

Feasibility Study for Shared Fire and Emergency Services

Sacred Heart

Renville

Danube

Olivia

Bird Island

Hector

Buffalo Lake

Fairfax

Franklin

Morton,

Minnesota

Winter/Spring 2015



Emergency Services
Consulting International

Table of Contents

Table of Figures	iii
Executive Summary.....	1
Section I – Evaluation of Current Conditions	5
Organizational Overview	6
Governance and Lines of Authority	10
Foundational Policy Documents	12
Organizational Design	14
Budget, Funding, Fees, and Taxation.....	14
Internal Assessment of Critical Issues.....	16
Reporting and Recordkeeping	16
Information Technology Systems	17
Capital Assets and Capital Improvement Programs.....	17
Facilities	18
Apparatus.....	29
Capital Replacement Planning	35
Equipment Replacement and Purchasing.....	37
Staffing and Personnel Management	38
Administrative and Support Staff	38
Operational Staff.....	39
Scheduling Methodologies and Staffing Performance	39
Human Resources Policies	40
Compensation Systems.....	40
Recruitment, Application, and Retention Programs.....	41
Testing, Measurement, and Promotional Processes	43
Service Delivery and Performance.....	44
Service Demand	45
Distribution	49
Resource Concentration	52
Response Performance.....	53
Support Programs: Training	59
Training Observations.....	59
Training Review and Recommendations	64
Support Programs: Fire Prevention, Public Education, and Investigation Programs.....	66
New Construction Code Compliance	66
Existing Occupancy Inspection Practices	67
Public Fire Safety Education.....	67
Fire Cause Investigation.....	67
Section II – Opportunities for Cooperative Efforts	69
Available Partnering Options	69
Complete Autonomy.....	69
Administrative Consolidation	70
Functional Consolidation	70

Operational Consolidation	70
Legal Unification	71
Feasible Options for Shared Services.....	72
Feasibility of Legal Integration of Renville County Fire Departments	72
Functional and Operational Cooperative Efforts Strategies.....	74
Findings, Recommendations, and Plan of Implementation.....	84
Implementation Process	84
Conclusion	88
Appendices	89
Appendix A: Minnesota Board of Firefighter Training and Education Minimum Training Criteria.....	89

Table of Figures

Figure 1: Study Area Base map	6
Figure 2: Population, Area, and Population Density Summary.....	7
Figure 3: Population Density.....	8
Figure 4: Capital and Personnel Resources Summary	9
Figure 5: Summary of Organizational Overview Elements	9
Figure 6: Summary of Lines of Governance and Authority Elements.....	11
Figure 7: Budget Summary.....	15
Figure 8: Budget Distribution (2015)	15
Figure 9: Cost per Capita Comparison	16
Figure 10: Sacred Heart Fire Station	19
Figure 11: Renville Fire Station	20
Figure 12: Danube Fire Station	21
Figure 13: Olivia Fire Station	22
Figure 14: Bird Island Fire Station.....	23
Figure 15: Hector Fire Station	24
Figure 16: Buffalo Lake Fire Station	25
Figure 17: Fairfax Fire Station	26
Figure 18: Franklin Fire Station	27
Figure 19: Morton Fire Station.....	28
Figure 20: Study Area Response Apparatus.....	30
Figure 21: Sacred Heart FD Major Apparatus	30
Figure 22: Renville FD Major Apparatus	31
Figure 23: Danube FD Major Apparatus	31
Figure 24: Olivia FD Major Apparatus.....	32
Figure 25: Bird Island FD Major Apparatus.....	32
Figure 26: Hector FD Major Apparatus	33
Figure 27: Buffalo Lake FD Major Apparatus	33
Figure 28: Fairfax FD Major Apparatus	34
Figure 29: Franklin FD Major Apparatus	34
Figure 30: Morton FD Major Apparatus.....	35
Figure 31: Example Vehicle Replacement Life and Cost	35
Figure 32: Future Apparatus Replacement Summary.....	36
Figure 33: Administrative and Support Positions	38
Figure 34: Operational Positions.....	39
Figure 35: Summary of Officer Annual Stipends.....	41
Figure 36: Personnel Paid-on-Call Rates	41
Figure 37: Summary of Application Processes.....	42
Figure 38: Relief Association Benefit	43
Figure 39: Service Demand by Year	45

Figure 40: Aggregate Service Demand by Month 46

Figure 41: Aggregate Service Demand by Day of Week 46

Figure 42: Aggregate Service Demand by Hour of Day..... 47

Figure 43: Overall Incident Density..... 48

Figure 44: Geographic Service Demand - Structure Fires Highlighted..... 49

Figure 45: ISO Distribution Model 50

Figure 46: ISO Distribution Model City Detail 51

Figure 47: Time-Based Distribution Travel Model 52

Figure 48: Modeled Resource Concentration at 14 Minutes of Travel 53

Figure 49: NFPA 1720 Response Target Summary..... 55

Figure 50: Turnout Time Performance - BIFD 56

Figure 51: Turnout Time Performance - BLFD 56

Figure 52: Turnout Time Performance - DFD..... 56

Figure 53: Turnout Time Performance - FFD 56

Figure 54: Turnout Time Performance - FFRA 56

Figure 55: Turnout Time Performance - HFD..... 56

Figure 56: Turnout Time Performance - MFD..... 56

Figure 57: Turnout Time Performance - OFD..... 57

Figure 58: Turnout Time Performance - RFD 57

Figure 59: Turnout Time Performance - SHFD..... 57

Figure 60: Total Response Time Performance - BIFD 57

Figure 61: Total Response Time Performance - BLFD..... 57

Figure 62: Total Response Time Performance - DFD 57

Figure 63: Total Response Time Performance - FFD..... 58

Figure 64: Total Response Time Performance - FFRA..... 58

Figure 65: Total Response Time Performance - HFD 58

Figure 66: Total Response Time Performance - MFD 58

Figure 67: Total Response Time Performance - OFD 58

Figure 68: Total Response Time Performance - BIRDFD 58

Figure 69: Total Response Time Performance - SHFD 58

Figure 70: Training Program Observations 60

Executive Summary

As a part of the Minnesota State Fire Marshal's Shared Services Grant Program, ten fire agencies in Renville County asked Emergency Services Consulting International (ESCI) to complete a Shared Services Feasibility Study in the winter and spring of 2014. Included were the communities of Sacred Heart, Renville, Danube, Olivia, Bird Island, Hector, Buffalo Lake, Fairfax, Franklin and Morton. This executive summary provides a brief overview of the study process and report findings.

In the report, the reader will find a detailed assessment of current conditions existing in the study agencies, along with the future options that ESCI identifies for their future and assessment of the feasibility of the identified options. First, ESCI evaluates the current conditions that exist in each agency in terms of programmatic, financial, service level, and infrastructure considerations; comparing their existing processes independently, from which a baseline is established to evaluate opportunities for future collaboration.

Following the evaluation of current conditions, the report identifies each of the potential partnership opportunities that are available to the agencies in this instance, along with a discussion of each strategy and its feasibility in Renville County. Finally, the most feasible integration options are analyzed and presented in detail, recommending those with the greatest opportunity for success.

The first section of the report is an *Evaluation of Current Conditions*. In this section the ESCI has completed an analysis of each of the ten agencies as they operate today, as separate organizations. The discussion compares the organizational components in a side by side appraisal. In doing so, the project team considers the relativity of each agency's current practices to those of the other participants to identify duplication and opportunities for greater collaboration, up to and including full integration of agencies. Included in the *Evaluation of Current Conditions* is a comparison of:

- Organizational Composition, Design, Funding and Governance
- Capital Assets and Capital Improvement Planning
- Staffing and Personnel Management
- Service Delivery and Response Performance
- Training Programs
- Fire Prevention Programs

Using this comparison as a baseline, the report identifies the options that are available in the study area in the *Opportunities for Cooperative Efforts* section of the report. The discussion follows a continuum, beginning with a status-quo approach that maintains full autonomy of the existing entities, as well as identification of various administrative, functional, and operational contractual consolidation initiatives. The report continues to explore the opportunities that exist for a more formal unification of the fire departments in the form of merger or legal integration. Specifically, the identified options are:

- Complete Autonomy
- Administrative Consolidation
- Functional Consolidation
- Operational Consolidation
- Legal Unification or Merger

ESCI has observed that the combining of fire departments and emergency medical systems has become a popular and effective option in many instances, as elected officials strive to ensure that efficiencies are being captured, operations are as cost effective as possible, and innovation and technologies are being utilized successfully. In most situations, the motivation to consider cooperative efforts with neighboring jurisdictions is undertaken for reasons including the desire to maintain or enhance current services or service levels, reduce or eliminate future costs, or to avoid duplication.

Having been involved in many consolidation processes in their various forms, ESCI has seen multiple successes. However, we also caution clients that consolidation for the sole purpose of saving money has risk. It is critical that, aside from financial considerations, organizations fit well together, have similar service delivery needs, and share a common vision for how services are to be provided to the citizenry.

In many instances, long-term costs savings through regional cooperation are realized, but not all consolidations ultimately result in saving money. Careful analysis is needed to determine what cost reductions can be gained and whether doing so will maintain or enhance services to the public.

The report continues to identify which of the options listed above prove to be feasible in Renville County, as well as beneficial in terms of gains that may be expected, if shared initiatives are undertaken. The *Feasible Options for Shared Services* section provides a detailed analysis of the identified options.

In evaluating what alternatives may be applicable to the fire departments in this study area, ESCI looked for the following:

- Unnecessary redundancy in station locations
- Duplicative apparatus and staffing deployment approaches
- Administrative staffing overlap and multiple chief officers
- Duplication in support staffing
- Redundancy in support program operations, including training and fire prevention
- Opportunities for substantial economies of scale in regard to purchasing and logistics

Summary of Key Findings

With the above considerations, ESCI evaluated the opportunities that may be found for increased efficiency and reduced cost in Renville County. It was readily apparent that multiple, valuable, gains can be realized through the implementation of the functional and operational consolidation strategies that are listed. These include shared training, collaborative development of regional operating procedures,

enhanced use of mutual and automatic aid, and a number of other function and operation approaches that are detailed in the following report section.

However, in looking beyond the approaches above, the question of taking collaborative efforts to a greater level, in the form of a formal legal integration of the fire departments involved in the study, ESCI does not find that there are advantages to be realized that will result in sufficient gains in terms of operational efficiency or financial savings. Because the subject agencies are small, the geographic service area is large and the majority of the personnel involved are volunteers (representing little personnel cost or savings potential.), the prospective advantages of a more formalized change in governance do not outweigh the challenges involved. Therefore, ESCI does not recommend that the study agencies pursue a legal integration approach.

A final alternative is discussed, that being the formation of a county-wide taxing district. The district would sub contract with fire departments, in a similar manner to what now occurs with the towns served by the study area fire departments. The concept is discussed in further detail.

While ESCI concludes that that legal unification of any two or more of the study agencies does not present sufficient benefits to prove beneficial, a host of other opportunities exist. They are in the form of functional cooperative efforts and include:

- Unification of Standard Operating Guidelines
- Shared Training Practices
- Collaborative Fire Prevention and Public Education
- Implementation of Mutual and Automatic Aid Practices
- Regionalized Incident Command
- Fire Apparatus Purchasing and Replacement Planning
- Shared Volunteer Recruitment and Retention Efforts
- Sharing of Response Personnel

Each of the above is explained in detail, and each is viewed as a feasible approach for these study agencies. ESCI recommends that as many of the functional cooperative strategies be implemented as possible.

Implementation and Next Steps

In closing, ESCI suggests the following next steps to achieve the shared services work moving forward:

- Conduct a visioning session with policymakers to determine whether the organizations want to move forward and, if so, in what manner.
- Invite external stakeholders into the process to advise the policymakers from a community perspective.
- Establish a Joint Implementation Committee (JIC) that will be given the overall responsibility with leadership and management of the planning and implementation process.

- Develop an implementation strategic plan and consider use of neutral third party facilitation.
- Establish implementation planning working groups. Once the working groups are established, they will set their meeting schedules and begin their various responsibilities and assignments. Recommended groups are detailed in the report.
- Establish a regularly scheduled briefing process from the chairs of each working group to the Joint Implementation Committee and from the JIC to the policymakers.
- Establish a communication strategy to keep internal members informed, or act as a clearing house for rumors. Establish a communication strategy to keep the communities and media informed when key milestones have been achieved or a change in direction has occurred. Communication should be positive, transparent, timely, and coordinated.
- Celebrate successes publicly and build momentum.

Section I – Evaluation of Current Conditions

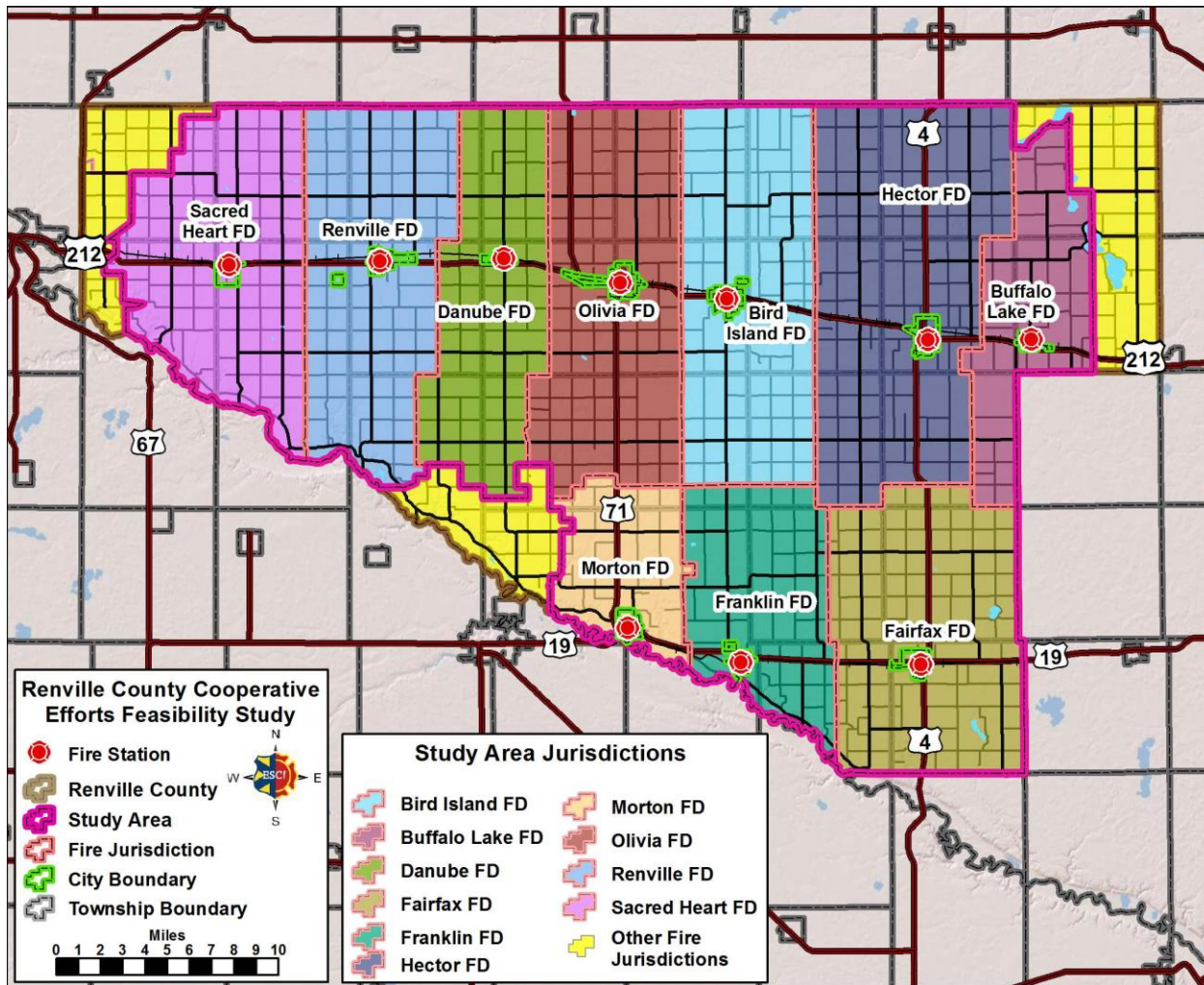
In January of 2015, Emergency Services Consulting International (ESCI) was engaged by ten communities in Renville County, Minnesota to review shared service delivery opportunities and evaluate the feasibility of enhancing the cooperative efforts that are currently in place between the individual communities, regarding the provision of fire and emergency services.

The communities included in the study span all of Renville County and include the following cities:

- Sacred Heart – Sacred Heart Fire Department (SHFD)
- Renville – Renville Fire Department (RFD)
- Danube – Danube Fire Department (DFD)
- Olivia – Olivia Fire Department (OFD)
- Bird Island – Bird Island Fire Department (BIFD)
- Hector – Hector Fire Department (HFD)
- Buffalo Lake – Buffalo Lake Fire Department (BLFD)
- Fairfax – Fairfax Fire Rescue Ambulance (FFRA)
- Franklin – Franklin Fire Department (FFD)
- Morton – Morton Fire Department (MFD)

The following figure illustrates the study area with each study agency's response area.

Figure 1: Study Area Base map



This report serves as the culmination of that analysis and begins with a general overview of each of the study agencies. The overview serves two purposes: first, it provides the reader who is not closely associated with each of the fire agency’s operations with an overview of how the organization is configured and how it compares to other fire departments in the study area. Secondly, the process assures that ESCI is fully armed with accurate baseline information, upon which the balance of the study report is configured.

Organizational Overview

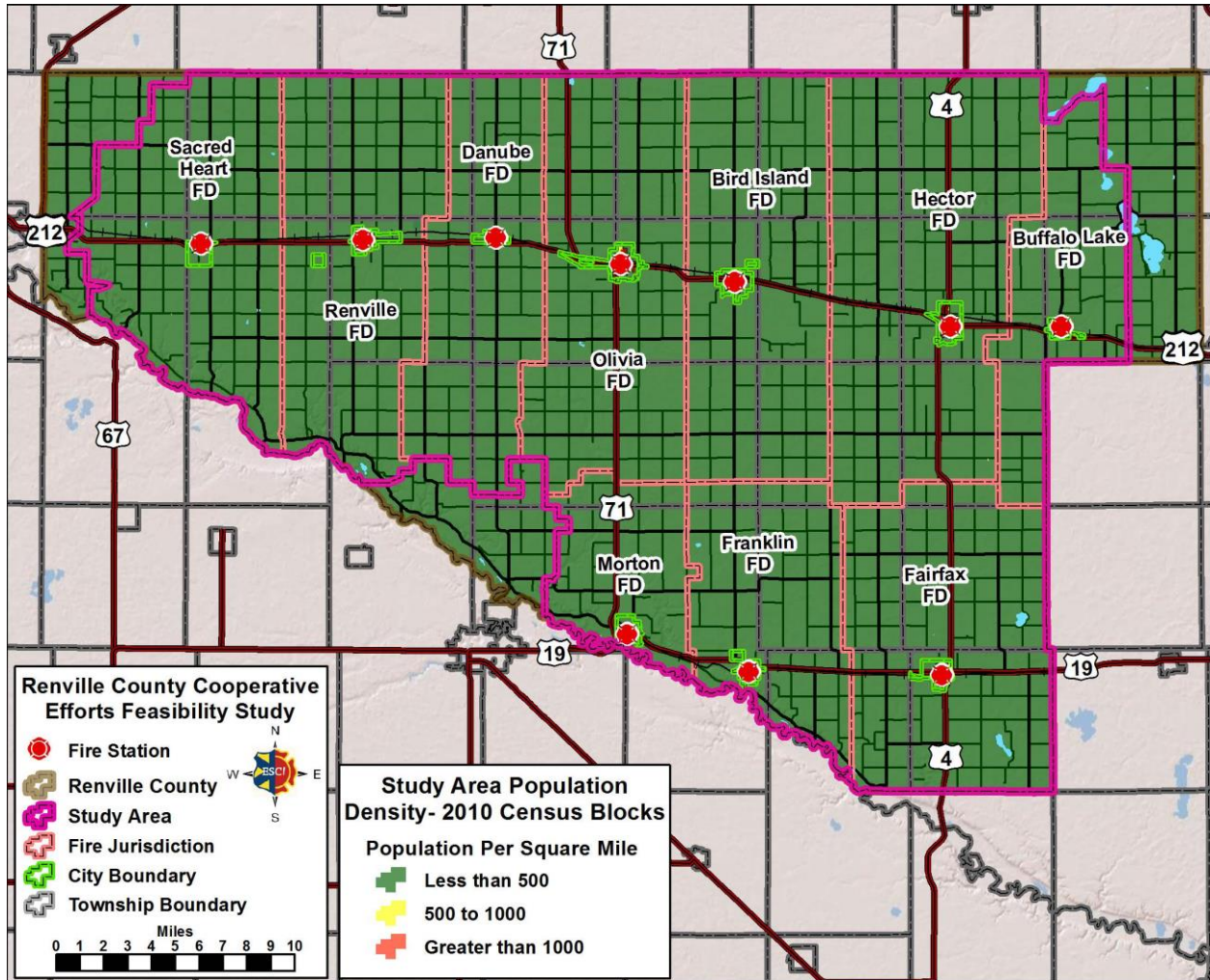
Each of the study fire departments serve a response area that varies in geography, population, and risk. The following figure summarizes each agency’s response area, population, and population density.

