

City of Columbia Heights, City of Fridley
and City of St. Anthony
Minnesota

Feasibility Study for Shared or Cooperative
Fire and Emergency Services

June 2013



Feasibility Study for Shared or Cooperative Fire and Emergency Services

City of Columbia Heights

City of Fridley

City of St. Anthony

Minnesota

Spring/Winter 2013

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Acknowledgements

Emergency Services Consulting International (ESCI) met with a number of individuals and groups throughout the process of completing this project. Without their insight and participation, this report would not have been possible. We sincerely extend our thanks to those listed here as well as others that assisted with collection of the necessary data and information from a variety of sources.

City of Columbia Heights

Gary Peterson, Mayor	Donna Schmitt, Councilmember
Tammera Diehm, Councilmember	Robert Williams, Councilmember
Bruce Nawrocki, Councilmember	Gary Gorman, Fire Chief

City of Fridley

Scott Lund, Mayor	Jim Saefke, Councilmember
Robert Barnette, Councilmember	Dolores Varichak, Councilmember
Ann Bolkcom, Councilmember	John Berg, Fire Chief

City of St. Anthony

Jerry Faust, Mayor	Jim Roth, Councilmember
Hal Gray, Councilmember	Randy Stille, Councilmember
Jan Jenson, Councilmember	John Malenick, Fire Chief

Executive Summary

Emergency Services Consulting International (ESCI) was engaged by the cities of Columbia Heights, Fridley, and St. Anthony, Minnesota, to evaluate the feasibility of shared and cooperative services among the cities' fire departments. This report serves as a report of that project and begins with a general overview of the participating agencies. This overview includes information relative to history, formation, and general description of the service areas, governance and lines of authority, foundational policy documents, organizational design, and budget and finance.

Columbia Heights Fire Department (CHFD) is a direct operating department of the City of Columbia Heights and falls within the general organizational structure and authorities of the city. The department was formed in 1907 and delivers fire suppression, basic life support (BLS) transport ambulance services, vehicle extrication, operations-level hazardous materials response, public education, code enforcement, and property maintenance inspections to the City of Columbia Heights and the City of Hilltop. These services are delivered from one fire station with a complement of two engines, one aerial ladder, three rescue units, and several ancillary and support vehicles. The department serves an area of 3.6 square miles with a resident population of 20,250. Based on information contained on the city-data website, the community sees a decrease in daytime population of 4,848 due to commuters working outside the area.

Fridley Fire Department (FFD) is a direct operating department of the City of Fridley and falls within the general organizational structure and authorities of the city. The department was formed in 1950 and delivers fire suppression, BLS first response, vehicle extrication, operations-level hazardous materials, public education, code enforcement, and property maintenance inspections. These services are delivered from three fire stations with a complement of three engines, one aerial ladder, four rescue apparatus, and several ancillary and support vehicles. The department serves an area of 10.9 square miles with a resident population of 27,208. Based on information contained on the city-data website, the city sees an increase in daytime population of 11,542 due to commuters living outside the area.

St. Anthony Fire Department (SAFD) is a direct operating department of the City of St. Anthony and, as such, falls within the general organizational structure and authorities of the city. The department was formed in 1956 and delivers fire suppression, BLS first response, vehicle extrication, technical high-angle rescue, public education, code enforcement, and property maintenance inspections. These services are delivered from one fire station with a complement of three engines, one rescue, and several ancillary

and support vehicles. The department serves an area of 2.4 square miles with a resident population of 8,226. Based on information contained on the city-data website, the city sees a decrease in daytime population of 466 due to commuters working outside the area.

Each participating agency is a direct operating department of its respective municipality. Each organization reports to a city council and/or mayor and participates in annual municipal budget processes. The primary difference between the governance and lines of authority of the three study agencies lies with the collective bargaining in which the CHFD fire chief participates. While a combined organization could work through this difference, a decision will need to be made as to which direction to move for this position regarding future cooperative efforts. In addition, each department should ensure that its enabling ordinances contain specific guidance that prevents governing bodies from exercising operational authority on incident scenes.

Foundational policy documents are those books, handbooks, and manuals that allow the organization to exist and govern its operations, both from administrative and operational perspectives. While each agency maintains some form of Standard Operating Guidelines (SOG), they are in variable states of completeness and organization. Regardless of moving forward with cooperative efforts, all three agencies would benefit from developing and implementing a standardized set of policy documents that cover specific topics including administrative policies, general rules, and operational guidance.

Most fire departments and emergency services agencies are structured in a typical “top-down” hierarchy where the fire chief reports to a board of directors (or city administrator/manager or city council) and the remainder of the fire department is under his/her direction, usually consisting of several assistant or deputy chiefs, line officers, and operational firefighters. Based on the size of the study agencies, functioning in clear operating divisions is not critical. With many organizations this size, programs and responsibilities are overseen by those ‘wearing more than one hat’, but that system is working for the current organizations. Future shared services may produce programs of sufficient size to warrant separate program managers as well as administrative and support positions. CHFD should work on updating all position descriptions for department staff and could use those currently in place within FFD and/or SAFD to increase consistency across all agencies regardless of future cooperative efforts. In addition, the study departments should work together to increase consistency within the collective bargaining agreements and each respective unit should consider combining into a single unit.

Without adequate funding, no emergency services organization can fulfill its mission. The personnel, whether career or volunteer, are compensated in some fashion either through salary and benefits or through intangible pension programs. Apparatus are expensive pieces of specialized equipment that can cost as much as \$1.5 million and must be replaced periodically (as will be discussed in the next section of this report). Facilities, which can cost upwards of several million dollars to construct, are necessary to house the apparatus and provide housing and training for personnel. Although not replaced as often as apparatus, emergency services facilities cannot be expected to last forever.

Based on combined budgets, the total cost of fire protection and all services provided by the study agencies is calculated to be \$3,612,138. Personnel costs account for 84.1 percent of the collective total, which would be expected in an area that utilizes career personnel. From a comparative perspective, the region's per capita cost of fire protection (\$64.87) is below the Minnesota average (\$70.28) and significantly below the national average (\$137.83). In addition to basic budgets and funding, ESCI also evaluated each agency's relief association and collective bargaining agreements. More detail on those elements is contained within the body of the report.

Aside from personnel, capital assets can be a department's most critical expense; without proper upkeep and replacement planning, facilities and apparatus can fall into disrepair and fail at a critical time. ESCI conducted a non-architectural/non-engineering review of existing facilities to evaluate suitability for current uses and viability for future service delivery. In addition, the project team reviewed existing apparatus for general condition and serviceability.

Fire stations in the study area vary considerably. The Columbia Heights station is contemporary, well designed, and has room for future expansion as service demand increases. The two Fridley sub-stations, Stations 2 and 3, are in good condition and adequately meet current needs. However, both are at maximum storage capacity and have no room for future expansion. Fridley Station 1 is an aging facility that has exceeded its capacity in terms of administrative and residential space for responders. Personnel are using small spaces to serve both as sleeping quarters and offices and personal accommodations are inadequate. In considering future cooperative efforts, this station will need to be factored into upgrade or replacement planning.

St. Anthony constructed its station in 2004; it is modern and presents well to the public. Space is adequate for current fire apparatus but room for additional equipment is limited. Further, due to

construction restraints, there is inadequate office space for current use, with work stations configured in the general purpose and training room.

Columbia Heights Fire Department has six fire response vehicles including two engines, a 109' aerial ladder truck, and three rescue vehicles. With an average age of 15 years, Columbia Heights' equipment is relatively new and appears to be serviceable at this writing with the exception of Engine 4, which is 28 years old. The engine shows evidence of excellent maintenance and does not show its age externally; however, it is aging and will need to be replaced in the near future.

Fridley Fire Department operates a fleet consisting of three fire engines, an aerial ladder truck, four rescue vehicles, and a small boat. All appear to be well maintained and fully serviceable. FFD engines and the aerial truck range in age from 4 to 23 years with an average age of 15 years. The primary units that are housed in Station 1 are newer and in good to excellent condition. The engines in Stations 2 and 3 are 18 and 23 years of age, respectively, which is near or exceeds what is generally accepted to be an acceptable service life.

St. Anthony Fire Department's major apparatus include three engines, a utility vehicle, a rescue unit, and a small boat. Engine 13 is 28 years of age and has exceeded what is typically considered an appropriate service life. Utility 11 is 23 years old. The other vehicles are newer and in good condition overall, with an average age of 10.25 years when the older units are removed from the calculation.

A key consideration in evaluating the feasibility of combining agencies into one or more consolidated entities is the costs that can be expected to be incurred for future replacement of major equipment. Apparatus service lives can be readily predicted based on factors including vehicle type, call volume, age and maintenance considerations. Fire engines in the study agencies average 19.5 years of service overall. Depending on multiple variables, an engine is typically expected to last 15 to 20 years in front line service and an additional five years in reserve status. The above average, however, includes some engines that are not in front-line service; when secondary engines are removed from the calculation, the average declines to approximately 14 years. Should the agencies combine efforts to leverage opportunities to share reserve or secondary engines, long-range cost avoidance may be gained by maintaining fewer apparatus; however, those opportunities are limited due to the relatively low number of engines in the combined fleets.

The only aerial apparatus in the three agencies are those in Columbia Heights and Fridley. Those units have an average age of 7.5 years and are not quite half way through their expected service life.

Today's emergency services agencies are a mix of career (paid full-time), part-time, paid-on-call, and volunteer personnel. Which of these an agency utilizes (one or more) is dependent upon several factors, including availability of paid-on-call or volunteer personnel, service demand, population density, socioeconomics, demographics, and financial resources of the community. For a career fire department, the distinction between administrative and support personnel and operations personnel is relatively clear. In combination and volunteer departments, however, this separation is not as simple. Most combination and volunteer departments have personnel that perform both administrative/support and operational roles while career departments have personnel that are primarily focused on managing and supporting the programs of the organization.

A total of nine full-time career and two part-time FTEs are assigned to primarily administrative and support functions. This equates to approximately 11 percent of the total staff within the system. In ESCI's experience, those systems that are not actively involved in transport EMS typically have a ratio of administrative and support to total personnel in the range of 10 to 15 percent. The current ratio in the study area is not considered to be out of line with industry standards given the combination status of the departments.

Based on the distribution of operational staff across all three study departments, the system utilizes a total 92 dedicated operational personnel including 16 career and 76 paid-on-call personnel. From a comparative perspective, the number of volunteer/paid-on-call personnel is in line with the regional benchmarks while the number of career personnel is significantly below the expected level. While raw numbers of personnel indicate a fire department's potential staffing for incidents, it is common for a limited number of those on the roster to respond to a majority of the incidents. The departments have varying success at producing their own personnel for structure fires, with SAFD having the highest average (11.5 and 12.4) for 2011 and 2012, respectively as illustrated below.

	2011	2012
CHFD	9.7	8.5
FFD	7.6	8.9
SAFD	11.5	12.4

The primary responsibility of emergency services organizations is to provide emergency response services to their respective communities. The next section of the report evaluates the service delivery and performance of each participating agency both as an independent provider and as a region. This was accomplished through an analysis of service demand, distribution of resources, and response performance.

As expected since each department is involved in emergency medical services first response efforts, medical incidents account for the vast majority of each agency's overall service demand while actual fires are relatively rare. Service demand was also evaluated temporally. As expected, each department's service demand begins to increase around 0600, peaks during the mid-afternoon hours and then declines into the evening. This is a common bell-curve pattern of service demand for fire departments involved in the delivery of EMS. When service demand was plotted geographically, it was determined that the heaviest incident density occurs within central Columbia Heights and St. Anthony, extending northward into the southern areas of Fridley.

While fire inspections and prevention programs are discussed separately, it is worth noting within the service demand section that each study department is also involved in property and maintenance inspections within the respective communities. These inspections, not related to fire safety or prevention, consume a large amount of time that could be utilized to increase firefighter training, improve fire prevention and public education efforts, or allow firefighters to participate in more activities related to delivery of emergency services.

CHFD is responsible for issuing and renewing of rental property licenses. In 2012, CHFD conducted 1,826 rental property license and complaint inspections. CHFD is responsible for all exterior property maintenance inspections. During 2012, this included 38 snow/ice removal inspections, 994 exterior nuisance inspection for outside storage/garbage, 1,508 long grass and weed inspections, and 191 single family home exterior maintenance inspections. CHFD conducted 800 annual commercial fire code inspections in Columbia Heights and an additional 56 commercial/multi-unit residential fire code inspections in the City of Hilltop by contract.

FFD, although not as involved as CHFD, provides inspections through its Residential Rental Property Inspections Division, which is responsible for issuing and renewing rental property licenses within the city. This division within the fire department is responsible for correcting substandard conditions and

maintenance of standards for rental properties. The city has approximately 4,000 rental properties that must be inspected on a four-year cycle.

SAFD is also involved in property maintenance inspections and inspected and mitigated over 236 code violations and rental properties in 2012. These included 19 parking violations, 39 vegetation violations, 19 garbage violations, 19 sign enforcement violations, 3 yard maintenance violations, 116 rental inspections, and 21 miscellaneous inspections.

Each municipality should evaluate the primary mission of its fire department and determine if these non-public safety inspections should be performed by fire department personnel. In addition, given recent events, the safety of the overall program should be investigated since the personnel conducting personal property inspections are not sworn law-enforcement officers and have no means to defend themselves should a property owner become hostile.

In regard to distribution of resources, based on travel models, nearly 100 percent of the combined service area is within four minutes of travel from an existing fire station. In addition, 98.2 percent of historic service demand (2011-2012) fell within four minutes of travel from an existing station. Similarly, 99.9 percent of historic service demand fell within eight minutes of travel from an existing station. This indicates that physical facilities are well-distributed throughout the study area.

When discussing emergency services organizations, the primary issue of question is response performance. Response performance analysis evaluates how quickly an organization responds to an incident and is more commonly known as response time. The response time continuum, the time between when the caller dials 9-1-1 and when assistance arrives, is comprised of several different components:

- Processing Time – The amount of time between when a dispatcher answers the 9-1-1 call and resources are dispatched.
- Turnout Time – The amount of time between when units are notified of the incident and when they are en route.
- Travel Time – The amount of time the responding unit actually spends on the road to the incident.
- Response Time – A combination of turnout time and travel time and generally accepted as the most measurable element.

For this analysis, ESCI was most interested in the ability to respond the appropriate resources to the highest percentage of incidents. For this reason, ESCI analyzed NFIRS data from each department for 2011 and 2012 and generated average and 90th percentile response performance for emergency incidents only. Normally, this analysis would begin with an evaluation of call processing time within the communications/dispatch center. However, since computer aided dispatch (CAD) data was not available for this project, departmental NFIRS data was used and does not contain the appropriate timestamps to provide this analysis.

Turnout times can vary based on staffing patterns and will typically be longer for volunteer or paid-on-call departments. *NFPA 1710*, the standard that applies to career organizations, recommends a turnout time performance of 60 seconds for medical incidents and 1:20 (1 minute 20 seconds) for fire incidents, when measured at the 90th percentile. *NFPA 1720*, the standard that applies to volunteer and combination departments, does not outline a specific turnout time performance recommendation. In order to measure turnout time, incident data must be provided with both 'dispatch' time and 'en route' time. Unfortunately, NFIRS does not require that 'en route' be recorded in the incident report. As mentioned previously, CAD data (the typical source for this performance measure) was not available from Anoka County so an analysis of turnout time performance could not be performed. Since the data was not available from Anoka County, which dispatches CHFD and FFD, turnout time performance was also not analyzed for St. Anthony (dispatched by Hennepin County).

Regardless of what the call processing or turnout times are for a particular organization or a region, the most important aspect of response is actually getting the appropriate resources on the scene of the emergency.

NFPA 1710 recommends a first unit arrival response performance of 5:00 when measured at the 90th percentile regardless of population density. *NFPA 1720* allows a tiered response performance objective based on varying levels of population density as illustrated in the figure below.

Classification	Population Density per Square Mile	Response Performance	
		Target	Percentile
Urban	>1,000	9:00	90 th
Suburban	500 to 999	10:00	80 th
Rural	<500	14:00	80 th
Wilderness/Remote	Undeveloped	Undetermined	90 th

The following chart illustrates the total response performance for the study agencies from time of dispatch to arrival at the incident for 2012.

	CHFD	FFD	SAFD
Average	4:37	5:32	2:38
80 th Percentile	6:00	7:00	3:26
90 th Percentile	7:00	9:00	4:11

Based on the analysis of calendar year 2012 incident data and assuming a response performance target in line with *NFPA 1720* urban density recommendations, each department is meeting or exceeding the recommended performance. However, if *NFPA 1710* is to be applied, only SAFD is meeting that performance objective.

Although the delivery of fire suppression and emergency medical services is at the core of each department's mission, additional core activities are necessary to support every emergency services agency. These activities provide the basis for employee training and education, career development, public safety education, fire prevention, and code enforcement. More detail on each of the elements is provided within the body of the document.

While the preceding sections of the report focus on the current conditions within each of the study agencies, the greater intent of the project is to evaluate the potential for cooperative and/or shared services between the agencies up to and including consolidation, if feasible. The final report section examines the multitude of options available to the study agencies and provides direction where appropriate. Three basic strategies are generally available when considering cooperative efforts and shared services, beginning with a do-nothing approach (status quo) and ending with complete unification of the organizations into what is, essentially, a new emergency service provider. In between lay the potential for functional consolidation and operational consolidation.

In identifying potential cooperative and shared services opportunities, the project team considered the key issues now challenging each agency and community. Some issues represent roadblocks to integration, while others provide a unique chance for improvement. As an element of the review, affected staff and other officials provided local and internal perspective on organizational culture, community expectation, and other significant matters.

ESCI usually makes no distinction between unification, consolidation, or merger, tending to use each term interchangeably. The reader should note that when referring to the union of programs or agencies, the operative words are *functional* and *legal*. Governing bodies should pursue the process of joining two or more fire departments only after concluding that unification is cost-effective and is likely to provide better and/or more efficient service to the public. Each agency's legal counsel should research the particular statutory steps necessary to implement a particular unification strategy. The different processes are not commonly difficult to accomplish; but because the transfer of public assets and liabilities may be involved, the procedure itself can be relatively precise. It is important, therefore, that the agencies have the benefit of competent legal advice throughout the process.

The decision to choose one unification strategy over another is a matter of local policy. Most often, officials choose a preferred course for analytical reasons; however, in certain cases politics or law may rule. Most states actively support cooperation between governments as a matter of policy in the interest of furthering the economy and efficiencies of local government. Generally, functional and operational strategies are always available as options, whereas the legal unification of fire departments is dependent on circumstance.

While the last section of the report evaluates and presents the potential for combining the study departments into one or more new and larger agencies, ESCI understands that cooperative efforts and shared services can take on a much different look. As mentioned previously, there are various methods by which to cooperate between departments and improve the overall efficiency of the organizations within a given region. Various functional shared services options that two or more departments may participate in to gain efficiencies of scale were evaluated and include:

- Enhanced Mutual and Automatic Aid Agreements
- Development of Uniform Pre-Incident Planning Processes
- Implementation of Regional Incident Command and Operational Supervision
- Combining Administrative and Support Services
- Developing a Regional Health and Safety Program
- Implementing a Regional Capital Replacement Plan
- Developing a Regional Training Program
- Developing a Regional Code Enforcement and Life Safety Education Program
- Developing Unified Standard Operating Guidelines/Procedures

This final section focuses on the operational consolidation of one or more of the study departments. Where appropriate, governance and financial implications are also discussed.

Strategy 1 – Consolidation of All Study Fire Departments

From an operational perspective, the consolidation of the three study departments could achieve certain efficiencies through the reduction in redundant administrative and support personnel as well as a potential alternative service delivery model. While the model indicates that a majority of the current FFD Station 2 area can be reached within four minutes of travel from Fridley Station 1, the amount of service demand coverage also indicates that FFD Station 2 could potentially be eliminated. Elimination of FFD Station 2 could produce savings from reduced operational costs and the potential decreased need for apparatus that are currently housed within this station.

While the model indicates a net negative change in personnel (-4) and a savings of approximately \$292,000, it should be understood that these savings could be re-applied to additional operational personnel or other positions to increase the overall effectiveness of the organization such as additional inspections personnel, dedicated training officer, or dedicated public education and prevention personnel.

Strategy 2 – Consolidation of Columbia Heights FD and Fridley FD

As an alternative, ESCI evaluated a ‘less-than-total’ consolidation and considered the merger of CHFD and FFD as well as CHFD and SAFD, which will be discussed next. The potential operational merger of CHFD and FFD could be possible since the two cities are contiguous and already share some operations through mutual and automatic aid.

From an operational perspective, the merger of these two agencies would not impact deployment of facilities and/or apparatus. The potential reduction in personnel resources, however, would change from that presented previously under a full consolidation of the three study departments. Based on this scenario, there is a net zero change in personnel as positions are re-allocated. Thus, little in the way of initial savings would be realized.

Strategy 3 – Consolidation of Columbia Heights FD and St. Anthony FD

As with Strategy 2, this strategy merges two contiguous departments and is similar to that described above. Aside from the potential elimination of FFD Station 2, the resource deployment would be the same as that of Strategy 2. Based on this scenario, there is a net zero change in personnel as positions

are re-allocated. However, given the reallocation of positions to operations, a slight increase in cost could be realized based on the average firefighter salary.

While the emergency operations component of a fire department is an important element of the overall emergency services system, no organization can properly function without some form of governance and authority to act. The paragraphs below provide policymakers with a summary of information regarding several potential options for governance of the fire protection system serving a combined organization, regardless of option chosen.

Status Quo

Any discussion of potential feasible governance options would be remiss without considering continuation of the current model. Although not perfect, the current model of independent municipal departments is a viable option for future governance. While the current model is a feasible option moving forward, in order for this model to be sustainable, certain cooperative efforts will be necessary.

Fire District through a Joint Powers Agreement

The term 'Fire District' in the State of Minnesota can take on more than one meaning. For the purposes of this discussion, the term Joint Powers Agreement (JPA) is more appropriate in terms of governance. A Fire District *per se*, will be discussed in the next section.

JPA's are not unfamiliar to the study participants. Minnesota statutes authorize two or more municipal corporations to collaborate in exercising any power common to the municipalities and to provide a joint board representing the participating entities.

The advantage of a JPA in this instance is that each entity maintains autonomy regarding taxation and ability to withdraw from the agreement in the future. Each participating entity would levy a tax in its own way and then contribute to the operations of the JPA as outlined in the enabling documents. No legislative approval is required for this type of agreement and the intergovernmental agreements created would define how the JPA was governed as well as how each participant is represented.

Fire District with Taxing Authority

A fire district with taxing authority within the State of Minnesota is an uncommon entity. In fact, only one currently exists: Cloquet Area Fire District. This district was created by special law in 2009 after the Cities of Cloquet and Perch Lake petitioned the legislature. Today, the district has expanded to include

the City of Scanlon as well as providing service to the Fond du Lac Band of Lake Superior Chippewa through a professional services contract.

What makes a district vastly different from a JPA is that the district is an independent quasi-governmental entity with taxing authority granted by the state. In other words, it would stand as a separate unit of local government. The primary advantage to this type of governance model is that the individual cities, would no longer be responsible for fire protection. Rather, the newly created district would have that responsibility as outlined in the enabling legislation. In addition, the covered municipalities would no longer be responsible for *funding* fire protection in their communities. This would lie with the taxing authority of the district.

Unlike the formation of a JPA, the State of Minnesota gives little guidance to how a board of an independent taxing fire district should be determined. In fact, since there is only one fire district with taxing authority in Minnesota, created by special law, *no* guidance is provided. Given the lack of guidance, local officials are left with the responsibility to determine how the board of a taxing fire district will be determined prior to requesting special legislation to create that entity.

Consolidation under One City

Consolidation of existing fire resources under one of the participating cities is the final option evaluated here regarding the future delivery of emergency services throughout the region. In essence, this type of consolidation would eliminate two of the departments and fire protection would be delivered to those cities through contract. While this would reduce the layers of governance by one, a contract would be required with each participant.

This type of arrangement would effectively place all governance, control, and funding in the hands of one city. The surrounding municipalities would contract with that city. Based on interviews with some elected and appointed officials from each of the participating jurisdictions, this is not a desirable option.

This final analysis consisted of cost allocation, which can be applied to any format for collaboration and is scalable based on the number of entities involved.

The report concludes with a general discussion on the overall implementation process should the entities make a decision to potentially move forward. The word potential is used here because a part of this process includes the policy decisions necessary to determine, based on the results of the study,

whether there is sufficient desire among the political bodies of the organization to continue with the process or not. The implementation begins with that step.

A tremendous amount of data and information is contained within this document, much of which was supplied by the agencies involved and then analyzed and evaluated by the ESCI project team. In the end, the study departments, like many other paid-on-call fire departments across North America, are operating at a level that is currently meeting the expectations of the communities served but realize that there is always room for improvement. Regardless of the path that policymakers chose moving forward, the information contained with this report is intended to be used by the fire departments to follow a process of continuous quality improvement in a non-ending cycle of self-evaluation.

ESCI began collecting data and working with community stakeholders for this project in February 2013. Analysis of data and collection of stakeholder input has taken over three months to compile to develop options for future service delivery within the study area. It is ESCI's sincere hope that the information contained within this document is seen as useful in enhancing the way in which fire and emergency services are delivered throughout the area.

Section I – Evaluation of Current Conditions

Emergency Services Consulting International (ESCI) was engaged by the cities of Columbia Heights, Fridley, and St. Anthony to evaluate the feasibility of shared and cooperative services between the cities' three fire departments. This report serves as a report of that project and begins with a general overview of the participating agencies.

Organizational Overview

In the paragraphs below, ESCI provides a general description of the primary organizational components of each study agency. This overview includes information relative to history, formation, and general description of the service areas, governance and lines of authority, foundational policy documents, organizational design, and budget and finance.

History, Formation and General Description of Fire Agencies

This section provides a general description of each of the participating fire departments and outlines the basic similarities and differences in their location, formation, services provided, and staffing methodologies.

Columbia Heights

Columbia Heights Fire Department (CHFD) is a direct operating department of the City of Columbia Heights and, as such, falls within the general organizational structure and authorities of the city. The department was formed in 1907 and delivers fire suppression, basic life support (BLS) transport ambulance services, vehicle extrication, operations-level hazardous materials response, public education, code enforcement, and property maintenance inspections to the City of Columbia Heights and the City of Hilltop. These services are delivered from one fire station with a complement of two engines, one aerial ladder, one rescue, one ambulance (BLS), and several ancillary and support vehicles. The department serves an area of 3.6 square miles with a resident population of 20,250.¹ Based on information contained on the city-data website, the City sees a decrease in daytime population of 4,848 due to commuters working outside the area.

Fridley

Fridley Fire Department (FFD) is a direct operating department of the City of Fridley and falls within the general organizational structure and authorities of the city. The department was formed in 1950 and

¹ U.S. Census Bureau 2010 decennial census.

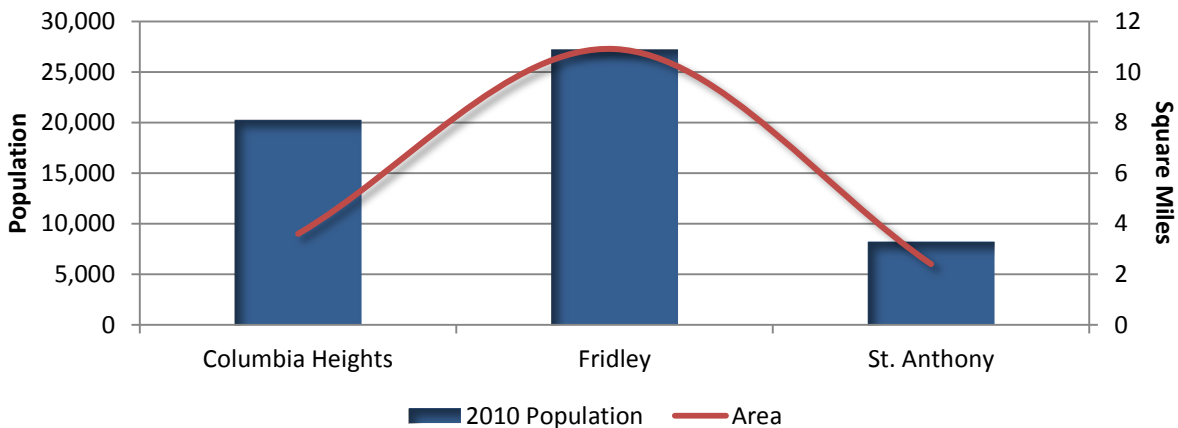
delivers fire suppression, BLS first response, vehicle extrication, operations-level hazardous materials, public education, code enforcement, and property maintenance inspections. These services are delivered from three fire stations with a complement of three engines, one aerial ladder, one rescue apparatus, and several ancillary and support vehicles. The department serves an area of 10.9 square miles with a resident population of 27,208.¹ Based on information contained on the city-data website, the City sees an increase in daytime population of 11,542 due to commuters living outside the area.

