Feasibility Study for Shared or Cooperative Fire and Emergency Services

Foreston Fire- Rescue Department

Isanti Fire District

Milaca Fire Department

NE Sherburne County Fire & Rescue Department

Princeton Fire-Rescue Department

Winter/Spring 2016

Emergency Services Consulting International
Providing Expertise and Guidance that Enhances Community Safety

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Executive Summary

Foreston Fire-Rescue Department (FFRD), Isanti Fire District (IFD), Milaca Fire Department (MFD), NE Sherburne Fire District (NESFD), and Princeton Fire-Rescue Department (PFRD) jointly engaged Emergency Services Consulting International (ESCI) to evaluate and identify potential areas of shared and cooperative services between the fire agencies providing services to the region. This document serves as the report of the analysis and evaluation conducted within the participating departments and begins with a basic overview of each organization.

This report focuses on the aforementioned departments that service a combined population of 51.061 in a service area consisting of 573 square miles resulting in an overall population density of 89.1 persons per square mile. These departments include:

- Foreston Fire-Rescue Department
- Isanti Fire District
- Milaca Fire Department
- Northeast Sherburne Fire and Rescue
- Princeton Fire-Rescue Department

The project team spent two days on-site within the community but was unable to coordinate a visit with NE Sherburne. Thus, many areas of this document do not contain data from that organization. However, the strategies that are contained within the final section of the report can still be applied to that agency as well as any other agency within the area that has a desire to cooperate with their adjacent organizations.

The first section of the report provides the ready with a basic overview of each organization including governance, lines of authority, jurisdictional limits, and risk types contained within each community. Foreston, Milaca, NE Sherburne, and Princeton are municipal departments and Isanti is a Joint Powers Authority. Each has independent lines of authority with Foreston and Princeton having elected fire chiefs and Isanti and Milaca's chiefs serving at the pleasure of their respective boards.

The next portion of the report evaluates foundational policy documents that include a mix of municipal policies, standard operating guidelines (SOG), administrative manuals and handbooks, and association bylaws. Although these are in various forms, each department is able to operate adequately with well-organized and complete documents. Due to the size of each organization, they do not generally have specific program managers assigned to responsibilities such as training or fire prevention but these duties are assigned as ancillary duties of other officers.

The report continues with a review of budget and funding for the participating agencies. Based on last funding from the last fiscal year, the region as a whole (without NE Sherburne) is spending $24.78 per capita for fire protection. This is in comparison to $76.49 throughout the state of Minnesota and a national value of $135.08.

ESCI also conducted a service viability (non-architectural/engineering) review of capital assets including facilities and apparatus. The region has a total of eight stations that are strategically located throughout the study area. Foreston operates from a single station; Isanti from three; Milaca from one; NE Sherburne from one; and Princeton from two. It is recommended that those stations with auxiliary power be considered for generators in the near future. Emergency services facilities should be capable of fully operating during times of power outages.

In regards to apparatus, the region (without NE Sherburne) uses a fleet of 13 engines, 10 tankers, 11 grass/wildland units, eight rescue/first response vehicles, and two aerial/ladders. For an area of this size, the number of engines is significantly above what would normally be expected but this number may play a role in the overall ISO scoring for each department. These apparatus are also aging and many will soon need to be replaced. Proper capital replacement planning should be undertaken in the very near future to properly plan

From a staffing perspective, there are a total of 35 personnel within the system (not including NE Sherburne) resulting in varying personnel per 1,000 population levels. Nationally, these levels range from 1.3 to 20 personnel per 1,000 population and the regional levels range from 1.5 to 21.6. The region currently has a range of 1.9 to 4.9, below benchmark levels for Foreston and Milaca but above benchmark levels for Isanti and Princeton. Joint efforts in recruitment and retention as well as joint use of staff may help to increase low staffing levels, particularly for involved emergency incidents.

As expected, Isanti has the highest level of service demand within the study region responding to 801 incidents in 2015. Foreston was the lowest (without evaluating NE Sherburne) with just fewer than 100 incidents in that same year. A majority of incidents responded to be all agencies are medical in nature with actual fires becoming increasingly rare. This is true for all the departments except Milaca where in 2015, their fire incidents were greater than medical responses.