Figure 2: Population, Area, and Population Density Summary

	Population	Area	Density
Bird Island	1,577	103.00	15.31
Buffalo Lake	1,111	57.00	19.49
Danube	945	78.00	12.12
Fairfax	1,869	106.00	17.63
Franklin	811	65.00	12.48
Hector	1,874	137.00	13.68
Morton	663	40.00	16.58
Olivia	3,146	106.00	29.68
Renville	1,859	100.00	18.59
Sacred Heart	1,099	98.00	11.21
Total	14,954	890	167

As seen in the figure above, the total population served is 14,954 based on 2010 census data. This population has increased to 15,166 as of the 2013 census estimate for Renville County. The following figure illustrates that each of the study agencies serves a population density below 500 per square mile, placing it in the rural category based on National Fire Protection Association (NFPA) criteria.

Figure 3: Population Density



Each of the study agencies operate from a single fixed facility (fire station) and operate a number of specialized pieces of apparatus. The departments are all volunteer/paid-on-call and no full-time career personal are employed. The following figure summarizes the capital and personnel resources of each department.

Figure 4: Capital and Personnel Resources Summary

	Stations	Engines	Tankers	Brush	Squad	Rescue/ Other	Total Personnel
Bird Island	1	2	1	1	0	1	21
Buffalo Lake	1	2	2	2	0	0	30
Danube	1	1	2	2	0	0	20
Fairfax	1	2	1	1	0	0	21
Franklin	1	2	1	1	0	0	20
Hector	1	2	1	1	1	0	21
Morton	1	1	1	2	0	0	18
Olivia	1	3	1	1	0	1	28
Renville	1	2	1	1	0	1	25
Sacred Heart	1	2	2	2	1	1	25
Total	10	19	13	14	2	4	229

The following figure summarizes the primary risk types within each community as well as general agency comparative information regarding formation, services provided, and Insurance Services Office (ISO) ratings.

Figure 5: Summary of Organizational Overview Elements

	Sacred Heart FD	Renville FD	Danube FD	Olivia FD	Bird Island FD
Primary Risk Types	Rural, Light Commercial	Rural, Light Commercial Agricultural	Rural, Agricultural	Rural, Light Commercial, Agricultural	Rural, Light Commercial Agricultural
Community Growth Level	Low	Low	Low	Low	Low
Year Agency Formed	c. 1900	1891	1946	1893	c. 1918
Services Provided	Fire suppression, vehicle extrication, confined space (grain bin)	Fire suppression, vehicle extrication, confined space (grain bin), hazmat operations level	Fire suppression, confined space (grain bin)	Fire suppression, vehicle extrication, confined space (grain bin)	Fire suppression, vehicle extrication, confined space (grain bin)
Latest ISO Rating	7/9	6		5	6/9
Year Last ISO Rating Conducted		2005		2014	2014

	Hector FD	Buffalo Lake FD	Fairfax FD	Franklin FD	Morton FD
Primary Risk Types	Rural, Agricultural	Rural, Agricultural	Rural, Agricultural, Light Commercial	Rural, Agriculture, Light Commercial	Rural, Agriculture
Community Growth Level	Low	Low	Low	Low	Low
Year Agency Formed	1896	1896	1882	1924	1888
Services Provided	Fire suppression, vehicle extrication, basic confined space (operations)	Fire suppression, vehicle extrication, cold water rescue (surface)	Fire suppression, BLS ambulance transport, vehicle extrication, confined space (grain bin)	Fire suppression, vehicle extrication, first responder	Fire suppression, first response, vehicle extrication, confined space (grain bin)
Latest ISO Rating	7/9	7	6/9	7/9	6/9
Year Last ISO Rating Conducted	2013	2006	2013	2006	2013

Governance and Lines of Authority

All organizations function under certain lines of authority that allow them to function, provide oversight, and encourage transparency, particularly regarding fiscal responsibilities. Each of the study agencies is a municipal department operating under their respective municipal governments. The following figure summarizes those lines of authority as well as the individual jurisdictions served.

Figure 6: Summary of Lines of Governance and Authority Elements

	Sacred Heart FD	Renville FD	Danube FD	Olivia FD	Bird Island FD
Municipality Name	City of Sacred Heart	City of Renville	City of Danube	City of Olivia	City of Bird Island
Title of Governing Authority or Board	City Council	City Council	City Council	City Council	City Council
Title of Governing Body Executive	Mayor	Mayor	Mayor	Mayor	Mayor
Agency Authorization Documents	City Charter	City Charter	City Charter	City Charter	City Charter
Jurisdictional Limits	City of Sacred Heart, Sacred Heart TWP, Ericson TWP, Wayne TWP, Hawk Creek TWP	City of Renville, Flora TWP, Emmet TWP, Crooks TWP, Sacred Heart North TWP, Sacred Heart South TWP, Ericson TWP	City of Danube, Flora TWP, Henryville TWP, Crooks TWP, Winfield TWP, Troy TWP, Emmet TWP	City of Olivia, Kingman TWP, Bird Island TWP, Norfolk TWP, Winfield TWP, Troy TWP, Henryville TWP	City of Bird Island, Bird Island TWP, Kingman TWP, Osceola TWP, Melville TWP, Norfolk TWP, Palmyra TWP

	Hector FD	Buffalo Lake FD	Fairfax FD	Franklin FD	Morton FD
Municipality Name	City of Hector	City of Buffalo Lake	City of Fairfax	City of Franklin	City of Morton
Title of Governing Authority or Board	City Council	City Council	City Council	City Council	City Council
Title of Governing Body Executive	Mayor	Mayor	Mayor	Mayor	Mayor
Agency Authorization Documents	City Charter	City Charter	City Charter	City Charter	City Charter
Jurisdictional Limits	City of Hector, Hector TWP, Brookfield TWP, Martinsburg TWP, Osceola TWP, Palmyra TWP, Melville TWP	City of Buffalo Lake, Hector TWP, Martinsburg TWP, Graffton TWP, Boone Lake TWP, Preston Lake TWP	City of Fairfax, Camp TWP, Martinsburg TWP, Wellington TWP, Cairo TWP, Ridgely TWP, Bandon TWP	City of Franklin, Eden TWP, Sherman TWP, Bandon TWP, Birch Cooley TWP, Camp TWP, Norfolk TWP, Palmyra TWP	City of Morton, Beaver Falls TWP, Henryville TWP, Norfolk TWP, and Birch Cooley TWP

Foundational Policy Documents

Organizations, regardless of size or function, must maintain certain documents that provide for oversight and direction. Within fire departments, these documents typically begin with municipal policies and/or ordinances that give the organization the authority to function. In addition, fire departments quite commonly have comprehensive standard operating guidelines and internal policies and procedures that give employees direction regarding personnel, operations, and general rules and regulations. Foundational policy documents are those books, manuals, and handbooks that provide personnel with written and formal direction on how the department operates as well as to guide personnel issues, routine behavior, and scene command and control. A list of common operational policies/procedures is provided in the following figure.

<i>Non-Emergency Ops</i>	
<i>Station Operations</i>	<i>Apparatus Operations</i>
Station Operations - General	Apparatus Maintenance
Station Maintenance	Vehicle Out of Service Procedure
Station Alerting System	Testing Apparatus Pumps
Purchasing Procedures	Driving Emergency Vehicles
National Flag/National Anthem	Warning Devices
Equipment Loan Out	Apparatus Operational Limits
Yard Maintenance	Fueling Procedure
Emergency Power Systems	Reserve Apparatus
Miscellaneous Station Duties	Apparatus Snow Chains
Personal Locker Assignments	Apparatus Movement to Training Center
Telephone Use	Driver Operator - Pump Certification
Station Libraries	<i>Public Education</i>
Scheduling Use of Media Center	General Policy
Energy Conversation	Public Education Scheduling Policy
<i>Equipment Operations</i>	Public Relations
Equipment Repairs	Station Tours
Equipment Out of Service	Fire Extinguisher Demonstrations
Color Coding Equipment	Engine Demonstrations
Radio Repair Procedure	Special Activities Engine - Engine One
Pressure Vessel Maintenance	Radio Controlled Education Robots
Hose Maintenance	<i>Fire Prevention</i>
Self-Contained Breathing Apparatus (SCBA)	Fire Company Fire Prevention Inspections -
Preventive Maintenance - SCBA's	General
Respiratory Breathing Air Systems	Fire Prevention Inspection Guideline
Ladder Maintenance	Fire Investigation
Nozzle Maintenance	Related Codes
Fire Extinguishers	Pre-Fire Plans
Hydrant Maintenance	
Hand Tool Maintenance	
Power Tool Maintenance	

Emergency Ops	
Alarms and Response Procedures	Command Operations
Alarm Response Procedures	General Strategic Guidelines
Alarm Response Areas	Incident Management System
Automatic Aid	Command Post Procedures
Mutual Aid	Welfare
Contractual Agreements	Helicopter Operations
	Public health Considerations
Fire Company Operations	Incident Critique
Standard Company Operations	Area Evacuation
First to Arrive Duties	Incident Command Resource Request
Returning Companies to Service	Building Evacuation
Use of Civilians	
Fire Scene Investigations	Firefighting
High Volume Smoke Removal System	Metal Fires
Personal Alert Safety Devices	Structure Fires (General)
On-Scene Equipment Inventory	Operations in Sprinklered Buildings
Personnel Accountability System	On-Site Auxiliary Fire Equipment
2 IN 2OUT	High Rise Fires
Initial Fireground Operations	Wildland Fires
Fluorescent Safety Vests	Vehicle Fires
Highway Incident Safety	Fire Stream Management
	Industrial Dumpster Fires
Medical Emergencies	Fire Watch Detail
Operational Guidelines for Medical Aid Responses	Fires in US Mailboxes
Operations with Ambulance Personnel	Special Local Hazards
Emergency Medical Technician - Defibrillator (EMT-D)	High Rise Pack
Major Medical Incidents	Bowstring Truss Roof - Operations Procedures
Triage	Carbon Monoxide Hazards
Exposure to Infectious Diseases and Hazardous Materials	Thermal Image Camera
Suspected Drug Overdose	
Animal Bites	Electrical Emergencies
Vial of Life and Medic Alert Tags	Electrical Emergency Operations
Attempted Suicide	
Suspected Homicide	Rescue Operations
DOA (Dead on Arrival)	Vehicle Rescue and Extrication
Suspected Child Abuse	Life Line Operations
Suspected Sexual Assault	Rescue from Machinery
Hospital Disaster Notification	Escalator Emergencies
EMS Reports	Elevator Emergencies
EMS Radio Procedures	Cave-in and Manhole Rescues
Drug Box Exchange Policy	Building Collapse
BLS Rules and Regulations	Rescue at Structure Fires
ALS Rules and Regulations	

<i>Emergency Ops</i>	
<i>Transportation Emergencies</i>	<i>Hazardous Materials Incidents</i>
Interstate Operations	Hazardous Materials (General)
Railroad Emergencies	Flammable Fuel Spill (Liquid or Gas)
Aircraft Emergencies	LPG Emergencies
	Fumigation Emergencies
	Explosives and Bombs
	PCB's
	Pesticide Procedures
	Radioactive Materials
	Natural Gas Filled Structures - No Fire
	Natural Gas Fed Fire - Inside Structure
	Broken Natural Gas Main - Fire
	Broken Natural Gas Main - No Fire

The study departments are severely lacking in their formal operational policies and procedures. While some of the departments have minimal written policies consisting of one or two pages, there is a dire need of a more formalized system of standard operating guidelines.

Organizational Design

Fire departments, dependent upon size, typically follow a fairly narrow, top-down organizational structure. This type of structure ensures that chain of command is clear and that each member knows to whom they should report. In most organizational theory models, span of control for any supervisor should be limited to between four and six individuals. This model evolved from historical military command structures and is intended for high-stress environments. Many emergency services organizations have adopted this model for reducing span of control with significant success.

Based on the small size of each of the study agencies, none are organized in clear operating divisions nor have assigned specific program managers. Rather, the fire chief and their respective officers are tasked with the overall operation of their organizations with additional duties assigned, such as training.

Budget, Funding, Fees, and Taxation

The fire service is dependent upon sufficient funding to provide the appropriate facilities, apparatus, and staffing to support service delivery. As mentioned previously, each of the study departments is a municipal organization and, as such, receives funding through their respective municipal general fund tax levy. The following figure summarizes the last three years of budgeted expenditures for the study agencies.

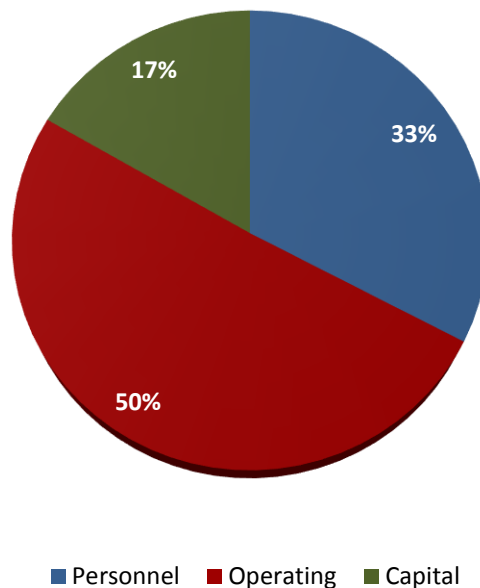
Figure 7: Budget Summary

	2013	2014	2015
Buffalo Lake	\$59,960	\$62,350	\$64,300
Hector*	\$112,988	\$67,837	\$73,337
Danube	\$25,802	\$30,402	\$35,491
Olivia	\$99,095	\$71,550	\$88,250
Sacred Heart	\$60,645	\$62,641	\$56,098
Renville	\$65,550	\$64,850	\$61,282
Bird Island	\$87,400	\$88,400	\$94,400
Morton*	\$160,765	\$66,399	\$64,650
Franklin	\$49,821	\$48,056	\$53,256
Fairfax	\$96,844	\$70,870	\$75,188
Total	\$818,870	\$633,355	\$666,252

*HFD and MFD includes substantial capital expenditures during 2013

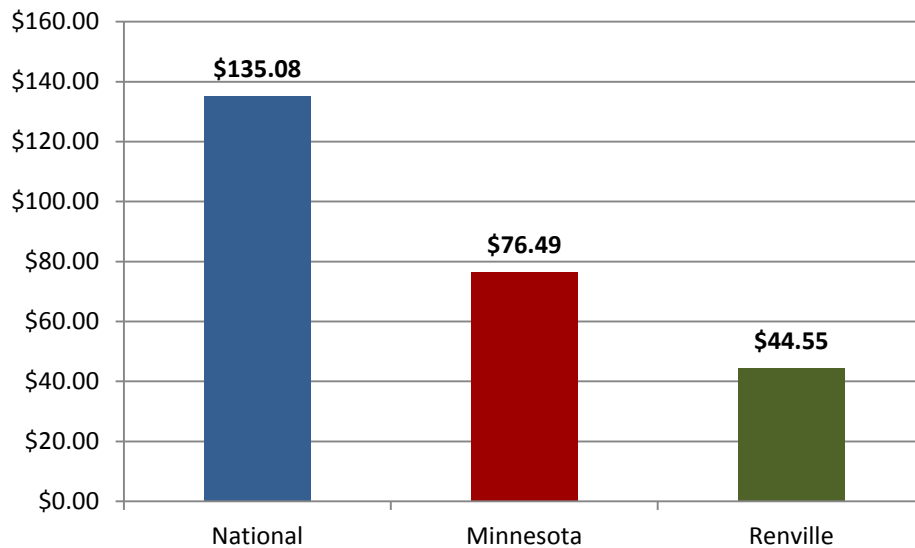
Based on the 2015 adopted budget for the system as a whole, a majority of expenditures will be for general operating costs. This is to be expected for volunteer/paid-on-call departments that do not pay full-time career personnel. The following figure provides an illustration of how funds are distributed across the three primary categories of personnel, operations, and capital expenditures.

Figure 8: Budget Distribution (2015)



Based on total budget compared to population, Renville County has a significantly lower per capita cost for fire protection as compared to the national and Minnesota averages as illustrated in the following figure.

Figure 9: Cost per Capita Comparison¹



Internal Assessment of Critical Issues

During interviews with elected officials, appointed staff, and fire department personnel, questions were posed as to what the current critical issues are facing the departments today. In addition, the stakeholders were asked their opinion of the main future challenges of the system. The following were the predominant responses to each question.

Critical Issues

1. Adequate staffing for daytime emergency responses
2. Lack of a formal equipment replacement plan
3. Limited training opportunities

Future Challenges

1. Potential for declining volunteerism
2. Aging equipment and no replacement funding
3. Increasing training demands on volunteers

Reporting and Recordkeeping

Records management is a critical function to any organization. A variety of uses are made of written records and, therefore, their integrity must be protected. State law requires public access to certain fire and EMS department documents and data. The Health Insurance Portability and Accountability Act (HIPAA) includes regulations that require all individually-identifiable health care information be protected to ensure privacy and confidentiality when stored, maintained, or transmitted.

¹ "How Does Minnesota Compare?" Fiscal Year 2012 Comparisons. December 2014. P. 33.

Since the departments have little in the way of formal standard operating guidelines, there are no written documents that provide guidance on reporting and recordkeeping. While each department enters incident data into an internal incident reporting system that is then transferred to the state, patient data from emergency medical and first response incidents is not properly safeguarded. Each department should implement a formal policy that ensures that all records are properly maintained and protected.

Information Technology Systems

Modern emergency services agencies, including fire departments, are becoming ever more dependent upon technology to assist them in meeting their responsibilities and service demands. These technologies begin with the telephone communications system within the jurisdiction. Emergency (and some non-emergency) calls for service are typically routed through a community 9-1-1 system to a centralized Public Safety Answering Point (PSAP). This PSAP then either dispatches the appropriate resources or transfers the caller to a more appropriate center. Information from the caller is usually automatically received by the PSAP through Automated Number Information/Automated Location Information (ANI/ALI) into the emergency phone system. This information is then transferred into a Computer Aided Dispatch (CAD) system, which serves as a database and assistive dispatch technology.

CAD systems take on many forms and can be relatively simple or extremely complex computer networks that include mobile data terminals in response apparatus and many other assistive devices. CAD systems are intended to provide organizations with a formal record of an incident that will include timestamps associated with each incident. Once a response is completed, organizations can use one of any number of Records Management Systems (RMS) to record incident specific information.

RMS programs, like CAD systems, can take on many forms and several standard programs are available commercially. Unlike CAD systems, these RMS programs are intended to record incident specifics rather than dispatch specifics. For example, an incident may be dispatched as a structure fire and recorded so in CAD as such but, in reality, the incident was simply smoke from something left on the stovetop. This difference would be recorded in the department's RMS. In addition, the RMS is used to track incident staffing as well as a number of other elements that should be submitted to state or federal agencies for larger scale data analysis.

Each study department uses ImageTrend incident reporting software that is NFIRS compliant. Incident information is entered into the system after each incident and the data is periodically transferred to the state fire marshal for reporting. Other than this transfer of incident information, no networking of computers has been established and there is no server redundancy or back-ups of critical information.

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).

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.

Each of the fire departments included in the study operated from a single fire station. ESCI toured each of the stations operated by the fire departments, resulting in the observations listed in the following figures.

Figure 10: Sacred Heart Fire Station



The Sacred Heart Fire Station consists of four, double- depth fire apparatus bays, all of a back-in configuration.

There are no residential facilities in the station for 24-hour response personnel. A good sized meeting room is present with a small kitchen and the only office space is a desk in the meeting room area. The station is in very good condition and has been well maintained.

The building houses two engines, two tankers, an equipment vehicle, a grass unit, and a rescue vehicle.

Survey Components	Observations
Structure	
Construction type	Masonry, built on on-grade concrete slab with a steel frame, flat roofing system
Date	2005
Seismic protection/energy audits	When designed
Auxiliary power	Automatic starting emergency generator
Condition	Excellent
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is appropriately configured for mixed gender use, is ADA accessible, and is adequately designed for its intended use
Future viability for shared service considerations	Excellent with room for future expansion, if needed
Accommodations	
Exercise/workout	None
Kitchen/dormitory	A small kitchen is adjacent to the meeting room
Lockers/showers	None
Training/meetings	A meeting room is well appointed and accommodates approximately 30 students
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 11: Renville Fire Station



The Renville Fire Station is constructed of a combination of wood frame and masonry design. There are three, back-in apparatus bays which are double I depth and house two fire engines, one tanker, two grass fire vehicles and a rescue unit.

