presented to the Advisory Committee and other appropriate audiences.

Strategic Plan Development

A specific strategic plan development element would complement the Baseline Survey and other analysis to help provide direction for the Essex County EMS system. This aspect of the project will identify the existing successes and gaps in service provision as well as anticipated challenges. CGR would work with the Advisory Committee and other select stakeholders in a planning process that would involve a SWOT analysis and the development of strategic priorities for the EMS community to consider. As part of the planning process, CGR would help facilitate the development of a mission and vision statement for the EMS system in Essex County. A key outcome of this portion of the project would be to develop strategic objectives that fall into immediate, short term and long term time horizons.

Action Plan Development

After the development of strategic goals and objectives, CGR would work with the Advisory Committee and local experts to develop action plans for these strategic goals and objectives. The action plans will have specific and realistic timelines for implementation. The plans will identify the involved stakeholders, the costs associated with implementation, potential sources of funding and possible obstacles toward completion. Each action plan will also include measurements to track implementation and enable plan adjustment.

Define how this project will impact the organization/agency.

The project has the potential to substantially modify the operations of the EMS system in Essex County. At a minimum, it will help the agencies coalesce their operations around a common vision and mission statement and develop a series of action plans to improve the EMS system in the community.

Explain if the project require organizational changes.

The extent of organizational changes is unknown at this stage of the project, but could include the merger or elimination of several agencies and the creation of new organizations. Organization changes will planned with the participation of the impacted agencies based on accomplishing the identified strategic goals and completing the individual action plans.

How will the changes be planned, implemented, and managed? Examples could include staffing changes, process changes, training, etc.

The planned changes will be developed with the involved agencies for the purposes of meeting the identified action plans and strategic goals. An overarching goal of the project will be to create a self-sustaining EMS system that provides excellent service to the residents and visitors of the county. The planned changes will identify the organization responsible for implementing the change, the costs associated with the change, other resources needed for implementation and how the change will be evaluated to see that it is having the desired outcome.

Describe how this project will benefit the Citizens of the State of New York.

The citizens of New York State will benefit initially from the improved EMS system in Essex County, a prime tourist destination in the Adirondacks and a secondary benefit will be the transferability of the findings in Essex County to other rural portions of the state that are struggling with the provision of EMS.

PROJECT TIMELINE

MRF applicants are asked to provide a clear project timeline. The timeline should clearly associate with the work plan and budget, tasks, and deliverables with the specific cost(s) for each. The Project Timeline is developed with the Work Plan, using the Work Plan and Budget Template.

QUALITY MANAGEMENT PLAN

The Quality Management Plan describes the methods by which the quality of project deliverables will be tested. This section outlines which deliverables will require test plans and a general description of that plan, such as, "A Development System Test plan will be created and used to test the functionality of the Development System". It is also the section where standards may

be listed, such as, "This project will be managed according methodology, as outlines in the NYS Project Management Guidebook, Release 2."

Quality Planning

List the Quality Standards that have been identified for each deliverable.

Quality standards will be identified with the Advisory Committee and will focus on inclusion of all agencies, establishing broad participation, producing accurate information and distributing materials to interested parties.

Quality Assurance Activities

Describe the processes that will be implemented to evaluate project performance on a regular basis, and validate that the Quality Standards defined in Quality Planning are appropriate and able to be met.

The Advisory Committee will be responsible for evaluating the work product of CGR and ensuring mutual agreed to standards are met. Regular meetings and status checks will facilitate that process.

Quality Control Activities

Describe the processes that will be implemented to measure project results, compare results against the Quality Standards and determine if they are being met. This also identifies ways to minimize errors and improve performance.

CGR and the Advisory Committee will establish a schedule for reviewing all materials prior to their distribution to interested organizations and the public.

BUDGET

The project budget will illustrate the projected cost for the entire project, including both project development, small scale implementation and full implementation. The Project Budget is developed with the Work Plan, using the Work Plan and Budget Template. If this is for a Fast Track project please indicate what has been completed to take the place of project development and small scale implementation.

In addition to the information in the Work Plan and Budget Template, provide a budget narrative including the following:

- Budget and Costs Determination. *How were the budget and costs determined, including the method/approach used to arrive at estimates?*

Information in separate document

- Budget Detail. *How does each budget item clearly support the project?*

Information in separate document

- Budget Relationship with Work Plan. *How the proposed budget is sufficient to complete the tasks in the work plan, and is cost-effective.*

Information in separate document

- Expense Eligibility. *Document how the projected costs are eligible for the grant program.*

Information in separate document

RISK AND ISSUES MANAGEMENT PLAN

- *What are the Minor Risks and issues to be captured and communicated in the Status Report?*

  Risk assessment will be conducted with Advisory Committee as part of project initiation

- *What are the Significant Risks and issues that arise to be documented and communicated in both in the Status Report, but also in a Risk and Issues Log?*

  Risk assessment will be conducted with Advisory Committee as part of project initiation

CHANGE MANAGEMENT PLAN

- *What are the minor changes in Status to be captured and communicated in the Statue Report.*

  Reporting process will be described as part of project initiation.

- *What are the significant changes to the project that impact the Scope, schedule, and/or budget to be documented and communicated with the use of a Project Change Form.*

  Reporting process will be described as part of project initiation.

ORGANIZATIONAL CHANGE PLAN

- *Define how this project will impact the local government(s), if it does.*

  There is a potential for substantial changes to the EMS system at the local government level including ownership, operation and funding of organizations.

- *Will the product of this project require organizational changes? Examples could include staffing changes, process changes, training, etc.*

  There is a potential for substantial changes to the EMS system at the local government level including ownership, operation and funding of organizations.

- *How will the changes be planned, implemented, and managed?*

  Changes will be planned through active participation from local organizations and based on regionally established priorities. Long term implementation and management will be the primary responsibility of local organizations.

PROJECT REPOSITORY

Explain how the project documents and information will be made available to all project partners, including the Department of State.

The final strategic plan document and key supporting documents will be published on a website to allow for public access. CGR will provide Essex County with electronic copies of all key files for storage and transmission to the Department of State.

COMMUNICATION PLAN

Explain the project partners will communicate and collaborate throughout the lifecycle of each project.

Although the communication plan will not be formalized until the project initiation, the plan will include regular meetings, status update communications, interim reports, and final documents. A shared internet file repository and a public website will also be used to share documents. The Advisory Committee will be responsible for communicating with local interest groups and agencies on a routine basis.

LIST OF ASSUMPTIONS

Describe the assumptions of the project. This could include any requirements of Law, information on internal contracts.

Assumptions will be identified during the project initiation

DISCRIPTION OF PILOT PROJECT TO EVALUATE

As part of the project, small scale implementation may be required. In doing so please indicate what type of implementation would be best to allow for an evaluation of the project and to help secure full buy-in at full scale implementation. As an example: a County wide project may start with several local governments providing the service to examine any problem that may arise or to show that project works as proposed without service concerns. This small scale implantation may be what is needed to convince others to join the project.

No pilot project is identified at this time, although one may be selected during the development of the strategic plan.

PROJECT TEAM ROLES AND RESPONSIBILITIES				
Role:	**Resource(s):**	***Title:***	***Phone:***	***Email:***
Project Sponsor				
Project Manager				
Team Member				
Team Member				
Stakeholder				
Stakeholder				

DEFINITIONS OF ROLES

Project Sponsor:

The Project Sponsor (Sponsor) will "champion" the project within the organization and provide guidance to the project team. The Sponsor will also ensure that resources and spending authority is secured. The Sponsor will work closely with the Project Manager to identify project goals, required resources, constraints and dependencies, and to keep the project on track. The Sponsor will approve that milestones and deliverables that are produced as defined in the Project Charter.

Project Manager:

The Project Manager (PM) has overall responsibility for the execution of the project. The PM will document all of the project plans throughout each phase of the lifecycle according to the NYS Project Management Guidebook, Release 2. The PM will track progress on the milestones and deliverables of the project, ensuring that tasks are meeting the approved scope, schedule, quality and budget. The PM is the primary communicator for the project.

Stakeholders

Stakeholders have a stake in the progress and/or outcome of the project. They may provide resources to the project team and may also be responsible for groups within the organization that may be impacted by the project, for example training or support groups. Although they may not attend regular meetings, stakeholders should review all project communication and identify any information that may benefit the project to the Sponsor and/or Project Manager.

Project Team Members:

Some projects may have more than one team. In this case, make sure to distinguish the specific activities of each team. Complete one section for each team or delete if not required.

Project Team members will carry out the work of the project. They will attend all project and technical meetings, prepare for meetings by reviewing agendas and updating tasks, review meeting notes and submit any corrections to the PM, and provide insight to the PM, such as recommending work, resources or best practices. Team members may be assigned for the full or limited duration of the project.

Appendix 2 – Required Forms

W-9 Form

Non-Collusive Bidding Certification

Contractor's Acknowledgement

Certification of Compliance with Iran Divestment Act

Essex County Vendor Responsibility Questionnaire

Form **W-9**
(Rev. December 2014)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Print or type
See Specific Instructions on page 2.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Center for Governmental Research, Inc.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification; check only **one** of the following seven boxes:
☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate
☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶
Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.
☑ Other (see instructions) ▶ **501(c)(3) Not for Profit Corporation**

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) **5**
Exemption from FATCA reporting code (if any)
(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.)
1 South Washington Street, Suite 400

Requester's name and address (optional)

6 City, state, and ZIP code
Rochester, NY 14614

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number
			–			–				

or

Employer identification number
1	6	–	0	7	5	4	7	7	4

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here Signature of U.S. person ▶ [signature] Date ▶ 4/13/2016

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at *www.irs.gov/fw9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding?* on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

NON-COLLUSIVE BIDDING CERTIFICATION

1. By submission of this bid, the undersigned bidder and each person signing on behalf of such bidder certifies and in the case of a joint bid each party thereto certifies as to its own organization — UNDER PENALTY OF PERJURY, that to the best of the undersigned's knowledge and belief:

(a) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

(b) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and

(c) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

2. The undersigned acknowledges and agrees that a bid shall not be considered for award nor shall any award be made where any of the above have not been complied with; provided however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefor. Where one or more of the above has/have not been complied with, the bid shall not be considered for award nor shall any award be made unless the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

3. The undersigned also acknowledges and agrees that the fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of paragraph 1 above.

4. The undersigned further acknowledges and agrees that any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a bidder which is a corporation or a limited liability company for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in paragraph 1 of this certificate, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation or limited liability company.

Name of Bidder: Center for Governmental Research, Inc.
(print full legal name)

Date Signed: 5/4/16 Signature: _____

Name of Person Signing Certificate: Joseph Stefko, President and CEO
(print full legal name of signer)

Bidder is (check one): □ an individual, □ a limited liability partnership, □ a limited liability company, ☒ other entity (specify): 501(c)(3) Not for Profit Corporation

CONTRACTOR'S ACKNOWLEDGEMENT
(If Corporation)

STATE OF NEW YORK) SS:
COUNTY OF ~~ESSEX~~ Monroe

On this 4th day of May 2016, before me personally came Joseph Stefko to me known, and known to me to be the President and CEO of the Corporation described in and which executed the within instrument, who being duly sworn did depose and say that he, the said Officer reside at 12 Spring Side Lane, Penfield, NY and that he is the authorized signer of said corporation and knows the corporate seal of the said corporation; that the seal affixed to the within instrument is such corporate seal and that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.

SUSAN M. BARNES
Notary Public, State of New York
No. 01BA5063176
Qualified in Monroe County
Commission Expires July 15, 2018

Notary Public

CONTRACTOR'S ACKNOWLEDGEMENT
(If Individual)

STATE OF NEW YORK) SS:
COUNTY OF ESSEX)

On this _____ day of _____ 20____, before me personally came _____ to me known, and known to me to be the same person described in and who executed the within instrument and he duly acknowledged to me that he executed the same for the purpose herein mentioned and, if operating under and trade name, that the certificate required by the New York State Penal Law, Sections 440 and 440-b has been filed with the County Clerk of Essex County.

_____
Notary Public

CONTRACTOR'S ACKNOWLEDGEMENT
(If Co-Partnership)

STATE OF NEW YORK) SS:
COUNTY OF ESSEX)

On this _____ day of _____ 20____, before me personally came _____ to me known, and known to me to be a member of the firm of and the person described in, and who executed the within instrument in behalf of said firm for the purposes herein mentioned and that the certificate required by the New York State Penal Law, Sections 440 and 440-b has been filed with the County Clerk of Essex County.

_____
Notary Public

CERTIFICATION OF COMPLIANCE WITH THE IRAN DIVESTMENT ACT

As a result of the Iran Divestment Act of 2012 (the "Act"), Chapter 1 of the 2012 Laws of New York, a new provision has been added to State Finance Law (SFL) § 165-a and New York General Municipal Law § 103-g, both effective April 12, 2012. Under the Act, the Commissioner of the Office of General Services (OGS) will be developing a list of "persons" who are engaged in "investment activities in Iran" (both are defined terms in the law) (the "Prohibited Entities List"). Pursuant to SFL § 165-a(3)(b), the initial list is expected to be issued no later than 120 days after the Act's effective date at which time it will be posted on the OGS website.

By submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, each Bidder/Contractor, any person signing on behalf of any Bidder/Contractor and any assignee or subcontractor and, in the case of a joint bid, each party thereto, certifies, under penalty of perjury, that once the Prohibited Entities List is posted on the OGS website, that to the best of its knowledge and belief, that each Bidder/Contractor and any subcontractor or assignee is not identified on the Prohibited Entities List created pursuant to SFL § 165-a(3)(b).

Additionally, Bidder/Contractor is advised that once the Prohibited Entities List is posted on the OGS Website, any Bidder/Contractor seeking to renew or extend a Contract or assume the responsibility of a Contract awarded in response to this solicitation must certify at the time the Contract is renewed, extended or assigned that it is not included on the Prohibited Entities List.

During the term of the Contract, should the County receive information that a Bidder/Contractor is in violation of the above-referenced certification, the County will offer the person or entity an opportunity to respond. If the person or entity fails to demonstrate that he/she/it has ceased engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then the County shall take such action as may be appropriate including, but not limited to, imposing sanctions, seeking compliance, recovering damages or declaring the Bidder/Contractor in default.

The County reserves the right to reject any bid or request for assignment for a Bidder/Contractor that appears on the Prohibited Entities List prior to the award of a contract and to pursue a responsibility review with respect to any Bidder/Contractor that is awarded a contract and subsequently appears on the Prohibited Entities List.

I, Joseph Stefko, being duly sworn, deposes and says that he/~~she~~ is the President and CEO of the Center for Governmental Research Corporation and that neither the Bidder/Contractor nor any proposed subcontractor is identified on the Prohibited Entities List.

SIGNED

SWORN to before me this 4th day of May, 2016

Notary Public

SUSAN M. BARNES
Notary Public, State of New York
No. 01BA5063176
Qualified in Monroe County
Commission Expires July 15, 2018

ESSEX COUNTY
VENDOR RESPONSIBILITY QUESTIONNAIRE

1. VENDOR IS:

_X_ PRIME CONTRACTOR

2. VENDOR'S LEGAL BUSINESS NAME	3. IDENTIFICATION NUMBERS	
Center for Governmental Research, Inc.	A) FEIN # 16-0754774 B) DUNS # 07-367-2578	
4. D/B/A – Doing Business As (if applicable) & COUNTY FIELD	5. WEBSITE ADDRESS (if applicable) www.cgr.org	
6. ADDRESS OF PRIMARY PLACE OF BUSINESS/EXECUTIVE OFFICE 1 South Washington Street, Suite 400 Rochester, NY 14617	7. TELEPHONE NUMBER (585) 325-6360	8. FAX NUMBER (888) 388-8521
9. ADDRESS OF PRIMARY PLACE OF BUSINESS/EXECUTIVE OFFICE *IN NEW YORK STATE, if different from above*	10. TELEPHONE NUMBER	11. FAX NUMBER

12. AUTHORIZED CONTACT FOR THIS QUESTIONNAIRE

Name Joseph Stefko

Title President and CEO

Telephone Number (585) 327-7065

Fax Number (888) 388-8521

Email jstefko@cgr.org

13. LIST ALL OF THE VENDOR'S PRINCIPAL OWNERS

A) NAME	TITLE	B) NAME	TITLE
N/A			
C) NAME	TITLE	D) NAME	TITLE

A DETAILED EXPLANATION IS REQUIRED FOR EACH QUESTION ANSWERED WITH A "YES," AND MUST BE PROVIDED AS AN ATTACHMENT TO THE COMPLETED QUESTIONNAIRE. YOU MUST PROVIDE ADEQUATE DETAILS OR DOCUMENTS TO AID THE COUNTY IN MAKE A DETERMINATION OF VENDOR RESPONSIBILITY. PLEASE NUMBER EACH RESPONSE TO MATCH THE QUESTION NUMBER.

14. DOES THE VENDOR USE, OR HAS IT USED IN THE PAST FIVE (5) YEARS, ANY OTHER BUSINESS NAME, FEIN, or D/B/A OTHER THAN THOSE LISTED IN ITEMS 2-4 ABOVE? List all other business name(s), Federal Employer Identification Number(s) or any D/B/A names and the dates that these names or numbers were/are in use. Explain the relationship to the vendor ____ YES _X_ NO

15. ARE THERE ANY INDIVIDUALS NOW SERVING IN A MANAGERIAL OR CONSULTING CAPACITY TO THE VENDOR, INCLUDING PRINCIPAL OWNERS AND OFFICERS, WHO NOW SERVE OR IN THE PAST ONE (1) YEARS HAVE SERVED AS:

a) An elected or appointed public official or officer?
List each individual's name, business title, the name of the organization and position elected or appointed to, and dates of service ____ YES _X_ NO

b) An officer of any political party organization in Essex County, whether paid or unpaid?
List each individuals name, business title or consulting capacity and the official political position held with applicable service dates. ____ YES _X_ NO

16. WITHIN THE PAST (5) YEARS, HAS THE VENDOR, ANY INDIVIDUALS SERVING IN MANAGERIAL OR CONSULTING CAPACITY, PRINCIPAL, OWNERS, OFFICERS, MAJOR STOCKHOLDER(S) (10% OR MORE OF THE VOTING SHARES FOR PUBLICLY TRADED COMPANIES, 25% OR MORE OF THE SHARES FOR ALL OTHER COMPANIES), AFFILIATE OR ANY PERSON INVOLVED IN THE BIDDING OR CONTRACTING PROCESS:

a) 1. been suspended, debarred or terminated by a local, state or federal authority in connection with a contract or contracting process; ___ YES _X_ NO

2. been disqualified for cause as a bidder on any permit, license, concession, franchise or lease;

3. entered into an agreement to a voluntary exclusion from bidding/contracting;

4. had a bid rejected on an Essex County contract for failure to comply with the MacBride Fair Employment Principles;

5. had a low bid rejected on a local, state or federal contract for failure to meet statutory affirmative action or M/WBE requirements on a previously held contract;

6. had a status as a Women's Business Enterprise, Minority Business Enterprise or Disadvantaged Business Enterprise, de-certified, revoked or forfeited;

7. been subject to an administrative proceeding or civil action seeking specific performance or restitution in connection with any local, state or federal government contract;

8. been denied an award of a local, state or federal government contract, had a contract suspended or had a contract terminated for non-responsibility; or

9. had a local, state or federal government contract suspended or terminated for cause prior to the completion of the term of the contract.

b) been indicted, convicted, received a judgment against them or a grant of immunity for any business-related conduct constituting a crime under local, state or federal law including but not limited to, fraud, extortion, bribery, racketeering, price-fixing, bid collusion or any crime related to truthfulness and/or business conduct? ___ YES _X_ NO

c) been issued a citation, notice, violation order, or are pending an administrative hearing or proceeding or determination of violations of: ___ YES _X_ NO

1. federal, state or local health laws, rules or regulations

17. IN THE PAST THREE (3) YEARS, HAS THE VENDOR OR ITS AFFILIATES[1] HAD ANY CLAIMS, JUDGMENTS, INJUNCTIONS, LIENS, FINES OR PENALTIES SECURED BY ANY GOVERNMENTAL AGENCY? Indicate if this is applicable to the submitting vendor or affiliate. State whether the situation(s) was a claim, judgment, injunction, lien or other with an explanation. Provide the name(s) and address(es) of the agency, the amount of the original obligation and outstanding balance. If any of these items are open, unsatisfied, indicate the status of each items as "open" or "unsatisfied". ___ YES _X_ NO

18. DURING THE PAST THREE (3) YEARS, HAS THE VENDOR FAILED TO:

a) file returns or pay any applicable federal, state or city taxes?
Identify the taxing jurisdiction, type of tax, liability year(s), and tax liability amount the vendor failed to file/pay and the current status of the liability. ___ YES _X_ NO

b) file returns or pay New York State unemployment insurance?
Indicate the years the vendor failed to file/pay the insurance and the current status of the liability. ___ YES _X_ NO

c) Property Tax
Indicate the years the vendor failed to file. ___ YES _X_ NO

19. HAVE ANY BANKRUPTCY PROCEEDINGS BEEN INITIATED BY OR AGAINST THE VENDOR OR ITS AFFILIATES[1] WITHIN THE PAST SEVEN (7) YEARS (WHETHER OR NOT CLOSED) OR IS ANY BANKRUPTCY PROCEEDING PENDING BY OR AGAINST THE VENDOR OR ITS AFFILIATES REGARDLESS OF THE DATE OF FILING? ___ YES _X_ NO
Indicate if this is applicable to the submitting vendor or affiliate. If it is an affiliate, include the affiliate's name and FEIN. Provide the court name, address and docket number. Indicate if the proceedings have been initiated, remain pending or have been closed. If closed, provide the date closed.

20. IS THE VENDOR CURRENTLY INSOLVENT, OR DOES VENDOR CURRENTLY HAVE REASON TO

BELIEVE THAT AN INVOLUNTARY BANKRUPTCY PROCEEDING MAY BE BROUGHT AGAINST IT? Provide financial information to support the vendor's current position, for example, Current Ration, Debt Ration, Age of Accounts Payable, Cash Flow and any documents that will provide the agency with an understanding of the vendor's situation.	___ YES _X_ NO
21. IN THE PAST FIVE (5) YEARS, HAS THE VENDOR OR ANY AFFILIATES: a) defaulted or been terminated on, or had its surety called upon to complete, any contract (public or private) awarded; Indicate if this is applicable to the submitting vendor or affiliate. Detail the situation(s) that gave rise to the negative action, any corrective action taken by the vendor and the name of the contracting agency.	___ YES _X_ NO

[1] "Affiliate" meaning: (a) any entity in which the vendor owns more than 50% of the voting stock; (b) any individual, entity or group of principal owners or officers who own more than 50% of the voting stock of the vendor; or (c) any entity whose voting stock is more than 50% owned by the same individual, entity or group described in clause (b). In addition, if a vendor owns less than 50% of the voting stock of another entity, but directs or has the right to direct such entity's daily operations, that entity will be an "affiliate" for purposes of this questionnaire.

ESSEX COUNTY
VENDOR RESPONSIBILITY QUESTIONNAIRE

FEIN # 16-0754774

State of: New York)
) ss:
County of: Monroe)

CERTIFICATION:

The undersigned: recognizes that this questionnaire is submitted for the express purpose of assisting the County of Essex in making a determination regarding an award of contract or approval of a subcontract; acknowledges that the County may in its discretion, by means which it may choose, verify the truth and accuracy of all statements made herein; acknowledges that intentional submission of false or misleading information may constitute a felony under Penal Law Section 210.40 or a misdemeanor under Penal Law Section 210.35 or Section 210.45, and may also be punishable by a fine and/or imprisonment of up to five years under 18 USC Section 1001 and may result in contract termination; and states that the information submitted in this questionnaire and any attached pages is true, accurate and complete.

