Kandiyohi County

Minnesota

Shared Services Feasibility Study

Emergency Services
Consulting International

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Executive Summary

To be completed upon client review of draft report.

Section I – Evaluation of Current Conditions

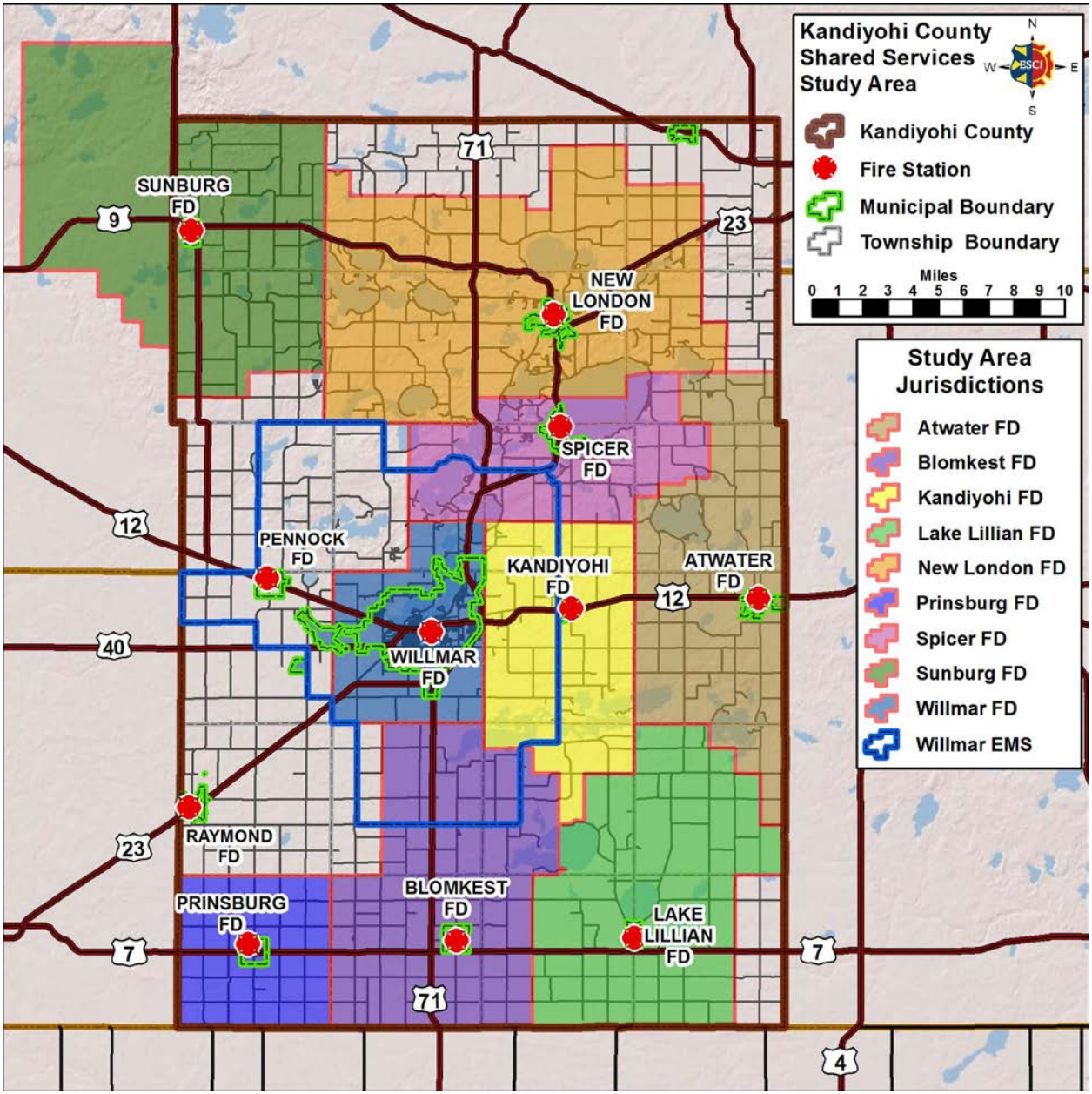
Emergency Services Consulting International (ESCI) was engaged by multiple fire agencies in Kandiyohi County, Minnesota to conduct a Shared Services Feasibility Study involving nine fire departments and Willmar Ambulance. This report is the culmination of that project and begins with a general overview of each organization, highlighting individual recommendations for improved efficiency and/or effectiveness where appropriate.

In order to fully appreciate the intricacies of how the participating agencies currently provide emergency services to their communities, ESCI initiated the project with an analysis of the current conditions existing in each agency. A review of all of the organizational elements is conducted for two reasons: first, to verify that ESCI's information collection is complete and accurate; secondly, to provide the reader that is not directly involved in fire and EMS service delivery with an understanding of how the agencies operate.

ORGANIZATION OVERVIEW

Fire departments and other emergency services providers are actively involved in a number of varying activities primarily dependent on the needs within their respective communities. The study area for this project is no different. This section provides a general description of each study agency's history, area served, population, infrastructure, and financial elements. The following figure illustrates the extent of the study area.

Figure 1: Study Area Map



Atwater Fire Department (AFD)

AFD, founded in 1890, is a municipal fire department serving the City of Atwater as well as Gennessee, Harrison, Irving, and Lake Elizabeth Townships. The total area served is approximately 78.5 square miles and contains a resident population of 2,140. A majority of the service area consists of light commercial, and rural residential properties as well as a significant amount of agricultural property.

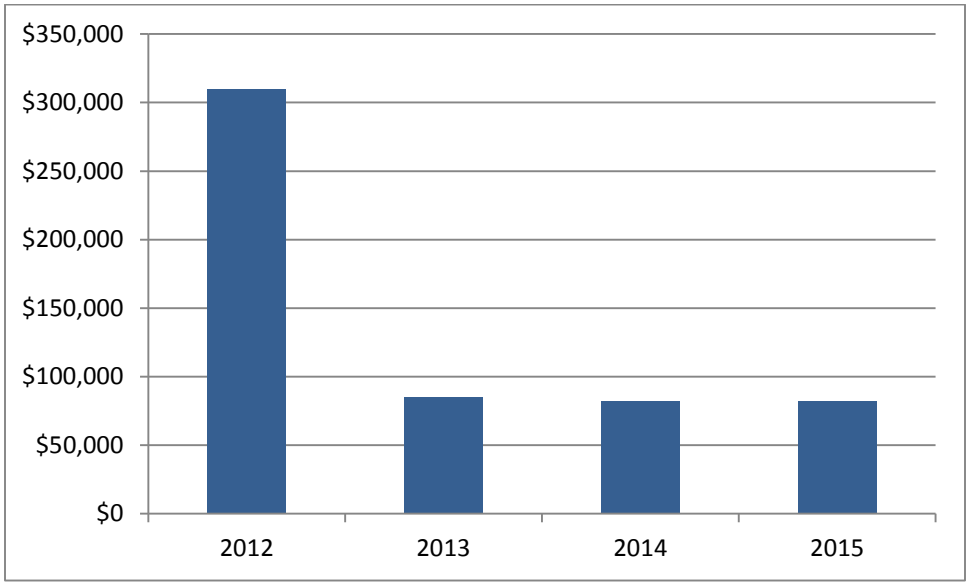
The department provides fire suppression, basic life support (BLS) ambulance transport, and vehicle extrication from a single facility with a fleet of two engines, two tankers/tenders, two brush vehicles, an

ambulance, and one rescue apparatus. AFD is a completely volunteer/paid-on-call organization with a total of 26 members.

Since AFD is a municipal department within the organizational structure of the City of Atwater, city personnel policies govern employee/member actions. In addition, the department maintains independent by-laws and a limited set of standard operating guidelines (SOGs).

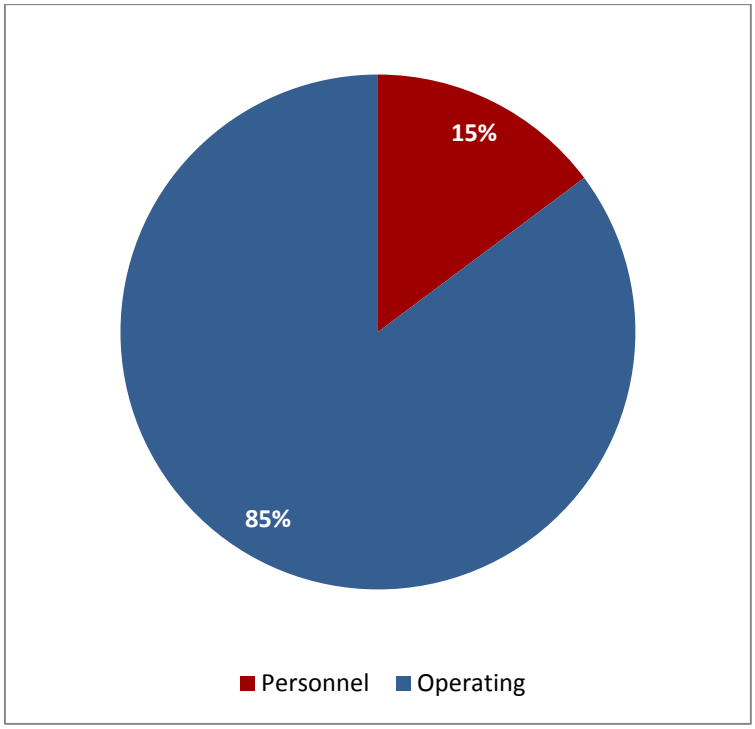
Other than a major capital expenditure in FY2012, AFD has seen a relatively stable budget over the past four years as illustrated in the following figure.

Figure 2: Historical Budget - AFD



During FY2015, the department's budget distribution did not contain any capital expenditures and a majority of the funds were expended on operational costs. A small portion of the overall budget was provided for paid-on-call personnel as illustrated in the following figure.

Figure 3: FY 2015 Budget Distribution - AFD



Blomkest Fire Department (BFD)

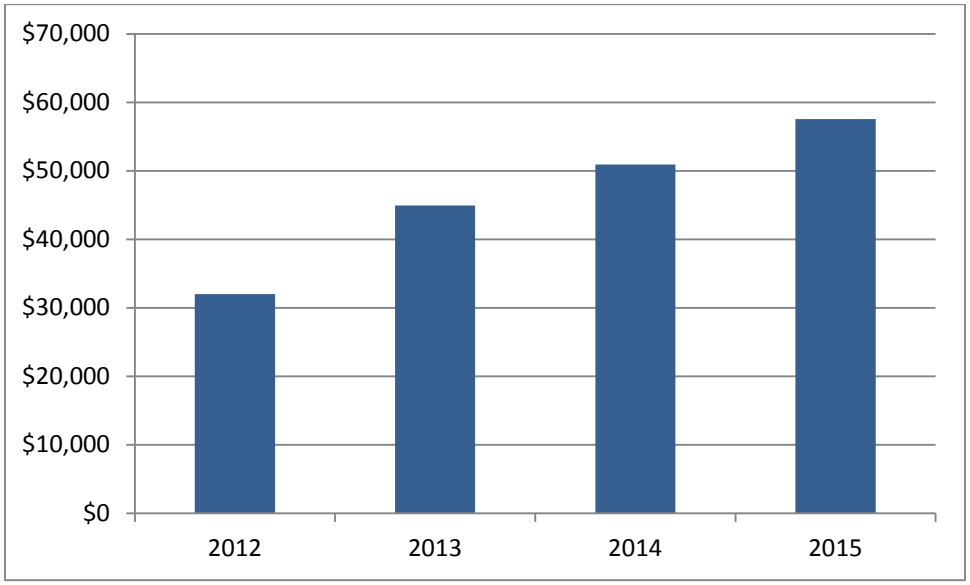
BFD, founded in 1952, is a municipal fire department serving the City of Blomkest as well as Whitefield, Roseland, Fauhlun, Lake Lillian Townships, and the Cities of Sevea and Roseland. The total service area is approximately 86.6 square miles and contains a resident population of 1,152. The communities protected are comprised of mostly light commercial and rural residential occupancies as well as limited heavy industrial properties and a significant amount of agricultural property.

The department provides fire suppression, medical first response, and cold water surface rescue services from a single facility and a fleet of two engines, two tankers/tenders, one brush vehicle, and one rescue apparatus. The department is completely volunteer/paid-on-call and has a total of 16 members.

Although BFD is a municipal fire department, it does not routinely following city personnel policies. Rather, the department maintains individual by-laws that govern the organization. No SOGs are in place but are currently under development.

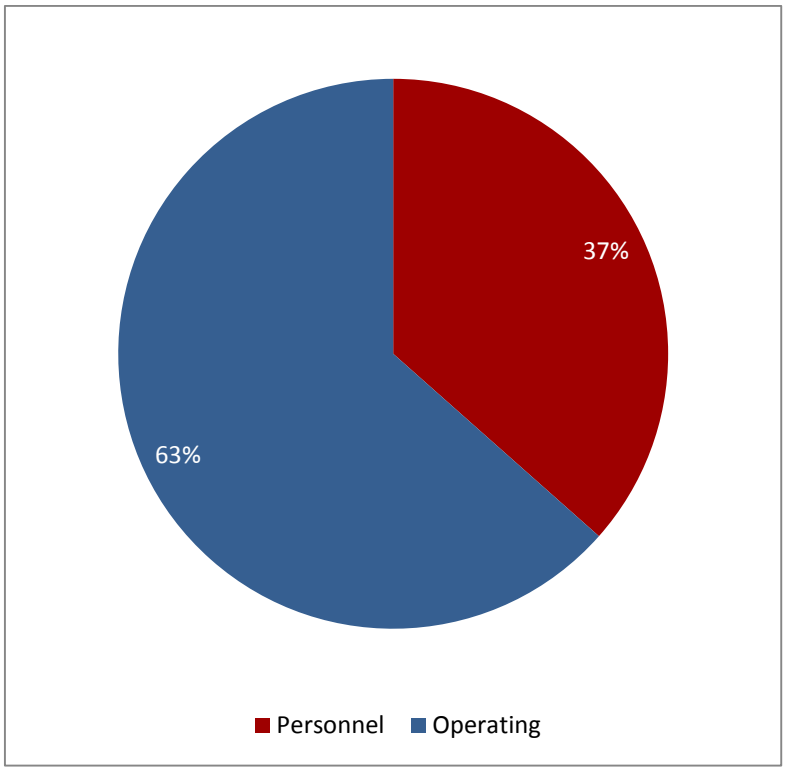
BFD has seen a steadily increasing budget over the past four years as illustrated in the following figure.

Figure 4: Historical Budget - BFD



The department did not have any capital expenditure during FY2015 and, like most volunteer/paid-on-call organizations, a majority of expenditures were allocated for operational costs with a smaller portion dedicated to paid-on-call personnel compensation as illustrated in the following figure.

Figure 5: FY 2015 Budget Distribution - BFD



Kandiyohi Fire Department (KFD)

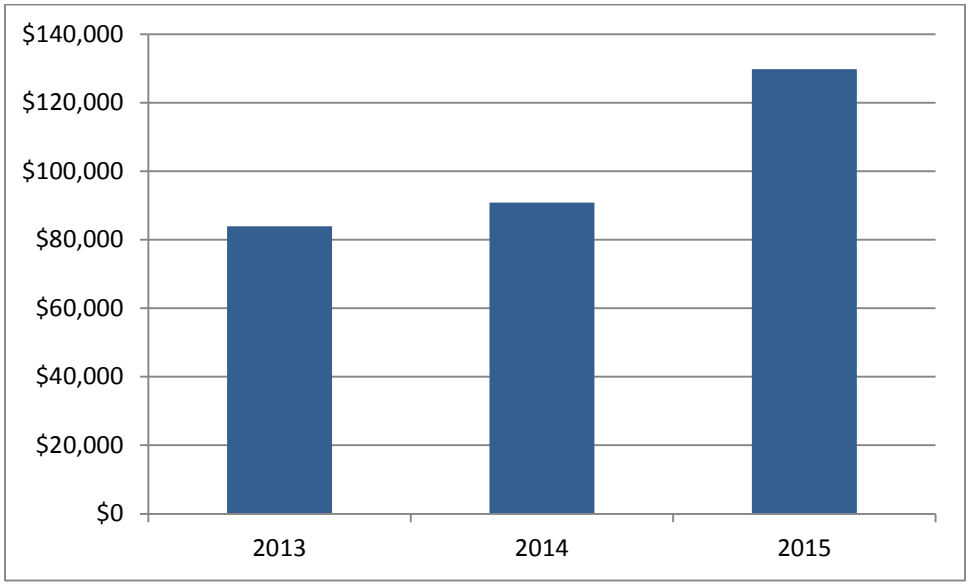
KFD, is a municipal fire department serving the City of Kandiyohi as well as Kandiyohi and Green Lake Townships. The total service area is approximately 59.7 square miles and contains a resident population of 1,143. The communities protected are comprised of mostly light commercial and rural residential properties with a significant amount of agricultural property.

The department provides fire suppression and medical first response services from a single facility with a fleet of two engines, one tanker/tender, two brush vehicles, and one ancillary vehicle. KFD is a completely volunteer/paid-on-call organization with a staff of 19.

The City of Kandiyohi has implemented a "Fire Department Ordinance," which provides the department with the authority to operate and provides some direction regarding personnel and operational practices. The department also maintains individual by-laws and a limited set of SOGs.