As a volunteer station, no residential facilities are in the station. A meeting room seats about 50 students and includes a small kitchen area.

The station is in fair condition overall, having been converted from a bus garage in the past. It appears to be well cared for

Survey Components	Observations
Structure	
Construction type	Wood frame and masonry, concrete slab with a wood frame, pitched, roof
Date	Date unknown
Seismic protection/energy audits	None
Auxiliary power	Portable generator only
Condition	Fair
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant and storage space is very limited
Future viability for shared service considerations	Adequate for current use, however there is little room for future expansion
Accommodations	
Exercise/workout	None
Kitchen/dormitory	A small kitchen is adjacent to the meeting room
Lockers/showers	None
Training/meetings	A meeting room seats approximately 50 students and is adequately equipped
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 12: Danube Fire Station



The city of Danube is served by a single fire station, consisting of five, single-depth apparatus bays. It is a steel frame, steel clad structure that is in generally good condition.

In the station is one fire engine, two grass vehicles, and two tankers.

The station is in good condition overall. It was constructed in 1986, has been well maintained, and is fully serviceable, absent significant maintenance concerns.

Survey Components	Observations
Structure	
Construction type	Steel frame walls and roof, built on grade on a concrete slab
Date	1986
Seismic protection/energy audits	None
Auxiliary power	None
Condition	Good
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant and storage space is limited
Future viability for shared service considerations	The apparatus bays are full to capacity and there is no room for future expansion
Accommodations	
Exercise/workout	None
Kitchen/dormitory	A partial kitchen is in the meeting room. There are no residential accommodations.
Lockers/showers	None
Training/meetings	A training room seats approximately 40 students
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 13: Olivia Fire Station



The city of Olivia and the Olivia Fire Department share a single building. The fire department portion has three apparatus bays, all of which are double in depth and back-in configuration.

Originally built in 1966, that station appears to be in good condition and no significant maintenance concerns were reported. The facility contains three fire engines, a tanker, and a grass vehicle, as well as one rescue unit.

Survey Components	Observations
Structure	
Construction type	Masonry walls and wood frame roof structure, built on grade on a concrete slab
Date	1966
Seismic protection/energy audits	Energy audit for lighting was performed. No other audits.
Auxiliary power	An automatically starting backup generator is present
Condition	Good
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant and storage space is limited
Future viability for shared service considerations	The apparatus bays are full to capacity and there is no room for additional vehicles in the future
Accommodations	
Exercise/workout	None
Kitchen/dormitory	A small kitchen is shared with city hall and adjacent to the meeting room. There are no residential accommodations.
Lockers/showers	None
Training/meetings	A small classroom area can seat approximately 30 students
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 14: Bird Island Fire Station



The Bird Island Fire Station is in a shared building with the city of Bird Island offices and includes four, single depth apparatus bays. Constructed in 1961, the station is in fair to good condition, however, it is filled to capacity with no room for future expansion. No significant maintenance concerns were reported

The station houses two fire engines, two tankers (water tenders), a grass vehicle, and an equipment van.

Survey Components	Observations
Structure	
Construction type	Masonry walls and wood frame roof structure, built on a concrete slab
Date	1961
Seismic protection/energy audits	None
Auxiliary power	None
Condition	Fair to good
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant and storage space is limited
Future viability for shared service considerations	The apparatus bays are full to capacity and there is no room for additional vehicles in the future
Accommodations	
Exercise/workout	None
Kitchen/dormitory	A kitchen is shared with city hall and adjacent to the meeting room. There are no residential accommodations.
Lockers/showers	None
Training/meetings	A large meeting room, shared with city hall, can accommodate 100 people for training and meetings
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 15: Hector Fire Station

Hector is served by a good sized fire station that includes four, back-in style, apparatus bays, housing two fire engines, a tanker, a rescue vehicle and a grass fire unit. It is of steel frame construction and was converted for fire department use from an older building at a date that is not known.



No significant maintenance concerns were identified by fire department personnel and the structure appears to be in very good condition.

Survey Components	Observations
Structure	
Construction type	Steel frame, steel clad, walls and roof structure
Date	Unknown
Seismic protection/energy audits	None
Auxiliary power	Portable generator only
Condition	Very good
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant. Adequate storage space is available.
Future viability for shared service considerations	The apparatus bays are reaching capacity, however there is some room for additional vehicles in the future
Accommodations	
Exercise/workout	None
Kitchen/dormitory	There are no residential accommodations or kitchen facilities.
Lockers/showers	None
Training/meetings	A well-appointed classroom is capable of accommodating about 25 people. Two offices are also present.
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 16: Buffalo Lake Fire Station



The fire station in Buffalo Lake is a newer facility, constructed in 1997 and is in excellent condition overall. Three, double-depth apparatus bays containing a fleet of vehicles including a fire engine, one well-equipped combination rescue/engine, three tankers and two grass fire vehicles. An additional bay in the back of the station houses an ambulance that is not operated by the fire department.

The structure is of wood frame construction and does not currently exhibit any significant maintenance challenges.

Survey Components	Observations
Structure	
Construction type	Wood frame walls and roof structure. Composition room covering.
Date	1997
Seismic protection/energy audits	Only when originally designed
Auxiliary power	A manually started generator is present
Condition	Excellent
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant. Adequate storage space is available.
Future viability for shared service considerations	There is some room for future expansion, but limited
Accommodations	
Exercise/workout	None
Kitchen/dormitory	There are no residential accommodations. A nice kitchen is adjacent to the meeting room.
Lockers/showers	None
Training/meetings	A good sized, well-appointed classroom is present. Two offices are also in place.
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 17: Fairfax Fire Station



Sharing a building with the city of Fairfax City Hall, the Fairfax Fire Station is comprised of six, single-depth apparatus bays, all of back-in configuration. The building was constructed in 1965, but despite its age, appears to have been well maintained and is in good condition.

In the facility is a fire engine, one combination engine/tanker, a tanker, a grass vehicle and two ambulances that are operated by the fire department.

Survey Components	Observations
Structure	
Construction type	Masonry building with a steel frame, flat, roof structure
Date	1965
Seismic protection/energy audits	Only when originally designed
Auxiliary power	None
Condition	Good
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant. Storage space is very limited.
Future viability for shared service considerations	The station is adequate for its current use, however, there is no room for future expansion
Accommodations	
Exercise/workout	None
Kitchen/dormitory	There are no residential accommodations. A small kitchen is adjacent to the meeting room.
Lockers/showers	None
Training/meetings	A meeting/classroom area has room for about 20 students. There are no offices.
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 18: Franklin Fire Station



In the city of Franklin, the fire department operates from a four bay fire station of steel frame construction. That station was originally constructed in 1984, and in 2004, an addition and remodeling was completed. The building is in good condition and has some room for future expansion.

The Franklin Fire Department operates two fire engines, one tanker and a single grass vehicle out of the station.

Survey Components	Observations
Structure	
Construction type	Steel frame, steel clad, building with a steel frame, pitched, roof structure
Date	1984 with an addition in 2004
Seismic protection/energy audits	None
Auxiliary power	None
Condition	Good
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant. Storage space is limited.
Future viability for shared service considerations	The station is adequate for its current use. There is some, though limited room for expanded future use.
Accommodations	
Exercise/workout	None
Kitchen/dormitory	There are no residential accommodations or kitchen facilities
Lockers/showers	Showers are located in the bathroom
Training/meetings	A well-appointed classroom area has room for about 20 students. One desk is in the classroom and there are no other offices.
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Figure 19: Morton Fire Station



The Morton Fire Station is small and aging. The facility dates back to 1958 and has only two apparatus bays and a small meeting area in the rear of the building. Inside is an engine, a tanker, a grass fire vehicle, a first responder vehicle and a tracked all-terrain vehicle which is configured for grass fire fighting.

Due to lack of space, vehicles are parked very close together and there is little room to walk between equipment. The building is in poor condition overall.

Survey Components	Observations
Structure	
Construction type	Masonry block and steel siding and roof
Date	1958
Seismic protection/energy audits	None
Auxiliary power	None
Condition	Poor
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not ADA compliant. Storage space is extremely limited.
Future viability for shared service considerations	The station is marginally adequate for its current use and provides no room for future expansion of operations.
Accommodations	
Exercise/workout	None
Kitchen/dormitory	There are no residential accommodations or kitchen facilities
Lockers/showers	None
Training/meetings	A small meeting area can seat 15 to 20 people.
Protection Systems	
Sprinkler system	The station is not protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	None

Fire stations in the study area vary broadly from several that are reasonably new and in good condition to others that are aging and due for replacement. Many of the stations observed are close to or have already reached their maximum capacity in terms of room for future expansion that can be expected as workload and service demand increases. Of particular concern is the station in Morton. It was constructed in 1958 and is clearly due for substantial upgrades or replacement.

From the perspective of potential shared service delivery, it is important that fixed facilities, like fire stations, be carefully taken into consideration, depending on the degree to which the agencies may elect to combine future efforts. If the fire departments will remain separate, as independent agencies that simply collaborate with each other, the concern is lessened. However, when evaluating more structured options for future shared service delivery initiatives, including legal unification, fire stations and their continued viability become a critical factor. If agencies choose to combine formally, one with comparatively new and adequate fixed facilities may inadvertently inherit a financial liability that comes with another fire department that has capital assets. Due to their considerable expense, the potential financial liability that may be realized in regard to some facilities must not be discounted.

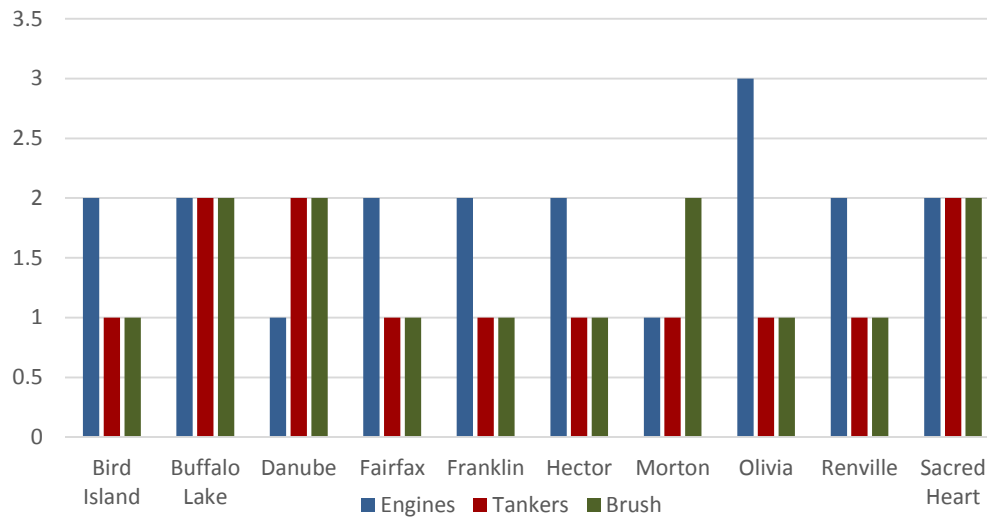
Apparatus

Response vehicles are the most important resource of the emergency response system, second only to personnel. If emergency responders cannot arrive at an incident quickly and safely due to unreliable transportation, or if the equipment does not function properly, the delivery of emergency service is likely compromised.

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

A summary of the participating agency's emergency response vehicle fleet is provided in the following table.

Figure 20: Study Area Response Apparatus



As shown above, each of the agencies is equipped in a similar manner, with generally comparable numbers of fire engines, water tankers, and brush vehicles.

ESCI reviewed the apparatus present in the study area fire stations and made the following observations:

Sacred Heart FD

The Sacred Heart Fire Department operates a fleet of two fire engines, one of which is a combination engine/tanker, two tankers, a grass fire unit, a rescue that also has grass firefighting capability a rescue unit and an equipment vehicle. All appear to be well maintained and fully serviceable. They are detailed in the following figure.

Figure 21: Sacred Heart FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	1994	GMC	Good	2	1,000	1,000
Engine 2	Pumper/Tanker	2008	International	Very Good	2	1,250	3,000
Tanker 1	Tanker	1996	GMC	Good	2	-	2,000
Tanker 2	Tanker	1985	Chevrolet	Fair	2	-	3,000
Grass 1	Grass/Brush	1997	Ford F 350	Good	2	100	300
Rescue 1	Grass/Rescue	2006	Ford F 350	Good	2	100	300
Equipment	Equipment	1988	Ford Econoline	Fair	-	-	-

Sacred Heart’s major apparatus range in age from 7 to 30 years with an average age of 18.7 years. The primary units are newer and in good condition. The 1985 tanker is approaching its expected service life.

Renville FD

The Renville Fire Department has five six response vehicles including two engines, a water tender, two grass units and a rescue truck, as detailed below.

Figure 22: Renville FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Rural Pumper	Engine	1996	Freightliner	Good	2	1,250	750
City Pumper	Engine	1976	Ford	Poor	2	750	350
Tanker	Tanker	1986	Chevrolet	Fair	1	-	1,750
Grass (1)	Grass	1991	Chevrolet	Fair	2	250	250
Grass (2)	Grass	2013	Ford F 550	Excellent	4	250	250
Rescue	Rescue/ personnel	2001	GMC 5500	Good	1	-	-

With an average age of 21, Renville equipment ranges in age from two to 39 years. Some units have reached or exceeded their acceptable service lives and are due for replacement.

Danube FD

Listed below is Danube Fire Department’s major apparatus. There are two engines, a heavy rescue, and two brush units in the fleet.

Figure 23: Danube FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	1992	GMC	Good	2	1,000	1,000
Tanker 1	Tanker	2001	Chevrolet	Good	2	150	2,000
Tanker 2	Tanker	1991	International	Fair	2	120	2,000
Grass 1	Grass	1999	Ford	Good	2	150	250
Grass 2	Grass	1978	Dodge	Poor	2	250	250

Grass 2 is 37 years of age and has exceeded what is typically considered an appropriate service life. Tanker 2 is 24 years old and will be due for replacement in the relatively near future. The other vehicles are somewhat newer and in generally good condition, with an average age of 17.6 years when the older unit is removed from the calculation.

Olivia FD

The Olivia Fire Department operates from a total of six vehicles, including three engines, a tanker, a grass fire vehicle and a rescue unit.

Figure 24: Olivia FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	1995	International	Good	2	1,250	900
Engine 2	Engine	2013	International	Excellent	2	1,500	750
Engine 3	Engine	1971	Ford	Fair	2	1,000	-
Tanker	Tanker	1994	International	Good	2	250	2,000
Grass	Grass/Brush	2002	Ford F 350	Good	2	250	250
Rescue	Rescue	1990	International	Good	1	-	-

Olivia’s equipment ranges in age from 2 to 44 years in age, with an average age of 20.8 years. While the vehicles are well cared for and properly maintained, a number will be due for replacement in the near future or have already exceeded their service lives.

Bird Island FD

Six vehicles constitute the Bird Island fleet of response apparatus. Two are engines, another a water tanker, as well as a grass unit, equipment van and reserve water tanker.

Figure 25: Bird Island FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 453	Engine	1985	Ford	Good	2	1,250	1,250
Engine 455	Engine	2004	Peterbilt	Excellent	5	1,250	1,000
Tender 458	Tender(tanker)	2006	GMC	Excellent	1	-	1,800
Tender 459	Reserve Tanker(tanker)	1980	Chevrolet	Poor	2	540	1,500
Grass Rig 454	Grass/Brush	2007	Ford	Excellent	2	200	250
Equipment 456	Equipment van	1997	Ford	Good	2	-	-

The department’s newest engine is 11 year of age and is in excellent condition. The only other structural fire engine, however, is 30 years in age and is reaching what is generally considered to be the end of its service life. The average age of the total apparatus fleet is 18.5 years.

Hector FD

The Hector Fire Department operates five fire apparatus. The units are in good to excellent condition overall and it is readily apparent that the agency cares for its equipment carefully.

Figure 26: Hector FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	2006	International	Excellent	3	1,200	1,000
Engine 2	Engine	1994	Freightliner	Good	3	1,200	1,000
Tanker	Tanker	1993	GMC	Good	2	150	2,000
Grass rig	Grass	2012	Ford	Excellent	3	150	300
Rescue	Rescue	1984	Ford	Good	2	-	-

The oldest piece of fire apparatus is a 1984 rescue vehicle that, while aging, remains serviceable. The primary fire engine is nine years of age, but the second out engine is 21 years of age and is approaching its viable service life. Overall, Hector apparatus averages 17.2 years in age.

Buffalo Lake FD

The Buffalo Lake Fire Department’s single fire station houses one fire engine along with combination engine/rescue vehicle. In addition, Buffalo Lake operates three water tankers, one of which is owned by the Department of Natural Resources, and two grass fire vehicles.

Figure 27: Buffalo Lake FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	2003	International	Very good	4	1,250	1,000
Rescue 1	Engine/Rescue	1993	KME	Good	4	1,500	1,000
Tanker 1	Tanker	1992	Freightliner	Good	1	-	4,500
Tanker 2	Tanker	1989	Mack	Fair	1	-	3,500
Tanker 3	Tanker	1981	Mack	Fair	1	-	3,500
Ford	Grass	1999	Ford	Good	1	8hp	300
Dodge	Grass	1977	Dodge	Poor	1	18hp	300

It is apparent from observing Buffalo Lake’s vehicles that they are well cared for and evident of pride in ownership. The newest piece of equipment is twelve years of age, while the oldest is 38 years old. The average age is 24.4 years.

Fairfax FD

The Fairfax Fire Station houses two fire engines, one of which is a pumper/tender combination, a water tanker, one grass vehicle and two ambulances.

Figure 28: Fairfax FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	2010	Crimson	Excellent	3	1,500	1,000
Engine 2	Engine/tanker	2004	Freightliner	Very good	2	750	1,000
Water 1	Tanker	1997	Freightliner	Good	2	300	3,000
Grass 1	Grass	2000	Chevrolet	Good	2	300	300
Ambulance 1	Ambulance	2008	Ford	Good	2	-	-
Ambulance 2	Ambulance	1998	Ford	Good	2	-	-

The Fairfax equipment is generally newer than some of the other agencies, averaging 12.1 years of age overall.

Franklin FD

In the Franklin FD station are four pieces of apparatus, including two fire engines, a tanker and a grass vehicle. They are listed in the following table.

Figure 29: Franklin FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Pumper	Engine	2002	Freightliner	Good	2	1,000	750
Pumper	Engine	1982	Freightliner	Fair	2	750	500
Tanker	Tanker	1998	Freightliner	Good	1	300	2,750
Grass	Grass	2007	Chevrolet	Good	2	300	250

One of Franklin's engines is 33 years of age and, while used primarily as a reserve, has exceeded its reasonably anticipated service life. The remaining equipment is newer and the fleet averages 17.75 years of age overall.

Morton FD

Finally, ESCI observed the apparatus in the Morton Fire Station, listed in the next table.

Figure 30: Morton FD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine	Engine	1994	Chevrolet	Good	4	1,250	1,000
Tanker	Tanker	1994	Ford LTL 9000	Fair	2	-	3,000
Grass Rig	Grass	1997	Ford F350	Good	2	250	250
First Response	Rescue	1996	Ford F350	Good	3	-	-
Ranger	Grass/rescue	2005	Polaris 700	New	2	160	50

The Morton apparatus averages 17.8 year of age overall. Both the department’s engine and tanker are 21 years of age, so a plan for replacement will need to be developed.

Capital Replacement Planning

When considering joining multiple agencies in some manner, it is important to evaluate the future, long range, 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 water tankers.

ESCI reviewed capital replacement planning methods in the participating agencies. As is commonly the case with small, rural fire departments, none of the agencies has established a structured or formalized capital replacement schedule, nor have they set aside funding for the future replacement of capital assets. Instead, each organization depends upon a combination of potential grant funding and financial resources that are obtained thorough the municipal budget process for capital expenses.

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

ESCI offers the vehicle replacement schedule below as one example of service lives and replacement values.

Figure 31: Example Vehicle Replacement Life and Cost

Description	Useful Life	Replacement Cost
Engine	20	500,000
Aerial Ladder Truck	25	950,000
Wildland Engine	15	75,000
Rescue	15	75,000
Water Tender	25	300,000

The service lives assume that all vehicles will be placed in reserve status for five years prior to disposal. The table above is an example only and it is recognized that frequency of use (call volume), which is lower in the study agencies than other instances, may warrant the use of extended replacement life estimates.

When evaluating the options for shared service delivery, or the feasibility of combining agencies into one or more entities, it is essential to consider the costs that can be expected for future replacement of major equipment. Apparatus service lives can be readily predicted based on factors including vehicle type, call volume, age, and maintenance considerations.