The undersigned certifies that he/she:

- Has not altered the content of the questions in the questionnaire in any manner;
- Has read and understands all of the items contained in the questionnaire and any pages attached by the submitting vendor;
- Has supplied full and complete responses to each item therein to the best of his/her knowledge, information and belief;
- Is knowledgeable about the submitting vendor's business and operations;
- Understands that Essex County will rely on the information supplied in the questionnaire when entering into a contract with the vendor;
- Is under duty to notify the Essex County Purchasing Officer of any changes to the vendor's responses.

Name of Business: Center for Governmental Research, Inc.

Signature of Owner: _____

Printed Name of Signatory: Joseph Stefko

Title: President and CEO

Address: 1 South Washington Street, Suite 400 City, State, Zip: Rochester, NY 14614

Date: 5/4/16

Sworn before me this 4th day of

May, 2016

_____
Notary Public

SUSAN M. BARNES
Notary Public, State of New York
No. 01BA5063176
Qualified in Monroe County
Commission Expires July 15, 2018

Appendix 3 – Emergency Medical Services System in Greene County, NY: Assessment of EMS Operations and Options for Improving Service

CGR

Inform & Empower
Center for Governmental Research

Emergency Medical Services System in Greene County

Assessment of EMS Operations and Options for Improving Service

September, 2014

Prepared for:
Greene County Ambulance Task Force
Greene County Rural Health Network

Prepared By:
Paul A. Bishop, MPA, NREMT-P
Project Director

1 South Washington Street
Suite 400
Rochester, NY 14614
585.325.6360

99 years
CGR • 1915-2014

Emergency Medical Services System in Greene County

Assessment of EMS Operations and Options for Improving Service

September, 2014

SUMMARY

Greene County has several circumstances that make the provision of EMS services more challenging than other jurisdictions. There are two distinct areas based on topography and population density. The mountain area has significantly more mountainous terrain and less population than the relatively level and densely populated valley area. The population has grown at a modest 2 percent since 2000. Like much of New York, the population is aging and the portion of younger people is decreasing.

There are 9 BLS or Intermediate Transport Ambulance services, 1 ALS Transport Ambulance service and 1 ALS First Response service. There are also 3 BLS First Response Agencies that respond regularly to calls. The services use a variety of methods to staff their ambulances. Generally, in the more densely populated valley areas, the services are all paid staff and have crews ready to respond. In the less populated mountain areas, the services have a variety of paid on call or volunteer staffs that respond to the base when a call occurs. An exception is Windham, which has a paid staff at the ambulance base in the mountain area. Greene County Emergency Medical Services GCEMS responds to the whole county and provides ALS as needed. All public safety communications including receiving calls, radio transmissions and record keeping is handled by the Greene County 911 Center.

There were 7,158 EMS events in 2013 resulting in 11,785 requests for EMS service. The demand for EMS services rises slightly in July, January and December compared to other months of the year. The demand also increases slightly on the weekends. 66 percent of calls occur between 7:00 am and 7:00 pm.

As a county, 54 percent of requests result in a transport to the hospital. Agencies respond to 92 percent of the requests that they receive. The other 8 percent are answered by mutual aid assistance. Prattsville Rescue Squad responded to only 13 percent of their requests and Greenville responded to only 54 percent. 40 percent of the requests occurred in the areas served by Catskill Ambulance.

The call processing time could be shortened by modifying procedures in the communications center to speed response in life threatening situations. An analysis by the dispatch center of calls that have lengthy call processing times should be completed to improve the process. As noted, the mutual aid requests lengthen the time interval as measured in this report.

Under the current system, 90 percent of patients have their responding resources to the scene in 22.22 minutes for ALS calls and 29.58 minutes for Other Calls. Agencies with staffed ambulances have quicker response times and chute times than those that need to respond to the base first. For GCEMS, responses in the mountain area of the county take fifty percent longer at every interval than responses in the valley.

Transport times for mountain agencies are considerably longer than those that serve the valley.

There are several basic considerations in establishing response time targets in Greene County.

- Not all EMS calls are equal in priority. Chronic abdominal pain or recurring mental health issues do not require the same level or speed of response as suspected cardiac arrest or significant trauma. Research has identified few conditions that need a very rapid response. The 911 Center already uses Medical Priorities Dispatching System (MPDS) for call categorization, but not all of the prioritizations or determinants are used.

- Only certain time intervals can be improved. In a large rural county, the actual time driving cannot be safely reduced. Time intervals that can be looked at for reduction are call processing time and chute time. Travel time can be impacted by reallocating resources dynamically.

- Improving system response for life threatening conditions may necessitate involving other emergency responders (law enforcement and volunteer firefighters) or non-traditional responders (DPW staff or public health nurses).

- The variable topography in the county suggests that two standards be established for the different areas.

Based on available information, the suggested response time targets from the patient perspective are shown on the table below. The Patient Response Time is the measure of the total response time for EMS from the perspective of the patient. It is an aggregate of the Call Processing Time and the Agency Response Time. It is influenced both by the actions of the

911 Center and the Agencies. The time frames suggested are designed to be an initial goal for the system.

Patient Response Time Recommendation
(90 % Fractile)

	Valley	Mountain	MLREMS*
Delta and Echo Calls	14.5	19.5	18.5
Charlie Calls	14.5	19.5	18.5
Bravo Calls	22.5	27.5	23.5
Alpha Calls	27.5	37.5	33.5

* Based on a modified call prioritization based on history

The Greene County EMS Task Force reviewed the Baseline Report and requested that CGR prepare three models for EMS response that would provide the following patient response times at the 90 % fractile:

- System A- 12.5 minutes in Valley and 17.5 minutes in Mountain
- System B – 14.5 minutes in Valley and 19.5 minutes in Mountain
- System C- 16.5 minutes in Valley and 21.5 minutes in Mountain

Three different models for locating the ambulances based on the geographic distribution of calls give Greene County the opportunity to adjust their system to provide improved response.

Model 1 uses the existing locations of stations and focuses on improving the call processing time and the chute time to meet the slowest of the proposed response time standards. This model could be used with little change to the current staffing models except for working to ensure that prompt response (short chute times) is implemented by all agencies.

Model 2 uses the existing locations of the stations, except for the relocation of the Cairo and Hunter Ambulance Stations to be more centrally located to their calls. This model would be able to meet the middle response time criteria based on volume of calls. It is also dependent on the adoption of the changes in Model 1.

Model 3 builds on both the previous models and includes the addition of two new stations in areas of the county that currently receive slower than the targeted response times. This model would be able to meet the response time goals based on geographic distribution and an adequate number of ambulances.

The Staffing Model is based on operating out of nine or more ambulance stations with enough resources to handle the variability in call demand.

The lowest staffing level is 10 ambulances in the early hours of the day and it peaks at 14 ambulances during the busiest hours of the day. The surge ambulances would be used in an effort to keep the system prepared for the next call by dynamically relocating them between areas of the system. The model for dynamic relocation would ensure that adequate resources would be appropriately shared across the county to enable adequate response.

Acknowledgements

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Table of Contents

INTRODUCTION

The Greene County EMS Task Force engaged CGR to conduct a study on the emergency medical services (EMS) response capabilities in the county, including existing response times, and to develop potential models for improving response times. The scope of the project is limited to looking at operations and has been designed to be conducted quickly. The project will not look at the fiscal impacts of proposed response times, current financial environment of the EMS agencies in the communities or other factors impacting the system such as clinical care or staffing.

This report contains several sections. The Demographics and Agency Profiles sections sets the context of the EMS operations. The Emergency Medical Services Demand section provides an analysis of EMS calls for each EMS agency. The Response Time Considerations section offers factors for the Task Force and community to consider when establishing response time benchmarks for the EMS agencies.

What is EMS?

Emergency Medical Services, more commonly known as EMS, is a system that provides emergency medical care. Once it is activated by an incident that causes serious illness or injury, the focus of EMS is emergency medical care of the patient(s). EMS is most easily recognized when emergency vehicles or helicopters are seen responding to emergency incidents. But EMS is much more than a ride to the hospital. It is a system of coordinated response and emergency medical care, involving multiple people and agencies. A comprehensive EMS system is ready every day for every kind of emergency.[1]

In Greene County, the EMS system has the well-recognized components of the ambulances, paramedic response vehicles, first responding fire apparatus and responders who provide pre-hospital care. On occasion, a helicopter may respond to transport a patient or special teams may be called upon to assist in complicated rescues. The EMS system also includes the 911 dispatchers that take calls, and assign and support EMS resources. The dispatchers are trained to give emergency medical care instructions to callers and can help begin patient care before trained providers arrive. The receiving hospitals and their trained staff are the destination for most patients and the source of their definitive care. (However, all the hospitals are outside of Greene County.) Physician medical directors provide the legal authorization for pre-hospital patient

[1] www.ems.gov/whatisems.htm

care and give essential support and direction to the certified EMS providers. EMS educators provide the initial education and continuously assist the care providers in staying aware of current standards. The State Department of Health provides regulation, oversight and support for the county and state EMS system.

EMS Changes in Greene County

The EMS system in Greene County has undergone significant transitions in the last 25 years. In the early 1990s, the system relied primarily on volunteer ambulances that were staffed by certified Emergency Medical Technicians (EMTs) that provided basic life support (BLS). The EMTs provided the services without charging a fee for the service and operated on donations or municipal support. Several commercial ambulances also operated in the county and provided EMS transport on a fee for service basis. Those commercial agencies began to provide advanced life support (ALS) through the use of paramedics or advanced EMT-Critical Care technicians (AEMT-CC).

During the course of the 1990s, the commercial services changed hands and eventually stopped providing dedicated service to the county. Over the course of the decade, many of the ambulances began to struggle with decreasing availability of volunteers and an increase in call volume that led several of the agencies, particularly in the more densely populated areas, to move toward a model of paid EMS service. As the agencies began to pay their employees, they also began to charge patients for services in addition to receiving municipal support.

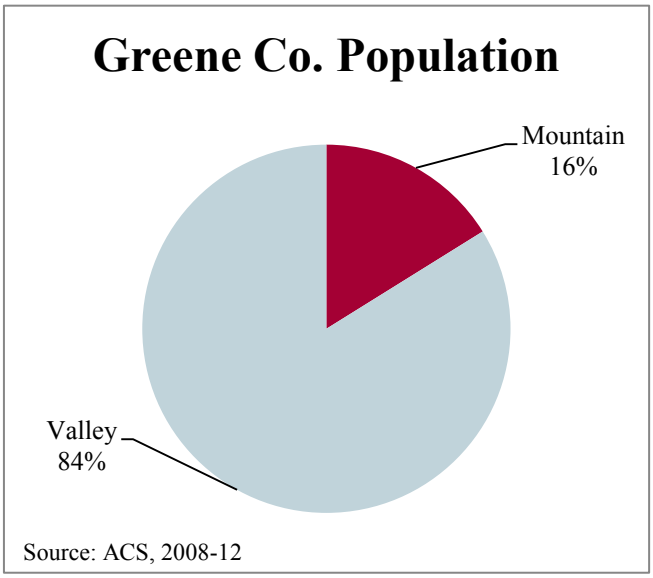
In 2000, Greene County EMS, Inc. (GCEMS) was formed to provide ALS services in the county. Greene County EMS is an independent non-profit agency that staffs paramedic response vehicles to support the BLS agencies in the county. Greene County EMS is funded by county tax dollars and a charge to the municipalities related to the number of ambulance transports for which they provide service.

The current system is described by agency elsewhere in the report. Primarily, BLS agencies respond to specific towns and assist each other as needed when resources become taxed. Greene County EMS responds only to calls that appear to require paramedic resources based on dispatch information. Some volunteer fire departments provide a basic life support first response to either all calls or more severe calls in the community.

GEOGRAPHY AND DEMOGRAPHICS

Greene County is located south of Albany and west of the Hudson River. It is bordered to the north by Albany, Schoharie, and Rensselaer counties, to the east by Columbia County, to the west by Delaware County, and to the south by Ulster County.

Geographically, Greene is composed of two different regions. The first, known as the "valley," makes up the eastern half of the county adjacent to the Hudson River and is mostly low-lying flatland. The western half of the county lies in the Catskill Mountains, and is less accessible by road than the "valley." The towns of Halcott, Prattsville, Lexington, Ashland, Jewett, Hunter and Windham lie in the mountainous western region, while the towns of Durham, Cairo, Catskill, New Baltimore, Coxsackie and Athens lie in the valley. The county seat is in the Village of Catskill, alongside the Hudson.

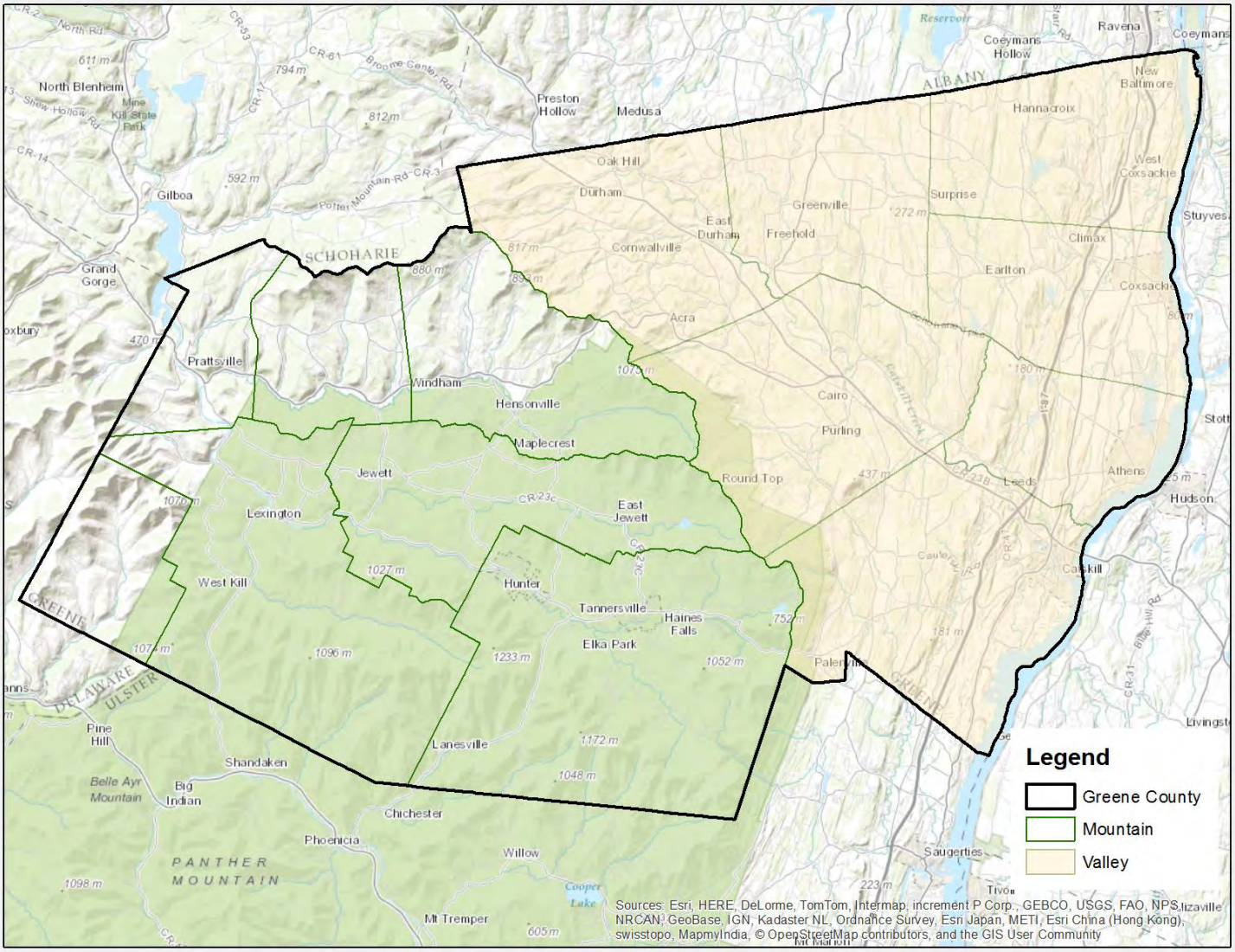


Geographic Obstacles

The valley portion of the county has an interconnected network of roads including the New York State Thruway and numerous state roads that allow for efficient travel between the various population centers. The mountainous portion of the county has a reduced network of roads based on a few key state highways. There are population centers in the mountain area with a limited number ways to get to them. There also are no direct routes between several of the population centers. Finally, adverse weather can dramatically increase transportation and response times in the mountain area.

Population Profile

Greene County's population has remained fairly stable over the past decade. Since 2000, Greene's population has grown 2%, reaching 49,221 in 2010. The American Community Survey for 2008-12 estimates that the population remained about the same since the 2010 Census. Most of the



county's population is concentrated in the eastern region, though half of the county's total land area is located in the western portion. The mountainous western region has far fewer residents and an average population density less than 1/5 that of the flat eastern region.

Greene County Population Density			
	Square Miles	**Population (08-12)**	**Population Density**
Mountain	335	7,928	24
Valley	321	41,194	128
Total	656	49,122	75

Source: American Community Survey, 2008-12

The largest town is Catskill, with a population of nearly 12,000. Coxsackie is the next largest town with about 8,900 residents. Both Catskill and Coxsackie are located in the eastern part of the county and have villages

within their borders. These two towns plus their neighbors, Athens and

Greene County Population by Municipality		
Mountain Towns and Villages	Ashland	738
	Halcott	263
	Hunter Village	485
	Hunter	2,732
	Jewett	895
	Lexington	1,034
	Prattsville	663
	Tannersville Village	482
	Windham	1,603
Valley Towns and Villages	Athens Village	1,571
	Athens	4,073
	Cairo	6,652
	Catskill Village	4,075
	Catskill	11,782
	Coxsackie Village	2,813
	Coxsackie	8,886
	Durham	2,721
	Greenville	3,716
	New Baltimore	3,364
Total Greene County		49,122

Source: ACS, 2008-12

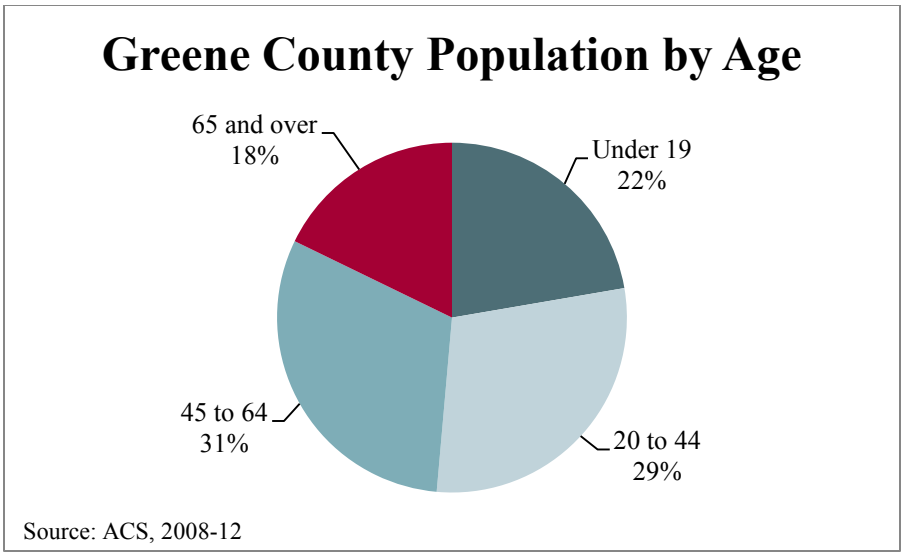
*Note: Town populations include the population of any village within its borders.

Cairo, account for more than sixty percent of the county's population. The largest town in the mountain area of the county is Hunter, with just over 2,700 residents and two villages within its borders.

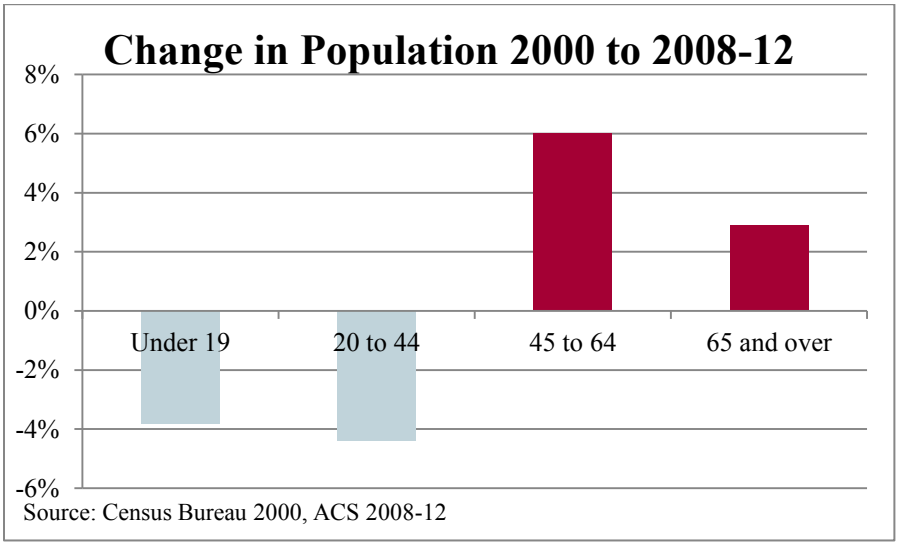
Vulnerable Age Groups

The very young and elderly are often more likely to be in need of emergency services than other age groups. About 22% of Greene's population is under the age of 19, while 18% is over the age of 65. Of those, about 1,110 residents are over the age of 85, representing 2% of the total population.

In line with trends at the state level, Greene County has seen a decrease in the proportion of younger residents and an increase in older residents. Since 2000, the percent of residents age 19 and under and 20 to 44



declined, compared to increases of 6 and 3 points in older age groups. This change in the population impacts the provision of EMS because workers are generally drawn from the younger population and the older population generally creates more demand for services.



Among local communities, Ashland and Windham had the highest proportion of residents age 65 and older (27% and 28%, respectively). Ashland and Prattsville had the highest proportion of residents age 85 or over with 4% each.

Population by Age Group				
		% 19 and under	% 65 and older	% 85 and older
Mountain Towns and Villages	Ashland	18%	27%	4%
	Halcott	25%	21%	2%
	Hunter Village	13%	24%	1%
	Hunter	22%	18%	1%
	Jewett	16%	21%	2%
	Lexington	15%	21%	1%
	Prattsville	21%	20%	4%
	Tannersville Village	21%	19%	1%
	Windham	17%	28%	2%
Valley Towns and Villages	Athens Village	18%	21%	2%
	Athens	21%	17%	1%
	Cairo	17%	21%	2%
	Catskill Village	24%	13%	3%
	Catskill	20%	17%	3%
	Coxsackie Village	24%	15%	2%
	Coxsackie	16%	11%	1%
	Durham	25%	22%	3%
	Greenville	19%	21%	2%
	New Baltimore	22%	15%	3%
Total Greene County		19%	18%	2%

Source: ACS, 2008-12

*Note: Town populations include the population of any village within its borders.

Income and Home Value

Median household incomes were generally higher in the valley than in the mountainous region. Median incomes were highest in the towns of Athens, New Baltimore and Coxsackie (each $60,000 or above), all located in the eastern region. The Town of Hunter, the Village of Hunter, Jewett, and the Village of Tannersville in the mountains had the lowest median incomes (each below $40,000).

