

FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

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Memorandum

To: All Readers

From: Susan L Brown, Homeland Security Program Manager

RE: Revised FRCOG RECC Feasibility Assessment Report

Date: August 5, 2011

The attached document is a truncated version of the FRCOG RECC Feasibility Assessment Report provided to the RECC Feasibility Study Evaluation Committee by GeoComm Inc on July 18th. The complete version of this document was referenced in a presentation of the current status of the Feasibility Study to the FRCOG Council at their quarterly meeting on Thursday July 21st.

This truncated version, with potentially sensitive information redacted, is provided for public officials to have a more in-depth yet broad overview of the status of the project to date. Sensitive information includes specifics regarding the technological capabilities and placement of public safety communications equipment throughout the region.

The information provided in this study is GeoComm Inc's first assessment of possible models of improvement to current public safety dispatching in Franklin County. GeoComm is in the process of developing the models in further detail and will present a Draft Feasibility Report, including a recommended avenue of improvement, at a public meeting on Thursday, August 18th at 7pm at Franklin Technical High School in Turners Falls. The report for the meeting will be available for review prior to the meeting. It will be posted to frcog.org as soon as it is delivered by GeoComm.

If you have any questions, please contact Susan Brown at 413.774.3167 x117 or sbrown@frcog.org.

Regional Emergency Communications Center Draft Feasibility Assessment Report, Truncated

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Included Content

- Table of Contents
- Executive Overview
- Governance
- Feasibility Assessment
- Financial Analysis

Excluded Content

- GIS
- Technology Assessment
- Interoperability Assessment
- 3-1-1

It is important to note that there may be references in the attached document to sections of the original report that are not included.

GeoComm

Franklin Regional Council of Governments

Regional Emergency Communications Center
Draft Feasibility Assessment Report

July 2011



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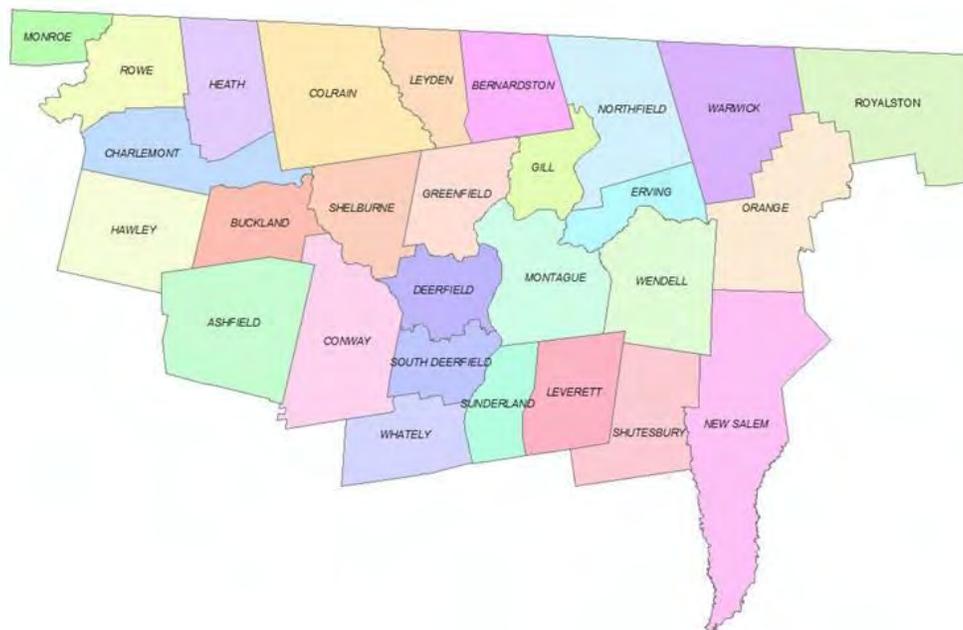


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Executive Overview

In February 2011, GeoComm began a partnership with public safety agencies within the Franklin Regional Council of Governments (FRCOG) community to conduct a comprehensive review of existing Public Safety Answering Point (PSAP) operations and technology with a goal of determining the feasibility of consolidating none, some, or all of the 9-1-1 emergency dispatch centers and public safety communications functions serving the region. The 26 FRCOG municipalities represented in the Regional Emergency Communications Center (RECC) Feasibility Study include:

Ashfield	Erving	Monroe	Shutesbury
Bernardston	Gill	Montague	Sunderland
Buckland	Greenfield	New Salem	Warwick
Charlemont	Hawley	Northfield	Wendell
Colrain	Heath	Orange	Whately
Conway	Leverett	Rowe	
Deerfield	Leyden	Shelburne	



The Town of Royalston is not an official participant in the feasibility study, GeoComm recognizes that it receives dispatch services from the Shelburne Control PSAP and therefore is an indirect stakeholder.



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The preliminary findings and discussions contained in this report provide the region with an appropriate framework for consolidation decision making and future planning. While there are effective public safety communications services provided under the current structure, there are many benefits to be obtained by further collaboration among the agencies.

When looking at consolidation feasibility, it is important that the stakeholders understand that there are a number of advantages to regional consolidation, such as:

- Transition to consistent service levels across the entire region by improving the quality of service to the highest levels
- Opportunity to coordinate support activities for PSAPs (training, public education, technology implementations and/or upgrades, Standard Operating Procedures (SOPs), Master Street Address Guide (MSAG) maintenance, and Geographic Information System (GIS) standards)
- Reduction in the transfer of 9-1-1 calls between PSAPs, resulting in quicker call processing, dispatch and response times, as well as reducing the potential for dropped calls, information loss on transfer and confusion to the callers
- Improvement in the coordination of public safety agency activities and the effectiveness of inter-agency communications (also known as “communications interoperability”)
- Enhanced resource management during large-scale incidents, natural disasters, and multi-jurisdiction/multi-agency and discipline incidents from a single point of control
- Improved services and cost efficiencies for all agencies through economies of scale. Long-term cost efficiencies from eliminating duplicate and expensive technology such as Computer Aided Dispatch (CAD), Record Management Systems (RMS), 9-1-1 answering equipment, radio consoles, logging recorders, etc.

GeoComm has examined various consolidation options to achieve the goals of participating communities. The primary goal of each option is to ensure the highest quality of emergency communications services with a secondary goal of identifying potential cost efficiencies to the community taxpayers.

Feasibility Assessment

GeoComm has identified three potential results of this feasibility study through a culmination of data collection, interviews, observations, PSAP visits, examination of industry standards and best practices, and stakeholder meetings. The three models presented for further consideration include:

- Model 1 – No changes in current PSAPs structure
- Model 2 – Consolidating Montague Police Department PSAP and Greenfield Police Department PSAP while Shelburne Control remains a separate Primary PSAP
- Model 3 – Creating a new countywide RECC serving all public safety entities in Franklin County



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One of GeoComm's preliminary findings is the need for improved communication and coordination between the public safety agencies in Franklin County. GeoComm has provided discussion and recommendations relative to governance as a part of this report.

For each of the models identified, GeoComm recommends expanding the role of the Franklin County Emergency Communications Systems Oversight Committee (FCECS) to improve communications and coordination among the public safety agencies. The committee should include representation from all public safety agencies in the region. This committee should meet regularly to address issues such as SOPs, MSAG standards and maintenance, collaborative training opportunities, etc. This committee should be present in any of the models presented and is the first step in a formalized governance structure for the region in Model 2 and 3.

For each model presented, the region should understand that the political environment in which consolidation will occur is a vital factor to consider. In PSAP consolidation efforts, the establishment of an appropriate, effective, and balanced governance structure is the key to long-term success. As such, the existing multi-agency PSAP in Franklin County, Shelburne Control would also benefit from an improved governance framework regardless of any other consolidation activity.

In addition to governance, there are a number of other crucial factors that must be considered in any consolidation feasibility discussion. These areas include:

- Impact on public safety communications personnel
- Impact on field responders
- Leave behind duties at all affected agencies
- Fair and equitable cost-sharing models
- Equipment and technology issues
- Training plans
- Supervision and management structure
- Transition
- Continuity of operations
- Responsibilities of a proposed RECC

This report will discuss the crucial elements of considering feasibility including operations, training, technology, facility, GIS, and the financial impact for each model presented. GeoComm will present the advantages and disadvantages of each scenario so that stakeholders can appropriately assess the impact of each model. This report will explain how each level of consolidation will affect the array of services provided through the current PSAPs and compare the current PSAP structure to each option.



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GIS

In the previous report, GeoComm presented a GIS Data Report Card that outlined a number of issues relating to the synchronization of MSAG and GIS data. The main issue was the lack of standards for maintenance across the different databases. This issue is not unique to the FRCOG region. As further explained in the report, there is an opportunity for the local communities to collaborate and construct standards and consistent rules in the region for how the MSAG components are developed. By developing MSAG standards based on best practices, it will benefit the region with its statewide efforts to transition Next Generation 9-1-1 (NG 9-1-1).

Financial Analysis

The report provides a financial comparison of operations, staffing and facility costs for the Greenfield, Montague, and Shelburne Control PSAPs. It also provides a high-level overview of the financial impact for each of the three models listed.

To summarize the financial analysis section of this report, the three models reflects the following financial impact on the participating agencies:

- Model 1: As it currently stands among the participating PSAPs, approximately \$1,860,975 is spent annually to fund the operation. Of this amount, \$737,612 is contributed by the Massachusetts State 9-1-1 Department and \$1,123,363 is funded through local budget processes.
- Model 2: Under the model 2 scenario, the total annual costs for the towns of Greenfield and Montague after accepting the 9-1-1 support grant is \$912,904. Model 2 would cost the Town of Greenfield an additional \$2,351 and the Town of Montague an additional \$53,209 annually (before considering the advantage of any incentive grants that will apply).
- Model 3: The annual recurring costs of a new RECC are projected to be \$1,833,160, not including construction of a new facility, as it is anticipated the construction of a new facility would be funded through development grants. There is an overall cost of \$1,095,548 for local agencies after accepting the 9-1-1 support grant and the incentive grant for the agencies currently serviced by Shelburne Control. The incentive grant for the new RECC including Greenfield and Montague will result in additional funding but the specific amount is unknown.