In the following table, ESCI calculated the average age of fire engines and water tankers (tenders) in the subject agencies to offer a point of reference when considering future vehicle replacement costs that may be incurred.

Figure 32: Future Apparatus Replacement Summary

Agency	Number of Engines	Average Age of Engines	Number of Tankers	Average Age of Tankers
Sacred Heart	2	14	2	24.5
Renville	2	29	1	29
Danube	1	23	2	19
Olivia	3	32	1	21
Bird Island	2	20.5	2	22
Hector	2	15	1	22
Buffalo Lake	2	17	3	27.5
Fairfax	2	8	1	18
Franklin	2	23	1	17
Morton	1	21	1	21
Total	19	20.25	15	22.1

Fire engines in the study agencies average 19 years in age. While many are newer, some will be in need of replacement or have already exceeded their accepted service life. When compared to the example replacement life and cost data in Figure 27, it is apparent that multiple vehicles are or will soon become due for replacement, representing a potentially significant cost to the combined organizations.

When reviewing the participant's apparatus, ESCI noted what may be some potential opportunities for sharing of vehicles which may result in some cost savings or future cost avoidance. Some, though not all, of the fire departments maintain an extra fire engine that serves as a reserve unit, in the event that the primary engine needs to be removed from service for maintenance or repair. This is a common practice and need in any fire department. However, as a result, agencies incur the cost of maintenance, insurance and other expenses for a vehicle that is rarely used.

Should the departments be able to share reserve engines, these costs can be avoided. An example is in the Olivia station, which houses three fire engines, one of which is 44 years in age and due for replacement. If Olivia FD finds that they routinely need two fire engines in service, and that the third is

purely in reserve, they may be able to enter into an agreement to share an engine from another department instead of buying a new vehicle. It is noted that all of the other departments in the study operate two engines, with the exception of Danube which has only one. Whether or not some of the agencies could agree to sharing their second engine, based on their need for two rather than one, would need to be further evaluated by the respective fire chiefs.

All of the departments also operate water tankers. Some agencies have two and three tankers in their stations. Having an adequate supply of water “on wheels” is a critical need that should not be compromised. However, with that in mind, the departments are encouraged to consider opportunities to share tankers as well as engines.

Equipment Replacement and Purchasing

When considering future opportunities for cooperative efforts, equipment replacement and purchasing is an area that offers multiple prospects for cost reduction, while also encouraging standardization of equipment configurations. Specifically, joint purchasing practices, whether for minor equipment, turnout gear, tools or other smaller items, as well as for large purchases like fire apparatus, can provide substantial financial savings. Typically, all that is required is communication between fire departments about planned purchases and the willingness to develop shared purchase specifications.

Staffing and Personnel Management

In career emergency services organizations, personnel represent the single greatest expenditure within a department's budget. As discussed previously in this report, however, personnel accounted for only 33 percent of the study departments' overall budget during FY2015; consistent with volunteer/paid-on-call organizations. Without proper levels of personnel, apparatus and stations will sit idle and may not be readily available for emergency response. This section is intended to provide the reader with a review of the areas personnel management practices as compared to industry standards and to examine the department's ability to provide sufficient staffing resources for the risks that exist throughout Renville County.

Administrative and Support Staff

The primary responsibility of a department's administration and support staff is to ensure that the organization's operational entities have the abilities and means to fulfill their mission at an emergency incident. Efficient and effective administration and support are critical to a department's success. Without adequate oversight, planning, documentation, and training the operational capabilities of the department may suffer.

Career fire departments commonly have dedicated administrative and support staff that are not typically also engaged in operational activities. Volunteer/paid-on-call departments, however, tend to have administrative personnel that area also operational service providers. None of the study departments have dedicated administrative and support staff other than the fire chief and other officers. No clerical support staff exists within the departments and all administrative responsibilities are handled by the volunteer/paid-on-call personnel. For the purposes of this report, ESCI has labelled command officers and several others as administrative positions (understanding that they still function in operational roles) as summarized below.

Figure 33: Administrative and Support Positions

	BIFD	BLFD	DFD	FFD	FFRA	HFD	MFD	OFD	RFD	SHFD
Fire Chief	1	1	1	1	1	1	1	1	1	1
1 st Asst. Chief	1	1	1	1	1	1	1	1	1	1
2 nd Asst. Chief		1				1	1	1	1	1
Captain		2		1	2			2		
Training Officer	1	1	1			1		1		1
Asst. TO			1							
Secretary	1	1	0.5	1			1	1		1
Treasurer		1	0.5					1		1

Since each agency is a municipal department, the secretary and treasurer positions are unnecessary except in the case of relief associations. Each department also maintains bylaws that are historic in nature, but are also unnecessary given the municipal nature of the organizations.

Operational Staff

It takes an adequate and well trained staff of emergency responders to put the appropriate emergency apparatus and equipment to its best use in mitigating incidents. Insufficient staffing at an operational scene decreases the effectiveness of the response and increases the risk of injury to all individuals involved. The following is a summary of operational positions within each organization, excluding those already noted in the administrative and support section above.

Figure 34: Operational Positions

	BIFD	BLFD	DFD	FFD	FFRA	HFD	MFD	OFD	RFD	SHFD
Lieutenant				2						
Safety Officer		1				1				
Firefighter	15	23	15	15	17	16	14	20	22	19

These personnel, combined with the administrative and support complement noted previously, (229 total) have the responsibility of responding to all sorts of emergency incidents across Renville County.

Scheduling Methodologies and Staffing Performance

As mentioned previously, all of the study departments use volunteer/paid-on-call personnel to carry out operational responsibilities including emergency response. Therefore, no personnel are scheduled to on-duty at any of the stations and, rather, respond from home, work, or wherever they may be when an incident is dispatched.

In most communities around the country, the number of fire calls has declined over the past decade. Yet as the frequency of fires diminishes, in part due to stricter fire codes and safety education, the workload of fire departments has risen due to medical calls, hazardous materials calls, and every sort of household emergency that are now addressed by fire departments. Therefore, as the frequency of fires diminishes, the need for a ready group of firefighters has increased.

Although modern codes tend to make fires in newer structures more infrequent, today's energy-efficient construction (designed to hold heat during the winter) also tends to confine the heat of a hostile fire. In addition, research has shown that modern furnishings generally burn hotter (due to synthetics), and roofs collapse sooner because prefabricated roof trusses separate easily after a very short exposure to flame. In the 1970s, scientists at the National Institute of Standards and Technology found that after a fire broke out, building occupants had about 17 minutes to escape before being overcome by heat and smoke. Today, that estimate is three minutes.² The necessity of firefighters arriving on the scene of a fire in the shortest span of time is more critical now than ever.

Published recommendations from the Centers for Public Safety Excellence (CPSE) suggest that 12-15 personnel be able to respond and engage in the effective suppression of a moderate risk structure fire. Based on the incident data provided by AFD, the department is working effectively to achieve this recommendation. The department should work to ensure that periodic review is conducted for each

² Bukowski, Richard, et al. *Performance of Home Smoke Alarms, Analysis of the Response of Several Available Technologies in Residential Fire Settings*. National Institute of Standards and Technology.

structure fire to determine the actual number of personnel that are engaged in the incident. This information should then be included in the department's annual report. Unfortunately, the data ESCI received from the Minnesota State Fire Marshal did not include staffing information. Therefore, there is no way to analytically determine the success of the study departments in meeting published standards regarding on scene personnel.

Human Resources Policies

It is important that members of the organization know to whom they should go when they have a problem, question, or issue related to their relationship to the department. In large companies, this function is typically handled by a human resource department. Staff within such a department handles questions, issues, and tasks related to appointment, benefits, performance, disciplines, promotion, or termination.

Since each study department operates within the governance structure of their respective municipality, city policies are applied to most personnel aspects of the fire departments. However, departmental bylaws are still in place in some of the agencies that could conflict with city policy. If fire department personnel are considered city employees (volunteers), the city policies should apply to all personnel rather than individual bylaws documents.

Compensation Systems

Perhaps the most important of all employment elements is that of compensation. While a positive work environment and an appropriate workload are beneficial, most individuals would endure substantial differences in those areas if pay and benefits were sufficient to retain personnel. The fire service is widely varied in how it pays and provides benefits to its members ranging from a volunteer with little or no pay, as in Renville County, to relatively highly paid career personnel.

Geography and politics have a significant impact on the pay and benefits provided to emergency personnel. For instance, states such as North Carolina (right-to-work state) provide significantly lower salaries and benefits than those states that have a strong union presence. This is not to say that one is better or worse than the other or that anything is wrong with either practice, but simply to highlight the difference across the country.

Within Renville County, paid-on-call personnel receive varied levels of compensation for the activities in which they participate. Some officers also receive a monthly or annual stipend for the additional time they commit to the organization. The following figure summarizes that stipends and rates of pay for the various positions within the system.

Figure 35: Summary of Officer Annual Stipends

	BIFD	BLFD	DFD	FFD	FFRA	HFD	MFD	OFD	RFD	SHFD
Fire Chief	\$500	\$600	\$1,000	\$800	\$1,000		\$500	\$3,400	\$4,000	
1 st Asst. Chief	\$500	\$100	\$200	\$500			\$250		\$1,000	
2 nd Asst. Chief		\$100					\$250			
Captain				\$150	\$300					
Training Officer	\$500	\$500	\$150							
Asst. TO			\$100							
Lieutenant					\$300					
Safety Officer		\$50								
Secretary	\$500		\$200		\$100		\$250	\$1,000	\$1,000	
Treasurer								\$1,000		

Figure 36: Personnel Paid-on-Call Rates

	BIFD	BLFD	DFD	FFD	FFRA	HFD	MFD	OFD	RFD	SHFD
Call	\$10	\$10	\$10/hr	\$9/hr			\$17.50	\$7.50/hr	\$12	
Training	\$8	\$10	\$10/hr	\$9/hr	Point- Based*		\$10	\$7.50/hr		
Meeting		\$10	\$10	\$9/hr				\$7.50/hr		

*FFRA’s point-based system is one that awards points based on annual participation in trainings sessions, drills, and responses. A certain amount of incentive money is provided each year (changes annually) and those funds are divided by the total number of points accumulated across all staff. Staff are then paid an amount equal to the resultant point value based on their participation.

Recruitment, Application, and Retention Programs

Successful emergency services agencies strive to ensure that their recruitment efforts are focused on the specific demographics of the population served combined with streamlined applications processes and formalized retention programs. Little is done in the way of recruitment within the study agencies. Most applicants are received through personal contacts with department members or through general interest of citizens. Application processes vary as summarized below.

Figure 37: Summary of Application Processes

	Sacred Heart FD	Renville FD	Danube FD	Olivia FD	Bird Island FD
Application Process Includes	Application	Application, elected by membership	Application	Application, interview, skills test, background checks	Application, interview, applicant orientation, background check
Minimum Physical Standards in Place	No	Lifting ability only	No	Yes	Limited
Aptitude Testing in Place	No	No	No	No	No
Pre-Hire Medical Physical Required	Yes	Yes	Yes	Yes	Yes
	Hector FD	Buffalo Lake FD	Fairfax FD	Franklin FD	Morton FD
Application Process Includes	Application	Application	Application, background check, agility test, medical physical	Application, interview, background check	Application, background check, elected by membership
Minimum Physical Standards in Place	No	No	Yes	No	No
Aptitude Testing in Place	No	No	No	No	No
Pre-Hire Medical Physical Required	Yes	No	Yes	No	Yes

Retention is a problem for nearly all volunteer organizations across the country and it is no different in Renville County. In an effort to retain members, the state of Minnesota allows departments to offer limited retirement benefits to firefighters through either the state’s Public Employee Retirement Association (PERA) or through a local Relief Association. All of the study departments provide one or both of these benefits in addition to per-call/training/meeting compensation as a means to retain members. Only Fairfax does not have a relief association and provides only PERA for members. Sacred Heart provides both relief association and PERA benefits. The relief association benefits also vary by department and are summarized below.

Figure 38: Relief Association Benefit

Department	RA Benefit
BIFD	\$950
BLFD	\$1,350
DFD	\$650
FFRA	N/A
FFD	\$1,300
HFD	1,300
MFD	\$800
OFD	\$1,100
RFD	\$1,300
SHFD	\$800

Relief association benefits are based on years of service and the benefit amount is multiplied by the number of years of creditable service and can be paid in lump sum upon retirement or distributed over a specific period of time. Fire departments in the state of Minnesota are fortunate to have such a system that rewards personnel for their time and commitment to their communities.

Testing, Measurement, and Promotional Processes

Once achieving active employment, individuals should be evaluated periodically to ensure their continued ability to perform their duties safely and efficiently. Technical and manipulative skills should be evaluated on a regular basis. This provides documentation about an employee's ability to perform their responsibilities and provides valuable input into the training and education development process.

Regular evaluation and feedback for personnel is critical to behavior modification and improvement. It has long been proven that employees sincerely wish to perform well and wish to be a contributing part of an organization. This desire to succeed is best cultivated through effective feedback that allows an employee to know whether they are doing well and, if not, what needs improvement. The honest and effective presentation of this feedback encourages the member to reinforce those talents and abilities they already excel in and to work harder to improve the areas where they fail to perform as desired. The following figure summarizes the testing, measurement, and promotional processes of the study agencies.

	Bird Island FD	Buffalo Lake FD	Danube FD	Fairfax FD	Franklin FD
Post-Hire Medical Physicals Required	Yes	No	No	No	Periodic
Periodic Capability Testing Required	Informal, observation only	Yes	Informal, observation	Informal, observation only	Informal, observation only
Periodic Performance Evaluations	No	No	No	No	No
Formal Promotional Testing in Place	Elected by members	Voted by Membership	Elected by membership	Elected by membership and approved by City Council	Elected by the membership

	Hector FD	Morton FD	Olivia FD	Renville FD	Sacred Heart FD
Post-Hire Medical Physicals Required	No	Every other year, fit testing	Every Third Year	Yes	Yes, every other year
Periodic Capability Testing Required	Informal, observation only	Informal, observation only	Informal, observation only	Informal, observation	Informal, observation
Periodic Performance Evaluations	No	No	No	No	No

Formal Promotional Testing in Place	Chief is Elected by Membership, Appointment by Chief	Elected by membership	Chief elected by Membership, Appointment by Chief	Elected by membership	Chief elected by Membership, Secretary elected by membership, AC's appointed by Chief
-------------------------------------	--	-----------------------	---	-----------------------	---

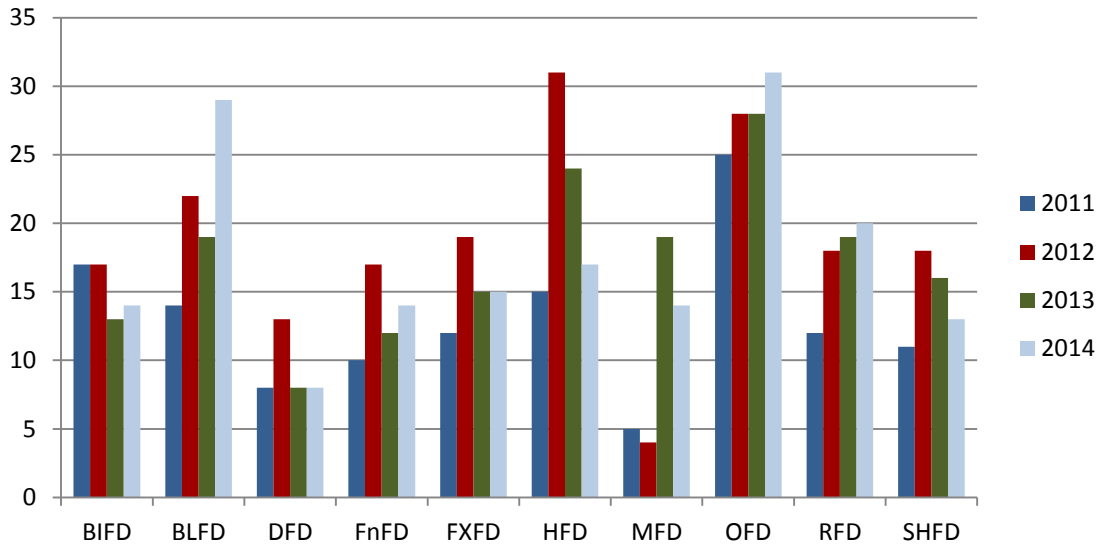
Service Delivery and Performance

While a fire department cannot function without sufficient staff, adequate facilities, and sufficient apparatus, the services that are delivered to the community is the ultimate measure of effectiveness. This section evaluates the actual service delivery components within the study agencies including service demand (workload), distribution of resources in relation to service demand, concentration capabilities of the region, individual department reliability and response performance.

Service Demand

Service demand can be defined in a number of ways depending on the types of services provided by the organization. For the purposes of this report, service demand is defined as any and all incidents where emergency resources are utilized to resolve the situation. These may include non-emergency incidents where resources are simply provided in a support role as well, but the primary goal is to show how busy the departments are over a given period of time. This analysis begins with an aggregate of total demand by year for each agency.

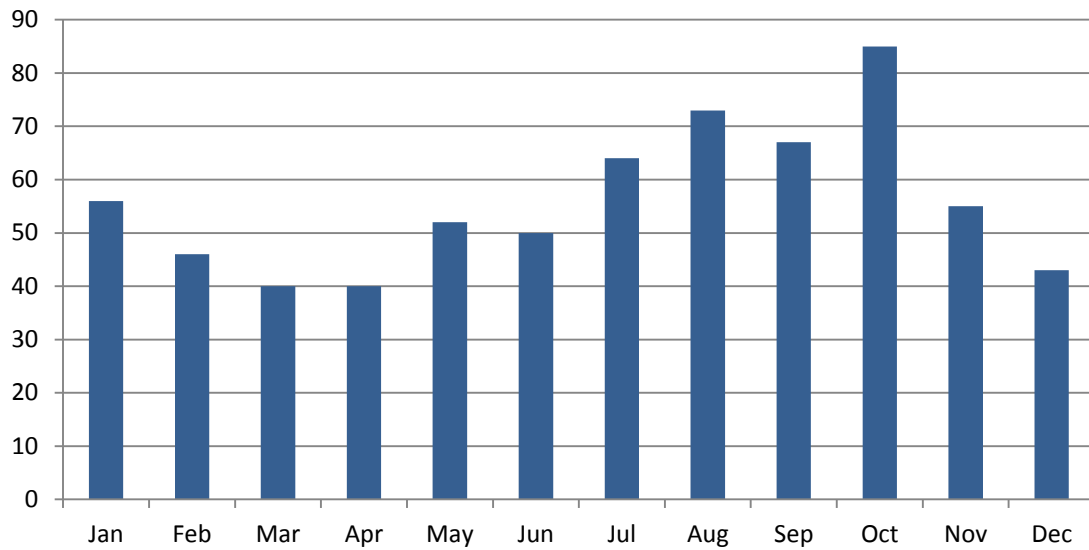
Figure 39: Service Demand by Year



Based on this analysis, there is a wide variety in service demand trends over the last four years. In addition, there are substantial differences between the data contained within the Renville County CAD system and the information that has been provided to the Minnesota State Fire Marshal. For the purposes of this analysis, ESCI used the data from Renville County CAD since the SFM data was largely incomplete, indicating a reporting issue with some of the study departments.

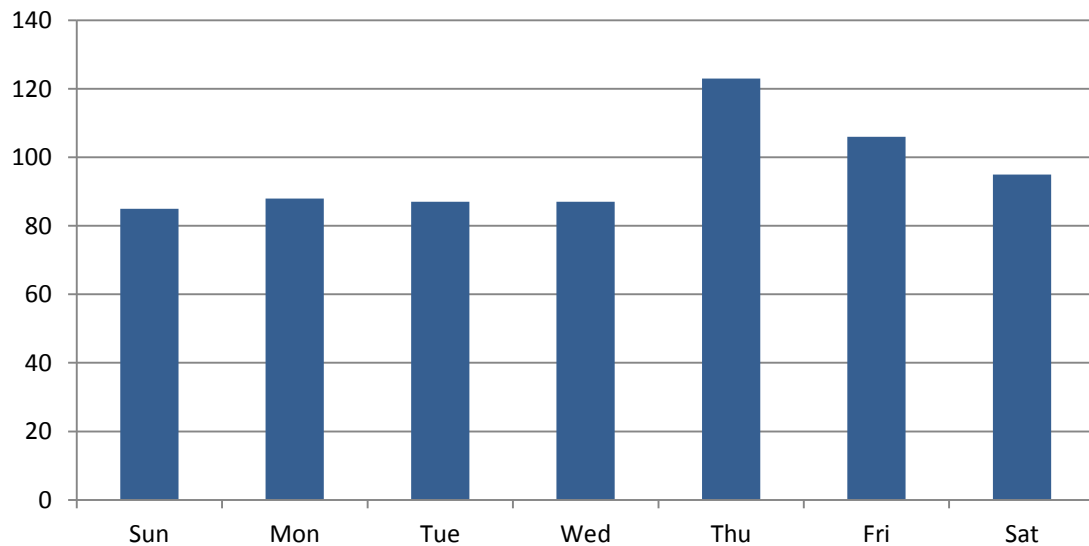
Rather than to display each department’s workload in other temporal illustrations, the remaining figures combine the data for the entire county to show any trends that may exist system-wide. This begins with an analysis of service demand by month.