St. Anthony

St. Anthony Fire Department (SAFD) is a direct operating department of the City of St. Anthony and, as such, falls within the general organizational structure and authorities of the city. The department was formed in 1956 and delivers fire suppression, BLS first response, vehicle extrication, technical high-angle rescue, public education, code enforcement, and property maintenance inspections. These services are delivered from one fire station with a complement of three engines, one rescue, and several ancillary and support vehicles. The department serves an area of 2.4 square miles with a resident population of 8,226.¹ Based on information contained on the city-data website, the City sees a decrease in daytime population of 466 due to commuters working outside the area.

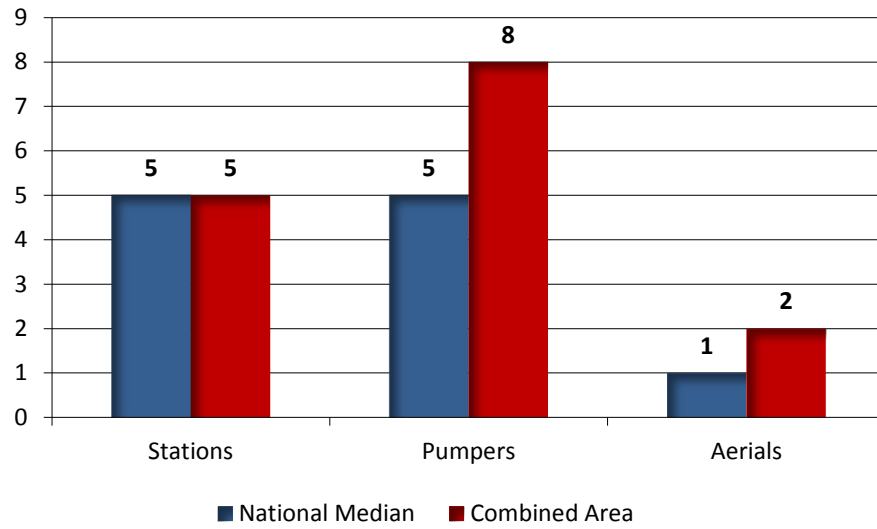
The following figure summarizes the population and area protected by each agency.

Figure 1: Comparison of Area and Population



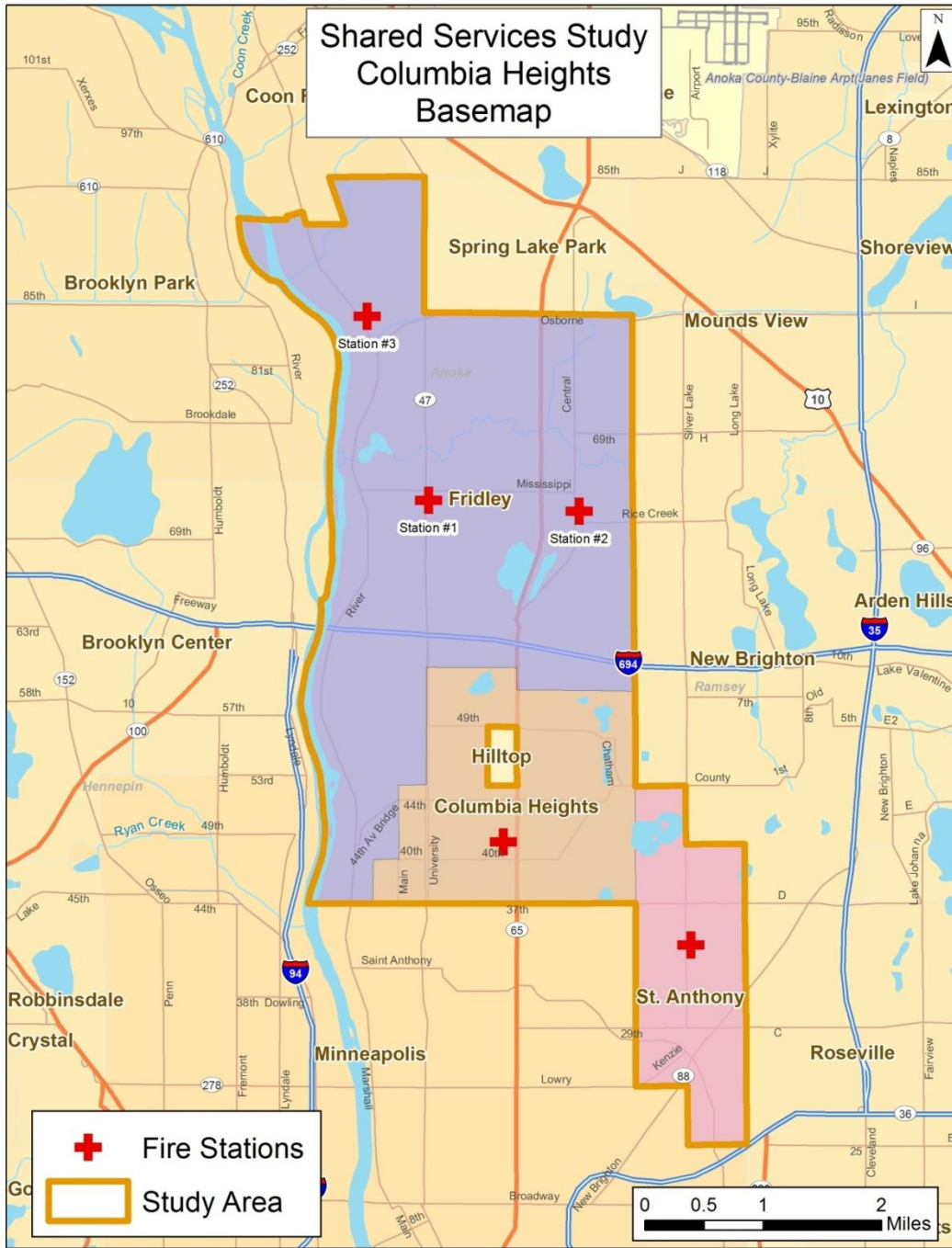
The study agencies provide service to a composite area of 17.0 square miles and a resident population of 55,684. Available national benchmark data provides some limited comparisons of capital resources for fire departments across the nation. The figure below illustrates how the combined capital assets of the study agencies compare to those benchmarks.

Figure 2: Comparison of Physical Resources to National Medians



The following map provides an overview of the study area geographically and indicates where each of the organizations fixed facilities is located.

Figure 3: Study Area Base Map



Governance and Lines of Authority

As mentioned, each participating agency is a direct operating department of its respective municipality. Each organization reports to a city council and/or mayor and participates in annual municipal budget processes. The figure below highlights some of the similarities and differences between the study agencies.

Figure 4: Summary of Governance and Lines of Authority Elements

	Columbia Heights FD	Fridley FD	St. Anthony FD
Agency Authorization Document	City charter and ordinances	City charter and ordinances	Statutory
Policy Limiting Governing Body from Operational Authority	No	No	No
Fire Chief Status	Selected employee with collective bargaining protection	At-will employee with no personal contract	At-will employee with no personal contract
Chief Receives a Performance Evaluation	Annually	Annually	Annually

The primary difference between the governance and lines of authority of the three study agencies lies with the collective bargaining in which the CHFD fire chief participates. While a combined organization could work through this difference, a decision will need to be made as to which direction to move for this position regarding future cooperative efforts. In addition, each department should ensure that their enabling ordinances contain specific guidance that prevents governing bodies from exercising operational authority on incident scenes.

Foundational Policy Documents

Foundational policy documents are those books, handbooks, and manuals that allow the organization to exist and govern its operations, both from an administrative and operational perspective. Many sets of these documents can exist within a single agency and the comprehensiveness of the documents can be highly varied. In general, those organizations that function as governmental entities (county, municipal, and special districts) tend to have a more comprehensive set of policy documents than do predominantly volunteer agencies. This is not due to the volunteer agencies' lack of attention to the issue but rather state and federal rules that local government units must adhere to in this regard. ESCI reviewed the policy documents for each agency as outlined in the following figure.

Figure 5: Summary of Foundational Policy Document Elements

	Columbia Heights FD	Fridley FD	St. Anthony FD
Titles of Policy Documents	Standard Operating Guidelines/Procedures City Personnel Rules and Regulations	FD Policies and Procedures City Policy Manual Standard Operating Guidelines	SOGs Employee Resource Guide
Total Number of Policy/ Governing Documents	3	3	2
Quality of Administrative Policy Documents	SOGs very limited	Well organized and complete	Reasonably well organized, but missing a few important components
Important Civil Liability and Risk Management Policies Present	Yes	Yes	Yes
Quality of Standard Operating Policies	Some present, but not complete	Outdated	Reasonably well organized, outdated
Adequate Operational Scene Guidance	No	Yes	Yes

While each agency maintains some form of Standard Operating Guidelines (SOG), they are in variable states of completeness and organization. Regardless of moving forward with cooperative efforts, all three agencies would benefit from developing and implementing a standardized set of policy documents that cover specific topics including administrative policies, general rules, and operational guidance.

Organizational Design

Most fire departments and emergency services agencies are structured in a typical “top down” hierarchy where the fire chief reports to a board of directors (or city administrator/manager or city council) and the remainder of the fire department is under his/her direction, usually consisting of several assistant or deputy chiefs, line officers, and operational firefighters. Often span of control becomes an issue as departments grow and the ability of supervisory personnel, either career or volunteer, becomes overextended. In historical military literature, the origin of modern span of control theory, an individual in a stressful situation should have no more than six to eight personnel under his command. ESCI evaluated the organizational structure of each study agency as illustrated in the following figure.

Figure 6: Summary of Organizational Design Elements

	Columbia Heights FD	Fridley FD	St. Anthony FD
Clear Unity of Command	Yes	Yes	Yes
Organized With Clear Operating Divisions	No	No	No
Specific Programs With Managers Designated	No	No	No
Individuals That Report Directly To The Chief	3	Asst. Chief Admin. Asst.	Asst. Chief All full-time staff
Chief's Span of Control	3	2	6
Chief's Disciplinary Authority	Fire Chief can hire/fire POC. City Manager is the disciplinary authority for all career staff.	Suspension from duty and recommendation for termination	Termination without additional authorization
Quality of Job Descriptions	Complete and thorough, but somewhat outdated	Complete, thorough, and up to date	Complete, thorough, and up to date
Collective Bargaining	Yes	Yes	Yes
Positions Covered	All positions below Assistant Chief, Fire Chief	All positions below Assistant Chief	All full-time staff

Based on the size of the study agencies, functioning in clear operating divisions is not critical. With many organizations this size, programs and responsibilities are overseen by those 'wearing more than one hat' but that system is working for the current organizations. Future shared services may produce programs of sufficient size to warrant separate program managers as well as administrative and support positions. CHFD should also work on updating all position descriptions for department staff and could use those currently in place within FFD and/or SAFD to increase consistency across all agencies regardless of future cooperative efforts. In addition, the study departments should work together to increase consistency within the collective bargaining agreements and each respective unit should consider combining into a single unit.

Budget and Finance

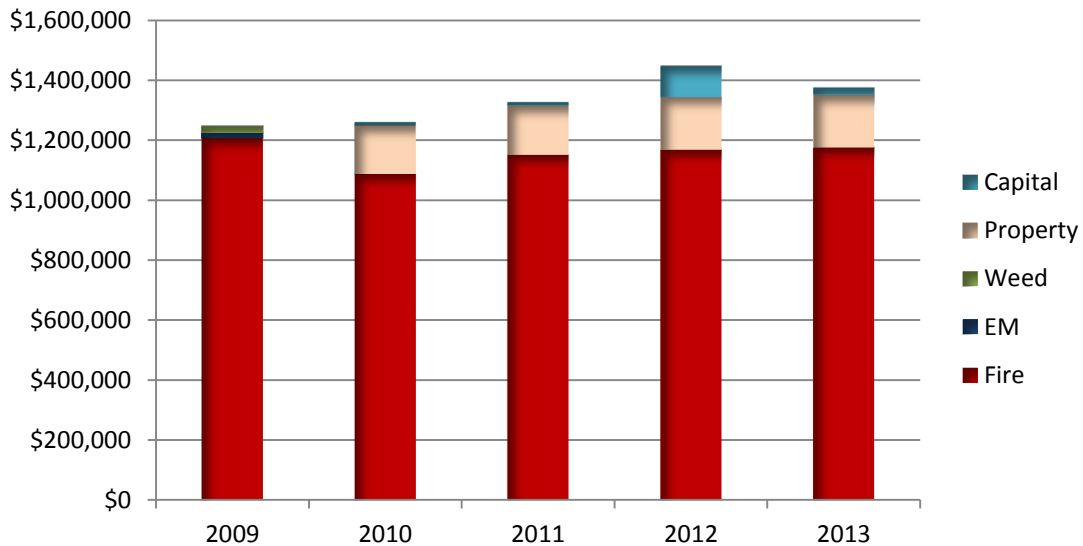
Without adequate funding, no emergency services organization can fulfill its mission. The personnel, whether career or volunteer, are compensated in some fashion either through salary and benefits or through intangible pension programs. Apparatus are expensive pieces of specialized equipment that can cost as much as \$1.5 million and must be replaced periodically (as will be discussed in the next section of this report). Facilities, which can cost upwards of several million dollars to construct, are necessary to house the apparatus and provide housing and training for personnel. Although not replaced as often as apparatus, emergency services facilities cannot be expected to last forever.

This section of the report analyzes the fiscal resources of each of the study agencies and provides some generalizations about accountability of taxpayer dollars and whether or not there are suitable protections in place between the county and the contract providers of fire protection.

Columbia Heights

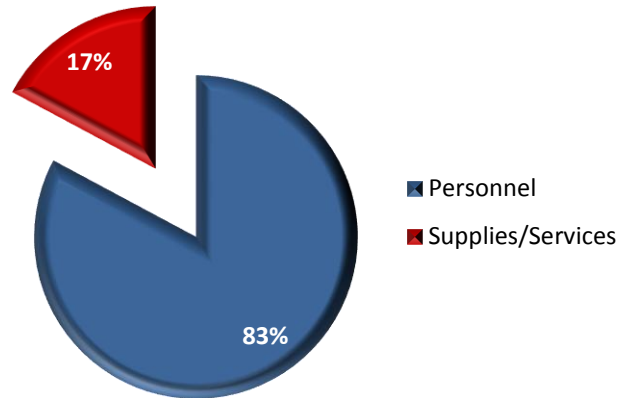
CHFD provides not only fire protection services but also emergency management, weed control inspections, and property inspections. All functions related to fire protection, including emergency medical response, training and fire prevention are included in the department's 'Fire' budget. Capital expenditures are recorded separately. The figure below illustrates the budget history based on the five years of data provided by the department

Figure 7: Budget History - CHFD



Based on the information provided, the fire department's overall budget has seen an increase of approximately 10.3 percent over the five-year period; however, the 'fire' portion the budget has seen a decrease of 2.6 percent over that same period. The following figure provides a summary of how the total departmental funds are distributed over the three primary categories of personnel, supplies/services, and capital expenditures for 2013.

Figure 8: 2013 Budget Distribution - CHFD

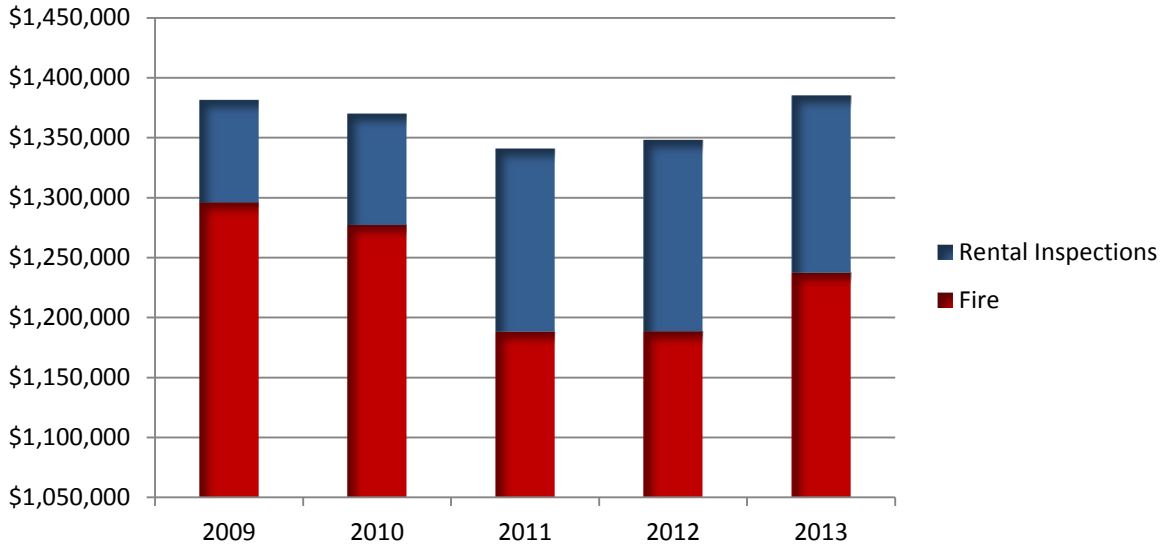


Although the 2013 budget indicates that the 'capital' budget includes a \$25,000 expenditure, this amount is included in the overall supplies/services line of the capital fire equipment budget. Given the fact that CHFD is a combination fire department that employs both career administrative and operational personnel, it would be expected that a majority of the department's budget be consumed by personnel expenditures.

Fridley

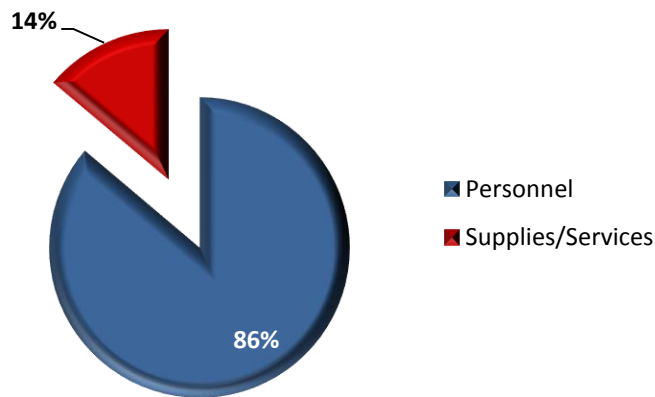
FFD provides not only fire protection services but also property inspections. Rental inspections are segregated into a separate budget as are capital expenditures on an annual basis. The figure below illustrates the department's budget history based on data provided by the department

Figure 9: Budget History - FFD



The fire department's overall budget has seen an increase of only 0.3 percent over the five-year period; the 'fire' portion the budget has seen a decrease of 4.5 percent over that same period. The figure below provides a summary of how the total departmental funds are distributed over the three primary categories of personnel, supplies/services, and capital expenditures.

Figure 10: 2013 Budget Distribution - FFD

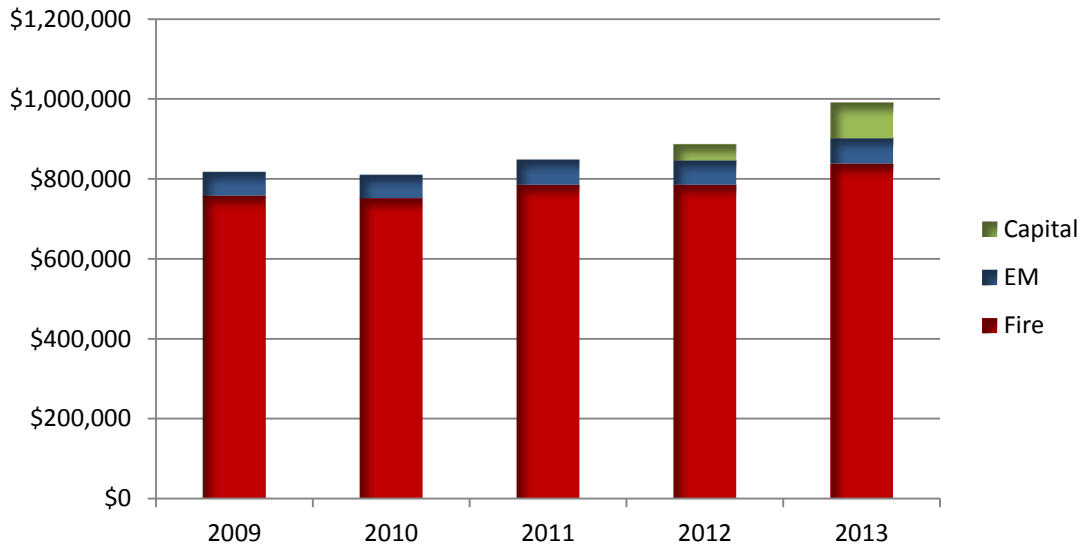


Given the fact that FFD is a combination fire department that employs both career administrative and operational personnel, it is expected that a majority of the department's budget be consumed by personnel expenditures.

St. Anthony

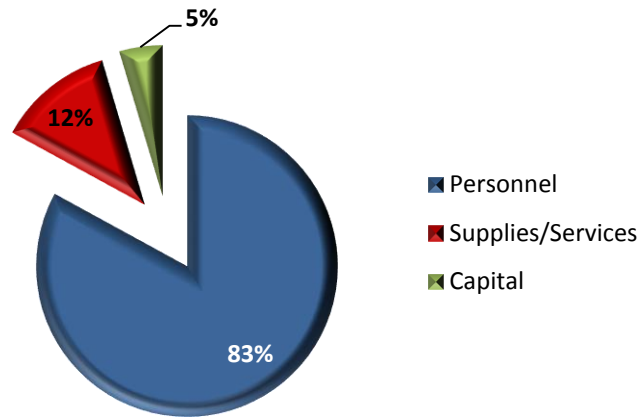
SAFD provides not only fire protection services but also emergency management and property inspections. All functions related to these services, excluding emergency management, are included in the overall fire department budget. Emergency management is segregated into a separate budget as are capital expenditures on an annual basis. The following figure illustrates the department's budget history based on the five years of data.

Figure 11: Budget History - SAFD



Based on the information provided, the fire department's overall budget has seen an increase of approximately 21.3 percent over the five-year period; however, the 'fire' portion the budget has seen an increase of only 10.6 percent over that same period. The figure below provides a summary of how the total departmental funds are distributed over the three primary categories of personnel, supplies/services, and capital expenditures.

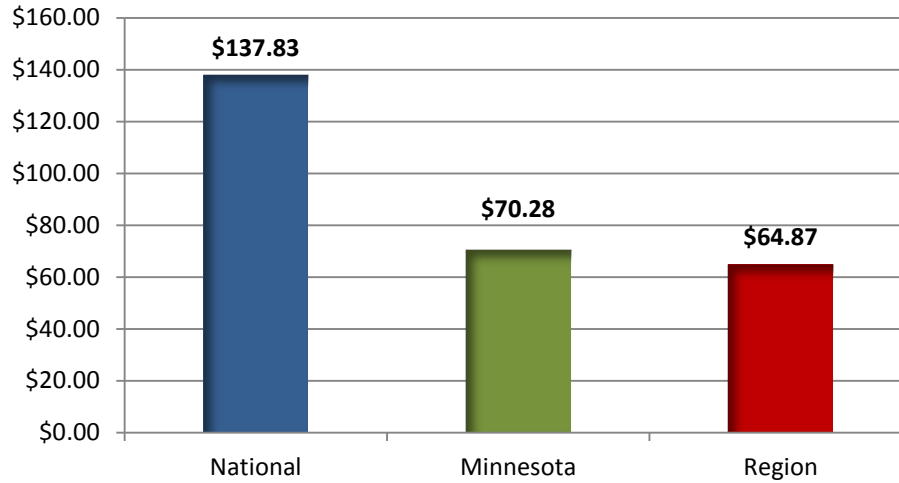
Figure 12: 2013 Budget Distribution - SAFD



Given the fact that SAFD is a combination fire department that employs both career administrative and operational personnel, it would be expected that a majority of the department's budget be consumed by personnel expenditures.

Based on combined budgets, the total cost of fire protection and all services provided by the study agencies is calculated to be \$3,612,138. Personnel costs account for 84.1 percent of the collective total, which would be expected in an area that utilizes this number of career personnel. From a comparative perspective, the region's per capita cost of fire protection is below the Minnesota average and significantly below the national average as illustrated in the following chart.

Figure 13: Comparative Cost Per Capita²



Although the figure above indicates that the Minnesota and study region costs per capita are substantially below the national cost, it should be noted that the benchmark data does not differentiate between those departments that do or do not provide transport emergency medical services or those department that are fully career or a combination of career and volunteer. Still, it is understood that Minnesota, in general, has costs significantly below the rest of the nation in terms to fire protection.

Relief Associations

One issue that could be a major factor in the decision to enter into a shared services or other cooperative services agreement between the fire departments concerns each agency's Fire Relief Association. A 2011 report issued by the Minnesota Office of the State Auditor found that 717 relief associations were in existence in Minnesota during 2009.³ Those 717 relief associations held nearly \$403 million in net assets, which represents accrued benefits for 20,812 firefighters statewide. During 2009, relief associations received \$15.4 million in fire state aid and \$7.8 million in municipal contributions. During that same year, \$30.8 million in service pensions was paid out by 444 different relief associations.

SAFD participates in a lump sum plan; at the appropriate time, eligible members receive a one-time payment from the association based on set criteria. CHFD and FFD participate in a defined-contribution plan. A defined-contribution plan is always fully funded based on the fact that assets are always equal to liabilities. All assets are divided among plan members, and the value of each member's account rises or

² Minnesota Taxpayers Association. How Does Minnesota Compare. September 2012. p. 33.

³ Financial and Investment Report of Volunteer Fire Relief Associations. March 2011.

falls based on revenues and expenditures to or from the plan. The differences in the plans within the study region are identified in the following figure.

Figure 14: Summary of Relief Association Benefits⁴

	Pension Type	Active Members	Active Service Requirement	Minimum Age	Yearly Benefit	Funding Ratio
CHFD	Defined Contribution	19	5	50	Balanced	100%
FFD	Defined Contribution	40	5	50	Balanced	100%
SAFD	Lump Sum	25	10	50	\$2,600	114%

Although there are differences between the plan types currently in use within the study region, it is also useful to examine the municipal contributions and current net assets held by each relief association. The following figure summarizes these components.

Figure 15: Fire Relief Association Net Assets⁵

	Municipal Contribution (2010)	Current Net Assets
CHFD	\$0	\$1,282,510
FFD	\$0	\$3,756,202
SAFD	\$6,000	\$987,657
Total Assets	\$6,000	\$2,270,373

If these funds were combined, there would have to be some adjustment to the plan type as well as the service requirement. Otherwise, Chapter 424B of Minnesota Statutes should be consulted in how to best merge the existing relief association if an operational consolidation is implemented.

Collective Bargaining Agreements

Collective bargaining agreements are those documents or contracts between the municipality and the bargaining unit (a group of employees) that outlines the salaries, benefits, and securities offered to covered employees. These documents also outline management rights regarding operational and administrative issues. Four separate bargaining units are in place within the study departments.