Enhancing public safety service in the region should be the primary goal for consolidation. In addition to enhanced service to public safety and the communities, there will also be a cost-savings to the state 9-1-1 department due to the reduction of 9-1-1 answering equipment and trunks for call delivery. While these items are absorbed in the state 9-1-1 budget, it should be considered when discussing the feasibility options for consolidation.



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Technology Overview

This report contains an overview of the public safety communications technology current utilized within Franklin County along with the impact of each consolidation model on this technology. A major asset of the region is the FRCOG radio system. To the credit of the participating agencies, the radio system is well constructed, well maintained and well managed. This radio system provides an excellent foundation for public safety communications regardless of any consolidation model. The report will also identify computer aided dispatch (CAD) and console issues that must be addressed. Where significant additional technology is required, GeoComm will provide high-level budgetary pricing in support of the feasibility determination.

Interoperability Assessment

The interoperability assessment activities undertaken as part of this project are continuing. The radio system mentioned above is a crucial component to effective interoperability in the FRCOG region. Over the next phase of this project, further assessment of governance, training, exercises and standard operating procedures will be conducted. GeoComm anticipates providing a full interoperability assessment in the final feasibility report along with the positive and negative impacts consolidation would have on regional interoperability.

3-1-1

At the request of FRCOG, this report contains information relative to implementing a regional 3-1-1 system in Franklin County. 3-1-1 was established several years ago as a non-emergency number to request public safety assistance. One of the early goals was to relieve over-use of 9-1-1 systems. Since the early implementations, 3-1-1 has evolved and most new systems are designed and managed as a customer service number for all government services. GeoComm has provided a summary of 3-1-1 and information specific to Franklin County that will help facilitate future regional discussions for moving toward consideration of a shared system.

Summary

In summary, GeoComm presents this interim report in order to provide the background detail of options for the region and evaluate the impact on governance, operations, technology, sustainability, and financial for feasible consolidation models for the region. Our team will continue to actively explore the funding opportunities mentioned above. Consolidation is a major decision; however, most importantly it is a decision that can result in service level improvements, improved communication, cost-savings, and response consistency.



The selection of an appropriate governance structure is one of the most crucial elements of successful transition to a multi-jurisdictional public safety communications operation. All participating agencies must develop confidence in their ability to appropriately influence the level of service provided to member agencies and the public. Either through direct or collaborative representation, agencies must have a forum for active participation in the policy development for and management of dispatch services. This is a complex area to develop – but one that has proven time and time again that it can be successful if properly structured.

GeoComm reported in its Technical Memorandum of Existing Conditions for the Franklin Regional Council of Governments Regional Emergency Communications Center Feasibility Study that it had met with multiple stakeholder representatives throughout the project. Members of the GeoComm Team conducted on-site interviews and observations at the Greenfield, Montague, and Shelburne Control Primary Public Safety Answering Points (PSAPs), as well as the Orange Fire Department and Turners Falls Fire Department Secondary PSAPs. GeoComm also visited the Baystate Health Ambulance (BHA) dispatch center. GeoComm also interviewed both operational and technical representatives at the Franklin County Sheriff's Department. Each of the participating agencies has responsibility for their own general public safety departmental administrative, technical, staffing, training, and budgeting functions. The functions inherent in call taking and dispatching of services in response to 9-1-1 calls is just one subset of the total services required within the present environment.

Regional Coordination and Cooperation

GeoComm noted that the emergency response agencies across Franklin County work cooperatively to provide the best services available. This was mentioned at both the police and fire chief meetings and this level of cooperation is best demonstrated through the Franklin County Emergency Communications Systems Oversight Committee (FCECS). The FCECS currently operates as a regional committee with representation from police, fire, and Emergency Medical Services (EMS). The FCECS also has representation from Franklin County municipal officials through the sitting member from the Franklin Regional Council of Governments Executive Committee. The committee currently provides governance over the regional radio system.

As noted in its meeting with GeoComm on May 10, 2011, there are services that the State 9-1-1 Department provides its constituents that are not always accessed by the local communities. During the presentation of the Geographic Information Systems (GIS) data report card, it was noted that there are gaps in standards between the Master Street Address Guide (MSAG) data and the GIS data. Each city and town has an assigned municipal coordinator for 9-1-1 services that should be responsible for insuring the data is accurate but not every coordinator is responsive or trained in the services provided.



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Given the limited support staff resources currently dedicated to the provision of emergency communications services within the study jurisdictions, GeoComm recommends that FCECS expand its scope to collaborate on issues affecting the PSAPs. As stated in the Executive Overview section of this report, those responsibilities would require active participation which could include:

- Coordination of training opportunities for agencies to meet the basic Telecommunicator requirements of the state and to provide certificated dispatcher training for specific police, fire, and EMS disciplines that will be consistent across the region
- Coordination of regional Standard Operating Procedures (SOPs), Memorandum of Understandings (MOUs), etc.
- Management of the multiple databases (GIS, MSAG, Wireless Routing, Next Generation 9-1-1 (NG9-1-1) Routing, etc.) that will be required for call routing as the 9-1-1 system migrates to Next Generation services
- Coordination of regional Continuity of Operations Planning (COOP)
- Coordination of regional public education
- Coordination with the Massachusetts State 9-1-1 Department
- Management of a regional radio service agreement to cover dispatch consoles and subscriber units
- Development of model public safety ordinances that can be shared with local agencies such as a radio system coverage building ordinance to ensure Franklin Regional Council of Governments (FRCOG) radios will work in new/remodeled buildings

Improved regional coordination of 9-1-1 and public safety dispatch services can provide significant benefit to Franklin County regardless of the level of consolidation. As noted within the Existing Conditions Report, the Massachusetts State 9-1-1 Department has suggested deployment of NG9-1-1 will occur within three to five years requiring many of the above opportunities be facilitated.

There are several models of 9-1-1 governance structure across the country that are successful in providing support services to local jurisdictions. However, based on the size of the FRCOG region, the history of outstanding cooperation among all the participating emergency response agencies, the positive track record of the FCECS, its expanded scope should include coordination activities among local PSAP(s) with a goal of providing a standard level of emergency services across Franklin County.

Because FCECS is an existing organization with a focus on emergency communications, GeoComm believes it is a natural fit for the committee to expand its scope. Coupled with this expansion, the committee must examine its current makeup to ensure adequate representation as discussed above.



GeoComm believes that the expanded scope is relevant to each of the three models proposed for consideration in the report, although the structure would vary based on the specific model that is implemented.

- Model 1 – No changes in current PSAP structure
- Model 2 – Consolidating Montague Police Department PSAP and Greenfield Police Department PSAP into a Primary PSAP while Shelburne Control remains a separate Primary PSAP
- Model 3 – Creating a new countywide Regional Emergency Communications Center (RECC) serving all public safety entities in Franklin County

This report provides the advantages and disadvantages of each model as well as the governance and financial impact.

During the first site visits, GeoComm met with the police and fire chiefs from across the region. There was much discussion regarding the level of service and the financial impact on the jurisdictions. The chiefs, as a whole are very proud of their ability to work well together. The chiefs expressed desire to have input into the development of policies and procedures as to how the dispatch services are provided for their communities. Agency chiefs indicated they could support consolidation if they believe it will enhance the level of service to the citizens of their community.

Most agencies are experiencing various types of budget challenges. Currently, there are 64 entities, serving 29 distinct political subdivisions that receive dispatch services at no direct cost from Shelburne Control, which is a Massachusetts State Police (MSP) managed agency. The state 9-1-1 dollars as assessed are provided to MSP. The participating agencies served by Shelburne Control indicated they do not have additional funding to support a structure that would require their community to contribute financially as long as current operations are deemed adequate.

Model 1 Governance

Under this scenario, there would be no formal governance changes. However, GeoComm recommends expanding the role of the FCECS to improve communications and coordination among the public safety agencies. The FCECS would focus on issues that are present across the county and solutions that would benefit the region as a whole such as interoperable communications, MSAG standards and maintenance, GIS maintenance, preparation for NG9-1-1 deployment, etc. This effort would frame the public's expectation of service as well as accomplish the coordination of training, technology, interoperability, and associated database maintenance.



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Although no PSAP structural changes are recommended under this scenario, GeoComm strongly recommends a renewed commitment by the MSP to create and support a truly collaborative-governance of Shelburne Control. The MSP and Shelburne Control provide extensive public safety communications services to the public safety agencies in Franklin County at no direct charge to those agencies.

Although this fact is widely acknowledged and appreciated by the participating public safety agencies, there is a significant gap between the levels of operational and management input expected by these agencies and the levels actually received. GeoComm received a blank Memorandum of Understanding (MOU) from the MSP as a sample of the document that exists between them and each of the agencies dispatched by Shelburne Control. It has been communicated to GeoComm by MSP representatives that an advisory board consisting of Shelburne Control customer agencies exists consisting of a single representative from each discipline served by Shelburne Control.

Several Shelburne Control customer agencies that participated in the various meetings and interviews expressed concern about the perceived lack of common Standard Operating Procedures (SOPs), limitations on radio use, and lack of input from customer agencies in general. Discouragement was expressed over the lack of ability to proactively influence dispatch services within their communities. There is significant room for improvement through the establishment of user groups, direct data transfer, fully interoperable radio systems, and jointly developed SOPs.

To alleviate this concern, GeoComm recommends a renewed commitment and collaborative governance through the user advisory board structure consisting of representatives from each of the agencies dispatched by Shelburne Control. This advisory board should meet on a monthly basis to provide operations and management input to the MSP. Formal by-laws and definition of the Shelburne Control Advisory Committee's purpose, makeup, and authority should exist. The Shelburne Control PSAP Manager should be required to attend these meetings and executive level staff from MSP should attend periodically. The advisory board should be required to review and comment on SOPs, technology improvements, and annual budgets. Minutes should be taken of these meetings to document the issues discussed and what decisions were reached.

Model 2 Governance

The success or failure of any PSAP consolidation is directly influenced by the type of governance structure. It is imperative that all public safety agencies served by the consolidated PSAP have a voice in the delivery of communications services impacting their agencies. Generally, there are two major categories of governance that must be addressed. First, the formation of a policy level governance group will establish authority for foundational items such as budget, cost-sharing methodologies, personnel issues such as organizational structure, collective bargaining, and compensation.