Figure 40: Aggregate Service Demand by Month



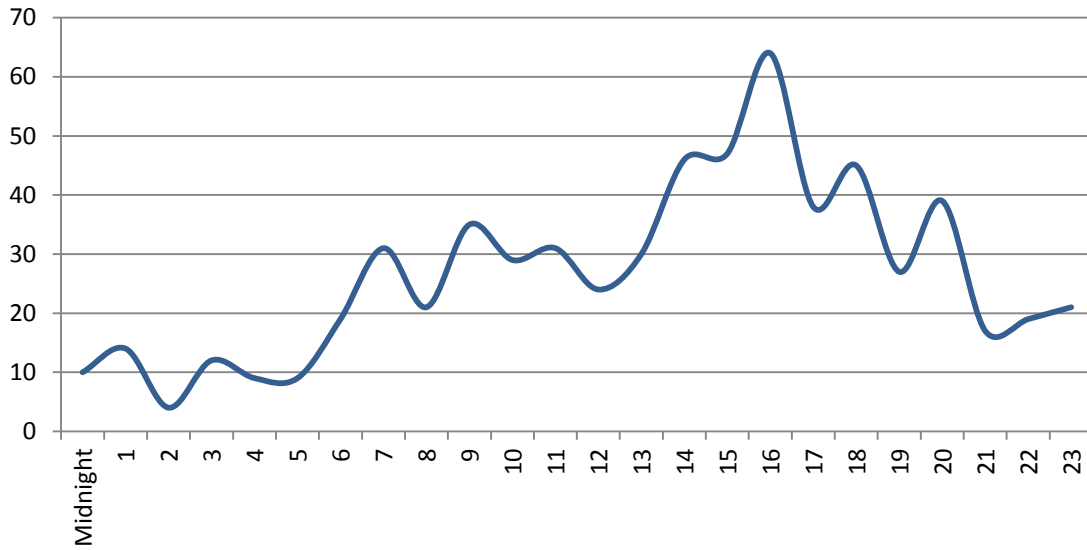
Service demand within Renville County is higher during the summer and early fall periods. This is expected based on the weather and climate of the area during the winter. There is, however, a spike in service demand in January that could indicate more fires due to the cold weather or more winter outdoor recreation accidents. The analysis continues with a review of service demand by day of week.

Figure 41: Aggregate Service Demand by Day of Week



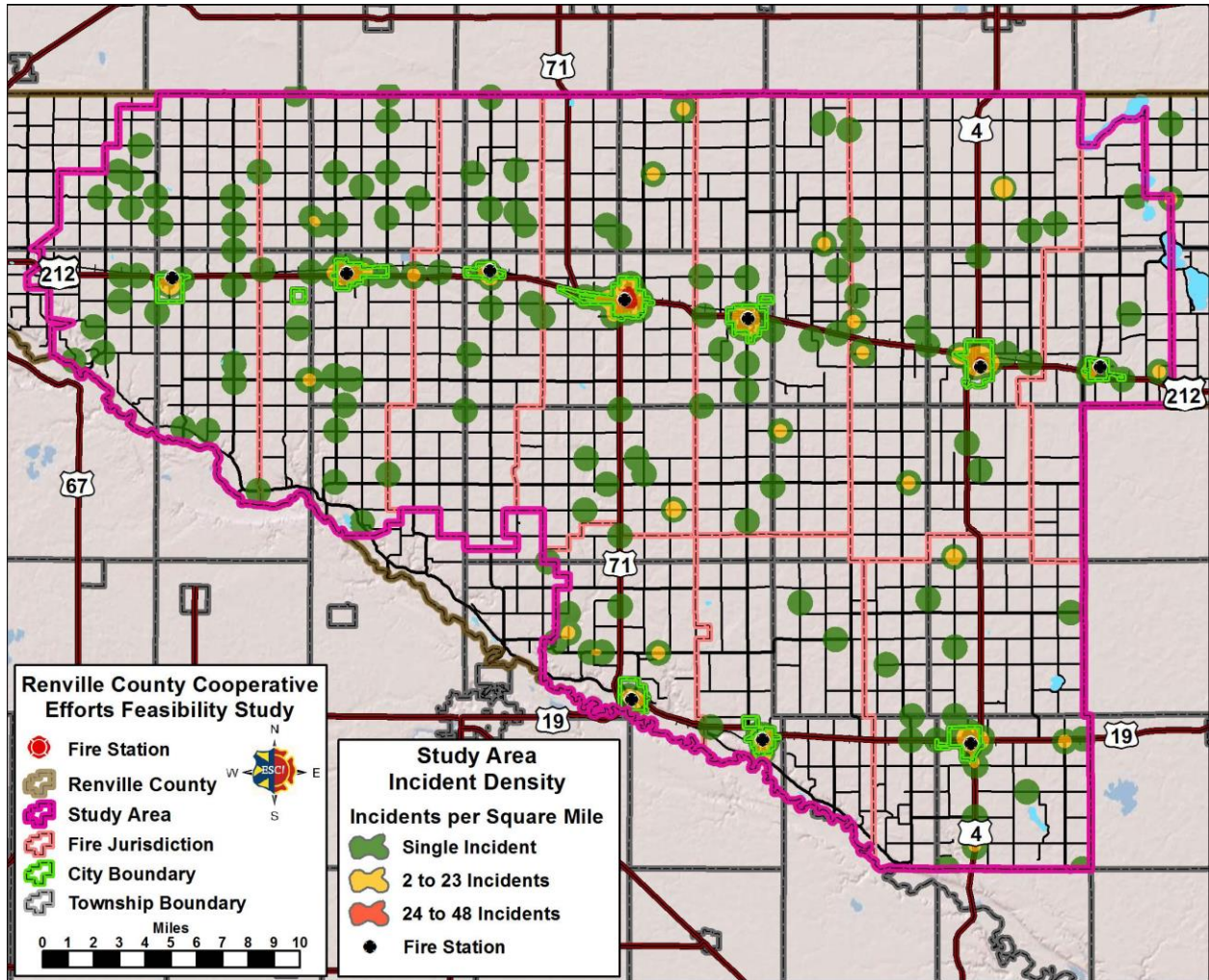
Service demand is relatively stable over most weekdays with a sharp increase on Thursdays, Fridays, and Saturdays. The final temporal analysis is that of demand by hour of day.

Figure 42: Aggregate Service Demand by Hour of Day



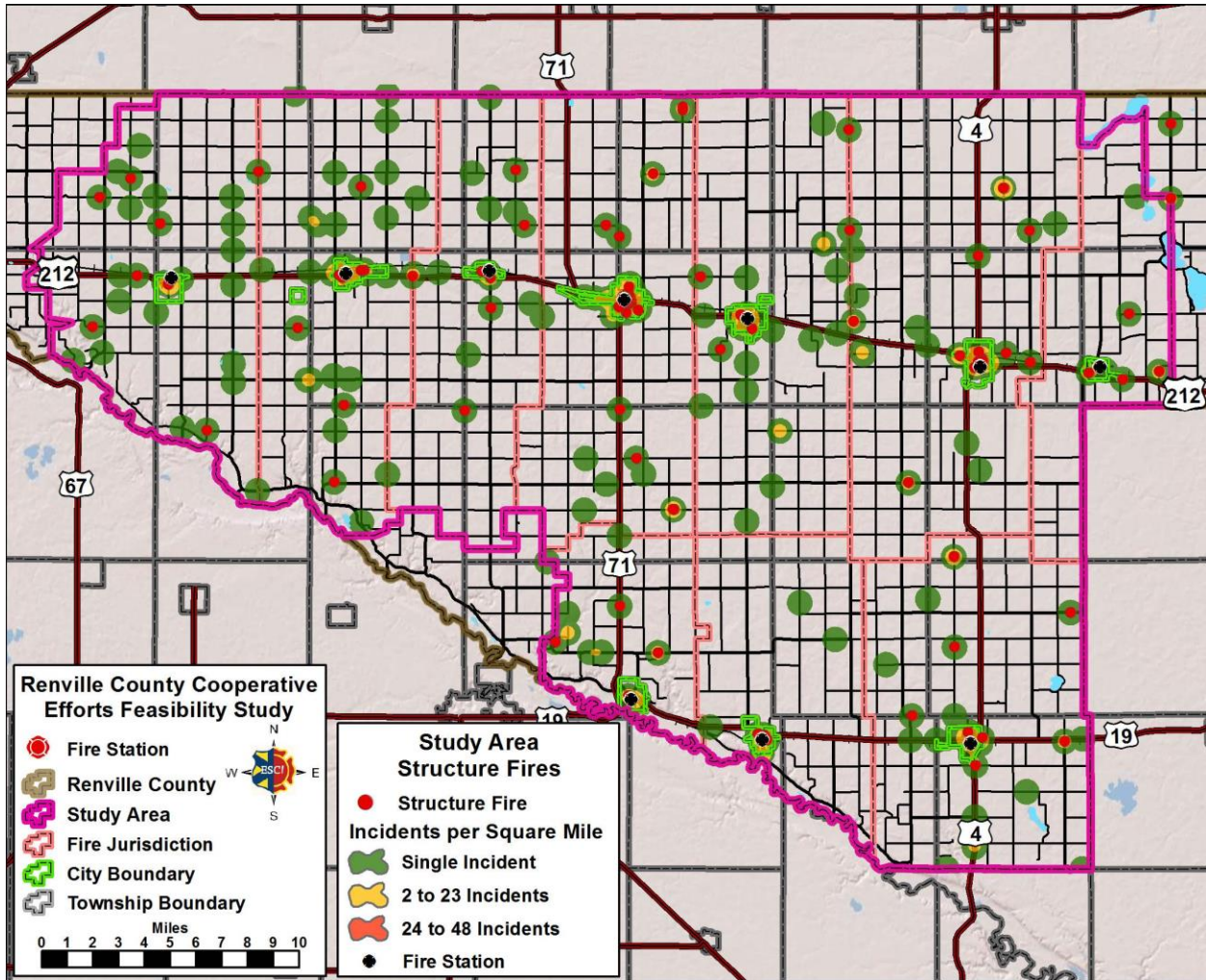
As expected, service demand remains relatively low until around 6:00 a.m., peaks during the midday hours, and then declines into the evening. This typical pattern follows common human activity, which ties directly to overall service demand. The next analysis of service demand is that of geography. The following figure illustrates how service demand is distributed across the county.

Figure 43: Overall Incident Density



As illustrated in the preceding figure, most service demand is concentrated around the city centers across Renville County with a scattering of incidents in the remaining service area, mostly along major roadways. The following figure highlights structure fires separately from general service demand.

Figure 44: Geographic Service Demand - Structure Fires Highlighted



Again, most structure fires occur in close proximity to center centers but there are a number in other areas a considerable distance from existing fire stations. This will be reviewed in relation to distribution of facilities in the following section.

Distribution

Distribution analysis is an evaluation of how well physical resources (facilities) are deployed across a specific geographic area. For medical incidents there is little in the way of guidance on how well resources should be distributed because these incidents are primarily driven by human activity. For fire protection, however, there are several industry standards that specify how fire stations should be distributed. The National Fire Protection Association (NFPA) recommends that fire departments serving urban areas with career personnel be able to respond to 90 percent of emergency incidents within five minutes of total response time (one minute for turnout and four minutes for travel). The following figure illustrates how well the department's distribution of resources can reach historic service demand from existing locations based on ISO travel distances.

Figure 45: ISO Distribution Model

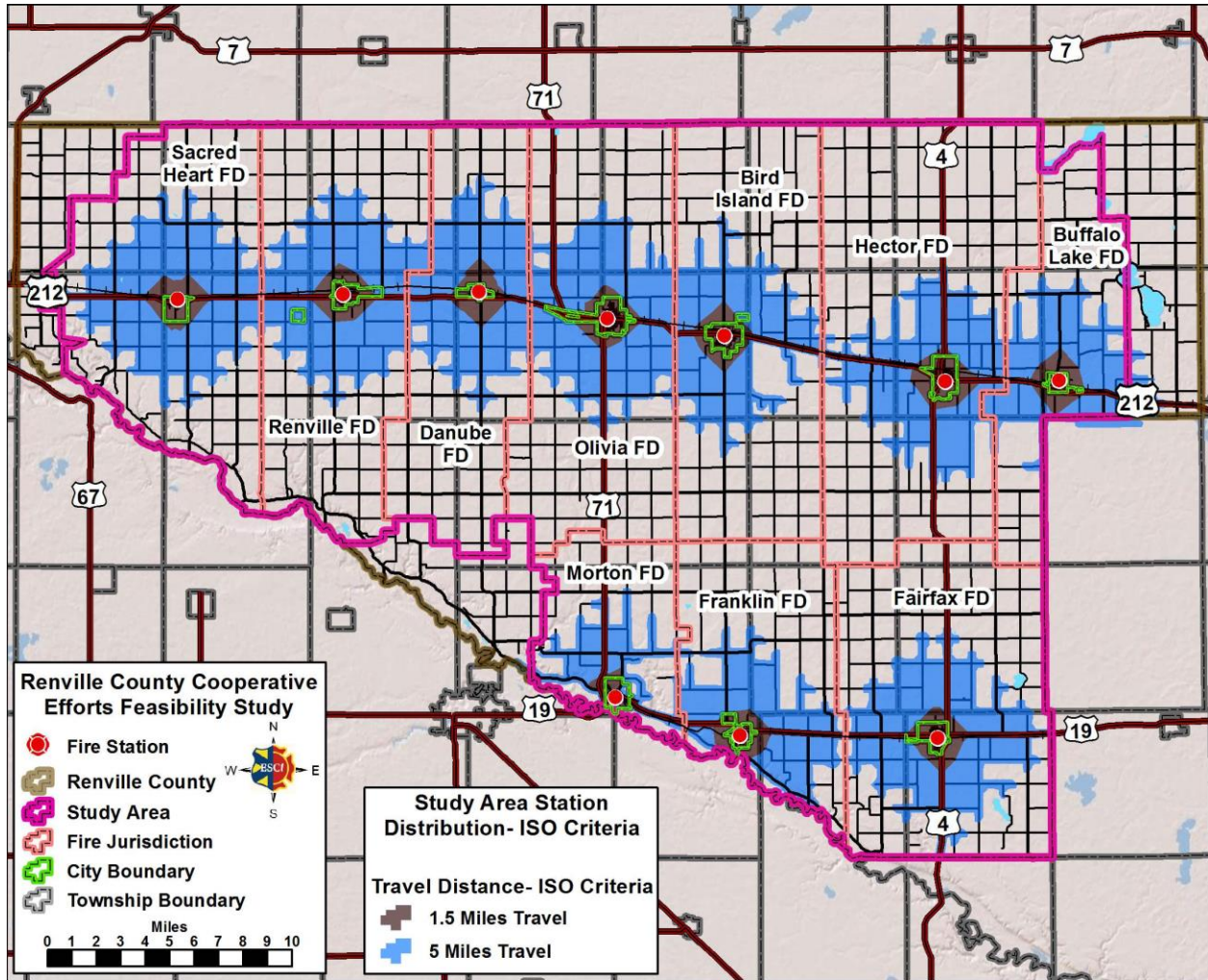


Figure 46: ISO Distribution Model City Detail

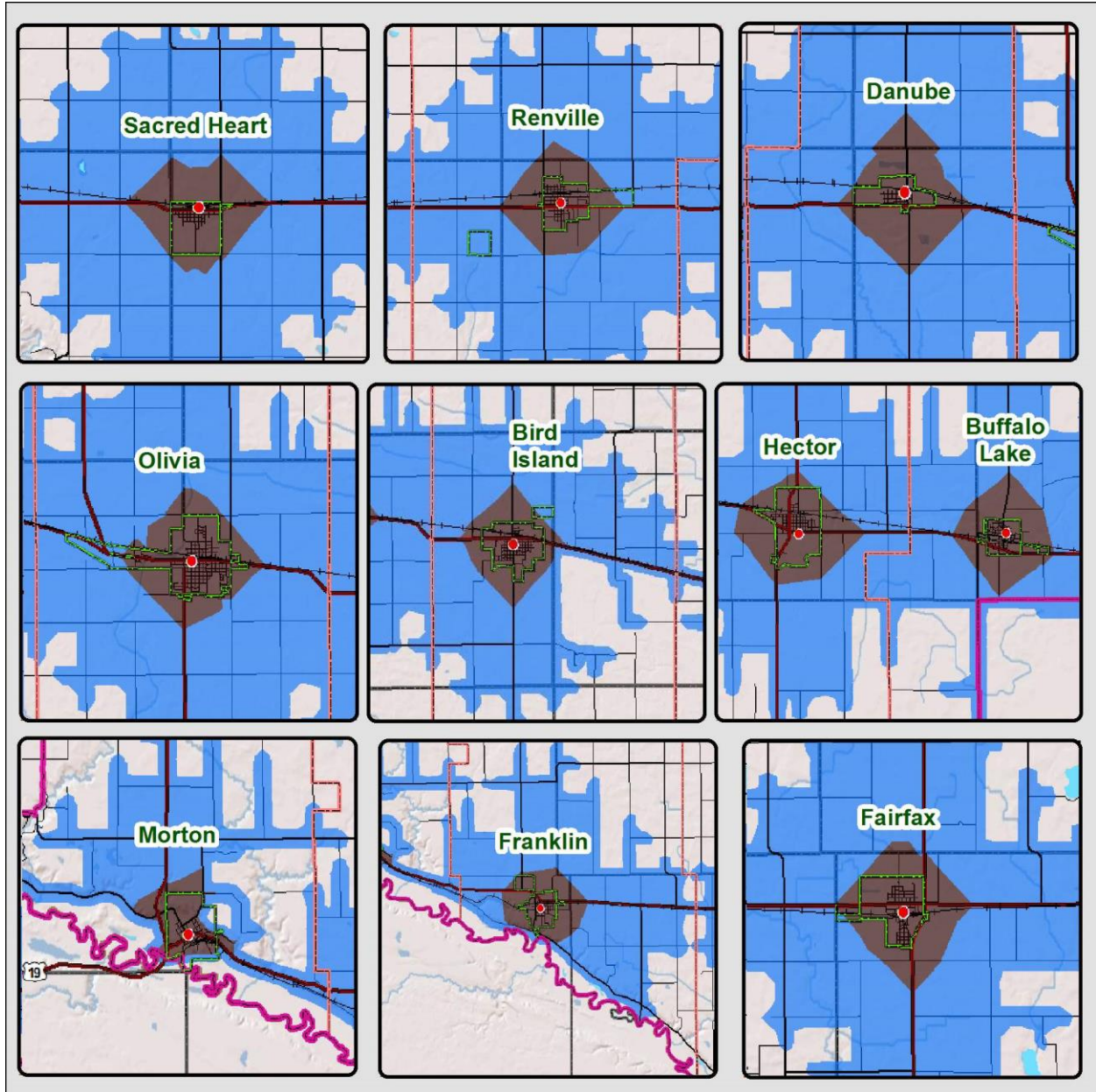
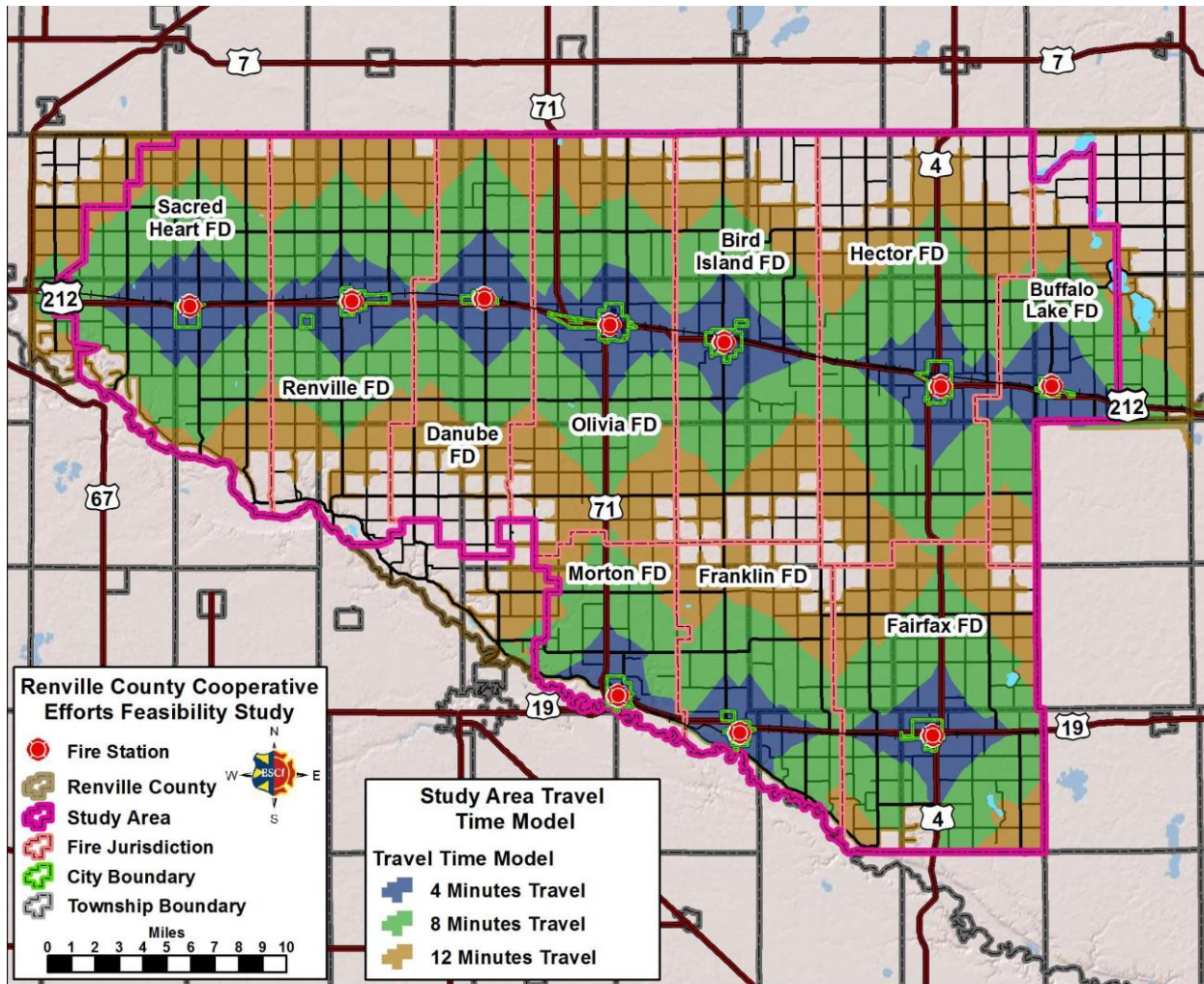