- Memorandum of Understanding between the City of Columbia Heights and Public Managers Association – Covers CHFD Fire Chief Only

⁴ *Financial and Investment Report Of Volunteer Fire Relief Associations*. State of Minnesota. Office of the State Auditor. http://www.osa.state.mn.us/Reports/pen/2010/vfra/vfra_10_report.pdf.

⁵ Ibid.

- Agreement between the City of Columbia Heights and International Association of Firefighters (IAFF) Local No. 1216 – Covers all positions below Assistant Chief
- Agreement between the City of Fridley and IAFF Local No. 1986 – Covers all fire department positions below Assistant Chief
- Agreement between the City of St. Anthony and IAFF Local No. 3486 – Covers all positions below Fire Chief

The agreement between Columbia Heights and the Public Managers Association covers department head personnel with the City of Columbia Heights including the Library Director, Community Development Director, Police Chief, Finance Director, and Public Works Director as well as the Fire Chief. The CHFD Fire Chief is the only study department executive officer covered by collective bargaining. The other Fire Chiefs are at-will employees without personal services contracts. Moving forward, a determination will need to be made regarding administrative personnel and the collective bargaining protection if consolidation is to be implemented. This will be purely a policy decision.

The collective bargaining agreements (CBA) for the three operational units follow the typical IAFF format and outline common topics such as purpose, recognition, definitions, employee security, employer security, grievance procedures, savings clause, seniority, discipline, work schedules, rates of pay, training, promotion, annual leave and holidays, overtime, allowances, benefits and miscellaneous items. The primary components and differences between the three CBAs is summarized in the next figure.

Figure 16: Comparison of Collective Bargaining Agreements

	CHFD	FFD	SAFD
PTO Selection Basis	Seniority	Seniority	Seniority
PTO Selection Date	Non-Specific	March 1	March 15
Disciplinary Steps	Five	Five	Five
Workweek	56 Hours	56 Hours	56 Hours
Rates of Pay (2013)			
Fire Marshal/AC	N/A	N/A	\$25.57
Captain	\$22.37	\$23.44	\$22.17
Firefighter/Inspector	N/A	\$31.85	N/A
Firefighter/FEO (>3 years)	\$20.44	\$22.76	\$21.00
Probationary Period	12 Months	12 Months	6 Months
Uniform Allowance	Item Specific	\$500	\$600
Annual Leave	Vac + Sick	Vac + Sick	PTO
After 6 months	N/A	N/A	240 hours
1 to 5 years	246 hours	N/A	456 hours
5 to 10 years	246-302 hours	N/A	504
<7 years	N/A	201 hours	N/A
7 to 15 years	302-358 hours	268 hours	N/A
10 to 15 years	N/A	N/A	552 hours
>15 years	358-414 hours	291 hours	600 hours
Holidays	12	11	12
Bereavement Leave	Yes	Yes	Yes
Single Health Coverage	\$805	\$620.87	100%
Longevity	No	No	Yes

Capital Assets and Capital Improvement Programs

Aside from personnel, capital assets can be a department's most critical expense; without proper upkeep and replacement planning, facilities and apparatus can fall into disrepair and fail at a critical time. This section evaluates the capital assets of the study agencies and provides recommendations for replacement as necessary.

Facilities

Fire stations play an integral role in the delivery of emergency services for a number of reasons. A station's location will dictate, to a large degree, response times to emergencies. A poorly located station can mean the difference between confining a fire to a single room and losing the structure. Fire stations also need to be designed to adequately house equipment and apparatus, as well as meet the needs of the organization, its workers, and/or its members. It is important to research need based on call volume, response time, types of emergencies, and projected growth prior to making a station placement commitment. The following figures summarize ESCI's non-engineering/architectural review of each facility within the study area.

Columbia Heights Fire Department Station 1




Built in 2009, Columbia Heights Station 1 is a modern and attractive facility consisting of five double-depth apparatus bays of a drive-through configuration.


The station is shared with the Columbia Heights Police Department and includes a well-appointed common reception area and conference room.

Living accommodations for four responders are available along with day room and kitchen space. There are two administrative offices in the building and a shared office space with six work stations.

The station houses two engines, a ladder truck, and three rescue vehicles along with a small boat.

Structure	
A. Construction type	Masonry, built on on-grade concrete slab with a steel frame flat roofing system.
B. Date	2009
C. Seismic protection/energy audits	When originally designed
D. Auxiliary power	Automatic starting emergency generator
E. Condition	Excellent
F. Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is appropriately configured for mixed gender use, is ADA accessible, and is adequately designed for its intended use
Accommodations	
A. Exercise/workout	A good sized exercise area is in the station and is well equipped
B. Kitchen/dormitory	Adequate kitchen facilities are available along with individual sleeping rooms for four personnel.
C. Lockers/showers	Separate, mixed gender locker rooms are available
D. Training/meetings	A large, well equipped, classroom capable of seating 60 is shared with the Police Department and can be divided into two smaller rooms.
E. Washer/dryer	A turnout gear extractor type washing machine is located in the apparatus bays
Protection Systems	
A. Sprinkler system	The station is fully protected by a fire sprinkler system
B. Smoke detection	Smoke detection is in place, consistent with current code requirements
C. Security	All doors have electronic combination locks
D. Apparatus exhaust system	An exhaust removal system is in place that is automatically activated by a CO sensor system

Fridley Fire Department Station 1	
	<p>The Fridley Station 1 serves as the headquarters station. It consists of three full-depth apparatus bays and two partial bays, all of a back-in configuration.</p> <p>The station was constructed in the 1940s and, despite some remodeling in 1989, is marginally adequate for its current use. There are limited office spaces and several sleeping areas serve double-duty as offices by the use of folding beds in a cramped environment.</p>
Structure	
A. Construction type	Masonry, built on on-grade concrete slab with a steel framed, flat roof.
B. Date	1940's with a partial remodeling in 1989
C. Seismic protection/energy audits	None
D. Auxiliary power	Automatic starting generator is in place
E. Condition	Fair to poor
F. Special considerations (ADA, mixed gender appropriate, storage, etc.)	The facility is not ADA compliant, nor mixed-gender accommodating. Working space and storage is very limited.
Accommodations	
A. Exercise/workout	Exercise equipment is housed in a small space in the basement
B. Kitchen/dormitory	A small kitchen is present in the main entry area which also serves as a training and meeting room
C. Lockers/showers	There is only a single shower room, absent lockers or other amenities. No mixed gender accommodations are present.
D. Training/meetings	A common meeting and kitchen area can accommodate about 20 people for training sessions
E. Washer/dryer	A washer and dryer are present in the apparatus bay area
Protection Systems	
A. Sprinkler system	A fire sprinkler system protects 100% of the building
B. Smoke detection	Smoke detection is provided in the station
C. Security	All doors are equipped with combination locks
D. Apparatus exhaust system	Only a manual ventilation system removes exhaust. Turnout gear is stored in the bays, exposed to vehicle exhaust

Fridley Fire Department Station 2	
	<p>Fridley's Fire Department's Station 2 is a smaller, two-bay station housing one fire engine and one rescue vehicle in back-in apparatus bays.</p> <p>The station is staffed by Paid On Call personnel so there are limited accommodations. However there is a well-appointed day room and meeting area that includes four in-wall folding beds. There are no offices.</p> <p>The facility is well maintained and in good condition. There is no room for future expansion.</p>
Structure	
A. Construction type	Masonry structure on a concrete slab with a wood framed, pitched, roof.
B. Date	1992
C. Seismic protection/energy audits	None
D. Auxiliary power	Automatic starting, natural gas powered
E. Condition	Excellent
F. Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is compliant with applicable building codes at the time of construction; it has not been upgraded for ADA, mixed gender or similar considerations
Accommodations	
A. Exercise/workout	No exercise area is provided
B. Kitchen/dormitory	This station does not have full kitchen, dormitory, or other residential accommodations as it is not a full-time staffed facility
C. Lockers/showers	Single restroom only
D. Training/meetings	The meeting space can accommodate 6 people
E. Washer/dryer	Located in the apparatus bays
Protection Systems	
A. Sprinkler system	The building is fully protected by a fire sprinkler system
B. Smoke detection	Smoke detection system in in place but does not include the apparatus bays
C. Security	All doors have combination locks
D. Apparatus exhaust system	There is no exhaust control system in place in the station

Fridley Fire Department Station 3



Fridley's Station 3 consists of essentially the same floor plan as that of Station 2, but in mirror image. It is also a small, two-bay station housing one fire engine and one rescue vehicle in back-in apparatus bays.

Like Station 2, there is a small day room and meeting area, which is equipped with a small kitchen and four in-wall folding beds. There are no offices or other administrative facilities.

The station is attractive in appearance and well maintained. There is no room for future expansion.

Structure	
A. Construction type	Masonry structure on a concrete slab with a wood framed, pitched, roof.
B. Date	1992
C. Seismic protection/energy audits	None
D. Auxiliary power	Automatic starting, natural gas powered
E. Condition	Excellent
F. Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is compliant with applicable building codes at the time of construction and a has not been upgraded for ADA, mixed gender or similar considerations
Accommodations	
A. Exercise/workout	No exercise area is provided
B. Kitchen/dormitory	This station does not have full kitchen, dormitory, or other residential accommodations as it is not a full-time staffed facility.
C. Lockers/showers	Single restroom only
D. Training/meetings	The meeting space can accommodate 6 people
E. Washer/dryer	Located in the apparatus bays
Protection Systems	
A. Sprinkler system	The building is protected by a fire sprinkler system
B. Smoke detection	Smoke detection system in in place but does not include that apparatus bays
C. Security	All doors have combination locks
D. Apparatus exhaust system	There is no exhaust control system in place in the station

St. Anthony Fire Department Station 1



The St. Anthony Fire Department operates out of a single fire station that houses three fire engines, a rescue vehicle, a utility vehicle, and a small boat. The station is configured with three, double depth, drive-through apparatus bays.

The station has a good sized training room, but only office and a watch room. Additional desks are found in the training room, absent other available space.

The station was constructed in 2004 and is in excellent maintenance.

Structure	
A. Construction type	Masonry block on slab with a flat, membrane roof on a steel frame
B. Date	2004
C. Seismic protection/energy audits	When designed
D. Auxiliary power	Automatic starting emergency generator is present
E. Condition	Excellent condition, well maintained
F. Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is compliant with fire and building codes at the time of construction. Storage space is limited and at maximum capacity.
Accommodations	
A. Exercise/workout	A small exercise area is provided in the dorm room space
B. Kitchen/dormitory	There is a small day room and kitchen area. Individual sleeping rooms accommodate 3 responders.
C. Lockers/showers	Mixed gender restrooms are in place in the public area. Only a single shower room is in the living area. There are no locker rooms
D. Training/meetings	A well-equipped multi-purpose room will accommodate 20 for training and meetings. A portion of the room is taken up with work spaces
E. Washer/dryer	Provided
Protection Systems	
A. Sprinkler system	The building is fully protected by a fire sprinkler system
B. Smoke detection	Smoke detection is present in living areas only
C. Security	All doors have electronic combination locks
D. Apparatus exhaust system	Provided for all vehicles

Fire stations in the study area vary considerably. The Columbia Heights station is contemporary, well designed and has room for future expansion as service demand increases.

The two Fridley sub-stations, Stations 2 and 3, are in good condition and meet current needs adequately. However, both are at maximum storage capacity and have no room for future expansion. Fridley Station 1 is an aging facility that has exceeded its capacity in terms of administrative and residential space for responders. Personnel are using small spaces to serve both as sleeping quarters and offices and personal accommodations are inadequate. In considering future cooperative efforts, this station will need to be factored into upgrade or replacement planning.

St. Anthony constructed its station in 2004; it is modern and presents well to the public. Space is adequate for current fire apparatus but room for additional equipment is limited. Further, due to construction restraints, there is inadequate office space for current use, with work stations configured in the general purpose and training room.

Apparatus

Other than the emergency responders, response vehicles are the next most important resource of the emergency response system. If emergency personnel cannot arrive quickly due to unreliable transportation or if the equipment does not function properly, then the delivery of emergency service is likely compromised.

Fire apparatus are unique and specialized pieces of equipment, customized to operate efficiently for a narrowly defined mission. For this reason, fire apparatus are very expensive and offer little flexibility in use and reassignment. As a result, communities always seek to achieve the longest life span possible for these vehicles. The following figures provide an overview of each agencies apparatus fleet.

Columbia Heights

Columbia Heights Fire Department has six fire response vehicles including two engines, a 109' aerial ladder truck, and three rescue vehicles, as detailed in the following table.

Figure 17: Columbia Heights Major Apparatus

Apparatus Name	Year	Make	Model	Type	Cab Capacity	GPM	Tank Size	Cond.
Engine 1	1995	Ford	Rosenbauer	Type I Engine	5	1,250	600	Good
Engine 4	1985	Ford	Rosenbauer	Type I Engine	5	1,250	500	Good
Aerial 15	2004	Rosenbauer	Spartan/ Gladiator	109' Ladder	5	2,000	500	Excellent
Rescue 1	1990	Ford	Road Rescue	Rescue	2	N/A	N/A	Good
Rescue 2	2002	Ford	Braun	Ambulance	2	N/A	N/A	Good
Rescue 3	2012	Chevrolet	Suburban	Rescue	2	N/A	N/A	Excellent
Boat	1999	Zodiac	Boat	Boat	2	N/A	N/A	Good

With an average age of 15 years, Columbia Heights' equipment is relatively new and appears to be serviceable at this writing with the exception of Engine 4, which is 28 years old. The engine shows evidence of excellent maintenance and does not show its age externally; however, it is aging and will need to be replaced in the near future.

Fridley

Fridley Fire Department operates a fleet consisting of three fire engines, an aerial ladder truck, four rescue vehicles, and a small boat. All appear to be well maintained and fully serviceable. They are detailed in the following figures.

Figure 18: Fridley Station 1 Major Apparatus

Apparatus Name	Year	Make	Model	Type	Cab Capacity	GPM	Tank Size	Cond.
Engine 3	2001	Spartan	Gladiator	Type I Engine	5	1,500	500	Good
Aerial 2	2006	Spartan	Gladiator	100 ft. Platform	6	2,000	500	Excellent
Rescue 1	2008	Ford	Rosenbauer	Rescue	2	N/A	N/A	Excellent
Rescue 3	2007	Ford	Rosenbauer	Rescue	5	N/A	N/A	Excellent
Boat 9	2000	Zodiac	-	Boat	2	N/A	N/A	Good

Figure 19: Fridley Station 2 Major Apparatus

Apparatus Name	Year	Make	Model	Type	Cab Capacity	GPM	Tank Size	Cond.
Engine 1	1995	Spartan	Gladiator	Type I Engine	5	1,500	500	Good
Rescue 4	2012	Chevrolet	Silverado	Rescue	5	N/A	N/A	Excellent

Figure 20: Fridley Station 3 Major Apparatus

Apparatus Name	Year	Make	Model	Type	Cab Capacity	GPM	Tank Size	Cond.
Engine 2	1990	Ford	L9000	Engine/ 50' Tower	4	1,200	500	Fair
Rescue 2	1999	Chevrolet	Silverado	Rescue	2	N/A	N/A	Good

FFD engines and the aerial truck range in age from 4 to 23 years with an average age of 15 years. The primary units that are housed in Station 1 are newer and in good to excellent condition. The engines in Stations 2 and 3 are 18 and 23 years of age, respectively, which is near or exceeds what is generally accepted to be an acceptable service life.

St. Anthony

Listed below is the St. Anthony Fire Department's major apparatus. There are three engines, a utility vehicle, a rescue unit, and a small boat.

Figure 21: St. Anthony Major Apparatus

Apparatus Name	Year	Make	Model	Type	Cab Capacity	GPM	Tank Size	Cond.
Engine 11	1999	Sterling	L9513	Type I Engine	5	1,500	500	Good
Engine 12	2000	HME	General	Type I Engine	5	1,250	1,000	Good
Engine 13	1985	Ford	General	Type I Engine	5	1,250	500	Fair
Utility 11	1990	Chevrolet	Road Rescue	Utility	6	N/A	N/A	Good
Rescue 11	2006	Ford	F350	Rescue	5	N/A	N/A	Good
Boat 11	2006	Mercury		Boat	3	N/A	N/A	Good

Engine 13 is 28 years of age and has exceeded what is typically considered an appropriate service life. Utility 11 is 23 years old. The other vehicles are newer and in good condition overall, with an average age of 10.25 years when the older units are removed from the calculation.

Future Apparatus Serviceability

A key consideration in evaluating the feasibility of combining agencies into one or more consolidated entities is the costs that can be expected to be incurred for future replacement of major equipment. Apparatus service lives can be readily predicted based on factors including vehicle type, call volume, age and maintenance considerations. In the following table, ESCI calculated the average age of fire engines and aerial ladder trucks in the subject agencies, to offer a point of reference when considering future vehicle replacement costs that may be incurred.

Figure 22: Capital Replacement Planning Summary

Agency	Number of Engines	Average Age of Engines	Number of Aerials	Average Age of Aerials
Fridley	3	17.5	1	6
Columbia Heights	2	23	1	9
St. Anthony	3	18	0	N/A

Fire engines in the study agencies average 19.5 years of service overall. Depending on multiple variables, an engine is typically expected to last 15 to 20 years in front line service and an additional five years in reserve status. The above average, however, includes some engines that are not in front-line service; when secondary engines are removed from the calculation, the average declines to approximately 14 years. Should the agencies combine efforts to leverage opportunities to share reserve or secondary engines, long-range cost avoidance may be gained by maintaining fewer apparatus; however, those opportunities are limited due to the relatively low number of engines in the combined fleets.

The only aerial apparatus in the three agencies are those in Columbia Heights and Fridley. Those units have an average age of 7.5 years and are not quite half way through their expected service life.

Maintenance of emergency apparatus is essential. ESCI reviewed vehicle repair and maintenance programs making the following observations, relative to all three agencies:

- Daily and weekly response readiness checks are completed routinely
- Full chassis maintenance is scheduled and performed annually
- The Fridley aerial ladder is tested annually by an external contractor

Capital Replacement Planning

When considering joining multiple agencies into a single entity, it is important to evaluate the future costs that can be anticipated for the replacement of major capital assets. The most expensive capital items that make up a fire department are facilities (fire stations) and major apparatus, including fire engines and aerial ladder trucks.

ESCI reviewed capital replacement planning methods in the participating agencies. A variety of approaches are employed, ranging from well planned and appropriately funded replacement schedules to simply meeting capital needs on an as-needed basis. The findings are summarized in the following table.

Figure 23: Capital Replacement Planning Summary

Agency	Apparatus Replacement Plan	Facility Replacement Plan	Funding Method
Columbia Heights	A replacement schedule is in place for apparatus extending to 2026	No structured facility replacement plan	Funds are set aside annually for building needs on a first come – first served basis
Fridley	A replacement schedule is maintained but is not funded	No structured facility replacement plan	General Fund budget, as available. Some vehicles are funded via bonded debt
St. Anthony	A replacement schedule is in place for apparatus extending to 2030	No structured facility replacement plan	All vehicles except pumpers are funded via liquor store revenues. No primary funding source for pumpers.

As seen above, apparatus replacement schedules are maintained in Fridley and St. Anthony. Funding for the replacement plans may be from General Fund or bonded debt in Fridley. St. Anthony has a well-developed replacement schedule, accessing funds from liquor store sales. Dedicated funding for future fire station replacement is not completed in any of the participating agencies.

Should a change in governance of some or all of the fire department be undertaken as a shared service delivery initiative, it will be important that apparatus replacement planning be considered. The agencies participating are advised to establish a structured replacement schedule with calculated future costs and identified funding strategies.

Staffing and Personnel Management

In many cases, emergency services agencies were formed by concerned citizens after a tragic event within the community that prompted dedicated residents to come together to prevent the event's recurrence. These personnel resources serve as the backbone of any emergency service provider. Regardless of the deployment of stations or the availability of vehicles and apparatus, people are the resource that put these other items into action and fulfill the missions of the organizations.

Today's emergency services agencies are a mix of career (paid full-time), part-time, paid-on-call, and volunteer personnel. Which of these an agency utilizes (one or more) is dependent upon several factors, including availability of paid-on-call or volunteer personnel, service demand, population density, socioeconomics, demographics, and financial resources of the community. This section of the report evaluates each agency's personnel resources including administrative staffing, operational staffing and performance, and member recruitment and retention efforts.

For a career fire department, the distinction between administrative and support personnel and operations personnel is relatively clear. In combination and volunteer departments, however, this separation is not as simple. Most combination and volunteer departments have personnel that perform both administrative/support and operational roles while career departments have personnel that are primarily focused on managing and supporting the programs of the organization. The following figure identifies the administrative and support functions within each organization while understanding that those positions that are designated paid-on-call (POC) also participate in operations.

Figure 24: Summary of Administrative and Support Staff Position

	Columbia Heights	Fridley	St. Anthony
Fire Chief	1	1	1
Assistant Chief	1	1	0
Fire Marshal	0	1 (Vacant)	0
Fire Inspector	0	1 (0.5 PT)	0
Clerical/Support	1 (2 PT @ 0.5 and 0.875)	1 (0.8 PT)	0
Total Career	3	5	1
Total PT	1	1	0

A total of nine full-time career and two part-time FTE are assigned to primarily administrative and support functions. This equates to approximately 11 percent of the total staff within the system. In

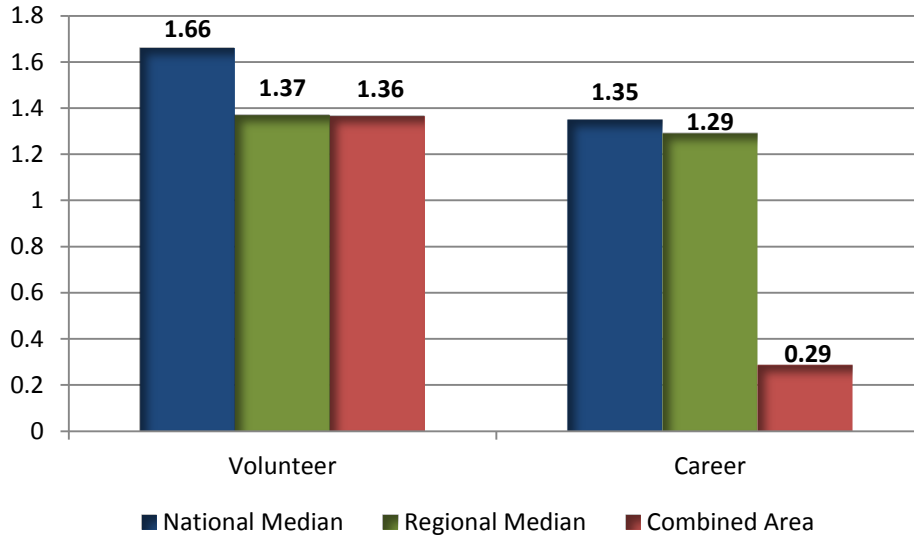
ESCI’s experience, those systems that are not actively involved in transport EMS typically have a ratio of administrative and support to total personnel in the range of 10 to 15 percent. The current ratio in the study area is not considered to be out of line with industry standards given the combination status of the departments. The following figure illustrates the distribution of operational personnel currently functioning within the system but does not include junior personnel or those considered as inactive or non-operational.

Figure 25: Summary of Operational Staff Positions

	Columbia Heights	Fridley	St. Anthony
Captain	3	3 (1 POC)	2 (1 POC)
Lieutenant	2 POC	2 POC	4 (2 POC)
Firefighter/Driver	0	0	0
Firefighter	3 (24 POC)	1 (27 POC)	16 POC
Support	0	0	1 POC (Safety)
Total Career	6	4	6
Total POC	26	30	20

Based on the distribution of staff indicated in the figure above, the system utilizes a total 92 dedicated operational personnel including 16 career and 76 paid-on-call personnel. This plays into the ratio stated above regarding administrative and support to total personnel. From a comparative perspective, the number of volunteer/paid-on-call personnel is in line with the regional benchmarks while the number of career personnel is significantly below the expected level as illustrated in the following figure.

Figure 26: Comparative Staffing Data



NFPA benchmark data does not include data specific to combination departments, but represents a combination of the available data from the closest matching population groups.

Aside from raw staffing numbers, ESCI evaluated several personnel management components of the participating agencies including recruitment and application processes, retention policies, and health and wellness programs. The following figure provides a summary of these components.

Figure 27: Summary of Staffing and Personnel Management Elements

	Columbia Heights FD	Fridley FD	St. Anthony FD
Minimum Physical Standards Established	Yes	Yes	Yes
Aptitude of Knowledge Testing	Yes	Yes	Yes
Pre-Appointment Medical Exam Required	Yes	Yes	Yes
Hiring Authority	City Manager for Career Fire Chief for POC	City Council for Career Fire Chief for POC	Fire Chief

	Columbia Heights FD	Fridley FD	St. Anthony FD
Applicant Process Includes	Complete application packet with job description and requirements, Application review, Applicant interview panel, Criminal history check, Personal reference checks, Written test, Physical agility test, Psychological test, Medical examination	Complete application packet with job description and requirements, Application review, Interview panel, Chief's interview, Criminal history check, Written test, Psychological test, Medical examination, Probationary period	Complete application packet with job description and requirements, Application review, Criminal history check, Written test, Physical agility test, Psychological test, Medical examination
Periodic Capability Testing to Measure Minimum Standards Compliance	Yes- formal periodic testing	No formal periodic testing- observation only	No formal periodic testing- observation only
Periodic Performance Evaluations	Yes- written	Yes- written	Yes- written
Frequency of Performance Evaluations	Annual	Annual	Sporadic
Formal Promotional Testing	Yes	Yes	Yes
Types of Promotional Testing	Written test, Skills test, Interview panel	Skills test, Interview panel	Skills test, written test, interview panel

Regarding benefits and personnel management elements, the departments vary in the levels of compensation and total benefits but each agency provides some limited retirement benefits as well as per call compensation to paid-on-call personnel. Each agency should ensure that appropriate disciplinary and appeals policies are in place to reduce human resources liability issues and enhance the overall function of the organizations as a region. In addition, the region should begin working in a cooperative effort to adopt and implement a standardized level of physical abilities and medical examinations for both new and existing personnel. The identification of potential life-threatening issues before they occur could help to save the life of someone that would otherwise not have a routine medical examination.

Staffing Performance

While raw numbers of personnel indicate a fire department's potential staffing for incidents, it is common for a limited number of those on the roster to respond to a majority of the incidents. The

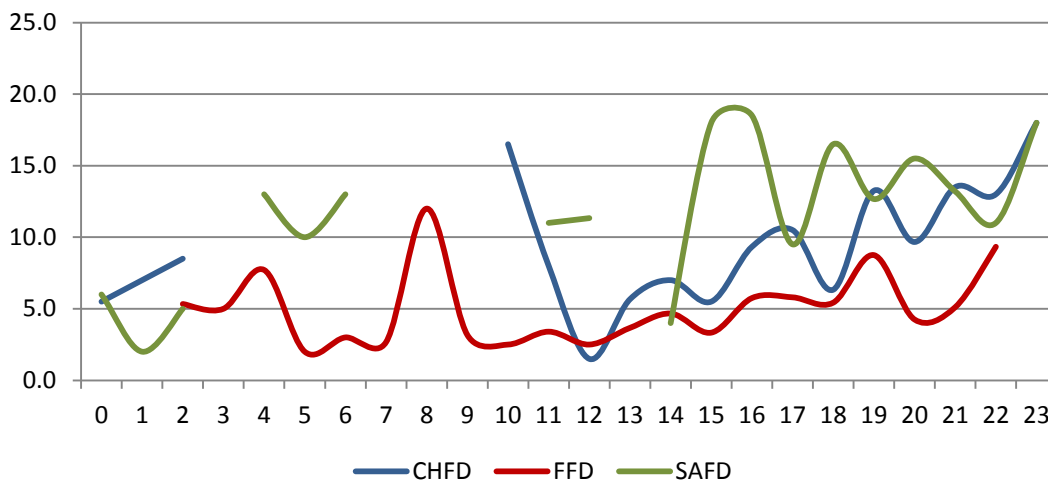
adage of 10 percent of the people doing 90 percent of the work typically applies within volunteer organizations. To this end, ESCI evaluated the overall staffing performance of each organization by analyzing National Fire Incident Reporting System (NFIRS) data that tracks the number of personnel on each incident, particularly structure fires. The following figure illustrates the average staffing performance from the data provided by each agency.