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The policy governance level also would determine when other agencies are able to join the consolidated operation and under what terms and conditions. In Model 2, GeoComm recommends that these policy issues be determined by the executive town leadership of Greenfield and Montague with input of the agency directors. The policy issues should be documented through interlocal agreements along with establishment of the process for policy changes going forward.

For Shelburne Control, GeoComm recommends the same formal structure enhancements as discussed in Model 1. In addition, the executive town leadership of Greenfield and Montague would need to support each other by aligning policies and objectives and striving for similar goals in the region.

Secondarily to a policy board, successful consolidations usually implement a committee or group focused on the day-to-day service delivery issues addressed through SOPs. An operational committee should be appointed to provide guidance and direction to the PSAP manager for coordinating public safety services through SOP development. Each public safety entity served by the PSAP should have representation on this committee and the committee must be charged with reaching consensus on operational issues to provide consistent guidance to the PSAP. In the specific case of Model 2, GeoComm recommends establishment of an operational committee consisting of mid-level supervisors from all served public safety agencies.

Model 3 Governance

In the full consolidation proposal, GeoComm recommends the formation of a separate independent operating entity responsible for the operation and management of the RECC. The operating entity would be governed the Public Safety Communications Board, a policy board consisting of executive level representatives from the participating communities. This Board would be responsible for establishing policy level guidance and strategy to provide equitable public safety services under an equitable funding formula. The Public Safety Communications Board would hire an executive director who would be responsible to the board for day-to-day management of the RECC.

As in Model 2, operational and technical committees consisting of agency representatives would be key to the success of the RECC. GeoComm understands that a governance board configuration is a major decision. The degree of shared commitment required of members cannot be over-emphasized. Experience shows these factors are much more important than the actual voting membership classifications or power-balance ratio. Simply, if there is inadequate commitment to success, it is unlikely that any governance board configuration will result in success.

As noted previously, the forming charter documents, governance structure, equitable funding, and commitment of participating agencies are the critical success factors. With this foundation in place, the long-term success of an RECC is much more likely. Without these components any effort is doomed to failure. Success must be built on a spirit of collaboration and trust among all stakeholders.



This section of the report focuses on the feasibility analysis of consolidation regarding the Technology, Redundancy, Diversity, and Continuity of Operations Assessment, Workflow Processes, Procedures and Training Evaluation, and Interoperability Analysis for each model. As stated in the Executive Overview section, based on the data reviewed and work completed up to this point, GeoComm determined that there are three options for the region's Public Safety Answering Points (PSAPs). The options include:

- Model 1 – No changes in current PSAP structure
- Model 2 – Consolidating Montague Police Department PSAP and Greenfield Police Department PSAP into a Primary PSAP while Shelburne Control remains a separate Primary PSAP
- Model 3 – Creating a new countywide Regional Emergency Communications Center (RECC) serving all public safety entities in Franklin County

For each potential model, GeoComm examined the impact on operations which includes: staffing, labor relations, and service levels.

Model 1: No changes in current PSAP structure

The first model for regional consideration would not implement any governance, facility, operations, or staffing changes at any of the three existing PSAPs. This model would be the easiest to implement as no changes would occur. Any deficiencies in existence today would remain.

Governance

Under this scenario, there would be no formal governance changes. Section two of this report fully discussed the governance impact of each model. In summary, model 1 includes:

- Expanded the role of the Franklin County Emergency Communications Systems Oversight Committee (FCECS) to improve communications and coordination among the public safety agencies.
 - focus on issues that are present across the county and solutions that would benefit the region as a whole such as interoperable communications, Master Street Address Guide (MSAG) standards and maintenance, Geographic Information System (GIS) maintenance, preparation for Next Generation 9-1-1 (NG9-1-1) deployment, etc.
 - coordination of training, technology, interoperability, and associated database maintenance.
- Renewed commitment by the Massachusetts State Police (MSP) to create and support a truly collaborative-governance of Shelburne Control.
- Formalized governance structure for the advisory board consisting of representatives from each of the agencies dispatched by Shelburne Control. This advisory board should meet on a monthly basis to provide operations and management input to the MSP. Formal by-laws and definition of the Shelburne Control Advisory Committee's purpose, makeup, and authority should exist, along with common Standard Operating Procedures (SOPs).



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Facility

Under the status quo model, no facility changes are recommended.

Operations

Although the status quo model does not specifically recommend changes in PSAP structure, improvements are possible. GeoComm found that strengths and deficiencies exist, within the current service level that can impact the delivery of services arising from this model for 9-1-1 call processing, emergency response dispatch, and more routine public safety communication services.

- Model I Advantages:
 - Continue current control and management of 9-1-1 call taking and dispatching
 - Agencies continue to receive state funds to provide 9-1-1 service
 - Agencies continue to receive benefit of ancillary duties performed by PSAP personnel
 - Retention of all staff at current compensation/benefit costs and assignment
 - Improved communication and coordination between public safety agencies through establishment of a regional committee
 - Improved governance of Shelburne Control through a renewed or enhanced collaborative governance process
- Model I Disadvantages:
 - Disparity of service delivery across the region would continue
 - Insufficient personnel to provide adequate workflow coverage
 - Inadequate direct supervision of 9-1-1 personnel
 - No improvement in cost efficiencies

Staffing and Workload

Currently, the PSAPs in Franklin County are authorized 29 full-time and up to eight part-time dispatchers/communications personnel to handle the 17,803 9-1-1 calls annually, associated dispatch services, and ancillary duties on behalf of the 67,925 population. Greenfield and Montague each employ one PSAP supervisor/manager and Shelburne Control employs one dispatch manager and three supervisors. There would be no change in PSAP structure, therefore labor relations and legal issues would not be a factor for this model.



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Model 2: Consolidating Montague Police Department PSAP and Greenfield Police Department PSAP into a Primary PSAP while Shelburne Control remains a separate Primary PSAP

The Model 2 scenario allows for two primary PSAPs for the region. In this model, the separate PSAPs at Greenfield and Montague would consolidate and become one primary PSAP and Shelburne Control would continue to operate as the other primary PSAP. GeoComm recommends that the current Turners Falls secondary PSAP be phased out and its duties be assumed by the proposed Greenfield/Montague consolidated PSAP and Orange Fire Department would be dispatched by Shelburne Control.

Governance

GeoComm recommendations for Model 1 also apply to Model 2. GeoComm recommends creating a regional committee within the FRCOG organization to improve communication and coordination among all public safety agencies. In addition, in this scenario a formal document between Greenfield and Montague would define the level of governance of the new primary PSAP. Given the small size of the resulting operation and the fact that reuse of a current facility is recommended, GeoComm does not anticipate the creation of a separate governmental entity or authority. Therefore, one of the towns would serve as the host agency and provide the administrative structure for the consolidated PSAP. This administrative structure would include functions such as personnel coordination, management and purchasing. In addition to the governance enhancements previously discussed between Shelburne and MSP and the formalized Shelburne Advisory Committee, the executive town leadership of Greenfield and Montague and Shelburne Control should support each other by aligning policies and objectives and striving for similar goals in the region.

Facility

GeoComm has determined that a consolidated Greenfield/Montague PSAP operation should possess four fully functional radio/telephone equipped workstations and could be accommodated within either current facility. The four positions will permit operational expansion to accommodate major events, special events or mission critical operations from the Shelburne Control RECC. Both facilities possess:

- Limited room to expand the PSAP operations area in the future
- Adequate parking for personnel
- Radio dispatch consoles with capacity to accommodate additional channels and central electronics with expansion capability for additional console positions
- An equipment room with expansion capacity and proper grounding
- An emergency generator supporting the entire building



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If Montague were selected as the chosen site for implementation of Model 2, a microwave or T-1 link to the main FRCOG transmitter on Great Hill should be installed, as the only current connection to this site is via radio control stations. Such a microwave link is already in place at the Greenfield facility.

Shelburne Control should be designated and programmed as the backup site for the consolidated Greenfield/Montague PSAP, and efforts should be undertaken there to ensure that all necessary Greenfield/Montague electronic functions can be adequately replicated or alternates are in place.

Operations

There are both advantages and disadvantages to establishing two primary PSAPs in Franklin County. All of the current PSAPs have numerous significant collateral duties beyond processing calls for service and dispatching field units.

- Model 2 Advantages:
 - Improved call processing by reduction in the number of transferred calls
 - Improved staff coverage and staffing flexibility
 - Improved PSAP management and supervision
 - Improved coordination between Greenfield and Montague response to citizens' calls for service
 - Improved redundancy/diversity for inter PSAP connectivity
 - Improved responder safety through increased staff resources and monitoring of emergency radio help-button activations
 - Redundant communication paths to the FRCOG radio system from the Greenfield/Montague PSAP will improve the reliability of dispatch communications
 - Improved efficiency by eliminating duplicated costs, increase in state funding through RECC incentive grants
- Model 2 Disadvantages:
 - Greenfield, Montague and Turners Falls each have significant duties not related to dispatch that will have to be accounted for at the local level or decisions made to reduce or to alter the way in which those services are provided to the public
 - Combining PSAPs into a current PSAP facility rather than construction of a new RECC could lead to perceptions of inequality among participating agencies in favor of the host agency. It will be important to fight these issues of perception with a strong commitment to a "shared service identity," as opposed to the perception that the "host agency is now dispatching for the other."

Staffing and Workload

Under Model 2, GeoComm would not recommend changes to Shelburne Control staffing. The newly created consolidated primary PSAP would be responsible for processing calls for service to support the combined population of 26,657.



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The annual combined 9-1-1 call volume is 8,488 and reported non-emergency calls received of 65,767 for a total combined incoming call volume of 74,255. In addition, associated dispatch services for these calls for service along with field-initiated and coordination activities for field units results in additional staffing impact.

Depending on the entity structure, there would be labor relations and/or legal issues that would factor into this model. GeoComm believes these issues are not insurmountable and additional research and analysis of these issues, along with specific recommendations will be provided if the project progresses in the direction of Model 2.