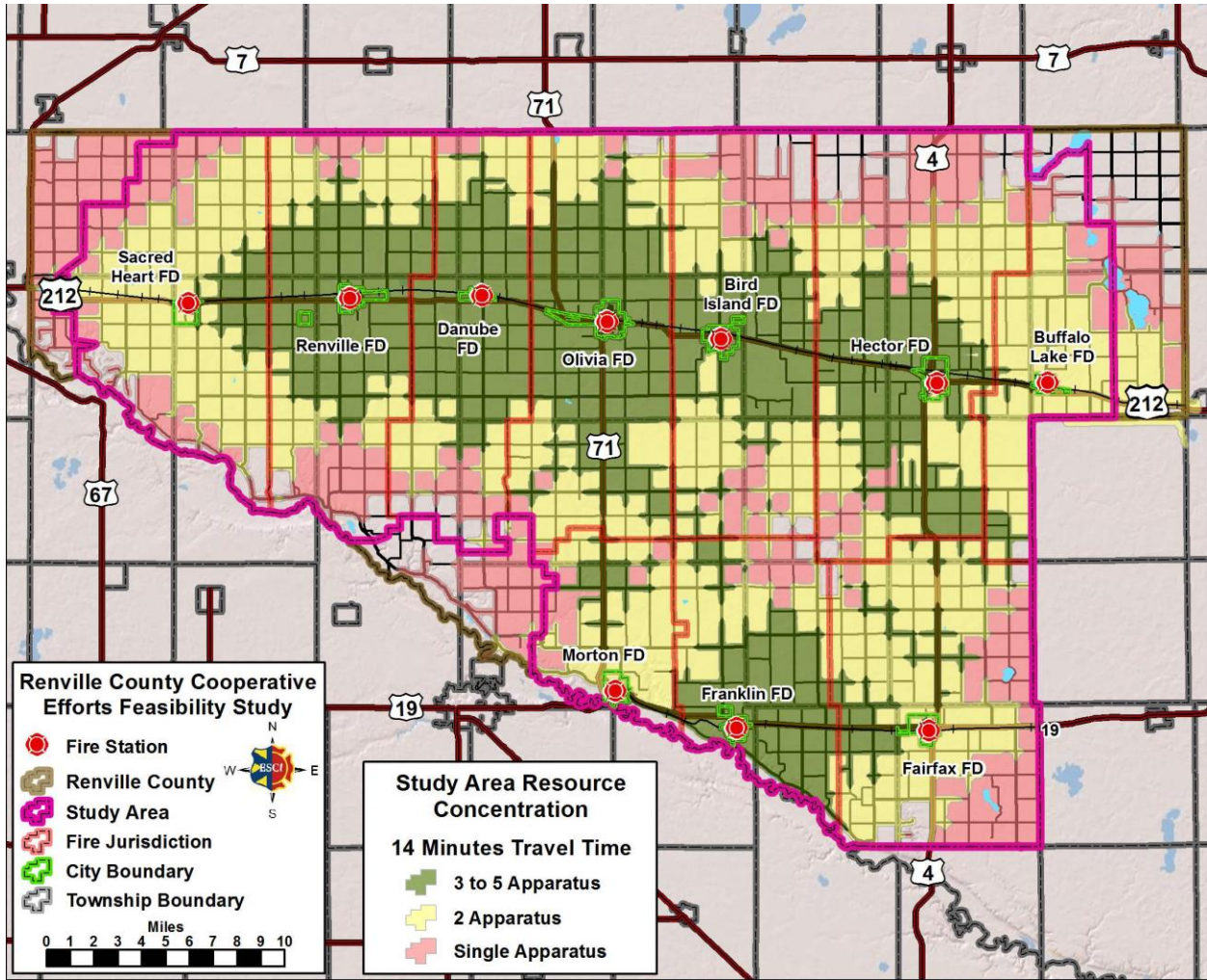
Figure 47: Time-Based Distribution Travel Model



Resource Concentration

Concentration is an analysis of the department’s ability to assemble an adequate amount of resources, personnel and/or apparatus, within a sufficient amount of time to effectively mitigate specific incidents, particularly structure fires. The following figure illustrates the study area’s modeled concentration abilities based on the concentration of available apparatus based on a modeled 14 minutes of travel from existing locations.

Figure 48: Modeled Resource Concentration at 14 Minutes of Travel



Based on this analysis, nearly 98 percent of the total response area can be reached by a single apparatus only. Two apparatus can reach approximately 95 percent of the service area and three apparatus can reach only 75 percent. However, much of the service demand falls within the three to five apparatus model shaded in green in the preceding figure.

Response Performance

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

As previously mentioned, a consolidated communications center serves as the Public Safety Answering Point (PSAP) for all emergency calls within Renville County. Requests for fire or medical resources are taken internally and the appropriate units dispatched. Before entering this discussion, however, it is important to provide a brief discussion about how the statistical information is presented, particularly in regard to average versus percentile measures.

The “average” measure is a commonly used descriptive statistic also called the mean of a data set. It is a measure 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.

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 computer aided dispatch (CAD) data and generated average, 80th, and 90th percentile response performance for emergency incidents.

NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments includes a performance objective of 240 seconds or less travel time for the arrival of the first arriving engine company in urban areas serviced by career fire departments.³ NFPA 1710 does not differentiate between the various population densities and assumes that all areas served by career or mostly career fire departments will adhere to a single performance objective. *NFPA 1720 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer and Combination Fire Departments* does not provide guidance regarding turnout time performance and allows department to implement a tiered response performance objective based on population density.

Those population densities are classified as urban, suburban, rural, and remote with the following population density criteria.

Figure 49: NFPA 1720 Response Target Summary

Classification	Population Density Per Square Mile	Response Performance Objective
Urban	>1,000	9:00 90 th Percentile
Suburban	500 to 999	10:00 80 th Percentile
Rural	>500	14:00 80 th Percentile
Remote	Wilderness	N/A

Due to the nature in which CAD data was supplied, the ‘call received’ time was not available. Therefore, call processing performance could not be analyzed.

Turnout time is the first element of the response performance continuum that the fire department actually controls; since they are responsible for receiving the information, making their way to the apparatus and affecting an appropriate response. The following figures summarizes the departments’ turnout time performance over the last four years.

³*NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments.* (National Fire Protection Association 2010.)

Figure 50: Turnout Time Performance - BIFD

	2011	2012	2013	2014
Average	3.7 Minutes	7.2 Minutes	9.1 Minutes	4.5 Minutes
80 th Percentile	5.0 Minutes	4.0 Minutes	7.2 Minutes	6.0 Minutes
90 th Percentile	5.6 Minutes	4.0 Minutes	16.2 Minutes	6.3 Minutes

Figure 51: Turnout Time Performance - BLFD

	2011	2012	2013	2014
Average	3.3 Minutes	9.6 Minutes	13.5 Minutes	6.6 Minutes
80 th Percentile	4.4 Minutes	6.0 Minutes	8.4 Minutes	8.4 Minutes
90 th Percentile	6.3 Minutes	6.4 Minutes	10.8 Minutes	9.2 Minutes

Figure 52: Turnout Time Performance - DFD

	2011	2012	2013	2014
Average	4.2 Minutes	2.8 Minutes	4.5 Minutes	3.8 Minutes
80 th Percentile	5.2 Minutes	4.0 Minutes	5.4 Minutes	5.0 Minutes
90 th Percentile	5.6 Minutes	4.0 Minutes	5.7 Minutes	5.0 Minutes

Figure 53: Turnout Time Performance - FFD

	2011	2012	2013	2014
Average	1.5 Minutes	5.0 Minutes	3.2 Minutes	4.3 Minutes
80 th Percentile	3.0 Minutes	6.0 Minutes	4.0 Minutes	5.0 Minutes
90 th Percentile	3.0 Minutes	6.0 Minutes	4.0 Minutes	5.5 Minutes

Figure 54: Turnout Time Performance - FFRA

	2011	2012	2013	2014
Average	5.7 Minutes	5.5 Minutes	2.5 Minutes	4.6 Minutes
80 th Percentile	5.0 Minutes	6.0 Minutes	5.0 Minutes	8.4 Minutes
90 th Percentile	10.6 Minutes	9.0 Minutes	6.5 Minutes	10.0 Minutes

Figure 55: Turnout Time Performance - HFD

	2011	2012	2013	2014
Average	3.0 Minutes	4.6 Minutes	3.3 Minutes	4.2 Minutes
80 th Percentile	3.0 Minutes	5.0 Minutes	4.0 Minutes	5.0 Minutes
90 th Percentile	3.4 Minutes	8.5 Minutes	4.0 Minutes	5.4 Minutes

Figure 56: Turnout Time Performance - MFD

	2011	2012	2013	2014
Average	3.0 Minutes	5.3 Minutes	6.0 Minutes	5.6 Minutes
80 th Percentile	4.2 Minutes	8.4 Minutes	6.8 Minutes	7.0 Minutes
90 th Percentile	4.6 Minutes	9.2 Minutes	8.4 Minutes	7.4 Minutes

Figure 57: Turnout Time Performance - OFD

	2011	2012	2013	2014
Average	4.3 Minutes	4.0 Minutes	3.9 Minutes	3.9 Minutes
80 th Percentile	5.0 Minutes	5.0 Minutes	5.0 Minutes	5.0 Minutes
90 th Percentile	5.7 Minutes	6.0 Minutes	5.0 Minutes	5.3 Minutes

Figure 58: Turnout Time Performance - RFD

	2011	2012	2013	2014
Average	3.1 Minutes	2.9 Minutes	3.3 Minutes	3.9 Minutes
80 th Percentile	3.8 Minutes	4.0 Minutes	5.0 Minutes	4.2 Minutes
90 th Percentile	6.2 Minutes	4.0 Minutes	5.0 Minutes	5.0 Minutes

Figure 59: Turnout Time Performance - SHFD

	2011	2012	2013	2014
Average	3.5 Minutes	3.2 Minutes	3.2 Minutes	3.6 Minutes
80 th Percentile	3.8 Minutes	4.0 Minutes	4.0 Minutes	4.2 Minutes
90 th Percentile	4.4 Minutes	4.0 Minutes	5.0 Minutes	4.6 Minutes

The final component of response performance analysis is that of total response performance as illustrated in the following figures. For this performance analysis, mutual aid calls were removed from the dataset along with all incidents that were determined to be non-emergency in nature. This allows for a better illustration of overall response performance based on emergency incidents within the respective department's primary response area. However, with the removal of those incident types, along with the cleaning of the data to ensure accuracy, some individual department datasets were very small, resulting in potentially skewed results.

Figure 60: Total Response Time Performance - BIFD

	2011	2012	2013	2014
Average	9.0 Minutes	8.7 Minutes	9.6 Minutes	12.5 Minutes
80 th Percentile	11.0 Minutes	13.0 Minutes	13.2 Minutes	19.8 Minutes
90 th Percentile	12.0 Minutes	14.8 Minutes	13.6 Minutes	22.8 Minutes

Figure 61: Total Response Time Performance - BLFD

	2011	2012	2013	2014
Average	5.0 Minutes	6.0 Minutes	6.2 Minutes	8.8 Minutes
80 th Percentile	5.0 Minutes	8.0 Minutes	7.2 Minutes	11.4 Minutes
90 th Percentile	8.5 Minutes	8.0 Minutes	9.6 Minutes	13.0 Minutes

Figure 62: Total Response Time Performance - DFD

	2011	2012	2013	2014
Average	11.0 Minutes	5.5 Minutes	7.0 Minutes	20.7 Minutes
80 th Percentile	12.2 Minutes	7.4 Minutes	7.0 Minutes	27.0 Minutes
90 th Percentile	12.6 Minutes	6.7 Minutes	7.0 Minutes	29.0 Minutes

Figure 63: Total Response Time Performance - FFD

	2011	2012	2013	2014
Average	3.0 Minutes	7.0 Minutes	5.8 Minutes	6.4 Minutes
80 th Percentile	3.6 Minutes	10.6 Minutes	6.4 Minutes	7.6 Minutes
90 th Percentile	3.8 Minutes	11.8 Minute	6.7 Minutes	8.8 Minutes

Figure 64: Total Response Time Performance - FFRA

	2011	2012	2013	2014
Average	9.5 Minutes	11.4 Minutes	9.0 Minutes	8.7 Minutes
80 th Percentile	9.0 Minutes	18.8 Minutes	11.4 Minutes	12.0 Minutes
90 th Percentile	17.0 Minutes	20.4 Minutes	13.2 Minutes	18.0 Minutes

Figure 65: Total Response Time Performance - HFD

	2011	2012	2013	2014
Average	7.9 Minutes	11.0 Minutes	8.7 Minutes	9.9 Minutes
80 th Percentile	10.2 Minutes	17.4 Minutes	14.0 Minutes	13.0 Minutes
90 th Percentile	13.4 Minutes	19.7 Minutes	15.0 Minutes	13.6 Minutes

Figure 66: Total Response Time Performance - MFD

	2011	2012	2013	2014
Average	3.5 Minutes	11.0 Minutes	12.3 Minutes	9.0 Minutes
80 th Percentile	5.0 Minutes	11.6 Minutes	14.2 Minutes	11.0 Minutes
90 th Percentile	5.0 Minutes	11.8 Minutes	15.1 Minutes	13.0 Minutes

Figure 67: Total Response Time Performance - OFD

	2011	2012	2013	2014
Average	7.8 Minutes	5.5 Minutes	7.2 Minutes	6.9 Minutes
80 th Percentile	10.2 Minutes	7.0 Minutes	9.0 Minutes	10.6 Minutes
90 th Percentile	11.8 Minutes	10.7 Minutes	10.0 Minutes	11.9 Minutes

Figure 68: Total Response Time Performance - BIRDFD

	2011	2012	2013	2014
Average	8.0 Minutes	6.2 Minutes	5.8 Minutes	6.5 Minutes
80 th Percentile	12.2 Minutes	9.6 Minutes	7.6 Minutes	9.0 Minutes
90 th Percentile	13.0 Minutes	11.0 Minutes	8.0 Minutes	10.0 Minutes

Figure 69: Total Response Time Performance - SHFD

	2011	2012	2013	2014
Average	10.3 Minutes	8.0 Minutes	7.8 Minutes	8.8 Minutes
80 th Percentile	12.4 Minutes	12.0 Minutes	9.0 Minutes	11.2 Minutes
90 th Percentile	12.7 Minutes	12.0 Minutes	11.0 Minutes	11.6 Minutes

Support Programs: Training

Firefighters operate in a complex, dangerous, and dynamic environment, as demonstrated by over 100 fatalities and 3,000 serious injuries annually. Firefighter training is the single most important factor that prepares them to meet the challenges of the situations and environments in which they work. The delivery of safe and effective fire and emergency medical services is, therefore, clearly dependent on a well-trained response force. The International Fire Service Training Association (IFSTA) states:

...regardless of the particular system used, an effective training program will include: (1) the continuous training of all levels of personnel in the organization; (2) a master outline or plan; (3) a system for evaluating the scope, depth, and effectiveness of the program; and (4) revising the program, as required, to include changing state and federal mandates, advances in equipment, products, and operational techniques.

Without a comprehensive training program, emergency outcomes are compromised, response personnel are at risk, and the agency may be exposed to liability for the actions of its personnel. Training and education of personnel are equally critical functions for each of the agencies included in this analysis. The function of a training program is not merely imparting personal knowledge and technical skills to an individual; it is also a process of developing the self-confidence to perform correctly under stressful - if not hostile - conditions. A training program must be systematic and must provide positive feedback to the trainee, firefighter, or officer. The goals of training should always focus on performance, never merely on acquiring a certain number of training hours.

Today's standards outline certain areas that are considered integral to the operation of an effective training program. The program should include the following:

- Identified general training competencies
- Training administration and scheduling
- Training facilities and resources
- Training procedures, manuals, and protocols
- Record keeping (records management system)
- Organizational priority to training
- Training program clerical support services

Training Observations

Each of the fire departments involved in this project reflect a healthy appreciation for the importance of training and its correlation to the safety of their firefighters. The approaches employed and program effectiveness varies greatly, however, among the various participants. The programs are reviewed in the following tables.

Training Program Observations: Hector, Buffalo Lake, Fairfax, Franklin and Morton Fire Departments

The table below contains ESCI's observations related to the training programs for the five fire departments listed. An additional table follows with the same information for the remaining agencies.

Figure 70: Training Program Observations

Training Program Observations					
	Sacred Heart FD	Renville FD	Danube FD	Olivia FD	Bird Island FD
Initial Training Provided By	In-house training officer	Fire chief additional duty, 6 training team members	In-house training officer	Fire chief. Not designated training officer	In-house training officer
Training Required Prior to Scene Response	Restricted from entering fires until completion of Firefighter I and II	Restricted until Firefighter I and II certification is completed	Restricted regarding on-scene tasks until completion of probation.	On scene tasks are limited until completion of Firefighter I and II training	May respond but not make entry until completion of Firefighter I and II
Training Required to Leave Probation	Completion of Firefighter I and II completes probation period	Three years allowed to complete Firefighter I and II certification	One year. During the second year, required to complete Firefighter I	One year probation, must obtain Firefighter I and II in two years	One year probation, 3 years to complete Firefighter I, II and 1 st Responder
Established Minimum Training Hours Annually	Can miss up to 3 sessions or must attend a at 20 hours of training annually	No minimum requirement	70% minimum attendance required. 12 sessions per year.	Required to attend 50% of the bi-monthly training (24 per year)	Minimum of 66% attendance to training sessions
Consistent Officer Training Provided	Only as included in ongoing training schedule	Only as included in ongoing training	Only as included in ongoing training	Voluntary attendance at outside officer schools only	Included in ongoing training only
Driver/Operator Training Provided	Only as included in ongoing training	Only as included in ongoing training	Only as included in ongoing training	No formal program	Included in ongoing training only
Individual Responsible for Training Program	Training Officer	Fire chief	Training Officer	Fire chief, delegated to rotating committee	Training Officer
Company Officers Trained in Instructional Techniques	No	No	No	No	No
Annual Training Plan Developed	Training Officer develops	Informally planned	No annual training plan is	Not planned in advance	Annual training plan is

	Training Program Observations				
	Sacred Heart FD	Renville FD	Danube FD	Olivia FD	Bird Island FD
and Followed	annual plan, one class per month		in place.		established
Training Program Dedicated Budget	\$1,000 annual line item budget for training	\$1,200 budgeted annually for training	No dedicated line item for training except for Firefighter I = \$3,000	\$3,000 annual budget	\$10,000 budgeted annually for training
List Training Resources Available	Classroom, apparatus, no props or training tower	Classroom, apparatus only	Classroom, apparatus only. Use community center and houses as available.	Classroom, apparatus, no props or training tower	Classroom, apparatus, parking lots and streets only
Standard Training Curriculum Manuals Used	No	No	Firefighter I and II manuals	No	No
Lesson Plans Used	No	No	No	College instructors are certified	No
Night Drills Conducted	Yes	Yes	Yes	Yes	Yes
Multi-Company Drills Conducted	Occasionally with neighboring departments	Occasionally with neighboring departments	Occasionally with neighboring departments	Occasionally with neighboring departments	With neighboring departments once or twice a year
Regional Disaster Drills Conducted	Periodic drills by the county emergency management	Periodic drills by the county emergency management	Not routinely	Periodic drills by the county emergency management	Not routinely
Performance Evaluations for Critical Duties	No	No	No	No	No
Skills Evaluations for Critical Duties	No. Drill observation only.	No	No	No	No, except as involved in regular training
Post Incident Analysis Used to Lead Training	Yes	Completed on most incidents	Completed on most incidents	Informally. Also debriefings.	Yes
Safety Officer	No	No	No	Yes	No

Training Program Observations					
	Sacred Heart FD	Renville FD	Danube FD	Olivia FD	Bird Island FD
Present for all Drills					
Training Records Maintained	Training Officer keeps records electronically	Log sheet maintained	In hard copy by Training Officer	FD secretary maintains on spreadsheet	By Training Officer
Recertification Requirements	None	None	None	None	None

Training Program Observations Continued: Hector, Buffalo Lake, Fairfax, Franklin and Morton Fire Departments

The training program observations continue below for Hector, Buffalo Lake, Fairfax, Franklin and Morton Fire Departments.