Figure 28: Historical Average Staffing Performance – Structure Fires

	2011	2012
CHFD	9.7	8.5
FFD	7.6	8.9
SAFD	11.5	12.4

The departments have varying success at producing their own personnel for structure fires with SAFD having the highest average (11.5 and 12.4) for 2011 and 2012, respectively. To evaluate whether or not each department was having difficulty producing staff during certain parts of the day, historic staffing was also analyzed by hour of day as illustrated below.

Figure 29: Historic Staffing Performance by Hour of Day (Structure Fires)



The figure above indicates that there is little pattern in each department’s ability to produce its own staff for structure fire other than an general increase in personnel availability after 1400 to 1500 hours. Those areas without data indicate that no structure fire incidents were reporting or recorded in the department’s records during that time period.

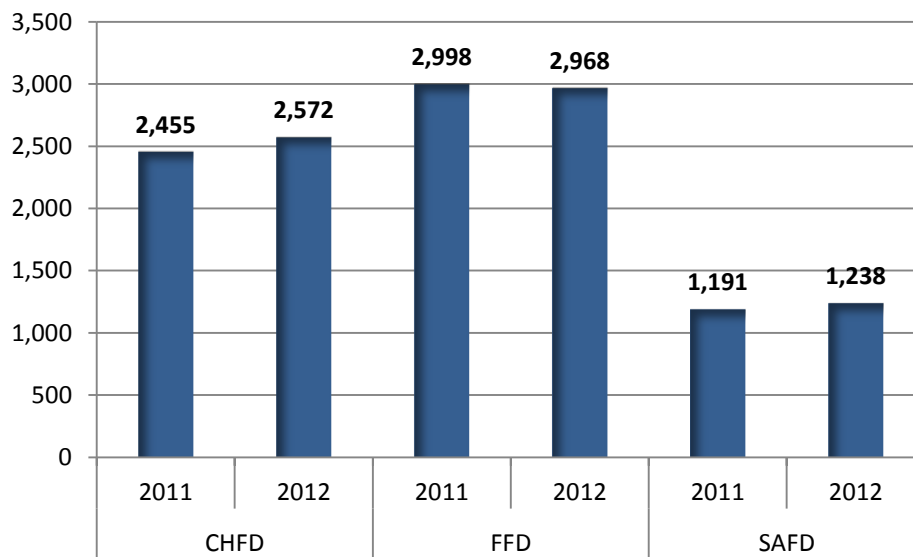
Service Delivery and Performance

While the previous sections of this document provide the reader with an overview of how each of the study departments are organized and managed, the primary responsibility of any emergency services organization is to provide emergency response services to their respective communities. This section evaluates the service delivery and performance of each participating agency both as an independent provider and as a region.

Demand

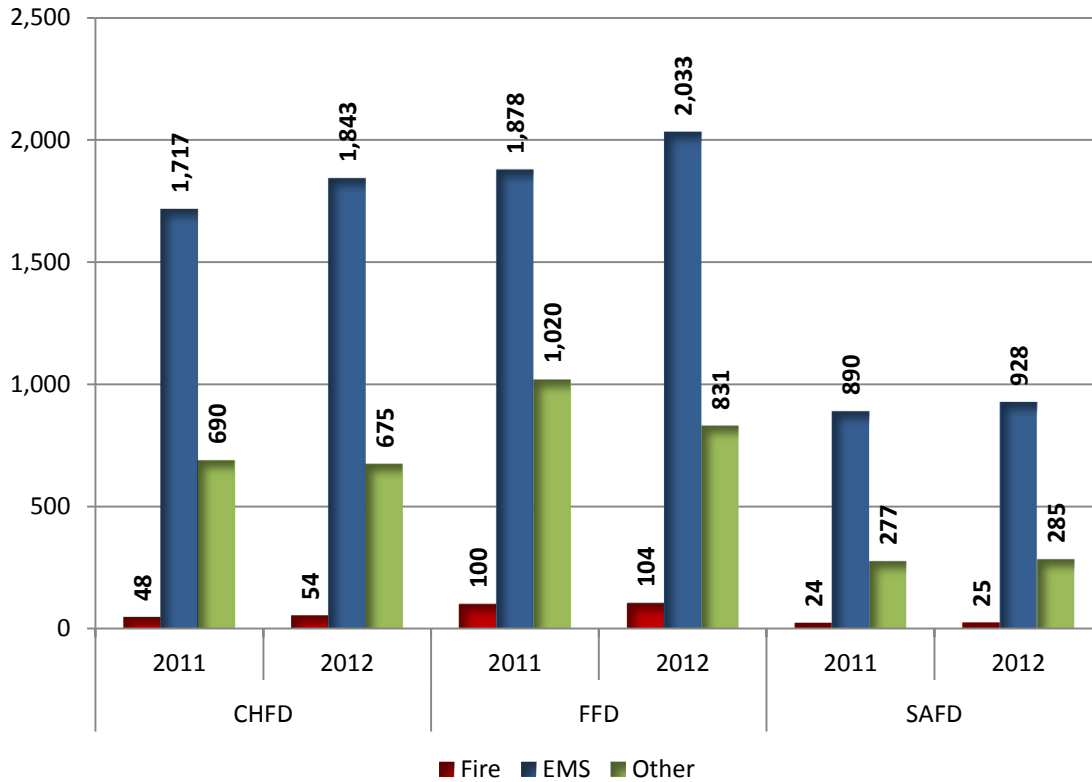
Service demand can be defined in a number of ways depending on the types of services provided by the organization. For the purposes of this report, service demand is defined as any and all incidents where emergency resources are utilized to resolve the situation. These may include non-emergency incidents where resources are simply provided in a support role as well, but the primary goal is to show how busy each department is over a given period of time. This analysis begins with a general overview of each agency's total service demand. This analysis was completed on National Fire Incident Reporting System (NFIRS) data from each of the departments. The figure below illustrates total service demand for 2011 and 2012 for the study agencies.

Figure 30: Aggregate Service Demand by Department



The following figure breaks down the overall service demand to illustrate how each department's workload is distributed between fire, medical and 'other' incidents, which include alarms, service calls, and public assists.

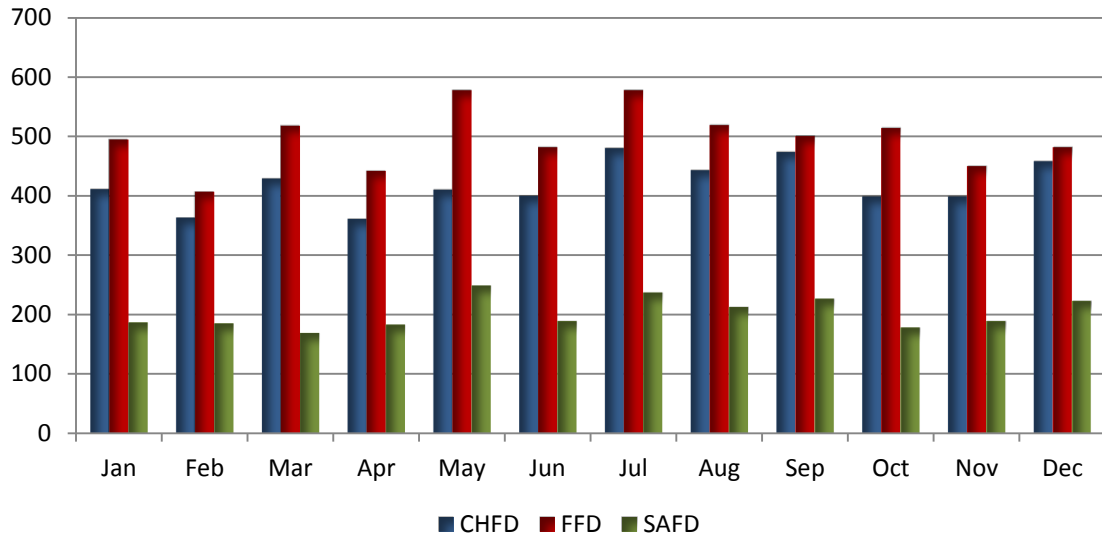
Figure 31: Service Demand by Incident Type



As expected since each department is involved in emergency medical services first response efforts, medical incidents account for the vast majority of each agency’s overall service demand while actual fires are relatively rare. This is common in today’s fire service.

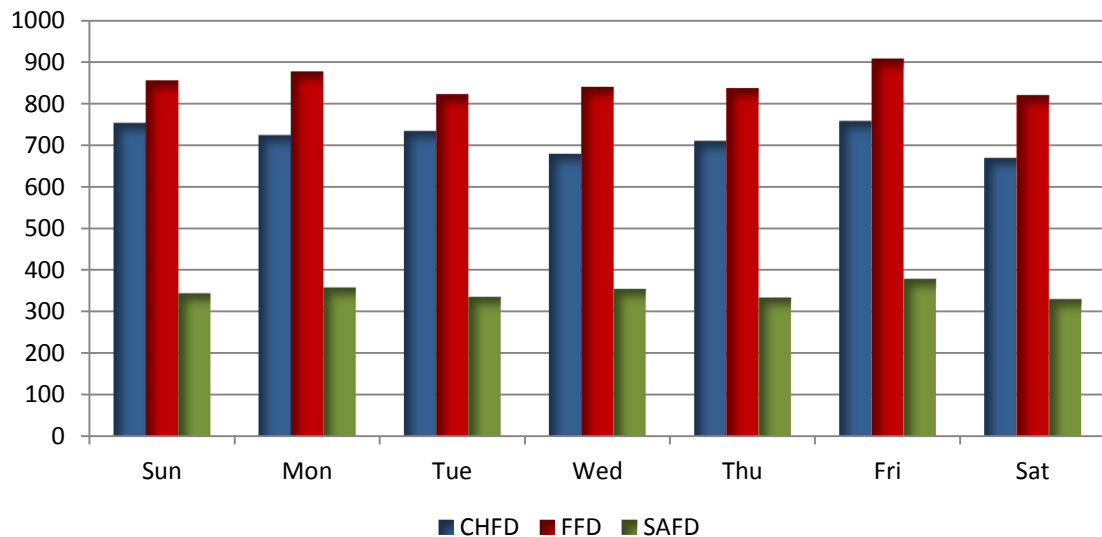
Although total service demand can provide an idea of how busy a department is overall, evaluating that service demand temporally is more useful in assessing how resources are matched against service demand based on specific time periods. This analysis begins with service demand by month to determine if any seasonal trends exist. This analysis is presented using two years of data from each department to identify common trends.

Figure 32: Service Demand by Month



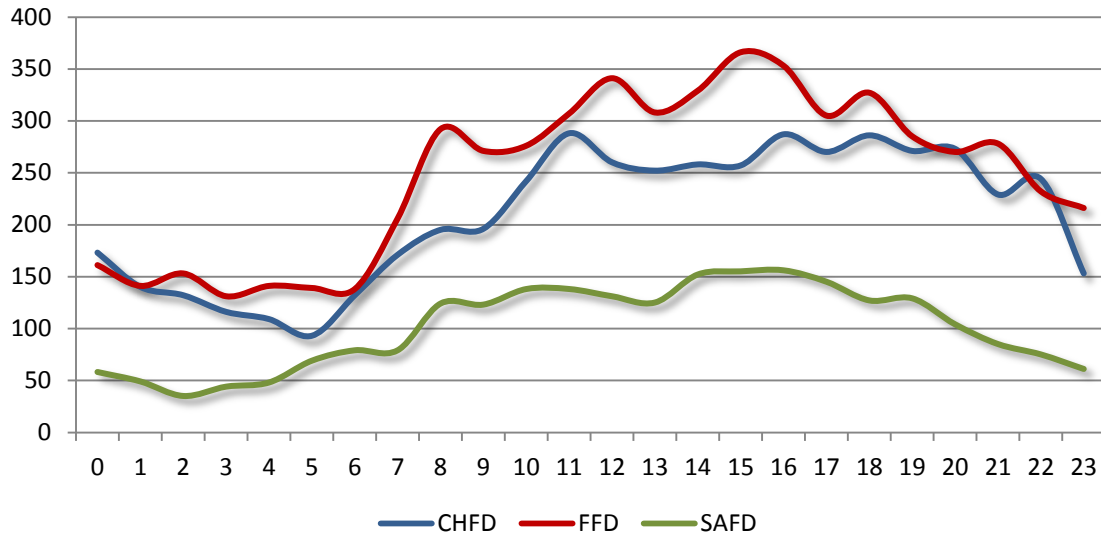
The summer months tend to be the busiest for all three agencies. This would be expected as the general population is able to get outside more and enjoy activities that are not possible during the winter months. The following figure illustrates each organization’s service demand by day of week to determine if any specific trend exists that can be used to match more appropriate staffing patterns.

Figure 33: Service Demand by Day of Week



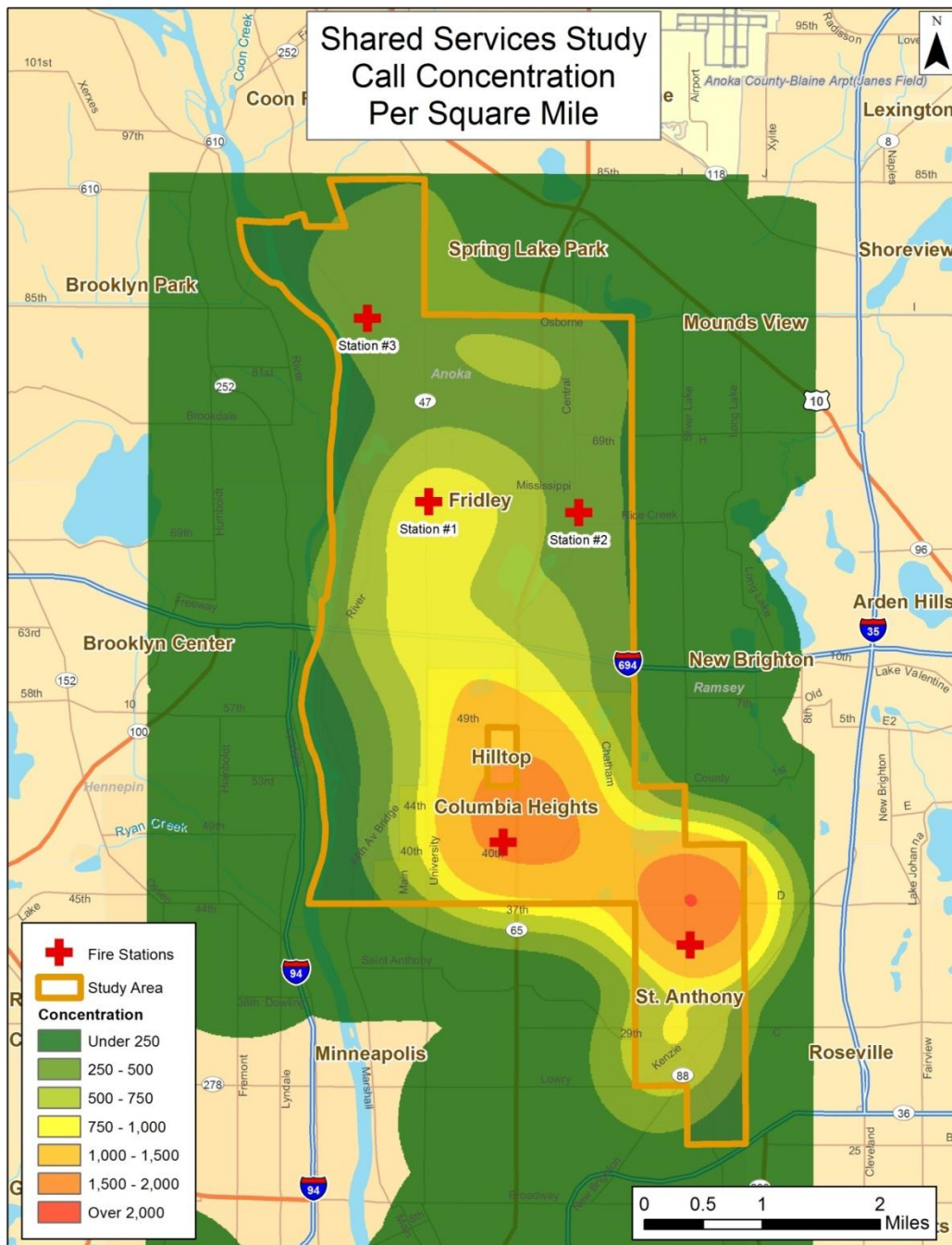
All three agencies experience relatively stable service demand across all weekdays. The final temporal analysis evaluates service demand by hour of day to evaluate the potential need for more dynamic staffing models.

Figure 34: Service Demand by Hour of Day



As expected, each department's service demand begins to increase around 0600, peaks during the mid-afternoon hours and then declines into the evening. This is a common bell-curve pattern of service demand for fire departments involved in the delivery of EMS. The following map evaluates the aggregate service demand and plots it geographically to illustrate how incidents occur across the study area.

Figure 35: Geographic Service Demand



The heaviest incident density occurs within central Columbia Heights and St. Anthony, extending northward into the southern areas of Fridley.

Property and Maintenance Inspections

While fire inspections and prevention programs will be discussed later in the report, it is worth noting within the service demand section that each study department is also involved in property and

maintenance inspections within their respective communities. These inspections, not related to fire safety or prevention, consume a large amount of time that could be utilized to increase firefighter training, improve fire prevention and public education efforts, or allow firefighters to participate in more activities related to delivery of emergency services.

CHFD is responsible for issuing and renewing of rental property licenses. In 2012 CHFD conducted 1,826 rental property license and complaint inspections. CHFD is responsible for all exterior property maintenance inspections. During 2012, this included 38 snow/ice removal inspections, 994 exterior nuisance inspection for outside storage/garbage, 1,508 long grass and weed inspections, and 191 single family home exterior maintenance inspections. CHFD conducted 800 annual commercial fire code inspections in Columbia Heights and an additional 56 commercial/multi-unit residential fire code inspections in the City of Hilltop by contract.

FFD, although not as involved as CHFD, provides inspections through its Residential Rental Property Inspections Division, which is responsible for issuing and renewing rental property licenses within the City. This division within the fire department is responsible for correcting substandard conditions and maintenance of standards for rental properties. The City has approximately 4,000 rental properties that must be inspected on a four-year cycle.

SAFD is also involved in property maintenance inspections and, in 2012, inspected and mitigated over 236 code violations and rental properties. These included 19 parking violations, 39 vegetation violations, 19 garbage violations, 19 sign enforcement violations, 3 yard maintenance violations, 116 rental inspections, and 21 miscellaneous inspections.

Each municipality should evaluate the primary mission of their respective fire department and determine if these non-public safety inspections should be performed by fire department personnel. In addition, given recent events, the safety of the overall program should be investigated since the personnel conducting personal property inspections are not sworn law-enforcement officers and have no means to defend themselves should a property owner become hostile.

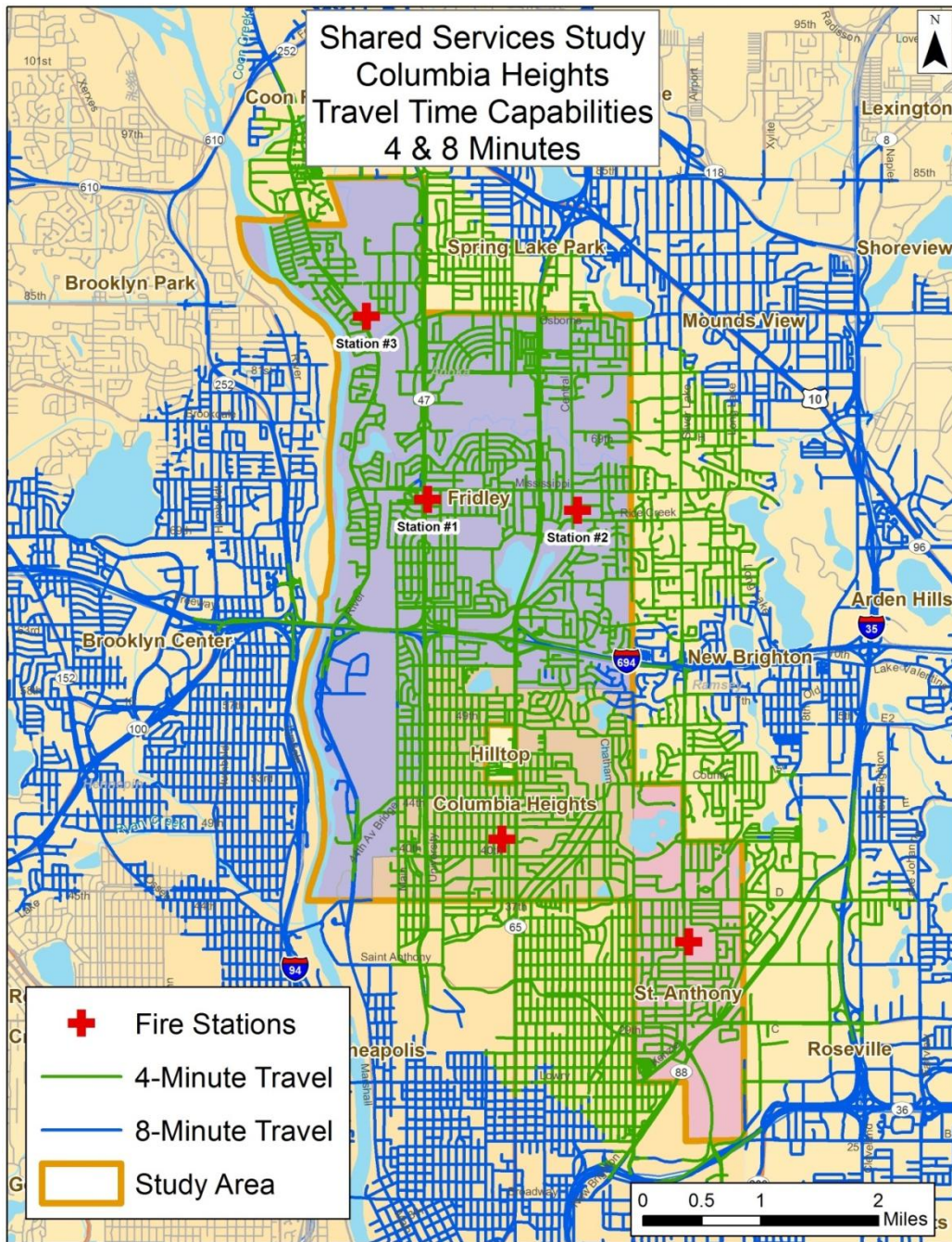
The next analysis evaluates how well physical resources are distributed across the service area to ensure a timely response to this service demand.

Distribution

Distribution analysis is an evaluation of how well physical resources (facilities) are deployed across a specific geographic area. For medical incidents there is little in the way of guidance on how well resources should be distributed because these incidents are primarily driven by human activity. For fire protection, however, there are several industry standards that specify how fire stations should be distributed. NFPA (National Fire Protection Association) recommends that fire departments serving urban areas with career personnel be able to respond to 90 percent of emergency incidents within five minutes of total response time or four minutes of travel while volunteer and combination departments be able to respond to emergency incidents on a sliding scale ranging from nine minutes to 14 minutes total response time dependent upon population density.

The following map illustrates both four and eight-minute travel models from existing stations and does not take into account station staffing or the time necessary for personnel to travel from home or work to respond apparatus from each station. This is the standard methodology for distribution analysis.

Figure 36: Four and Eight-Minute Travel Capabilities



Based on the travel model, nearly 100 percent of the combined service area is within four minutes of travel from an existing fire station. In regard to service demand, 98.2 percent of historic service demand (2011-2012) fell within four minutes of travel from an existing station. Similarly, 99.9 percent of historic service demand fell within eight minutes of travel from an existing station.

The Insurance Services Office (ISO) reviews the fire protection resources within communities and provides a Public Protection Classification™ (PPC) rating system from which insurance rates are often based. The rating system evaluates three primary areas: the emergency communication and dispatch system, the fire department, and the community's pressurized hydrant or tanker-based water supply. The overall rating is then expressed as a number between 1 and 10, with 1 being the highest level of protection and 10 being unprotected or nearly so. It is also important to note that, according to the Insurance Services Office website information on the PPC™ minimum criteria, "...the ISO generally assigns Class 10 to properties beyond five road miles" from a fire station.⁶

A community's PPC™ can affect decisions insurers make regarding the availability and price of property insurance. Many insurance companies make at least some use of the classification to price their policies, determine what types of coverage to offer, or to determine deductibles for individual homes and businesses. Regardless of the community's classification, individual insurance companies establish their premiums, not the Insurance Services Office. The particular system that any given company uses when calculating premiums for property insurance may be affected by that company's fire-loss experience, underwriting guidelines, and marketing strategy. This makes it extremely difficult to generalize how any improvement or decline in the PPC™ rating will affect specific insurance policies or premiums.

The following figure shows how insurance premiums might vary for two typical structures under a couple of insurance companies' current rating schedules. While these figures are reasonable examples of the impact the PPC™ can make on insurance premiums, the value of the premium credits for the different PPC™ ratings will vary among insurance companies. This example chart was obtained from a report published by the League of Minnesota Cities entitled *The ISO Fire Protection Rating System*.

⁶ Information obtained from the Insurance Services Office website, www.isomitigation.com, on 3/5/2008.

Figure 37: Representative Insurance Premiums by Fire Protection Class

PPC Classification	\$150,000 Residence	\$1,000,000 Commercial Space
1	\$670	\$2,950
2	\$670	\$2,980
3	\$670	\$3,020
4	\$670	\$3,040
5	\$670	\$3,060
6	\$670	\$3,120
7	\$670	\$3,230
8	\$777	\$3,330
9	\$972	\$3,440
10	\$1,072	\$3,710

According to the report, there are some points to note regarding the chart:

- “In this schedule, no additional credit is given on residential property for a fire class better than 7. The reason has largely to do with the role that water supply plays in the ratings. Having a better water supply helps in fighting fires in larger commercial structures, and therefore is reflected in a better rating. But for most residential fires a lesser water supply is actually needed, and having more than that available really doesn’t help the fire department fight that particular residential fire any better. There is some variation among insurance companies (e.g., some might allow additional credit for class 6, others might lump classes 7 and 8 together for rating purposes, etc.) but this general pattern is fairly typical for residential premium structures.
- Not all insurance companies use the ISO classifications. This is especially true for residential coverage. Some companies have their own rating systems based on their own historical loss data for the area rather than on an evaluation of the fire protection in the area. Other insurance companies use their own systems for rating the fire protection for a particular property; a company might classify properties based on the individual property’s distance from a fire station and water supply, for example”.⁷

While distribution credits in the PPC™ may not be the most important factor in the decision to add facilities, it is acknowledged that this issue does affect the community’s rating classification and should be considered. The next few paragraphs of the report examine the travel coverage based upon the PPC credentialing criteria by the Insurance Services Office.