As noted in Appendix A, GeoComm uses a complex methodology for calculating PSAP staffing needs. The methodology is based on decades of public safety communications experience, local observations and assessment, supplemented by two commonly recognized industry processes. Based on all input factors, GeoComm recommends a minimum staffing level of three personnel on duty at all times in a Greenfield/Montague consolidated PSAP. At times, there would only be two people in the PSAP as these personnel would be self-relieving; their workload would be assumed by the other two when on a meal break. These personnel would be responsible for processing all incoming calls for service via wireline 9-1-1 and non-emergency numbers in addition to handling police, fire, and Emergency Medical Services (EMS) dispatching for the participating agencies. GeoComm anticipates the current practice of using BHA as an EMD resource would continue. One of the staff positions on each shift should be designated as a lead dispatcher, shift coordinator, or shift supervisor with some increased level of authority and accountability.

Based on the Net Available Work Hours process described in this report, GeoComm recommends a total of 15 shift personnel and one PSAP manager.

RECC Agency Affiliation

Model 2 creates a fully functional, equipped, and professionally managed RECC hosted by either Montague or Greenfield and providing services to both communities. This model retains Shelburne Control as a fully functional RECC. GeoComm believes this model will provide many benefits to agencies in Franklin County, including an increase in resource depth, efficiencies created by reducing infrastructure resources and strengthening of continuity of operations capacity.

Ideally, any scenario resulting in two RECCs in Franklin County would merge the governance of both operations. Without a shared vision for quality of services, executive leadership philosophy, technology management, and commitment to inclusiveness a situation could develop where one PSAP is perceived to be superior to the other. This perceived superiority could result in political disagreements and PSAP “shopping” by agencies within the county based on cost, services, or both. Although GeoComm does not suggest such actions would be taken lightly, nor engaged in without serious consideration and fiscal analysis, a constant shifting of dispatch responsibilities would create inherent instability.



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Each time an agency joins or leaves one of the RECCs, there would be a corresponding impact on the financial and operational situation at each RECC. One potential solution is establishment of interlocal agreements detailing a clear timeline for notice and exhaustion of reasonable attempts at remediation of performance based issues and provision of sufficient notice to pre-plan the transition.

Model 3: Creating a new countywide RECC serving all public safety entities in Franklin County

The Model 3 scenario allows for consolidation of the three PSAPs within this study and would serve the county with one RECC. Shelburne Control would no longer provide 9-1-1 call taking and dispatching services to public safety agencies in the region. Greenfield and Montague would discontinue PSAP operations and would be served by the RECC as would Turners Falls and Orange Fire Departments. Each participating agency would financially contribute to the operational costs of the combined entity.

Governance

The formation of a single RECC serving Franklin County would result in establishment of a new, formal governance structure representative of all participating agencies. GeoComm recommends the creation of a new entity to operate the RECC, governed by a Public Safety Communications Board composed of agency representatives. The new entity would employ a director and staff and operate the facility on behalf of the participating public safety agencies.

Facility

None of the existing facilities are capable of accommodating such an RECC serving all communities and public safety agencies in Franklin County. GeoComm envisions the construction of a new facility of approximately 5,200 square feet to accommodate the operations, training, administrative, technology, and support functions of this RECC. Specification details for the recommended facility is included in Appendix B.

The estimated cost of this facility is \$1,647,520 not including real estate acquisition or land preparation. Construction would be eligible for a development grant through the Massachusetts State 9-1-1 Department.

Operations

There are both advantages and disadvantages to establishing one RECC in Franklin County.

- Model 3 Advantages:
 - Improved call processing by reduction in the number of transferred calls
 - Improved staff coverage and flexibility
 - Improved PSAP supervision, management and quality assurance



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- Improved coordination in response to citizens' calls for service
- Improved responder safety through increased staff resources and monitoring of emergency radio help-button activations
- Redundant communication paths to the FRCOG radio to improve the reliability of dispatch communications
- Improved efficiency by eliminating duplicated and triplicated costs; increase in state funding through RECC incentive grants
- **Model 3 Disadvantages:**
 - Greenfield, Montague, and Turners Falls each have significant duties not related to dispatch that will have to be accounted for at the local level or decisions made to reduce services provided to citizens
 - Only one PSAP in Franklin County would create a need for enhanced continuity of operations planning and more complex backup capabilities

Staffing and Workload

The newly created RECC would be responsible for processing calls for service to support the combined population of 71,535. The annual combined wireline 9-1-1 call volume is 17,803 and reported non-emergency calls received of 226,767 for a total combined incoming call volume of 244,570. In addition, associated dispatch services for these calls for service along with field-initiated and coordination activities for field units results in additional staffing impact.

Implementation of the RECC will require establishment of a new entity to employ personnel and manage the operation. There will certainly be labor relations and/or legal issues created by this approach. GeoComm believes these issues are manageable based on similar consolidations around the country. Additional research and analysis of these issues, along with specific recommendations will be provided if the project progresses in the direction of Model 3.

As noted in Appendix A, GeoComm uses a complex methodology for calculating PSAP staffing needs. The methodology is based on decades of public safety communications experience, local observations and assessment, supplemented by two commonly recognized industry processes. Based on all input factors, GeoComm recommends a minimum staffing level of four combined call taker/dispatcher positions responsible for processing all incoming calls for service via 9-1-1 and non-emergency numbers in addition to handling police, fire, and EMS dispatching for the participating agencies. GeoComm recommends one shift supervisor coverage position resulting in around the clock direct supervision.

Based on the Net Available Work Hours process described later in this report, GeoComm recommends a total of 20 call taker/dispatch personnel, five shift supervisors, one technical coordinator, one administrative assistant, and one PSAP manager.



GeoComm recommends one of the shift supervisors be assigned ancillary duties to coordinate staff training. Additional personnel will be needed to perform general administrative functions as well as facility maintenance.

Potential RECC Responsibilities

GeoComm recognizes the importance of a local public safety presence in the community. Each agency plays a large role in providing community services in addition to answering and dispatching 9-1-1 calls. In Franklin County, the PSAP personnel are involved in a variety of activities that are unrelated to the delivery of 9-1-1 service. These services can be provided to citizens and first responders through a RECC model; however, some services would need to be handled by the local community even after consolidation. If consolidation occurs, each local community must make its own determination for handling these tasks consistent with the community standard of care, RECC policies and procedures, service level expectations, and available resources.

In Model 2 or 3, a transition period will occur and local communities will have the opportunity to educate their citizens on new service methods. The communications personnel through common training and increased uniformity of operations and policies will become more efficient and therefore will be able to provide quicker response times. In an RECC model, the community will have access to more robust resources in the event of a major incident or multiple routine incidents. Beyond 9-1-1 call answering, the following are types of services that can potentially be provided by an RECC/Regional PSAP:

LEAPS System	Amber Alert Information
24x7 209A restraining order processing	Warrant inquiries
Section 12 processing	Notify bail clerks/on call Judge
Issue and report burn permits	Winter parking bans/winter notices
Citation data reports	Firearms licensing
Animal control notification	Cruiser/officer assignments
Bicycle registration	Court schedule
Lost/found property	Towing service notification

Operational Overload and Continuity of Operations

As noted in the Existing Conditions report, each PSAP in Franklin County provides a myriad of duties and services beyond 9-1-1 call-taking and dispatching first responders. The list of ancillary duties includes items that PSAP staff may be rarely called upon to perform, but the criticality of the task is so high it warrants inclusion. Every PSAP across the Commonwealth and the nation has a list of ancillary duties. While there are some unique tasks within the region, most are common to public safety communication operations.



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It is this wide range of duties coupled with the complexity of the job and the critical nature of the tasks that justify the extensive training and supervision models necessary to support the PSAP operation.

Because of the rarity, yet importance of many public safety communications tasks, an effective means to measure the potential for workload is difficult. In most PSAPs, the workload could accurately be described as dynamic and volatile. Therefore, consistent measurable workload must be evaluated based on the normal or routine occurrences rather than the unusual events or ultra-peak activity levels. In order to bring some stability to the workload equation, the call volume of both emergency calls and non-emergency calls are readily measurable and can be used to assess actual workload. Call processing time becomes important as well, but absent a formal time and behavioral study is usually based on an average amount of time, while all recognize some calls take longer than others. Many PSAPs assume that certain call types take longer to process but no real data exists to verify such assumptions. GeoComm uses a statistical average of 120 seconds per call in its various calculations and finds this average holds up across the nation as an appropriate measure.

Within Franklin County PSAPs and similar to most other PSAPs around the country, call volume is seldom reviewed by hour of day and/or day of week. The state provided 9-1-1 equipment includes software that is capable of creating numerous arrays of call data which can be very helpful when making staffing decisions. It is important to reinforce the concept of a call taking/radio position (seat) being occupied continuously because someone has to be available to take the call or answer the radio regardless of actual measured volume. It is more productive although more difficult to assess what is referred to as volume influenced positions, which are conceptually designed to handle increased call volume. Call volume follows a pattern of peaks and valleys. GeoComm asked all PSAPs to estimate how much time a day was spent on 9-1-1 calls, non-emergency calls, and interaction with the public at a lobby window as well as other duties that impact the time usage of PSAP staff. The results of this non-scientific survey expectedly tracks with 9-1-1 call volume. The non-emergency call volume as reported does indicate a greater impact on staff at Shelburne Control; where two dispatchers are on duty unlike Montague where one staff person is the normal staffing level.

A factor that causes general concern is the routine radio activity created by law enforcement. The level of self-generated activity that requires interaction via radio is certainly a factor to be considered, yet it is not easily measured at most locations. In addition, there is some evidence in the APCO International Project RETAINS (Responsive Efforts To Address Integral Needs in Staffing study) that suggests the level of continuous, active staff work or agency occupancy should not be above 85 percent since such a level will deny the PSAP the opportunity to respond to that “big event” which may occur, forcing some disruption of “normal” activity.



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Today, without the use of enhanced communication alternatives and with the added responsibility to manage walk in traffic and effectively handle required breaks, the three PSAPs normally deploy a combined total of five staff per shift. The assignment of extra staff due to an anticipated public event (holiday, concert, VIP visit) is not a routine staffing element.

Under the current structure, adequate staffing does not exist to handle a surge in activity caused by even a moderate event. Certainly in the case of multiple events or a major disaster any of the PSAPs in Franklin County could easily become overloaded. This overload situation would potentially be met with lost calls which could not be appropriately handled. Model 1 as presented in this feasibility study does nothing to improve the staffing scenario at any of the PSAPs. Model 2 provides improved staffing for Greenfield, Montague, and Turners Falls but does not enhance staffing levels for Shelburne Control. Only Model 3 results in an improved depth of staff for all agencies in the county.