Training Program Observations					
	Hector FD	Buffalo Lake FD	Fairfax FD	Franklin FD	Morton FD
Initial Training Provided By	In-house training officer	In-house training officer	Use Firefighter I, II and Haz Mat Awareness college program	Fire Captain is assigned to training	1 Asst. Chief is designated as Training Officer
Training Required Prior to Scene Response	On scene tasks are limited until completion of Firefighter I training	Restricted initially. Firefighter I required for full operation.	On scene tasks are limited until completion of Firefighter entry training	Restricted from entry until training is started	None
Training Required to Leave Probation	Firefighter I certification required within 3 years of hire	Firefighter I certification required to complete probation	3 year probationary period during which Firefighter I, II, Haz Mat and First Responder or EMT	90 day probation, with training minimums and completion of Firefighter I, II and Haz Mat within 2 years	None
Established Minimum Training Hours Annually	Minimum attendance to 6 monthly trainings	Minimum attendance to 6 monthly trainings	Required to attend a minimum of 30% of training offered	Must attend a minimum of 8 hours training per year. Missing 3 consecutive meetings will result in	No minimum requirement

	Training Program Observations				
	Hector FD	Buffalo Lake FD	Fairfax FD	Franklin FD	Morton FD
Consistent Officer Training Provided	Limited	Voluntary attendance at outside officer schools only	Included in ongoing training only	Included in ongoing training only	No
Consistent Driver/Operator Training Provided	No	Informal only. No EVIP course	Included in ongoing training only	Included in ongoing training only	Annual driver training included in ongoing training
Individual Responsible for Training Program	Training Officer	Training Officer	All four chief officers	Fire Captain is assigned to training	Assistant Chief
Company Officers Trained in Instructional Techniques	No	No	No	No	No
Annual Training Plan Developed and Followed	Not planned in advance	3 to 6 month schedule planned in advance	Annual training plan established in November of each year	No annual training plan. Training needs identified seasonally and by identified need.	Annual training schedule is in place
Training Program Dedicated Budget	\$1,500 annual budget	\$3,000 annual budget, generally adequate	\$4,000 annual training budget	\$3,000 Annual training budget	Not available
List Training Resources Available	Classroom, apparatus, search and rescue container	Classroom, apparatus, parking lots and streets only	Classroom, apparatus, parking lots and streets only	Classroom, apparatus, parking lots and streets only	Classroom, apparatus, parking lots and streets only
Standard Training Curriculum Manuals Used	No	No	No	No	No
Lesson Plans Used	No	College instructors use lesson plans	College instructors use lesson plans	No	No
Night Drills Conducted	Yes	Yes		Yes	Yes
Multi-Company Drills	Occasionally with	Occasionally with	Occasionally with	Occasionally with	Occasionally with

	Training Program Observations				
	Hector FD	Buffalo Lake FD	Fairfax FD	Franklin FD	Morton FD
Conducted	neighboring departments	neighboring departments	neighboring departments, less than yearly	neighboring departments	neighboring departments
Regional Disaster Drills Conducted	Not routinely	Not routinely	Periodic drills by the county emergency management	Not routinely	Periodic drills by the county emergency management
Periodic Performance Evaluations for Critical Duties in Place	No	No	No	No	No
Periodic Skills Evaluations for Critical Duties in Place	No, except as involved in regular training	No, except as involved in regular training	No	No	No
Post Incident Analysis Used to Lead Training	Yes	Yes	Informally	Yes	Informally
Safety Officer Present for all Drills	No	Yes	No	Yes	Yes
Training Records Maintained	By Training Officer	By Training Officer	On hard copy	By Training Captain	By Training Officer
Recertification Requirements	None	None		No	None

Training Review and Recommendations

All of the participating agencies seek to address training needs with approaches that are generally acceptable, but that vary in methodology. All are challenged, as is typically the case in smaller volunteer organizations, to fully meet the multiple demands associated with firefighter training and skills maintenance.

While mandated requirements for training of non-career firefighters in Minnesota are not in place, 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.

To achieve the recommended minimum of 24 annual hours, an agency needs to offer training at least twice monthly, if 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 so, the 24 hour minimum does not address the additional state and federal training requirements discussed above. As a result, the study area fire departments are considerably challenged to meet their training needs.

Each organization has assigned responsibility for training to someone in the agency. In some instances, a dedicated training officer is identified. In others, the fire chief assumes training obligation, along with other duties. What is common to all, however, is the need for someone to identify training needs, determine how to meet them, and establish a plan for doing so. This need, because it is universally shared by all ten agencies, presents a prime opportunity to share the associated workload and eliminate or reduce the need for each organization to have someone performing the same tasks of training planning.

Training delivery is offered differently, as well. Some of the departments train twice monthly, while others only once a month. Commendably, and as listed in the previous tables, most make good use of external training resources that are available through area colleges, specifically Ridgewater College, South Central College and Minnesota West Community and Technical College. The colleges are used, to differing degrees, by all of the fire departments involved in the study, however, there is little consistency with regard to how and to what extent they are used.

Minimum training requirements also vary between the participants. For new, entry level, fire department personnel, nearly all of the agencies have adopted a minimum requirement of Firefighter I and II training, combined with basic hazardous materials certification, which is an appropriate baseline standard. The sole exception is the Morton Fire Department, where no minimum requirement is in place. ESCI encourages Morton to do so.

In terms of ongoing training, following the entry level requirements, most of the participants have identified a minimum attendance requirement based either on percentage or contact hours. Some do not establish training minimums. It is important that all fire departments set reasonable minimum standards for training participation. However, an essential element that was found to be in place in all of the agencies, with the exception of Morton, is that new personnel are restricted in their activities, specifically entry to a fire building, until they have met identified minimum training requirements.

It is apparent, from the above review of training delivery in the region, that all ten fire departments are faced with essentially the same challenges and all make a concerted effort, yet struggle to meet the demands that result in effective firefighter operations and critical responder safety. For this reason, ESCI finds that opportunities exist for the participants to collaborate and share in the workload associated with training program management, which will be addressed in further detail later in this report.

Support Programs: Fire Prevention, Public Education, and Investigation Programs

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

A fire department should actively promote fire resistive construction, built-in warning and fire suppression systems, and an educated public trained to minimize their exposure to fire and health issues and to respond effectively when faced with an emergency.

The following overview discusses the fire prevention and public education efforts that are put forth by the agencies subject to this analysis.

New Construction Code Compliance

Of the ten agencies, none have directly adopted their own fire and life safety code, as is commonly the case in smaller organizations. Instead, the communities are subject to the Minnesota State Fire Code, which is adopted on a state-wide basis and applies to jurisdictions that do not have a differing code adoption.

Active involvement in the process of approving building permits for new construction or extensive remodeling and changes of occupancy is important if a fire department is to be able to assure that buildings are safe. However, smaller fire departments are typically unable, due to staffing limitations, to become actively involved in the building permit process. In the study agencies, most have little, if any involvement while others are informed and consulted about proposed construction projects and provided with the opportunity to have input, though not directly responsible for plan reviews or permit issuance.

More commonly, building permits are processed by the cities having jurisdiction over the proposed project. In the city of Hector, for example, a city building official reviews applications and issues building permits. The fire department is not involved.

While it is difficult for departments that are staffed with volunteer or paid per call personnel to become actively involved in the new construction approval process, it is important that they seek to do so, to the

extent possible. The departments are encouraged to inject themselves into this process by, at a minimum, requesting the opportunity to see permit applications and comment on fire related concerns that a proposed building may present.

Existing Occupancy Inspection Practices

Existing commercial occupancies should be inspected annually, at a minimum, for fire and life safety concerns. However, the process requires specialized training and is time consuming. As a result, all of the study agencies depend on the Minnesota State Fire Marshal's Office to conduct existing occupancy code enforcement inspections.

The State Fire Marshal makes a commendable effort in regard to existing occupancy inspection practices. However, it is important to note that the Fire Marshal's Office field personnel are only able to inspect higher risk occupancy types, such as schools and institutional buildings, due to workload. Typically, lower risk structures, including mercantile and multi-family residential occupancies, do not get inspected. Opportunities to engage in fire prevention safety programs and share code enforcement activities, personnel, and practices with neighboring agencies warrant future consideration.

Public Fire Safety Education

Public education activities are one of the most important elements of an effective approach to community fire prevention. Humans are the primary cause of fires. Informing and educating a community's citizenry will result in fewer fires and fewer losses of lives and property.

Public education efforts are in place in all of the fire departments reviewed. Buffalo Lake provides training on a variety of subjects during National Fire Prevention Week, as well as during Buffalo Lake Days. All of the other participants make similar efforts during Fire Prevention Week, but to varying degrees. Generally, activities are limited during the rest of the year.

Public fire and life safety education is one of the most beneficial steps that a smaller fire department can take to help to reduce the occurrence of fires and enhance the safety of its citizens. It is also an area that can be very effectively addressed by sharing of outreach strategies. Opportunities should be explored for regional, shared, delivery of public education efforts.

Fire Cause Investigation

All of the agencies rely heavily on the Minnesota State Fire Marshal's Office to assist them with the determination of a fire's cause and origin, as is appropriate. There is no regional Fire Investigation Team (FIT) in the area, leaving the State Fire Marshal as the sole resource. While the approach is generally adequate, establishing a FIT team is an effective way to share available fire investigation resources and to meet a need that many, especially smaller, fire departments are simply unable to achieve.

Section II – Opportunities for Cooperative Efforts

In the next report section, the opportunities that are available to Minnesota fire departments are identified and discussed. Having completed the above evaluation of current conditions, ESCI is able to use the information obtained in that review to compare practices that are in place in the study agencies and identify needs in order to evaluate the opportunities that exist in the Renville County area for shared service delivery between the agencies.

In Minnesota, fire department can work together in various ways, ranging from very fundamental sharing of resources and programs up to and including legal assimilation of multiple agencies into one in the form of a merger or consolidation, where feasible. ESCI has worked with many shared services efforts in the state, and has learned in our experience that no single approach can be applied successfully to all situations – there is no “one size fits all” solution. Instead, strategies must be identified that will work in each, unique, area.

The balance of this report examines the multitude of options available to the study agencies and provides direction where appropriate.

Available Partnering Options

A number of basic strategies are generally available to Minnesota fire departments when considering cooperative efforts and shared services, beginning with a do-nothing approach (status quo) and ending with complete unification of two or more organizations into what is, essentially, a new emergency service provider. The potential options are:

- Complete Autonomy
- Administrative Consolidation
- Functional Consolidation
- Operational Consolidation
- Legal Unification or Merger

A description of the primary methodologies is found below.

Complete Autonomy

This is a status quo approach in which nothing changes. While often viewed negatively, in some cases the best action is no action. In this case, the ten participants 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 carries with it the advantage of being the easiest to accomplish as well as maintaining the independence of the organizations and local control. That is, the currently elected boards continue to oversee their individual agencies as their electorate desires without the complication of considering the views of a different constituency. It creates the least stress on the organizations and does not

necessitate reorganization. What it lacks is long term commitment and the virtues that can be gained in terms of increased efficiency that are realized in a cooperative 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. Renville County is no exception. 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 agencies like those in Renville County, administrative costs, and potential savings, are small. However, important efficiencies may be gained.

An administrative consolidation is most effective in larger organizations where duplication exists and workload assignments can be re-aligned to gain efficiencies. In the Renville County fire agencies, due to their smaller size and limited number of administrative and support personnel, opportunities for gains with this approach are limited.

Functional Consolidation

Public entities in Minnesota have authority under law to enter intergovernmental agreements (IGAs) for the purpose of cost containment and service delivery enhancement. The laws of the State of Minnesota address the issue, allowing intergovernmental contracts for any lawfully authorized governmental function.⁴

This type of cooperative effort can include any function within the study departments that allows them to deliver services. In the Renville County agencies, examples were identified in the Evaluation of Current Conditions section such as shared training efforts, fire prevention activities, equipment purchasing, logistics, etc. Through functional consolidations, each agency benefits from the resources of the whole while maintaining independence as separate organizations. In some instances, functional consolidations serve as a prelude to a future merger.

Operational Consolidation

This strategy 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

⁴ Minnesota Statutes, section 471.59. Joint Exercise of Powers Act.

significant cooperative commitment 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.

In Minnesota there are several types of Inter-Governmental Agreements (IGA)s, including 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.

Legal Unification

Legal unification of fire departments is commonly referred to using differing terms such as merger, consolidation and annexation. This formal approach unites not only the programs but also the organizations themselves. State laws addressing political subdivisions usually detail a process for legal unification.

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

Legal consolidation 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 the state.

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 evaluate each potential and provide policymakers with the information so that they can make an educated decision regarding the future of fire protection and emergency services within their respective communities.

Feasible Options for Shared Services

ESCI's process of reviewing potentially feasible opportunities for and shared service delivery includes identifying and evaluating the issues that are current challenging each agency, as discussed in the Evaluation of Current Conditions section of this report. Once existing similarities in needs and current challenges are found, the next step is the identification of potential ways to address them. In some cases, issues identified present roadblocks to shared service delivery, while others provide a unique chance for improvement.

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

The distinction between various forms of unification, including terms like consolidation, merger, collaboration and shared service delivery tend to be used interchangeably, with varying definitions and interpretations. The reader should note that when referring to the union of programs or agencies, key terms that are used include *functional consolidation*, *operational consolidation* and *legal unification*.

If two or more governing bodies are going to pursue undertaking of shared service delivery efforts, they need to first consider whether doing so is advantageous. ESCI applies the most basic test of feasibility being that of developing an approach that meets the following minimum standards:

1. Provides equivalent or improved service delivery at a reduced cost, or
2. Provides equivalent or improved service delivery at the same cost

ESCI will not recommend a strategy that results in a reduced level of service.

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

The decision to choose one unification strategy over another is a matter of local policy. Most often, officials choose a preferred course for analytical reasons; however, in certain cases politics or law may rule. Most states actively support cooperation between governments as a matter of policy in the interest of furthering the economy and efficiencies of local government.

Feasibility of Legal Integration of Renville County Fire Departments

Generally, functional and operational strategies are always available as options, whereas the practicality and advantage of legal unification of fire departments is more complex and dependent on multiple circumstances and viability considerations. In the multiple formal unifications that ESCI has

accommodated nationally, those that were recommended as feasible, and subsequently successful, were in situations where common needs and duplication existed. Typical examples include:

- Unnecessary redundancy in station locations
- Duplicative apparatus and staffing deployment approaches
- Administrative staffing overlap and multiple chief officers
- Duplication in support staffing
- Redundancy in support program operations, including training and fire prevention
- Opportunities for substantial economies of scale in regard to purchasing and logistics

A number of other examples can be found in various situations, dependant on local geography, resource deployment, political and legal considerations and more, however the most common opportunities for increased efficiency overall are those that involve the elimination or reduction of unnecessary duplication. The most common financial savings that result are those that are realized when staffing can be reduced, most commonly at administrative levels.

With the above in mind, ESCI evaluated the opportunities that may be found for increased efficiency and reduced cost in Renville County. It quickly became apparent that multiple and highly valuable gains can be realized through the implementation of a variety of functional and operational consolidation strategies. These include shared training, collaborative development of regional operating procedures, enhanced use of mutual and automatic aid and a number of other function and operation approaches that are detailed in the following report section.

However, in looking beyond the approaches above, the question of taking collaborative efforts to a greater level, in the form of a formal legal integration of the fire departments involved in the study, ESCI does not find that there are advantages to be realized that will result in sufficient gains in terms of operational efficiency or financial savings. Because the subject agencies are small, the geographic service area is large and the majority of the personnel involved are volunteers (representing little personnel cost or savings potential.), the prospective advantages of a more formalized change in governance do not outweigh the challenges involved. Therefore, ESCI does not recommend that the study agencies pursue a legal integration approach.

However, given that each agency is contracting with one or more towns to provide service, there is the potential for financial disparity between departments. The one element that could prevent towns from moving from one department to another as their service provider is to implement a county-wide fire taxing district that contracts with the various fire departments in Renville County to provide service. This would equalize funding across all agencies and allow large expenditures such as apparatus and/or facility replacement to be planning for on a county-wide level. Since fire taxing districts are uncommon in Minnesota (Cloquet Area Fire District is the only one that ESCI is aware of) it is possible that legislative approval would be necessary before this strategy could be implemented.

Functional and Operational Cooperative Efforts Strategies

Based on the findings outlined in the preceding discussion, ESCI finds that legal unification of any two or more of the study agencies does not present sufficient benefits to prove feasible. However, shared services can take on a much different look, one that is not limited to formal merger or legal integration. As outlined previously, there are many methods by which departments can cooperate, while remaining as stand-alone organizations, to improve the overall efficiency of the organizations within a given region.

In the next section, ESCI presents a variety of functional and operational shared service opportunities for consideration by the Renville County fire departments. Each has been identified as an initiative that is applicable to the study area participating agencies and is customized to the Renville County departments based on the information developed in the Evaluation of Current Conditions section. These options are ones that two or more fire departments, or all participants, may choose to implement, remaining autonomous and yet benefitting from increased operational efficiencies and economies of scale.

Functional Strategy: Unification of Standard Operating Guidelines

In the earlier discussion titled Foundational Policy Documents, ESCI made the following observation:

“The study departments are severely lacking in their formal operational policies and procedures. While some of the departments have minimal written policies consisting of one or two pages, there is a dire need of a more formalized system of standard operating guidelines.”

Along with the above statement, a detailed listing of the content necessary to comprise an appropriate set of Standard Operating Guidelines (SOGs), or Procedures (SOPs) is provided. The importance of establishing adequate operating guidelines cannot be overstated. It is essential, and lacking in the study area.

Since the need is common to all ten agencies, developing guidelines as a shared initiative is a natural solution and will eliminate a great deal of duplicative effort. However, an even greater advantage exists in that consistent operating practices can be established and institutionalized throughout the region. As a result, when firefighters find themselves at emergencies, fighting fires with other fire departments, all will be working under common procedures, resulting in enhanced firefighter safety and operational effectiveness.

The development of unified standard operating guidelines is viewed by ESCI as the most important, and urgent, shared strategy that the agencies should pursue in Renville County.

Unification of Standard Operating Guidelines Discussion

Timeline: Short Term

Objective: Increase firefighter safety and effectiveness by providing common guidelines for operation during emergencies, emergent, and non-emergent incidents.

Policy Action: Develop an agreement between all Renville County fire departments to establish shared guidelines. Adopt common operational guidelines that are kept in electronic format for ease of updating

and distribution. Provide consistent initial and recurring training to personnel on the use of the joint guidelines. Provide for periodic review of manuals and update as necessary.

Pros

- Improvement in on-scene safety, efficiency and effectiveness of personnel.
- Reduced confusion in the delivery of service.
- Common methods of approach

Cons

- Limited individuality in specific administrative policies and procedures.