To receive maximum credit in this section, all “built-upon” portions of a community would need to be within 1.5 road miles of an engine company and 2.5 road miles of a ladder or service company. In order to determine the distribution of engine companies across “built upon” areas, ISO reviews the response area of each existing engine and identifies the number of fire hydrants within those response areas. ISO analyzes whether there are additional geographic areas of the district outside of the existing engine

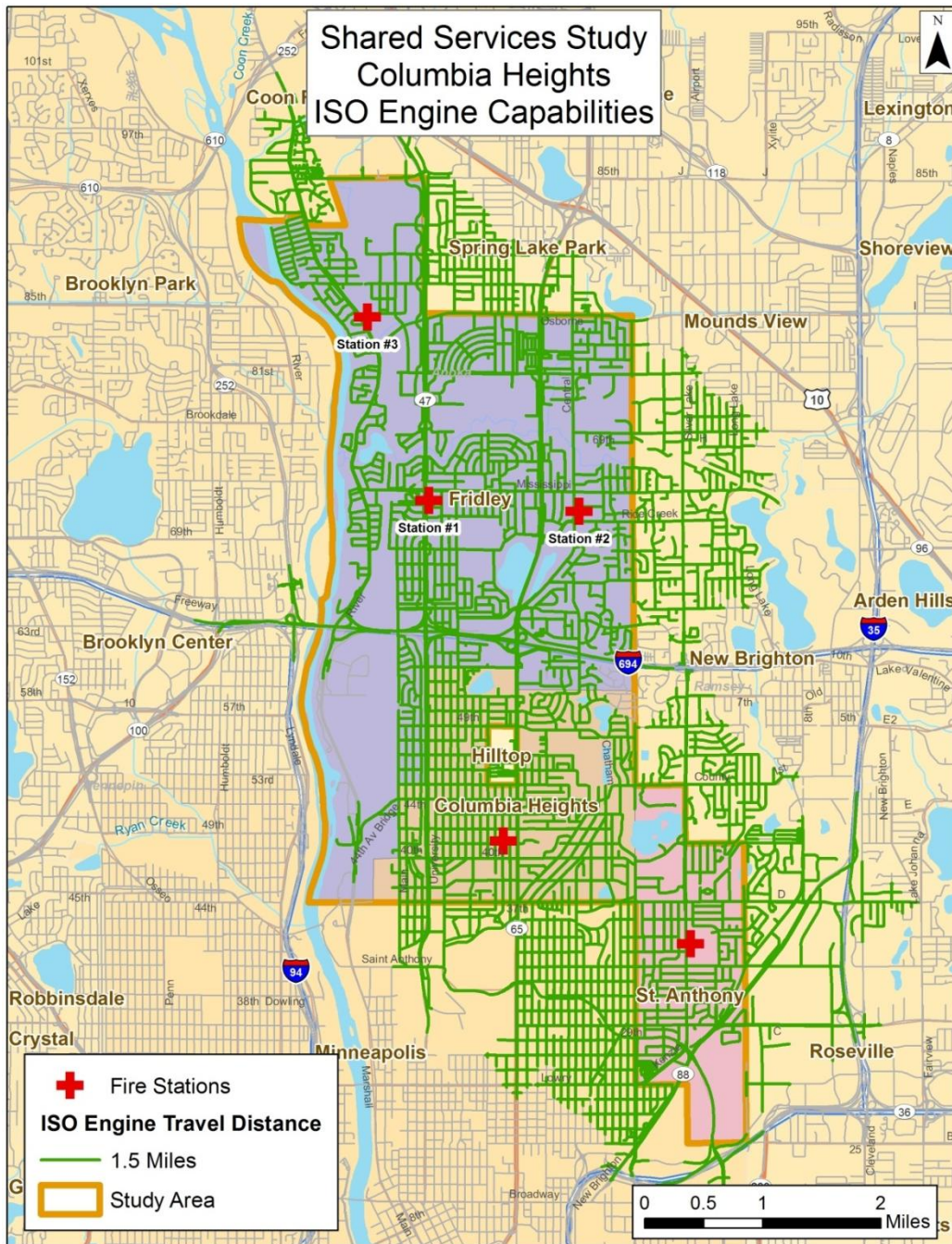
⁷ League of Minnesota Cities. *The ISO Fire Protection Rating System*. www.lmnc.org.

company response where at least 50 percent of the number of hydrants served by the largest existing response area could be served by a new engine. For ISO purposes, the response area is measured at 1.5 miles of travel distance from each engine company on existing roadways.

In similar fashion, to achieve optimum credit for the number of truck companies, ISO reviews the response area of each existing ladder company and identifies the number of fire hydrants within those response areas. ISO analyzes whether there are additional geographic areas of the district outside of the existing ladder response areas where at least 50 percent of the number of hydrants served by the largest existing response area could be served by a new truck, were one to be added. For ISO purposes, the response area is measured at 2.5 miles of travel distance from each ladder company on existing roadways. A ladder company is not required to have an elevating ladder or aerial device unless there are a sufficient number of buildings that would meet the three-story height and square footage limits. Other areas can receive similar credit for a service company without the requirement of an elevated device and can even receive partial credit for a service company if other apparatus, such as an engine, carries a complement of service company equipment.

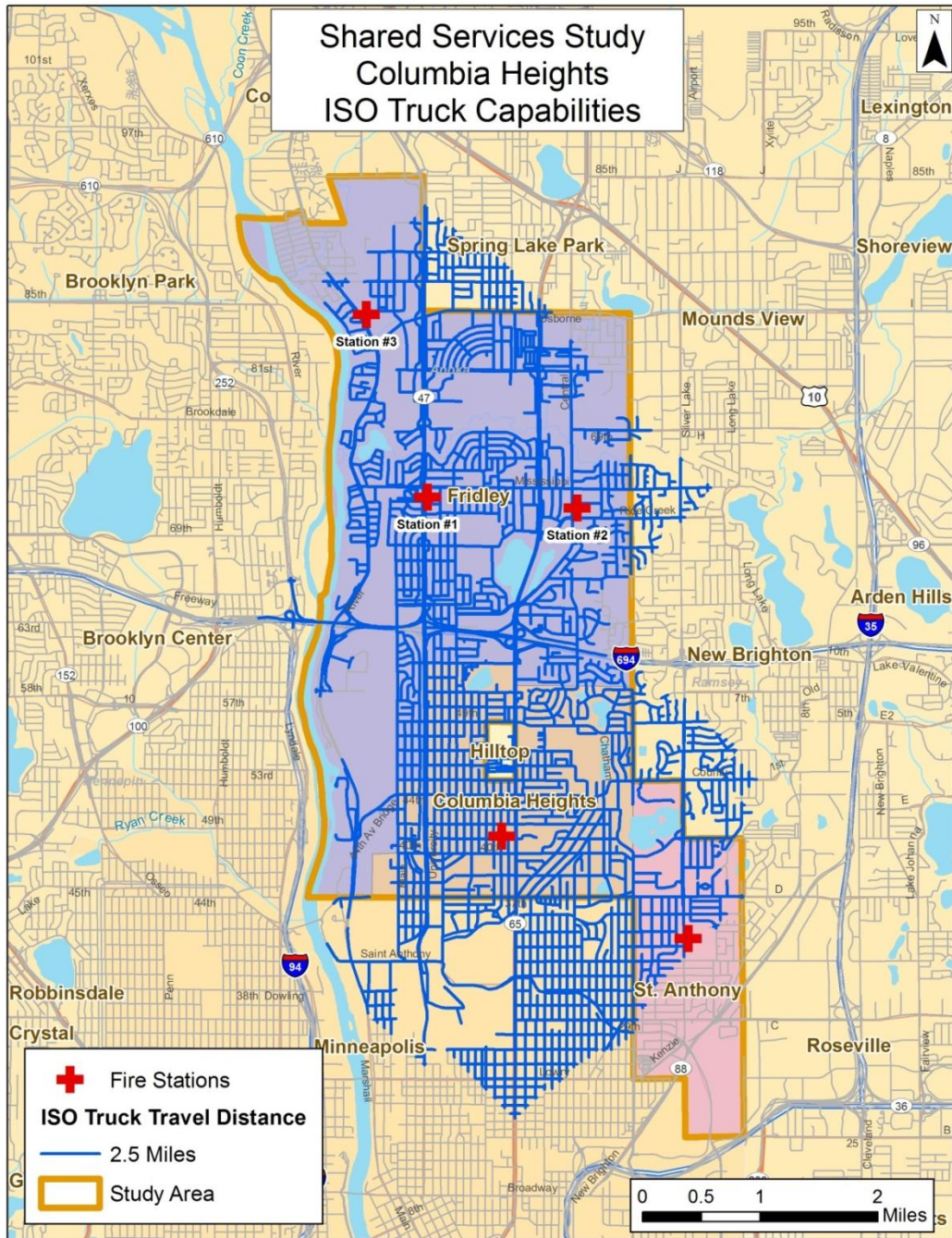
The following figures illustrate the extent of the 1.5-mile engine company coverage and the 2.5-mile ladder/service company coverage within the study area.

Figure 38: 1.5-Mile Engine ISO Travel Distance Coverage



Based on current deployment, nearly 100 percent of the study area is currently within 1.5 road miles of a fire station. The following map provides similar representation of the 2.5-mile aerial ladder deployment.

Figure 39: 2.5-Mile Aerial Ladder ISO Distance Coverage



Although much of the area is within the 2.5-road mile coverage area for an aerial ladder, the southern half of St. Anthony is outside that travel model. Without significant large square footage structures or structures over three stories in height, it is unlikely that this area would require an aerial ladder for improved ISO credit.

Performance

When discussing emergency services organizations, the primary issue of question is response performance. Response performance analysis evaluates how quickly an organization responds to an incident and is more commonly known as response time. The response time continuum, the time between when the caller dials 9-1-1 and when assistance arrives, is comprised of several different components:

- Processing Time – The amount of time between when a dispatcher answers the 9-1-1 call and resources are dispatched.
- Turnout Time – The amount of time between when units are notified of the incident and when they are en route.
- Travel Time – The amount of time the responding unit actually spends on the road to the incident.
- Response Time – A combination of turnout time and travel time and generally accepted as the most measurable element.

Other performance measurements are also valuable but not utilized in this analysis of staffing and deployment, such as:

- Patient Contact Time – The actual time personnel arrived at the patient and began treatment.
- Scene Time – The total amount of time resources have spent on the emergency scene prior to transport or clearing the incident.
- Transport Time – The total amount of travel time spent transporting the patient to a definitive care facility.
- Hospital Time – The total amount of time the transporting unit spent at the receiving facility before returning to service.
- Total Commit Time – The total amount of time between dispatch and clearing the incident.

Since none of the agencies involved in this project provide primary transport EMS, the components evaluated in this section will be limited to those found in the first list: processing, turnout, and total response. Before entering this discussion, however, the project team felt it necessary to provide a brief discussion about how the statistical information is presented, particularly in regard to average versus percentile measures.

The ‘average’ measure is a commonly used descriptive statistic also called the mean of a data set. It is a measure which is a way to describe the central tendency, or the center of a data set. The average is the sum of all the points of data in a set divided by the total number of data points. In this measurement,

each data point is counted and the value of each data point has an impact on the overall performance. Averages should be viewed with a certain amount of caution because the average measure can be skewed if an unusual data point, known as an outlier, is present within the data set. Depending on the sample size of the data set, this skewing can be either very large or very small.

As an example, assume that a particular station with a response time objective of six minutes or less had five calls on a particular day. If four of the calls had a response time of eight minutes while the other call was across the street and only a few seconds away, the average would indicate the station was achieving its performance goal. However, four of the five calls, or 80 percent, were beyond the stated response time performance objective.

The reason for computing the average is because of its common use and ease of understanding. The most important reason for not using averages for performance standards is that it does not accurately reflect the performance for the entire data set.

With the average measure, it is recognized that some data points are below the average and some are above the average. The same is true for a median measure which simply arranges the data set in order and finds the value in which 50 percent of the data points are below the median and the other half are above the median value. This is also called the 50th percentile.

When dealing with percentiles, the actual value of the individual data does not have the same impact as it did in the average. The reason for this is that the percentile is nothing more than the ranking of the data set. The 90th percentile means that 10 percent of the data is greater than the value stated and all other data is at or below this level.

Higher percentile measurements are normally used for performance objectives and performance measurement because they show that the large majority of the data set has achieved a particular level of performance. This can then be compared to the desired performance objective to determine the degree of success in achieving the goal.

For this analysis, ESCI was most interested in the ability to respond the appropriate resources to the highest percentage of incidents. For this reason, ESCI analyzed NFIRS data from each department for 2011 and 2012 and generated average and 90th percentile response performance for emergency incidents only.

Normally, this analysis would begin with an evaluation of call processing time within the communications/dispatch center. However, since computer aided dispatch (CAD) data was not available for this project, departmental NFIRS data was used and does not contain the appropriate timestamps to provide this analysis.

The second component of the response time continuum is that of turnout or the time between when resources are dispatched and when they are en route to the incident. Turnout times can vary based on staffing patterns and will typically be longer for volunteer or paid-on-call departments. *NFPA 1710*, the standard that applies to career organizations, recommends a turnout time performance of 60 seconds for medical incidents and 1:20 (1 minute 20 seconds) for fire incidents, when measured at the 90th percentile. *NFPA 1720*, the standard that applies to volunteer and combination departments, does not outline a specific turnout time performance recommendation. In order to measure turnout time, incident data must be provided with both ‘dispatch’ time and ‘en route’ time. Unfortunately, NFIRS does not require that ‘en route’ be recorded in the incident report. As mentioned previously, CAD data (the typical source for this performance measure) was not available from Anoka County so an analysis of turnout time performance could not be performed. Since the data was not available from Anoka County, which dispatches CHFD and FFD, turnout time performance was not analyzed for St. Anthony (dispatched by Hennepin County) either.

Regardless of what the call processing or turnout times are for a particular organization or a region, the most important aspect of response is actually getting the appropriate resources on the scene of the emergency.

NFPA 1710 recommends a first unit arrival response performance of 5:00 minutes when measured at the 90th percentile regardless of population density. *NFPA 1720* allows a tiered response performance objective based on varying levels of population density as illustrated in the figure below.

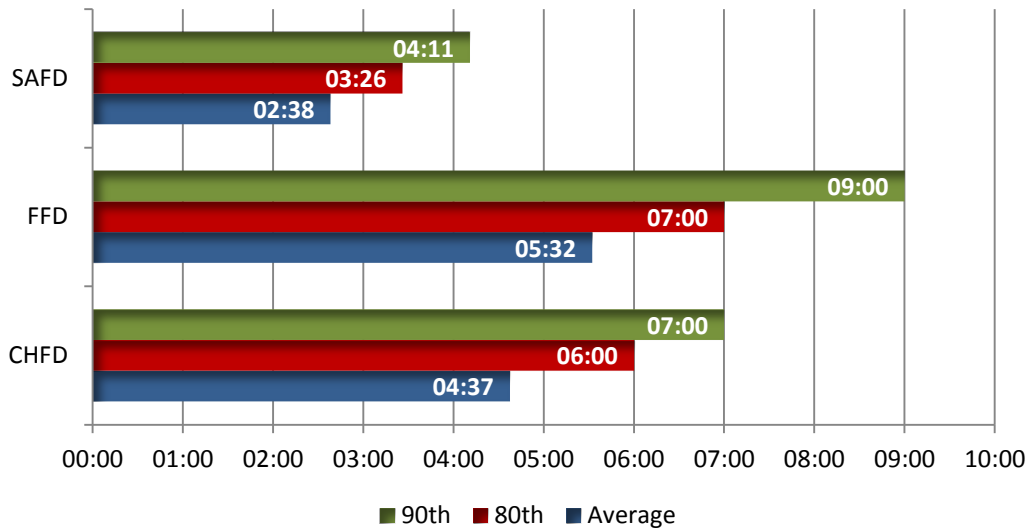
Figure 40: NFPA 1720 Response Performance Recommendations⁸

Classification	Population Density per Square Mile	Response Performance Target	Percentile
Urban	>1,000	9:00	90 th
Suburban	500 to 999	10:00	80 th
Rural	<500	14:00	80 th
Wilderness/Remote	Undeveloped	Undetermined	90 th

⁸ *NFPA 1720* Volunteer Department Staffing and Response Target Table from Section 4.3.2.

The following chart illustrates the total response performance for the study agencies from time of dispatch to arrival at the incident for 2012.

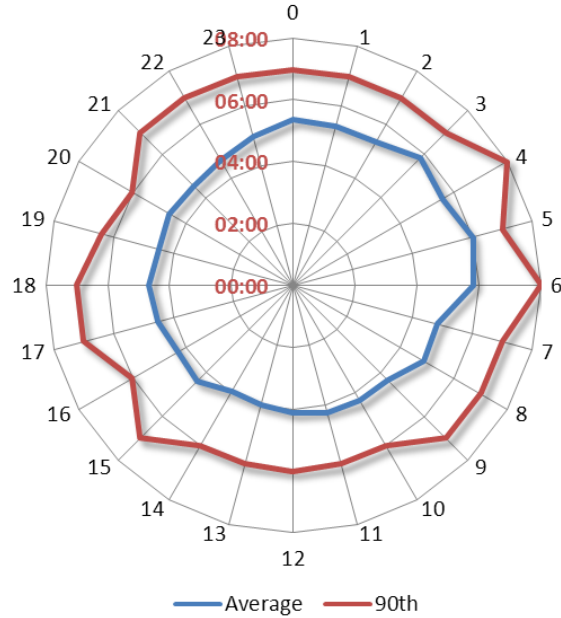
Figure 41: Response Time Performance, 2012



Based on the analysis of calendar year 2012 incident data, and assuming a response performance target in line with *NFPA 1720* urban density recommendations, each department is meeting or exceeding the recommended performance. However, if *NFPA 1710* is to be applied, only SAFD is meeting that performance objective.

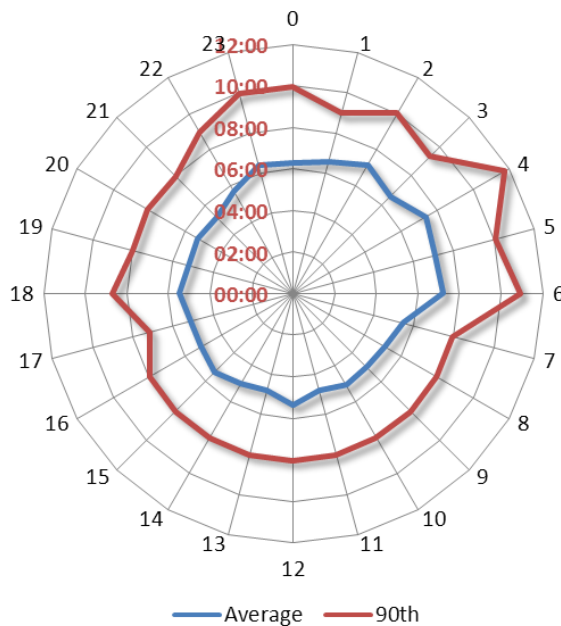
Although overall response time is useful in determining general performance for an organization, evaluating that data temporally sometimes allows policymakers and administrators to identify specific times of the day when performance could be improved. The following figure illustrates CHFD's actual response performance by hour of day both as an average and 90th percentile.

Figure 42: Response Time by Hour of Day – CHFD, 2012



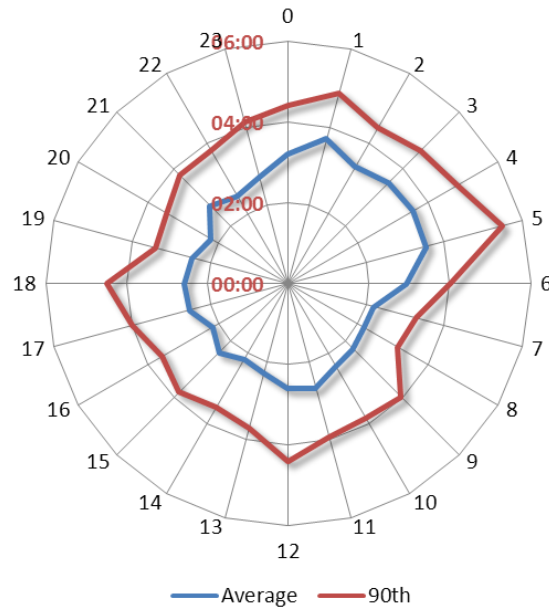
As is common with most emergency services providers, both average and 90th percentile response performance is slightly longer during the overnight hours as personnel must be awakened while working the last half of their 24-hour shift. The following figure illustrates the same analysis for FFD.

Figure 43: Response Time by Hour of Day – FFD, 2012



As with CHFD, response performance during the overnight hours is slightly longer than during normal business hours. The final illustration is the same analysis for SAFD.

Figure 44: Response Time by Hour of Day – SAFD, 2012



SAFD experiences a slightly more varied overall response performance at the 90th percentile but its average performance is very similar to the other departments; longer during the overnight hours.

Mutual and Automatic Aid Programs

Communities have traditionally forged limited agreements to share resources under circumstances of extreme emergencies or disasters. These agreements, known as mutual aid agreements, allow one community to request the resources of another in order to mitigate an emergency situation or disaster that threatens lives or property. There are numerous mutual aid agreements, both formal and informal, in place between fire, police, and emergency medical agencies within the study area, both with participating departments and those surrounding the study area.

However, it is important to define the level of mutual aid systems in place in this region. Mutual aid can take several forms, and this analysis of mutual aid programs will begin with a brief explanation of the various types of mutual aid systems used by the fire service in various parts of North America.

Basic Mutual Aid upon Request

This form of mutual aid is the most basic and is typically permitted under broad public laws that allow communities to share resources upon request during times of disaster or during local and regional emergencies. Often, these broad laws permit communities to make decisions quickly regarding mutual aid under specified limitations of liability. These broad laws can allow a community to tap into resources from their immediate neighbors, as well as very distant resources in communities with which they have very little day-to-day contact otherwise. Under this level of mutual aid, specific resources are typically requested by the fire department, through the appropriate chain of command, and sometimes coordinated by local or regional emergency management personnel. Depending on the level of the request, the response can sometimes be slow and the authorization process may be cumbersome due to the exchange of official information or even elected official's approval that may be required.

Written Mutual Aid Agreements

This form of mutual aid takes the previous form one step further by formalizing written agreements between communities (typically immediate neighbors in a region) in an effort to simplify the procedures and, thus, cut response time. Usually, these written agreements include a process that takes the request and response authorization down to a lower level in the organization, such as the Fire Chief or other incident commander. By signing such agreements, communities are "pre-authorizing" the deployment of their resources under specified circumstances as spelled out in the agreement. Most often, these agreements are generally reciprocal in nature and rarely involve an exchange of money for service, though they may include methods for reimbursement of unusual expenses for long deployments.

Automatic Aid Agreements

Once again, this form of mutual aid takes the process an additional step further by spelling out certain circumstances under which one or more community's specific resources will respond automatically upon notification of a reported incident in the neighboring community. In essence, automatic aid agreements expand a community's initial first alarm response to certain types of incidents by adding resources from a nearby neighbor to that response protocol. Typically, such agreements are for specific geographic areas where the neighbor's resource can be expected to have a reasonable response time and are for only specific types of incidents. An example of such an agreement would be having a neighboring community's engine respond to all reported structure fires in an area where it would be closer than the second or third-due engine from the home community. In other cases, the agreement might cover a

type of resource, such as a water tender or aerial ladder, than the home community does not possess. An example of this would be having a neighboring community's water tender respond to all reported structure fires in the areas of the home community that do not have pressurized hydrants.

Automatic aid agreements may be purely reciprocal or they may involve the exchange of money for the services provided. Purely reciprocal agreements are common, but typically are used where each community has some resource or service it can provide to the benefit of the other. These services or resources need not be identical. For instance, one community may send an engine to the other community on automatic response to structure fires, while the second community agrees to send a water tender to the first community's structure fire calls in exchange. These reciprocal agreements are sometimes made without detailed concern over quantification of the equality of the services exchanged, since they promote the effectiveness of overall services in both communities. In other cases, the written agreements spell out costs that one community can charge the other for services, typically where no reasonable reciprocation can be anticipated.

One primary purpose of automatic aid agreements is to improve the regional application of resources and staffing. Since fire protection resources are most frequently established because of the occupancy risks in a community and not necessarily a heavy workload, these resources may be idle during frequent periods of time. While fire departments make productive use of this time through training, drills, pre-incident planning, and other functions, the fact is that these expensive resources of apparatus and staff are not heavily tied up on emergency incidents. Communities that share certain resources back and forth are, in essence, expanding the emergency response workload of those units across a larger geographic area that generally ignores jurisdictional lines. This expanded use of resources can strongly benefit both communities that might otherwise have significantly increased costs if they had to procure and establish all the same resources alone. Automatic aid can be used effectively to bolster a community's fire protection resources or to reduce unnecessary redundancy and overlap between communities.

The study departments already benefit from mutual and automatic aid on varying levels. FFD and SAFD will respond to Columbia Heights with an engine or aerial ladder between the hours of 0500 and 1700 on weekdays for any report of smoke and/or flame showing. CHFD will respond to Fridley and St. Anthony with an engine or aerial ladder between the hour of 0500 and 1700 on weekdays for any report

of smoke and/or flame showing. Automatic aid is dispatched at the discretion of the appropriate dispatching service.

All three departments also partner within the North Suburban Regional Mutual Aid Agreement (NSRMAA), which is a joint powers agreement that allows fire departments who subscribe to the agreement to respond to other cities and receive help from other departments without incurring additional cost or liability. FFD is also designated as a State of Minnesota Hazardous Materials Chemical Assessment Team (CAT) along with Coons Rapids FD and Spring Lake Park/Blaine/Mounds View FD. This service is available to the entire region and is dispatched by the state. In addition, CHFD and FFD also benefit from the Anoka County Fire Investigation Team and the Anoka County Specialized Rescue Team.

Support Programs

Although the delivery of fire suppression and emergency medical services is at the core of each department's mission, additional core activities are necessary to support every emergency services agency. These activities provide the basis for employee training and education, career development, public safety education, fire prevention, and code enforcement.

Training

Providing safe and quality fire and emergency services requires a well-trained workforce. Training and education of personnel are critical functions for each study agency. Without quality, comprehensive training programs, emergency outcomes are compromised and emergency personnel are at risk. "One of the most important jobs in any department is the thorough training of personnel. The personnel have the right to demand good training and the department has the obligation to provide it."⁹

Proper training of emergency services personnel starts prior to being hired or joining an agency. Specific knowledge and skills must be obtained to achieve a basic understanding of the roles and responsibilities of an emergency responder. Two of the study agencies have entered into a joint effort to offer a combined 'rookie school' that provides this basic introductory training. Beyond the introductory issues, personnel should be actively engaged on a regular basis and tested regularly to ensure that skills and knowledge are maintained. In order to accomplish this task, agencies must either have a sufficient number of instructors within their own organization or be able to tap those resources elsewhere.

⁹ Klinoff, Robert. *Introduction to Fire Protection*, Delmar Publishers, 1997. New York, NY.

Training sessions should be formal and follow a prescribed lesson plan that meets specific objectives. In addition, a safety officer should be dedicated to all training sessions that involve manipulative exercises. In addition to the ongoing training offered to general staff, certain individuals should be offered specific officer development training in order to prepare them for more responsibility as they progress through the agency’s command structure. Placing individuals in positions of authority without first giving them the tools to succeed often ends in failure and discouragement by both the officer and their subordinates. ESCI reviewed the Columbia Heights, Fridley, and St. Anthony training programs, as summarized in the following pages.

General Training Competencies

The first comparison reviews the fundamental components that are considered as the most foundational elements of an effective training program.