The current structure provides some limited backup functionality but continuity of operations is not robustly planned. Even if the technological backup plans were successfully implemented the limited staffing would be stretched beyond capacity. Model 2 provides some improvement by creating two consolidated centers which could serve as reciprocal backup facilities. The facilities would be quite a distance from each other which presents both benefits and challenges. The geographic separation causes improved risk avoidance, which is a tremendous benefit to continuity of operations planning. However, the distance also causes a potential delay when an immediate and dramatic increase or relocation of staff is called for.

Backup arrangements should exist between functioning PSAPs in Franklin County. If Model 3 is chosen as the preferred structure, it should be coupled with an extensive continuity of operations planning effort that would require selection of a backup facility outside of the county, establishment of a new backup PSAP facility, coordinating with the MSP to provide backup PSAP functionality or leaving a current PSAP facility in-place to serve as a regional backup. Franklin County PSAPs should coordinate with adjoining counties to determine resources that might exist. Further, Franklin County PSAPs may be called upon to provide for 9-1-1 call overflow from other facilities.

Regardless of which model is selected, GeoComm strongly recommends that enhanced continuity of operations planning occur between all public safety agencies in the county. This planning should focus on operational training and exercises for items such as call overload and resource exhaustion as well as technical and facility failures that would inhibit an agency's ability to perform critical public safety communications functions. Additional information about Telephone Service Sustainability is located within the technical section of this report.



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Non-Emergency Calls

As mentioned in this report, the non-emergency call volume processed by the three PSAPs in Franklin County is significant. The management of non-emergency calls is a crucial element to staff efficiency. Non-emergency calls that do not require an immediate response by an agency and others that are suitable for a delayed or scheduled response should be delivered to the appropriate public safety agency in a timely and efficient manner.

The ability to make public notifications regarding general hazards or conditions which have impact on communities should be supported as part of the overall effective, emergency communication process. Shelburne Control reports using a recording to assist callers who seek information regarding burn permits. This same approach has been used for other classes of common inquiry such as dynamic public interest events, weather and road conditions, as well as the hours and phone numbers of community services. GeoComm encourages further development and use of this option for all PSAPs as a means to better manage non-emergency calls which are clearly information requests that can be effectively handled by transferring the caller to an extension upon which an appropriate recording exists. This strategy provides benefit during busy times; the caller can politely be provided with the basic information and the PSAP can avoid a repeat call.

Further, most business telephony systems allow the creation of mailboxes for depositing messages. Many PSAPs have found this an efficient means for callers to leave a message for a particular agency/official without extended staff involvement. The same systems often provide an option to alert the mailbox owner of the receipt of a new message via pager, cell phone, text or email message.

GeoComm finds all Franklin County PSAPs currently operating at minimum staffing with personnel who consistently remain busy; the efficiency with which calls can be processed has a direct impact on the workload of each PSAP and the need for additional staffing. Public notification of community events from boil water orders to highway closures can reduce call volume and lessen community anxiety. GeoComm encourages coordination of efforts to better utilize existing technology to manage this portion of the PSAP workload.

Community Policing

There is always a concern when communities discuss the option of consolidation that the new RECC dispatchers/communications personnel will not know the local area and it also generates concern for officer safety. Although dispatchers/communications personnel would be moved out of their current jurisdictions, they will have improved training and the opportunity to learn the geographical area they are covering. The move to a RECC will not change the local public safety police officers, firefighters, Emergency Medical Technicians (EMT's), and supervisors responding to the 9-1-1 and other non-emergency calls.



In addition, new CAD (Computer Aided Dispatch) technology will include local information that will be entered into the system during the planning stage. It is anticipated that the new RECCs will be managed, supervised, and operated by communications personnel currently employed by the individual towns. If consolidation is to occur, the region should establish an aggressive public education program to inform citizens of the benefits of consolidation and the enhanced levels of service they will receive. The establishment of an RECC should not disrupt any community policing efforts that currently exist.

Training Analysis

The mission of a PSAP operation is to provide emergency communications services to the public and to safeguard public safety responders, both of which cannot be accomplished without proper training.

The Massachusetts State 9-1-1 Department makes training available to PSAP personnel through direct training and training grants. However, the training is not mandatory, and agencies do not always take full advantage of the training opportunities provided.

None of the agencies participating in this study employ PSAP training coordinators. The following was reported in the Existing Conditions Report as the current training program status for the participating agencies:

PSAP	Training Status
Greenfield	<ul style="list-style-type: none"> ■ Pre-service minimum training requirements as promulgated by the Massachusetts State 9-1-1 Department were generally followed. ■ Required training sessions related to specific applications and hardware. ■ Initial service agency orientation and local agency familiarization is required, prior to formal assignment to “on-the-job” training with peer mentoring. ■ Peer mentoring training component, which includes a combination of observation and actual, monitored performance. However, the PSAP reports that this training component is not fully documented at this time.
Montague	<ul style="list-style-type: none"> ■ Pre-service minimum training requirements as promulgated by the State 9-1-1 office were generally followed. ■ Additional on-the-job training, with peer mentoring is utilized for new staff. ■ The PSAP Supervisor provides supporting materials to support enhanced awareness of local services, relationships, and response parameters.
Shelburne Control	<ul style="list-style-type: none"> ■ Pre-service minimum training requirements as promulgated by the State 9-1-1 office were generally followed. ■ Staff are provided additional state supported public safety communications training. ■ Additional on-the-job training, with peer mentoring is utilized for new staff.



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Overall, the three PSAPs in this study report that they generally comply with the mandatory two-day basic 9-1-1 course, although in some cases, documentation is lacking. As a result, there are gaps in training between PSAPs in the region. The lack of consistent training among dispatchers intensifies the local disparity of service delivery across the county. This leads to PSAP service that is unable to provide the same “standard of care” across the county.

GeoComm determined that there is opportunity for improvement of training for PSAP staff in each of the three participating communications centers. This improvement should take place regardless of consolidation and efforts can be facilitated by working together through a structure such as the one recommended in Model I. Each of PSAPs in Franklin County would benefit from:

- Standardized curriculum for call takers and dispatchers
- Dedicated training instructors and/or personnel
- Improved training facilities and equipment



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Appendix A

Staffing Calculations

GeoComm uses a complex methodology for calculating PSAP staffing needs. The methodology is based on our consultant's decades of public safety communications experience, local observations and assessment, supplemented by two commonly recognized industry processes. GeoComm uses a combination of the Erlang-C and APCO Project Responsive Efforts to Address Integral Needs in Staffing (RETAINS) tools as inputs into this staff calculation process. Erlang-C is a widely accepted engineering model for establishing appropriate call center staffing needs based on acceptable waiting times for callers. The Erlang-C model uses important criteria for determining the recommended number of 9-1-1 call takers needed to achieve the desired level of service.

The second component to the GeoComm formula for recommending PSAP staffing is the Association of Public-Safety Communications Officials (APCO) Project RETAINS. In addition to examining 9-1-1 staff turnover and retention issues, the project developed formulas and processes to estimate PSAP staffing needs based on important factors such as the net available hours, turnover rates, hours, and positions that must be covered, agency calls for service, etc. An important factor in both the Project RETAINS and Erlang-C models is the average 9-1-1 call duration as well as the workload generated by handling non-emergency telephone and radio traffic.

While 9-1-1 call volume is accurately reported by the State 9-1-1 Department, other workload criteria is less reliable. In this feasibility study, GeoComm has made estimated calculations based on known information and call volume data reported by the participating agencies. Information pertaining to call duration is not readily available. Therefore, GeoComm has estimated the average call duration based on our experience and observations. It should be noted that call durations and post initial dispatch of resources can dramatically increase with the implementation of formalized Emergency Medical Dispatch (EMD) systems as defined by local protocols. The Erlang-C and Project RETAINS calculations are tools used by GeoComm's subject matter experts to determine final staffing recommendations for Model 2 and Model 3.

There are two approaches to considering PSAP staffing needs. The first approach is to determine the number of positions or workstations that must be covered on a continual basis, regardless of calls for service or level of dispatch activity. The most common example is the law enforcement dispatch position which must always be staffed, ready to deploy law enforcement services in addition to providing a control point for radio traffic from responder, field-initiated activity even if there is a low call volume for actual calls for service. A similar position would be anticipated for fire and EMS service related calls. When not committed to active events requiring radio support, these staff positions could assist with 9-1-1 call answering during brief periods of demand.



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It is important to note that such assignments reflect the “primary responsibility per shift” of the staff but does not preclude the necessary and reasonable direct assistance of any call taker/dispatcher to participate in resolving the call for service on behalf of the public and responders.

For each of the consolidation models presented for consideration, GeoComm has identified the need for a primary police and primary fire dispatch position. Depending on actual workload, personnel working these positions can assist with overflow call processing.

In addition, GeoComm’s subject matter experts used the Erlang-C and Project RETAINS processes to provide input to determine if anticipated call volume is sufficient to warrant additional 9-1-1 call taker staffing. This analysis utilized 2010 call volume totals for the agencies, as reported. Further, the analysis applied the NFPA, NENA, and SETA standard for 9-1-1 caller wait times, which establishes, directly or indirectly, a target of 90 percent of all 9-1-1 calls being answered in ten seconds or less. Finally, absent specific local workload assessment data, an average call duration time is estimated to be approximately 120 seconds from start to finish including call reporting and wrap-up time.

The next step to determine the actual staffing levels involves an analysis of the staffing pattern and job classification of the employee. In order to complete this assessment, decisions are necessary regarding the structure of staffing. For example, GeoComm must assume that the required coverage positions are either discipline specific or general. For example, generalist employees are cross-trained to provide both police and fire/EMS dispatching while specialists are trained only to dispatch a single type agency. Customarily, all dispatch personnel are trained in processing 9-1-1 calls and can assist with peak call loads. There are advantages and disadvantages to each structure. A primary advantage to generalist positions is increased management flexibility with assignments.

Due to the size and expected call volume, GeoComm recommends an initial generalist structure whereby all operational level personnel are cross-trained in all classes of public safety discipline specific call taking, EMD, and dispatch functions. If staffing size expands and based upon local needs, more specialty trained staff can be used as generalist and then dynamically assigned to specific, emerging events.