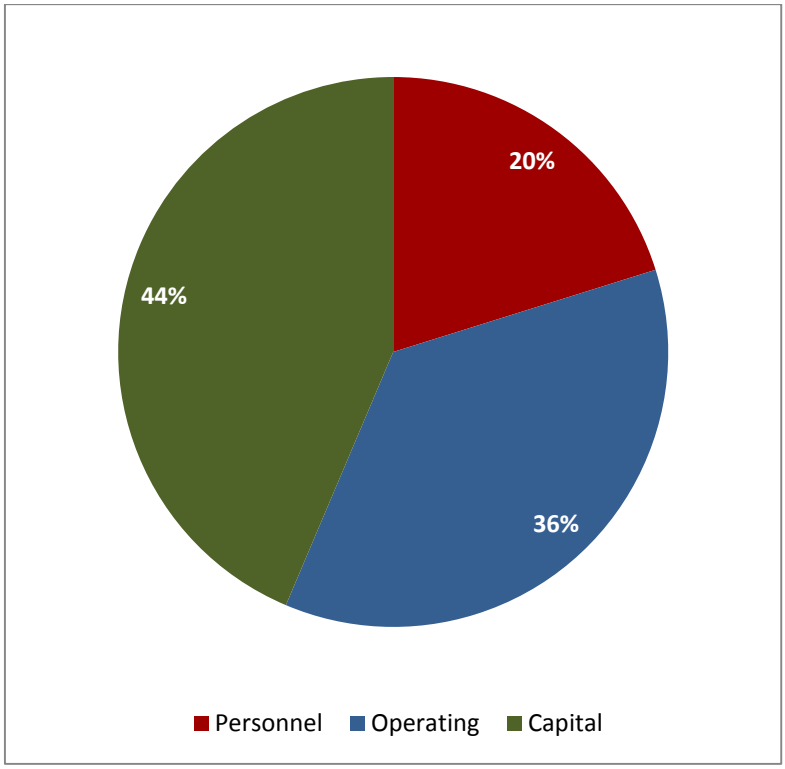
KFD has seen a steadily increasing budget over the past three years (FY2012 not reported) but capital expenditures in FY2015 can be attributed to much of the increase as indicated in the following figure.

Figure 6: Historical Budget - KFD



As mentioned previously, KFD's FY2015 budget contained capital expenditures in the amount of $56,637, which changes their budget distribution from the other departments previously reviewed. This distribution is presented in the following figure.

Figure 7: FY2015 Budget Distribution - KFD



Lake Lillian Fire Department (LLFD)

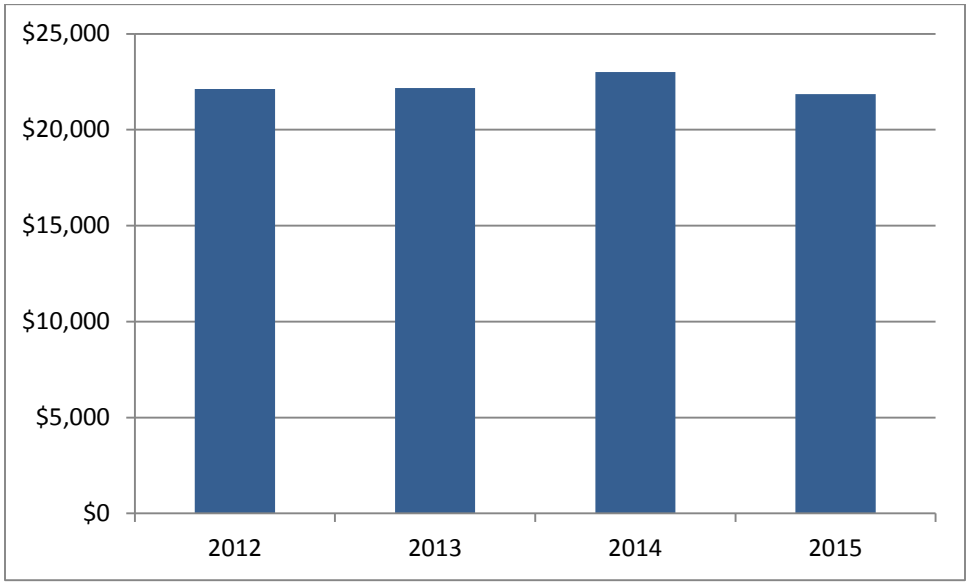
LLFD, founded in 1953, is a municipal fire department serving the City of Lake Lillian as well as Lake Lillian, East Lake Lillian, Lake Elizabeth, and Faulon Townships. The total service area is approximately 87.4 square miles with a resident population of 804. The communities protected are comprised of mostly light commercial and rural residential properties with a significant amount of agricultural property.

The department provides fire suppression and cold water surface rescue from a single facility and a fleet of one engine, three tankers/tenders, one brush vehicle, and one rescue apparatus. The department is completely volunteer/paid-on-call and has a total of 12 active members.

Being a municipal department, LLFD falls under city personnel policies for all human resources issues but also maintains a separate set of departmental personnel policies. LLFD has developed a well-organized and complete set of SOGs and govern typical departmental operations.

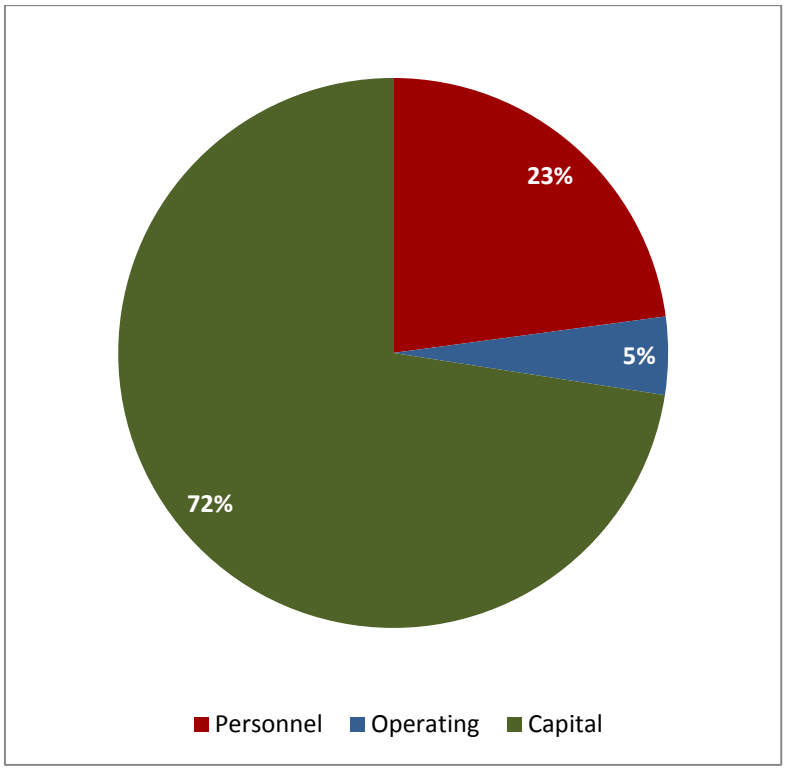
With the exception of FY2014, LLFD's operating budget has been relatively stable and saw a slight decline in FY2015 as shown in the following figure.

Figure 8: Historical Budget - LLFD



During FY2014, a small capital expenditure caused a spike in the historical budget but given the limited size of operating funds, the spike is amplified. Unlike most of the other study departments, and due to the limited size of the LLFD budget, capital expenditures in FY2015 of $15,855 consumed a majority of the organization allocation as illustrated in the following figure.

Figure 9: FY2015 Budget Distribution - LLFD



New London Fire Department (NLFD)

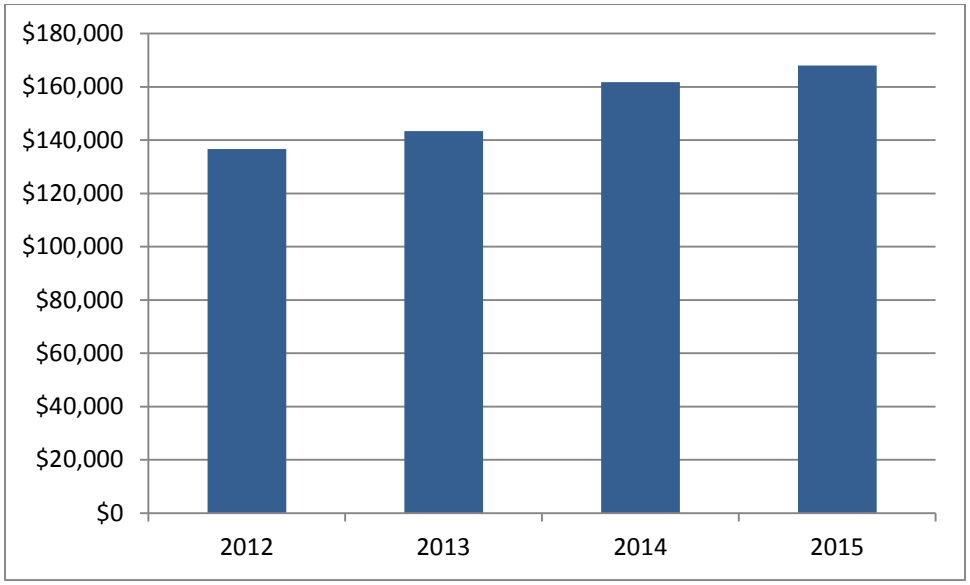
NLFD, founded in 1891, is a municipal department serving the City of New London as well as Burbank, Colfax, Irving, Lake Andrew, New London, and Roseville Townships. The total service area is approximately 132.5 square miles and contains a resident population of approximately 6,062. The risks within the community include light commercial and rural residential occupancies as well as limited manufacturing and a significant amount of agricultural property.

The department provides fire suppression, BLS ambulance transport, vehicle extrication, and cold water surface rescue from a single facility and a fleet of two engines, one aerial apparatus, one tanker/tender, three brush vehicles, and one ancillary vehicle. The department is completely volunteer/paid-on-call with a total of 25 members.

The City of New London's personnel policies govern department personnel issues but the department also maintains independent by-laws. A set of well-organized SOGs have been implemented but could use updating and expanding.

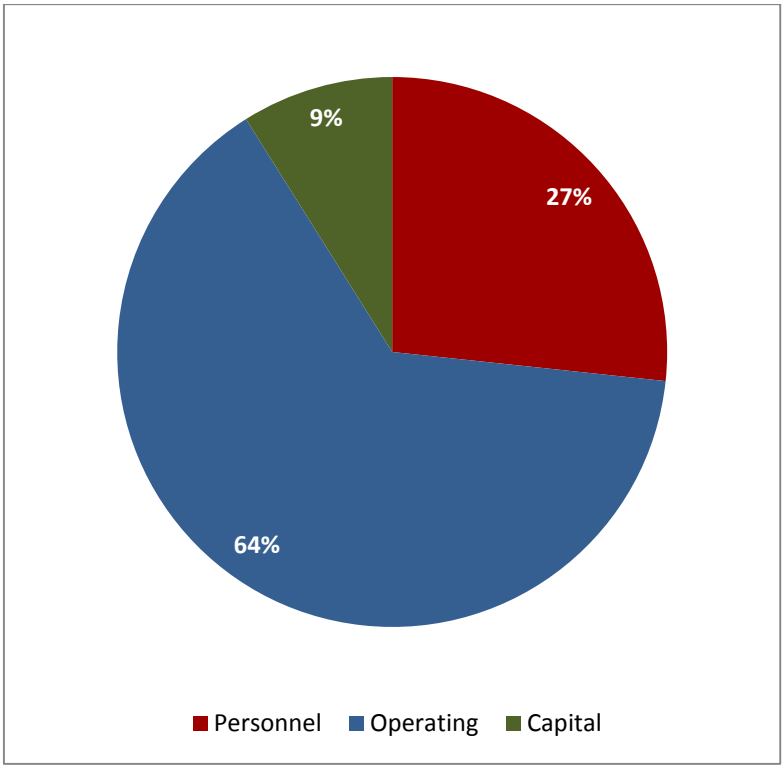
Over the past four years, NLFD has seen a steadily increasing departmental budget as illustrated in the following figure.

Figure 10: Historical Budget - NLFD



As is the case with most volunteer/paid-on-call organizations, a majority of each year's funding is dedicated to operations. For FY2015 a small amount ($15,000) was allocated to capital expenditures as illustrated in the following figure.

Figure 11: FY2015 Budget Distribution - NLFD



Prinsburg Fire Department (PFD)

PFD, founded in 1890, is a municipal fire department serving the City of Prinsburg as well as Holland Township. The total area served is approximately 36.4 with a resident population of 835. A majority of the service area is light commercial or rural residential occupancies and a significant amount of agricultural property.

The department provides, fire suppression and vehicle extrication services from a single facility and a fleet of one engine, three tankers/tenders, one brush vehicle, and one ancillary vehicle. PFD is a completely volunteer/paid-on-call department with a total of 18 members.

The department is governed by the City of Prinsburg's personnel policies but the department also maintains independent by-laws. No SOGs are in place to provide operational or administrative guidance to members.

PFD's budget has remained flat at $70,000 over the past four years and no information is available as to how those funds are distributed across the primary categories of personnel, operations, and capital.

Spicer Fire Department (SFD)

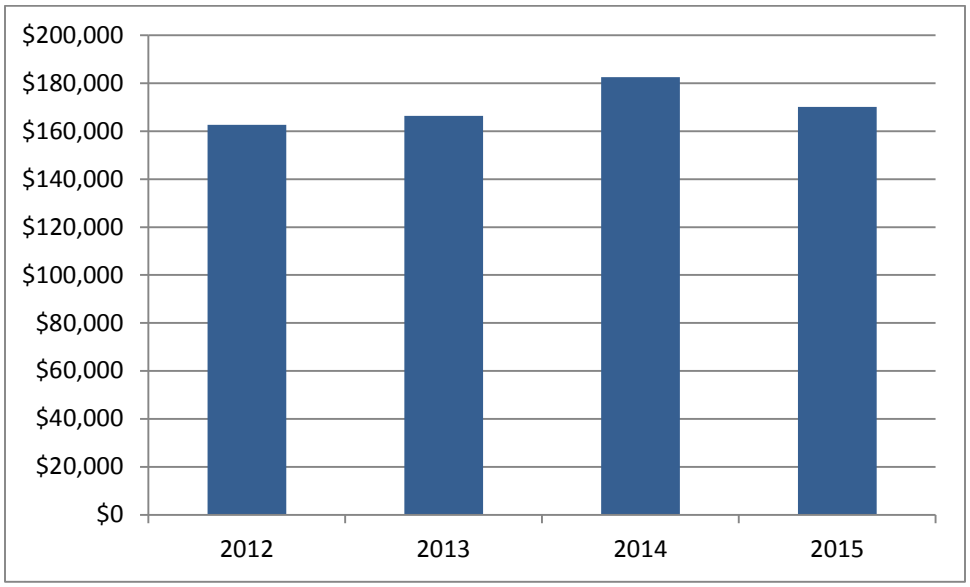
SFD, founded in 1910, is a municipal fire department serving the City of Spicer as well as New London, Dovre, Green Lake, Harrison, and Irving Townships. The total service area is approximately 52.4 square miles with a resident population of approximately 4,086. The risks within the community are primarily light commercial and rural residential occupancies with a significant amount of agricultural property.

The department provides fire suppression and medical assist services from a single facility and a fleet of three engines, one tanker/tender, and three brush vehicles. SFD is completely volunteer/paid-on-call and has a total of 24 members.

SFD falls under the City of Spicer's personnel policies for human resources issues but also has an internal set of by-laws. A well-organized set of Standard Operating Policies (SOP) has been implemented but could be expanded somewhat.

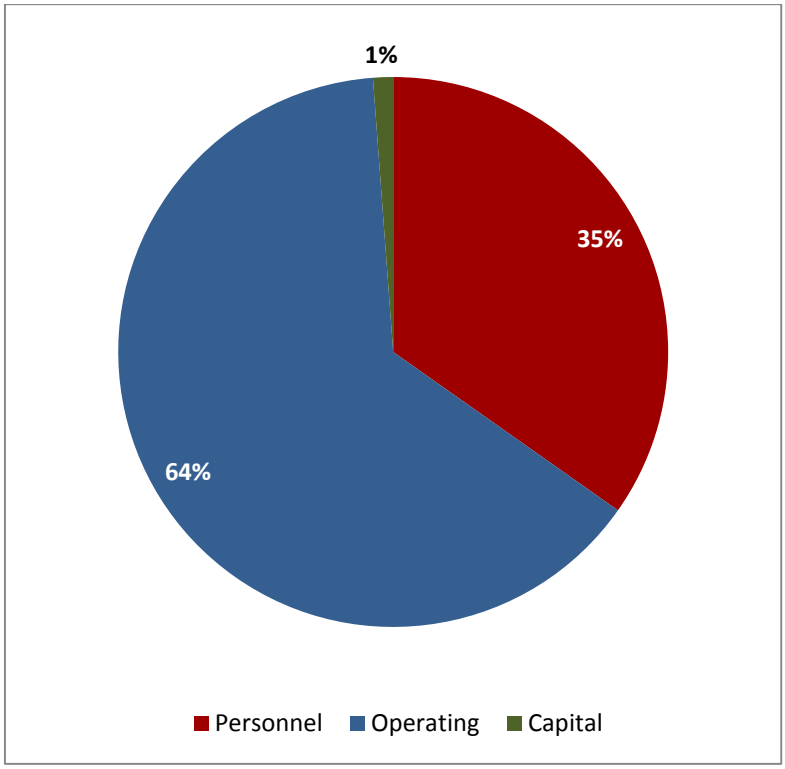
The department's budget has shown a steady increase over the past four years with a spike in FY2014 for capital expenditures as illustrated in the following figure.