Figure 45: General Training Competencies

	Columbia Heights	Fridley	St. Anthony
Incident command system	NIMS based	NIMS based	NIMS based
Accountability procedures	PAR system standardized throughout county	PAR system standardized throughout county	Area wide accountability system being adopted currently
Policy and procedures	On Rules and Regulations at initial hire	Annual policy training	Yes, but need to do more
Safety procedures	Incorporated into ongoing training but SOGs are minimal	Included in SOGs and trained on	SOGs are in place but need to be improved upon
Recruit academy	EMT required for hire. Complete FFI via county wide recruit academy that completes FFI, FFII, and Haz Mat Operations. Followed by in-house task-based training.	Will hire and train to EMT level. Grant funded Anoka County recruit academy achieves FFI, FFII, Haz Mat Operations, EMT, defensive driving. Additional in-house orientation training.	In-house recruit academy obtains FF I, FF II, Haz Mat Operations, EMT for a total of 425 contact hours. Completed every 2 years, generally 5 to 6 students. Well- structured academy.
Special rescue (high angle, confined space, etc.)	Services received from a County team and City of Minneapolis team	Awareness only. Some members participate in the County team	In-house technical rescue team, backed up by Minneapolis team
Hazardous materials	Operations level	Technician level quarterly training	Operations level
Wildland firefighting	No	No	No
Vehicle extrication	Yes	Yes	Yes
Defensive driving	Internal program	Periodic CEVO courses	Included in academy and ongoing training
EMS skills and protocol	BLS – EMT-Basic	EMT-Basic plus variances for airways and drug therapy	BLS – EMT-Basic

ESCI’s review of the general training competencies indicates that the three agencies adequately address the basic topics that we expect to find in a training program. Collaboration is apparent in that the agencies share fundamental training initiatives such as incident command and personnel accountability systems, a positive attribute. Of noted importance is training on the Standard Operating Guidelines (SOG) that are in place in the organizations. Some weaknesses were identified with regard to SOG development and completeness, which should be further evaluated. As discussed earlier in this report, collaborative opportunities for the development of standardized policies and operational guidelines should be considered, regardless of other cooperative efforts decisions.

Training of new firefighters is handled similarly in Columbia Heights and Fridley, where a shared, county-wide recruit academy is employed. In St. Anthony, new hires are trained via an in-house program. Both approaches train personnel to the Firefighter I and Firefighter II level, as well as Hazardous Materials Operations. Because recruit training is time consuming and labor intensive, a joint academy approach warrants future consideration.

Training Administration

To function effectively, a training program needs to be managed. Administrative program support is important, though frequently weakly addressed. An additional element of effective administration is the development of program guidance in the form of training plans and goals.

Figure 46: Training Administration, Scheduling, and Record Keeping

	Columbia Heights	Fridley	St. Anthony
Director of training program	Shared by Assistant Chief and Captain	Currently filled by POC Lieutenant/committee. Would normally be Assistant Chief	Captain designated as Training Officer, Lieutenant assists
Goals and objectives identified	EMT education requirements, meet all minimum OSHA and related requirements	Unwritten. Goal to achieve EMS, Firefighter I and II certification requirements	Unwritten but based on an annual assessment and identification of training theme for year
Governing body support and concurrence	Supportive	Support has been limited in recent years	Supportive
Clerical support	Captain with assistance of office staff	No dedicated support; office staff only	None
Career training schedule	Every Monday night drill. 2 to 3 hours weekly. Results in approximately 42 drills per year	Weekly Monday night training repeated on Tuesday morning, approximately 2.5 hours	1st and 3rd Wednesdays from 7 to 9:30. Career and part time. Also 3-hour EMT drill quarterly. Monthly business meeting separate from the Wednesday drills

	Columbia Heights	Fridley	St. Anthony
Volunteer/PPC schedule	Same as career	Same as career	Same as career
Annual training hours defined	90% attendance to drills, plus EMT Continuing Education minimums and FFI Certification maintenance hours	70% attendance requirement. Mandatory requirements in place for certification maintenance	60% drill attendance plus EMT Continuing Education minimums and FF II Certification maintenance hours
Individual training files maintained	Yes	Some. Monthly time and attendance sheet	Yes
Records and files computerized	In Firehouse Software, hard copies in individual personnel files	Entered into Image Trend, time and attendance only	In Firehouse Software, plus hard copy files of outside training

None of the study agencies have a dedicated Training Officer position; instead training tasks are assigned to administrative and line personnel as additional assigned duties. Program goals are generally established, though informally, and all training personnel express a strong appreciation for the importance of effective educational programs.

Some sharing of training delivery takes place in the study area. Specifically, Fridley Fire Department makes its drill available to other department members that may have missed training in their home agency. However, topics are not coordinated between agencies. Regardless of future collaborative efforts that may be undertaken, the opportunity to expand this kind of training coordination and exchange should be reviewed. In addition, a joint approach to training program management in the form of a common training officer’s position warrants consideration.

Minimum training requirements are essential and may be in the form of annual contact hour requirements or competency-based, tied to drill activities. In Fridley minimum attendance requirements are in place, but they are unwritten. The other agencies set minimum attendance, but they are not tied to training hours or skills competency. Adopting clearly defined minimum requirements is encouraged.

Training Resources

To be able to deliver effective training to fire and EMS personnel, some resources are necessary to arm the trainer with the tools needed to provide adequate educational content.

Figure 47: Training Resources

	Columbia Heights	Fridley	St. Anthony
Training facilities (tower, props, pits)	Hose tower is configured for training	Drill ground with tower and props available in the city	No training ground in city, multiple small props built in-house
i) live fire prop	None. Occasional house burn	Provided at drill ground	Mobile prop available and Minneapolis FD training facility
ii) fire and driving grounds	Station parking lots and streets. Vacant lot next to station	Conducted on city streets and parking lots	City streets and parking lots
Classroom facilities	Large classroom seats 60, well equipped	Only classroom is in the Station 1 all purpose room. Can seat 20 – 30	One classroom in station with multiple uses
Audio/visual equipment, projection	Adequate, would like to have interactive system	Smart board and AV equipment	Well equipped with audio visual equipment
Books, magazines, instructional materials	Adequate	Limited	Adequate

Of the three departments, only Fridley has a dedicated training facility. The others make use of a few available props, city streets, and parking lots for drilling. For classroom delivery, the Columbia Heights station is well suited with excellent facilities. Fridley and St. Anthony both are limited to single meeting rooms that are also used for other purposes, compromising use at times as classrooms.

Training Procedures

Of equal importance to program planning, educational contact hours and available tools is the methodology with which training is delivered. Procedures and training manuals need to establish a balance between the provision of didactic information and the hands-on practice of manipulative skills. Training procedures in the study agencies are summarized below:

Figure 48: Training Procedures

	Columbia Heights	Fridley	St. Anthony
Department Training Manual developed	None	Written program for Phase I and Phase II of recruit training	No. A task book is provided to rookies
Training manuals used	Jones and Bartlett	IFSTA and Jones and Bartlett	Jones and Bartlett manuals used
Task performances/frequency	Mandatory skill testing for EMT. No routine task performance for fire skills	Periodically incorporated into regular training	Currently adopting an annual task based performance testing process

	Columbia Heights	Fridley	St. Anthony
Use of lesson plans	IFSTA manual lesson plans are used	Occasional from IFSTA and Jones and Bartlett manuals	Use plans from Jones and Bartlett or develop individually in-house
Night drills	Yes	Yes	Yes
Multi-agency drills	Occasionally but increasing	Occasionally	About quarterly
Inter-station drills	N/A	Most all	N/A
Physical standards or requirements	Annual physical ability test and SCBA FIT testing	Annual fit testing and pulmonary function testing, medical evaluation every 3 years. No physical ability testing	Currently under development
Annual performance evaluation conducted	No	Periodically incorporated into regular training sessions	Currently under development

Task books are in place for recruit level training in two of the departments, but none have an agency training manual in place. All three agencies could benefit from the development of a comprehensive training document that defines practices, procedures, and requirements. Doing so could easily be accomplished as a collaborative undertaking.

Periodic skills assessment is similarly limited in the three, an undertaking that would be highly valuable to undertake as a shared initiative.

Training Program Summary

Overall, all three agencies are providing adequate training to their emergency responders, as is apparent from ESCI's review of program documents and training records. Of particular note is the St. Anthony program, which is comprehensive and well developed. There is, expectedly, some room for improvement as noted. The three fire departments will be well served to increase training interaction, including development of a regional training consortium.

Life Safety Programs

An aggressive risk management program, through active fire and life safety services, is a fire department's best opportunity to minimize the losses and human trauma associated with fires and other community risks.

The National Fire Protection Association recommends a multifaceted, coordinated risk reduction process at the community level to address local risks. This requires engaging

all segments of the community, identifying the highest priority risks, and then developing and implementing strategies designed to mitigate the risks.¹⁰

Each of the study area departments needs to review and understand the importance of fire prevention and public education, appreciating their role in the planning process of a community with diversified zoning including residential, commercial, and industrial properties.

In the study area, the participating agencies vary in their fire prevention activities. All three have appropriately adopted a model fire code and all complete new construction and existing occupancy inspections to varying degrees. Fire prevention efforts are detailed in the following tables.

Fire Safety Code Enforcement and Inspection Programs

A fire department should actively promote fire resistive construction, built-in warning and fire suppression systems, and effective administration of applicable fire codes and ordinances. Doing so not only protects an individual property owner's interests, but those of community safety and economic viability overall. The essential components of effective code enforcement include:

- Adoption and administration of appropriate codes and ordinances
- Active participation in new construction building permit fire and life safety plans reviews
- Completion of inspections pursuant to building permit issuance
- Inspection of existing commercial and high risk occupancies
- Enforcement and management of code related activities

On the following pages are ESCI's observations of the three fire department's code enforcement and inspection programs.

¹⁰ Kirtley, Edward, *Fire Protection Handbook*, 20th Edition, 2008, NFPA, Quincy, MA.

Figure 49: Code Enforcement and Inspection Programs

	Columbia Heights	Fridley	St. Anthony
Fire code adopted	Minnesota State Fire Code	Minnesota State Fire Code 2007 edition, but not formally adopted	Minnesota State Fire Code 2007 edition (most current)
Local codes or ordinances adopted, amendments	Property Maintenance Code including: Rental property licensing, snow and ice, grass, storage inspections and abatement enforcement	Multiple addenda. Inspections also completed on rental properties, about 4,200 completed by career FF.	Some supplemental amendments included in code adoption
Sprinkler ordinance in place	For over 2,000 sq. ft. new construction or remodels	For over 2,000 sq. ft. new construction	None
Consulted in proposed new construction	By the city building official	Yes	Yes
Perform fire and life safety plan review in new construction	Informal Fire Chief reviews only. No formal fire and life safety plan review. Building Official is skilled in fire code concerns.	Assistant Chief conducts fire and life safety plan review	Submitted to Fire Marshal for fire and life safety plan review.
Sign-off on new construction	No	Yes, but inconsistent	Yes
Charges for inspections or reviews	In permit fee based on FD fee schedule	For installed system reviews, in permit fees.	In building permit fee. Progress inspections completed by FM.
Perform existing occupancy inspections	Yes	Inconsistently. A new program is improving inspection frequency	Yes
Special risk inspections	Yes	Yes	Yes
Storage tank inspections	Yes	Yes	Yes
Key-box entry program in place	Key box system required	Key box system in place	Key box system in place
Existing occupancies: Self-inspection program in place	No	No	No
Frequency of existing occupancy inspections	Commercial and multifamily occupancies inspected annually; rental properties bi-annual interior inspections, annual exterior drive by.	Goal to inspect commercial occupancies on a 4 year rotation. Part time inspector visits all occupancies in about 1 ½ years.	Apartment buildings inspected annually (common areas only). All other occupancies in a 2 year rotation.
Citation process in place and formally documented/adopted	Can cite or remediate at property owner's expense	Access to city citation process	Access to city citation process
i) court cited to	Municipal Court	Municipal Court	Hennepin County
Number of personnel devoted to program	Assistant Chief and on duty crews	One, 25 hours/week plus part of Assistant Chief's time. Equals about 1 FTE	One shift Captain currently assigned as acting Fire Marshal
Fees for specialty inspections	Yes	Yes	Only if included in city permit fee

It is apparent that all three departments have made a sincere commitment to fire and life safety code administration, with some expected variations. Appropriate fire and life safety codes have been adopted in the participating cities, however it is noted that the Minnesota State Fire Code that it adopted in Fridley is not the most current version.

New construction plan review procedures are in place in Fridley and St. Anthony, but in Columbia Heights, the task is performed by the city Building Official, with only informal involvement by the fire department. While the practice of deferring to the city for this review may be fully appropriate, the fire department should maintain vigilance over the process to assure that its fire safety interests are protected.

Existing occupancy inspections are completed in all instances; however some important limitations were identified. In Columbia Heights, in addition to fire code enforcement inspections, the fire department is deeply involved in property reviews for tall grass, yard debris and a variety of hazard abatement reviews. It was reported that this undertaking involves approximately 5,000 inspections annually which represents a considerable workload. The city is encouraged to evaluate whether this represents the best use of fire department personnel and whether doing so compromises the department's ability to meet fire safety code enforcement needs.

The Fridley Fire Marshal retired approximately 2½ years ago and the position not been refilled. Instead, prevention duties are assigned to an Assistant Chief as an additional duty. A part-time inspector has been placed to assist the Assistant Chief on a schedule of 24 hours per week. Even so, given that the department completes rental property permit instructions in addition to fire and life safety work, program resources are stretched thin.

A similar situation exists in St. Anthony, where a previous fire marshal was not replaced following a 2012 retirement. On duty personnel conduct most of the fire inspections, as is the case in all three agencies. However, St. Anthony Acting Fire Marshal responsibilities have been assigned to a Captain, who is also assigned to a fire suppression shift. As a result, the Acting Fire Marshal is only available to complete fire prevention work during one to two week days, compromising his ability to effectively address code enforcement concerns.

Given the challenges that are found with regard to code enforcement in the three departments, ESCI believes that opportunities exist for future collaboration and sharing of fire prevention resources.

Public Education

One of the most effective ways to prevent the occurrence of fires is by effectively educating the public so that they can minimize their exposure to fire and health issues and so that they can respond effectively when faced with an emergency.

Figure 50: Fire Safety and Public Education

	Columbia Heights	Fridley	St. Anthony
Public education/information officer in place	Active program. K – 3 program in all schools. Also pre-K family education program	Not designated. No structured program. Educations provided upon request	Assigned to acting Fire Marshal. K–3 program and 9 th grade CPR, poster program and multiple other outreach activities
Feedback instrument used	No	No	No
Public education in the following areas:			
i) calling 9-1-1	Yes	Yes	Yes
ii) exit drills in the home	Yes	Yes	Yes
iii) smoke alarm program	Yes	No	Yes
iv) general fire safety	Yes	Yes	Yes
v) injury prevention	No	No	Yes
vi) fire extinguisher use	On request	On request	Yes
vii) fire brigade training	No	No	Provided to City businesses. Fee assessed.
viii) elderly care and safety	Yes	No	Yes
ix) curriculum used in schools	Internal public education manual	In development	CPR certification curriculum in 9 th grades
x) baby-sitting classes offered	No	No	No
xi) CPR courses, blood pressure checks offered	CPR and blood pressure checks	Blood pressure checks only	9 th grade school certification program
Publications available to public	Yes	Distribute National Fire Safety Council materials annually	Multiple handouts in station
Bilingual information available	Yes	Yes	Yes
Annual report distributed to community	Included in Annual Report	No	Included in Annual Report
Juvenile fire setter program	County-wide JFS program is in place	County-wide JFS program is in place	Uses State Fire Marshal's Office JFS resources
Wildland interface education	No	No	No

Public education efforts are prioritized more highly in Columbia Heights and St. Anthony than in Fridley. All are encouraged to review and make public education program improvements wherever possible.

Fire Investigation

A sometimes under-appreciated component of fire prevention programs overall is that of assuring that the cause of a fire that has occurred is effectively identified so that public education and code enforcement efforts can be targeted toward identified causes. Fire cause determination is not limited to intentionally cause incidents, but includes all forms of accidental fires, as well. Following is a review of fire investigation efforts in the study agencies.

Figure 51: Fire Investigation

	Columbia Heights	Fridley	St. Anthony
Fire origin and cause determination	Assistant Chief primarily. Captains have cause and origin training	On duty Captain initially, Fire Chief and Assistant Chief complete, as needed. May use FIT Team or State Fire Marshal	One career employee is member of the Hennepin County Fire Investigation Team
Arson investigation and prosecution			
i) arson investigation training provided	Assistant Chief and one Captain have considerable arson training	All recruits receive awareness training through the Anoka County Fire Academy. FFD trains all employees periodically. Career staff are required to have the State's 3-day class and participate in IAAI.	Referred to County FIT Team and/or State Fire Marshal
Person responsible for investigations	Assistant Chief	Assistant Chief	Fire Chief
Local FIT membership (fire investigation team)	County-wide FIT team is in place	County-wide FIT program is in place	County-wide Team
Process for handling juvenile suspects	Processed in County Juvenile Court and JFS program	Processed in County Juvenile Court and JFS program	County Juvenile Court, may be Ramsey or Hennepin County
Scene control practices in place	Yes	Yes	Yes
Adequate and appropriate equipment issued/supplied	Yes	Yes	Yes
Evidence collection process in place	Yes	Yes	Yes
Reports and records of all incidents made	Maintained in Firehouse Software program	Investigations are recorded separately from other department records	Records maintained electronically and in hard copy

Columbia Heights, Fridley, St. Anthony, Minnesota
Feasibility Study for Shared or Cooperative Fire and Emergency Services

	Columbia Heights	Fridley	St. Anthony
File, record, and evidence security	Photos and sensitive files are separately filed and secured	Secured appropriately	Adequately secured
Records computerized	Yes	Yes	Yes
ii) software used	Firehouse Software	Word processing software. Investigation software is not used.	Firehouse Software
Information collected in the following areas:			
i) fire incidents	Yes	Yes	Yes
ii) time of day and day of week	Yes	Yes	Yes
iii) method of alarm (how received)	Yes	Yes	Yes
iv) dispatch times	Yes	Yes	Yes
v) response times	Yes	Yes	Yes
Information analyzed & used for planning	Not routinely	Not formally	No
Reports made & distributed	Included in departmental annual report	No	Included in departmental annual report
FTEs used in data collection & analysis	Assistant Chief and office staff	Assistant Chief and part-time employee total approximately 1 FTE	Only the acting Fire Marshal

Section II – Opportunities for Cooperative Efforts

While the preceding sections of this report focused on the current conditions within each of the study agencies, the greater intent of the project is to evaluate the potential for cooperative and/or shared services between the agencies up to and including consolidation if feasible. This final report section examines the multitude of options available to the study agencies and provides direction where appropriate.

General Partnering Strategies

Three basic strategies are generally available when considering cooperative efforts and shared services, beginning with a do-nothing approach (status quo) and ending with complete unification of the organizations into what is, essentially, a new emergency service provider. A description of the three primary methodologies is found below.

Functional Consolidation

Public entities usually have broad authority under law to enter intergovernmental agreements (IGAs) for the purpose of cost and service efficiency. Minnesota is no different in this regard. The laws of the State of Minnesota address the issue, allowing intergovernmental contracts for any lawfully authorized governmental function.

Examples of this type of cooperative effort may include any function within the study departments that allows them to deliver services, such as training, fire prevention, equipment purchasing, logistics, etc. Through functional consolidations, each agency benefits from the resources of the whole while maintaining independence as separate organizations. Many times, functional consolidations serve as a prelude to a future merger.

Operational Consolidation

This strategy joins two or more entities, in their entirety, through the execution of an intergovernmental agreement (IGA). The resulting organization features a single organizational structure and chain of command. Depending on the form of the agreement(s) establishing the organization, members may remain with the original agency, transfer to one of the other agencies, or transfer to an entirely new organization.

Unlike functional consolidation, an operational consolidation brings the actual operations of the separate organizations together into a single department that provides services to both communities but does not create a new legal entity. The organizational structure, command, and operational model will depend upon the structure and format of the agreements established between the communities. Like functional consolidations, operational consolidations are sometimes considered an intermediate step leading to a full merger. The main advantage of the strategy offers governing bodies the ability to negotiate and monitor desirable outcomes for the management of a particular service.

This type of operational consolidation is commonly structured as a Joint Powers Authority (JPA) that allows the forming governmental entities to retain certain levels of control and oversight. An example of this type of consolidation is the South Metro Fire District (MN).

Legal Unification

Under certain circumstances in law, fire departments can join into a single entity. This formal approach unites not only the programs but also the organizations themselves. State laws addressing political subdivisions usually detail a process for legal unification.

Typically, state laws draw a distinction between words like *annexation*, *merger*, and *consolidation* when speaking of legal unification. Organizationally, however, the outcome of any such legal process results in one unified organization. The major differences between the legal strategies relate to governance and taxation issues. In many states, some process of *inclusion* exists that essentially involves the annexation of one entity to another, preserving the governing body and taxing authority of the surviving agency. A legal merger, on the other hand, usually entails the complete dissolution of two or more agencies with the concurrent formation of a single new entity (and governing body) in place of the former.

An example of this type of unification is the Cloquet Area Fire District (MN). The City of Cloquet and the City of Sunfish Lake opted to dissolve their individual departments and petitioned the Minnesota legislature to create a special law that would allow the unification of the departments under a new special taxing district. While this is the only taxing fire district in Minnesota, other efforts are currently underway to replicate this process.

Options for Shared Services

In identifying potential cooperative and shared services opportunities, the project team considered the key issues now challenging each agency and community. Some issues represent roadblocks to

integration, while others provide a unique chance for improvement. As an element of the review, affected staff and other officials provided local and internal perspective on organizational culture, community expectation, and other significant matters.

ESCI usually makes no distinction between unification, consolidation, or merger, tending to use each term interchangeably. The reader should note that when referring to the union of programs or agencies, the operative words are *functional* and *legal*.

Governing bodies should pursue the process of joining two or more fire departments only after concluding that unification is cost-effective and is likely to provide better and/or more efficient service to the public. Each agency's legal counsel should research the particular statutory steps necessary to implement a particular unification strategy. The different processes are not commonly difficult to accomplish, but because the transfer of public assets and liabilities may be involved, the procedure itself can be relatively precise. It is important, therefore, that the agencies have the benefit of competent legal advice throughout the process.

The decision to choose one unification strategy over another is a matter of local policy. Most often, officials choose a preferred course for analytical reasons; however, in certain cases politics or law may rule. Most states actively support cooperation between governments as a matter of policy in the interest of furthering the economy and efficiencies of local government. Generally, functional and operational strategies are always available as options, whereas the legal unification of fire departments is dependent on circumstance.

The following paragraphs provide a summary of potential shared services strategies available within the study region. Although every attempt has been made to identify all the areas of potential, intimate knowledge of the current system may allow for other areas to be explored outside the parameters of this report.

Baseline Budget Determination

ESCI projects the financial result of any proposed consolidation. The forecast does not attempt to predict the finances of the departments because changes in law and politics are certain to make such forecasting inaccurate. Rather, ESCI's analysis shows how trends in the cost of labor and other operational expenditures act on the outcome of a consolidation based on 2012 policy and law. The

figure below details the combined baseline budget of the departments using 2012 expenditures as the base from which to build future budget models.

Figure 52: Combined Budget by Category, Fiscal Year 2012

	CHFD	FFD	SAFD	Total
Personnel	\$1,139,335	\$1,161,642	\$737,225	\$3,038,202
Supplies/Services	\$236,087	\$186,474	\$110,875	\$533,436
Capital	\$0	\$0	\$40,500	\$40,500
Total	\$1,375,422	\$1,348,116	\$888,600	\$3,612,138

Total costs for personnel services with benefits calculated at \$3,038,202 and account for 84.1 percent of total expenditures in 2012. Materials and services and capital outlay are approximately 14.8 percent of the total current baseline budget. The reader must keep in mind that this baseline budget is a ‘snapshot’ in time; expenditures, particularly capital, will vary annually. This baseline budget, including budgeted capital expenditures, is used only as a model to determine potential cost savings of future cooperative efforts.

Baseline Personnel

In order to determine the appropriate model moving for any consolidated effort, it is necessary to first review the current levels of staffing with each department. The figure below restates the administrative and support positions within the study departments.

Figure 53: Administrative and Support Baseline Staffing

	Columbia Heights	Fridley	St. Anthony	Total
Fire Chief	1	1	1	3
Assistant Chief	1	1	0	2
Fire Marshal	0	1 (Vacant)	0	1
Fire Inspector	0	1 (Temp PT)	0	1
Clerical/Support	1 (2 PT)	1 (1 PT)	0	5
Total Career	3	4	1	8
Total PT	2	2	0	4

In determining the fiscal impact of any potential staffing model, only those personnel that are in paid positions, either career or part-time, are analyzed. It is assumed that any POC positions will remain in their current roles and responsibilities and that their fiscal impact will remain unchanged. The combined

departments have a total of nine full-time and four part-time administrative and support personnel. This equates to a ratio of administrative and support staff to total personnel of approximately 10.5 percent; within the expected range of 10 to 15 percent. The following figure lists each department's current operational personnel resources and includes only those who are assigned to emergency field operations as a primary responsibility and schedule accordingly.

Figure 54: Field Operations Baseline Staffing

	Columbia Heights	Fridley	St. Anthony	Total
Captain	3	3 (1 POC)	2 (1 POC)	8
Lieutenant	2 POC	2 POC	4 (2 POC)	4
Firefighter	3 (24 POC)	1 (27 POC)	16 POC	4
Support	0	0	1 POC (Safety)	0
Total Career	6	4	6	16

As with the administrative and support staff above, only those personnel that are paid, either career or part-time, are analyzed. It is assumed that any POC positions will remain in their current roles and responsibilities and that their fiscal impact will remain unchanged. Based on the figure above, a total of 16 full-time career personnel are assigned to primarily operational functions.

Functional Cooperative Efforts Strategies

While the next section of this report will evaluate and present the potential for combining the study departments into one or more new and larger agencies, ESCI understands that cooperative efforts and shared services can take on a much different look. As mentioned previously, there are various methods by which to cooperate between departments and improve the overall efficiency of the organizations within a given region. This section will present various functional shared services options that two or more departments may participate in to gain efficiencies of scale.

Enhanced Mutual and Automatic Aid Agreements		Timeline: Short term
<p>Objective: Enhance existing mutual and automatic aid agreements and formalize those agreements with city council approval.</p>		
<p>Summary Background: One of the most elemental levels of cooperative service delivery is that of the sharing of valuable resources, both equipment and people. A primary means for sharing resources is by the use of Mutual Aid and Automatic Aid. Mutual Aid involves establishing agreements under which a fire department can request and receive equipment and personnel support for an emergency incident from a neighboring fire department. Automatic Aid is the same, with the exception that it is automated based on dispatch protocols, absent the need for an incident commander to request the assistance</p>		
<p>Policy Action: Review mutual aid and automatic aid procedures that are currently in place to identify opportunities to increase effectiveness. In jurisdictions for which Automatic Aid procedures have not yet been established, complete the implementation process. Review response times, including the maps provided in this report, to identify areas in which Automatic Aid can be initiated to enhance response. Do not limit consideration to the study agencies, but include review of station locations and travel times from other neighboring fire departments.</p>		
<p>Pro</p> <ul style="list-style-type: none"> • Formalization of existing agreements • Identification of responsibilities, duties and liabilities • More efficient response • Reduced requirements on command personnel (automatic dispatch) • Increased interdepartmental cooperation 	<p>Con</p> <ul style="list-style-type: none"> • Potential of imbalance in responses • Substantial differences in current equipment load lists, compartmentation, and staffing models 	
<p>Fiscal Considerations:</p> <ul style="list-style-type: none"> • Number and frequency of response • Volume of equipment and personnel sent to incidents outside of the agency's jurisdiction • The cost of implementing these practices is generally offset by the fact that a similar level of assistance is provided by another agency in return. As a result, an organization may be able to avoid costs if Mutual or Automatic Aid resources are made available instead of adding new stations, apparatus and personnel to provide coverage in a response area. 		