To determine the number of personnel needed to fill a position, a net-available work hour calculation must be performed. Again, some basic assumptions must be made at this stage of the process. Specific vacation, sick leave, holiday, and training time allocations must be assumed.



Based on our overview of the existing information, we are projecting the following benefit impact:

Net Available Work Hours Per Coverage Position	
Full Year Full-Time Coverage	2,080 hours
Vacation/PTO	120 hours
Sick Leave	80 hours
Holiday	80 hours
Training	40 hours
Meals/Breaks (Self-relieving within minimum staffing)	0 hours
Total Net Available Work Hours	1,760 hours

Each coverage position requires 8,760 hours annually for continuous staffing. Although the staff at each PSAP in the FRCOG region are members of a collective bargaining unit, it is anticipated that transition to a new entity will result in a new collective agreement which would provide the final numbers for this calculation. For purposes of feasibility assessment, smoothing was used to perform a consistent calculation of net available work hours based on general assumptions. The above assumptions relative to net available work hours indicate a need for 5 personnel positions to provide continuous staffing for each coverage position.

It should be noted that the Erlang-C model assumes a consistent call volume throughout the entire 24-hour period. As this is not the nature of public safety, scheduling adjustments must be made to accommodate peak and low-volume time periods.

Agency management should be vested with the authority to schedule resources utilizing carefully developed and maintained data collections processes within the agency to effectively predict and properly staff to provide adequate public safety services. The staff calculations utilized by GeoComm are intended to provide adequate management resources for such dynamic deployment.

The final step is to determine “function positions.” Function positions are held by one individual and are not covered when that individual is absent. For example, the PSAP manager or administrative assistant positions are considered function positions in most organizations.

GeoComm identified the function positions to support the two Primary PSAPs under Model 2 and the RECC under Model 3.



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Model 2 Staffing at the Greenfield/Montague PSAP:

Position	Greenfield Montague PSAP
PSAP Manager	1
Call Takers/Dispatchers FT/PT	15
Total	16

There would be no changes in the organizational structure of Shelburne Control under Model 2 and therefore, no staffing changes are recommended.

Model 3 Staffing at the RECC:

Position	RECC Staffing
PSAP Director	1
Administrative Assistant	1
Technical Coordinator	1
Shift Supervisor(s)	5
Call Takers/Dispatchers FT/PT	20
Total	28



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Appendix B

Facility Specifications

None of the current facilities have adequate space to support the fully combined RECC. Based on the required operational, administrative, technical, and support area required, GeoComm has calculated that a minimum of 5,200 square feet must be available for a facility to be deemed adequate. As noted previously, a fully consolidated RECC must accommodate a minimum of seven fully functional call taker/dispatch workstations.

There are likely a number of existing facilities within Franklin County that could be converted into an acceptable RECC. GeoComm is not evaluating existing facilities as part of this project. When evaluating facilities it is important to keep in mind the unique security and resiliency requirements of public safety answering points. GeoComm makes the following recommendations with regard to new construction or existing facility renovation:

- RECC facility should be located away from known hazards.¹
- RECC facility should be geographically located so that a natural, technological, or intentional disaster does not render the RECC and PSAP backup facility inoperable
- RECC facility should provide sufficient parking and security to accommodate staff and technical needs
- RECC facility should be easily serviced by high capacity communications networks, preferably from multiple providers
- RECC facility and identified backup facility should be serviced through different power grids, if possible
- RECC facility and identified backup facility should be serviced through multiple telephone companies with telephone, 9-1-1 trunking and critical data circuits provided through diverse routing

The actual design of the facility is a critical component as well. The RECC must have adequate space for administrative functions, training, technology, personnel support, storage, and public safety operations.

In addition to the specific space recommendations contained within this report, GeoComm provides the following considerations relative to facility construction design:

- All flooring in the operational and technical areas of the facility should be raised computer type flooring with appropriate static and sound control features
- Public safety operations areas should be constructed in open space leaving as much potential for future modification as possible
- Break and kitchen areas should be sized to accommodate staff support for the potential of extended work periods of time and should be located near the operations area

¹ PSAP-Service Capability Criteria Rating Scale - APCO/NENA ANS 1.102.2-2010



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- Supply storage should be easily accessible from the operations area and sized appropriately so it can be kept orderly at all times
- Two equipment storage spaces should be allocated, one for radio equipment and the other for telephone, recording equipment, computer, and other crucial support equipment. Both equipment areas should be well ventilated, separately heated/cooled with high ceilings and sufficient space for technicians to access all sides of the equipment without taking it out of service.
- Auxiliary power sufficient to operate the entire PSAP for four to seven days²
- Lightning protection and grounding to meet national standard recommendations³

Operational Area

The operational area of the facility should be sufficient to accommodate seven 9-1-1 call taker workstations including one supervisory workstation. These work areas, equipped with redundant capability, will allow task assignments based on actual conditions. The capacity also accommodates backup operations should a total equipment or facility failure exist at another location outside of Franklin County where backup services are provided. The operations area would need to be at least 5,200 square feet to accommodate the recommended workstations, consoles, and circulation area.

Equipment Area

The dedicated equipment area needed to support the RECC based on the above recommendations is no less than 320 square feet. This area should include workspace for technical support.

Staff Support Area

GeoComm recommends dedicated restroom, locker room, shower facilities, kitchen, and break area space to provide support to the 24 hour staff.

Training Area

GeoComm recommends training space allocation to accommodate a multi-purpose classroom of at least 220 square feet. The classroom should be located such that training participants have entrance/egress without disturbing public safety operations. In addition to the multi-purpose classroom, GeoComm recommends a fully-functional call taking and radio dispatch console to be primarily used for training purposes, but available as an additional backup/special operations console. The console should be configured identical to live-operational workstations and constructed in a separate, secure room. This separate room requires approximately 100 square feet.

² PSAP-Service Capability Criteria Rating Scale - APCO/NENA ANS 1.102.2-2010

³ PSAP-Service Capability Criteria Rating Scale - APCO/NENA ANS 1.102.2-2010



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Administrative Area

GeoComm recommends four administrative offices in the RECC for the center manager, administrative assistant, technical coordinator and one shared office for use by shift supervisors when completing reports, counseling employees, completing performance reviews, etc. Within this administrative area, a small conference room is recommended for staff meetings and meetings with customer agency personnel. The administrative area should have a small workroom/storage area for office supplies, copier, etc.

Parking

The RECC facility will be in continuous operation and therefore require adequate secure parking for all staff and visitors. Due to the nature of public safety communications workflow, parking must be available for two shifts simultaneously in addition to administrative staff, trainees/students, customer agency personnel, and technical staff.

Cost

GeoComm originally estimated the cost of construction at \$250 per square foot. This estimate is based on assessment of several complimentary sources including RSMeans. RSMeans provides cost data and estimating tools for construction costs for nearly every category of construction. These costs are adjusted for local materials and labor cost conditions as RSMeans contacts trade union councils throughout North America regularly to track union labor agreements. RSMeans subscribes to all Davis-Bacon decisions, and uses Davis-Bacon rates where no union rates are available. In addition, RSMeans researches open shop labor rates on a regular basis by surveying members of a major construction trade association.

The parameters used in calculating the construction costs of the RECC include specification for a police facility including specialized security and building characteristics of a one story, 5,238 square foot building in Greenfield, Massachusetts utilizing union labor for construction with no basement.





Square Foot Cost Estimate Report

Building Type	Police Station with Face Brick with Concrete Block Backup/Bearing Walls	Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly. Parameters are not within the ranges recommended by RSMeans.
Location	Greenfield, Massachusetts	
Story Count	1	
Story Height	12	
Floor Area	5,238	
Labor Type	Union	
Basement Included	No	
Data Release	Year 2011 Quarter 2	
Cost Per Square Foot	\$245.04	
Building Cost	\$1,283,500	

The generated building estimate of \$245 per square foot (including contractor and architectural fees) was then compared to the average cost per square foot of police department new construction in major metropolitan areas across the United States. The secondary comparison is performed only as a validating measure to ensure the initial estimates are with the expected range. As March 2011, the highest cost per square foot is in New York City at \$311 per square foot while the low end in Winston-Salem is at \$179 with a median of \$241 per square foot. The Boston area cost per square footage for a police facility is \$278. These costs are sharply higher than ordinary market rate office buildings because of the security requirements. The cost includes build-out of the facility but does not include furnishing or equipment.



RECC Facility Specifications			
Area	Quantity	Size (square feet)	Total square feet
RECC Manager's Office	1	230	230
Shared Supervisor's Office	1	140	140
Supervisor Position	1	140	140
Dispatch/Call Taker Positions	6	100	600
Kitchen/Break Room	1	240	240
Small Conference	1	140	140
Training Room/Training Simulator Room	1	320	320
Copy, File, Work Room	1	120	120
Equipment Room (IT and Radio)	2	160	320
Restroom, Lockers, and Showers	2	900	1,800
Storage	1	140	140
Total			4,190
Building Circulation 15%			629
Building Services 10%			419
Gross Building Spaces			5,238
Total Vehicles		21	
Parking Spaces		42	5,460
Parking Circulation 15%			819
Parking Lot Space			6,279
COSTS:			
Description	Size	Price per sq./ft.	Subtotal
Facility	5,238	\$250	\$1,309,500
Parking Lot and Exterior	6,279	\$30	\$188,370
Total Facility Cost			\$1,497,870
Architectural and Engineering Cost 10 %			\$149,787
Extended Total (minus real estate acquisition and land preparation)			\$1,647,657



At the request of FRCOG, Section 4 of this report has been removed.



5

Financial Analysis

This financial overview is intended to provide a summary of the current expenditures associated with provision of 9-1-1 and public safety dispatching services for the three primary PSAPs operating in Franklin County compared to expense projections for each of the consolidation models presented. Today, all of the communities within Franklin County are provided call taking and direct dispatch services from one of three distinct PSAPs. The PSAPs are funded with public tax dollars from general fund allocations as well as a defined portion of the surcharges attached to wireline and wireless telephone services. The surcharges are paid to the state by telecommunications services providers and returned to PSAPs through a variety of grant programs.