Median home values were higher in some mountain communities, such as Windham, Jewett, and the Village of Tannersville (all above $235,000). Most mountain communities had median home values of over $200,000, compared to a top median home value of $189,000 in the valley.

Median Income and Median Home Value			
		Median Income	Median Home Value
Mountain Towns and Villages	Ashland	$58,500	$176,900
	Halcott	$53,750	$156,300
	Hunter Village	$33,648	$226,000
	Hunter	$38,598	$218,600
	Jewett	$39,313	$235,700
	Lexington	$43,836	$224,000
	Prattsville	$42,891	$166,500
	Tannersville Village	$32,109	$250,000
	Windham	$55,846	$240,600
Valley Towns and Villages	Athens Village	$52,727	$169,000
	Athens	$69,375	$186,700
	Cairo	$49,471	$163,200
	Catskill Village	$41,842	$168,200
	Catskill	$54,633	$169,000
	Coxsackie Village	$46,373	$173,600
	Coxsackie	$60,785	$180,700
	Durham	$47,031	$171,000
	Greenville	$51,316	$189,000
	New Baltimore	$62,784	$174,700
Total Greene County		$47,539	$179,700

Source: ACS, 2008-12

*Note: Town figures include figures of any village within its borders.

AGENCY PROFILES

The agency profiles are designed to give a brief overview of the agencies including the territory they cover, the number of vehicles, level of operation and other basic information. All agencies that regularly respond to EMS calls in the county were asked for the information. In cases where it was not provided, limited information from other sources is used to provide a brief view.

Ambulance and Advanced Life Support Agencies

Town of Ashland Ambulance

The Town of Ashland Ambulance is a municipally operated BLS ambulance service. Its primary operating area is the Town of Ashland. They have inter-municipal agreements to provide service to Prattsville and

Lexington between the hours of 6:00 am and 6:00pm. The department owns two ambulances. One ambulance is staffed by on-call personnel. The on call personnel are paid by the call on a scale that varies based on the disposition of the call. The department usually has a single certified EMT and CPR certified driver. On occasion, two EMTs work together. The total payroll for the organization in 2013 was $61,500.

The department reports that it has a core of 6 to 10 employees that are very committed and live in the area. The core has not had many new members recently. The department does bill for services and handles its own billing with a reported 90 percent collection rate. The ambulance service is supported from its own billing, charges to the other towns and taxes.

Town of Cairo Ambulance

The Town of Cairo Ambulance is a municipally operated AEMT-Intermediate (AEMT-I) ambulance service. Its primary operating area is the Town of Cairo. A single ambulance is staffed by a paid crew at all times. A second ambulance is only staffed rarely for specific events. The crews work 12 hour shifts that change at 6:00 am and 6:00 pm. There are four full time staff members that work 36 hours per week. The full time employees receive healthcare benefits and are part of the state retirement plan. There are 19 part time employees. There is little turnover among the staff and they work consistent shifts from week to week. The department employs EMTs, AEMT-Is and paramedics. Paramedics at the department can only function at the AEMT-I level.

The total payroll for the department in 2013 was $350,000. The department is funded through billing for transport and tax support. The income is about 50 percent between the two sources. The department bills for service using a contracted provider.

The department is looking toward the town building a new base of operations in the near future as the current facility has been in operation for more the sixty years and is in need of either a major renovation or replacement.

Town of Catskill Ambulance

The Town of Catskill Ambulance is a municipally operated ambulance AEMT-I service. Its primary operating territory is the Town of Catskill and the Town of Athens. Two ambulances are staffed at all times. A third ambulance is staffed for 12 hours from 6:00 am to 6:00 pm during weekdays. The department owns 5 ambulances and a supervisor's vehicle.

The department is staffed by 13 full time and 12 part time employees. The employees are unionized. The full time employees work 36 hours per

week and get overtime after 40 hours. Full time employees receive healthcare benefits and are eligible for state retirement. All responses come from a single station in the Village of Catskill.

The total budget for the department in 2013 was $1.33 million excluding benefits. About 63 percent of that was for personnel. Other major expense categories include 15 percent for other operations expenses, 14 percent for ALS responses and 8 percent for billing. The revenue for EMS billing was projected to be $ 1.29 million. The department bills for service using a contracted provider.

The Town Board authorized the ambulance to go to a paramedic level starting January 1, 2015 with two paramedic ambulances on duty at all times.

Town of Coxsackie Ambulance

The Town of Coxsackie Ambulance is a municipally operated BLS ambulance service. Its primary operating territory is the Town of Coxsackie. They also respond to a portion of the Town of New Baltimore. The department owns three ambulances and another EMS response vehicle. The department has a paid staff and a single ambulance is staffed at all times. The department bills for service and receives some support from property tax.

The department has 22 employees that are mostly EMTs, however there are some CPR certified drivers that assist periodically. The crews are at the station between calls.

Durham Ambulance, Inc.

Durham Ambulance, Inc. is an independent non-profit ambulance in the Town of Durham. The primary service area is the town. The ambulance provides AEMT-I level service. The ambulance is staffed by a paid per call program. There are about 30 part time employees that are paid per call. There are 5 AEMT-Is, 20 EMTs and 5 non certified drivers. The employees sign up for specific shifts and must remain within a 7 mile radius. They are also able to stay at the agency's building between calls. The agency owns two ambulances.

The agency had total revenue of $307,000 in 2012. About 58 percent of the revenue came from charges for patient transport. The remainder comes from a contract with the town and community donations. The employees were paid $89,000 for their services. The agency had excess revenue of close to $70,000. The agency is working to develop enough revenue to staff an ambulance 24 hours a day.

Greene County Medical Services, Inc.

Greene County Emergency Medical Services, Inc. (GCEMS) is an independent non-profit (501c3) organization that was created in 1998 to provide paramedic response to Greene County. Their primary operating area is the entire county with the exception of Windam that has its own paramedics. GCEMS responds to second calls in Windam.

The agency owns five paramedic response vehicles that are each staffed by a single paramedic. There are 4 vehicles on duty at a given time and they are strategically located throughout the county to improve response time. The vehicles are based out of fire or ambulance stations. GCEMS pays rent to use some of the stations. The vehicles will relocate based on which vehicles are in service to allow for better response time. There are 32 employees and about half are full time. Full time employees work 36 hours per week. Employees work either 24 hour or 12 hour shifts. The agency does employ some paramedics as second medics to gain experience in the operating model. They are paid at a lower rate that the other staff members, but are often offered full positions with the organization when they have demonstrated the aptitude necessary to function alone. The agency does not have an effective model of calling in additional resources during peak demand periods.

The agency does not bill for services. Two thirds of their operational budget comes from Greene County government. The other third comes from contracts with the individual towns based on the number of calls in that town averaged over the previous three years. The total expense for the agency was $1.2 million dollars in 2012. 70 percent of the budget was spent on personnel costs.

Greenville Rescue Squad, Inc.

The Greenville Rescue Squad is an independent non-profit 501c3 organization that provides EMS response in the Town of Greenville. The agency is staffed exclusively by volunteers. They operate a single AEMT-I ambulance. The volunteer staff members respond to the base when available and then drive the ambulance to the scene. There are about 25 members of the department. About 16 percent of them are qualified to work as AEMT-Is. If one of them is not available, the ambulance responds as a BLS ambulance. The ambulance is kept at the Greenville Fire Department.

The agency is funded about 95 percent from billing. Total revenue in 2012 was $120,000. The largest expense for the department is insurance. The agency has indicated that they are exploring some sort of compensation for members or hiring employees to be able to answer more calls than they currently do.

Hunter Area Ambulance

The Hunter Area Ambulance is a municipal BLS ambulance service that operates two ambulances. The department does have a paid staff and does bill for services. For 2013, the department received about $130,000 in ambulance fees. The department paid about $129,000 in personal services and $70,000 in other expenses during that year.

The agency did not respond to requests for additional information

Lexington Fire Department Rescue Squad

The Lexington Fire Department Rescue Squad operates a single BLS ambulance. The department has no paid employees and staffs the ambulance only when a call occurs. The ambulance does not bill for service.

The agency did not respond to requests for additional information.

Prattsville Hose Company Rescue Squad

The Prattsville Hose Company Rescue Squad operates a single BLS ambulance. The department has no paid employees and staffs the ambulance only when a call occurs. The ambulance does not bill for service.

The agency did not respond to requests for additional information.

Town of Windham Ambulance Service

The Town of Windham Ambulance is municipally operated paramedic level ambulance. The primary operating areas are the Towns of Windham and Jewett. Jewett contracts with Windham for the service through an inter-municipal agreement. The department owns two ambulances. The department always staffs a single ambulance with a paramedic and EMT. A second ambulance is staffed when there is an identified need in the community and can on occasion be staffed for a second emergency call. GCEMS would provide ALS for second calls. The department is staffed with 19 paramedics and 13 EMTs. No one on the staff is a full time employee. Employees work 12 hour shifts and generally work 24 to 36 hours per week. The employees are eligible for state retirement.

The total budget for the department is $409,000. The department is funded about half from tax revenues and half from billings for ambulance transports. The department bills for service using a contracted provider.

Basic Life Support First Response

In Greene County, several volunteer fire departments provide Basic Life Support First Response (BLS FR). There are three agencies that are identified as responding to EMS calls in their community on a regular basis and have their information recorded by the 911 center. East Jewett Fire Department, New Baltimore Fire Department, Tannersville Rescue are all dispatched by the 911 center to EMS calls. The 911 Center data that was available for the BLS FR agencies did not provide enough information for a response time analysis. Palenville Fire Department and Medway Grapeville Fire Department also respond on a regular basis but are not tracked by the 911 Center. There are about 30 other fire departments that do not respond to EMS calls unless specifically requested or a fire service issue exists.

Emergency Communications

There is a single unified public safety answering point (PSAP) and dispatching center operated by Greene County Emergency Services. The department receives all 911 calls in the county. The department is responsible for dispatching all EMS, fire and police agencies in the county. The 911 Center also provides support to Public Health, the Highway Department, Emergency Management, the Coroner, and the Department of Social Services.

The 911 Center answers more than 200 calls per day and dispatches responses to about 35 events each day.

911 Center Activity		
	2012	2013
Calls to Center	80,550	75,898
Net Emergency Events	12,666	12,578
Source: 911 Center		

The department has 14 full time, 1 part time and 2 per diem employees. The employees are all county civil service positions. The typical staffing is 3 to 4 from8:00 am to 4:00 pm, 3 from 4:00 pm to midnight and 2 from midnight to 8:00 am. Additional staff can be called in to work during emergency situations.

All of the staff are certified as Emergency Medical Dispatchers (EMD). EMDs use a specific series of questions to gather necessary information related to medical events from 911 callers. The questions allow dispatchers to identify the medical problem, assign the appropriate resources and provide essential first aid instructions to callers. The instructions include CPR, bleeding control, relieving choking and assisting

in childbirth. These instructions can provide immediate assistance in the case of an emergency if there is willing bystander on scene to assist.

EMS agencies are dispatched on a VHF-High Band frequency and operate on another. The several fire based EMS agencies operate primarily with fire departments on a VHF- Low Band frequency. The system utilizes six towers located throughout the county. This allows for relatively good coverage between mobile radios and the dispatch center. However, other mobile radios frequently cannot hear mobile radio transmissions in other areas of the county. Portable radios work well when they are near the tower sites, but have problems in areas remote from the tower sites. The radio system had multiple failures during Hurricane Irene and the county is actively pursuing cost effective methods to improve the resilience and effectiveness of the system.

The department uses the InterAct Computer Aided Dispatch program with the ProQA Emergency Medical Dispatching module as a records management system for all 911 events. The software has been in use for about eight years and has received minor upgrades during the time it has been installed. The computer system does export some data related to EMS calls to some of the agencies electronic pre-hospital care records

The emergency communications operation is funded entirely from Greene County tax revenues except for small portions from grants for specific items.

EMERGENCY MEDICAL SERVICES DEMAND

In order to consider changes to EMS in Greene County, it is necessary to have an accurate measurement of the current demand for EMS in the community. EMS is requested for a wide variety of emergency situations from chest pain to stroke to traumatic injuries. EMS is also requested for a number of non-emergency conditions such as chronic abdominal pain, mental health problems and minor injuries.

The best source for data in Greene County was the 911 Center. They track time data for all events handled by the agencies they dispatch. All data used for assessing the demand for EMS in Greene County was provided by 911. Data was requested for 2011, 2012 and 2013. The data was exported from the Interact Computer Aided Dispatch system as a PDF file and converted to an Excel file to allow analysis. After consultation with the task force, it was decided to perform an in-depth analysis on only 2013 because of the length of time required to convert files. The data included information related to the location of calls, the agency that responded and

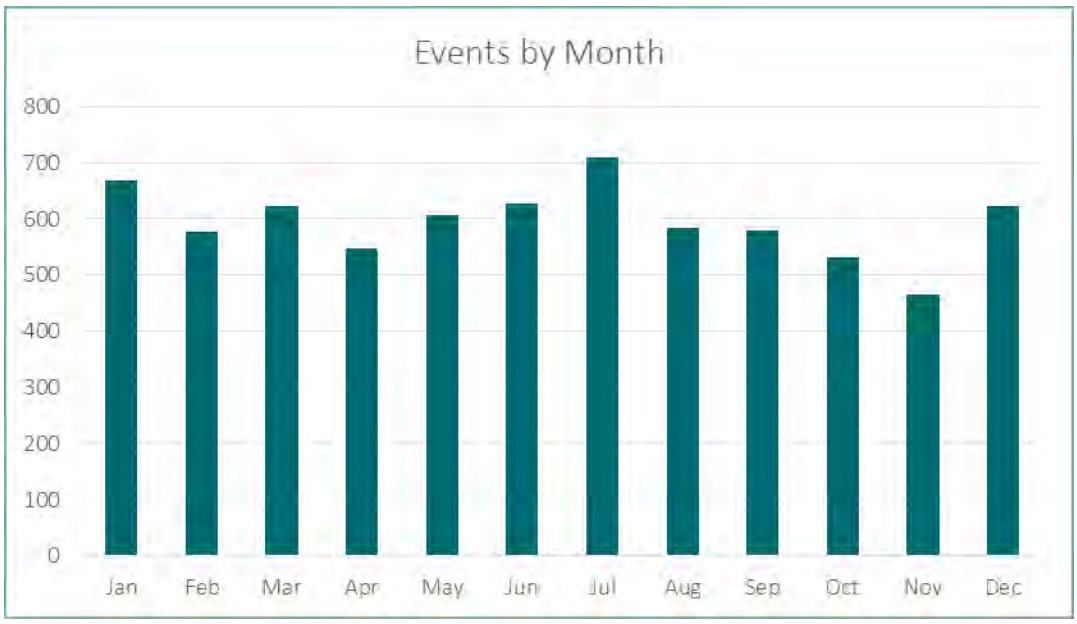
several key time points on the calls. There was no data available for patient demographics, the care provided to the patient, the actual response mode, the transport mode or the destination.

We look at the demand for service using the lens of agency response. There are ten transporting ambulances in the county and one ALS response agency that were previously described. We present data in the body of the report that summarizes the whole county. We will remark on key findings from the agency level data in the report. Individual agency data is provided in an appendix at the end of the report.

The county has been divided into 33 emergency service zones (ESNs) to allow for dispatchers to quickly identify the appropriate resource to send for an event. These ESNs follow either political or fire service lines. Each ESN has a specific response matrix that designates which ambulance is primary. The ESNs allow the report to identify service as it is provided in specific areas. In the report, we refer to calls that an agency responds to outside their primary ESNs as mutual aid.

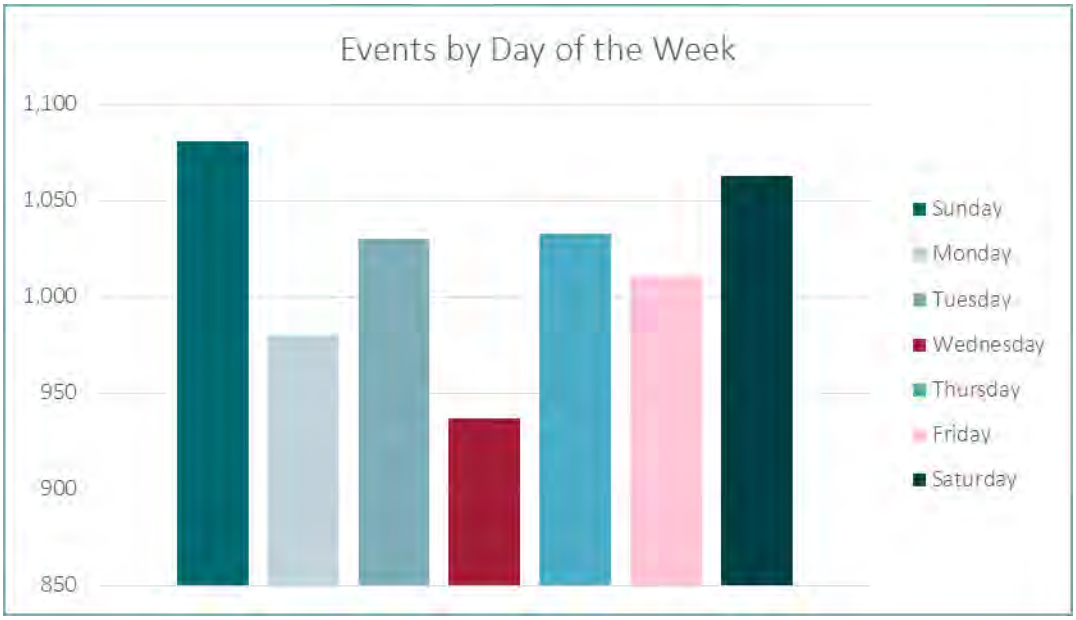
Event Analysis

Using the time stamp of when a call was received, CGR identified 7,158 unique EMS events reported to 911. These events generated 11,785 requests for EMS agencies. An event could result in several agencies being requested to respond to the event. For example, an ALS request in Tannersville would have a request for Tannersville Rescue to first respond, Hunter ambulance to provide a BLS ambulance and a GCEMS paramedic to respond. If the Hunter Ambulance was not available, then a request would be sent to Catskill for an ambulance. This could result in 4 agency requests from a single event.



The demand for EMS is influenced by multiple factors including the population, the age of the population, the overall health of the individuals and any particular risks in the community such as athletic activities. The demand can be expected to vary based on time of day as the population shifts from home to work and back. In Greene County, it is noted that both winter and summer bring an increase in population for recreational activities in the community. This increased population results in an increase in calls during the peak months.

There are also more events on the weekend than during the week. However, the difference is minimal as the average call volume by weekday was just over 1,000 and no weekday exceeded or fell below that by more than 10 percent.



The table below shows when the requests came to the agency and also the agency responses by time period and aspect of the week. Given the relatively small sample events, the hours were grouped into four hour blocks showing the day in six time periods. This table shows the ability of agencies to answer requests for service in different time periods. This would help to identify gaps when staffing should be adjusted.

The analysis of requests and responses is based on the agency requests. In time periods where there is a large difference between response and requests would indicate time periods when either there is high call volume or lack of volunteer response necessitating the use of mutual aid resources. At the county level, 92 percent of requests are responded to by the first agency assigned. The remaining events are answered by neighboring agencies that are coming from outside the community where the

emergency occurred. This information is included in the appendix for both the agencies and the ESNs.

Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	1,707	1,576	600	555	2,307	2,131
Late Workday (11a-3p)	2,081	1,921	885	777	2,966	2,698
Early Evening (3p-7p)	1,780	1,625	766	686	2,546	2,311
Evening (7p-11p)	1,324	1,240	684	629	2,008	1,869
Mid Night (11p-3a)	704	651	413	383	1,117	1,034
Late Night (3a-7a)	600	561	241	227	841	788

The table below looks at the mix of transports, non-transports and non-responses in the county. A non-response is an indication that the 911 requested the ambulance to respond but they did not for some reason. 911 then had to request another resource to fulfill the request. During 2013, 8 percent of calls needed to be answered by a mutual aid department. A transport rate of 54 percent is similar to transport rates seen in other communities.

Calls by Type

Total Calls	11,785	100%
Transports	6,384	54%
Non-Transport	4,447	38%
Non-Responses	954	8%

During the year, some agencies are able to readily respond to their requests and others rely on mutual aid or inter-municipal agreements more frequently. Catskill, Coxsackie, Durham, GECMS (Medics), and Hunter all responded to more than 90 percent of their requests. Greenville responded to only 54 percent of their requests.

Agency Responses to Events in 2013

	Requests	Responses	Percent
Ashland	229	203	89%
Cairo	1046	912	87%
Catskill	3195	3082	96%
Coxsackie	1172	1054	90%
Durham	531	493	93%
East Jewett	43	31	72%
Greenville	364	197	54%
Hunter	489	444	91%
Lexington	71	55	77%
Medics	3672	3601	98%
New Baltimore	173	154	89%
Prattsville	67	9	13%
Tannersville	304	233	77%
Windham	429	383	89%
Total	**11785**	**10851**	**92%**

Prattsville responded to only 13 percent of their requests, but has an inter-municipal agreement with Ashland to provide service on a regular basis. If only transport and GCEMS are considered, the response rate becomes 93 percent for the whole county.

The EMS events were widely distributed throughout the county based on ESN. The ESNs served by Catskill Ambulance (Catskill Village, Catskill Town, Athens Village, Athens Town, Kiskatom, Palenville, and West Athens) account for more than 40 percent of the EMS events in the county. Two tables that show which agencies were requested and which responded in the ESNs is included in the appendix.

ESN Name	Unique Events	Percent
Ashland	55	1%
Athens Town	59	1%
Athens Village	163	2%
Cairo Town	803	11%
Catkill Town	1073	15%
Catskill Village	1037	15%
Coeymans	2	0%
Coxsackie Town	484	7%
Coxsackie Village	390	5%
Earlton	110	2%
East Durham	231	3%
East Jewett	44	1%
Freehold	82	1%
Greenville	250	4%
Haines Falls	65	1%
Hensonville	57	1%
Hunter	227	3%
Jewett	46	1%
Kiskatom	173	2%
Lanesville	11	0%
Leeds	301	4%
Lexington	69	1%
Malden West Camp	16	0%
Medway Grapeville	92	1%
New Baltimore	201	3%
Oakhill Durham	122	2%
Palenville	88	1%
Prattsville	68	1%
Ravena	8	0%
Rensselaerville	1	0%
Round top	170	2%
Tannersville	184	3%
West Athens	139	2%
Windham	248	3%
Unknown	66	1%
Total	7135	100%

Response Analysis

The analysis looks at several factors of the current EMS system to assess its ability to provide service to the community. These factors were chosen for their ability to be measured and the impact on the patient experience. An activity summary report for the whole county is shown below. Each agency has a report in the appendix.

All calls are categorized as either ALS calls or into another category by 911. ALS calls represent that calls believed to those that are the greatest risk for threat to the patient and require that a paramedic be dispatched. The categorization is performed using a series of validated questions that can help predict the appropriate resources. Paramedics are assigned to respond to all ALS calls. The "Other" calls include all other EMS events, in some cases a paramedic is assigned to these calls either on dispatch or after an EMS resource arrives. ALS Calls were chosen as the primary metric for the EMS system as they are the more severe calls.

Columns identify the 50 %, 70 % and 90 % fractile for each time period. The percentage indicates the share of calls that were less than the indicated time period. A 50 % fractile is equivalent to an average, meaning that half of calls were less than that time period and half were greater. A 70 % fractile indicates that 70 percent of calls were less than the time period. A 90 % fractile is used in many EMS systems as the benchmark for EMS response indicating that 90 percent of calls were less than the time period. For example, a 90% fractile of fifteen minutes indicates that 90 percent of calls were responded to in less than fifteen minutes.