Figure 12: Historical Budget - SFD



The capital expenditure realized in FY2014 was not repeated in FY2015 and a majority of the department's expenditures are attributed to operating costs as illustrated in the following figure.

Figure 13: FY2015 Budget Distribution - SFD



Sunburg Fire Department (SuFD)

SuFD, founded in 1890, is a municipal department serving the City of Sunburg as well as Hayes, Norway, Arctender, Kirkhoven, and Gilcrest Towhships. The service area consists of a total of 123.4 square miles with a resident population of 991. The communities served are primarily rural residential and agricultural regarding risk categorization.

The department provides fire suppression, medical assist, and cold water surface rescue services from a single facility and a fleet of one engine, three tankers/tenders, four brush vehicles, and one rescue apparatus. The department is completely volunteer/paid-on-call and has a total of 23 members.

SuFD falls under the City of Sunberg's personnel policies for human resources issues and operates with a very limited set of internal policies and procedures.

Information regarding budget was not available for SuFD.

Willmar Fire Department (WFD)

WFD, founded in 1879, is a municipal department serving the City of Willmar as well as Willmar and Dovry Townships. The total service area is approximately 43.1 square miles with a resident population of approximately 20,792. Since Willmar is the retail center for much of Kandiyohi County, the city sees a daytime population increase of approximately 5,876 due to commuting for work and/or shopping.[1] The

[1] http://www.city-data.com/city/Willmar-Minnesota.html. Accessed 4/9/15.

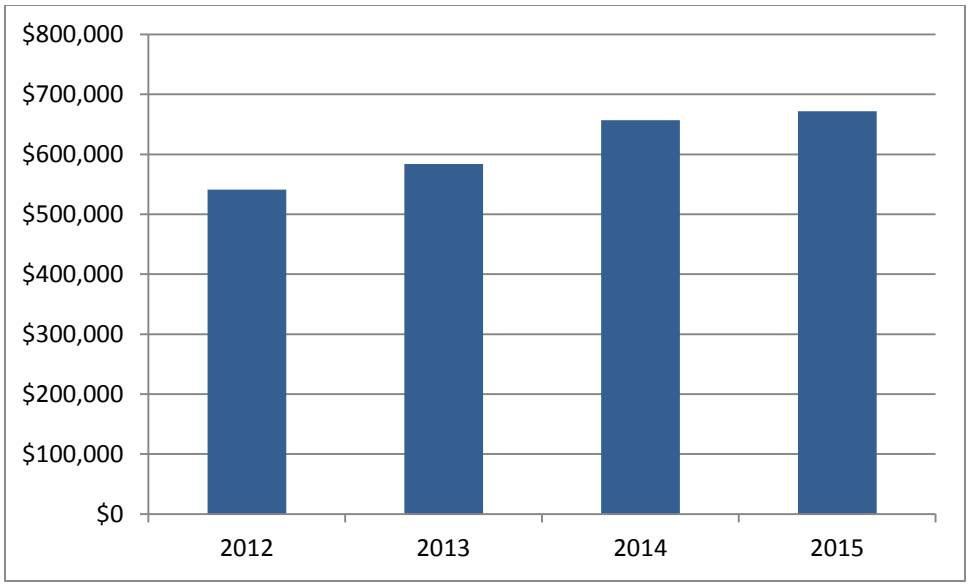
service area consists of a wide range of occupancies and risks including light commercial, heavy industrial, chemical use and processing, rural residential, suburban residential, and agricultural properties.

The department provides fire suppression and hazardous materials response at the operations level (with some technician level capabilities) from a single facility and a fleet of two engines, two aerial apparatus, one tanker/tender, and two brush vehicles. While the department maintains full-time and/or part-time administrative and support positions, all operations positions are volunteer/paid-on-call and consist of a total of 34 members, not including full/part-time personnel.

The city falls under the City of Willmar's personnel policies for all human resources issues and also maintains a complete and well-organized set of Fire Department Rules and Regulations and SOGs. Full-time staff are also covered by a Memorandum of Understanding between those individuals and the City of Willmar.

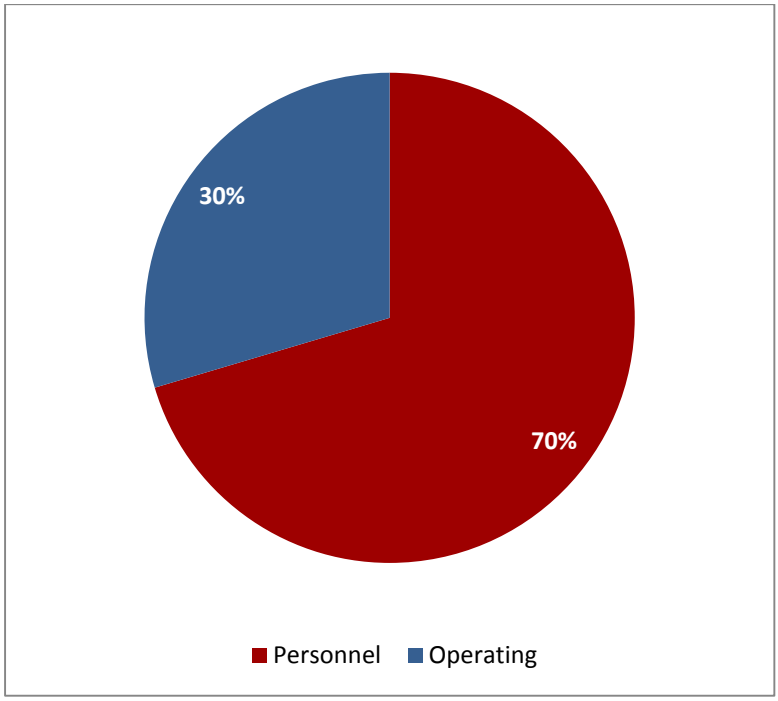
Over the past four years, the department has seen a steady increase in overall budget as identified in the following figure.

Figure 14: Historical Budget - WFD



Unlike the other departments in this study, WFD has career personnel, although limited. Therefore, personnel costs take a large percentage of the overall budget. During FY2015, no capital expenditures were noted in the department's budget as illustrated in the following figure.

Figure 15: FY2015 Budget Distribution - WFD



Willmar Ambulance (WEMS)

WEMS, founded in 1994, is a part of the emergency services department within Rice Memorial Hospital. The hospital is owned by the City of Wilmar but employees of WEMS are not considered city personnel. The total service area is approximately 136 square miles and contains a resident population of approximately 40,000.

The organization operates from a single facility (not including Rice Memorial Hospital) and maintains a minimum on-duty strength of four personnel at all times. Staffing is accomplished with full and part-time (occasional) personnel and services provided include advanced life support (ALS) transport, ALS intercepts with area BLS services, and inter-facility transports to other facilities across the region.

Rice Memorial Hospital maintains a complete set of personnel policies that apply to WEMS personnel and the organization also maintains a complete set of ALS protocols and internal SOPs. Although WEMS was included as a stakeholder for this project, their interaction with the other study participants is limited to on-scene responses with the first responder agencies.

CAPITAL ASSETS AND CAPITAL IMPROVEMENT PROGRAMS

Three basic resources are required to successfully carry out the mission of a fire department — trained personnel, firefighting equipment, and fire stations. No matter how competent or numerous the firefighters, if appropriate capital equipment is not available for use by responders, it is impossible for a fire department to deliver services effectively. The capital assets that are most essential to the provision of emergency response are facilities and apparatus (response vehicles). The following figure exhibits the number of fire stations, engines, and aerial ladder trucks operated by the agencies participating in the study.

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.

Consideration should be given to a fire station's ability to support the district's mission as it exists today and into the future. The activities that take place within the fire station should be closely examined to ensure the structure is adequate in both size and function.

Figure 16: Atwater Fire Station Observations

Atwater Fire Station occupies a portion of a much larger building which serves as a community center. The fire department is able to make use of a very large meeting area and commercial grade kitchen, which is a part of the community center. The fire station portion consist of four apparatus bays, all of which are large enough to accommodate two vehicles. This station houses two engines, two tankers/tenders, two brush vehicles, one rescue apparatus, and one ambulance.	
Structure	
A. Construction type	Masonry block
B. Date Built	1987
D. Auxiliary power	None
E. Condition	Good
F. Special considerations (American with Disabilities Act (ADA), mixed gender appropriate, storage)	Station is ADA compliant. Storage space is limited.
Facilities Available	
A. Exercise/workout	None
B. Kitchen/dormitory	Large commercial grade kitchen is in the community center, accessible to the fire department.
C. Lockers/showers	No locker rooms or showers are available
D. Training/meetings	A large community meeting room seats approximately 200
Protection Systems	
A. Sprinkler system	Building is not protected with a fire sprinkler system
B. Smoke detection	Smoke detectors are not present
C. Security	Doors are equipped with combination key pads

Figure 17: Blomkest Fire Station Observations

The Blomkest Fire Station is the fire department's only station, housing two engines, two tanker/tenders, a grass vehicle, and a first responder unit. The facility was constructed in 1992 and consists of four apparatus bays of back in configuration. Two bays are double depth.	
Structure	
A. Construction type	Masonry block construction with a steel frame roof structure
B. Date Built	1992
D. Auxiliary power	None
E. Condition	Fair
F. Special considerations (American with Disabilities Act (ADA), mixed gender appropriate, storage)	Station is ADA compliant. Storage space is limited.
Facilities Available	
A. Exercise/workout	None
B. Kitchen/dormitory	None
C. Lockers/showers	No locker rooms or showers are available
D. Training/meetings	A good sized meeting room seats approximately 25, adjacent to the apparatus bays
Protection Systems	
A. Sprinkler system	Building is not protected with a fire sprinkler system
B. Smoke detection	Smoke detectors are not present
C. Security	Doors are equipped with combination key pads
D. Apparatus exhaust system	Apparatus exhaust systems are not present

Figure 18: Kandiyohi Fire Station Observations

The Kandiyohi Fire Department's station is a larger facility including six, double-depth apparatus bays. The station is nearly new, having been constructed in 2012 and will serve the department well into the future. This station houses two engines, one tanker/tender, two brush vehicles, and one ancillary vehicle.	
Structure	
A. Construction type	Steel frame walls and roof structure
B. Date Built	2012
D. Auxiliary power	None
E. Condition	Excellent
F. Special considerations (American with Disabilities Act, mixed gender appropriate, storage)	Station is ADA compliant. Storage space is adequate for current use.
Facilities Available	
A. Exercise/workout	None
B. Kitchen/dormitory	A kitchen is located off of the meeting area. No residential facilities are present.
C. Lockers/showers	No locker rooms are available
D. Training/meetings	A large, well-appointed meeting room seats approximately 40
Protection Systems	
A. Sprinkler system	Building is not protected with a fire sprinkler system
B. Smoke detection	Smoke detectors are not present
C. Security	Doors are equipped with combination key pads
D. Apparatus exhaust system	Apparatus exhaust systems are not present

Figure 19: Lake Lillian Fire Station Observations

Lake Lillian is served by a single fire station, comprised of three, double-depth, back-in style apparatus bays. In the facility is a single fire engine, three water tankers/tenders, a grass vehicle, and a personnel and equipment vehicle. The station was constructed in 1990.	
Structure	
A. Construction type	Steel frame walls and roof structure
B. Date Built	1990
D. Auxiliary power	None
E. Condition	Good
F. Special considerations (American with Disabilities Act (ADA), mixed gender appropriate, storage)	Station is ADA compliant. Storage space is adequate for current use.
Facilities Available	
A. Exercise/workout	None
B. Kitchen/dormitory	None
C. Lockers/showers	No locker rooms or showers are available
D. Training/meetings	A meeting room seats approximately 20
Protection Systems	
A. Sprinkler system	Building is not protected with a fire sprinkler system
B. Smoke detection	Smoke detectors are not present
C. Security	Doors are equipped with combination key pads
D. Apparatus exhaust system	Apparatus exhaust systems are not present

Figure 20: New London Fire Station Observations

The New London Fire Station was constructed in 1954, and three apparatus bays were added in 1995. It is in good condition and includes six apparatus bays, all of back-in configuration. Two bays are single depth and the remainder are double in depth. This station houses two engines, one aerial apparatus, one tanker/tender, three brush vehicles, and one ancillary vehicle.	
Structure	
A. Construction type	Steel frame walls and roof structure, partial masonry
B. Date Built	1954 with addition in 1995
D. Auxiliary power	Portable generator only
E. Condition	Good
F. Special considerations (American with Disabilities Act (ADA), mixed gender appropriate, storage)	Station is not ADA compliant. Storage space is adequate for current use.
Facilities Available	
A. Exercise/workout	A small, well equipped exercise area is present
B. Kitchen/dormitory	None
C. Lockers/showers	No locker rooms or showers are available
D. Training/meetings	A well-equipped meeting room can accommodate approximately 40 students
Protection Systems	
A. Sprinkler system	Building is not protected with a fire sprinkler system
B. Smoke detection	Smoke detectors are not present
C. Security	Doors are equipped with combination key pads
D. Apparatus exhaust system	Apparatus exhaust systems are not present

Figure 21: Prinsburg Fire Station Observations

Prinsburg is served by a single fire station that has three apparatus bays, each of which is double in depth. The station houses a fire engine, three water tanker/tenders (one of which is a combination engine/tanker), a grass vehicle, and a personnel and breathing air vehicle. The station was constructed in 1999.	
Structure	
A. Construction type	Steel frame walls and roof structure
B. Date Built	1999
D. Auxiliary power	An automatically starting generator is present
E. Condition	Very Good
F. Special considerations (American with Disabilities Act (ADA), mixed gender appropriate, storage)	Station is ADA compliant. Storage space is adequate for current use.
Facilities Available	
A. Exercise/workout	None
B. Kitchen/dormitory	A kitchen is adjacent to the meeting room. No dormitory.
C. Lockers/showers	No locker rooms or showers are available
D. Training/meetings	A large meeting room is shared with the community center and can accommodate approximately 50 students
Protection Systems	
A. Sprinkler system	Building is not protected with a fire sprinkler system
B. Smoke detection	Smoke detectors are not present
C. Security	Doors are equipped with combination key pads
D. Apparatus exhaust system	Apparatus exhaust systems are not present

Figure 22: Spicer Fire Station Observations

The Spicer Fire Station is newer, built in 2002, and consists of three, double-depth apparatus bays and one, single bay for the first responder unit. The facility houses three fire engines, one water tanker/tender, and three grass vehicles. There are no residential facilities in the building.	
Structure	
A. Construction type	Steel frame walls and roof structure
B. Date Built	2002
D. Auxiliary power	Currently being installed
E. Condition	Excellent
F. Special considerations (American with Disabilities Act (ADA), mixed gender appropriate, storage)	Station is ADA compliant. Storage space is adequate for current use.
Facilities Available	
A. Exercise/workout	An exercise area is present
B. Kitchen/dormitory	Small kitchen in the meeting area. No dormitory.
C. Lockers/showers	No locker rooms or showers are available
D. Training/meetings	Seating for approximately 50 students is available in a large, well-appointed meeting room
Protection Systems	
A. Sprinkler system	Building is not protected with a fire sprinkler system
B. Smoke detection	Smoke detectors are not present
C. Security	Doors are equipped with combination key pads
D. Apparatus exhaust system	Apparatus exhaust systems are not present

Figure 23: Sunburg Fire Station Observations

Built in 1998, the Sunburg Fire Station is older, but in generally good condition. Four apparatus bay, two of which are double in depth, house a single fire engine, three water tanker/tenders, and four brush vehicles. There is some room for future expansion in this station.	
Structure	
A. Construction type	Masonry block
B. Date Built	1998
D. Auxiliary power	None
E. Condition	Good
F. Special considerations (American with Disabilities Act (ADA), mixed gender appropriate, storage)	Station is ADA compliant. Storage space is adequate for current use.
Facilities Available	
A. Exercise/workout	None
B. Kitchen/dormitory	A community kitchen is available. No dormitory.
C. Lockers/showers	No locker rooms or showers
D. Training/meetings	A meeting room seats approximately 20
Protection Systems	
A. Sprinkler system	Building is not protected with a fire sprinkler system
B. Smoke detection	Smoke detectors are not present
C. Security	Keyed locks only
D. Apparatus exhaust system	Apparatus exhaust systems are not present

Figure 24: Willmar Fire Station Observations

The Willmar Fire Station houses the fire department's equipment as well as administrative offices. The facility is modern in design, in excellent condition, and well maintained. Two fire engines, a combination engine/tanker, two aerial ladder trucks, and one wildland (brush) engine, along with support and command vehicles operate from this station, which consists of six apparatus bays.	
Structure	
A. Construction type	Masonry block construction with a steel frame roof structure
B. Date Built	1970, with additions and remodeling in 1990
D. Auxiliary power	Automatic starting diesel generator
E. Condition	Excellent
F. Special considerations (American with Disabilities Act (ADA), mixed gender appropriate, storage)	Public areas are ADA compliant. Storage space is adequate but reaching capacity.
Facilities Available	
A. Exercise/workout	Some exercise equipment is located in the day room
B. Kitchen/dormitory	A small, commercially equipped kitchen is in the day room area. There are not sleeping accommodations.
C. Lockers/showers	No locker rooms, two small showers are available
D. Training/meetings	A large training/meeting room seats approximately 60 and is well equipped with audio-visual equipment
Protection Systems	
A. Sprinkler system	Building is fully protected with a fire sprinkler system
B. Smoke detection	Smoke and heat detectors are present throughout
C. Security	Doors are equipped with combination key pads
D. Apparatus exhaust system	Apparatus exhaust systems are installed on all vehicles

Discussion

When considering fire stations in the context of potential unification of fire departments in any form, ESCI looks for significant concerns with facilities that may adversely affect cooperative efforts. Should a fire department enter into a formal unification with one or more others, they may inadvertently inherit future financial liabilities associated with facility condition issues such as deferred maintenance, abandoned fuel storage tanks, or inadequate design for current use.