As described previously, Shelburne Control is essentially a third party PSAP that has full control over operational service delivery and activity, definition and depth of technology, appropriate staffing levels and associated training, recruitment, selection and retention of staff without any defined relationship to the customer agencies. Throughout the project, GeoComm heard frequently that dispatch services via Shelburne Control are provided 'free' to local agencies. A more correct version of the situation is that services as currently provided do not create additional demands on local budgets. The funds to support Shelburne Control arise from general state tax revenue as well as dedicated 9-1-1 surcharge revenue. Therefore, the Shelburne Control operation is not free and any such description of the operation in the strict sense of the word would not paint a full picture.

GeoComm has recently received budgetary information from the Massachusetts State Police (MSP) related to the operation of Shelburne Control through a formal Freedom of Information Act request. Greenfield and Montague have been responsive in providing the requested current cost data. While GeoComm is confident in the expense projections presented in this section for the Model 2 and Model 3 options, the intent is not to provide a precise budget but rather sufficient information for the participating agencies to evaluate the financial feasibility of moving forward with detailed planning.



Current Budget Snapshot

The following financial information was received from participating agencies:

Current Operating Budgets			
Personnel Expense	Greenfield	Montague	Shelburne
Full and Part-Time Wages	\$413,000 ¹	\$126,000	\$611,000
Longevity	\$4,000	-	-
Overtime	\$25,000	\$28,000	\$43,500
Shift Differential	\$8,000	\$11,500	\$16,000
Holiday Pay	\$15,000	\$5,000	-
Training Wages	\$4,000	\$2,500	-
Employee Benefits	\$164,150 ²	\$60,550 ²	\$234,675 ²
Total Personnel Expense	\$633,150	\$233,550	\$905,175
Operating Expense			
Supplies	\$2,000	\$2,000 ³	\$300
Training and Travel	\$4,000	\$1,500	\$10,800
Utilities (Electricity, Water, Sewer, Gas)	\$1,500	\$1,500 ³	\$6,000
Miscellaneous (Headsets, Chairs, Other)	\$3,000	\$3,000 ³	\$3,000 ³
Maintenance			
Radio	\$8,000	\$4,500 ³	\$0 ³
Computer Aided Dispatch (CAD)	\$7,500	\$9,600	\$6,000
Administrative Telephone	\$10,000	\$4,900	\$0 ³
Total Operating Expense	\$36,000	\$27,000	\$26,100
Total Budget	\$669,150	\$260,550	\$931,275

Among the participating Public Safety Answering Points (PSAPs), approximately \$1,860,975 is spent annually to fund the operation. Of this amount, \$737,612 is contributed by the Massachusetts State 9-1-1 Department through the various grant programs resulting in \$1,123,363 funded through local budget processes. It is important to note this number does not include facility expenses or executive/administrative costs which are contained in the larger department budgets and are unable to be itemized by the participating PSAPs.

¹ Dispatch manager salary not included in PSAP budget

² Personnel benefits factor estimated at 35%

³ Actual costs contained in larger department budget - estimated



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Facilities

For Model 2, GeoComm has determined that a consolidated Greenfield/Montague PSAP operation should possess four fully functional radio/telephone equipped workstations and could be accommodated within either current facility. Final facility planning may result in the desire for some minor interior renovations. We are further analyzing whether the current facilities can accommodate the combined operation. If Montague were selected as the preferred site for implementation of Model 2, a microwave link to the main Franklin Regional Council of Governments (FRCOG) transmitter on Great Hill should be installed at an estimated budgetary cost of \$85,000. The microwave link is already in place at the Greenfield facility so this cost would not apply in that scenario provided there is adequate capacity.

For Model 3, GeoComm recommends construction of a new public safety communications facility. Absent architectural design and specific location definition, it is impossible to provide a professional estimate for the construction of the Regional Emergency Communications Center (RECC). However, to provide a basis for consideration, GeoComm has evaluated recent communications center construction in various areas of the country in addition to examining construction costs of public safety facilities within Massachusetts. This information provides a rough order of magnitude estimate for constructions costs of the type of facilities recommended. Construction of the RECC facility to support Model 3 is expected to cost approximately \$1.65 million not including real estate acquisition, land preparation. Equipment and furnishings would more than double this investment. It is highly unlikely any of the communities in Franklin County could contribute significant funding to support construction of a RECC. The cost for construction of a RECC facility is eligible for a development grant through the State of Massachusetts 9-1-1 Department and GeoComm supports this capital funding strategy.

Staffing

GeoComm has developed an analysis of the personnel structure required for consolidation of the Greenfield and Montague PSAPs into a consolidated primary PSAP operating within one of the current facilities. As noted in Appendix A, the total budgetary cost for Model 2 is \$985,260, which includes staffing for 16 personnel. In this model, GeoComm recommends a minimum staffing of three personnel at all times with one of those serving in a working supervisory role.

Under the Model 3 scenario, GeoComm recommends creation of a new entity to jointly operate the RECC. The new entity should have sufficient administrative and leadership staff to effectively operate, include a director, administrative assistant, and technical coordinator.

Based on assessment of workload factors, a minimum staffing level of four combined call taker/dispatcher positions should be required to process all incoming calls for service and dispatching functions for Police, Fire, and Emergency Medical Service (EMS) agencies.



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GeoComm also recommends one shift supervisor coverage position (in addition to the four dispatcher/call taker positions) for continuous direct supervision and support.

The personnel and operational costs of a new RECC are projected to total \$1,833,160 not including construction of a new facility as it is anticipated the start-up would be funded through development grants.

Technology

CAD

Based upon the CAD status described in this report, it is not anticipated that additional expenditures would be required to support Model 2. As noted, Shelburne Control and Greenfield are planning to migrate to a new CAD system regardless of consolidation. Although there would be minor licensing and hardware costs, transition to a full RECC would not be technically complex.

Regional Radio System

Many of the local communities receiving dispatch services through Shelburne Control consider the funds required to support the Franklin County Radio System are equivalent to their “dispatch costs.” It is important to reaffirm that radio service and local radio equipment cost is a continuing responsibility of the local agency through customary, routine local budget processes. The current FRCOG radio assessment is included in the financial summary chart of this report.

Franklin County is extremely fortunate in the leadership shown with development of the current countywide FRCOG radio system supporting public safety communications. Transitional costs for radio improvements related specifically to consolidation are minimal, although significant expenditures can be expected regardless of consolidation. For example, the current Motorola Gold Elite console system used by Greenfield and Shelburne Control has reached the manufacturers end-of-product life. Future upgrades or major modifications will be difficult and expensive, if even possible. There will be no manufacturer support, although local radio shops may have some surplus or used replacement parts for the near future.

Costs to replace the consoles will be wholly dependent on the needs of the PSAP. Should direct control of a sophisticated IP based trunked radio system be required then specific proprietary equipment will be necessary. Non-trunked equipment can be managed and controlled with a more generic, non-proprietary system.



For console replacement only, GeoComm offers the following budgetary pricing for replacement with proprietary equipment as a not-to-exceed amount:

Console Budgetary Cost	Greenfield	Montague	Shelburne Control
Model 1	\$450,000	N/A	\$550,000

Console Budgetary Cost	Greenfield/Montague	Shelburne Control
Model 2	\$550,000	\$550,000

Console Budgetary Cost	Fully Consolidated RECC
Model 3	\$850,000

Additional radio system costs for items such as microwave links and control station relocation or replacement are highly dependent on the final consolidation model chosen. Since CAD and radio costs are eligible for funding through development grants supporting a multi-agency communications center, it is doubtful the actual cost is a significant impact on the local decision to move forward with any of the consolidation models. The budgetary costs presented above are intended to illustrate the cost to be incurred by local agencies if consolidation is not pursued. GeoComm will provide budgetary pricing within the final recommendations for the specific recommended configuration of CAD and public safety radio.

Cost-Sharing Methodology and Sustainability

In order for any potential consolidation to be successful, an equitable cost-sharing methodology must exist. There are a number of cost-sharing criteria that could support funding methodology for regional public safety communications such as allocating responsibility for percentages of total costs based on:

- Population
- 9-1-1 Call Volume
- Events Dispatched
- Assessed Valuation

For the purposes of this report and assessing initial feasibility, GeoComm calculated individual contributions on the percentage of population served. As more consistent data is compiled regarding calls for service and self-initiated field activity, cost-sharing methodology should be revisited to include overall impact of each agency's operation on the total system.



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The agency costs indicated in the report are based on the projected costs of the models, the impact of current Massachusetts State 9-1-1 Department support, and current population percentages. GeoComm has requested specific information regarding the additional incentive grant amount and will modify the final budgetary information upon receipt. As Franklin County continues to examine Massachusetts statutes, regulations and practices, establishment of a special service district with taxing authority may be an eventual path for the region to ensure sustainability.

Comparison Analysis

GeoComm has completed cost budgeting for Model 2 and Model 3 options as detailed in the Section Appendix along with creating a snapshot of current operational expenditures. The following chart indicates the financial impact on each agency relative to implementation of the options:

Model 2 - Consolidating Montague Police Department PSAP and Greenfield Police Department PSAP into a Primary PSAP while Shelburne Control remains a separate Primary PSAP

Agency	Current Total Costs	Current 9-1-1 Grant	Net Current Agency Costs	Model 2 Agency Costs	Model 2 Net Agency Costs	Net Cost Difference
Greenfield (68%)	\$669,150	\$54,607	\$614,543	\$671,501	\$616,894	\$2,351
Montague (32%)	\$260,550	\$18,749	\$241,801	\$313,759	\$295,010	\$53,209
Shelburne Control	\$931,275	\$664,256	\$267,019	\$931,275	\$267,019	\$0
Region Total	\$1,860,975	\$737,612	\$1,123,363	\$1,916,535	\$1,178,923	\$55,560

Model 2 results in net operational costs of a new combined primary RECC being shared by Greenfield and Montague. Shelburne Control would continue to operate a RECC and all public safety agencies in Franklin County would continue to pay the current FRCOG radio assessment. The modified agency contribution for Model 2, including the FRCOG radio assessment is contained in Appendix C.