We measured the following time intervals using data from 911. All time data was reported with hours, minutes and seconds. All were used for the calculations.

- Call Processing – is the time period from when a call taker begins entering information into the CAD to the time an agency is assigned to the call. This time includes all gathering of information from the caller, identifying the location and selecting the appropriate resource.
- Agency Response – is the time period from when the agency is assigned the call to when the dispatcher records that the ambulance is on scene. This time is not calculated if the agency is canceled while enroute.
- Patient Response – is the time from when the call taker begins entering the call information to when the dispatcher records that the ambulance is on scene. This time is the sum of Call Processing and Agency Response. This is the response time from the perspective of the patient. This time is not calculated if the agency is canceled while enroute.

- Chute Time – is the time from when an agency is notified of a call and the agency indicates that they are enroute to the call. This is sometimes referred to as turnout time.
- Scene Time – is the time from when an agency reports that they are on scene until they report they are on the way to the hospital. This time is not calculated if they do not transport, but go directly back in service.
- Transport Time – is the time from when an agency reports they have begun transport until they arrive at the hospital.
- Total Length of Calls – is the total time of all calls from when it is entered by the dispatcher until the ambulance reports being back in service.
- Total Length of Transport Calls – is the total time of all calls from when it is entered by the dispatcher until the ambulance reports being back in service for transports. This category excludes non transports.

ALS Calls Response Times (in minutes)

Total Calls 6,585	50%	70%	90%
Call Processing	2.45	3.18	4.47
Agency Response	9.45	13.03	18.46
Patient Response	12.08	15.93	22.22
Chute Time	1.73	2.43	5.49
Scene Time	15.23	19.42	27.63
Transport Time	27.93	36.23	49.10
Total Length of Calls	84.16	119.44	164.04
Total Length of Transport Calls	114.78	139.26	179.48

Other Calls Response Times Intervals (Minutes)

Total Calls 5,200	50%	70%	90%
Call Processing	2.52	3.40	5.25
Agency Response	9.49	13.42	19.58
Patient Response	13.53	18.51	29.58
Chute Time	1.53	2.42	8.94
Scene Time	12.77	17.35	28.92
Transport Time	24.82	35.03	46.27
Total Length of Calls	73.77	115.22	161.02
Total Length of Transport Calls	113.95	138.10	174.85

The response time tables above show the countywide composite of responses. These values will be used as the basis of comparison for all the agencies. The Call Processing Time has an average of 2.45 minutes and 90 percent of calls are processed in less than 4.47 minutes for ALS calls. One

factor that causes this time to grow is that it includes calls that are mutual aided to another agency, and that longer time is counted in the call processing time. There is no specific standard for this time frame, but the 911 should evaluate its practices to identify factors that might lengthen this time frame, particularly in life threatening situations.

The Agency Response category shows that the average response time for ALS Calls is 9.45 minutes and 90 percent of calls are answered in 18.46 minutes or less. The Agency Response time for Other Calls is slightly longer than for ALS calls.

The Patient Response category shows that the average response time for ALS Calls is 12.08 minutes and 90 percent of calls are answered in 22.22 minutes. The Patient Response for Other Calls is about 90 seconds longer on average and 7 minutes longer at 90 percent.

The Chute Time category shows the average time for an agency to go enroute for an ALS Call is 1.73 minutes and 90 percent of calls have a unit enroute in 5.49 minutes. The Chute Time average is less (at 1.53 minutes) for Other Calls, but the 90 percent threshold is 8.94 minutes.

The categories of Scene Time, Transport Time, Total Length of Calls and Total Length of Transport Calls are provided to give reference of system operations. The Total Length of Calls can be an important factor when considering the availability of resources for the system because it measures how long a resource is not available because it is on a response.

Key Countywide Event Time Interval Findings

- The current EMS response system is able to respond a unit to all calls it receives.
- There are slightly more calls in the months of July, January, March, June and December. Weekend days have a slightly higher share of calls than weekdays.
- Two thirds of calls occur between 7:00 am and 6:59 pm. Only 7 percent of calls occur between 3:00 am and 6:59 am.
- The call processing time could be shortened by modifying procedures in the communications center to speed response in life threatening situations. An analysis by the dispatch center of calls that have lengthy call processing times should be completed to improve processes the process. As noted, the mutual aid requests lengthen the time interval as measured in this report.
- Under the current system, 90 percent of patients have their responding resources to the scene in 22.22 minutes for ALS calls and 29.58 minutes for Other Calls.

Agency Responses

The following brief analysis of the individual transport and ALS agencies compare those agencies to the countywide composite of calls. This composite is weighted heavily by Catskill Ambulance and GCEMS because together they account for almost 60 percent of the responses. Despite that limitation, they provide a rough benchmark for the agencies to be compared against. For a more detailed comparison, a more comprehensive report is included in the appendix.

Ashland Ambulance

Ashland responded to a large percentage (89%) of its 276 requests. About 75 percent of its requests were mutual aid requests to either to Prattsville or Lexington. Both of those towns have inter-municipal agreements where Ashland is dispatched at the time of the call to all events between 6:00 am and 6:00 pm. The Agency Response and Patient Response times were about equal to the county at the 90 percent fractile for ALS calls. The chute time was more than 7 minutes longer than the county at both the average and 90 percent fractile. This is expected with an on call system. Transport time was more than twenty minutes greater than the county composite at both the average and 90 percent fractile. The average length of transport calls was more than double the county composite.

Cairo Ambulance

Cairo responded to a large percentage (87%) of its1,046 requests. For ALS calls in its home ESNs, the Agency Response and Patient Response times were both more than 2 and half minutes quicker than the county composite at the 90 percent fractile. The chute time was considerably quicker (3 minutes) than the 90 percent fractile for the county composite. Less than 10 percent of calls were requests to respond for Mutual Aid.

Catskill Ambulance

Catskill is the busiest ambulance in the county. It responded to nearly all (96%) of its 3,195 requests. For ALS calls in its home ESNs, the Agency Response and Patient Response times were 3.86 minutes and 4.51 minutes, respectively, quicker than the county composite at the 90 percent fractile. The chute time was quicker (2 minutes) than the 90 percent fractile for the county composite. Less than 10 percent of calls were requests to respond for Mutual Aid.

Coxsackie Ambulance

Coxsackie responded to most (90%) of its 1,172 requests. For ALS calls in its home ESNs, the Agency Response and Patient Response times were 5.11 minutes and 6.13 minutes, respectively, quicker than the county

composite at the 90 percent fractile. The chute time was quicker (2.42 minutes) than the 90 percent fractile for the county composite. Ten percent of calls were requests to respond for Mutual Aid.

Durham Ambulance

Durham responded to most (93 %) of its 531 requests. For ALS calls in its home ESNs, the Agency Response were equal to the county composite. The Patient Response time was 1 minute, quicker than the county composite at the 90 percent fractile. The chute time was slower (8.04 minutes) than the 90 percent fractile for the county composite, which is expected for a crew not at base. Forty percent of calls were requests to respond for Mutual Aid. Most of these mutual aid requests were to Greenville or Cairo.

Greenville Ambulance

Greenville responded to only 54 percent of its 364 requests. For ALS calls in its home ESNs, the Agency Response time was 5.76 minutes slower than county composite. The Patient Response time was just over 5 minutes slower. The chute time was nearly 20 minutes at the 90 percent fractile for ALS calls – this is 14.37 minutes slower than the county composite. Greenville provided limited mutual aid.

GCEMS (Medics)

GCEMS responded to 98 percent of 3,672 requests. This is slightly more than half of the events in the county. 81 percent of their requests were initially categorized as ALS and the remainder was Other Calls. Since GCEMS responds to the whole county, responses were are categorized into mountain and valley area requests based on the geographic distribution. 22 percent of requests occurred in the mountain area. There is a noticeable difference in response times between the two different geographies. Agency Response times for ALS Calls were at 15.60 minutes for 90 percent of calls in the Valley and 23.87 minutes for Calls in the mountain area. This resulted in Patient Response times in the valley area of 18.60 for 90 percent of calls and 27.89 minutes in the mountain area.

The Chute Time for GCEMS was 3.00 minutes in the valley area and 3.25 minutes in the mountain area at the 90 % fractile. It should also be noted that GCEMS only transports on about half the calls they are dispatched on. This indicates that after evaluation by the paramedic, only about half of the patients that they assess require treatment by the paramedic.

Hunter Ambulance

Hunter responded to nearly all (91%) of their 489 requests. For ALS calls in their home ESNs, the agency response time was nearly three minutes

slower and the Patient Response time was 2.36 minutes slower. The chute time was 15.39 minutes at the 90 percent fractile which is nearly 10 minutes slower than the county composite.

Lexington Ambulance

Lexington responded to only half of their 71 requests for service in 2013. However, Ashland does respond to their events under an inter-municipal agreement. For ALS calls in their home ESN, the Agency Response time was 13 minutes longer than the county composite and the Patient Response Time was 12 minutes longer at the 90th percentile. The Chute Time for the agency was particularly long at 15.84 minutes at the 90 percentile. It should be noted that the Length of Transport Calls on average was more than an hour longer than the county composite at 184 minutes and the 90 % fractile was nearly four hour long. For Other Calls, the 90 % fractile of calls was more than 5 hours long.

Prattsville Ambulance

Prattsville only responded to nine of the sixty seven (13%) calls they were dispatched to in 2013. They only transported three patients to the hospital in 2013. When they did respond, their 90 percent chute time was 14.36 minutes for ALS calls. The Agency Response time at the 90 % fractile level was 36.86 minutes and the Patient Response was 40.39 minutes.

Windham Ambulance

Windham responded to 89 percent of the 429 requests they received. There is a noticeable increase for calls during the winter months and on the weekends. 47 percent of the agencies calls occurred between December 1 and March 31.

Their 90 percent Chute Time for ALS calls was 2.36 minutes, more than 3 minutes quicker that the county composite. The ALS Call Agency Response time at the 90 percent level was 20.90 in the home ESN and the Patient Response was 23.57 minutes. The 90th percent for ALS Transport Calls was three hours and twenty minutes.

Key Agency Event Time Interval Findings

- Agencies with staffed ambulances have quicker response times and chute times than those that need to respond to the base first.
- For GCEMS, responses in the mountain area of the county take fifty percent longer at every interval than responses in the valley
- Transport times for mountain agencies are considerably longer than those that serve the valley.

- Prattsville Ambulance responds to only a small share of calls in their community. Greenville Ambulance response to only about half of the calls in their community.

RESPONSE TIME CONSIDERATIONS

EMS is an on demand service for an actual or perceived medical emergency. Because of its nature, there is an expectation of a quick response to provide the necessary care and transport. There is a basic assumption that a quicker response is a better response, but not all patients need an emergency response. Determining the appropriate EMS response time is akin to deciding on the appropriate level of service that a community desires for other public services like water and highway maintenance. It is an inherently local decision that is influenced by local factors.

Background

When considering responses times, it is important to note that there is no guidance from federal or state regulators about an appropriate response time. In the Greene County area, the Regional Emergency Medical Advisory Committee and the Regional Emergency Medical Services Council do not have published guidance on response times for their communities. Other groups such as the National Association of EMS Physicians (NAEMSP), American College of Emergency Physicians, American College of Surgeons and the American Heart Association (AHA) do not have position statements on specific response time intervals for EMS systems.

The AHA and the International Liaison Committee on Resuscitation have noted that patients in out of hospital cardiac arrest in primary ventricular fibrillation have a greater chance of survival with shorter time intervals to CPR and AED but stop short of recommending that EMS systems be designed for a specific response time interval.

The National Fire Protection Association (NFPA) does have published standards for response times for paid fire departments that provide EMS (Standard 1710). But the NFPA standards for EMS systems (Standard 470) and volunteer fire departments do not have similar standards. The NFPA is an international non-profit organization that publishes consensus codes and standards intended to minimize the possibility and effects of fire and other risks. Unless specifically adopted by an organization, the standards are advisory.

In the Rochester area, the Monroe Livingston EMS Regional Medical Director published Regional Performance Metrics that include

measurements and targets for agencies. However, it should be noted that there is no consistent measuring or reporting on these metrics on the agency's website and the medical director has no specific enforcement power. Targets were created as goals for agencies to work towards.

Establishing EMS Response Time Targets

There are several basic considerations in establishing response time targets in Greene County.

- Not all EMS calls are equal in priority. Chronic abdominal pain or recurring mental health issues do not require the same level or speed of response as suspected cardiac arrest or significant trauma. Research has identified few conditions that need a very rapid response. The 911 Center already uses MPDS for call categorization, but not all of the prioritizations or determinants are used.

- Only certain time intervals can be improved. In a large rural county, the actual time driving cannot be safely reduced. Time intervals that can be looked at for reduction are call processing time and chute time. Travel time can be impacted by reallocating resources dynamically.

- Improving system response for life threatening conditions may necessitate involving other emergency responders (law enforcement and volunteer firefighters) or non-traditional responders (DPW staff or public health nurses).

- The variable topography in the county suggests that two standards be established for the different areas.

As noted previously, there is not a comprehensive response time standard from a large national or international organization that would apply to Greene County. Below, there are suggested standards that are drawn heavily from the Monroe-Livingston region[2].These suggested targets are intended as the start of a discussion for the task force. The targets are suggested in three specific areas of response time – Call Processing, Chute Time and Agency Response Time. The combination of Call Processing and Agency Response Time equal the Patient Response Time.

[2] MLREMS Policy Statement 10-18 is attached to the document as an appendix.

The NAEMSP position paper "Considerations in Establishing EMS Response Time Goals" was reference in developing these recommendations and is attached as an appendix.

Call Processing

This is the time frame from when a call is answered to when the event is assigned to an agency. The 911 Center is responsible for all aspects of this time interval. There is no national study for time to process the call. The NFPA 1221 recommends an interval of 60 seconds 90 percent of time. However, the International Academies of Emergency Dispatch has no specific time interval required for accreditation.

Currently, the 90 percent fractile for ALS calls in Greene County is 4.47 minutes. Half of calls are dispatched in 2.45 minutes or less. One of the factors influencing this particular measurement is the use of mutual aid as dispatchers need to wait for an initial ambulance to not respond before sending the next resource. A detailed analysis should be performed of the discrete tasks during call processing to determine where efficiencies can be obtained in the work flow.

In the MLREMS Performance Measures, the performance goal is 95% of calls processed in 90 seconds. For discussion purposes, an initial performance goal of 90 % of calls processed in 150 seconds should be considered in Greene County. This time frame can be shortened in the future as efficiencies are identified and capitalized on in the dispatch center.

Chute Time

Chute time, or turnout time, is the time from when an agency receives a request to when they are enroute to the call. This is a time interval that is under control of the responding agencies and is included in the Agency and Patient Response times.

Currently, the 90 percent fractile is 5.49 minutes for ALS calls and 8.94 minutes for Other Calls. However, among the agencies that are staffed, the intervals are much shorter. For this interval, separate standards should be considered for both the severity of the calls and the staffing type.

In the MLREMS Performance Measures, the performance goal is 90% of all Priority 1 and 2 calls in less than 60 seconds for staffed resources. For discussion purposes, staffed ambulances should seek a performance goal of 90 seconds 90 % of the time for ALS Calls and 120 seconds for Other Calls. Unstaffed ambulances should seek a performance goal of 300 seconds for ALS Calls and 600 seconds for Other Calls.

Agency Response Time

Agency response time is the time from when an agency receives a request to when they are on scene of a call. This time interval is under the control of the agency, but is influenced by the location of the call and the weather conditions as well as the Chute Time.

The NFPA 1710 Standard for professional firefighting organizations recommends that ALS arrive on scene in 480 seconds 90 percent of the time. However, its standards specifically for EMS and for volunteer fire departments do not have similar recommendations.

Currently, the 90 percent fractile is 18.46 minutes for ALS calls and 19.58 minutes for Other calls. Agencies in the valley area have shorter response times than those in the mountain. For example, Windham has an ALS 90 percent response of 20.90 minutes compared to Catskill's 14.60 minutes. Because of the topography and varying level of patient condition, this area should also include several levels of response targets. The table below is provided as a suggested discussion point. It is important to note that the recommendations are based on full application of the MPDS EMD process with several tiers of patient prioritization and a BLS response on scene in less than 8 minutes for the emergent events.

Patient Response Time

This is the measure of the total response time for EMS from the perspective of the patient. It is an aggregate of the Call Processing Time and the Agency Response Time. It is influenced both by the actions of the 911 Center and the agencies. The time frames suggested are designed to be an initial goal for the system.

Agency Response Time Recommendation
(90 % Fractile)

	Valley	Mountain	MLREMS*
Delta and Echo Calls	12	17	17
Charlie Calls	12	17	17
Bravo Calls	20	25	22
Alpha Calls	25	35	32

* Based on a modified call prioritization based on history

Patient Response Time Recommendation
(90 % Fractile)

	Valley	Mountain	MLREMS*
Delta and Echo Calls	14.5	19.5	18.5
Charlie Calls	14.5	19.5	18.5
Bravo Calls	22.5	27.5	23.5
Alpha Calls	27.5	37.5	33.5

* Based on a modified call prioritization based on history

Options for Improving EMS Response

The Greene County EMS Task Force reviewed the Baseline Report and requested that CGR prepare three models for EMS response that would provide the following patient response times at the 90 % fractile:

- System A- 12.5 minutes in Valley and 17.5 minutes in Mountain
- System B – 14.5 minutes in Valley and 19.5 minutes in Mountain
- System C- 16.5 minutes in Valley and 21.5 minutes in Mountain

Objectives in Developing Models

The first objective for developing the models was to ensure that ambulances could be positioned to be able to respond to the locations of EMS calls within the desired timelines. The next objective was to determine the appropriate number of ambulances needed to meet the number of requests in the system.

Underlying Assumptions

The models were built on a series of underlying assumptions that are described below:

- 2013 was a typical year for EMS call distribution by location, time, day of the week, and season.
- All resources in the system are equal in capabilities. Modeling the current tiered model created an additional layer of complexity that would not add much value to the final product. Also, the presented models could be adjusted to match the current tiered response system.

- All events were treated as high priority. This assumption creates an "overbuilt" system that allows for some flexibility for peak demand periods and severe weather. In 2013, 56 percent of responses were high priority requiring an ALS response.

- The 911 Center will be able to assign a call to EMS in less than 2.5 minutes. They currently assign 50 percent of calls in less time and 90 percent of calls in less than 4.47 minutes. This will require performance improvement on about 40 percent of calls.

- Valley EMS agencies, which are generally staffed at all times, will be able to place the vehicles enroute in less than two minutes from call assignment.

- Mountain EMS agencies, several of which require crews to respond to the base before being able to respond to the call, will be able to place vehicles enroute in less than seven minutes from call assignment. Agencies that are staffed currently meet this assumption. Agencies that require crews to respond to bases before the ambulance can respond will be challenged to meet this goal.

Methodology for Creating Models

- The first step was identifying the location for calls that would be used as the basis for the model. In 2013, there were 7,158 unique EMS events in the county. 7,023 had enough information to be located geographically. These events occurred at 2,623 different locations in the county.

- 214 locations had more than 5 calls at the location. The top twenty call locations accounted for 24 percent of the calls in the county. The table below generically identifies the top 20 sources of calls in the county, the town and the number of calls.

- For the 2,623 different locations, the locations were validated to get accurate longitude and latitude. More than 98 percent of the addresses were appropriately validated and serve as the basis for creating the location models.

- The addresses for ambulance and fire stations were used for different stages of the modeling process as the starting locations of EMS resources.

- The models do not acknowledge municipal or district borders.

Top 20 Call Sources in Greene County

Type	Events	Town
Adult Health Facility	238	Catskill
Adult Health Facility	188	Catskill
Adult Health Facility	160	Catskill
Ski Area	147	Hunter
Adult Health Facility	133	Catskill
Urgent Care	115	Coxsackie
Urgent Care	100	Catskill
Adult Health Facility	83	Coxsackie
Correctional Facilty	75	Coxsackie
Ski Area	70	Windham
Urgent Care	60	Catskill
Apartment Complex	54	Catskill
Correctional Facilty	50	Coxsackie
Adult Health Facility	48	Catskill
Apartment	47	Catskill
Unknown	38	Coxsackie
Apartment Complex	34	Catskill
Adult Health Facility	34	Athens
Mobile Home	32	Coxsackie
Unknown	32	Catskill

- The drive time and drive distance calculations were standardized for the whole county. To be conservative on our models, we assumed that resources would travel at an average of 35 mph during their response. The table below shows the distance traveled at that speed for several time intervals. The bolded figures were used for creating the models.

Distance Traveled at 35 mph	
Time(min)	Distance in miles
6	3.5
8	**4.7**
10	**5.8**
12	**7.0**
14	8.2

Model 1 - Existing Station Locations Model

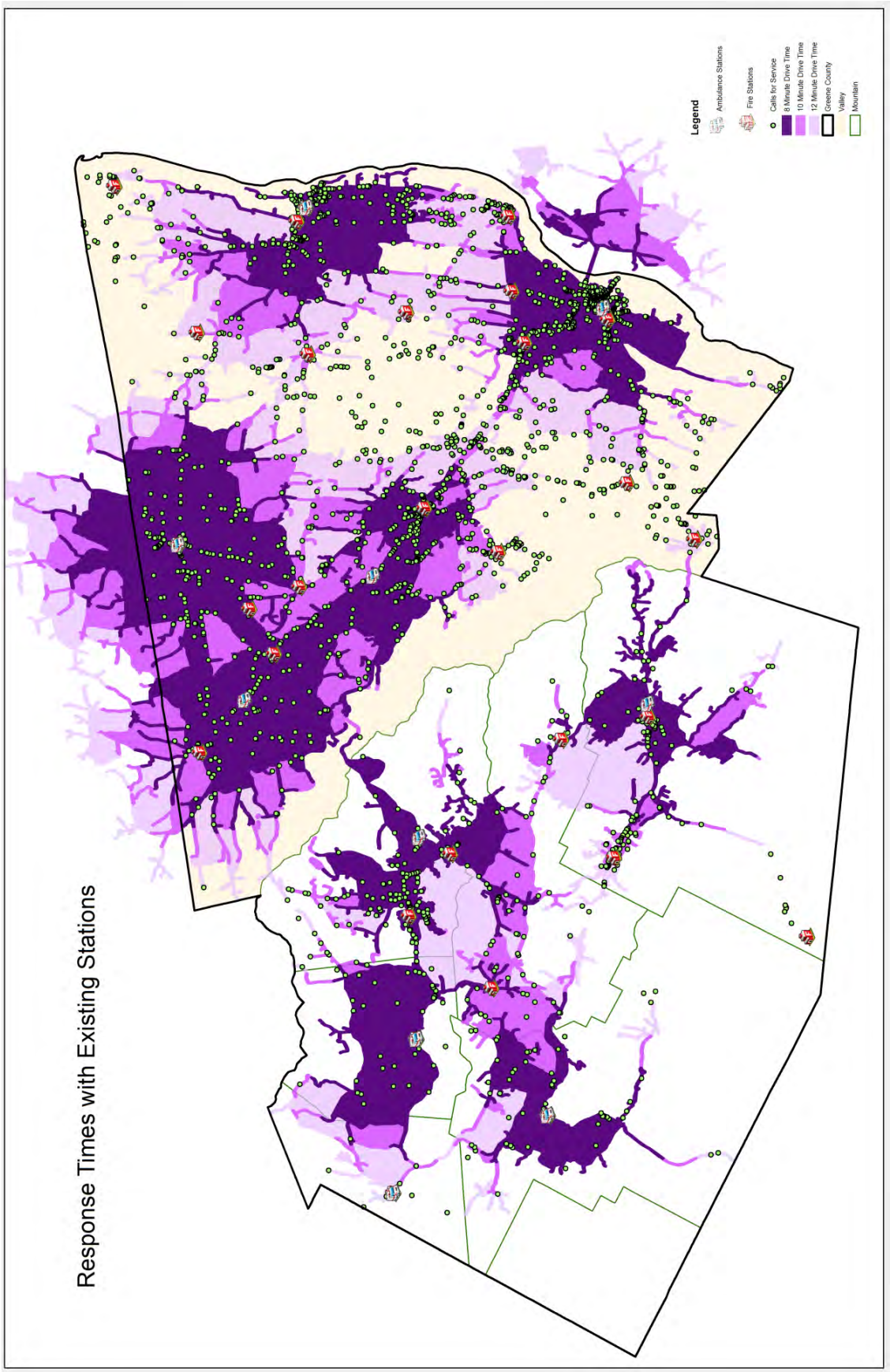
- The first model (Existing Stations) used the existing ambulance stations[3] as the locations for the resources.