The fire stations found in the study area were found to fall in a range from good to excellent condition overall. KFD's station, for example, is nearly new and presents excellent future viability. Others, such as AFD's and NLFD's facilities are older, but have been well cared for and are expected to serve in their current capacity for some time. ESCI did not find troubling facility concerns in the review.

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 compromised.

Fire apparatus are unique and specialized pieces of equipment, customized to operate efficiently for a narrowly defined mission. For this reason, they 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.

A summary of the participating agencies' emergency response vehicle fleet is provided in the following tables.

Atwater Fire Department

AFD's fleet of two engines, two tenders, two attack units, a rescue vehicle, and an ambulance are reviewed in the following table:

Figure 25: Atwater FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
4150	Engine	1984	Ford	Fair	3	750	750
4151	Engine	2006	International	Excellent	4	1,500	1,000
4170	Tender	1996	GMC	Excellent	2	250	2,000
4171	Tender	2010	International	Excellent	2	250	3,000
4180	Attack	1988	Ford	Good	2	150	150
4181	Attack	1974	Dodge	Fair	2	150	150
4190	Rescue	1998	Ford	Good	4	-	-
6150	Ambulance	2006	Ford	Good	2	-	-

Blomkest Fire Department

BFD operates a fleet of two fire engines, two water tenders and one brush engine and a first responder vehicle. Some equipment is aging and approaching or due for replacement, as listed in the following figure.

Figure 26: Blomkest FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
4251	Engine	1996	Freightliner	Marginal	4	1,250	750
4255	Engine	1991	Chevrolet	Good	2	750	2,000
4275	Tender	1992	GMC	Fair	2	500	2,000
4270	Tender	1970	Chevrolet	Fair to poor	2	500	1,200
4280	Brush	1986	Chevrolet	Poor	2	250	200
6270	First Responder	1995	Ford	Good	2	-	-

Kandiyohi Fire Department

KFD major apparatus was reviewed and is listed in the following figure.

Figure 27: Kandiyohi FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
4389	1st Responder	1994	Ford	Good	4	-	-
4357	Engine	1995	International	Good	5	750	1,500
4358	Engine	1979	Pierce	Fair - aging	2	500	1,000
4375	Tender	2001	International	Good	2	250	2,000
4384	Brush	1986	Chevrolet	Fair	2	10	200
4385	Brush	1983	Chevrolet	Fair	2	9	150

Lake Lillian Fire Department

LLFD major apparatus is listed in the following figure. The department operates one fire engine, three water tankers (tenders), a brush vehicle, and a personnel vehicle. Two vehicles are older and will be due for replacement in the near future.

Figure 28: Lake Lillian FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
4450	Engine	1992	Chevrolet	Good	2	1,000	1,000
4471	Tender	1971	Ford	Poor	2	250	1,000
4472	Tender	1987	International	Fair	2	500	1,500
4473	Tender	2005	International	Excellent	2	300	2,000
4480	Brush	2011	Ford	Excellent	2	300	250
4490	Equipment	1990	International	Fair	2	-	-

New London Fire Department

NLFD operates three engines, a tender, a ladder truck, and two brush vehicles.

Figure 29: New London FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
4551	Engine	2005	International	Good	4	1,500	1,000
4550	Engine	1990	International	Good	4	1,500	1,000
4570	Tender	2003	International	Good	3	750	2,000
4599	Ladder	1975	International	Fair – aging	4	1,250	500
4591	Hose	1984	Chevrolet	Fair	2		
4582	Brush		Jeep	Good	2	9 HP	100
4583	Brush	1999	Jeep	Good	2	5.5 HP	100

Prinsburg Fire Department

PFD maintains a compliment of apparatus ranging in age and condition, as detailed in the following table.

Figure 30: Prinsburg FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
4750	Engine	2007	Kenworth	Excellent	5	1,250	1,000
4755	Engine/ Tender	2014	Freightliner	Excellent	2	1,000	2,000
4770	Tender	1971	Chevrolet	Good	2	250	1,250
4775	Tender	1983	Mack	Good	2	250	3,700
4780	Brush	1999	Ford	Good	4	250	300
4790	Personnel/ Air	1976	Chevrolet	Poor	2	-	-

Spicer Fire Department

SFD operates a fleet of three engines, a tender, and three brush vehicles. Vehicles were found to be well maintained and in generally good condition.

Figure 31: Spicer FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
4950	Engine	2006	International	Good	4	1,500	1,000
4951	Engine	1994	International	Good	4	1,252	1,000
4952	Engine	1982	International	Fair	2	750	1,000
4970	Tender	2008	Ford	Good	2	500	2,000
4982	Brush	1984	Chevrolet	Good	2	200	250
4980	Brush	2013	Ford	Excellent	4	200	250
4981	Brush	1985	Ford	Good	2	120	250

Sunburg Fire Department

SuFD has one fire engine, three water tenders, three brush units, and a rescue van. The vehicle specifications and conditions are listed in the following figure.

Figure 32: Sunburg FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
5150	Engine	2008	Peterbilt	Excellent	2	1,250	1,000
5170	Tender	1981	International	Good	2	150	2,200
5175	Tender	1984	Ford	Fair	2	150	1,500
5176	Tender	1985	Chevrolet	Good	2	500	2,000
5180	Brush	2003	Ford	Good	2	100	500
5185	Brush	1986	Chevrolet	Good	2	150	500
5186	Brush	1985	Chevrolet	Good	2	100	150
5195	Brush	2013	Polaris	Excellent	2	100	90
5190	Rescue van	1991	GMC	Fair	2	-	-

Willmar Fire Department

WFD operates a fleet of two fire engines, two aerial ladder trucks, one engine/tender and one brush engines along with several support vehicles. All appear to be well maintained and fully serviceable, as detailed in the following figure.

Figure 33: Willmar FD Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
5299	Ladder	1999	Pierce (platform)	Good	4	2,000	0
5276	Engine/Tender	2005	Spartan	Good	4	1,500	1,800
5257	Engine	1987	Luverne	Fair	4	1,500	750
5298	Ladder	2013	Rosenbauer	Excellent	4	2,000	400
5251	Engine	2002	Spartan	Good	4	1,500	500
5285	Brush	1998	Chevrolet	Good	4	100	200

Willmar Ambulance

The Willmar Ambulance vehicles are reviewed in the following figure:

Figure 34: Willmar Ambulance Major Apparatus

Apparatus Designation	Type	Year	Make/Model	Condition	Minimum Staffing
Ambulance 7250	Type3	2010	Ford/ Road Rescue	Very Good	2
Ambulance 7251	Type3	2008	Ford/ Road Rescue	Fair	2
Ambulance 7252	Type3	2014	Ford/ Road Rescue	NEW	2
Ambulance 7253	Type3	2009	Ford/ Road Rescue	Good	2
Ambulance 7254	Type3	2013	Ford/ Road Rescue	NEW	2

Future Apparatus Serviceability

A key consideration in evaluating the feasibility of combining agencies into one or more consolidated entities is the cost 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. Looking at the combined fleet of apparatus that is in place in all of the study agencies, ESCI found that vehicles range from as new as one year, to an age of 45 years. Also calculated as the average age of all of the fire engines, grass units, and aerial ladder trucks in the combined agencies, which resulted in an average of 21 years. However, the numbers must be put in perspective, understanding that many of the vehicles are in reserve status. If only front line vehicles are considered, the average age is considerably newer.

There is no standard or requirement with regard to when fire apparatus should be replaced. Calculation of acceptable service lives for fire apparatus varies widely between fire departments due to differing uses, road conditions, maintenance practices, and other variables. In larger, busy, fire departments, a front-line service life of 10 to 15 years is commonly combined with a five year reserve status. In smaller agencies, 15 to 25 years is more commonly found, a portion of which may be in reserve.

Considering fire apparatus replacement from a regional perspective offers opportunities that warrant consideration. Typically, most agencies maintain extra fire engines, often to hold one in reserve for use when the primary engine is out of service for maintenance. Sharing of reserve apparatus can result in reduced numbers of engines overall and subsequent financial savings in replacement, maintenance, and insurance costs. Even as stand-alone fire departments, the Kandiyohi County agencies should consider inventorying and identifying opportunities to share reserve equipment where possible.

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. AFD was the only agency that reported having a formal and funded apparatus replacement schedule and plan in place. The other agencies use a variety of approaches, but primarily simply meet capital needs with available operations budget funding apparatus replacements on an as-needed basis.

Looking forward, should a change in governance of the fire departments be undertaken as a shared service delivery initiative, apparatus and facility replacement planning should be considered. All of the agencies are advised to establish a structured replacement plan with calculated future costs and identified funding strategies, viewed in light of any shared service initiatives that may be undertaken moving forward.

STAFFING

An analysis of staffing is a review of personnel levels and distribution of those levels among operational, support, and administrative functions. In larger emergency services organizations, administrative, and

support positions are regularly separate from primary operational staff. The fire chief and other command staff, as well as fire prevention, training, and clerical support are often counted as non-operational personnel; although they may, at times, be involved in operations. Smaller organizations, however, commonly combine these positions into an aggregate roster since they do not have the capacity to have dedicated administrative and support staff. This is the case in each of the Kandiyohi County fire departments. The following figure summarizes the staffing of each of the study agencies.

Figure 35: Staffing Complement Summary

	AFD	BFD	LLFD	KFD	NLFD	PFD	SPF	SuFD	WFD	Total
Fire Chief	1	1	1	1	1	1	1	1	1	**9**
Asst. Chief	2	1	1	1	1	2	1	1	1	**11**
Deputy Chief	0	0	0	0	0	0	0	0	1	**1**
Battalion Chief	0	0	0	0	0	0	0	0	2	**2**
Captain	2	1	1	2	2	0	1	4	3	**16**
Lieutenant	2	2	1	6	2	0	2	0	3	**18**
Training Officer	0	1	0	0	1	1	1	1	0	**5**
Asst. Training Officer	0	0	0	0	0	1	0	0	0	**1**
Safety Officer	0	0	0	0	0	1	0	0	0	**1**
Firefighter	13	10	7	7	17	11	16	14	14	**109**
EMT	4	0	0	0	0	0	0	0	0	4
FF/Hazmat	0	0	0	0	0	0	0	0	7	**7**
FF/Rookies	0	0	0	0	0	0	0	0	3	**3**
Maintenance	0	0	0	0	0	0	0	0	1	**1**
SCBA Officer	0	0	0	1	0	0	0	0	0	**1**
Admin. Asst.	0	0	0	0	0	0	0	0	1	**1**
Secretary	1	0	1	1	1	1	1	1	0	**7**
Treasurer	1	0	0	0	0	0	1	1	0	**3**
Emergency Management	0	0	0	0	0	0	0	0	0.25	**0.25**
Total	**26**	**16**	**12**	**19**	**25**	**18**	**24**	**23**	**37.25**	**200.25**

As illustrated in the figure above, each department has some similarities in staffing complements but there are also some differences, primarily in support roles.

One of the major issues facing the study agencies is that many of each agency's personnel work in another jurisdiction, leaving the home department largely uncovered during normal working hours. Under the current system, personnel are not allowed to respond to another agency's incident unless specifically requested through mutual aid. Implementing a program where 'system' personnel can respond and utilize 'system' resources may enhance the way that services are delivered throughout the county. For example, If an incident occurs in Kandiyohi but personnel are working in Willmar, it could be possible that KFD personnel working in Willmar could respond along with WFD personnel and resources to the incident in Kandiyohi. This type of coordinated response would reduce the overall response time to incidents within the home department's territory.

The only non-fire organization participating in the study, Willmar EMS, is a fully career advanced life support (ALS) transport ambulance provider. WEMS provides services across Kandiyohi County and is supplemented by the various first responder agencies, either as part of the fire departments or as stand-alone ambulance services.

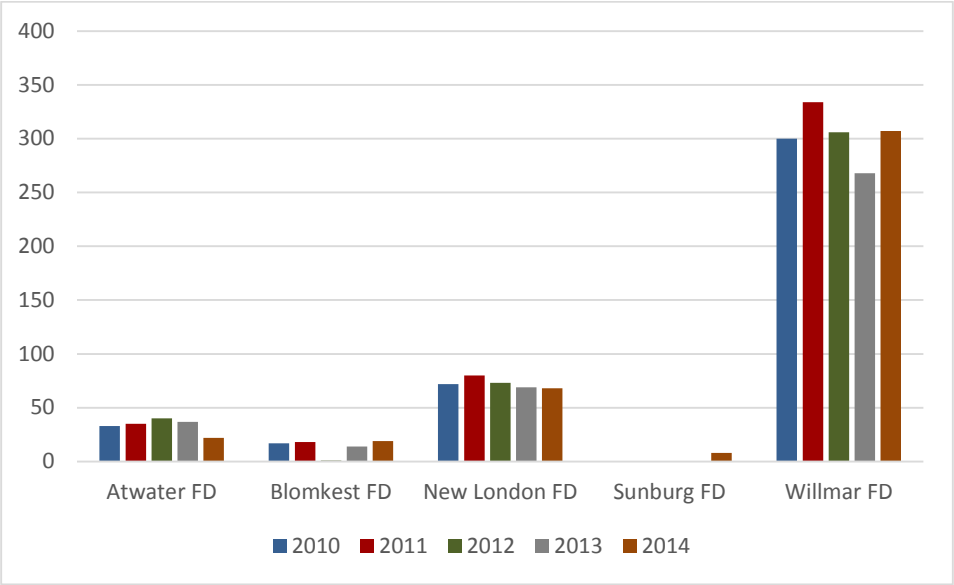
SERVICE DELIVERY AND PERFORMANCE

In this section of the feasibility study, ESCI reviews current service delivery and performance within the study area. Observations will be made concerning service delivery for the study area as a whole; and for the individual agencies where appropriate and depending on the available data.

Service Demand

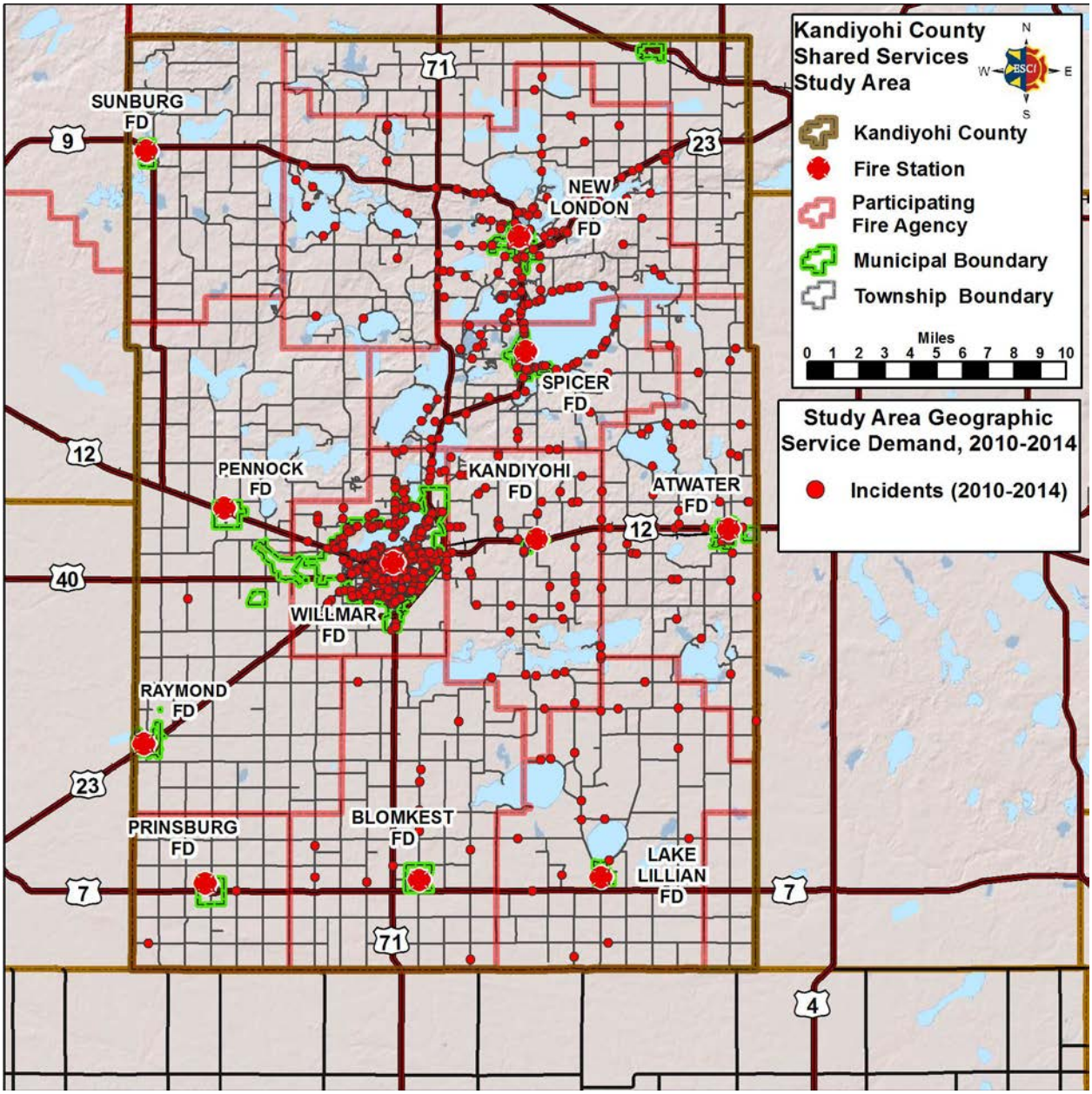
Service demand can be described in a number of ways but, for the purposes of this report, ESCI was most interested in the total amount of departmental workload experienced by each of the study agencies. ESCI requested National Fire Incident Reporting System (NFIRS) data from the Minnesota Office of the State Fire Marshal (OSFM) in order to produce workload analysis. It became evident, after review of the data received, that not all of the study departments were routinely submitting their data to the OSFM or that data submitted was not validated. Therefore, only a limited analysis of the data was possible. As seen in the following figure, data was only available for five of the study departments and only one year was provided for SuFD.