Develop Uniform Pre-Incident Planning Processes		Timeline: Short term
Objective: Provide a system of shared operational plans for use during emergencies and non-emergent incidents.		
Summary Background: Pre-incident plans are an important part of the emergency response system to provide essential information on specific structures and processes. Through timely planning, strategy and tactics can be developed before an emergency occurs. Pre-incident planning involves evaluating protection systems, building construction, contents, and operating procedures that may impact emergency operations.		
Policy Action: Inventory current pre-incident planning development in each agency. Evaluate commonality between current systems of pre-incident planning. Consider the establishment of a committee to develop building criteria and data for inclusion in pre-incident plans. Develop a timeline for the implementation, completion, and review of pre-incident plans.		
Pro		Con
<ul style="list-style-type: none"> • Increased safety for all regional responders • More accuracy in planning of critical properties and high risk occupancies 		<ul style="list-style-type: none"> • None
Fiscal Considerations:		
<ul style="list-style-type: none"> • Current hardware and software assets and cost to upgrade or purchase hardware and software, if desired • Number of facilities/buildings with existing pre-incident plans versus those yet to be developed • Pace of new construction requiring pre-incident plans • Personnel costs to gather and assemble plans • Unquantifiable potential for prevention of injury or death to emergency responders and the public 		

Implement Regional Incident Command and Operational Supervision		Timeline: Short term
Objective: Provide for IC (Incident Command) supervision of emergency operations. Provide for supervision of Paid per Call personnel during routine operations.		
Summary Background: The fire chiefs in the study departments have authority and responsibility for all aspects of day-to-day operations and personnel management. The chief will also assume command of emergency incidents or the role may be assumed by other trained command level officers in the department.		
Policy Action: Use standards of coverage and deployment planning to determine an appropriate level and number of incident commanders that may be needed at an incident. Compare current incident command practices and training activities to determine what is needed to combine them. Conduct joint incident command training exercises.		
Pro <ul style="list-style-type: none"> • Improved communications for scene command and control • Increased efficiency in scene size-up and request for additional resources • Improved interdepartmental cooperation 	Con <ul style="list-style-type: none"> • None 	
Fiscal Considerations:		
<ul style="list-style-type: none"> • No significant financial considerations. 		

Combine Administrative and Support Services		Timeline: Short term
Objective: Combine the administrative elements of all agencies to promote improved efficiencies by eliminating duplication across the study region.		
Summary Background: An administrative consolidation occurs when two or more agencies maintain their separate legal status and separate operational elements but combine some or all of their administrative functions.		
Policy Action: Evaluate current administrative and support duties and responsibilities. Identify redundancies and potential reductions. Determine appropriate levels of staff.		
<p>Pro</p> <ul style="list-style-type: none"> • Improved interdepartmental consistency in human resources, hiring, payroll and other administrative functions • Reduction in redundancy resulting in better efficiency • Potential for moving redundant positions to operational roles 	<p>Con</p> <ul style="list-style-type: none"> • Potential loss of individual departmental identity • Difficulty in merging payroll and other human resources systems 	
<p>Fiscal Considerations:</p> <ul style="list-style-type: none"> • Could result in lower personnel costs by removing redundant positions • May require new personnel management IT systems 		

Develop a Regional Health and Safety Program		Timeline: Short term
Objective: Provide a fire-service related health and safety program		
<p>Summary Background: A single method and source for providing occupational and health services may provide savings through economies of scale and reduced worker’s compensation costs. The Minnesota Department of Labor and Industry (DLI), provides guidance on the formation and management of health and safety program. Additionally, <i>NFPA 1500, Standard on Fire Department Occupational Safety and Health Programs</i>, provides the minimum requirements for a fire-service related occupational safety and health program.</p>		
<p>Policy Action: Identify applicable requirements and standards for safety committees as established by Minnesota statute. Meet with representatives of both organizations to develop a jointly administered safety program. Determine required and desired specifications for an occupational safety and health program. Create a single personnel policy for occupational safety and health. Conduct baseline testing for firefighters without previous audio and lung function baseline records.</p>		
<p>Pro</p> <ul style="list-style-type: none"> • Improves health and safety of all personnel across the region • Ensures that all personnel are receiving the same health benefits • Can potentially identify high risk personnel and allow for pre-treatment of serious conditions 	<p>Con</p> <ul style="list-style-type: none"> • Will increase costs of those departments that do not currently operate a comprehensive health and safety program. 	
<p>Fiscal Considerations:</p> <ul style="list-style-type: none"> • Occupational medicine programs are often menu driven. Items selected for inclusion in the program determine the final cost. • Additional financial factors involve whether the fire departments elect to exceed mandated requirements, perform some of the occupational medicine functions internally, or consolidate the occupational medicine program with interrelated programs. • Interrelating programs that share functions include wellness, infectious disease, FIT testing, EMS, and hazardous materials. 		

Regional Capital Replacement Planning		Timeline: Short term
<p>Objective: Adjacent agencies should work together to adopt a regional capital replacement plan that adequately funds the purchase of future apparatus. Outside regional cooperation, each city should adopt such a plan.</p>		
<p>Summary Background: Each fire department uses and maintains a variety of emergency apparatus types. Among the common types of apparatus, each department uses equipment of different makes, models, and configurations. A standard specification and procurement process for each apparatus type would result in lower cost, faster production, and training efficiencies.</p>		
<p>Policy Action: Assemble data on current department apparatus, including: age, mileage, operating hours, maintenance costs, cumulative down time, and annual test results. Use the information to create a single apparatus refurbishment/replacement plan and schedule. Determine the replacement interval and projected life expectancy of each apparatus. Examine the merits of extending the useful service life of apparatus through rehabilitation and refurbishment.</p>		
<p>Pro</p> <ul style="list-style-type: none"> • Formalizes capital replacement and identifies it as a priority • Allows for long-range planning for apparatus and equipment replacement • Reduces the need for special financing or bonding to purchase high value items 	<p>Con</p> <ul style="list-style-type: none"> • Will require a substantial investment to bring current fleet up to necessary levels for future funding • Will require additional annual funding to ensure that the plan is fully funded 	
<p>Fiscal Considerations:</p> <ul style="list-style-type: none"> • Time and effort savings by preparing fewer bid specifications. • Effort avoided by conducting fewer bid processes. • Investigate the letting of apparatus bids for periods longer than one year. • Cost savings in acquiring emergency fire apparatus. • Consider the purchase of stock versus custom apparatus. • Consider leasing versus outright purchase of emergency apparatus. 		

Regional Training Program		Timeline: Short term
<p>Objective: Consolidate training programs to provide more options for volunteer attendance and to capitalize on the instructor base of each agency.</p>		
<p>Summary Background: In regard to ongoing training, the departments currently have separate training programs, which may limit instructional opportunity, duplicate recordkeeping, and foster separation of workgroups. This is already being done to a certain degree regarding recruit training. This program should be expanded to include ongoing continuing education for all levels of personnel.</p>		
<p>Policy Action: Agencies should expand the current model of joint initial training and develop joint ongoing training program standards and objectives that comply with published standards and effectively address all mandatory training requirements.</p>		
<p>Pro</p> <ul style="list-style-type: none"> • Personnel would have more options to attend training on alternative days/nights. • Interagency training opportunities with consistent instruction should result in enhanced emergency scene cooperation, teamwork, and performance. • Reduced cost and duplication of effort in the planning and development of course materials. • Broader array of topics, apparatus, tasks, and evolutions for the volunteers to experience. • The program could easily expand to include other agencies, further enhancing the training opportunities throughout the region. 	<p>Con</p> <ul style="list-style-type: none"> • Cooperative effort may result in less agency-specific training and flexibility. 	
<p>Fiscal Considerations:</p> <ul style="list-style-type: none"> • A reduction in duplicated staff effort (reduces soft costs) and training staff to develop similar but separate programs based on the same or differing standards. • A potential for reduced specialized training costs through a larger pool of personnel. • The elimination of duplicated staff effort (reduces soft costs) in the selection, development, and updating of separate training manuals. • Instructional time is likely impacted during multi-agency training sessions by reducing or eliminating the time devoted to adaptive or remedial training. • An emergency workforce trained under a cooperative system is more efficient and effective in reducing property damage and loss during emergency incidents. • An elimination or reduction in duplicated staff effort (reduced soft costs) in the creation and updating of multiple training plans. • Instructional time is increased during multi-agency training sessions with personnel trained to selected certification levels. • A reduction in costs through coordination of shared training resources and equipment. • Economies of scale in the collective purchase, use, and maintenance of a single RMS (records management system). 		

Regional Code Enforcement and Life Safety Education Program		Timeline: Mid term
<p>Objective: Provide for a Uniform Fire Code with a single set of local amendments that apply to new construction, remodels, and tenant improvements as well as providing for cost effective, regional code enforcement activities and life safety education programs.</p>		
<p>Summary Background: The municipalities comprising the study region have adopted the state fire code and each has added local amendments to address issues considered unique to the jurisdiction. Adopting a single fire code would benefit the fire departments, developers, and the citizens of the region. One such benefit includes a decrease in the cumulative cost of individually developing local amendments to the fire code. This could take the form of a county-funded fire marshal’s office to oversee the county-wide program and provide code enforcement and inspections services throughout the unincorporated area.</p>		
<p>Policy Action:</p> <ul style="list-style-type: none"> • Formalize the creation of the coalition through a written agreement. • Involve others from outside the area and from non-traditional groups (insurance industry, educators, SC State Fire Marshal, media). • Create standardized messages that can be used across the region. • Learn from others. Model the coalition after other successful regional public fire safety education programs. • Some agreements related to current local amendments could be affected by changes or the adoption of new amendments. • Agencies must work closely with all building officials in the adoption of local amendments. • Develop a model citation program for local adoption as part of the local amendments. 		
<p>Pro</p> <ul style="list-style-type: none"> • Fire codes and enforcement of those codes would be more consistent throughout the region. • Municipalities can share resources to ensure that programs are delivered throughout the region. • Reduced cost by consolidated resources. 	<p>Con</p> <ul style="list-style-type: none"> • Loss of local control of inspection program. • Potential loss of municipality-specific education programs. 	
<p>Fiscal Considerations:</p> <ul style="list-style-type: none"> • The elimination of duplicated staff effort in the creation and distribution of public fire safety education messages reduces soft costs. • Cost savings can be achieved through group purchasing of materials and other media. • Marginal costs of creating a single fire code should compare favorably against the reduced level of effort required individually by the agencies. 		

Unified Standard Operating Guidelines/Procedures		Timeline: Short term
Objective: Provide guidelines for operation during emergencies, emergent, and non-emergent incidents.		
Summary Background: Currently each fire agency in this study is responsible for developing a unique set of standard operating guidelines for its organization.		
Policy Action: Adopt common operational guidelines that are kept in electronic format for ease of updating and distribution. Give initial and recurring education to personnel on the use of the joint guidelines. Provide for periodic review of manuals and update as necessary.		
Pro		Con
<ul style="list-style-type: none"> • Improvement in on-scene safety, efficiency and effectiveness of personnel. • Reduced confusion in the delivery of service. • Common methods of approach. 		<ul style="list-style-type: none"> • Limited individuality in specific administrative policies and procedures.
Fiscal Considerations:		
<ul style="list-style-type: none"> • The elimination of duplicated staff effort in the creation and updating of standard operating guidelines will reduce soft costs. • Instructional time optimized during multi-agency training sessions by excluding time devoted to adapting to differing procedures. 		

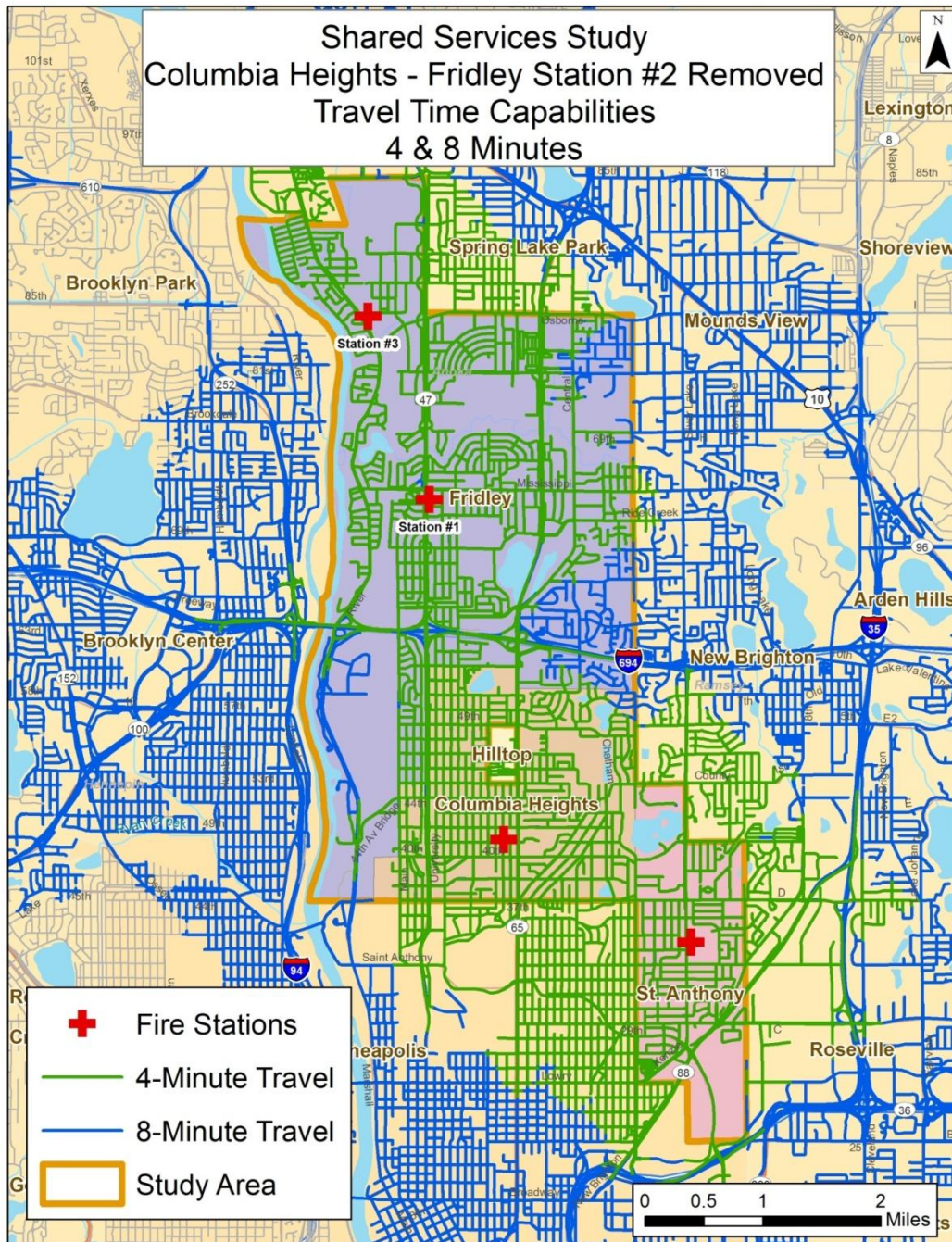
Operational Cooperative Effort Strategies

This section focuses on the operational consolidation of one or more of the study departments. Where appropriate, governance and financial implications are also discussed.

Strategy 1 – Consolidation of All Study Fire Departments

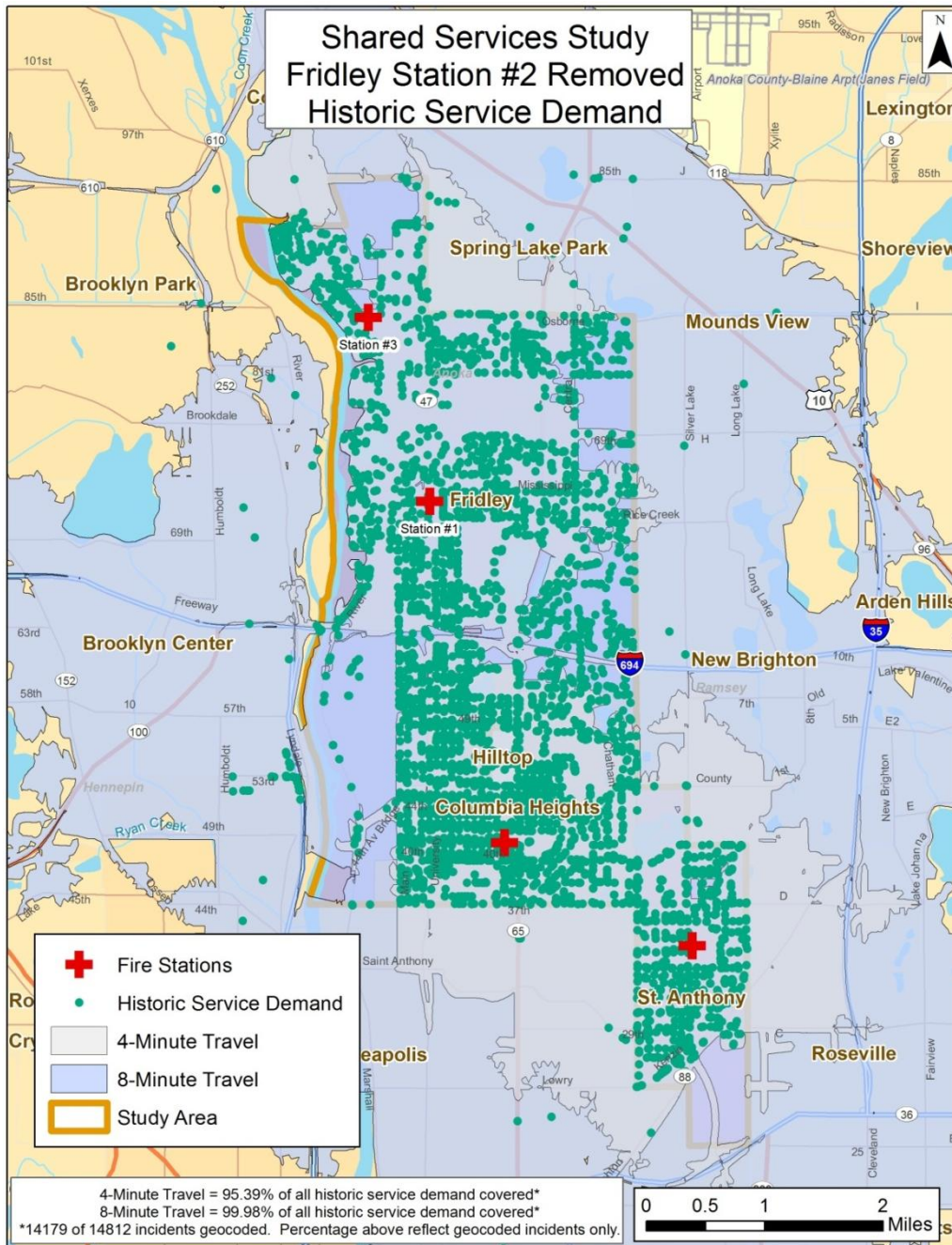
From an operational perspective, the consolidation of the three study departments could achieve certain efficiencies through the reduction in redundant administrative and support personnel as well as a potential alternative service delivery model. As can be seen in the following map, the area to the east of Fridley Station 1 is within four minutes of travel (for a majority of the area) even without Station 2.

Figure 55: Travel Time Model without Fridley Station 2



While the travel model indicates that a majority of the current Station 2 area can be reached within four minutes of travel from Fridley Station 1, the amount of service demand coverage also indicates that Station 2 could potentially be eliminated as shown in the next map.

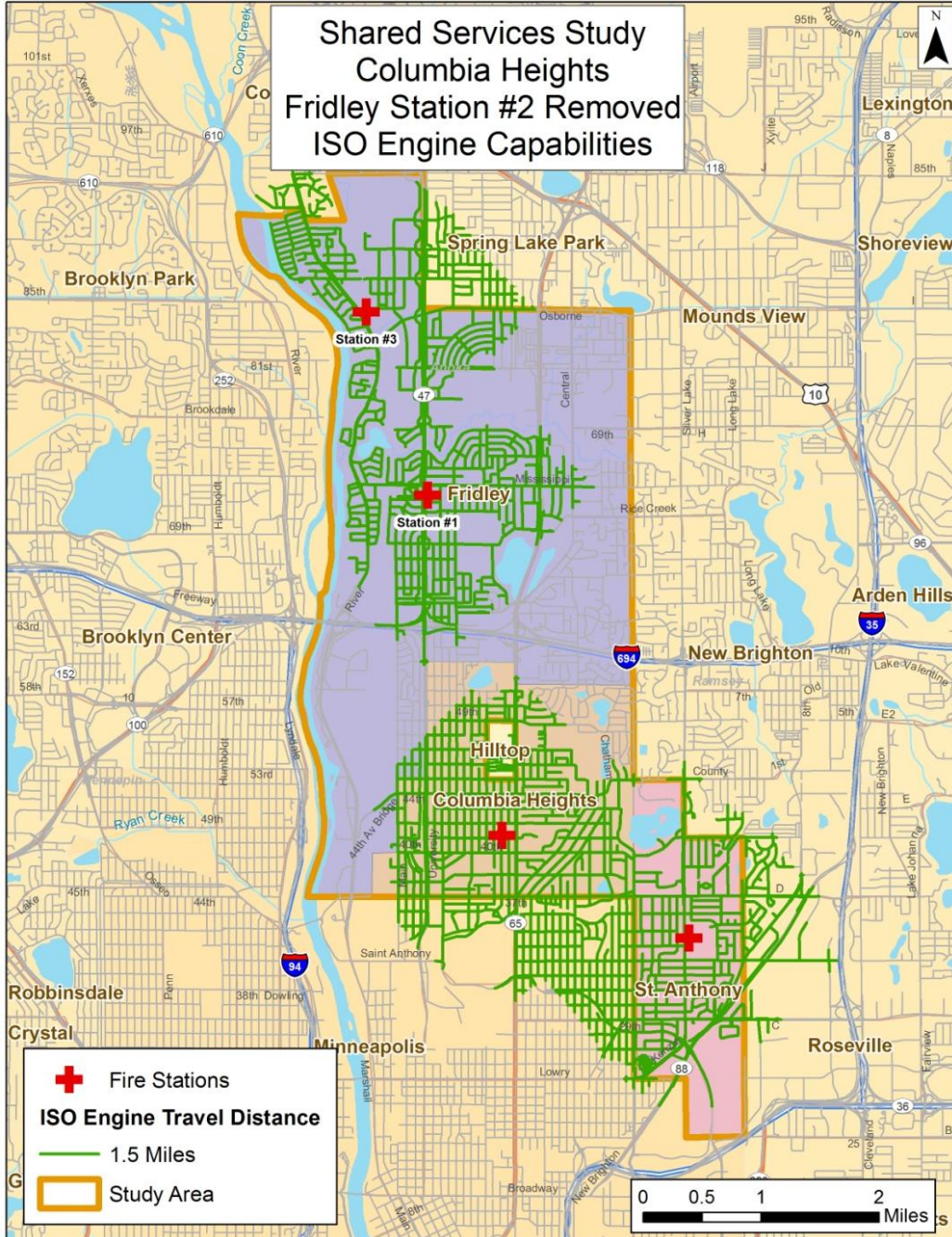
Figure 56: Coverage of Historic Service Demand without Fridley Station 2



Based on the travel model, 95.4 percent of all service demand (throughout the region) is within four minutes of travel on the existing street network while nearly 100 percent is within eight minutes of travel. This compares to 98.2 with Station 2 at four minutes of travel. Another consideration in this model is the ISO travel distance of the engine from Fridley Station 1. The following figure shows that if Station 2 is eliminated, a large portion of the area now served by Station 2 would fall outside the 1.5-

mile travel distance as recommended by ISO. This could impact the fire insurance for those properties and businesses located within this area.

Figure 57: ISO Engine Travel Model without Fridley Station 2



Elimination of Fridley Station 2 could produce savings from reduced operational costs and the potential decreased need for apparatus currently housed within this station.

In regard to personnel, this strategy is much more straightforward. A consolidation of all three study agencies would reduce the need for some existing administrative and support positions. The figure below identifies what ESCI considers to be a sufficient level of staff for a department the size of the consolidated agency.

Figure 58: Proposed Staffing Configuration and Potential Savings – Strategy 1

Position	Current	Proposed	Change	Potential Savings/Cost
Fire Chief	3	1	-2	-\$272,000.00
Assistant Chief	2	2	0	\$0.00
Fire Marshal	1	1	0	\$0.00
Fire Inspector	1	2	+1	\$44,500.00
Clerical/Support	5	2	-3	-\$44,500.00
Total Admin/Support	12	8	-4	(\$272,000.00)
Captain	8	3	-5	-\$458,000.00
Lieutenant	4	3	-1	-\$80,000.00
Firefighter	4	10	+6	\$518,000.00
Total Operations	16	16	0	(\$20,000.00)
Total	28	24	-4	(\$292,000.00)

Although the model above indicates a net negative change in personnel and a savings of approximately \$292,000, it should be understood that these savings could be re-applied to additional operational personnel or other positions to increase the overall effectiveness of the organization such as additional inspections personnel, dedicated training officer, or dedicated public education and prevention personnel.

Strategy 2 – Consolidation of Columbia Heights FD and Fridley FD

As an alternative, ESCI evaluated a ‘less-than-total’ consolidation and considered the merger of CHF D and FFD as well as CHF D and SAFD, which will be discussed next. The potential operational merger of CHF D and FFD could be possible since the two cities are contiguous and already share some operations through mutual and automatic aid.

From an operational perspective, the merger of these two agencies would not impact deployment of facilities and/or apparatus. Personnel, the potential reduction in personnel resources, however, would change from that presented previously under a full consolidation of the three study departments. The following table illustrates the proposed deployment of personnel resources based on this two-department scenario.

Figure 59: Proposed Staffing Configuration and Potential Savings - Strategy 2

Position	Current	Proposed	Change	Potential Savings/Cost
Fire Chief	2	1	-1	-\$136,000.00
Assistant Chief	2	1	-1	-\$100,000.00
Fire Marshal	1	1	0	\$0.00
Fire Inspector	1	1	0	\$0.00
Clerical/Support	5	2	-3	-\$44,500.00
Total Admin/Support	11	6	-5	(\$280,500.00)
Captain	6	3	-3	-\$275,000.00
Lieutenant	0	0	0	\$0.00
Firefighter	4	9	+5	\$431,000.00
Total Operations	10	15	+5	\$156,000.00
Total	21	21	-0	(\$124,500.00)

Based on this scenario, there is a net zero change in personnel as positions are re-allocated. Thus, little in the way of initial savings would be realized.

Strategy 3 – Consolidation of Columbia Heights FD and St. Anthony FD

As with Strategy 2, this strategy merges two contiguous departments and is similar to that described above. Aside from the potential elimination of FFD Station 2, the resource deployment would be the same as that of Strategy 2. The potential personnel deployment is illustrated in the figure below.

Figure 60: Proposed Staffing Configuration and Potential Savings - Strategy 3

Position	Current	Proposed	Change	Potential Savings/Cost
Fire Chief	2	1	-1	-\$136,000.00
Assistant Chief	1	1	0	\$0.00
Fire Marshal	0	1	+1	\$100,000.00
Fire Inspector	0	1	+1	\$44,500.00
Clerical/Support	3	2	-1	-\$44,500.00
Total Admin/Support	6	6	0	(\$36,000.00)
Captain	5	3	-2	-\$185,000.00
Lieutenant	4	3	-1	-\$85,000.00
Firefighter	3	6	+4	\$345,000.00
Total Operations	12	12	0	\$75,000.00
Total	18	18	0	\$39,000.00

Based on this scenario, there is a net zero change in personnel as positions are re-allocated. However, given the reallocation of positions to operations, a slight increase in cost could be realized based on the average firefighter salary.

Governance Options and Strategies

While the emergency operations component of a fire department is an important element of the overall emergency services system, no organization can properly function without some form of governance and authority to act. This report section provides policymakers with information regarding several potential options for governance of the fire protection system serving a combined organization, regardless of option chosen.

Status Quo

Any discussion of potential feasible governance options would be remiss without considering continuation of the current model. Although not perfect, the current model of independent municipal departments is a viable option for future governance. While the current model is a feasible option moving forward, in order for this model to be sustainable, certain cooperative efforts will be necessary.

Fire District through a Joint Powers Agreement

The term 'Fire District' in the State of Minnesota can take on more than one meaning. For the purposes of this discussion, the term Joint Powers Agreement (JPA) is more appropriate in terms of governance. A Fire District *per se*, will be discussed in the next section.

JPAs are not unfamiliar to the study participants. Minnesota statutes authorize two or more municipal corporations to collaborate in exercising any power common to the municipalities and to provide a joint board representing the participating entities.