Distribution is an analysis that illustrates travel capability of specific units based on the existing roadway network. In essence, travel time is mapped using geographic information system (GIS) software and a model is created that estimates how much of a given area can be covered within a specified period of time. ESCI modeled several travel models by time and distance to indicate that only small portions of each agency's response area can be reached within specific models. This is not to say that they departments are poorly deployed. The models indicate that stations are located within close proximity to population centers that tend to generate more service demand.

Perhaps the most visible and notable aspect of emergency services to the public, response performance is the primary measure by which the public gauges overall effectiveness. Response time can be measured in a number of ways but industry standards suggest that performance be measured on a percentile rather than simply reporting the average. Based on the response performance analysis performed by the project team, each of the study departments are performing at acceptable levels. NFPA 1720 recommends a 14 minute response time at the 80th percentile for rural areas and each of the study departments are meeting that goal, with the exception of MFD, but the goal was actually attained in 2014. Each department should

listen to their respective communities regarding future expectation for the delivery of emergency services and continually monitor response performance to ensure that goals are being met sufficiently.

The final section of the evaluation portion of the report focuses on the support programs of training and life-safety services (fire and injury prevention). Currently, each department has implemented its own method of delivering training programs. A more cohesive program across the region will improve the overall efficiency of the programs and will assist the departments in working more closely together on incident scenes. None of the departments have a formal life-safety services program in place and each use the State Fire Marshal to conduct high risk occupancy inspections. Each department does participate in limited public education activities with most occurring during fire prevention week.

The remainder of the report outlines the available options for future cooperative efforts and includes a review of both functional and operational strategies. Functional cooperative effort can include any function within the study departments that allows them to deliver services. In the preceding Evaluation of Current Conditions section of this report, examples are identified 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. Some of the more practical functional options include, but are not limited to:

- Enhanced Mutual and Automatic Aid Agreements
- Development of Uniform Pre-Incident Planning Processes
- Development of a Regional Health and Safety Program
- Regional Capital Replacement Planning
- Joint Purchasing of Equipment and Apparatus
- Joint Recruitment and Retention Programs
- Regional Training Program
- Unified Standard Operating Guidelines/Procedures

Operational consolidation joins two or more entities from an operational standpoint through the execution of an intergovernmental agreement (IGA) or other mechanism. This 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 all agencies. The fire departments, whether only a few, or all, remain independent agencies from a legal standpoint, but from a service delivery perspective they operate as one. An operational consolidation, accomplished through a written agreement between two or more agencies, requires a significant cooperative commitment is sometimes undertaken as a step 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. Given the large geographic area of this project and the lack of contiguous response areas, it would be difficult, if not impossible, for the study agencies to operationally consolidate. However, if, in the future, additional agencies expressed a desire to work more closely with the study agencies, this option could apply.

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 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. As with operational consolidation, the separation of the study agencies would prevent a full legal unification.

Throughout the review and analysis of the study departments, it became evident that each of the study agencies, as well as others within the general vicinity, are interdependent upon one another to deliver services, particularly during involved incidents. From this interdependence, the departments have learned to work together operationally and the next logical step is to increase this cooperation to a functional level.

As indicated previously, there are a number of functional cooperative efforts that can be applied to the study department but total consolidation is likely not feasible at this time due to geographic separation. Each of the functional cooperative efforts strategies discussed are feasible and can be extended to other agencies across the region.

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

Section I – Evaluation of Current Conditions

Foreston Fire-Rescue Department (FFRD), Isanti Fire District (IFD), Milaca Fire Department (MFD), NE Sherburne Fire District (NESFD), and Princeton Fire-Rescue Department (PFRD) jointly engaged Emergency Services Consulting International (ESCI) to evaluate and identify potential areas of shared and cooperative services between the fire agencies providing services to the region. This document serves as the report of the analysis and evaluation conducted within the participating departments and begins with a basic overview of each organization.

ORGANIZATIONAL OVERVIEW

This report focuses on the aforementioned departments that service a combined population of 51.061 in a service area consisting of 573 square miles resulting in an overall population density of 89.1 persons per square mile. The figure below represents the study area.