Figure 36: Overall Service Demand by Department



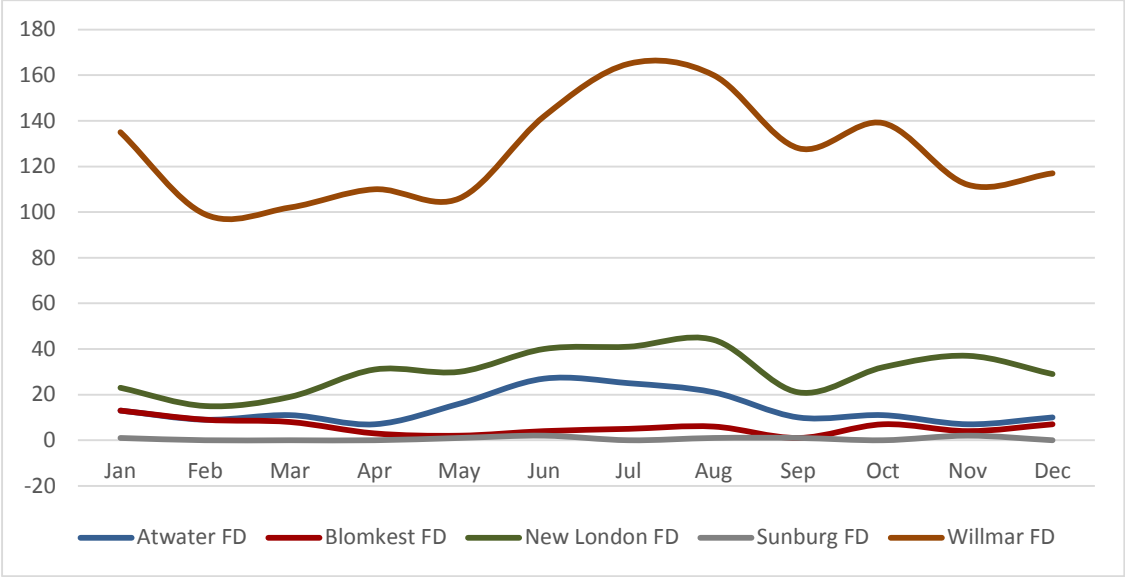
Although viewing service demand graphically has its advantages, it is also useful to view service demand geographically. The following figure illustrates how service demand over the past five years has been distributed across Kandiyohi County, as far as the data provided allows.

Figure 37: Geographic Service Demand (All Years)



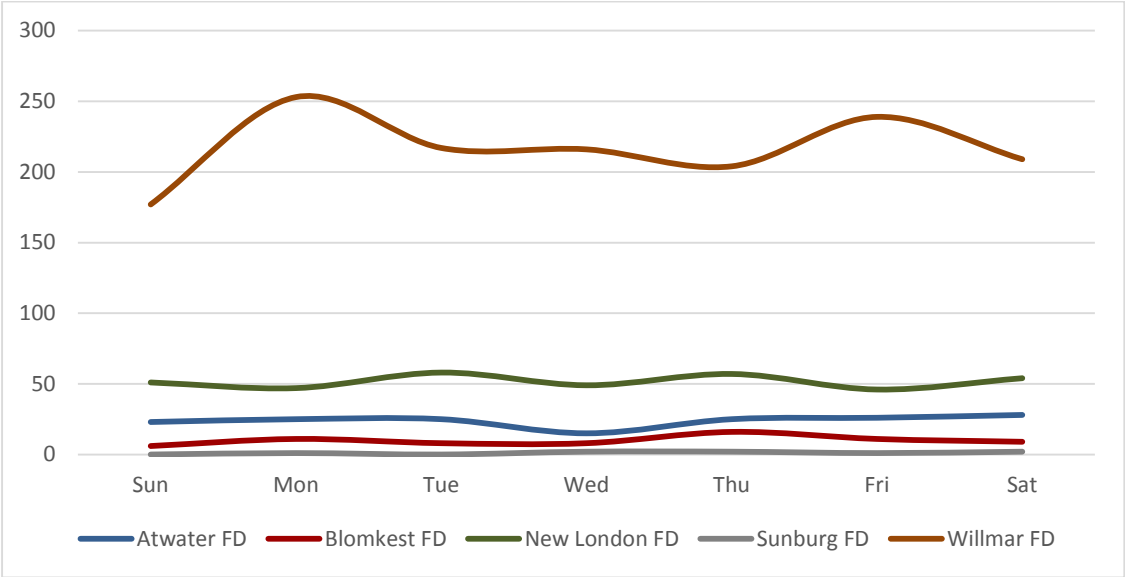
As illustrated in the figure above, service demand is generally distributed in and around the more populated areas, as would be expected. Based on this representation, current station locations are well-suited to the historic service demand. The next analysis of service demand views the workload temporally and begins with a review of service demand by month.

Figure 38: Service Demand by Month (All Years)



Based on this analysis, service demand tends to be relatively higher during the summer and early fall months, as far as the data provided allows analysis. Since this portion of Minnesota is accustomed to seeing harsh winter weather, this would be expected as the populations become more active during the warmer months and wildland fires are more prevalent. The next analysis reviews service demand by day of week.

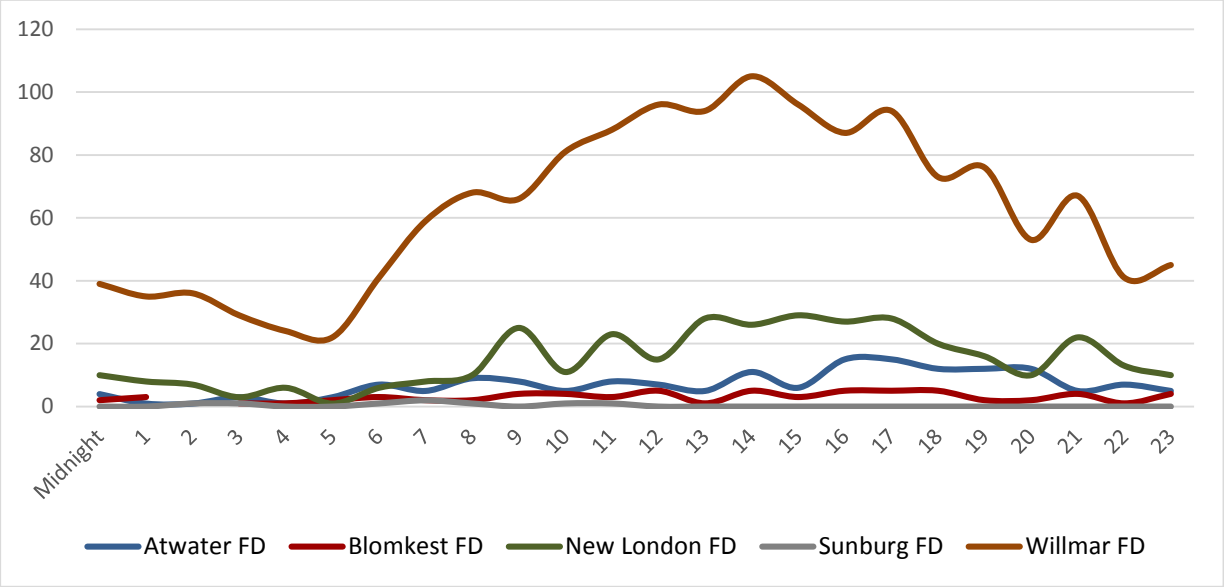
Figure 39: Service Demand by Day of Week (All Years)



This analysis indicates that, for WFD, the busiest days are Mondays and Fridays while the other departments that provided data have a more stable day of week workload history. This change in workload in Willmar is likely due to the population shifting to the city for work and shopping at the

beginning and end of the typical workweek. The final temporal analysis reviews service demand by hour of day as illustrated in the following figure.

Figure 40: Service Demand by Hour of Day (All Years)

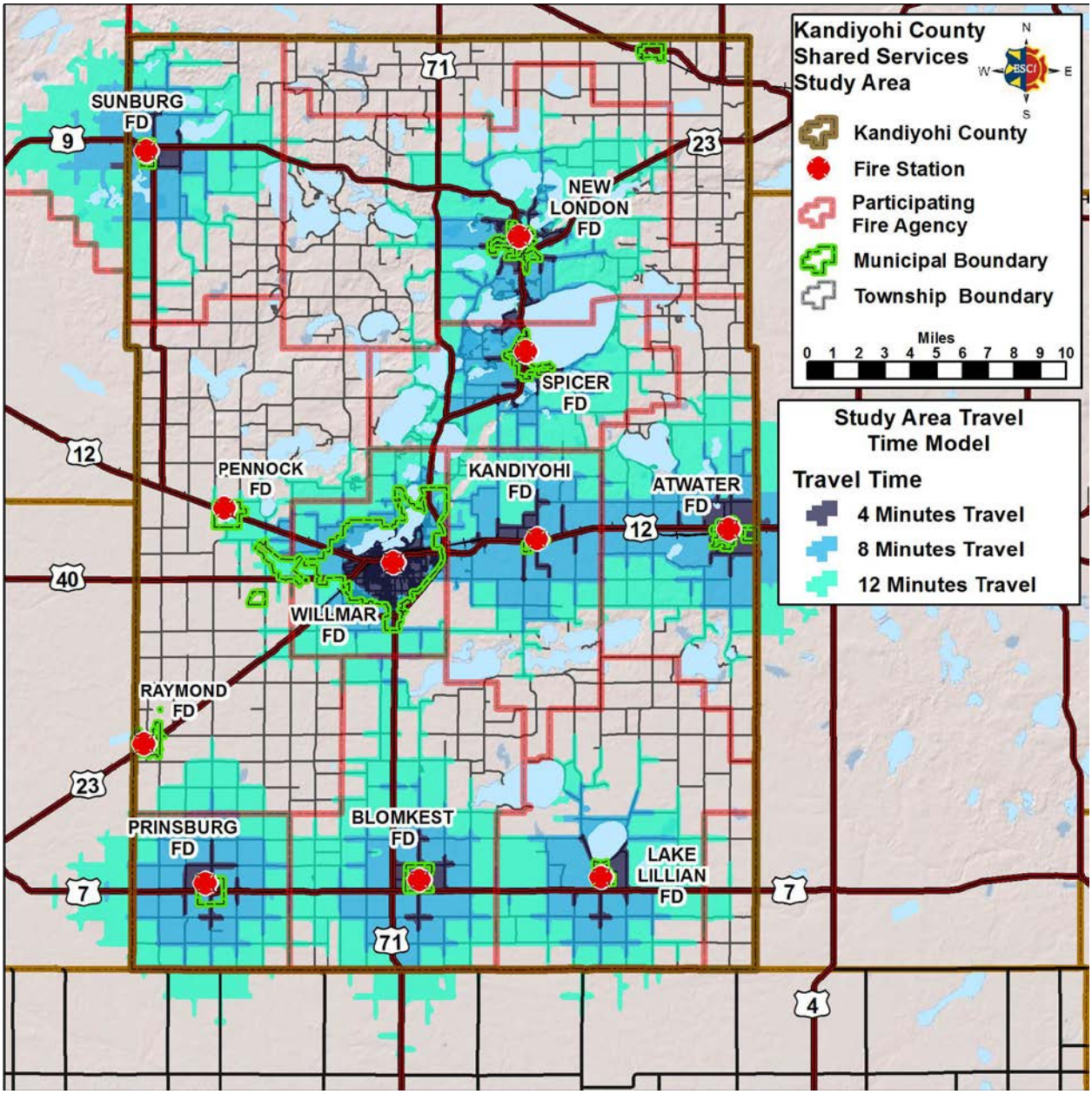


This analysis indicates that service demand generally begins to increase between the hours of 5:00 a.m. and 6:00 a.m., peaking during the mid-afternoon hours, and then declining into the evening. This is a common pattern of emergency services organizations that are involved in the delivery of emergency medical services; either first response or transport. This pattern closely follows the normal routine of the population as they wake up, are out-and-about during the day, and then return home in the evenings and is expected in this type of emergency services system.

Resource Distribution

In order for an emergency services agency to effectively respond to the greatest number of incidents within their response area, it is critical that resources be located in such a manner that they can achieve an adopted response performance. Resource distribution is an analysis of how facilities are deployed within a response area and measures how well that distribution is able to respond to historic service demand. The following figure illustrates the four, eight, and 12-minute travel models from existing stations of the study agencies.

Figure 41: Travel Time Capability (Four, Eight, and 12-Minute Travel Models)



Based on this travel model and the historic service demand described in the preceding section, the departments can reach a certain percentage of that demand as illustrated in the following figure.

Figure 42: Distribution Coverage Capability (All Years)

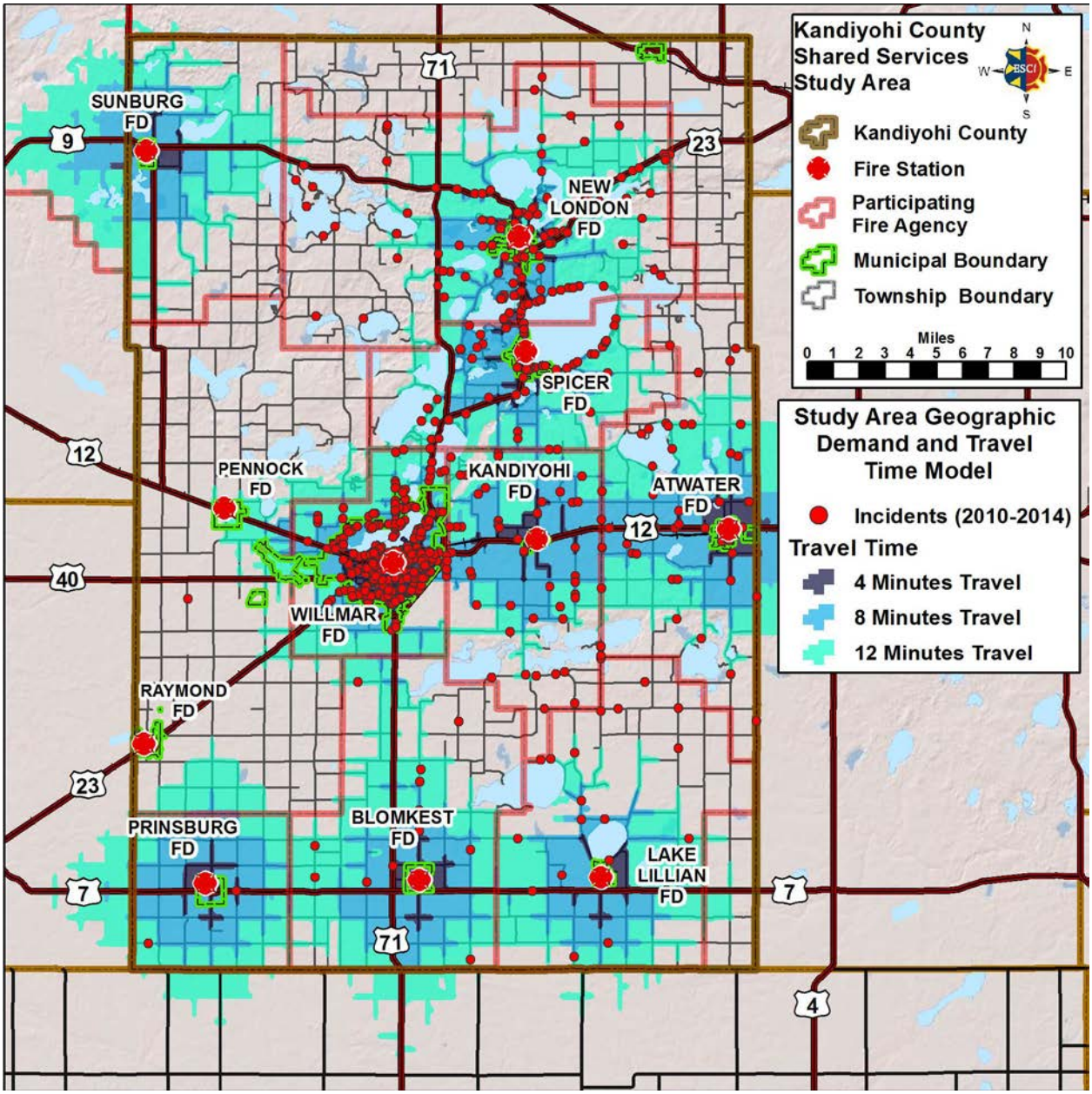


Figure 43: Service Demand Coverage Capability

Travel Time	Percent of Incidents
4 Minutes	66.2%
8 Minutes	92.3%
12 Minutes	97.0%

Response Performance

When discussing emergency services organizations, the primary issue 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 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.