Fiscal Considerations:

- Time commitment by personnel to draft and develop guidelines

Functional Strategy: Shared Training Practices

In the Evaluation of Current Conditions section of this report, ESCI states that:

“It is apparent, from the review of training delivery in the region, that all ten fire departments are faced with essentially the same challenges and all make a concerted effort, yet struggle to meet the demands that result in effective firefighter operations and critical responder safety.”

When reviewing current Renville County fire training practices, it was obvious that the needs of all of the agencies are similar because they all share very like fire risks, geographic conditions and staffing approaches. Because of the similarities, the training needs are alike, however, training is generally conducted independently. The situation offers prime opportunities to address shared training needs using a regionalized approach. However, geographic distances between the fire departments present additional challenges. For example, the Morton, Franklin and Fairfax Fire Departments are geographically separated from those on the Highway 212 corridor, resulting in challenges when it comes to meeting for training. Similarly, the Hector and Buffalo Lake departments are separated, though to a lesser extent, from the others. Even so, many elements of training activities can be regionalized, including planning, administration and delivery. The approach should be viewed as one that can be applied to the entire study area, in some respects, but can also be used as a more localized option between some of the departments mentioned above, viewed as “sub regions” to an overall regional approach. The concept is further defined below:

Shared Training Discussion

Timeline: Short Term

Objective: Share Renville County training practices programs to provide more options for volunteer attendance and to make more effective use of available instructors at each agency, as well as college instructional resources.

Overview: Each of the departments currently has a separate training program, but very similar training needs. As a result, limits are found in terms of instructional opportunity, training planning is repeated by each of ten training officers, recordkeeping is duplicated and separation of responders exists. Challenges also exist in regard to geography and travel, however those can be mitigated using a truly collaborative approach.

Policy Action: Agencies should expand the current model of independent training and develop joint ongoing training program planning, standards and objectives that comply with industry standards and effectively address the Minnesota recommended minimum training requirements detailed in Appendix A: Minnesota Board of Firefighter Training and Education Minimum Training Criteria

Pros

- Personnel have more options to attend training on alternative days/nights at different locations.
- Interagency training opportunities with consistent instruction results in enhanced emergency scene cooperation, teamwork, and performance.
- Reduced cost and duplication of effort in the planning and development of training sessions.
- Broader array of topics, apparatus, tasks, and evolutions for the volunteers to experience.
- The program could expand to include other agencies, further enhancing the training opportunities throughout the region.

Cons

- Cooperative effort may result in less agency-specific training and flexibility.

Fiscal Considerations:

- Time commitment required by training coordinators

Functional Strategy: Collaborative Fire Prevention and Public Education

As identified earlier in the report, the study agencies focus on fire prevention and public education is limited, generally due to a lack of sufficient to more effectively address the need. Like training, fire prevention and public education needs are similar in the participating agencies, presenting opportunities to combine efforts, as discussed below. It is understood that the majority of fire and life safety code enforcement responsibility is delegated to the Minnesota State Fire Marshal in the study agencies, as is appropriate. However, the state cannot be expected to be fully effective in all regards of prevention and education. For this reason, the study agencies are encouraged to do what they can, given staffing and financial limitations, to supplement the efforts of the State Fire Marshal's Office.

Shared Fire Prevention and Public Education Discussion

Timeline: Mid term

Objective: Provide for a consistent fire prevention and public education outreach in the Renville County fire agencies, to the extent possible.

Overview: The municipalities comprising the study region have not independently adopted a fire code and have limited, if any, involvement in fire and life safety code enforcement. A somewhat higher degree of engagement in public education outreach exists in that all of the agencies conduct community programs during the annual Fire Prevention Week.

It will be difficult for the participants to become closely involved in code enforcement activities due to training and certification requirements along with relatively low volumes of new or existing occupancy activity. However, any efforts that can be made to enhance current prevention efforts will prove to be valuable. Doing so is best achieved by establishment of an area-wide task force, or coalition, of representatives from each of the fire departments that can work together to address identified prevention and community education needs. Some guidance is provided below:

Policy Action:

- Institutionalize the creation of the coalition through a written agreement.
- Involve others from outside the area and from non-traditional groups (insurance industry, educators, MN State Fire Marshal, media).
- Create standardized public education messages that can be used across the region to avoid duplicated efforts.
- Learn from others. Model the coalition after other successful regional public fire safety education programs.
- Some agreements related to current local amendments could be affected by changes or the adoption of new amendments.
- Work with the State Fire Marshal's Office to assist with and/or supplement existing occupancy fire prevention inspections.
- Work closely with all building officials in an effort to gain, at a minimum, the ability to provide advisory review of new construction building plans when they are submitted.

Pros

- Fire codes and enforcement of those codes would be more consistent throughout the region.
- Municipalities can share resources to ensure that programs are delivered throughout the region.
- Public education outreach is maximized.

Cons

- Potential loss of municipality-specific education programs.

Fiscal Considerations:

No significant financial considerations.

Operational Strategy: Implementation of Mutual and Automatic Aid Practices

The agencies in the study area currently utilize mutual aid on larger incidents but only informally and to varying degrees. They do so in the absence of a formalized Mutual Aid Agreement. Automatic Mutual Aid practices are not in place.

Mutual and Automatic aid provide invaluable assets to a fire department, enabling it to muster the resources necessary to manage a large emergency, without the necessity of purchasing and maintaining large numbers of response resources that are needed on few occasions. Establishment of a formal Mutual Aid Agreement, including Automatic Aid provisions is strongly recommended in Renville County.

Mutual and Automatic Aid Practices Discussion

Timeline: Short

Objective: Establish mutual and aid agreements on a county-wide basis.

Overview: One of the most elemental levels of cooperative service delivery is that of the sharing of valuable resources, including apparatus, equipment and people. A primary means for sharing resources is by the use of Mutual Aid and Automatic Aid. Mutual Aid involves establishing agreements under which a fire department can request and receive equipment and personnel support for an emergency incident from a neighboring fire department. Automatic Aid is the same, with the exception that it is automated based on dispatch protocols, absent the need for an incident commander to request the assistance. In Renville County, establishing these practices, under a written agreement, is viewed as of critical importance.

Policy Action: Review mutual aid and automatic aid procedures that are currently in place in other areas to identify opportunities to establish similar agreements. Analyse travel and response times, including the maps provided in this report, to identify areas in which Mutual and 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.

Pros

- Establishment and/or formalization of existing agreements
- More efficient emergency response
- Reduced decision making burden on command personnel (automatic dispatch)
- Increased interdepartmental cooperation
- Enhanced opportunities to receive grant funding
- Improved capacity to manage large scale disaster situations

Cons

- Potential of imbalance in responses
- Differences in current equipment load lists, compartmentation, and staffing models

Fiscal Considerations:

- Number and frequency of responses
- Volume of equipment and personnel sent to incidents outside of the agency’s jurisdiction
- The cost of implementing these practices is generally offset by the fact that a similar level of assistance is provided by another agency in return. As a result, an organization may be able to avoid costs if Mutual or Automatic Aid resources are made available instead of adding new stations, apparatus and personnel to provide coverage in a response area.

Operational Strategy: Regionalized Incident Command

All ten study agencies use an Incident Command System (ICS) on emergency scenes, however, practices vary to some extent. Standardization and establishment of a regionalized approach is important, especially considering that agencies are responding into each other’s areas where ICS practices must be consistent. A lack of standardized, regional, ICS protocols can compromise firefighter safety as well as impede the effectiveness of fireground operations.

Implementation of Regional Incident Command Practices

Timeline: Short term

Objective: Provide for IC (Incident Command) supervision of emergency operations throughout Renville County. Provide for supervision of response personnel during routine operations.

Overview: 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. But to do so safely, and to assure that on-scene operations are effective, tightly structured command practices must be in place. The standard for incident command practices is found in the National Incident Management System (NIMS).

Policy Action: Use coverage and deployment planning to determine an appropriate level and number of incident commanders that may be needed at an incident. Compare current incident command practices and training activities to determine what is needed to combine them. Conduct joint incident command training exercises.

Pros

- Improved communications for scene command and control
- Increased efficiency in scene size-up and request for additional resources
- Improved interdepartmental cooperation
- Enhanced safety

Cons

- None

Fiscal Considerations:

No significant financial considerations.

Functional Strategy: Fire Apparatus Purchasing and Replacement Planning

In the previous Capital Assets review, ESCI identified purchasing and planning for vehicle replacement as both a challenge, and an opportunity to implement shared services initiatives. None of the ten agencies has established a structured or formalized capital replacement schedule or set aside funding for the future replacement. To replace equipment, each fire department has to use grant funding or city operating budget dollars.

The participating agencies should consider establishing cooperative replacement practices, where practical. Concurrently, they are encouraged to identify opportunities to share reserve apparatus and undertake joint purchasing practices, as described previously. ESCI provided a sample vehicle replacement schedule in the capital assets section that can serve as a starting point for planning.

Fire Apparatus Purchasing and Replacement Planning Discussion

Timeline: Mid-term

Objective: Adjacent agencies should work together to adopt a regional capital replacement planning and joint purchasing procedures that adequately funds the purchase of future apparatus. In addition, existing inventories of fire engines, tankers and other vehicles should be reviewed to identify duplication and opportunities to share reserve equipment to reduce costs.

Overview: Each fire department uses and maintains a variety of emergency apparatus types. Among the common types of apparatus, each 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. Further, planning future purchases jointly, using common specifications, can produce additional cost savings. Finally, all participants maintain reserve apparatus that is needed, but rarely used. Sharing of reserves can reduce the needed numbers of reserve equipment regionally.

Policy Action: Assemble data on current department apparatus, including: age, mileage, operating hours, maintenance costs, cumulative down time, and annual test results. Use the information to create a combines 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. Evaluate opportunities to share reserve apparatus to reduce regional inventory. Develop standardized apparatus specifications and joint purchasing practices.

Pros

- Formalizes capital replacement and identifies it as a priority
- Allows for long-range planning for apparatus and equipment replacement
- Reduces the need for special financing or bonding to purchase high value items

Cons

- May require a substantial investment to bring current fleet up to necessary levels for future funding
- Will require annual financial resources if the plan is to be fully funded

Fiscal Considerations:

- Time and effort savings by preparing fewer bid specifications.
- Effort avoided by conducting fewer bid processes.
- Investigate the letting of apparatus bids for periods longer than one year.
- Cost savings in acquiring emergency fire apparatus.
- Cost savings associated with shared reserve apparatus
- Cost savings realized via joint purchasing and resultant economies of scale.

Functional Strategy: Shared Volunteer Recruitment and Retention Efforts

The participating agencies depend heavily on the use of volunteer or 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.

Shared Volunteer Recruitment and Retention Discussion**Timeline:** Short term

Objective: Create a regional recruitment strategy in Renville County that draws on the specific demographics of the communities served and coordinates hiring processes that provides for consistent application and evaluation components. Establish retention programs (pay, benefits, etc.) that are consistent, to the extent possible, between the agencies in order to prevent personnel from leaving one agency and joining another.

Overview: A joint recruitment and retention program would allow all the study departments to pool their resources and apply for regional grant opportunities in order to attract more paid-on-call personnel to the system.

Policy Action: Evaluate the demographics and potential of each community regarding volunteer/paid-on-call personnel. Work together to develop and implement a joint recruitment program that applies to all Renville County agencies. Consider applying for a joint Volunteer Recruitment and Retention grant through the Assistance to Firefighter's Grant Program that covers the entire county's recruitment efforts. Work as a region to make standardize pay and benefits, to the extent possible. Work with each municipality to align relief association benefits across the region.

Pros

- Reduced costs of recruitment and application processes.
- Potential for regional grants for recruitment and retention programs.
- Information sharing between departments on potential members.

Cons

- 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.

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.

Functional Strategy: Sharing of Response Personnel

The dependence on volunteer or paid-on-call responders in Renville County results in multiple challenges in terms of having enough responders available when an emergency occurs. The problem is particularly difficult with daytime incidents when many personnel are at work. Often they work in a nearby city, but not in their home area. If they are to respond, they must first travel from their work community to their home fire department to staff response apparatus. The same may occur if they are simply driving through, or visiting, in another area.

Shared Response Personnel Discussion

Timeline: Mid term

Objective: Create a collaborative emergency response staffing plan, applicable throughout Renville County that enables emergency personnel to respond to the closest fire station in the event of a major incident.

Overview: When a large emergency is reported, responders can, under a well-developed cooperative effort, go to the closest fire station and respond with that department's crews, enhancing the response team. Naturally, doing so requires that multiple issues be considered, including establishing common training standards, operating guidelines, command practices and additional initiatives discussed in this report, along with others that would need to be identified. The concept is unique, and not without its challenges, but can be accomplished.

Policy Action: Inventory where responders live, work and recreate in the context of availability to respond to emergencies when away from home. Establish standardized training, response guidelines and incident command practices that are standardized county-wide to accommodate common approaches. Develop well-structured response procedures that dictate when and how personnel are to respond to stations other than those of their home agency.

Pros

- Enhanced daytime emergency response
- Ability to field an adequate response team when numbers of available responders is limited
- Improved overall operations that result from responders from different departments working and training together

Cons

- Potential issues regarding insurance, workers compensation and liability concerns.
- Increased need for structured response guidelines and procedures

Fiscal Considerations:

- Limited financial considerations should be realized

Findings, Recommendations, and Plan of Implementation

A variety of Operational Cooperative Efforts Strategy alternatives have been identified and analyzed in this report. Several potential consolidation combinations have been explored including the merger of all of the participating agencies into a single organization, as well as two other alternatives involving smaller geographic areas that held potential for integration into smaller combined entities. Throughout the process, it became apparent that geography, financial and taxation disparities, and service delivery models in all ten fire departments mean that all of the alternatives identified are not feasible in the context of formal operational merger.

In completing numerous shared service delivery feasibility studies over the course of many years, ESCI most often is able to demonstrate a host of advantageous reasons to integrate separate fire departments that result in significantly increased efficiencies and financial savings. In the instance of the agencies that chose to participate in this study, those advantages are not present.

Although a merger of some or all of the fire departments has not proved to be feasible, multiple other gains can be realized in the form of Functional Cooperative Efforts. Some of the strategies that are listed can be applied regionally, involving all ten agencies, and can even be expanded to include neighboring departments that did not participate in this study. Others may not apply to all ten participants and can, instead, be adopted by smaller regional consortiums of agencies.

Decisions about how to proceed and what initiatives are to be implemented will need to be carefully evaluated by the participants. When properly analyzed, it is likely that the organizations will find that some strategies will be readily adopted and initiated and others will be more complex and time consuming. It may also be found that some are not feasible at all. Care should be taken in making decisions that will affect the agencies for years to come. Guidance on the decision making process and implementation planning is provided in the next section.

Implementation Process

This section of the report describes recommended processes for moving forward with the potential implementation of a variety of shared service delivery efforts. 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 Renville County political bodies to continue with the process or not. The implementation begins with that step.

The detail here may be greater than what is applicable in this study area, however, it is included to underscore the importance of a process that is somewhat structured, to assure success. Renville County agencies may use only some, or all of the approaches, based on their assessment of need in terms of the initiatives that are being considered.

Conduct Vision Session(s) with Policymakers

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

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

One of the best methods for initiating this vision process is to begin with policymakers sharing an open discussion of critical issues. In an area like Renville County, comprised of smaller fire departments, the fire chiefs will need to provide a high level of guidance and insight to assist the elected officials in understanding the concepts. This assists in focusing the discussion on which of the feasible options from the study best address those critical common issues and how.

As the process focuses on those feasible options with the greatest opportunity to positively impact shared critical issues, the discussion can expand to the strengths and weakness of the strategies relative to the conditions, financial abilities, and cultural attitudes of the communities involved. There should be a concerted effort to remain at a policy level without becoming overly embroiled in operational discussions of implementation details. Those will be addressed once a common vision has been established for a future strategy that is in the best interest of all the communities involved.

This is also the time that communities may make the decision to opt out of further involvement. This may occur for a number of reasons. There may be legitimate concern that an individual community does not truly share an adequate number of common critical issues with the other communities. There may

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

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

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

Establish a Joint Implementation Committee

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

- City Manager/Administrator (or equivalent) from each community
- Fire Chief
- Finance manager from each community
- Volunteer/Paid on Call representatives from each organization

The Joint Implementation Committee’s first order of business should be to determine the rules and procedures of this committee. This should include such items as:

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

Develop an Implementation Strategic Plan

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

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

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

This process should result in the preparation of an implementation planning document that can be shared with the policy body, stakeholders, and others who will be involved in or affected by the implementation process. When completed, this document will serve as the master “road map” for the process and will help guide the next steps of developing working groups and assigning responsibilities.

Establish Implementation Working Groups

As part of the implementation strategic planning process, various Implementation Working Groups may be needed that will be charged with responsibility for performing the necessary detailed work involved in analyzing, weighing and deciding on specific processes. The number and titles of the working groups will vary, depending on the type and complexity of the strategies begin pursued. However, the following list provides some typical working groups that may be needed.

- Governance Working Group
- Finance Working Group
- Legal Working Group
- Operations Working Group
- Support Services and Logistics Working Group (Optional)
- Communications Working Group

Meet, Identify, Challenge, Refine and Overcome

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

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

Conclusion

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

ESCI began collecting data and working with Renville County stakeholders for this project in January 2015. Analysis of data and collection of stakeholder input has taken over five months to compile to develop options for future service delivery within the study area. It is ESCI’s sincere hope that the information contained within this document is seen as useful in enhancing the way in which fire and emergency services are delivered throughout the area.

Appendices

Appendix A: 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 MUST 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 CFR 1910.134 (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.

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.

Respiratory Protection

[29 CFR 1910.134]

(c) Respiratory Protection Program.

This paragraph requires the employer to develop and implement a written respiratory protection program with required worksite-specific procedures and elements for required respirator use. The program must be administered by a suitably trained program administrator. In addition, certain program elements may be required for voluntary use to prevent potential hazards associated with the use of the respirator.

(g) Use of Respirators.

This paragraph requires employers to establish and implement procedures for the proper use of respirators. These requirements include prohibiting conditions that may result in facepiece seal leakage, preventing employees from removing respirators in hazardous environments, taking actions to ensure continued effective respirator operation throughout the work shift, and establishing procedures for the use of respirators in IDLH atmospheres or in interior structural firefighting situations.

(k)(4)

An employer who is able to demonstrate that a new employee has received training within the last 12 months that addresses the elements specified in paragraph (k)(1)(i) through (vii) is not required to repeat such training provided that, as required by paragraph (k)(1), the employee can demonstrate knowledge of those element(s). **Previous training not repeated initially by the employer must be provided no later than 12 months from the date of the previous training.**

Respiratory Protection**[29 CFR 1910.134 App A]****Appendix A to § 1910.134: Fit Testing Procedures (Mandatory) Part****I. OSHA-Accepted Fit Testing Protocols**

The employer shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT. **AL REFRESHER TRAINING**

Hazardous Waste Operations and Emergency Response**[29 CFR 1910.120 (q)]**

(6)

Training

Training shall be based on the duties and function to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of this standard, shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident. Employees who participate, or are expected to participate, in emergency response, shall be given training in accordance with the following paragraphs:

(i) First Responder Awareness level

First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency.

(ii) First Responder Operations level

First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight (8) hours of training or have had sufficient experience to objectively demonstrate competency.

(iii) Hazardous Materials Technician

Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least twenty-four (24) hours of training equal to the first responder operations level and in addition have competency.

(iv) Hazardous Materials Specialist

Hazard materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local and other government authorities in regards to site activities. Hazardous materials specialists shall have received at least 24 hours of training equal to the technician level and in addition have competency.

(v) On-Scene Incident
Commander

Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least twenty-four (24) hours of training equal to the first responder operations level and in addition have competency.

(7)
Trainers

Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy, or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.

ANNUAL REFRESHER TRAINING

(8) Refresher Training

(i) Those employees who are trained in accordance with paragraph (q)(6) of this section shall receive annual refresher training of sufficient content and duration to maintain their competencies, or **shall demonstrate competency in those areas at least yearly.**

(ii) A statement shall be made of the training or competency, and if a statement of competency is made, the employer shall keep a record of the methodology used to demonstrate competency

Conclusion

The purpose of this document is to inform and help departments obtain the needed information to keep their firefighters safe and well trained.

All the state OSHA requirements are department-dependent, based upon level of service. The 11 Core Elements will provide 24 hours annually in any combination, according to the department's needs.

Non-traditional classes and/or expenses maybe available for reimbursement when the 24 hours of firefighter training has been completed in the 11 Core Elements.



Emergency Services
Consulting International

Corporate Offices
25030 SW Parkway Avenue, Suite 330
Wilsonville, Oregon 97070
800.757.3724

Southern Region Office
1591 Terrace Drive
Lantana, Texas 76226
940.453.1366

National Capital Region Office
4025 Fair Ridge Drive
Fairfax, Virginia 22033
703.273.0911