Model 3 - Creating a new RECC serving all public safety entities in Franklin County

Under Model 3, GeoComm estimates annual operating costs at \$1,833,160. Factoring the 2011 support grants and the current Shelburne Control incentive grant, local agencies would be responsible for \$1,095,548 in direct contributions to the RECC (prior to additional incentive funds from the State 9-1-1 Department). Under the current environment, agencies served by Shelburne Control do not contribute local funds to cover PSAP operational costs. In the RECC environment, each agency would contribute to the net local costs based on percentage of population. The percentage of population and net costs are detailed below:

Community	Population	Percentage	RECC PSAP Operations
Ashfield	1,800	2.52%	27,567
Bernardston	2,155	3.01%	33,004
Buckland	1,991	2.78%	30,492
Charlemont	1,358	1.90%	20,798
Colrain	1,813	2.53%	27,776
Conway	1,809	2.53%	27,705
Deerfield	4,750	6.64%	72,746
Erving	1,467	2.05%	22,467
Gill	1,363	1.91%	20,874
Greenfield	18,168	25.40%	278,240
Hawley	336	0.47%	5,146
Heath	805	1.13%	12,328
Leverett	1,663	2.32%	25,469
Leyden	772	1.08%	11,823
Monroe	93	0.13%	1,424
Montague	8,489	11.87%	130,008
New Salem	929	1.30%	14,277



Community	Population	Percentage	RECC PSAP Operations
Northfield	2,951	4.13%	45,194
Orange	7,518	10.51%	115,117
Rowe	351	0.49%	5,376
Shelburne	2,058	2.88%	31,518
Shutesbury	1810	2.53%	27,720
Sunderland	3,777	5.28%	57,844
Warwick	750	1.05%	11,486
Wendell	986	1.38%	15,100
Whately	1,573	2.20%	24,090
Totals	71,535	100.00%	1,095,548

Model 3 results in net operational costs of a new combined primary PSAP being shared by all public safety agencies participating in this feasibility study. Shelburne Control would discontinue operations as a regional PSAP. All public safety agencies would continue to pay the current FRCOG radio assessment. The modified agency contribution for Model 3, including the FRCOG radio assessment is contained in Appendix C.



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Conclusion

GeoComm has examined the costs associated with consolidation of Greenfield/Montague into a single primary PSAP and the costs of a fully consolidated RECC serving all public safety agencies in Franklin County. Each of the models examined provide benefits that must be measured against the associated cost. In any shift of resources there are disadvantages as well, such as inconvenience to citizens who must adopt a new method of interacting with the local public safety agency.

In Model 2, there is a total cost of \$912,904 for the Towns of Greenfield and Montague after accepting the 9-1-1 support grant. This scenario results in an additional cost of \$2,351 for Greenfield and \$53,209 for Montague, prior to calculating the impact of the 2012 incentive grants through the State 9-1-1 Department. GeoComm has requested clarification of the 2012 incentive grant formula based on population and 9-1-1 call volume and will update this financial assessment as soon as the formula clarification is received.

In Model 3, there is overall total cost of \$1,833,160 of which 1,095,548 is the responsibility of Franklin County agencies, after accepting the 9-1-1 support grant but not including the impact of additional 9-1-1 incentive grants. Depending on the amount of the incentive grant, small local agencies will be required to contribute funding to the RECC in this model. Model 3 also includes the GeoComm recommendation to seek a 9-1-1 development grant supporting construction of a new facility.

Every PSAP operation must create and maintain a sustainable budget for all operations including facility improvements and technology upgrades. When no additional revenue is available, plans for normally occurring improvements and upgrades are delayed. The delay or inability to make such improvements builds slowly over time, until the need to make changes is forced upon the PSAP by major system failure, compliance with regulatory actions or through agreements post-civil litigation after a tragic event. Likewise, the cost of consolidation is often regarded as too high due to the initial start-up costs. However when the price drivers to accomplish such a goal are fully examined, it is often found that much of the expense is attributed to subsystems which were not well managed or maintained over the previous years. This situation must be examined when considering the start-up costs associated with consolidation.

The primary goal of any consolidation effort should be to enhance public safety in the region. Service enhancements should be clear and immediate. In addition to the public safety service enhancements and the financial benefits summarized in this report, consolidation of the PSAPs would result in a reduction of 9-1-1 answering workstations in the region. This workstation reduction results in cost-savings associated with 9-1-1 answering equipment and trunks for call delivery. The 9-1-1 answering equipment and telephone trunk savings, although realized in the state 9-1-1 budget, should be considered when determining the overall feasibility of consolidation.



Appendix A – Model 2 (Consolidated Greenfield/Montague PSAP)

Model 2	
Revenue	
State of Massachusetts E9-1-1 Support Grant	\$73,356 ⁴
Agency Contributions/Service Fees	\$911,904
Revenue Total	\$985,260
Expense	
Personnel Expense	
PSAP Manager (1)	\$69,000
Dispatcher (15)	\$585,000
Payroll Expenses (SS, Unemployment, Medicare)	\$58,860
Benefits (35%)	\$228,900
Subtotal	\$941,760
Operating Expense	
Supplies	\$4,000
Training and Travel	\$8,000
Utilities (Electricity, Water, Sewer, Gas)	\$1,500
Miscellaneous (Headsets, Chairs, Other)	\$ 8,000
Maintenance (Radio, CAD, Telephone, Building)	\$12,000
Administrative Telephone	\$10,000
Subtotal	\$43,500
2012 Annual Total	\$985,260

⁴ Based on 2011 support grant allocation - incentive grant eligible



Appendix B – Model 3 (Fully Consolidated RECC)

Model 3 – RECC	
Revenue	
State of Massachusetts E9-1-1 Support Grant	\$737,612 ⁵
Agency Contributions/Service Fees	\$1,095,548
Revenue Total	\$1,833,160
Expense	
Personnel Expense	
PSAP Manager (1)	\$69,000
Administrative Assistant (1)	\$35,000
Technical Coordinator (1)	\$55,000
Supervisor (5)	\$275,000
Dispatcher (20)	\$780,000
Payroll Expenses (SS, Unemployment, Medicare)	\$109,260
Benefits (35%)	\$424,900
Subtotal	\$1,748,160
Operating Expense	
Supplies	\$4,000
Training and Travel	\$14,000
Utilities (Electricity, Water, Sewer, Gas)	\$6,000
Miscellaneous (Headsets, Chairs, Other)	\$14,000
Maintenance (Radio, CAD, Telephone, Building)	\$35,000
Administrative Telephone	\$12,000
Subtotal	\$85,000
2012 Annual Total	\$1,833,160

⁵ Based on 2011 support grant allocation - incentive grant eligible



Financial Comparison of Models

Appendix C

Community	Population	Percentage	FRCOG Radio System Assessment	Model 1 PSAP Operations	Model 1 PSAP/ Radio Cost	Model 2 PSAP Operations	Model 2 PSAP/ Radio Cost	Model 3 PSAP Operations	Model 3 PSAP/ Radio Cost	Model 2 Net Increase	Model 3 Net Increase
Ashfield	1,800	2.52%	2,360	-	2,360	-	2,360	27,567	29,927	-	27,567
Bernardston	2,155	3.01%	3,540	-	3,540	-	3,540	33,004	36,544	-	33,004
Buckland	1,991	2.78%	1,770	-	1,770	-	1,770	30,492	32,262	-	30,492
Charlemont	1,358	1.90%	4,130	-	4,130	-	4,130	20,798	24,928	-	20,798
Colrain	1,813	2.53%	3,540	-	3,540	-	3,540	27,766	31,306	-	27,766
Conway	1,809	2.53%	3,540	-	3,540	-	3,540	27,705	31,245	-	27,705
Deerfield	4,750	6.64%	3,540	-	3,540	-	3,540	72,746	76,286	-	72,746
Erving	1,467	2.05%	2,360	-	2,360	-	2,360	22,467	24,827	-	22,467
Gill	1,363	1.91%	2,360	-	2,360	-	2,360	20,874	23,234	-	20,874
Greenfield	18,168	25.40%	7,080	614,543	621,623	616,894	623,974	278,240	285,320	2,351	(336,303)
Hawley	336	0.47%	590	-	590	-	590	5,146	5,736	-	5,146
Heath	805	1.13%	1,180	-	1,180	-	1,180	12,328	13,508	-	12,328
Leverett	1,663	2.32%	2,360	-	2,360	-	2,360	25,469	27,829	-	25,469
Leyden	772	1.08%	1,180	-	1,180	-	1,180	11,823	13,003	-	11,823
Monroe	93	0.13%	590	-	590	-	590	1,424	2,014	-	1,424
Montague	8,489	11.87%	4,720	241,801	246,521	295,010	299,730	130,008	134,728	53,209	(111,793)
New Salem	929	1.30%	1,180	-	1,180	-	1,180	14,227	15,407	-	14,227
Northfield	2,951	4.13%	5,310	-	5,310	-	5,310	45,194	50,504	-	45,194
Orange	7,518	10.51%	7,670	-	7,670	-	7,670	115,137	122,807	-	115,137
Rowe	351	0.49%	1,180	-	1,180	-	1,180	5,376	6,556	-	5,376
Shelburne	2,058	2.88%	2,950	-	2,950	-	2,950	31,518	34,468	-	31,518

Financial Comparison of Models

Appendix C

Community	Population	Percentage	FRCOG Radio System Assessment	Model 1 PSAP Operations	Model 1 PSAP/ Radio Cost	Model 2 PSAP Operations	Model 2 PSAP/ Radio Cost	Model 3 PSAP Operations	Model 3 PSAP/ Radio Cost	Model 2 Net Increase	Model 3 Net Increase
Shelburne Control (MSP)	-	-	-	267,019	267,019	267,019	267,019	-	-	-	(267,019)
Shutesbury	1,810	2.53%	2,360	-	2,360	-	2,360	27,720	30,080	-	27,720
Sunderland	3,777	5.28%	5,310	-	5,310	-	5,310	57,844	63,154	-	57,844
Warwick	750	1.05%	1,180	-	1,180	-	1,180	11,486	12,666	-	11,486
Wendell	986	1.38%	1,180	-	1,180	-	1,180	15,100	16,280	-	15,100
Whately	1,573	2.20%	3,540	-	3,540	-	3,540	24,090	27,630	-	24,090
Totals	71,535	100.00%	76,700	1,123,363	1,200,063	1,178,923	1,255,623	1,095,548	1,172,248	55,560	(27,815)

6

Technology Assessment

At the request of FRCOG, Section 6 of this report has been removed.



7

Interoperability Assessment

At the request of FRCOG, Section 7 of this report has been removed.



At the request of FRCOG, Section 8 of this report has been removed.