The "average" measure is a commonly used descriptive statistic also called the mean of a data set. It is a measure 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 with the appropriate resources to the highest percentage of incidents. For this reason, ESCI analyzed (NFIRS) and computer aided dispatch (CAD) data and generated average, 80th, and 90th percentile response performance for emergency incidents only.

Unfortunately, due to the way that data is recorded in most NFIRS programs, call processing time and turnout time could not be calculated. This could be accomplished if the county had a computer aided dispatch (CAD) system that tracked system resources and provide response providers and policymakers with response reports on a regular basis. The data did provide analysis of overall response performance (from dispatch to first unit arrival) and those figures are illustrated below.

Figure 44: Average Response Performance by Year

	2010	2011	2012	2013	2014
Atwater FD	0:05:36	0:05:33	0:06:08	0:04:48	0:06:44
Blomkest FD	0:07:21	0:05:53	0:11:00	0:07:26	0:09:41
New London FD	0:07:32	0:07:46	0:05:40	0:04:46	0:06:29
Sunburg FD					0:06:22
Willmar FD	0:07:29	0:08:18	0:08:06	0:08:12	0:08:45

Figure 45: 80th Percentile Response Performance by Year

	2010	2011	2012	2013	2014
Atwater FD	0:07:00	0:07:00	0:08:00	0:07:00	0:09:00
Blomkest FD	0:10:48	0:08:36	0:11:00	0:10:00	0:13:48
New London FD	0:10:00	0:09:00	0:08:00	0:06:24	0:08:00
Sunburg FD	0:10:00	0:11:00	0:11:00	0:11:00	0:12:00
Willmar FD	0:10:00	0:10:00	0:10:00	0:10:00	0:10:00

Figure 46: 90th Percentile Response Performance by Year

	2010	2011	2012	2013	2014
Atwater FD	0:10:54	0:09:00	0:11:00	0:07:42	0:09:00
Blomkest FD	0:13:48	0:11:18	0:11:00	0:10:00	0:15:00
New London FD	0:11:00	0:11:00	0:11:00	0:08:00	0:10:00
Sunburg FD	0:12:00	0:13:00	0:13:00	0:13:42	0:13:00
Willmar FD	0:10:00	0:10:12	0:10:00	0:10:00	0:10:00

Mutual and Automatic Aid Systems

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. 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 throughout 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 described 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 describing 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 neighbor to that response protocol. Typically, such agreements are for specific geographic areas where the neighbor's resources 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, which 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 reciprocate resources 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.

Although each of the study agencies uses mutual aid on a routine basis in order to ensure that sufficient personnel and physical resources are on the scene of emergency incidents, provided incident data did not contain the necessary fields to analyze to what extent mutual and/or automatic aid is used.

SUPPORT PROGRAMS – TRAINING AND FIRE PREVENTION

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

Training Overview

Training is the acquisition of knowledge, skills, and competencies as a result of teaching new information or practicing existing abilities that come together to form a useful proficiency. One of the most cost effective, critical investments a fire agency can make is in the training and development of its personnel. The three physical resources that a fire department brings to bear in responding to an emergency are properly located facilities, the right kind of equipment in proper working order, and skilled firefighters to perform the tasks required. In order to ensure that the firefighters are skilled, a comprehensive training program must be in place. These newly acquired skills or enhanced competencies provide firefighters with the ability to adaptively problem solve during a compressed time frame under significant pressure. This section evaluates the training program for the participating agencies.

All of the nine fire agencies involved in this study have identified training at the Firefighter I, II and Hazardous Materials-Operations as their baseline, minimum training standard, which is consistent with state-wide practices. Willmar Ambulance uses State and National Continuing Education requirements as its baseline. Like nearly all small fire departments, the agencies find themselves challenged to adequately meet the multiple demands associated with firefighter training and skills maintenance.

Minnesota Training Standards

In the State of Minnesota, there are no mandated minimum requirements for training of volunteer firefighters. However, the *Minnesota Board of Firefighter Training and Education* establishes recommendations based on state occupational health standards and industry best practices. A minimum of 24 hours of continuing annual training is recommended, falling in 11 "Core Elements" identified by the Board. They are categorized as follows:

1. Safety and Protective Equipment
2. Chemistry and Fire Behavior
3. Self-Contained Breathing Apparatus
4. Fire Streams
5. Hose
6. Pumping Fire Apparatus
7. Ladders
8. Rescue
9. Forcible Entry
10. Ventilation
11. Administrative/Command

In addition to the recommended "Core Elements," multiple additional training requirements are in place to meet federal and state mandates. Those are primarily based on Minnesota Occupational Safety and Health Administration (MNOSHA) and it is emphasized that compliance is required, not simply recommended. A document detailing the recommendations and requirements is provided in an appendix to this report.

Entry Level Firefighter Training

Providing adequate training to newly selected responders is critical, not only to assuring that they operate effectively but, of equal importance, to make sure that they are able to function in a manner that is safe for themselves and their fellow firefighters.

The study agencies all require a minimum training level of Firefighter I, II and Hazardous Materials Operations be applied to new personnel, which is an appropriate practice and one that is generally applied in non-career Minnesota agencies.

Of equal importance in regard to firefighter safety are the tasks that a new hire is allowed to perform on an emergency scene prior to full training completion. ESCI was pleased to find that all of the agencies limit the on-scene activities of new personnel until they complete their training, which is appropriate and important. Generally, all prohibit entry to a fire building during training, however the degree of limitations overall varies to some extent with some agencies being more restrictive than others. It is recommended that the criteria be reviewed and standardized regionally.

Ongoing Training and Continuing Education

Willmar Ambulance bases its ongoing training on the Continuing Education requirements established by state and national certification criteria. The standards are appropriately applied.

The nine study area fire departments use the state recommended 24 hour annual training benchmark as their baseline continuing education target. For a fire department to achieve the recommended minimum of 24 annual hours, it will need to offer training at least twice monthly, assuming that classroom sessions are 2 hours in length. However, it is unlikely that responders are going to attend 100 percent of available training, necessitating access to additional classes. Even with perfect attendance, the 24 hour minimum does not address the additional state and federal training requirements discussed previously. Between the demand for training hours and the difficulties associated with recruiting, training, and maintaining an adequate number of responders, the Kandiyohi County fire departments are challenged to meet their training needs.

The training challenge is a difficult one – and a critical one. However it is also noted that all of the nine fire departments have essentially the same needs, and struggles, in regard to training. This factor represents an optimal opportunity to undertake shared initiatives for both initial hire and ongoing continuing education of fire responders.

The following common needs and duplicated efforts were observed during ESCI's field work:

- Each organization has a designated training officer or person assigned training responsibilities.
- Each organization creates a plan for future training independently.
- Each agency delivers training differently.

- Each agency needs to meet the same minimum training standards.
- Each organization has minimal time to provide instruction to volunteers, so volunteers may miss provided training and be unable to make up classes.

It is readily apparent that all of the fire departments share essentially the same challenges when it comes to training. For this reason, ESCI finds that multiple opportunities exist for the participants to collaborate and share their training efforts, which represents one of the best opportunities to develop a shared initiative in this area. The concept is further developed in the Functional Cooperative Efforts Strategies discussion later in this report.

Life Safety Services (Fire Prevention) Overview

Fire prevention is an undertaking that is a critically important piece of the overall fire protection puzzle. It is also often the most undervalued of services provided by a fire department. Fire prevention programs include the following components:

New Construction Plan Reviews and Code Enforcement: When a new building is constructed in a fire jurisdiction, the structure becomes the protection responsibility of the fire department for the life of the facility. It is important that the fire department be involved in the design and approval process, at least at an oversight and informational level, so that it is aware of the project and has input on its design from a fire protection standpoint.

Existing Occupancy Code Enforcement Inspections: Although smaller fire departments may not be directly responsible for fire prevention inspections, they can and should make efforts to assure that inspections are conducted appropriately and supplement efforts of state inspectors, where possible.

Public Education Outreach: Educating and informing the public about how fires are occurring in a community and how to prevent them is an essential element of an effective fire protection initiative.

Fire Cause Determination and Investigation: Determining how and why a fire started, whether accidental or intentional, is important in identifying areas of needed focus on public education and code enforcement.

Of the study agencies, most have not adopted a model fire code. WFD and PFD indicated that they operate under the 2007 version of the state-adopted fire and life safety code.

In terms of new construction building permit processes, only WFD conducts a review of submitted plans to check compliance with fire related code concerns. In the other communities, permits are processed at the city or county level and the fire departments have little, if any, involvement in the process.

Code enforcement inspections in existing buildings are not completed by any of the fire departments. Instead, dependence is placed upon the Minnesota State Fire Marshal's Office to conduct inspections, as is commonly found in smaller agencies, simply due to staffing and workload considerations. It should be understood, however, that he state inspectors are not able to inspect all occupancies, so many buildings, even ones representing a substantial fire risk, may go without periodic safety inspections.

WFD indicated that they are in the process of developing a plan to perform annual inspections of commercial and higher risk occupancies. ESCI supports and encourages Willmar's efforts to do so and recommends that they move forward with the initiative. It is further recommended that the other study agencies consider a similar effort, to the extent that their staffing capacity allows.

Public education efforts in the study area vary. Some departments do little public outreach, while others make efforts that generally consist open houses and school programs focused around the annual Fire Prevention Week. WFD has a more structured program that includes a school curriculum that has been develop for Kindergarten through fifth grade students.

Because public education is time consuming and challenging for smaller organizations that have limited staffing resources, it presents a valuable opportunity to share resources and address needs as a shared service initiatives, which is discussed in more detail later in this report.

In Willmar, fire cause determination is completed by the fire chief, assisted by a deputy chief that is trained in fire investigation and is also a law enforcement officer. In the other fire departments, all fire cause work is deferred to the State Fire Marshal for processing.

Section II – Opportunities for Cooperative Efforts

Having completed the evaluation of current conditions process above, ESCI is now armed with the information necessary to effectively evaluate the opportunities that exist in the Kandiyohi County area for shared service delivery opportunities between the participating agencies.

General Partnering Strategies

It is often assumed that legal merger of agencies is the only alternative that is available. However, in general terms, a number of different strategies are available to the fire and EMS agencies in Kandiyohi County when considering shared services. The options range from a "do-nothing" approach to a complete unification of the organizations into what is, essentially, a new emergency service provider. The balance of this report examines the multiple options that are available to the study agencies and provides insight and guidance where appropriate.

Specific to the State of Minnesota, there are a finite number of ways in which fire departments can collaborate, both formally and informally, generally driven by state and local statutory authority as well as the will and desire of local units of government. The strategies available for consideration are listed below:

- Status Quo
- Administrative Consolidation
- Functional Consolidation
- Operational Consolidation
- Legal Unification or Merger

Following is a discussion of the primary methodologies.

Status Quo

The status quo approach is one in which nothing changes. While often viewed negatively, in some cases the best action is no action. In this case, the ten Kandiyohi County fire and EMS agencies simply continue to do business as usual, cooperating with and supporting each other as they do today, but with no change to governance, staffing, or deployment of resources.

This approach is the easiest to accomplish and maintains the independence of the organizations and local control. It creates the least stress on the organizations and does not necessitate reorganization. However it also lacks long term commitment and the virtues that can be gained in terms of increased efficiency that are realized in a shared service delivery environment.

In today's environment, taxpayers typically hold their elected officials accountable for delivering a quality level of service at an affordable rate and expect creative thinking to solve problems or achieve those ends. While "maintaining the status quo" is easy and involves the least amount of impact to the agencies, it may well be one of the riskier decisions to make politically.

Administrative Consolidation

Under an administrative consolidation, two or more agencies remain independent of each other from a governance standpoint but they blend some or all of their administrative functions. The result is often one of increased efficiency in the use of administrative and support personnel. Overhead costs are typically reduced and duplication of efforts is eliminated. However, it is noted that in the case of all volunteer or paid-on-call agencies like those in Kandiyohi County, because few have paid administrative staff members, the potential for significant cost savings is small. Even so, the approach may offer opportunities to increase efficiencies.

Functional Consolidation

When the term "consolidation" is used, concerns are often raised about loss of identity, local control and other considerations. Kandiyohi County agencies are no different and, in fact, the concern was raised in the course of ESCI's stakeholder interviews with representatives of communities in the study area. However, in Minnesota, public entities have authority under law to enter intergovernmental agreements (IGAs) for the purpose of cost containment and service delivery enhancement. Doing so, enables communities to retain their identity and control, while working together more effectively. The laws of the State of Minnesota address the issue, allowing intergovernmental contracts for any lawfully authorized governmental function.[2]

This type of cooperative effort can include any function within the study departments that allows them to deliver services. In Kandiyohi County, ESCI has identified opportunities in the Evaluation of Current Conditions section of this report that may present themselves as feasible options. Those identified are discussed in the next report section. In some instances, functional consolidations serve as a prelude to a future merger.

Operational Consolidation

An operational consolidation also retains local autonomy, but brings fire departments together more closely in regard to emergency response operations. This strategy, like a functional consolidation, joins two or more entities from an operational standpoint through the execution of an intergovernmental agreement (IGA).

The operational consolidation strategy takes the next step in the continuum of closer collaboration development. In this case, all operations are consolidated under a single organization that serves both agencies. The fire departments, whether only a few, or all ten, remain independent agencies from a legal standpoint, but from a service delivery perspective they operate as one. An operational consolidation, accomplished through a written agreement between two or more agencies, requires a significant cooperative commitment and is sometimes undertaken as a segue toward complete integration. The level of trust required to implement operational consolidation is very high, since independence and autonomy have been willingly relinquished in favor of the preferred future state of a complete integration.

[2] Minnesota Statutes, section 471.59. Joint Exercise of Powers Act.

Legal Unification

Legal unification is a formal approach that unites not only the programs, like under a functional or operational consolidation, but also the organizations themselves and their governance and structure. 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. A legal merger 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.

True legal unification of fire departments has not been a common practice in the State of Minnesota, although it has become widely accepted in other states. In fact, until recent years, legislation did not exist that empowered Minnesota fire departments to combine legally. However, the situation changed recently when the City of Cloquet, Perch Lake Township, and the City of Scanlon agreed to petition the legislature for a special law that would create the State's first independent fire district with taxing authority. The result was the formation of the Cloquet Fire District, the first of its kind in Minnesota.

Because ESCI often finds that study agencies are reluctant to relinquish control of their respective fire departments to a full consolidation, the intent of this project is to evaluate all potential options and provide policymakers with the information so they can make an educated decision regarding the future of fire protection and emergency services within their respective communities.

Cooperative Efforts Methodology Options

Beyond the implementation of a legal merger of fire departments discussed above, in Minnesota there are several types of Inter-Governmental Agreements (IGAs) that can be used to achieve functional and operational collaborative efforts. They include Joint Exercise of Powers, Intergovernmental Service Agreements, and Intergovernmental Service Transfers. Within the Joint Exercise of Powers Act there are two primary options for sharing services: Shared Powers Agreements and Service Contracts. In Shared Powers Agreements, governments jointly share responsibility for providing a service such as fire protection. Service Contracts, however, allow one city to "contract" with another government for services. The Intergovernmental Service Agreement is the most common form of cooperative arrangement in Minnesota. It is an agreement-formal or informal, written or oral, between two or more governments about the delivery of a service or services. These agreements may take many forms. Intergovernmental Service Transfers are a permanent transfer of total responsibility for the provision of a service from one government unit to another.

Feasible Options for Shared Service Delivery

In identifying potential cooperative and shared services opportunities, the project team considered the key issues now challenging each agency and community in Kandiyohi County. Some issues represent roadblocks to integration, while others provide a unique chance for improvement.

As an element of the review, affected staff and officials provided local and internal perspective on organizational culture, community expectations, and other considerations that may be specific to the Kandiyohi County study area. Some specific considerations raised and concerns include:

- Concept of a county-wide fire department
- Retention of local identity, tradition, individuality
- Avoidance of the perception of a "takeover" by Willmar
- Importance of personnel recruitment and retention
    - Challenges with keeping personnel, even with increased pension benefits
    - Concept of shared recruitment, training efforts
- Cost effectiveness, efficiency of current/future practices
- Perceived imbalance of mutual aid provided vs. received
- Need to enhance training, share resources
- Ladder truck purchase, replacement, deployment, and sharing
- Fire department provision of ambulance transport services at times of peak or overflow demand
- Importance of and desire for collaborative training county-wide
- Increased frequency of shared, multi-agency training exercises
- Regional desire by all participants to explore opportunities for increase efficiency and enhanced service delivery

Legal Unification Considerations

As already mentioned, legal unification would create a single new entity tasked with providing fire protection and other emergency services to a majority of Kandiyohi County. In many cases, legal unification is implemented to reduce costs and streamline operations. For example, consolidating a number of career fire departments into a single service provider allows governmental entities to reduce the number of administrative staff or perhaps move previously administrative staff to more operations roles. This reduces duplicity and lowers total operating costs.