- The results indicate that existing location of ambulances bases would be able to arrive at the locations of calls during the System C time window 93 percent of the time in the Mountain area and 92 percent in the Valley. Therefore, if the current EMS system were to perform as based on the assumptions of call processing, chute times, and resources were always available from the stations it would meet the System C response times.

Initial Model - Existing Locations			
Valley Total Response Time	12.5	14.5	16.5
Mountain Total Response Time	17.5	19.5	21.5
Drive Time	8	10	12
Mountain	66%	85%	93%
Valley	67%	79%	93%
All Unique Locations	66%	79%	92%

- The following map shows the response times based on the existing station locations responding to the unique call locations in 2013. The darker shaded indicate areas where ambulances from existing locations can arrive in 8 minutes. The progressively lighter areas are the 10 and 12 minute intervals respectively. The dots indicate the locations where calls occurred.
- The map identified areas in the southwestern portion of the Town of Catskill, the eastern portion of Cairo, and parts of the Town of Athens that had longer than 8 minute drives for multiple call locations. It also became apparent that if the Hunter Ambulance was relocated a little to the west, the response times in the Mountain Area would improve.

[3] Prattsville Ambulance was excluded from all models due to their lack of effective response.


Response Times with Existing Stations
Legend
Ambulance Stations
Fire Stations
Calls for Service
8 Minute Drive Time
10 Minute Drive Time
12 Minute Drive Time
Greene County
Valley
Mountain

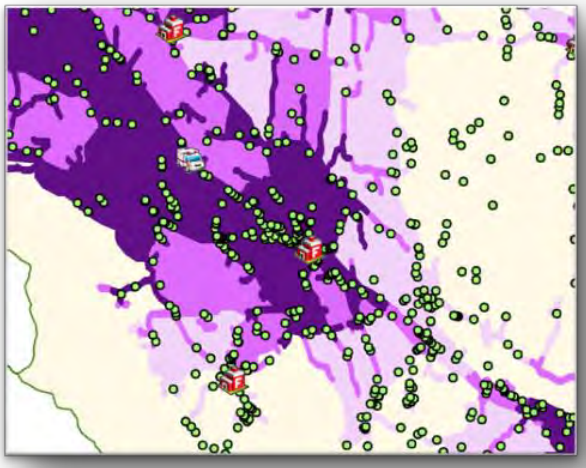
Model 2- Modified Locations Only

A second model is to just modify the locations of the stations for Cairo and Hunter Ambulances to improve response times in those areas and thereby the whole system.

Cairo Ambulance

The Cairo Ambulance is located to the west of the center of their calls leading to a number of calls that are just outside of the 8 and 10 minute response window shown on the map below. If the ambulance station were moved to the east at the approximate location of the Cairo Hose Company #1, the response times for that area would improve. This would lead to improving the response times in the Valley to meet the 90 percent target when the number of calls, and not just locations, are taken into consideration.

Cairo Ambulance Area

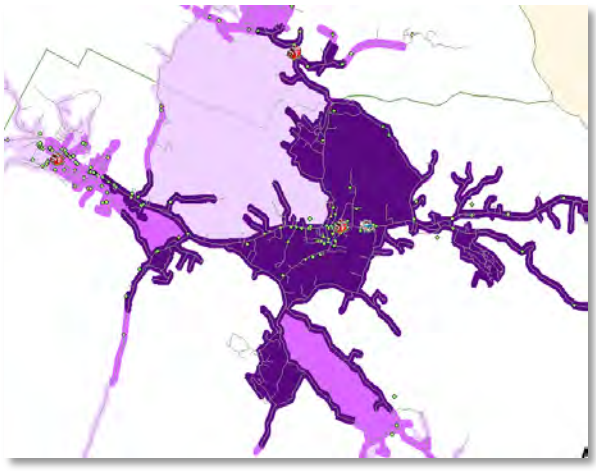


The Cairo Ambulance is currently located at the town DPW facility. If it could be relocated to a position closer to the intersection of Routes 23 and 32 it would provide better response to its service area.

Hunter Ambulance

Hunter Ambulance serves the whole town of Hunter including the Villages of Tannersville and Hunter. The ambulance is located at the town's highway facility in the Village of Tannersville. Tannersville is about five miles east of the Village of Hunter. More calls in the district occur in the Village of Hunter,

Hunter Ambulance Area



particularly at the ski area. If the location of the ambulance were moved to a location partway between the two villages, potentially at the intersection of Route 23A and Route 214, the response times to the whole district would likely meet the 8 minute drive time target which is within the response time targets of System A.

Model 3- Modified and Supplemented Station Locations

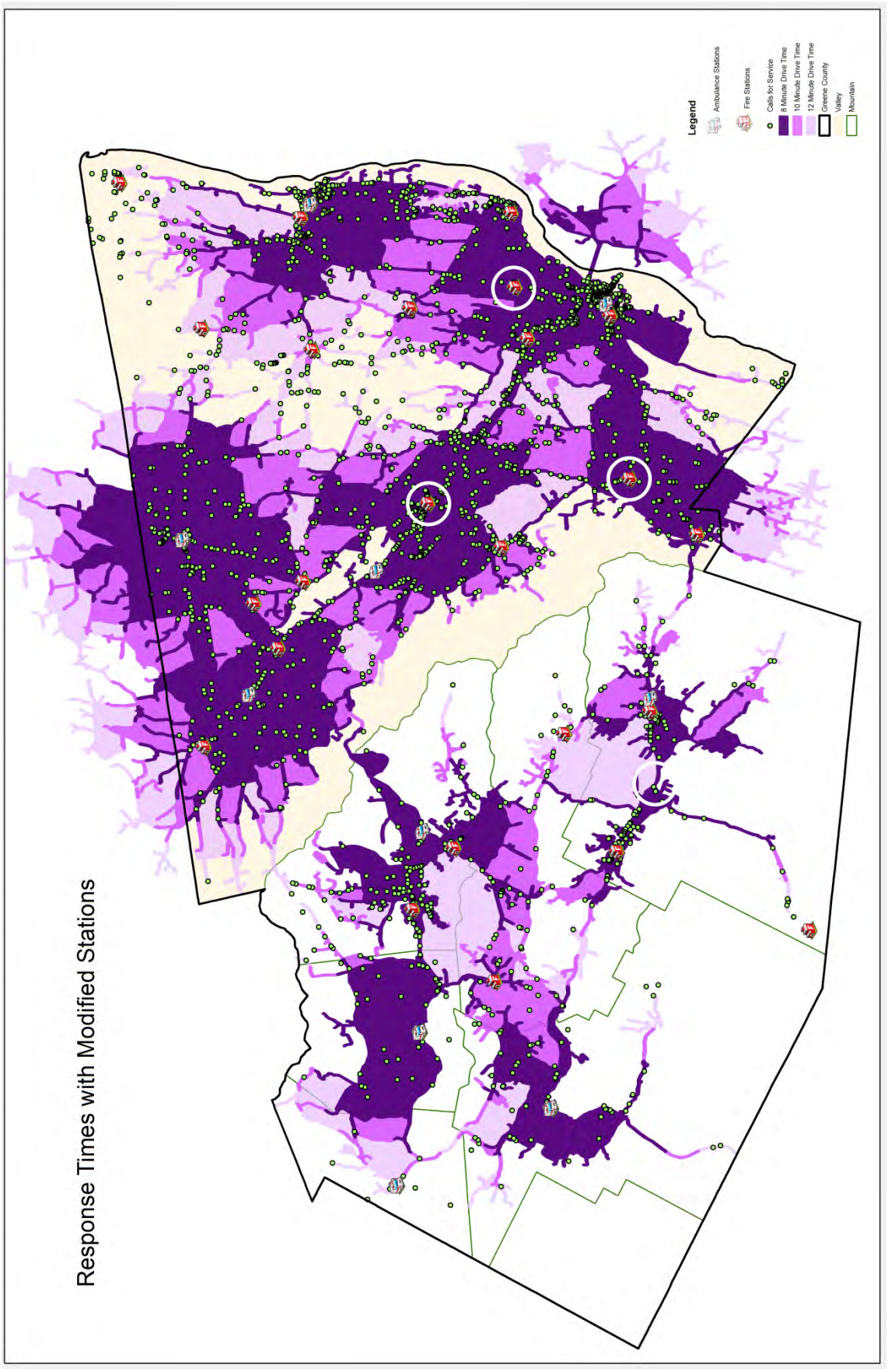
- A third model (Modified & Supplemented Stations) was run with modifications to two station locations and two additional ambulance stations were created at existing fire stations.
    - Cairo Ambulance Station was moved to Cairo Hose Company # 1 to improve response in the eastern area of the town. (The Cairo Ambulance station is still shown on the map, but the responses are mapped from the Cairo Hose Company.
    - Hunter Ambulance was moved to the intersection of Route 214 and Route 23A to improve response times to the Village of Hunter. This move will increase response times in East Jewett, but there are more calls in the Village of Hunter, including the ski area.
    - Kistkatom Volunteer Fire Department was created as a new ambulance station on Route 32. This location will provide better service to that area of the Town of Catskill
    - The West Athens Lime Street (WALS) Fire Company Station # 2 was created as a new ambulance station. This location will provide better service to the Town and Village of Athens.
- Under this model, the response times to the locations in the Valley improved to the 87 percent level for 8 minutes of drive time and in the Mountain they improved to the 75 percent level for 8 minutes.
    - The model could theoretically be improved with another station in western Coxsackie. However, given the number of locations with multiple calls in the Valley, this model meets the ability to get to 90 percent of calls within an 8 minute drive time in the Valley.
    - Although this model doesn't meet the 8 minute drive target for all locations in the Mountain zone, we believe it would meet the target for responses because of the concentration

of calls in the population centers and particularly at the ski areas that would be under 8 minutes. Meeting the 8 minute drive time response requirement (System A) solely on geography would require multiple stations that would respond to very few calls.

- We believe this model would meet the response time targets for 90 percent of calls for the quickest goal (System A) based on static deployment without adding several additional stations.

Modified Locations			
Valley Total Response Time	12.5	14.5	16.5
Mountain Total Response Time	17.5	19.5	21.5
Drive Time	8	10	12
Mountain	75%	87%	95%
Valley	87%	92%	98%
All Unique Locations	85%	91%	97%

- On the following map, the new or relocated stations are indicated with a white circle around the station.
- The darker shade indicates areas where ambulances from existing locations can arrive in 8 minutes. The progressively lighter areas are the 10 and 12 minute intervals respectively. The dots indicate the locations where calls occurred.


Legend
Ambulance Stations
Fire Stations
Calls for Service
8 Minute Drive Time
10 Minute Drive Time
12 Minute Drive Time
Greene County
Valley
Mountain
Response Times with Modified Stations

Staffing Model

The staffing model is based on a hybrid model of call locations in the county and also the density of the events. As noted earlier in the report, calls are not distributed equally. 75 percent of the events occur in the areas served by Cairo, Catskill and Coxsackie. Catskill's district has 44 percent of the events by itself.

Geographic Distribution Staffing

To provide an adequate response to all areas of the county, it is necessary to staff an ambulance at each of the stations in the models. For the first two models, this requires a minimum of nine ambulances and the third model would require eleven ambulances. This is the minimum number of ambulances to meet the geographic distribution of calls.

Ideally, there would always be an ambulance available to respond from each of the locations in the model. However, when an ambulance responds it is not available again until that call is complete. In the Valley this is typically two hours or less for 70 percent of transport calls. In the Mountain area, between three and four hours is needed to complete transport calls 70 percent of the time. In order to address the utilization of resources, there needs to be additional resources in the system beyond those necessary to ensure geographic coverage.

Staffing Levels

In addition to the ambulances needed for geographic coverage, an analysis was preformed to identify the number of ambulances needed on duty to meet the demand for calls. To conduct the analysis, the calls were clustered into nine groups based on the existing ambulance station location and also grouped by four hour block of the day.

	Total Calls	Midnight to 3:59 am	4:00 am to 7:59 am	8:00 am to 11:59 am	Noon to 3:59 pm	4:00 pm to 7:59 pm	8:00 pm to 11:59 pm
Coxsackie	1286	103	110	281	276	287	229
Ashland	176	12	15	44	42	37	26
Catskill	2849	239	288	690	699	564	369
Durham	280	23	21	67	58	58	53
Cairo	1064	104	85	217	259	234	165
Lexington	91	5	7	22	23	19	15
Hunter	554	31	31	130	192	104	66
Greenville	394	32	37	101	71	97	56
Windham	329	21	21	83	96	65	43
Total	**7023**	**570**	**615**	**1635**	**1716**	**1465**	**1022**

The table shows that certain areas are much busier than others based on the calls closest to them. Similarly, there are certain periods of the day that are much busier than others. Catskill is the busiest by far while Lexington has very few calls.

An assumption for developing the staffing model is that each station needs at least one ambulance per time block. The second assumption is that clusters that have more than one call daily for a time block need one additional ambulance for each daily call or fractional daily call in that time block. For example, Catskill has 1.9 calls per day in the 8:00 am to noon time block and would need two ambulances to provide adequate response.

In addition to staffing for calls in specific areas, there needs to be an ability to provide replacement resources or "surge capacity" during each time block. For the second and subsequent daily calls in each time block, an additional ambulance is added to the system. For example, during the 8:00 am to noon time block there are 4.8 calls per day. To provide surge capacity, 4 additional ambulances would be needed.

The surge capacity ambulances should be stationed at the two newly designated stations (Kiskatom FD and WALS FD) as well as existing stations in busy areas. Extra capacity would be used to back fill the Mountain area when those resources became tied up on a call.

Proposed Staffing Levels for Greene County System

	Midnight to 3:59 am	4:00 am to 7:59 am	8:00 am to 11:59 am	Noon to 3:59 pm	4:00 pm to 7:59 pm	8:00 pm to 11:59 pm
Coxsackie	1	1	1	1	1	1
Ashland	1	1	1	1	1	1
Catskill	1	1	2	2	2	2
Durham	1	1	1	1	1	1
Cairo	1	1	1	1	1	1
Lexington	1	1	1	1	1	1
Hunter	1	1	1	1	1	1
Greenville	1	1	1	1	1	1
Windham	1	1	1	1	1	1
Base Needed	9	9	10	10	10	10
Surge Capacity	1	1	4	4	4	2
Total Staffing	10	10	14	14	14	12

Staffing models, particularly the locations of the surge crews, could be varied based on the call volume. Although 75 percent of calls occur in just three jurisdictions (Catskill, Cairo, and Coxsackie), positioning of

surge resources should consider other factors. For example, in the winter the call volume in the Mountain is higher than other seasons and the calls take longer because of road conditions, therefore they would have a greater need for the surge resources.

Geographic and Seasonal Distribution of Calls					
	Total Calls	Winter	Spring	Summer	Fall
Coxsackie	1286	320	331	329	306
Ashland	176	40	31	48	57
Catskill	2849	721	779	756	593
Durham	280	53	60	93	74
Cairo	1064	265	263	290	246
Lexington	91	18	23	29	21
Hunter	554	199	105	163	87
Greenville	394	101	84	96	113
Windham	329	124	78	77	50
Total	**7023**	**1841**	**1754**	**1881**	**1547**

Model Summary

All three different models for locating the ambulances based on the geographic distribution of calls give Greene County the opportunity to adjust their system to provide improved response.

Model 1 uses the existing locations of stations and focuses on improving the call processing time and the chute time to meet the slowest of the proposed response time standards. This model could be used with little change to the current staffing models except for working to ensure that prompt response (short chute times) is implemented by all agencies.

Model 2 uses the existing locations of the stations, except for the relocation of the Cairo and Hunter Ambulance Stations to be more centrally located to their calls. This model would be able to meet the middle response time criteria based on volume of calls. It is also dependent on the adoption of the changes in Model 1.

Model 3 builds on both the previous models and includes the addition of two new stations in areas of the county that currently receive slower than the targeted response times. This model would be able to meet the response time goals based on geographic distribution and an adequate number of ambulances.

The staffing model is based on operating out of nine or more ambulance stations with enough resources to handle the variability in call demand. The lowest staffing level is 10 ambulances in the early hours of the day and it peaks at 14 ambulances during the busiest hours of the day. The

surge ambulances would be used in an effort to keep the system prepared for the next call by dynamically relocating them between areas of the system. The model for dynamic relocation would ensure that adequate resources would be appropriately shared across the county to enable adequate response.

Barriers to Implementation

The models were created as best case theoretical scenarios. However, it would be disingenuous to ignore some of the obvious barriers to implementation.

- The models were based on standard and optimistic portions of the response. In particular, the Chute Time for non-staffed ambulances is very optimistic. The non-staffed ambulances could work to reduce the Chute Time by asking their members to remain at their stations during peak demand time periods.
- The models do not follow political and service boundaries, they focus only on sending the closest resource. The New York State Certificate of Operating (CON) Authority for EMS agencies could be a significant barrier to moving toward a closest EMS resource. Columbia County is using a system that allows individual agencies to work together cooperatively under a County CON that might work in Greene County.
- The models do not account for the current tiered system. It is possible that the proposed locations could be used for both ambulances and ALS fly-cars. The ALS fly-cars could be positioned to provide services to areas that do not have ALS ambulances (Windham).
- The models do not consider the expense of operating the system. This was expressly excluded from the study's analysis by the study team.

Other Considerations

The three models presented were focused primarily on the response times of ambulances. In order to provide greater public health impact to the community, consideration should be given to the following actions:

- Full implementation of the Emergency Medical Dispatching system to allow for call triage. This system would allow agencies to selectively respond to low priority calls without lights and sirens and also to identify calls where prompt response from an AED equipped first responder would have the greatest likelihood of benefit.

EMD Distribution October 13 to April 14		
OMEGA	47	1%
ALPHA	1071	30%
BRAVO	681	19%
CHARLIE	794	23%
DELTA	886	25%
ECHO	39	1%
Total	3518	100%

Source: GC ECC

- Develop a system where CPR trained and AED equipped responders are dispatched to calls (outside of healthcare facilities) where there is likely a cardiac arrest. During the first six months of using the EMD system, only 1 percent of calls were classified as "Echo" meaning there was a likelihood of cardiac arrest. Another 25 percent were considered "Delta" calls that would probably need prompt ALS intervention.
- There are a finite number of available, qualified EMS providers in the Greene County area. In particular, most EMS providers identified during the study work for more than one agency in the system. This presents a barrier to adequate staffing if the system were operated by a single employer because the current system of full time work at one agency and part time work at another agency by a single provider could not be accomplished without overtime.

Next Steps

The EMS System in Greene County has a solid foundation of talented providers and appropriate response equipment to provide excellent service to the residents and visitors to the county. However, as identified in this report, there are opportunities for changes that would result in meaningful improvements. Several potential changes are identified here to improve both response times and the general system.

Short Lead Time Changes

- **Implement the EMD coding process** to dictate resource utilization. As indicated above, the 911 Center already codes EMS calls into priority categories. Those categories are used to help decided whether or not ALS units should respond. Those categories could further be used to send first response agencies to high priority calls. They can also be used to select which calls should have a lights and sirens response from those that should have a normal traffic response. This second change will improve provider and citizen safety by reducing the risk of collisions.

- **Develop measurement reports for agencies** could be done with existing data that is tracked by the 911 Center. The raw data used in this report was provided by the 911 Center, but needed to be manipulated. It is likely that the software vendor would be able to create reports for each agency and or ESN that would allow leaders to track the performance of the system.

- **Set performance goals for agencies in systems, particularly call processing and chute times.** These two time segments have significant impact on the response time to the patient and they can be reduced to some degree by policy changes and modified practices.

- **Develop CPR and AED first response capabilities in all communities, particularly those with longer drive times to call locations.** There are existing organizations (law enforcement and fire service) that could be quickly tapped to respond with appropriate equipment and training to calls that likely need immediate aid as identified through the EMD process. Additional community resources could be developed in the future to assist in this goal.

Long Lead Time Changes

- **Move ambulance locations in Cairo and Hunter.** These two ambulances are located away from the center of calls in their district at the town highway garages. If these locations were relocated closer to where most of their calls occur, drive times to the locations of calls would be reduced.

- **Improve response times to "gap" areas.** Some of the gap areas will be addressed by relocated the resources in Cairo and Hunter. There are others that could be addressed by relocating the resources to the Kiskatom Fire Department and also to the West Athens Lime Street Fire Department.

APPENDIX A: GLOSSARY OF COMMON TERMS

- Advanced Life Support- ALS is considered the highest level of pre-hospital care. It provides numerous invasive and pharmaceutical interventions to treat a variety of medical conditions based on a thorough patient assessment.

- AEMT- Intermediate - An Advanced EMT is certified by the NYS DOH after completing a specific training course of about 250 hours beyond the EMT training. AEMT-Is are authorized to perform all skills of an EMT plus they can start intravenous fluid therapy and perform certain advanced airway procedures. AEMTs must recertify every three years.

- Ambulance – An ambulance is a specifically designed vehicle to transport up to two supine patients to the hospital. They are designed to allow for patients to be treated during transport. The ambulance must be inspected and certified by the NYS DOH. An ambulance must be staffed by at least one EMT.

- Basic Life Support – BLS is considered the provision of essential pre-hospital care including skills like CPR, defibrillation, basic patient assessment, and injury stabilization. In most systems, about 60 to 70 percent of patients only need BLS care.

- EMT- An Emergency Medical Technician is certified by the NYS DOH after completing a specific training course of about 150 hours. EMTs are authorized to provide basic life support including CPR, defibrillation, administering oxygen, immobilizing injuries and giving a handful of emergency medications. EMTs must recertify every three years.

- Emergency Service Zones (ESN)- In Greene County, an ESN is a designated area based on municipality, fire department and law enforcement agency that identifies the proper responding agency.

- Event – A situation that occurs requiring the assistance of the EMS system.

- Mobile Radio – Radio that is mounted in a vehicle and generally broadcasts at between 50 and 100 watts.

- Paramedic- A paramedic is certified by NYS DOH after completing as specific training course of about 1,000 hours beyond the EMT training. Paramedics are authorized to perform all the skills of an AEMT-I plus monitor and treat cardiac rhythms, administer about twenty medications, and perform endotracheal intubation. Paramedics are considered the only Advanced Life Support providers in the region. Paramedics must recertify every three years.

- Paramedic Response Vehicle – Paramedic Response Vehicle or Fly car is staffed by a single paramedic with all needed equipment for ALS.

- Portable Radio- A small hand held radio that can only broadcast at about 10 watts.