The advantage of a JPA in this instance is that each entity maintains autonomy regarding taxation and ability to withdraw from the agreement in the future. Each participating entity would levy a tax in its own way and then contribute to the operations of the JPA as outlined in the enabling documents. No legislative approval is required for this type of agreement and the intergovernmental agreements created would define how the JPA was governed as well as how each participant is represented.

A prime example of this type of collaboration is the South Metro Fire Department (SMFD). SMFD (created in 2005) serves South St. Paul and West St. Paul and is the result of a full consolidation of both cities' fire departments. Another example is the Isanti Fire District that includes the City of Isanti and the townships of Athens, Bradford, Isanti, Oxford, Spender Brook, and Standford.

In most situations where two or more municipalities or quasi-governmental organizations enter into a shared services agreement through a JPA, the governing board consists of representatives from the participating agencies. Under the assumption that a single representative from each participating jurisdiction serves on the board of a newly created JPA, the board would consist of three members, each with an equal vote. However, it should be noted that this is only one example and the governing board can be determined by any number of methods.

Many governing boards find it difficult to reach consensus on a majority of issues when the membership of the board surpasses five to seven members. This is not to say that larger boards cannot be productive but rather to urge that smaller boards are more efficient at dealing with public safety issues. In this case, ESCI would recommend a board of no more than seven individuals with representation based on a similar weighting as will be discussed in the following section of this report regarding funding.

Fire District with Taxing Authority

A fire district with taxing authority within the State of Minnesota is an uncommon entity. In fact, only one currently exists: Cloquet Area Fire District. This district was created by special law in 2009 after the Cities of Cloquet and Perch Lake petitioned the legislature. Today, the district has expanded to include the City of Scanlon as well as providing service to the Fond du Lac Band of Lake Superior Chippewa through a professional services contract.

What makes a district vastly different from a JPA is that the district is an independent quasi-governmental entity with taxing authority granted by the state. In other words, it would stand as a separate unit of local government. The primary advantage to this type of governance model is that the individual cities, would no longer be responsible for fire protection. Rather, the newly created district would have that responsibility as outlined in the enabling legislation. In addition, the covered municipalities would no longer be responsible for *funding* fire protection in their communities. This would lie with the taxing authority of the district.

Unlike the formation of a JPA, the State of Minnesota gives little guidance to how a board of an independent taxing fire district should be determined. In fact, since there is only one fire district with taxing authority in Minnesota, created by special law, *no* guidance is provided. Given the lack of guidance, local officials are left with the responsibility to determine how the board of a taxing fire district will be determined prior to requesting special legislation to create that entity.

In the case of Cloquet Area Fire District, the initial board members were selected based on representation from the participating agencies; the City of Cloquet (three) and the Perch Lake Township (two) as well as one at-large member. Since the district has expanded to include the City of Scanlon, one additional representative has been appointed to the board.

Although the Cloquet Area Fire District has chosen to maintain representation from member communities in a more controlled distribution, the creation of a taxing district allows that entity to hold elections at large as part of the general community election. The downside to this method of staffing governing positions is that some communities, particularly those with less dense populations, will not be afforded equal representation given the drastic differences in population levels among the member organizations.

Still, districts with taxing authority can blend the aforementioned methods of governance and have a constant representation from predetermined participants as well as members selected during at-large elections.

Consolidation under One City

Consolidation of existing fire resources under one of the participating cities is the final option evaluated here regarding the future delivery of emergency services throughout the region. In essence, this type of consolidation would eliminate two of the departments and fire protection would be delivered to those cities through contract. While this would reduce the layers of governance by one, a contract would be required with each participant.

This type of arrangement would effectively place all governance, control, and funding in the hands of one city. The surrounding municipalities would contract with that city. Based on interviews with some elected and appointed officials from each of the participating jurisdictions, this is not a desirable option.

Funding

Prior to discussing alternative assessments, fees, or other increases to the current revenue stream, the governing boards of the participating municipalities should clearly define the level of community emergency service in measurable terms. For example, the boards should specify the service (fire protection), the quantity (a fire pumper and four firefighters), the quality (within six minutes of dispatch), and the accuracy (80 percent of the time). Once service is defined in specific and measurable

terms, the tasks of determining cost and the consideration of funding alternatives become more focused.

Potential funding alternatives can be grouped into two general categories: untapped revenues and redirected funds. Untapped revenue is represented by existing funding alternatives that are not fully used, like a tax increase or the implementation of a new tax, and by the identification of fees that do not fully recoup service cost. Redirected funds are existing revenue identified as not contributing toward the essential goals of the organization and, therefore, may be more efficiently allocated to other programs or functions.

There are essentially three methods that can be used to redirect public funding: 1) proving that money could be spent more effectively, 2) showing that a population or area is not receiving its fair share of service, and 3) changing a policy so that a program can access a funding stream that currently exists.¹¹ In order to redirect funding, leadership researches what funding is there, who controls the funding, what the policies are, and whether or not allocation patterns can be changed.

For the study region, this would involve altering the methodology for calculating the cost of serving the region. A formula for apportioning service cost may factor in assessed valuation, population (residents and employees), service demand, level of service, and area size. One option for leveling cost fluctuations is to employ a formula using multiple factors (e.g., population and assessed valuation).

What follows is an alphabetical listing of system variables that can be used (singly or in combination) to allocate cost between allied fire departments. Each option is summarized by the concept, its advantages and disadvantages, and other factors that should be considered. Regardless of the option(s) chosen to share the cost of fire protection, the resulting intergovernmental agreement needs to address the issues of full cost versus marginal cost and should be clear about the inclusion of administrative or overhead cost. In addition, service contracts often must reconcile the exchange of in-kind services between the participating agencies.

¹¹ *Sustainable Funding for Program Strategies*, Lessons Learned from an Ambitious Community Change Effort, June 2005, Urban Health Initiative, Seattle, WA.

Area

Concept:

The cost of emergency service can be apportioned based on the geographic area served relative to the whole. Apportionment founded on service area alone may work best in areas that are geographically and developmentally similar.

Pro:

Service area is easily calculable from a variety of sources.

Con:

Service area does not necessarily equate to greater risk or to greater workload.

Consider:

Service area may be combined with other variables (assessed value and number of emergencies) to express a compound variable (such as assessed value per square mile and emergencies per square mile).

Tax Capacity

Concept:

The tax capacity of municipalities is established by the local tax assessor under laws of the state. Usually, higher-valued structures and complexes carry a greater risk to the community from loss by fire; consequently, tax capacity also tends to approximate the property at risk within a municipality. Fire departments are charged with being sufficiently prepared to prevent property loss by fire. Therefore, the cost of contracted fire protection may be apportioned relative to the assessed value of the allied jurisdictions. Typically, tax capacity is used to apportion cost of shared service by applying the percentage of each partner's tax capacity to the whole.

Pro:

Tax capacity is updated regularly helping to assure that adjustments for changes relative to new construction, annexation, and inflation are included. Because a third party (the assessor) establishes tax capacity in accordance with state law, it is generally viewed as an impartial and fair measurement for cost apportionment. Fire protection is typically considered a *property-related service* and, thus, apportionment tied directly to property value has merit.

Con:

Tax capacity may not reflect the property risk associated with certain exempt property, such as schools, hospitals, universities, government facilities, churches, and other institutions. Tax capacity may not always represent the life risk of certain properties, such as nursing homes or places of assembly, which might dictate more significant use of resources. In addition, some large facilities may seek economic development incentives through tax capacity exemptions or reductions. Adjustments may need to be made to tax capacity if such large tracts of exempt property in one jurisdiction cause an imbalance in the calculation. Last, tax capacity typically includes the value of land, which is not usually at risk of loss by fire. Depending on the local circumstance, however, this may not be a significant factor if the relative proportion of land value to structure value is reasonably uniform over the whole of the territory.

Consider:

Some states discount tax capacity depending on the class of property (commercial or residential), which may skew the overall proportion of those properties compared to risk. As an additional consideration, county assessors usually establish the tax capacity in accordance with the property tax cycle, which can lag somewhat behind the budget cycle of local agencies and the time when service contracts are reviewed or negotiated.

Deployment

Concept:

Payment for service based on the cost of meeting specific deployment goals. Deployment goals may be tied to the physical location of stations, equipment, and personnel (strategic deployment) or by stating the desired outcome of deployment (standards of cover). For example, a strategic goal could specify the location of two stations, two engines, and ten on-duty firefighters. A standard of cover might state the desired outcome of the same deployed resources as — two engine companies and ten firefighters on the scene of all structure fire emergencies within eight minutes 80 percent of the time. While both strategic and outcome goals can be used effectively to assist in allocating cost, ESCI views outcome goals to be more dynamically linked to the quality of service and therefore preferable over strategic goals. This alternative is highly variable due to the independent desires of each community in regard to outcome goals.

In order to present an example of how this type of funding alternative may be applied, ESCI developed a weighted scoring system that uses critical task analysis. This type of scoring system for each municipality allows the ranking of each area based on the assigned risk as well as the apparatus, manpower, and Needed Fire Flow.

Pro:

Deployment is intuitively linked to the level of service. The outcome of deployment based on a standard of cover can be monitored continuously to assure compliance. Such deployment can be adjusted if standards are not met. This assures the continuous quality of emergency response throughout the life of a service contract.

Con:

Strategic deployment may not equate to better service because such goals are prone to manipulation wherein resources may be sited more for political reasons and less for quality of service reasons. Outcome goals require the automatic time capture of dispatch and response activities to assure accuracy. Record keeping needs to be meticulous to assure the accurate interpretation of emergency response outcomes.

Consider:

Contracts for deployment-based fire protection should address the inclusion of administrative or overhead cost, as well as capital asset cost, depreciation, rent, and liability insurance.

Service Demand

Concept:

Service demand may be used as an expression of the workload of a fire department or geographical area. Cost allocation based on emergencies would consider the total emergency response of the service area and apportion system cost relative to the percentage of emergencies occurring in the jurisdictions.

Pro:

Easily expressed and understood. Changes in the workload over the long term tend to mirror the amount of human activity (such as commerce, transportation, and recreation) in the corresponding area.

Con:

Emergency response fluctuates from year to year depending on environmental and other factors not directly related to risk, which can cause dependent allocation to fluctuate as well. Further, the number of alarms may not be representative of actual workload; for example, one large emergency event requiring many emergency workers and lasting many hours or days versus another response lasting only minutes and resulting in no actual work. Last, emergency response is open to (intentional and/or unintentional) manipulation by selectively downgrading minor responses, by responding off the air, or by the use of mutual aid. Unintentional skewing of response is most often found in volunteer fire systems, where dispatch and radio procedures may be imprecisely followed. Further, service demand does not follow a predetermined ratio to land area. As such, the service demand per square mile ratios may produce large variations.

Consider:

Using a rolling average of alarms over several years can help to suppress the normal tendency for the year-to-year fluctuation of emergencies. Combining the number of emergencies with the number of emergency units and/or personnel required may help to align alarms with actual workload more closely; however, doing so adds to the complexity of documentation. In a similar manner (and if accurate documentation is maintained), the agencies could consider using the total time required on emergencies as an aid to establish the comparative workload represented by each jurisdictional area.

Fixed Rate

Concept:

The use of fixed fees or rates (such as a percentage) to calculate allocation of shared cost is more common between municipalities. Occasionally, fixed-rate contracts involve the exchange of in-kind services.

Pro:

The concept is simple and straightforward. A menu of service options and the fees corresponding to those alternatives can be developed by the contractor agency. The contracting agencies can tailor a desired level of service based on risk and community expectation by choosing from the various menu items.

Con:

Partnering communities may change (i.e., population, jobs, commerce, structures, and risk) at divergent rates causing disconnection between the rationale used to establish the fee and the benefit received. A fixed-rate contract may be difficult to coherently link to the services provided and/or received, which can lead to a lack of support by officials and the community.

Consider:

Partnering agencies need to assure that provision for rate adjustment is included in the agreement, including inflation. The agreement should address the issue of full cost versus marginal cost. The inclusion or non-inclusion of administrative and/or overhead cost also requires statement, as does the reconciliation of in-kind service exchange. The ownership and/or depreciation of capital assets should be addressed, as should rent, utilities, and liability insurance. In the case of a fixed fee, the agreement should establish how the participation of other public agencies in the partnership would affect cost.

Population

Concept:

Payment for service can be based on the proportion of residential population to a given service area.

Pro:

Residential population is frequently used by governmental agencies to measure and evaluate programs. The U.S. Bureau of Census maintains an easily accessible database of the population and demographics of cities, counties, and states. Estimates of population are updated regularly. Laypersons intuitively equate residential population to the workload of fire departments.

Con:

The accurate population of partially covered areas is often difficult to establish. Census tract boundaries and response area boundaries infrequently match, forcing extrapolated estimates, which can fail to take into account pockets of concentrated population inside or outside of the response areas. Residential population does not include the daily and seasonal movement of a transient population caused by commerce, industry, transport, and recreation. Depending on the local situation, the transients coming in (or going out) of an area can be very significant, which can tend to skew community risk. Residential population does not statistically link with emergency

workload; rather, human activities tend to be the linchpin that connects people to requests for emergency assistance.

For example, if residential population actually determined emergency workload, emergencies would peak when population was highest within a geographic area. However, in many communities where the residential population is highest from about midnight to about 6:00 a.m. (bedroom communities), that time is exactly when the demand for emergency response is lowest. It turns out that emergency demand is highest when people are involved in the activities of daily life — traveling, working, shopping, and recreating. Often, the persons involved in such activities do not reside in the same area.

Consider:

The residential population of partially covered areas can sometimes be estimated by using the GIS mapping capability now maintained by most counties. By counting the residential households within the area in question, then applying demographic estimates of persons per household, it may be possible to reach a relatively accurate estimate of population within the area in question. Alternately, residential population can be estimated by using information obtainable from some public utility districts by tallying residential electrical meters within a geographic area and then multiplying by the persons per household.

Some areas experience a daily or seasonal influx of people who are not counted as residential population. This transient population can be estimated by referring to traffic counts, jobs data, hotel/motel occupancy rates, and, in some cases, state or national park administrators. Residential population plus transient population is referred to as *functional population*. Where functional population is significantly different from residential population, service agreements based on population should be adjusted to account for it.

Multiple-Variable Allocation

Frequently, even though everyone may agree on the benefit of allied fire protection, officials find it difficult to reach an agreement on the cost and the allocation of those costs. The differences between community demographics and/or development, along with changes that occur within the system over the long term, can cause the perception of winners and losers. This can be especially prevalent when a single variable is used to apportion cost. A service contract based on more than one allocation determinate may help solve these problems.

By apportioning costs over multiple variables, members of an alliance have been able to reach a long-term agreement that fits the diversity of the partnering agencies. Other partnerships in other geographical areas may require a different solution involving different combinations of variables.

Allocation Summary

The information provided above serves as a detail of each funding alternative presented. Given the lengthy discussion provided with each alternative, ESCI has compiled the information into a summary table illustrating how each funding alternative would be distributed among the member municipalities. In addition to the individual funding alternatives, several multiple-variable scenarios are also provided as an example of how this type of methodology can be applied and modified.

Figure 61: Summary of Alternative Funding Models

Jurisdiction	Area	Tax Capacity	Service Demand	Population	Multiple Variable #1	Multiple Variable #2	Multiple Variable #3
City of Columbia Heights	21.3%	33.8%	37.9%	36.4%	34.0%	35.2%	35.4%
City of Fridley	64.5%	38.7%	43.8%	48.9%	44.1%	43.6%	47.6%
City of St. Anthony	14.2%	27.5%	18.3%	14.8%	21.9%	21.2%	16.9%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 62: Multiple-Variable Funding Scenarios

Multiple Variable Weights

Multiple Variable #1

Area	10%
Assessed Value	50%
Service Demand	25%
Population	15%
	100%

Multiple Variable #2

Area	5%
Assessed Value	40%
Service Demand	40%
Population	15%
	100%

Multiple Variable #3

Area	10%
Assessed Value	5%
Service Demand	45%
Population	40%
	100%

This process of cost allocation can be applied to any format for collaboration and is scalable based on the number of entities involved.

Implementation Process

This section of the report describes a recommended process for moving forward with the potential implementation of a cooperative service delivery effort. The word potential is used here because a part of this process includes the policy decisions necessary to determine, based on the results of the study, whether there is sufficient desire among the political bodies of the organization to continue with the process or not. The implementation begins with that step.

Conduct Vision Session(s) with Policymakers

The initial stage of implementation begins with the most elementary decision: “Do we want to move forward or not?” It is extremely important that, at this stage of the process, it is clearly recognized that this is a public policy decision on the part of the governing entities involved. A decision to consider altering the way in which a critical public safety service is provided, in some cases even permanently altering the governance of those services, is clearly in the purview of the elected bodies. While senior management input should be considered, the final decision should not rest at any level lower in the organization than those who are elected to represent the customers.

For this reason, it is recommended that the elected representatives meet together for the initial discussion of the feasibility study and its projected operational and fiscal outcomes. Depending on the number of elected officials, the policymakers can decide whether to include all elected officials or a representative group assigned to represent each governing entity. During this policy stage, involvement by additional staff should be kept to a minimum, perhaps at the senior management level, and then for the sole purpose of providing technical support. It is important to limit the ability for the process to be “hijacked” at this point by strenuous arguments for or against the idea from those operations level personnel whose opinions may be influenced by turf, power, or control issues. Stakeholder input is important, but plentiful opportunity can be provided for this once the policy bodies have determined what is in the best interest of their citizens as a matter of public policy.

It is equally important that the policy bodies recognize exactly what decision is being considered in the initial vision meetings. The purpose is to weigh the strategies, operational advantages, fiscal outcomes, and potential impediments of the feasibility to determine whether to commit local resources to move

the process forward. The decision is not, at this point, a final decision to “flip the switch”. The final commitment to take legal actions necessary to finalize implementation of any given strategy will come much further into the process.

This initial vision meeting can be likened to the court process known as a probable cause hearing. The purpose of such a hearing is for a judge or grand jury to determine if sufficient evidence exists to warrant an arrest and a trial. The probable cause hearing does not determine the final verdict or sentence. That occurs after the much more thorough process and deliberation of the trial. Likewise, the vision meetings are for the policymakers to judge whether sufficient evidence exists to warrant moving forward. The final verdict on whether to take legal or contractual actions to implement will come after weeks, months, or even years of additional detailed planning work involving stakeholders, operations staff, legal counsel, finance personnel, and others. As this actual implementation planning work moves forward, there may be several points at which new information or undefeatable obstacles arise that cause one or more communities to decide not to finalize and implement the plan.

The term “vision session” is used here because the policymakers will be determining their joint decision on a future vision toward which the additional work of implementation will be directed. In many cases, several legal, operational or functional strategies are presented as being feasible in the study. These may involve various options for governance, finance, and organizational structure. Which one or ones should the entities pursue, if any? This will become the joint vision of the policymakers.

One of the best methods for initiating this vision process is to begin with policymakers sharing an open discussion of critical issues. Each entity representatives can present a short description of those critical issues, service gaps, or service redundancies that might be concerning them relative to their provision of public safety services. As each entity takes their turn presenting these issues, a picture typically emerges of those shared critical issues that two or more of the entities have in common. This assists in focusing the discussion on which of the feasible options from the study best address those critical common issues and how.

As the discussion focuses on those feasible options with the greatest opportunity to positively impact shared critical issues, the discussion can expand to the strengths and weakness of the strategies relative to the conditions, financial abilities, and cultural attitudes of the communities involved. There should be a concerted effort to remain at a policy level without becoming overly embroiled in operational

discussions of implementation details. Those will be addressed once a common vision has been established for a future strategy that is in the best interest of all the communities involved.

This is also the time that communities may make the decision to opt out of further involvement. This may occur for a number of reasons. There may be legitimate concern that an individual community does not truly share an adequate number of common critical issues with the other communities. There may also be a legitimate concern that the feasible strategies do not do enough to benefit a given community and would leave it with too many remaining critical issues. And, of course, there is always the possibility that a given community will not feel that the projected financial outcome is within their ability or provides a cost-benefit that is better than their current situation. Any such decisions by one or more communities should not be considered a discouraging factor, for that is the very purpose of the vision sessions. In many cases, other remaining entities continue moving forward with a shared vision for cooperative service delivery even after one or more communities determine not to.

The goal of the vision session(s) is to come out with a decision by the policy bodies on whether to continue with the next steps and, if so, what direction those steps should take. The vision should be sufficiently decisive as to be actionable by senior appointed officials and staff. While there will be many, many details to work out in the implementation process, the vision should clearly articulate the intention of the agreeing policy bodies on the desired outcome from the specified cooperative service strategy or strategies. Once this occurs, the real work begins.

After setting the joint vision, this policymaker group should meet together at set intervals, or as needed, to hear the progress of the Implementation Committee and its Working Groups and refine direction when necessary. The appropriate interval will depend on the situation and the complexity and length of the process itself, but often a quarterly meeting is sufficient.

Establish a Joint Implementation Committee

The next step in the process is to establish a Joint Implementation Committee that will be given the overall responsibility with leadership and management of the planning and implementation process. This will be the “nuts and bolts” group that works through the details, overcomes the challenges, reacts to new information, and makes many of the actual decisions on the implementation plan. This group should have much wider representation from stakeholders both inside and outside of the individual organizations involved. Membership in the Joint Implementation Committee may include senior

management personnel and, where appropriate, labor representatives. The following is an example of a Joint Implementation Committee:

- City Manager (or equivalent) from each community
- Fire Chief
- Finance Director from each community
- Volunteer representatives from each volunteer organization involved

The Joint Implementation Committee should select a chair or co-chairs to function as organizers and facilitators for the committee meetings. In addition, their first order of business should be to determine the rules and procedures of this committee. This should include such items as:

- How often does this group meet (monthly is typical)?
- How are absences handled (assigned alternates are recommended)?
- How does communication (occasionally secure) within this committee take place?
- How will meetings be conducted? Are there “rules of conduct” for the meetings?
- Under what circumstances will the meetings be opened to attendance by non-members?
- How will the group pursue consensus? When voting is necessary, how will that occur?

Develop an Implementation Strategic Plan

Once the ground rules have been set, the Joint Implementation Committee should schedule a strategic planning process. Consideration should be given to having this strategic planning process directed by neutral outside professionals trained in strategic planning facilitation. The strategic planning process should be held in a neutral setting away from the daily activities and noise of the usual office environment. It need not be an expensive retreat, but it should be organized in a way to focus energy and attention exclusively to the planning process for its duration.

The purpose of the initial strategic planning session should be as follows:

- To further articulate and refine the joint vision set by the policy bodies.
- To identify critical issues that will be met as the implementation process unfolds
- To identify potential impediments to implementation from:
 - Organizational culture
 - Availability of data and information
 - Lack of sufficient staff to carry through implementation processes
 - Outside influences and time demands
- To set the specific goals and objectives of the implementation process and the timelines for accomplishment
- To establish the necessary Implementation Working Groups

This process should result in the preparation of an implementation planning document that can be shared with the policy body, stakeholders, and others who will be involved in or affected by the implementation process. The document should provide the joint vision, describe the cooperative service strategy or strategies being pursued, the desired outcome, the goals that must be met in order for implementation to be achieved and the individual objectives, tasks and timelines for accomplishment. When fully and adequately prepared, this document will serve as the master “road map” for the process and will help guide the next steps of developing working groups and assigning responsibilities.

Establish Implementation Working Groups

As part of the implementation strategic planning process, various Implementation Working Groups should be established that will be charged with responsibility for performing the necessary detailed work involved in analyzing, weighing and deciding on specific processes. Membership for these Implementation Working Groups should be roughly identified as part of that process as well.

The number and titles of the working groups will vary, depending on the type and complexity of the strategies begin pursued. However, the following list provides some typical working groups used in most consolidation processes and a description of some of their primary assigned functions and responsibilities.

Governance Working Group

This group will be assigned to examine and evaluate various governance options for the cooperative service effort. A recommendation and process steps will be provided back to the Joint Implementation Committee and the Policymaker Group. Once approved, this working group is typically assigned the task of shepherding the governance establishment through to completion. The membership of this group typically involves one or more elected officials and senior city/district and agency management.

Finance Working Group

This group will be assigned to review the financial projections contained in the feasibility study and complete any refinements or updating necessary. The group will look at all possible funding mechanisms and will work in partnership with the Governance Working Group to determine impact on local revenue sources and options. Where revenue is to be determined by formula rather than a property tax rate, such as in a contractual cooperative venture, this group will evaluate various formula components and model the outcomes, resulting in recommendations for a final funding methodology and cost

distribution formula. The membership of this group typically involves senior financial managers and staff analysts, and may also include representatives from the agencies' administrative staffs.

Legal Working Group

Working in partnership with the Governance Working Group, this group will identify study all of the legal aspects of the selected strategy and will identify steps to ensure the process meets all legal obligations of process and law. Where necessary, this group will oversee the preparation and presentation of policy actions such as ordinances, joint resolutions, dissolutions, and enabling legislation. The group will also be responsible for working with other elected bodies, such as State Legislatures, when necessary to accomplish establishment of local selected governance. The membership of this group typically involves legal counsel from the various entities involved and may also include senior city/district management staff.

Operations Working Group

This group will be responsible for an extensive amount work and may need to establish multiple sub-groups to accommodate its workload. The group will work out all of the details of necessary operational changes required by the strategy. This involves detailed analysis of assets, processes, procedures, service delivery methods, deployment, and operational staffing. Detailed integration plans, steps and timelines will be developed. The group will coordinate closely with the Support Services and Logistics Working Group, if established. The membership of this group typically involves senior agency management, mid-level officers, training staff, and volunteer representatives. This list often expands with the complexity of the services being provided by the agencies.

Support Services and Logistics Working Group (Optional)

This group will be responsible for any required blending of capital assets, disposition of surplus, upgrades necessary to accommodate operational changes, and the preparation for ongoing administration and logistics of the cooperative effort. The membership of this group typically involves mid-level agency management, administrative and support staffs. Where involved, support divisions such as Maintenance, Fire Prevention, etc., will also be represented.

Communications Working Group

Perhaps one of the most important, this group will be charged with developing an internal and external communication policy and procedure to ensure consistent, reliable and timely distribution of information related to the cooperative effort. The group will develop public information releases to the

media and will select one or more spokespersons to represent the communities in their communication with the public on this particular process. The important of speaking with a common voice and theme, both internally and externally, cannot be overemphasized. Fear of change can be a strong force in motivating a group of people to oppose that which they do not clearly understand. A well informed workforce and public will reduce conflict. The membership of the group typically involves public information officers and senior city or agency management.

Meet, Identify, Challenge, Refine and Overcome

Once the working groups are established, meeting, and completing their various responsibilities and assignments, it will be important to maintain organized communication up and down the chain. The working group chairs should report regularly to the Joint Implementation Committee. When new challenges, issues, impediments, or opportunities are identified by the working groups, this needs to be communicated to the Joint Implementation Committee so that the information can be coordinate with findings and processes of the other working groups. Where necessary, the Joint Implementation Committee and a working group chairperson can meet with the Policymakers to discuss significant issues that may precipitate a refinement of the original joint vision.

The process is continual as the objectives of the strategic plan are accomplished one by one. When sufficient objectives have been met, the Joint Implementation Committee can declare various goals as having been fully met until the point comes when the actual implementation approval needs to be sought from the policy bodies. This formal “flipping of the switch” will mark the point at which implementation ends and integration of the agencies begins.

Conclusion

A tremendous amount of data and information is contained within this document, much of which was supplied by the agencies involved and then analyzed and evaluated by the ESCI project team. In the end, the study departments, like many other paid-on-call fire departments across North America, are operating at a level that is currently meeting the expectations of the communities served but realize that there is always room for improvement. Regardless of the path that policymakers chose moving forward, the information contained with this report is intended to be used by the fire departments to follow a process of continuous quality improvement in a non-ending cycle of self-evaluation.

ESCI began collecting data and working with community stakeholders for this project in February 2013. Analysis of data and collection of stakeholder input has taken over three months to compile to develop options for future service delivery within the study area. It is ESCI's sincere hope that the information contained within this document is seen as useful in enhancing the way in which fire and emergency services are delivered throughout the area.



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