In volunteer organizations however, no such costs would be saved since all personnel are operational. No career personnel are currently functioning within the Kandiyohi system, except for the administrative and support personnel within WFD. Therefore, a legal merger of the study agencies would not result in appreciable savings. However, there are advantages to bringing the study organizations together, primarily in regards to operations. As already mentioned, the study departments rely on each other through mutual and automatic aid during emergency responses. Personnel from one agency may work in the response area of another, which could cause a delayed response. A unified organization would allow personnel to respond to the closest station and provide an overall better level of response. In addition, a unified organization would have a single set of standard operating guidelines, a single organizational command structure, more buying power for equipment and apparatus, and an overall efficiency in working and training together.

The biggest issue in this type of legal unification, typically, is control and funding. Traditionally, fire departments, particularly volunteer departments, have been community oriented and many were created to provide service to a relatively small area. As the industry has progressed, however, fire departments

are being called on for every sort of task including rescues, medical incidents, traffic control, basement pump-outs, etc. These additional responsibilities tax many departments and, in a time where volunteerism is in decline, many find it more difficult to provide their desired level of service. Having a single command structure with paid administrative and support staff would allow the departments to focus on the delivery of services rather than having to handle the day-to-day administrative functions that are required.

Rather than one city "taking over" and operating the system, if this strategy is chosen, the new department should be operated at the county level. Governance could be in the form of a county department or as an independent taxing district as previously discussed. Although an independent taxing district would allow for more independent control, the primary disadvantage to this structure is the inability to fund the system through means other than property tax. In this economic environment, if may be difficult for residents to accept another layer of government and another layer of taxation.

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. Policymakers should specify the service (fire protection), the quantity (a fire pumper and four firefighters), the quality (within 10 minutes of dispatch), and the accuracy (80 percent of the time), for example. Once service is defined in specific and measurable terms, the tasks of determining cost and the consideration of funding alternatives become more focused.

In discussing potential funding alternatives, it should be understood that these options would only apply to a JPA or contractual arrangement. The creation of an all-encompassing fire protection district would allow that district to levy its own tax for operational funding.

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.[3] 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

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

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 a 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.

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).

Taxable Value

Concept:

The taxable value 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 taxable value to the whole.

Pro:

Taxable value 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 taxable value 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:

Taxable value may not reflect the property risk associated with certain exempt property, such as schools, hospitals, universities, government facilities, churches, and other institutions. Taxable value 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, taxable value 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 taxable value 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.

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.

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. Censuses 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 departments/service areas. 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 47: Single Variable Allocation Summary

Jurisdiction	Area	Service Demand	Population
Atwater	11.2%	4.5%	5.6%
Blomkest	12.4%	4.0%	3.0%
Kandiyohi	8.5%	2.3%	3.0%
Lake Lillian	12.5%	2.5%	2.1%
New London	18.9%	14.2%	16.0%
Prinsburg	5.2%	1.0%	2.2%
Spicer	7.5%	6.5%	10.8%
Sunburg	17.6%	1.5%	2.6%
Willmar	6.2%	63.5%	54.7%
	100.0%	100.0%	100.00%

Combining these variables into a weighted system of allocation allows organizations to blend the data based on a pre-determined set of criteria. For the example below, three scenarios are used to illustrate how simply changing certain weights can impact the overall allocation model.

Figure 48: Multi-Variable Allocation Model

Jurisdiction	Multiple Variable #1	Multiple Variable #2	Multiple Variable #3
Atwater	7.1%	5.8%	6.2%
Blomkest	6.4%	4.5%	4.6%
Kandiyohi	4.6%	3.3%	3.6%
Lake Lillian	5.6%	3.5%	3.7%
New London	16.4%	15.5%	16.0%
Prinsburg	2.8%	2.0%	2.4%
Spicer	8.3%	8.5%	9.2%
Sunburg	7.2%	3.8%	4.5%
Willmar	41.6%	53.1%	49.8%
	100.0%	100.0%	100.0%

This multi-variable model is derived from the weights applied in the following figure but should be considered as a final recommendation on cost allocation. Policymakers, during detailed discussions and negotiations, will need to adopt a model that is fair and equitable based on the chosen variables.

Figure 49: Multi-Variable Weighting Example

Multiple Variable Weights	
Multiple Variable #1	
Area	33%
Service Demand	33%
Population	34%
	100%
Multiple Variable #2	
Area	25%
Service Demand	60%
Population	15%
	100%
Multiple Variable #3	
Area	50%
Service Demand	25%
Population	25%
	100%

In addition, the assumed tax burden can be used to determine potential impact to each entity based on a JPA or contractual arrangement.

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 by local responders and decision makers may allow for other areas to be explored outside the parameters of this report.

In considering shared service delivery alternatives, ESCI typically makes only limited 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, operational,* and *legal.*

Functional Cooperative Efforts Strategies

Elsewhere in this report, ESCI evaluates and discusses the potential options that are available for combining the study departments into a single organization. However, ESCI also understands that cooperative efforts and shared services can take on a much different look, not limited to fully combining the agencies. As mentioned previously, there are various methods, including contracted services, 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 the two departments may participate in to gain efficiencies, contain costs, and increase effectiveness.

The following strategies are those that ESCI has identified as potentially applicable to these organizations and are ones that may be implemented while remaining as separate, stand-alone, agencies, absent legal merger or other formal integration. They may be accomplished singly or in multiples and the effort may be viewed as a pre-cursor to future, more formal consolidation, and/or merger initiatives.

Enhanced Use of Mutual and Automatic Aid

The study agencies utilize mutual and automatic aid currently. While the system is working, when it is more closely examined, opportunities to further enhance existing practices may be recognized.

First however, is an important element; While the agencies exchange mutual aid, they do so in the absence of a structured, formal, and written agreement to do so. The practice may expose the organizations to various liabilities. ESCI recommends that mutual aid and automatic aid agreements be established.

<table>
<tr><th colspan="2">Enhanced Mutual and Automatic Aid Agreements</th><th>Timeline: Short term</th></tr>
<tr><td colspan="3">Objective: Establish written agreements and enhance existing mutual and automatic aid agreements and formalize those agreements with city council approval.</td></tr>
<tr><td colspan="3">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, as is currently done in between all of the Kandiyohi County study agencies. Mutual aid necessitates formal 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, establishing pre-planned dispatch protocols, absent the need for a responder or incident commander to request the assistance.</td></tr>
<tr><td colspan="3">Policy Action: Review mutual aid and automatic aid procedures that are currently in place to identify opportunities to increase effectiveness. 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. Create written agreements and dispatch center protocols.</td></tr>
<tr><td colspan="2">Pro
• Establishment of proper agreements.
• Identification of responsibilities, duties, and liabilities.
• More efficient response.
• Reduced requirements on command personnel (automatic dispatch).
• Increased interdepartmental cooperation.</td><td>Con
• Potential of imbalance in responses.
• Substantial differences in current equipment load lists, compartmentation, and staffing models can be problematic.</td></tr>
<tr><td colspan="3">Fiscal Considerations:
• Number and frequency of responses may increase.
• Volume of equipment and personnel sent to incidents outside of the agencies' jurisdictions may increase.
• 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.</td></tr>
</table>

Unification of Standard Operating Guidelines

Some of the agencies have established Standard Operating Guidelines (SOGs) that are well established, while others are less fully developed. While the existing SOGs are generally acceptable as they stand, they differ considerably and were all developed separately. Efforts to standardize the procedures regionally will accomplish two things; First, it will assist those agencies that have limited SOGs manuals in place to develop them. Secondly, it will improve operating efficiency and, most importantly, enhance firefighter safety.

Unified Standard Operating Guidelines/Procedures	**Timeline:** Short term
Objective: Provide consistent guidelines for operations during emergencies, emergent, and non-emergent incidents.	
Summary Background: Currently only some of the study agencies have developed a set of SOGs for their organization. However, firefighters from all of the communities in Kandiyohi County may find themselves working together on emergency scenes, underscoring the importance that personnel are working from the same operating guidelines.	
Policy Action: Blend and 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. Incorporate SOGs routinely into training.	
Pro • Improvement in on-scene safety, efficiency, and effectiveness of personnel. • Reduced confusion in the delivery of service. • Common methods of approach.	Con • Reduced individuality in specific administrative policies and procedures.
Fiscal Considerations: • The elimination of duplicated staff effort in the creation and updating of SOGs will reduce soft costs. • Instructional time is optimized during multi-agency training sessions by excluding time devoted to adapting to differing procedures.	

As an additional consideration, development of policy and procedure documents can be completed by organizations that specialize in fire department policy development at a reasonable cost, eliminating the need for time intensive writing. One that ESCI is aware of is Lexipol LLC, which can be found at www.lexipol.com

Enhanced Regional Incident Command

Incident Command (IC) practices vary between the subject agencies. Standardization of a regional approach is important, as has been recognized at the state level as well as regionally in the Kandiyohi County and surrounding areas. Because all of the agencies may find themselves responding to the same incidents, any opportunities that may exist to further integrate existing IC practices is important.

Implement Regional Incident Command and Operational Supervision	**Timeline:** Short term
Objective: Provide standardized IC (Incident Command) supervision during emergency operations. Provide for supervision of volunteer and 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 coverage and deployment information from this feasibility study in 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 • Improved communications for scene command and control. • Increased efficiency in scene size-up and request for additional resources. • Improved interdepartmental cooperation.	Con • None.
Fiscal Considerations: • No significant financial considerations.	

Shared Administrative and Support Services

Administrative services are wholly separated between the agencies, and a shared need. Each administers their organization independently and each is strained to varying degrees to do so, given existing staffing capacity. The smaller county agencies are particularly challenged, with only volunteer personnel managing administrative functions. Even as separate agencies, opportunities may be realized in combining certain support services.

<table>
<tr><th colspan="2">Combine Administrative and Support Services</th><th>Timeline: Short term</th></tr>
<tr><td colspan="3">Objective: Combine the administrative and management elements of the agencies to promote improved efficiencies by eliminating duplication.</td></tr>
<tr><td colspan="3">Summary Background: An administrative consolidation, as it is sometimes called, occurs when two or more agencies maintain their separate legal status and independent operational elements but combine some or all of their administrative functions. The concept may be applied to nearly any administrative function, including purchasing and financial record keeping, payroll, human resources management, incident records and reporting, to name a few.

In the instance of most or all these study agencies, the cities are providing some of the administrative services through their finance, human resources, and other departments. However, other needs have to be met by fire personnel, most of whom are volunteers. Many of those tasks are duplicated in each agency.</td></tr>
<tr><td colspan="3">Policy Action: Evaluate current administrative and support duties and responsibilities and the capacities of volunteer chiefs to perform them. Identify redundancies and opportunities to share resources.</td></tr>
<tr><td colspan="2">Pro
• Improved interdepartmental consistency in personnel management and selection, payroll, and other administrative functions.
• Reduction in redundancy resulting in better efficiency.
• Potential for moving redundant positions to operational roles.</td><td>Con
• Potential loss of individual departmental identity.
• Difficulty in merging payroll and other human resources systems.</td></tr>
<tr><td colspan="3">Fiscal Considerations:
• Could result in lower personnel costs by removing redundant positions.
• May reduce or eliminate the need to replace vacant administrative positions.</td></tr>
</table>

Capital Replacement Planning

Planning for long term replacement of capital assets is a shared challenge between all of the agencies. With the exception of AFD, none of the organizations has a funded replacement plan and schedule in place. Because facilities and equipment are very expensive, approaching capital planning from a regional perspective may offer opportunities for cost savings and operational efficiencies.

Additionally, as found in the apparatus inventory tables earlier in this report, ESCI found potential opportunities for sharing of vehicles which may result in some cost savings or future cost avoidance. Most of the fire departments have an extra fire engine in their fleet that serves as a reserve unit when a primary engine needs to be removed from service for maintenance. As a result, agencies incur the cost of maintenance, insurance, and other expenses for a vehicle that is rarely used. Sharing of reserve engines is a recommended practice.

Regional Capital Replacement Planning	**Timeline:** Short term
Objective: The agencies should work together to adopt a shared capital replacement plan that adequately funds the purchase of future apparatus and replacement or rehabilitation of fixed facilities.	
Summary Background: Each department uses and maintains a variety of emergency apparatus types and maintains a fire station. 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.	
Policy Action: Assemble data on 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. Conduct a similar process for fixed facilities.	
Pro • Formalizes capital replacement and identifies it as a priority. • Allows for long-range planning for facility, apparatus, and equipment replacement. • Reduces the need for special financing or bonding to purchase apparatus.	Con • May require a substantial investment to bring current fleet up to necessary levels for future funding. • May require additional annual funding to ensure that the plan is fully financed.
Fiscal Considerations: • Time and effort savings by preparing fewer bid specifications. • Effort avoided by conducting fewer bid processes. • Realize the benefits of joint purchasing and economies of scale. • Cost savings in acquiring emergency fire apparatus. • Consider the purchase of stock versus custom apparatus.	

Apparatus and Equipment Purchasing

In concert with the above initiative, purchasing of fire apparatus and equipment can be shared, often resulting in cost savings and future cost avoidance. It is acknowledged that apparatus needs in a city like Willmar may differ from those of the smaller fire departments. Even so, much of the apparatus used by the study agencies are similar. Joint purchasing is not limited to fire engines and other apparatus. The same concept, applied to the equipment carried on those vehicles, can result in cost savings.

Further, ESCI looked at aerial ladder trucks in the region. Ladder trucks are extremely expensive vehicles and, while a highly valuable tool on a large fire incident, they see little routine use overall. Sharing of this high-cost resource is a valuable cost saving practice. Upon our field work visits, ESCI learned that SFD and NLFD have discussed the joint purchase of a ladder truck. SFD does not have a ladder currently and NLFD's ladder truck is a 1975 vintage and due for replacement. The joint purchase concept is worthy of serious consideration.

Joint Purchasing of Equipment and Apparatus	**Timeline:** Long term
Objective: Create a single set of emergency apparatus specifications and provide for single-source uniform emergency apparatus for all study fire agencies.	
Summary Background: The fire departments use and maintain a variety of emergency apparatus types including engines, aerial trucks, brush units and water tankers, as well as small equipment such as self-contained breathing apparatus (SCBA), personal protective equipment, and ancillary equipment. Each department uses different makes, models, and configurations. A standard specification and procurement process for apparatus and equipment would result in lower cost, faster production, training efficiencies, and safer and more efficient scene operations. This could include a joint capital replacement plan that encompasses all heavy rolling stock, expanded throughout the region.	
Policy Action: Use provided data on current multi-agency fleet to generate a comprehensive apparatus replacement schedule including agreed upon replacement interval and projected life expectancy of all equipment. Examine the potential of refurbishment, rehabilitation, or remounting of apparatus if feasible and evaluate technological updates necessary in small tools and safety equipment. Develop and follow a prescribed load list for apparatus standard equipment.	
Pro • Cost savings of buying stock units. • Consistency in equipment can increase efficiency. • Ease of training personnel from multiple agencies on operation of apparatus.	Con • Potential loss of customization by study agencies. • Long process of increasing consistency. • Specialization of apparatus based on risk will impact certain equipment needs.
Fiscal Considerations: • Time and effort savings by preparing fewer bid specifications. • Cost savings in acquiring emergency fire apparatus and equipment. • Consider the purchase of stock versus custom apparatus.	

Shared Recruitment and Retention Efforts

The participating agencies depend heavily on the use of volunteer/paid-on-call responders. As a result, all share a common need for recruitment and retention of capable personnel. Shared recruitment and retention activities offer the opportunity to pool personnel resources and offer additional gains, as noted below.

<table>
<tr><th colspan="2">Joint Volunteer/Paid On Call Recruitment and Retention Program</th><th>Timeline: Short term</th></tr>
<tr><td colspan="3">Objective: Create a regional recruitment program that draws on the specific demographics of the communities served and coordinates hiring processes that provides for consistent application and evaluation components. Make retention programs (pay, benefits, etc.) consistent in order to prevent personnel from leaving one agency and joining another.</td></tr>
<tr><td colspan="3">Summary Background: Considering that the Kandiyohi County fire agencies share common needs, a joint recruitment and retention program would allow the study departments to pool their resources by eliminating the duplication that is found when each organization conducts their own recruitment. In addition, the approach enhances the ability to successfully apply for regional grant opportunities in order to attract more volunteer/paid-on-call personnel to the system. Finally, sharing in the development of incentives, recognition programs, pension plans, and compensation practices can improve retention of members.</td></tr>
<tr><td colspan="3">Policy Action: Evaluate the demographics and potential of each community regarding volunteer/paid-on-call personnel. Work as a region to develop and implement a joint recruitment program. Apply for a joint grant that covers the entire region's recruitment efforts, specifically the Volunteer Recruitment and Retention grants available through the Department of Homeland Security Staffing for Adequate Fire and Emergency Response (SAFER) grants program. Support other fire departments as applications come in through a system of coordinated review. Work together to make pay and benefits more consistent and with each municipality to align relief association benefits across the region.</td></tr>
<tr><td colspan="2">Pro
• Reduced costs of recruitment and application processes.
• Potential for regional grants for recruitment and retention programs.
• Information sharing between departments on potential members.
• Enhanced ability to recruit and retain personnel.</td><td>Con
• Potential of increased costs due to alignment of relief association benefits for existing members.
• Increase in soft costs of coordinating recruitment campaigns and application review processes.</td></tr>
<tr><td colspan="3">Fiscal Considerations:
• Time and effort savings by joining recruitment efforts.
• The prospect of potential grant funding for a regional effort.
• Potential cost savings in conducting coordinated application reviews and background checks.</td></tr>
</table>

Consolidate Training Into a Shared Regional Training Program

All of the Kandiyohi fire agencies have very similar training needs, and equally similar challenges in meeting those needs. In reviewing the study agencies' training programs earlier in this report, ESCI finds that developing a strategy under which the multiple training programs are combined into a regional, shared approach is one of the most important and potentially beneficial initiatives the these fire departments can undertake. The concept should be considered as a high priority.