- Request- A request is the occasion when an agency is asked to provide a service for an event.

- Response – A response is the occasion when an agency is able to send a resource for an event.

APPENDIX B: AGENCY RESPONSE ANALYSIS

The tables that follow related to the agency response all follow an identical format. The first page looks at the demand for service for that agency.

Demand for Service

The first row shows the total number of requests 911 recorded for the agency and then the number of responses that were recorded. The agency responded if 911reported an enroute time for the agency. The percentage of responses to requests is the calls answered rate. The other calls would have to be handled by mutual aid with another agency.

The demand for services is summarized in two charts and a table. The first chart shows the distribution of requests for EMS service by agency by month. The darker shading indicates the home ESNs or the ESNs where the agency is the primary responder. The lighter shading indicates the mutual aide requests or requests outside the home ESNs. The second chart shows the distribution by day of the week.

The table shows when the requests came to the agency and also the agency responses by time period and aspect of the week. Given the relatively small sample of some agencies, the hours were grouped into four hour blocks showing the day in six time periods. This table shows the ability of an agency to answer its requests for service by the different time periods. This would help to identify gaps when staffing should be adjusted.

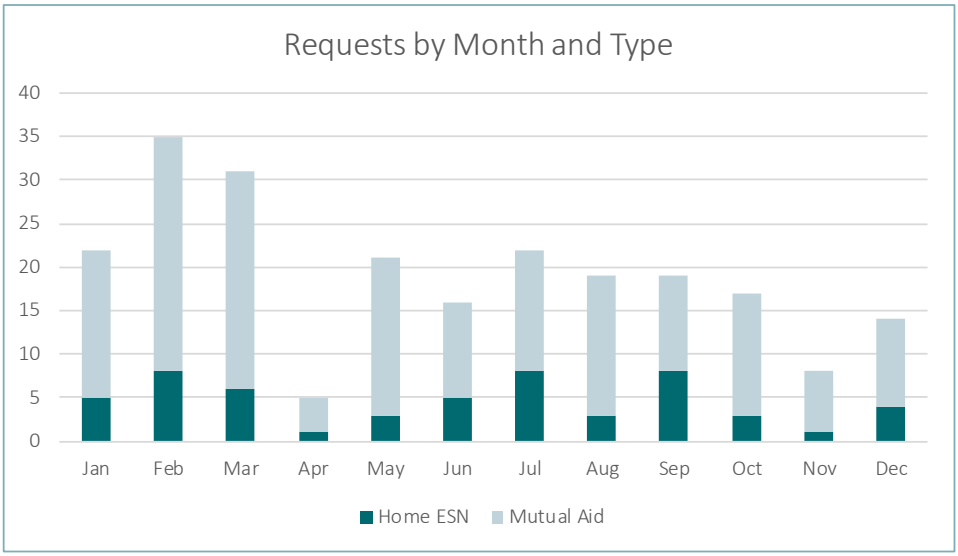
The second page includes a table that shows the agency's distribution of call dispositions between transports, non-transports and non-responses. The other two tables show response times for both ALS calls and "Other" calls. The time intervals are described below. We measured the following time intervals using data from 911. All time data was reported with hours, minutes and seconds. All were used for the calculations.

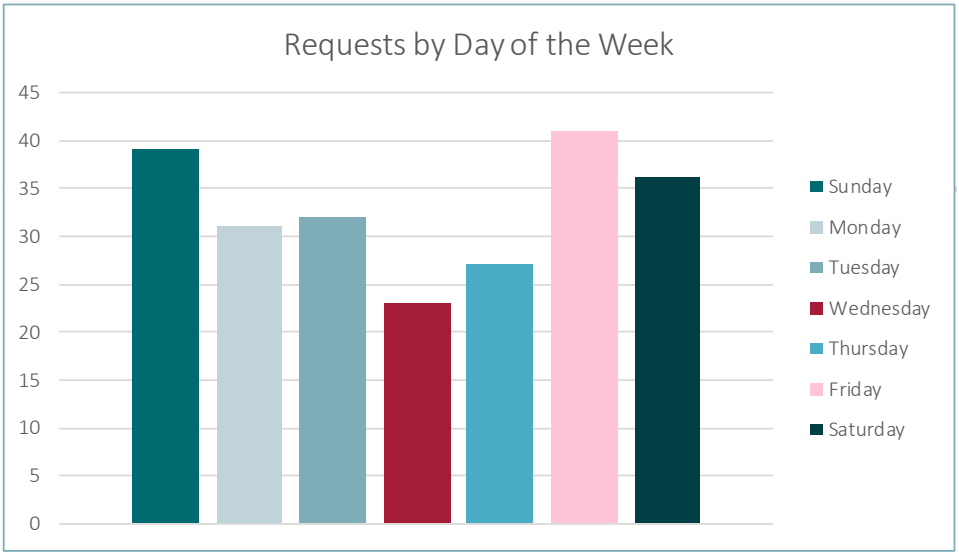
- Call Processing – is the time period from when a call taker begins entering information into the CAD to the time an agency is assigned to the call. This time includes all gathering of information from the caller, identifying the location and selecting the appropriate resource.
- Agency Response – is the time period from when the agency is assigned the call to when the dispatcher records that the ambulance is on scene. This time is not calculated if the agency is canceled while enroute.

- Patient Response – is the time from when the call taker begins entering the call information to when the dispatcher records that the ambulance is on scene. This time is the sum of Call Processing and Agency Response. This is the response time from the perspective of the patient. This time is not calculated if the agency is canceled while enroute.
- Chute Time – is the time from when an agency is notified of a call and the agency indicates that they are enroute to the call. This is sometimes referred to as turnout time.
- Scene Time – is the time from when an agency reports that they are on scene until they report they are on the way to the hospital. This time is not calculated if they do not transport, but go directly back in service.
- Transport Time – is the time from when an agency reports they have begun transport until they arrive at the hospital.
- Total Length of Calls – is the total time of all calls from when it is entered by the dispatcher until the ambulance reports being back in service.
- Total Length of Transport Calls – is the total time of all calls from when it is entered by the dispatcher until the ambulance reports being back in service for transports. This category excludes non transports.

Ashland Ambulance

Total Requests: 229 Total Responses: 203 (89%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	38	37	12	11	50	48
Late Workday (11a-3p)	28	25	25	21	53	46
Early Evening (3p-7p)	42	34	18	15	60	49
Evening (7p-11p)	24	22	12	11	36	33
Mid Night (11p-3a)	11	9	7	7	18	16
Late Night (3a-7a)	11	10	1	1	12	11

Greene County EMS Agency Activity Summary (continued)

Ashland

Home ESN Requests: 55 Mutual Aid Requests: 174

	Home ESN		Mutual Aid	
Transports	34	62%	79	45%
Non-Transport	20	36%	70	40%
Non-Responses	1	2%	25	14%

ALS Calls Response Times (in minutes)

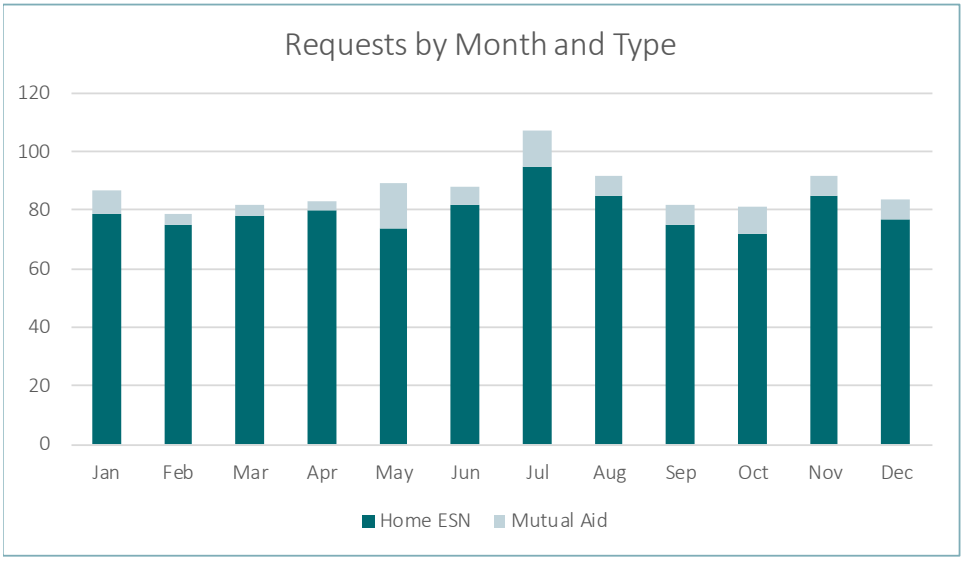
	Home ESN			Mutual Aid		
Total Calls 122	50%	70%	90%	50%	70%	90%
Call Processing	2.63	3.60	4.28	3.17	4.17	7.40
Agency Response	13.37	14.54	18.91	19.37	24.01	32.53
Patient Response	15.55	17.33	22.54	24.03	28.52	36.01
Chute Time	9.15	11.02	13.19	9.63	11.09	14.84
Scene Time	19.60	22.52	27.21	17.82	23.51	31.13
Transport Time	48.00	58.80	73.90	57.22	63.76	73.12
Total Length of Calls	180.50	205.45	237.28	183.88	210.88	251.44
Total Length of Transport Calls	188.85	210.15	236.47	207.38	228.78	264.64

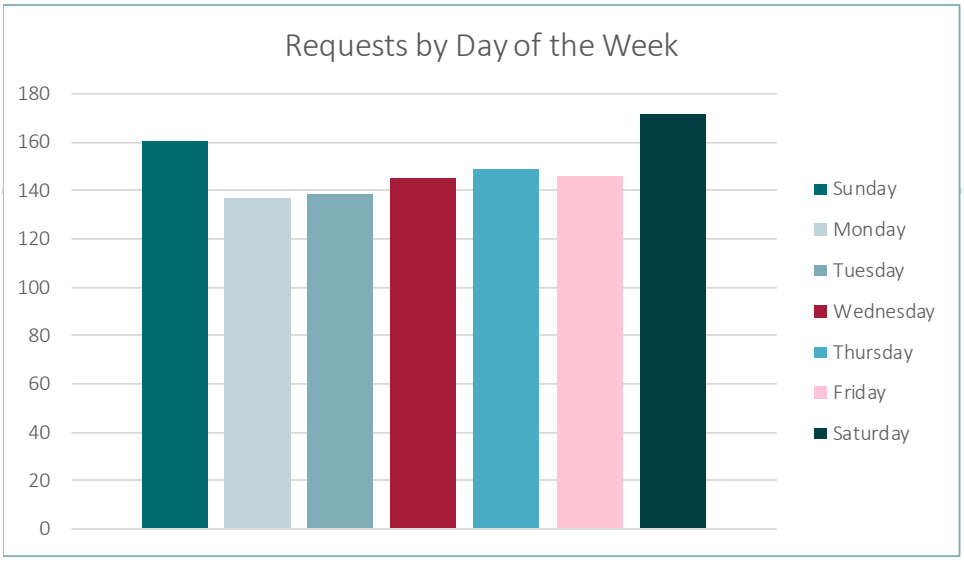
Other Calls Response Times Intervals (in Minutes)

	Home ESN			Mutual Aid		
Total Calls 107	50%	70%	90%	50%	70%	90%
Call Processing	3.07	3.47	4.72	3.41	4.21	6.39
Agency Response	12.38	14.43	16.81	18.15	20.77	28.74
Patient Response	15.74	19.33	23.29	24.52	27.56	39.32
Chute Time	8.38	10.20	12.13	9.62	11.23	14.02
Scene Time	19.93	22.49	27.72	14.57	26.71	46.91
Transport Time	42.23	45.50	57.69	52.65	62.25	76.18
Total Length of Calls	111.81	159.03	217.75	149.13	188.04	237.70
Total Length of Transport Calls	169.77	180.40	233.84	192.63	218.55	247.72

Cairo Ambulance

Total Requests: 1,046 Total Responses: 912 (87%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	132	112	44	42	176	154
Late Workday (11a-3p)	191	162	90	74	281	236
Early Evening (3p-7p)	168	142	75	67	243	209
Evening (7p-11p)	116	105	49	42	165	147
Mid Night (11p-3a)	56	51	46	42	102	93
Late Night (3a-7a)	52	48	27	25	79	73

Greene County EMS Agency Activity Summary (continued)

Cairo

Home ESN Requests: 957 Mutual Aid Requests: 89

	Home ESN		Mutual Aid	
Transports	527	55%	36	40%
Non-Transport	315	33%	34	38%
Non-Responses	115	12%	19	21%

ALS Calls Response Times (in minutes)

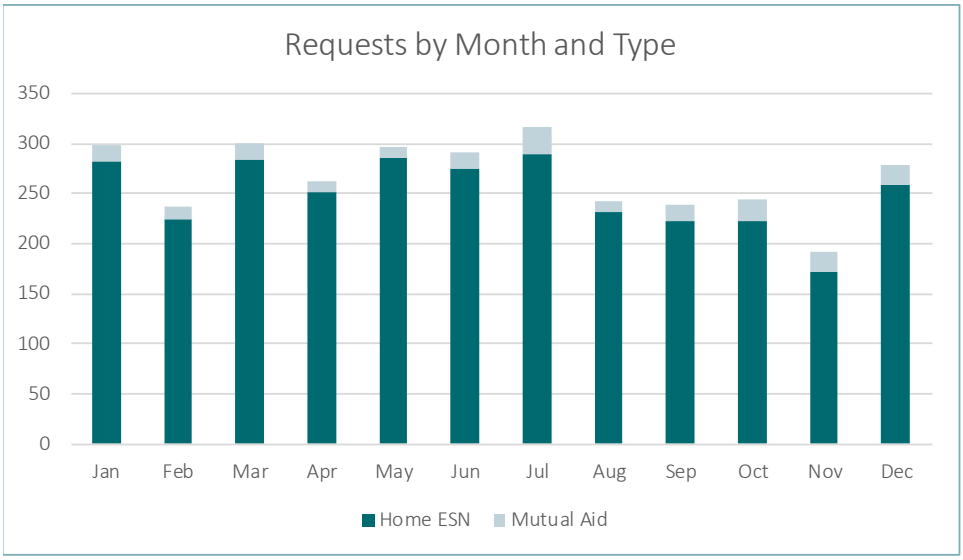
	Home ESN			Mutual Aid		
Total Calls 451	50%	70%	90%	50%	70%	90%
Call Processing	2.38	3.10	4.18	6.27	7.20	8.48
Agency Response	10.50	12.86	15.96	14.58	18.16	21.25
Patient Response	13.17	15.13	19.58	19.98	23.80	27.26
Chute Time	1.40	1.83	2.49	1.38	2.03	2.53
Scene Time	15.53	19.47	27.51	11.79	15.73	26.87
Transport Time	24.57	30.33	47.99	30.10	34.06	49.37
Total Length of Calls	97.78	118.12	163.63	59.67	108.08	147.47
Total Length of Transport Calls	110.13	137.45	176.13	120.97	139.45	158.42

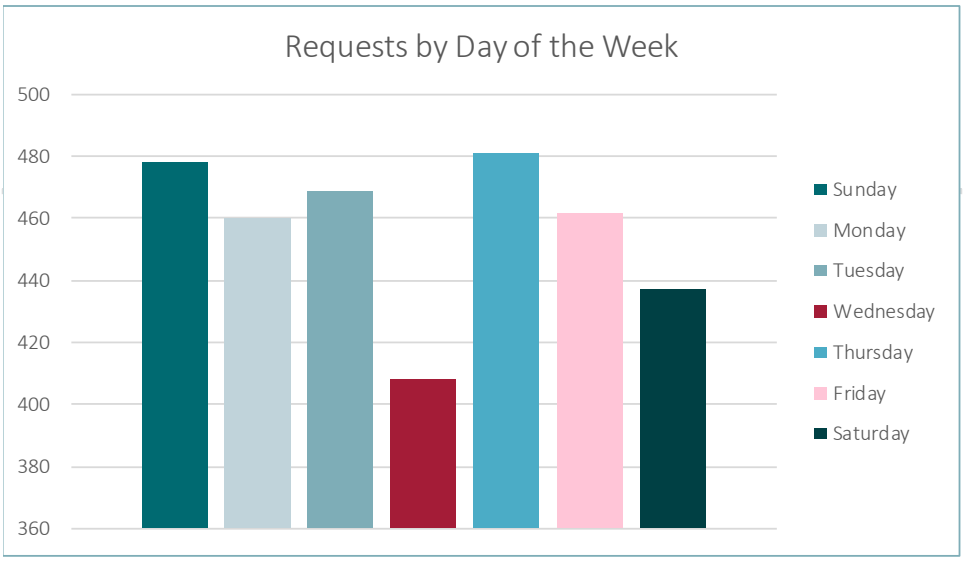
Other Calls Response Times Intervals (in Minutes)

	Home ESN			Mutual Aid		
Total Calls 595	50%	70%	90%	50%	70%	90%
Call Processing	2.73	3.53	4.78	4.75	6.97	8.93
Agency Response	11.04	13.68	17.88	14.30	18.03	21.03
Patient Response	14.18	17.50	24.35	23.30	26.46	39.47
Chute Time	1.20	1.65	2.61	0.90	1.45	1.90
Scene Time	12.03	17.71	28.49	12.45	17.87	28.54
Transport Time	23.19	25.79	39.35	30.53	33.93	44.15
Total Length of Calls	66.44	94.90	138.87	50.43	102.09	154.25
Total Length of Transport Calls	99.42	121.47	158.50	140.67	154.17	164.59

Catskill Ambulance

Total Requests: 3,195 Total Responses: 3,082 (96%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	479	469	168	160	647	629
Late Workday (11a-3p)	600	583	214	198	814	781
Early Evening (3p-7p)	483	470	190	171	673	641
Evening (7p-11p)	343	332	166	158	509	490
Mid Night (11p-3a)	194	188	99	97	293	285
Late Night (3a-7a)	181	179	78	77	259	256

Greene County EMS Agency Activity Summary (continued)

Catskill

Home ESN Requests: 2,998 Mutual Aid Requests: 197

	Home ESN		Mutual Aid	
Transports	2,139	71%	98	50%
Non-Transport	768	26%	77	39%
Non-Responses	91	3%	22	11%

ALS Calls Response Times (in minutes)

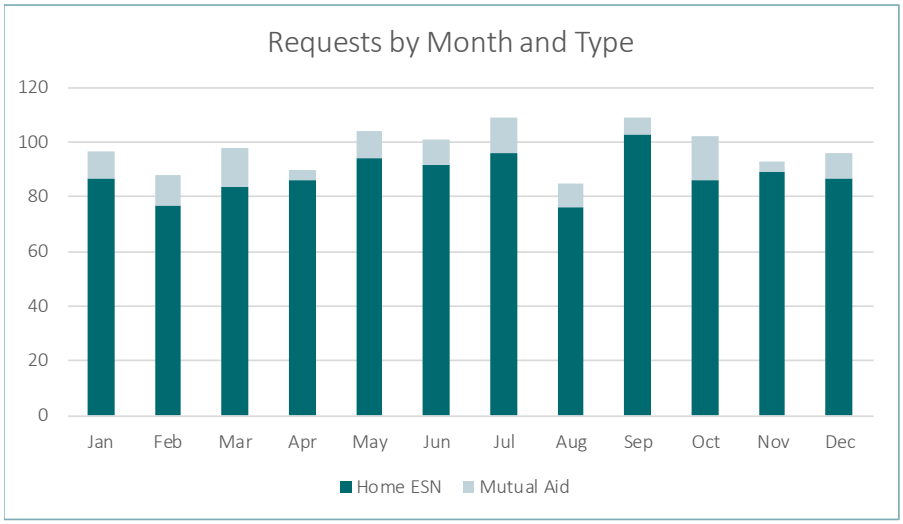
		Home ESN			Mutual Aid		
Total Calls	1,422	50%	70%	90%	50%	70%	90%
Call Processing		2.37	3.05	4.20	5.10	6.65	8.82
Agency Response		7.15	10.18	14.60	15.43	18.80	24.41
Patient Response		9.70	12.61	17.71	22.05	26.97	37.40
Chute Time		1.72	2.37	3.40	1.50	2.01	3.42
Scene Time		13.71	17.22	23.76	12.69	18.10	28.67
Transport Time		16.75	21.71	39.11	28.52	31.06	38.53
Total Length of Calls		76.18	92.46	135.37	100.23	124.51	148.41
Total Length of Transport Calls		79.98	97.32	136.99	118.56	135.60	153.14

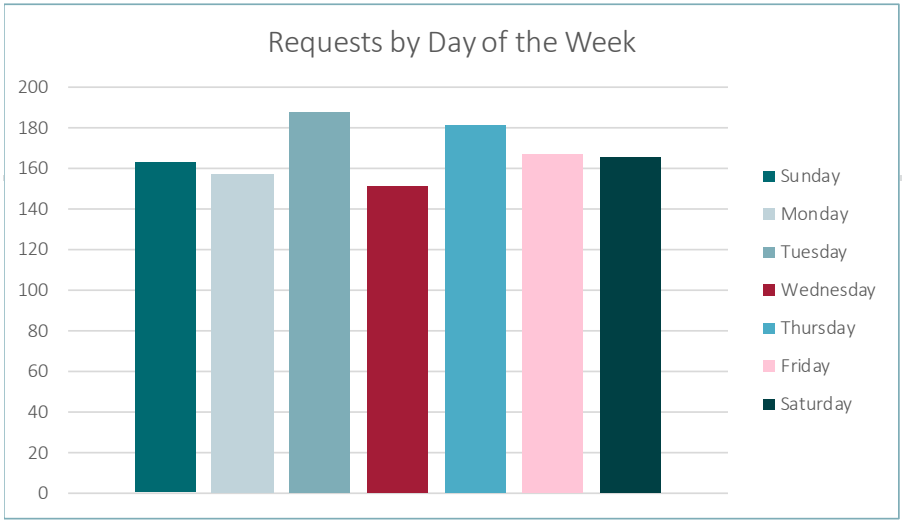
Other Calls Response Times Intervals (in Minutes)

		Home ESN			Mutual Aid		
Total Calls	1,773	50%	70%	90%	50%	70%	90%
Call Processing		2.37	3.05	4.45	4.03	5.62	8.44
Agency Response		7.47	10.04	15.22	15.17	18.07	22.54
Patient Response		10.05	13.57	19.62	22.02	27.08	41.93
Chute Time		1.52	2.11	3.08	1.24	1.85	3.16
Scene Time		12.02	15.39	22.66	12.90	19.56	36.41
Transport Time		15.87	19.08	36.12	26.97	30.43	41.41
Total Length of Calls		63.85	78.14	119.20	86.62	116.55	153.45
Total Length of Transport Calls		72.30	89.87	127.38	114.95	128.95	157.53

Coxsackie Ambulance

Total Requests: 1,172 Total Responses: 1,054 (90%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	168	155	57	51	225	206
Late Workday (11a-3p)	187	168	84	64	271	232
Early Evening (3p-7p)	184	162	67	60	251	222
Evening (7p-11p)	168	154	59	50	227	204
Mid Night (11p-3a)	82	78	38	37	120	115
Late Night (3a-7a)	55	54	23	21	78	75

Greene County EMS Agency Activity Summary (continued)

Coxsackie

Home ESN Requests: 1,057 Mutual Aid Requests: 115

	Home ESN		Mutual Aid	
Transports	643	61%	58	50%
Non-Transport	314	30%	39	34%
Non-Responses	100	9%	18	16%

ALS Calls Response Times (in minutes)