<table>
<tr><th colspan="2">Consolidate Training into a Shared Regional Training Program</th><th>Timeline: Mid term</th></tr>
<tr><td colspan="3">Objective: Eliminate duplication in training emergency responders to increase effectiveness. Create a single unified training program.</td></tr>
<tr><td colspan="3">Summary Background: Each of the study agencies assigns training responsibility to someone in the organization and each develops its own, stand-alone, training plans and practices. Their training needs, and challenges, however, are the same. As a result, multiple opportunities exist to standardize and combine training efforts. This can be best accomplished by creating a county-wide training committee, establishing common training standards and plans, and developing a pool of instructors and a shared approach to scheduling educational outreach.</td></tr>
<tr><td colspan="3">Policy Action:
• Create a county training committee or task force, charged with developing standards and delivery strategies for training outreach.
• Inventory and evaluate current training programs and practices to identify what is working and what is not.
• Involve all agencies in the county to establish a fully regional approach.
• Create common list of classes to be offered and shared class schedule.
• Develop the training system to enable personnel from fire departments to attend training at any agency, accommodating make up of missed classes as well as enabling personnel from different agencies to train together to build relationships and share approaches.
• Work closely with city and township building officials in the conduct of code enforcement activities. Work with the State Fire Marshal's Office to supplement their efforts, where possible.
• Establish frequent multi-department training activities.</td></tr>
<tr><td colspan="2">Pro
• Development of consistency in training regionally
• Establishment of the same level of consistency in emergency operations as a result.
• Enhanced relationships between agencies by training together.
• Reduced cost by shared use of resources.</td><td>Con
• None.</td></tr>
<tr><td colspan="3">Fiscal Considerations:
• The elimination of duplicated staff effort in the development of training plans and deliver reduces costs.
• Elimination duplicated efforts in training program management is cost effective.</td></tr>
</table>

Cooperative Fire Prevention and Public Education

Like training, fire prevention and public education needs are similar in the participating agencies. As discussed in the Evaluation of Current Conditions section of this report, a large part of prevention efforts are deferred to the State Fire Marshal's Office, by necessity. However, the Fire Marshal cannot be expected to meet all of the prevention and public education needs that should be addressed. ESCI identified collaboration in the area of fire prevention and public education as an opportunity to realize multiple advantages, as discussed below.

<table>
<tr><th colspan="2">Collaborative Code Enforcement and Life Safety Education Program</th><th>Timeline: Mid term</th></tr>
<tr><td colspan="3">Objective: Provide support to the Minnesota State Fire Marshal in fire code enforcement and public education efforts to deliver more effective prevention programs.</td></tr>
<tr><td colspan="3">Summary Background: The agencies play varying roles in terms of fire safety code administration, depending largely on the State Fire Marshal to provide those services. They also all provide public education tasks in a similar manner, to the extent that they are able to do so. Because the State Fire Marshal cannot be expected to inspect all commercial buildings, and because of the importance of delivering as much public education outreach as possible, approaching these needs from a collaborative perspective will help to achieve prevention and education goals.</td></tr>
<tr><td colspan="3">Policy Action:
Create a fire prevention coalition consisting of fire department representatives to develop prevention and education opportunities that can be addressed collaboratively.
Inventory and evaluate current personnel resources and fire prevention efforts.
Involve others from outside the area and from non-traditional groups (insurance industry, educators, State Fire Marshal, media).
Create standardized public education messages that can be used across the region reduce duplication.
Learn from others. Model the coalition after other successful regional public fire safety education programs.
Work closely with city and township building officials in the conduct of code enforcement activities. Work with the State Fire Marshal's office to supplement their efforts, where possible.</td></tr>
<tr><td colspan="2">Pro
Fire codes and enforcement of those codes would be more consistent throughout the region.
Fire departments can share resources to ensure that programs are delivered throughout the region.
Reduced cost by shared use of resources.</td><td>Con
Possible reduction in of local control of inspection efforts.
Potential loss of municipality-specific education programs.</td></tr>
<tr><td colspan="3">Fiscal Considerations:
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 enforcement strategy should compare favorably against the reduced level of effort required individually by the agencies.</td></tr>
</table>

SECTION III – FINDINGS, RECOMMENDATIONS, AND PLAN OF IMPLEMENTATION

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. Implementation begins with that step.

Findings

Based on the analysis completed by ESCI during this process, it is apparent that the Kandiyohi County fire departments have historically worked well together and continue to do so today, as witnessed by the fact that all but two agencies in the county elected to participate in this study process. While a spirit of cooperative effort is in effect currently, opportunities exist for further improvement and increased efficiency. It would make sense that organizations continue efforts to work more closely together. This can be accomplished by any of the methods discussed previously. Which method is ultimately chosen is a policy decision placed squarely in the hands of the elected officials within each community.

Using the information developed, ESCI draws certain conclusions regarding the participants, and the opportunities for collaboration. A summary of those findings follow.

All of the Kandiyohi County Fire Departments are Interdependent – The fire departments depend upon each other and other neighbors for mutual aid and automatic aid assistance during emergency incidents. As stand-alone agencies, each would be challenged to effectively combat a significant, multiple alarm fire or other major incident without assistance.

Each Agency Values Customer Service – During the work leading to this report, each fire department consistently demonstrated a focus toward serving those who live, work, and play in the area. Each agency is proud of its community and works hard to care for it.

Each Agency Strives to Meet the Expectations of its Customers – The departments each display considerable efforts to assure that they provide acceptable levels of service to their communities.

Each Agency Needs Infrastructure Improvements – Although the need varies between the agencies, important gaps were identified in each organization. Those needs are identified in the Evaluation of Current Conditions section of the report. Some of the improvements identified in this report may be more readily achievable by sharing effort in some manner with the other agencies.

Communication Between Agencies is Effective – As a result of the close collaboration on numerous operational issues, dialogue is effective between all of the agencies. It is essential that the current level of communication be maintained and further enhanced in the future.

Multiple Functional Cooperative Efforts are Feasible – ESCI has identified multiple opportunities for functional cooperation in this report. These undertakings can be accomplished while the organizations remain separate from a governance standpoint – the only requirement to move forward with them is an

agreement to do so. At a minimum, it is recommended that as many of the identified functional strategies be evaluated and implemented, as possible.

Combining All of the Participating Agencies is Theoretically Feasible, but Gains May Be Minimal

All of the strategies presented in this report are feasible. Each presented strategy moves across the spectrum of partnership options from maintaining status quo at the low end of the scale, to full integration of all of the agencies. However, while the establishment of a single, county-wide, fire agency may be advantageous in the long term, and can be accomplished from a technical standpoint, the gains that can be achieved as a result of doing so do not offset the cost and complexity.

Preferred Strategy

ESCI finds that the preferred and most appropriate strategy at this time is for the study agencies to evaluate, prioritize, and implement as many of the functional cooperative efforts as found to be feasible at this time. It is understood that these undertakings will be accomplished, enabling the organizations to capitalize on the benefits identified, while still retaining their independent status from a governance standpoint.

This strategy may be viewed as a single step to what may become a more formalized unification in the future. Often, and in this case, the road toward the establishment of a legally consolidated organization or a county-wide, single, fire and EMS delivery system is achieved incrementally. Effective implementation of functional cooperative measures may be adequate to meet the communities' needs, or something more structured may be the optimal long term solution. At this point in time, the agencies are simply encouraged to take the first step.

CONCLUSION

The study departments currently share multiple services and work together well, more closely than most, in many regards. However, they have not yet achieved what could be considered fully collaborative and seamless. Developing and expanding the existing cooperation to gain more efficiencies is a logical next step.

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Appendix B: Minnesota Board of Firefighter Training and Education Minimum Training Criteria

The following document is provided by the Minnesota Board of Firefighter Training and Education:

11 Core Elements

These recommendations come from the Minnesota OSHA standards, providing Minnesota fire departments multiple options to design an annual training program that fits their needs and requirements. Twenty-four hours of continuing annual training is recommended in any combination of the following 11 Core Elements.

Each of the recommended 11 Core Elements has been further developed to include subgroups that include:

1. Safety and Protective Equipment

a. A culture of a safe working environment
b. 16 life safety initiatives
c. PPE checks
d. Bloodborne pathogens
e. Proper PPE for the work place

2. Chemistry of Fire and Fire Behavior

a. Fire Behavior
b. Building Construction
c. Fire Tactics/Strategies
d. Thermal imager
e. Foam
f. Extinguishers

3. Self-Contained Breathing Apparatus (SCBA)

a. Checks/ recharge SCBA cylinder
b. Donning/doffing
c. PASS devices
d. Use/Care
e. Confidence course

4. Fire Streams

a. Attack below grade
b. Attack ground grade
c. Attack above grade

5. Hose

a. Types
b. Loads/Lays
c. Coupling drill
d. Deployment techniques

6. Pumping Fire Apparatus

a. Responding (CEVO or Emergency Vehicle Operations)
b. Pumping
c. Drafting
d. Supply to appliances

7. Ladders

a. Ladders
b. Deployment
c. Safety
d. Aerials

8. Rescue

a. Firefighter
   i. Search
   ii. Self-rescue
   iii. Mayday operations
   iv. Rapid intervention
b. Extrication
   i. Auto recognition
   ii. Highway safety
   iii. Tools
   iv. Airbags
   v. Other cutting devices
   vi. Disentanglement
   vii. Other machinery
   viii. Farm equipment or Mining equipment
c. Ropes
   i. Rope types
   ii. Knots
   iii. Use
d. First Aid
   i. First Aid
   ii. CPR

9. Forcible Entry

a. Tool Identification
b. Forcible entry
   i. Door
   ii. Window
   iii. Wall
   iv. Other

10. Ventilation

a. Horizontal
b. Vertical
c. Mechanical

11. Administrative/Command

a. Professional Development
b. Financial Management
c. Human Resources
d. Incident Command System

Minimum Training for Minnesota Firefighters to Meet Federal and State Requirements

INITIAL TRAINING

The General Duty Clause

[MN Statute 182.653 Subd. 2]

Each employer shall furnish to each of its employees conditions of employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious injury or harm to its employees.

Hazardous Waste Operations and Emergency Response

[29 CFR 1910.120 (e)(1)(ii)]

Employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility.

Hazardous Materials Awareness (3 hours) and Infectious Disease Control (3 hours)

1. *Hazardous Materials First Responder Awareness Level* (3 hours)
2. *Communicable Disease Risk Exposure and Prevention of the Transmission of Bloodborne and Airborne Pathogens for Emergency Responders* (3 hours)

This orientation course has been developed to assist you in comprehension of the OSHA requirement. It does not supplant the employers' responsibility to provide training necessary to be in full compliance. MN OSHA recommends the "operational level" course for all firefighters who will take action beyond identification of the incident.
[29 CFR 1910.120(q)(6)(i)]
[29 CFR 1910.134(g)]
[29 CFR 1910.1030(g)(2)(i through vi)]

Fire Brigades

[29 CFR 1910.156 (c)(1)]

The employer shall provide training and education for all fire brigade members commensurate with those duties and functions that fire brigade members are expected to perform. Such training and education **shall** be provided to fire brigade members before they perform fire brigade emergency activities.

Confined Space Entry Awareness and Employee Right To Know (3 hours)

1. *Permit-required Confined Space Entry Awareness* – This course is designed to familiarize the student with an understanding of the OSHA requirements. Additional training is needed to comply with Section (k) of 1910.146 and 5207.0300 for construction activities.

2. *Department of Labor and Industry Employee Right To Know Standards* Chapter 5206

This orientation course has been developed to assist you in comprehension of the OSHA requirement. It does not supplant the employers' responsibility to provide training necessary to be in full compliance.

[29 CFR 1910.146(g)(1)]

[MN Rule Chapter 5206.0700(G)(1)(4)]

[29 CFR 1910.1200 (h) (3) (iv) Global Harmonization]

INITIAL TRAINING

Basic Firefighting Course – NFPA 1001

(*This course meets the requirements for Minnesota voluntary certification and/or licensure)*

To include, but not limited to, the following subjects from NFPA 1001 standards: Firefighter Personal Protective Equipment and SCBA; Firefighter Orientation and Safety; Implementing ICS; Fire Behavior; Ladders; Forcible Entry Tools and Construction Techniques; Rescue and Extrication; Building Search and Victim Removal; Hose Tools, Appliances, Coupling, Loading, Rolling, Lays, Carries; Advancing Water Fire Streams; Ventilation; Fire Control Classes; Vehicle and Wildland Fire Control: Live Burn; Salvage and Overhaul; Firefighter Survival, and RIT.

[29 CFR 1910.156(c)(1)]

[29 CFR 1910.134(e)(5)]
[29 CFR 1910.157(g)(1)]
[29 CFR 1910.132]

First Responder Operational Level (24 hours)

1. *Hazardous Materials for the First Responder* (24 hours)

Any firefighter who remains at the scene and is allowed to take minimal defensive action during an incident involving hazardous materials <u>MUST</u> be trained to this level.

[29 CFR 1910.120(q)(3)(ii)] as per [29 CFR 1910.120(q)(3)(i)] [29 CFR 1910.120(q)(6)(ii)] as per [29 CFR 1910.120(q)(6)(v)]

Respiratory Protection

[29 CFR1910.134 (a)(2)]

A respirator shall be provided to each employee when such equipment is necessary to protect the health of such employee. The employer shall provide the respirators which are applicable and suitable for the purpose intended. The employer shall be responsible for the establishment and maintenance of a respiratory protection program, which shall include the requirements outlined in paragraph (c) of this section. The program shall cover each employee required by this section to use a respirator.

Practices for Respirator Protection

[ANSI Z88.2-1992]

Sec. 8.2 Training frequency

Each respirator wearer shall be trained upon initial assignment and be retrained once every 12 months.

Employee Right to Know

[MN Statute 182.653 Subd. 4b]

(a) Prior to an employee's initial assignment to a workplace where the employee may be routinely exposed to a hazardous substance or harmful physical agent, the employer shall provide training concerning the hazardous substance or harmful physical agent. The employer shall provide additional instruction whenever the employee may be routinely exposed to any additional

hazardous substance or harmful physical agent. The term "routinely exposed" includes the exposure of an employee to a hazardous substance when assigned to work in an area where a hazardous substance has been spilled.

(d) **Training to update the information required to be provided under this subdivision shall be repeated at intervals no greater than one year**.

Bloodborne Pathogens

[29 CFR 1910.1030(g)(2)]

Information and training

(i) The employer shall train each employee with occupational exposure in accordance with the requirements of this section. Such training must be provided at no cost to the employee and during working hours. The employer shall institute a training program and ensure employee participation in the program.

(ii) Training shall be provided as follows:

(A) At the time of initial assignment to tasks where occupational exposure may take place;

(B) At least annually thereafter.

(iv) Annual training for all employees shall be provided within one year of their previous training.

(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

Fire Brigades

[29 CFR 1910.156(c)(2)]

The employer **shall** assure that training and education is conducted frequently enough to assure that each member of the fire brigade is able to perform the member's assigned duties and functions satisfactorily and in a safe manner so as not to endanger fire brigade members or other employees. **All fire brigade members shall be provided with training at least annually**. **In addition, fire brigade members who are expected to perform interior structural firefighting shall be provided with an education session or training at least quarterly.** (See 11 Core Elements)

Employee Right to Know

[MN Statute 182.653 Subd. 4b]

(b) Prior to an employee's initial assignment to a workplace where the employee may be routinely exposed to a hazardous substance or harmful physical agent, the employer shall provide training concerning the hazardous substance or harmful physical agent. The employer shall provide additional instruction whenever the employee may be routinely

exposed to any additional hazardous substance or harmful physical agent. The term "routinely exposed" includes the exposure of an employee to a hazardous substance when assigned to work in an area where a hazardous substance has been spilled.

(e) **Training to update the information required to be provided under this subdivision shall be repeated at intervals no greater than one year**.

Employee Right to Know Standards

[MN Rules 5206.0700(G)(4)]

Training updates must be repeated at intervals of not greater than one year. Training updates may be brief summaries of information included in previous training sessions.

Bloodborne Pathogens

[29 CFR 1910.1030(g)(2)]

Information and training

(i) The employer shall train each employee with occupational exposure in accordance with the requirements of this section. Such training must be provided at no cost to the employee and during working hours. The employer shall institute a training program and ensure employee participation in the program.

(ii) Training shall be provided as follows:

(C) At the time of initial assignment to tasks where occupational exposure may take place;

(D) At least annually thereafter.

(iv) Annual training for all employees shall be provided within one year of their previous training.

(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.