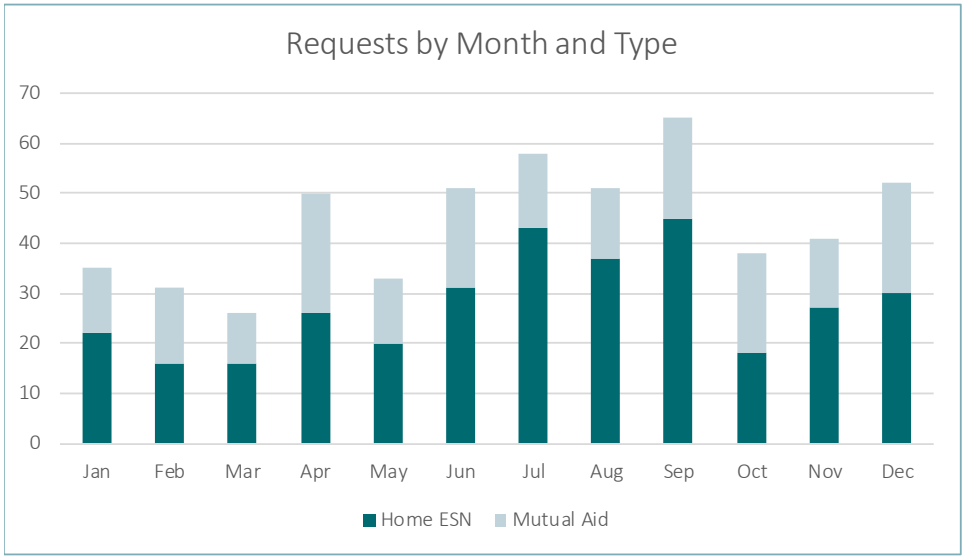
		Home ESN			Mutual Aid		
Total Calls	553	50%	70%	90%	50%	70%	90%
Call Processing		2.45	3.03	4.24	4.25	6.68	8.72
Agency Response		6.38	8.76	13.35	13.08	14.53	17.48
Patient Response		8.83	11.19	16.09	23.26	25.71	31.59
Chute Time		1.29	1.85	3.07	0.85	1.16	1.79
Scene Time		16.18	20.53	30.65	12.71	17.14	24.98
Transport Time		30.37	32.60	38.52	34.19	38.93	43.28
Total Length of Calls		108.52	120.06	141.25	105.28	135.28	158.37
Total Length of Transport Calls		113.13	123.97	143.32	134.47	146.16	172.38

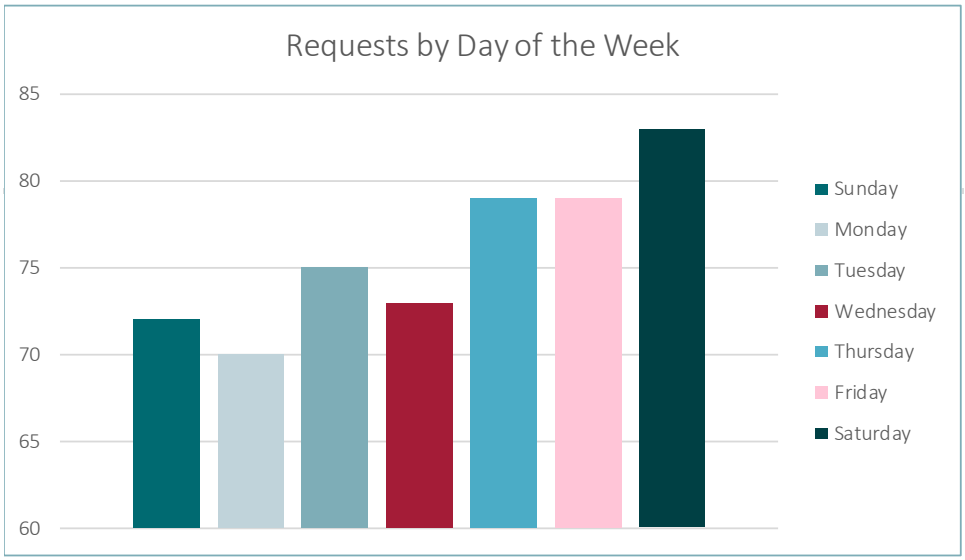
Other Calls Response Times Intervals (in Minutes)

		Home ESN			Mutual Aid		
Total Calls	619	50%	70%	90%	50%	70%	90%
Call Processing		2.18	2.95	4.47	3.88	5.59	8.40
Agency Response		7.48	9.57	14.42	15.02	16.71	21.70
Patient Response		10.11	13.38	21.00	22.92	27.56	40.60
Chute Time		1.12	1.62	3.02	0.87	1.41	3.12
Scene Time		12.99	18.99	30.10	13.54	16.66	37.43
Transport Time		29.51	32.15	38.00	24.98	30.75	37.84
Total Length of Calls		88.70	105.88	134.84	86.48	122.15	151.14
Total Length of Transport Calls		105.13	119.38	145.56	121.09	131.54	152.70

Durham Ambulance

Total Requests: 531 Total Responses: 493 (93%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	74	70	22	21	96	91
Late Workday (11a-3p)	82	73	31	27	113	100
Early Evening (3p-7p)	85	77	37	34	122	111
Evening (7p-11p)	65	62	33	31	98	93
Mid Night (11p-3a)	40	40	23	22	63	62
Late Night (3a-7a)	30	27	9	9	39	36

Greene County EMS Agency Activity Summary (continued)

Durham

Home ESN Requests: 331 Mutual Aid Requests: 200

	Home ESN		Mutual Aid	
Transports	199	60%	142	71%
Non-Transport	109	33%	43	22%
Non-Responses	23	7%	15	8%

ALS Calls Response Times (in minutes)

	Home ESN			Mutual Aid		
Total Calls 218	50%	70%	90%	50%	70%	90%
Call Processing	2.40	3.12	4.12	6.23	8.11	9.36
Agency Response	11.85	14.67	18.56	16.72	20.32	26.20
Patient Response	14.64	17.50	21.18	24.08	28.13	34.32
Chute Time	7.97	10.60	13.53	7.50	8.93	11.31
Scene Time	17.49	23.08	30.14	15.57	19.48	28.53
Transport Time	35.52	43.73	54.18	37.29	40.97	48.94
Total Length of Calls	121.03	140.02	175.85	149.55	162.23	181.69
Total Length of Transport Calls	134.15	156.95	182.91	155.67	169.79	183.62

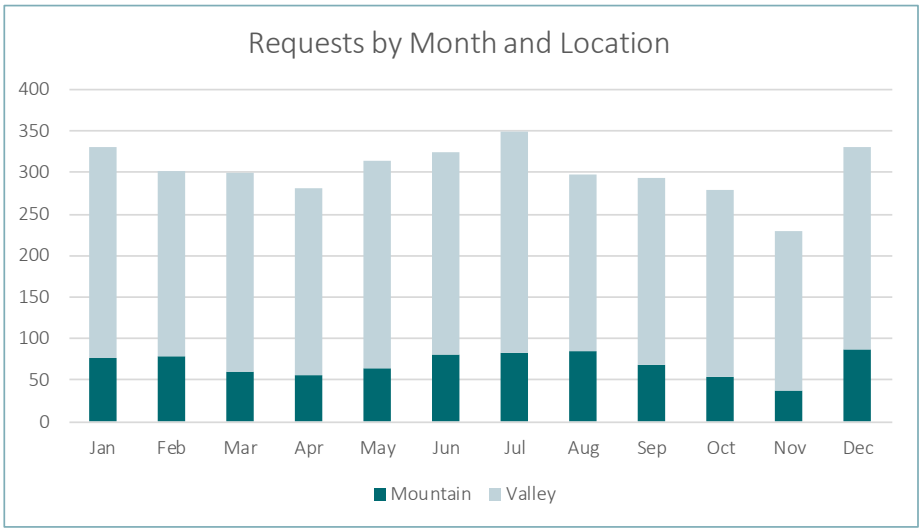
Other Calls Response Times Intervals (in Minutes)

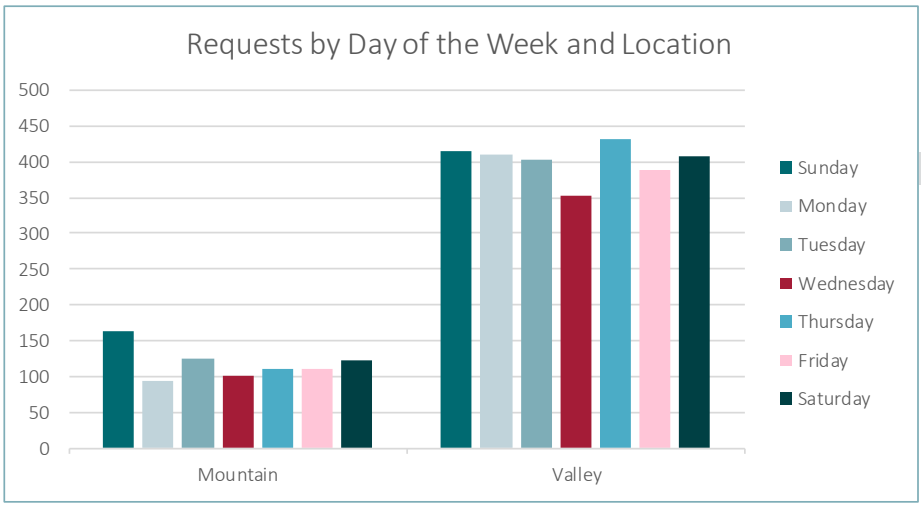
	Home ESN			Mutual Aid		
Total Calls 313	50%	70%	90%	50%	70%	90%
Call Processing	2.37	3.36	5.28	4.72	7.00	8.68
Agency Response	11.27	15.81	20.25	19.18	22.03	28.36
Patient Response	14.85	19.54	25.23	26.92	30.08	39.95
Chute Time	6.45	10.03	12.85	6.60	9.10	12.90
Scene Time	16.13	22.54	39.09	16.48	21.07	35.08
Transport Time	38.43	46.48	56.82	34.90	41.17	48.77
Total Length of Calls	105.70	131.19	171.62	129.43	152.91	172.55
Total Length of Transport Calls	132.18	157.85	182.52	141.29	157.83	173.87

GCEMS (Medics)

Mountain & Valley Report

Total Requests:	3,672		Total Responses:	3,601	(98%)
Mountain:	825		Mountain:	804	(97%)
Valley:	2,807		Valley:	2,761	(98%)





Greene County EMS Agency Activity Summary (continued)

Mountain & Valley Report

Mountain Requests: 825 Valley Requests: 2,807

	Mountain		Valley	
Transports	410	50%	1,316	47%
Non-Transport	394	48%	1,445	51%
Non-Responses	21	3%	46	2%

ALS Calls Response Times (in minutes)

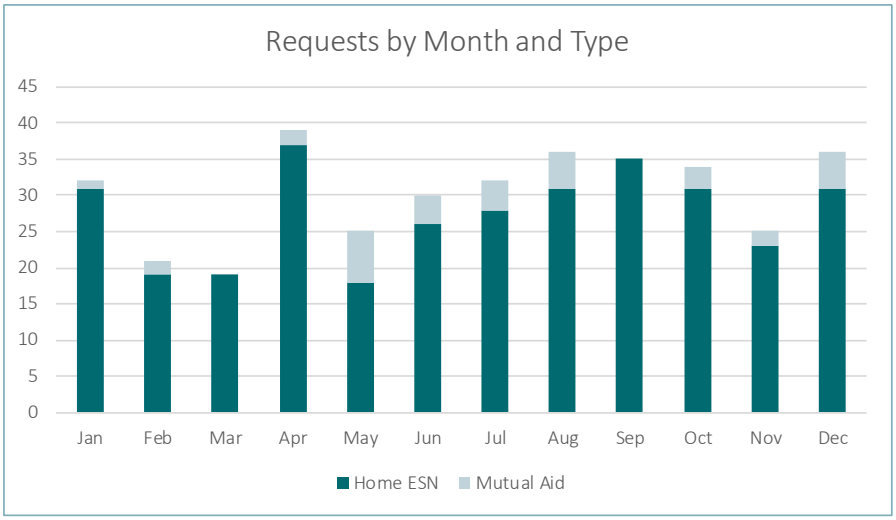
		Mountain			Valley		
Total Calls	2,988	50%	70%	90%	50%	70%	90%
Call Processing		2.48	3.32	4.65	2.42	3.08	4.22
Agency Response		15.73	19.00	23.87	8.50	11.33	15.60
Patient Response		18.95	22.12	27.89	11.17	14.12	18.60
Chute Time		1.71	2.33	3.25	1.63	2.17	3.00
Scene Time		17.37	22.63	32.48	15.13	19.18	26.20
Transport Time		42.58	50.56	68.11	24.88	30.83	41.14
Total Length of Calls		130.07	160.04	198.84	68.43	98.44	135.69
Total Length of Transport Calls		158.00	177.31	212.53	100.03	120.04	150.36

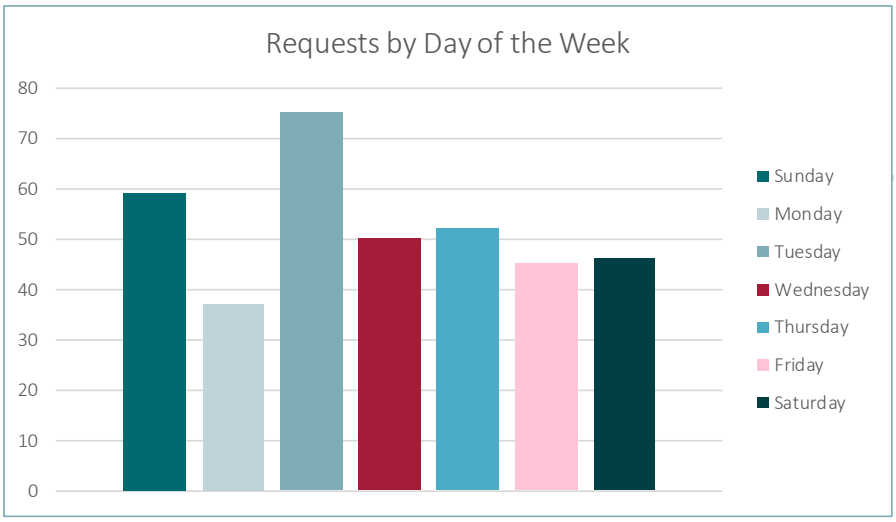
Other Calls Response Times Intervals (in Minutes)

		Mountain			Valley		
Total Calls	684	50%	70%	90%	50%	70%	90%
Call Processing		4.02	5.34	8.08	3.00	4.35	7.47
Agency Response		13.59	17.84	22.36	7.50	10.34	15.21
Patient Response		26.88	38.41	54.23	19.18	27.51	39.54
Chute Time		1.25	1.75	2.86	1.05	1.62	2.80
Scene Time		9.31	16.58	33.18	11.17	15.33	26.15
Transport Time		40.17	46.52	60.11	25.23	32.74	42.37
Total Length of Calls		126.61	152.97	194.90	84.85	119.85	155.92
Total Length of Transport Calls		153.73	173.94	196.29	120.30	137.87	172.30

Greenville Ambulance

Total Requests: 364 Total Responses: 197 (54%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	60	34	14	8	74	42
Late Workday (11a-3p)	64	39	20	11	84	50
Early Evening (3p-7p)	53	35	25	13	78	48
Evening (7p-11p)	38	25	29	18	67	43
Mid Night (11p-3a)	24	9	11	2	35	11
Late Night (3a-7a)	20	2	6	1	26	3

Greene County EMS Agency Activity Summary (continued)

Greenville

Home ESN Requests: 329 Mutual Aid Requests: 35

	Home ESN		Mutual Aid	
Transports	125	38%	15	43%
Non-Transport	52	16%	5	14%
Non-Responses	152	46%	15	43%

ALS Calls Response Times (in minutes)

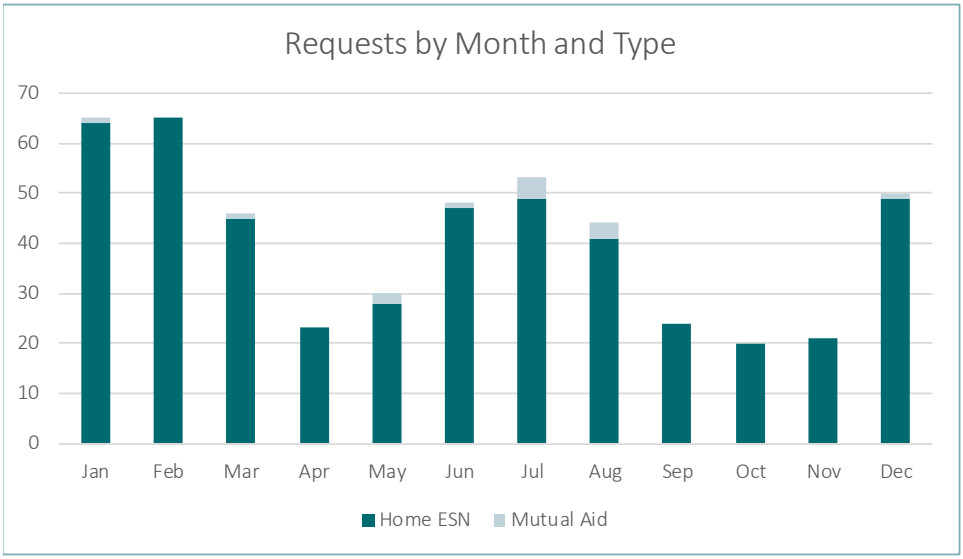
		Home ESN			Mutual Aid		
Total Calls	160	50%	70%	90%	50%	70%	90%
Call Processing		2.46	3.18	4.31	9.70	9.86	9.94
Agency Response		16.52	20.30	24.22	21.62	23.22	24.82
Patient Response		19.08	23.05	27.25	30.43	31.86	37.00
Chute Time		14.00	17.49	19.86	13.55	15.47	17.39
Scene Time		17.23	22.36	33.23	13.88	15.26	16.64
Transport Time		36.93	40.75	45.69	40.94	47.50	48.42
Total Length of Calls		118.63	144.62	172.31	147.47	168.75	173.58
Total Length of Transport Calls		145.68	158.84	186.48	169.74	171.95	175.22

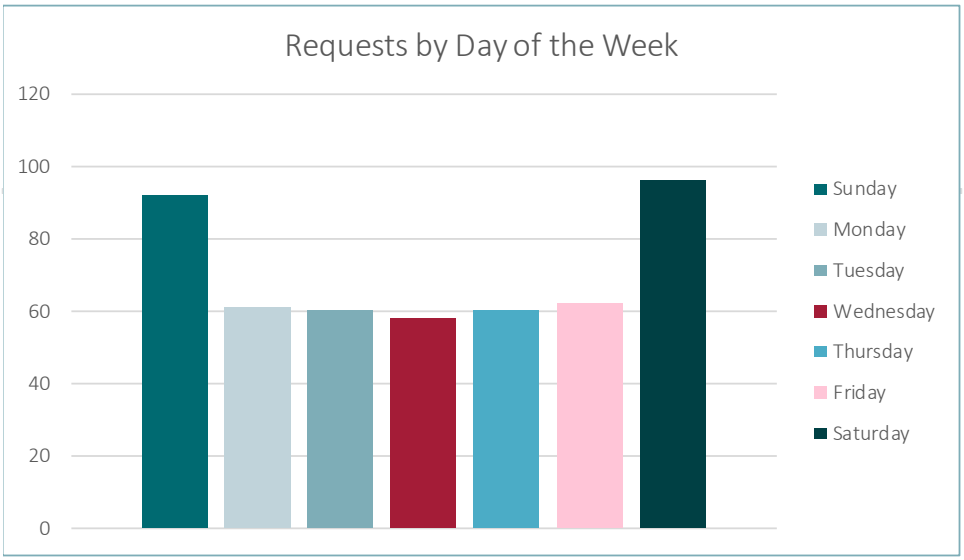
Other Calls Response Times Intervals (in Minutes)

		Home ESN			Mutual Aid		
Total Calls	204	50%	70%	90%	50%	70%	90%
Call Processing		2.58	3.60	5.33	3.21	5.20	8.21
Agency Response		20.55	24.58	29.20	27.38	32.18	36.38
Patient Response		23.93	27.69	32.23	33.63	36.71	52.65
Chute Time		15.33	18.82	23.36	17.22	20.39	24.60
Scene Time		20.60	26.43	40.92	11.83	17.39	20.92
Transport Time		38.43	41.08	45.48	34.68	37.59	46.49
Total Length of Calls		105.72	144.72	172.43	143.27	159.07	170.91
Total Length of Transport Calls		149.63	163.98	183.23	148.95	165.40	173.23

Hunter Ambulance

Total Requests: 489 Total Responses: 444 (91%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	53	50	33	28	86	78
Late Workday (11a-3p)	100	89	65	60	165	149
Early Evening (3p-7p)	75	63	42	40	117	103
Evening (7p-11p)	34	30	29	29	63	59
Mid Night (11p-3a)	22	20	14	14	36	34
Late Night (3a-7a)	17	17	5	4	22	21

Greene County EMS Agency Activity Summary (continued)

Hunter

Home ESN Requests: 476 Mutual Aid Requests: 13

	Home ESN		Mutual Aid	
Transports	299	63%	5	38%
Non-Transport	135	28%	5	38%
Non-Responses	42	9%	3	23%

ALS Calls Response Times (in minutes)

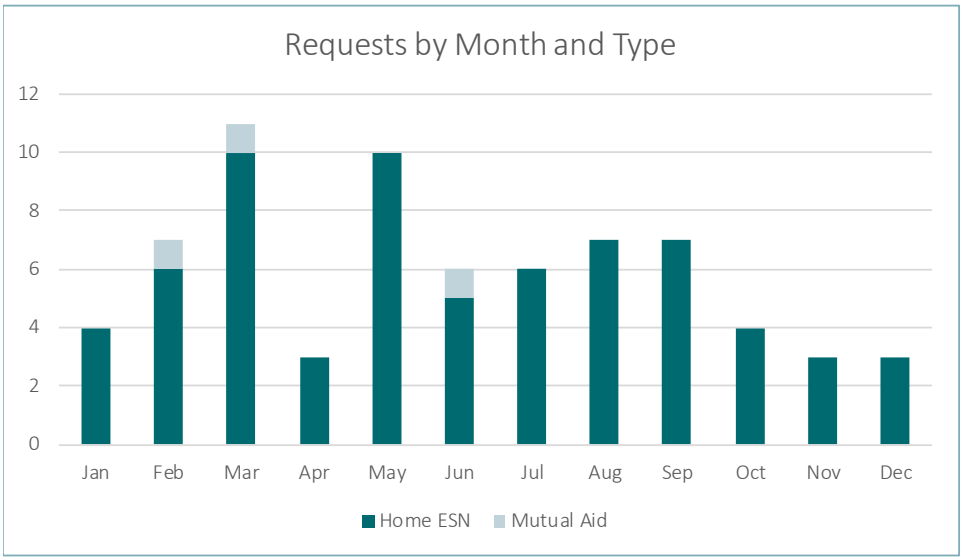
	Home ESN			Mutual Aid		
Total Calls 211	50%	70%	90%	50%	70%	90%
Call Processing	2.24	3.13	4.81	6.77	7.27	7.78
Agency Response	14.48	16.78	21.40	21.20	21.37	21.53
Patient Response	17.20	20.21	24.58	26.88	27.32	27.75
Chute Time	9.40	11.74	15.39	10.58	11.52	12.46
Scene Time	15.52	20.70	32.04	10.45	10.72	11.00
Transport Time	46.13	51.51	71.37	39.41	44.71	50.02
Total Length of Calls	144.67	167.47	203.03	133.27	134.99	136.72
Total Length of Transport Calls	157.67	184.98	207.31	135.43	136.29	137.15

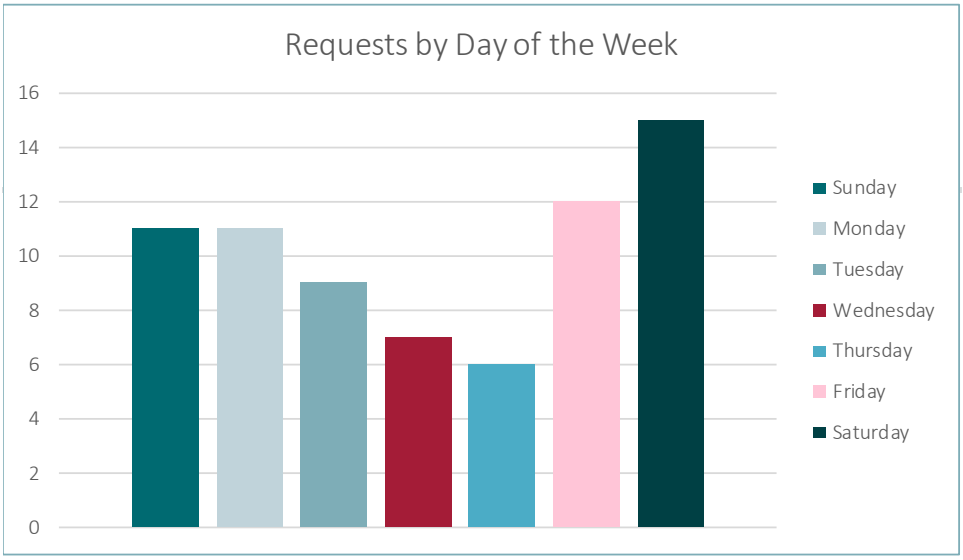
Other Calls Response Times Intervals (in Minutes)

	Home ESN			Mutual Aid		
Total Calls 278	50%	70%	90%	50%	70%	90%
Call Processing	2.35	3.35	4.59	4.01	4.74	5.71
Agency Response	15.31	18.30	23.19	8.55	11.92	15.48
Patient Response	18.52	21.65	29.15	15.95	20.61	52.31
Chute Time	10.26	12.70	15.43	6.62	7.41	8.19
Scene Time	13.87	17.01	29.90	23.82	24.15	24.48
Transport Time	44.03	46.44	62.40	45.48	54.84	64.19
Total Length of Calls	134.28	146.03	180.84	109.73	138.50	178.14
Total Length of Transport Calls	140.17	151.29	187.95	140.17	148.51	156.86

Lexington Ambulance

Total Requests: 71 Total Responses: 35 (49%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	9	2	4	1	13	3
Late Workday (11a-3p)	8	3	9	4	17	7
Early Evening (3p-7p)	12	9	7	3	19	12
Evening (7p-11p)	9	7	4	3	13	10
Mid Night (11p-3a)	5	3	2	0	7	3
Late Night (3a-7a)	2	0	0	0	2	0

Greene County EMS Agency Activity Summary (continued)

Lexington

Home ESN Requests: 68 Mutual Aid Requests: 3

	Home ESN		Mutual Aid	
Transports	20	29%	0	0%
Non-Transport	15	22%	0	0%
Non-Responses	33	49%	3	100%

ALS Calls Response Times (in minutes)

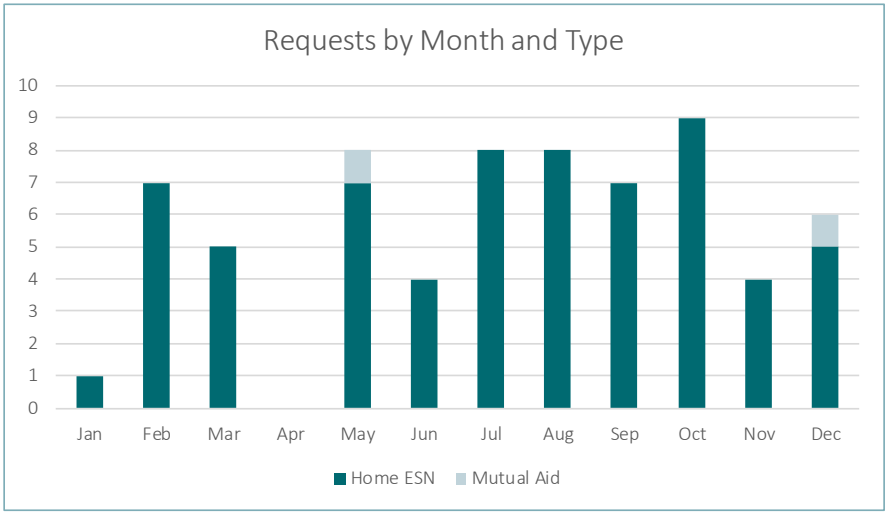
	Home ESN			Mutual Aid		
Total Calls 32	50%	70%	90%	50%	70%	90%
Call Processing	3.16	4.13	5.83	N/A	N/A	N/A
Agency Response	23.35	26.96	31.53	N/A	N/A	N/A
Patient Response	24.81	31.47	34.15	N/A	N/A	N/A
Chute Time	15.03	19.16	21.33	N/A	N/A	N/A
Scene Time	17.32	21.12	36.97	N/A	N/A	N/A
Transport Time	53.10	54.56	75.17	N/A	N/A	N/A
Total Length of Calls	80.24	172.68	226.83	N/A	N/A	N/A
Total Length of Transport Calls	184.30	208.01	231.93	N/A	N/A	N/A

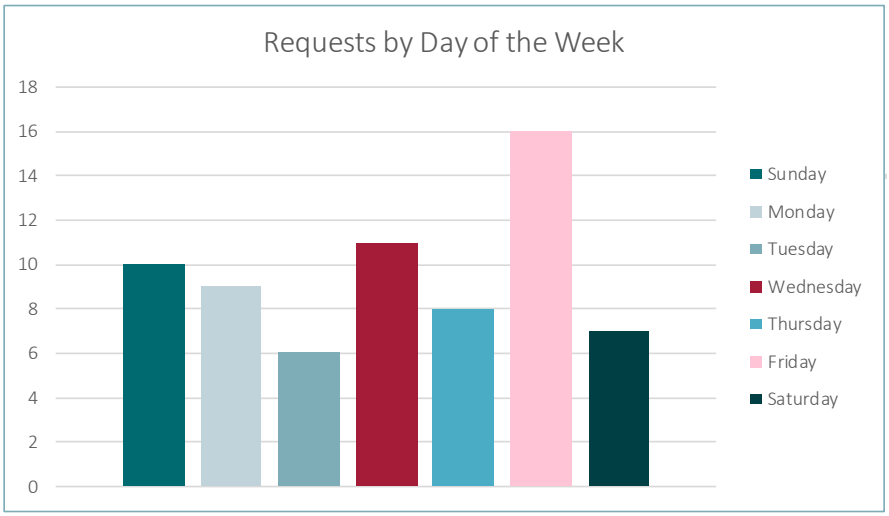
Other Calls Response Times Intervals (in Minutes)

	Home ESN			Mutual Aid		
Total Calls 39	50%	70%	90%	50%	70%	90%
Call Processing	2.88	3.69	4.69	5.80	6.53	7.27
Agency Response	15.52	20.07	21.16	N/A	N/A	N/A
Patient Response	20.88	23.81	32.48	N/A	N/A	N/A
Chute Time	13.03	15.17	16.41	N/A	N/A	N/A
Scene Time	16.85	49.75	134.04	N/A	N/A	N/A
Transport Time	46.01	60.94	66.59	N/A	N/A	N/A
Total Length of Calls	80.15	135.26	231.73	20.50	51.17	81.83
Total Length of Transport Calls	187.36	235.25	312.23	N/A	N/A	N/A

Prattsville Ambulance

Total Requests: 67 Total Responses: 9 (13%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	18	1	3	1	21	2
Late Workday (11a-3p)	4	0	3	1	7	1
Early Evening (3p-7p)	12	2	4	1	16	3
Evening (7p-11p)	7	2	4	1	11	3
Mid Night (11p-3a)	5	0	2	0	7	0
Late Night (3a-7a)	4	0	1	0	5	0

Greene County EMS Agency Activity Summary (continued)

Prattsville

Home ESN Requests: 65 Mutual Aid Requests: 2

	Home ESN		Mutual Aid	
Transports	3	5%	0	0%
Non-Transport	6	9%	0	0%
Non-Responses	56	86%	2	100%

ALS Calls Response Times (in minutes)

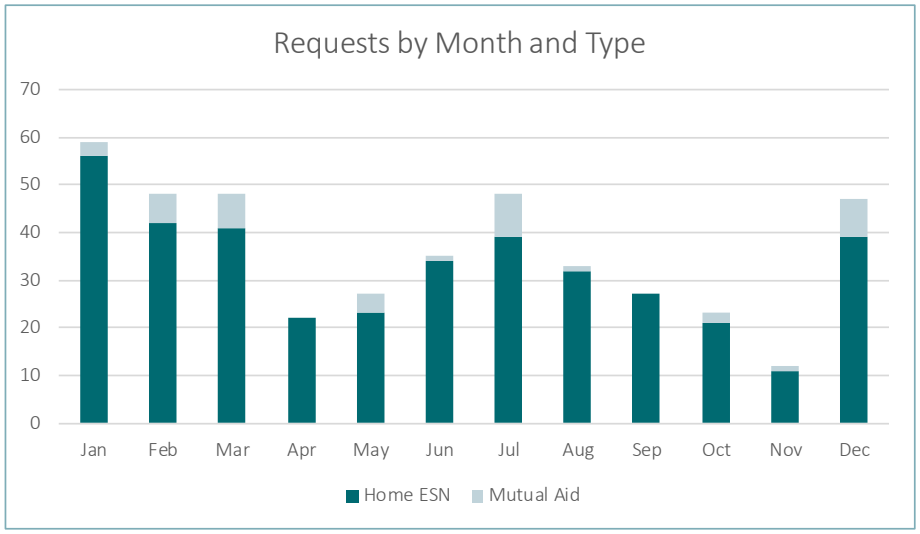
		Home ESN			Mutual Aid		
Total Calls	32	50%	70%	90%	50%	70%	90%
Call Processing		2.95	3.68	4.92	N/A	N/A	N/A
Agency Response		14.78	15.05	36.86	N/A	N/A	N/A
Patient Response		16.50	17.78	40.39	N/A	N/A	N/A
Chute Time		10.20	10.89	14.36	N/A	N/A	N/A
Scene Time		26.50	26.84	27.18	N/A	N/A	N/A
Transport Time		85.57	90.82	96.07	N/A	N/A	N/A
Total Length of Calls		26.95	49.54	108.63	39.55	39.55	39.55
Total Length of Transport Calls		169.43	170.10	170.77	N/A	N/A	N/A

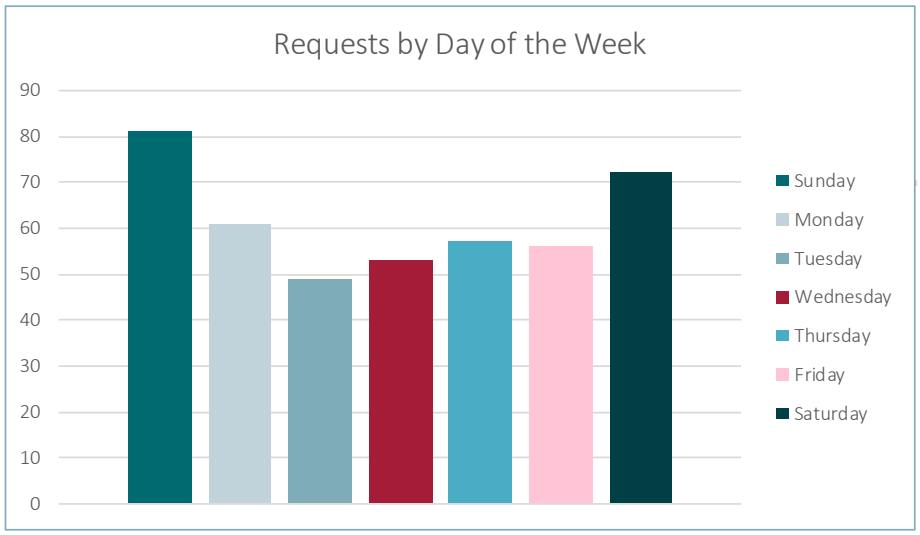
Other Calls Response Times Intervals (in Minutes)

		Home ESN			Mutual Aid		
Total Calls	35	50%	70%	90%	50%	70%	90%
Call Processing		2.60	3.28	5.05	2.95	2.95	2.95
Agency Response		13.03	15.97	23.47	N/A	N/A	N/A
Patient Response		16.47	21.08	28.65	N/A	N/A	N/A
Chute Time		8.02	10.58	21.67	N/A	N/A	N/A
Scene Time		13.90	13.90	13.90	N/A	N/A	N/A
Transport Time		N/A	N/A	N/A	N/A	N/A	N/A
Total Length of Calls		24.35	35.78	61.91	N/A	N/A	N/A
Total Length of Transport Calls		N/A	N/A	N/A	N/A	N/A	N/A

Windham Ambulance

Total Requests: 429 Total Responses: 383 (89%)





Requests & Responses by Time of Day and Week Day

	Monday - Friday		Saturday & Sunday		Total	
	Request	Response	Request	Response	Request	Response
Early Workday (7a-11a)	55	51	29	26	84	77
Late Workday (11a-3p)	93	84	44	33	137	117
Early Evening (3p-7p)	54	48	31	25	85	73
Evening (7p-11p)	50	47	26	25	76	72
Mid Night (11p-3a)	17	17	17	14	34	31
Late Night (3a-7a)	7	7	6	6	13	13

Greene County EMS Agency Activity Summary (continued)

Windham

Home ESN Requests: 387 Mutual Aid Requests: 42

	Home ESN		Mutual Aid	
Transports	213	55%	16	38%
Non-Transport	130	34%	24	57%
Non-Responses	44	11%	2	5%

ALS Calls Response Times (in minutes)

		Home ESN			Mutual Aid		
Total Calls	187	50%	70%	90%	50%	70%	90%
Call Processing		2.17	2.94	4.23	7.35	8.38	9.42
Agency Response		10.82	13.92	20.90	18.53	19.90	25.26
Patient Response		13.15	16.36	23.57	24.35	28.74	45.38
Chute Time		1.23	1.75	2.36	0.91	1.35	1.88
Scene Time		16.73	21.10	29.25	10.00	14.98	21.10
Transport Time		49.53	62.92	69.45	42.65	46.89	57.35
Total Length of Calls		139.53	169.67	199.51	129.69	146.74	170.80
Total Length of Transport Calls		162.80	182.83	202.98	135.38	150.74	166.48

Other Calls Response Times Intervals (in Minutes)

		Home ESN			Mutual Aid		
Total Calls	242	50%	70%	90%	50%	70%	90%
Call Processing		2.08	2.98	4.10	2.37	6.11	7.67
Agency Response		12.22	14.77	20.51	20.40	26.52	31.33
Patient Response		15.15	18.59	26.37	36.00	39.62	50.11
Chute Time		1.28	1.66	3.07	1.11	1.34	1.52
Scene Time		15.18	20.77	33.06	17.32	32.32	50.23
Transport Time		45.35	59.48	68.71	45.26	56.83	69.56
Total Length of Calls		124.15	156.33	210.99	99.73	155.14	208.14
Total Length of Transport Calls		151.76	175.22	223.48	158.36	162.63	228.27

Appendix C: Agency Activity Summary by ESN

The two tables that follow break down which agencies responded to calls in the different ESNs. The first table is the number of requests by agency by ESN. The second table is the number of responses by agency by ESN.

Greene County EMS Agency Activity Summary

Requests by ESN and Agency

ESN Name	Unique Events	Ashland	Cairo	Catskill	Coxsackie	Durham	East Jewett	Greenville	Hunter	Lexington	Medics	New Baltimore	Prattsville	Tannersville	Windham
Ashland	55	**55**	0	0	0	0	0	0	0	0	39	0	0	0	1
Athens Town	59	0	0	**58**	2	0	0	0	0	0	35	0	0	1	0
Athens Village	163	0	0	**162**	8	0	0	0	0	0	88	0	0	0	0
Cairo Town	803	0	**787**	41	3	60	0	1	2	0	430	0	0	0	10
Catkill Town	1,073	0	14	**1,066**	9	0	0	0	0	0	506	0	0	1	0
Catskill Village	1,037	0	12	**1,029**	15	0	0	0	0	0	523	0	0	0	1
Coeymans	2	0	0	0	2	0	0	0	0	0	1	0	0	0	0
Coxsackie Town	484	0	0	58	**470**	0	0	2	1	0	310	1	0	0	0
Coxsackie Village	390	0	0	30	**387**	0	0	1	0	0	181	0	0	0	0
Earlton	110	0	1	4	**108**	0	0	6	1	0	67	0	0	0	0
East Durham	231	0	24	3	0	**210**	0	4	0	0	132	0	0	0	3
East Jewett	44	0	0	0	0	0	**42**	0	3	0	3	0	0	1	42
Freehold	82	0	3	1	2	28	0	**82**	0	0	49	0	0	0	0
Greenville	250	0	2	1	22	77	0	**247**	0	0	143	0	0	0	1
Haines Falls	65	1	0	1	0	0	0	0	**64**	0	30	0	0	64	1
Hensonville	57	4	1	0	0	0	0	0	0	0	4	0	0	0	**57**
Hunter	227	5	1	6	0	0	0	2	**225**	2	129	1	0	79	10
Jewett	46	4	0	0	0	0	1	0	3	1	7	0	0	1	46
Kiskatom	173	0	7	***167***	0	2	0	2	1	0	93	0	0	0	0
Lanesville	11	0	0	0	0	1	0	0	**10**	0	5	0	0	10	0
Leeds	301	1	13	***294***	2	1	0	0	0	0	162	0	0	0	0
Lexington	69	*62*	0	0	0	0	0	0	0	68	40	0	1	1	0
Malden West Camp	16	0	0	15	0	0	0	0	0	0	6	0	0	0	0
Medway Grapeville	92	0	0	1	**92**	0	0	7	0	0	57	2	0	0	0
New Baltimore	201	0	0	4	33	0	0	1	0	0	121	167	0	0	0
Oakhill Durham	122	0	7	1	0	**121**	0	4	0	0	68	0	0	0	3
Palenville	88	0	2	***87***	0	0	0	0	2	0	52	0	0	0	0
Prattsville	68	*62*	0	0	0	0	0	0	0	0	39	0	**65**	0	1
Ravena	8	0	0	0	3	0	0	0	0	0	4	1	0	0	0
Rensselaerville	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Round top	170	0	**170**	11	1	12	0	0	0	0	89	0	0	0	0
Tannersville	184	0	0	4	0	0	0	0	**177**	0	104	0	0	146	7
West Athens	139	0	0	***135***	7	0	0	0	0	0	87	0	0	0	0
Windham	248	34	2	0	0	3	0	0	0	0	33	0	0	0	**242**
Unknown	7	0	0	5	0	1	0	0	0	0	5	0	0	0	1
Unknown	2	0	0	0	1	0	0	0	0	0	1	1	0	0	0
Unknown	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Unknown	56	1	0	11	5	13	0	5	0	0	29	0	1	0	3
Total	**7,135**	**229**	**1,046**	**3,195**	**1,172**	**531**	**43**	**364**	**489**	**71**	**3,672**	**173**	**67**	**304**	**429**

Bold Underline = Home ESN, *Italics = Contracted ESN*

Greene County EMS Agency Activity Summary

Responses by ESN and Agency

ESN Name	Unique Events	Ashland	Cairo	Catskill	Coxsackie	Durham	East Jewett	Greenville	Hunter	Lexington	Medics	New Baltimore	Prattsville	Tannersville	Windham
Ashland	55	***54***	0	0	0	0	0	0	0	0	39	0	0	0	1
Athens Town	59	0	0	**57**	1	0	0	0	0	0	35	0	0	0	0
Athens Village	163	0	0	**158**	7	0	0	0	0	0	86	0	0	0	0
Cairo Town	803	0	**692**	38	2	57	0	1	1	0	417	0	0	0	10
Catkill Town	1,073	0	12	**1,039**	8	0	0	0	0	0	499	0	0	0	0
Catskill Village	1,037	0	12	**987**	13	0	0	0	0	0	517	0	0	0	1
Coeymans	2	0	0	0	2	0	0	0	0	0	1	0	0	0	0
Coxsackie Town	484	0	0	49	**421**	0	0	1	1	0	303	0	0	0	0
Coxsackie Village	390	0	0	28	**343**	0	0	1	0	0	178	0	0	0	0
Earlton	110	0	1	3	**106**	0	0	5	1	0	67	0	0	0	0
East Durham	231	0	20	2	0	**198**	0	3	0	0	132	0	0	0	3
East Jewett	44	0	0	0	0	0	31	0	3	0	3	0	0	1	40
Freehold	82	0	0	1	2	27	0	**47**	0	0	48	0	0	0	0
Greenville	250	0	0	1	21	71	0	**130**	0	0	140	0	0	0	1
Haines Falls	65	0	0	1	0	0	0	0	**59**	0	30	0	0	50	1
Hensonville	57	4	1	0	0	0	0	0	0	0	4	0	0	0	**52**
Hunter	227	4	0	6	0	0	0	1	**205**	0	120	1	0	56	9
Jewett	46	3	0	0	0	0	0	0	1	0	4	0	0	1	43
Kiskatom	173	0	7	**160**	0	2	0	1	1	0	93	0	0	0	0
Lanesville	11	0	0	0	0	0	0	0	**10**	0	5	0	0	7	0
Leeds	301	1	8	**289**	2	1	0	0	0	0	161	0	0	0	0
Lexington	69	*46*	0	0	0	0	0	0	0	**35**	40	0	0	0	0
Malden West Camp	16	0	0	15	0	0	0	0	0	0	6	0	0	0	0
Medway Grapeville	92	0	0	1	**87**	0	0	3	0	0	56	0	0	0	0
New Baltimore	201	0	0	3	27	0	0	1	0	0	116	151	0	0	0
Oakhill Durham	122	0	5	1	0	**110**	0	1	0	0	67	0	0	0	3
Palenville	88	0	2	**84**	0	0	0	0	2	0	51	0	0	0	0
Prattsville	68	*59*	0	0	0	0	0	0	0	0	39	0	**9**	0	1
Ravena	8	0	0	0	2	0	0	0	0	0	3	1	0	0	0
Rensselaerville	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Round top	170	0	**150**	11	0	11	0	0	0	0	89	0	0	0	0
Tannersville	184	0	0	3	0	0	0	0	**160**	0	103	0	0	118	7
West Athens	139	0	0	**133**	6	0	0	0	0	0	87	0	0	0	0
Windham	248	32	2	0	0	3	0	0	0	0	30	0	0	0	**208**
Unknown	7	0	0	5	0	1	0	0	0	0	5	0	0	0	1
Unknown	2	0	0	0	1	0	0	0	0	0	1	1	0	0	0
Unknown	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	56	0	0	7	3	11	0	2	0	0	26	0	0	0	2
Total	**7,135**	**203**	**912**	**3,082**	**1,054**	**493**	**31**	**197**	**444**	**35**	**3,601**	**154**	**9**	**233**	**383**

Bold & Underline = Home ESN, *Italics = Contracted ESN*

Appendix D: Response Time Reference Documents