Figure 1: Study Area Base Map
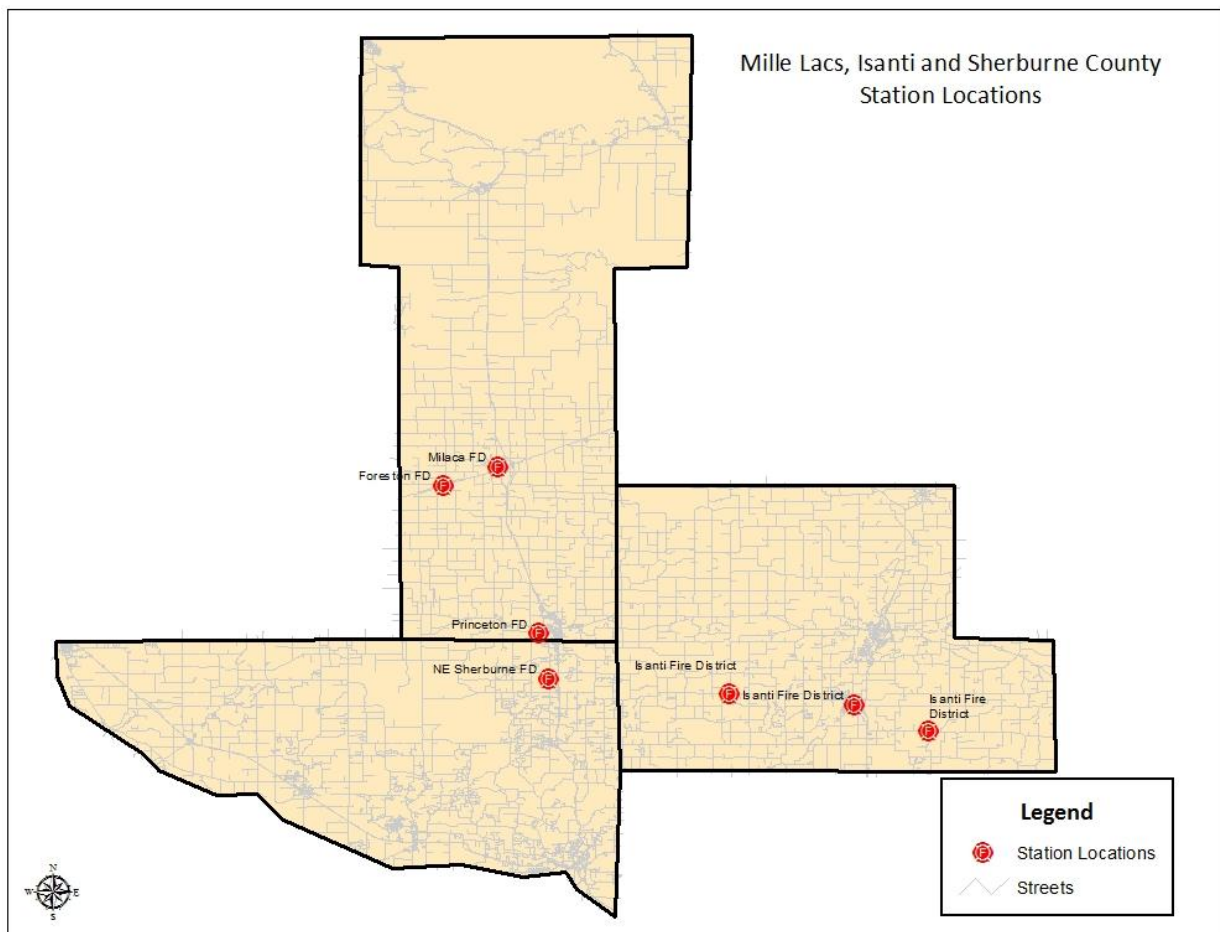
Foreston Fire-Rescue Department (FFRD)

FFRD is a municipal department operating under the auspices of the City of Foreston. The department provides fire suppression, basic life support (BLS) medical first response, vehicle extrication, limited technical rescue, and public education services to the City of Foreston as well as the Townships of Milaca and Milo. The population of the service area is estimated at 2,028 within an area of 36 square miles resulting in an overall population density of 56.3 persons per square mile. Growth within the area is reported to be very limited.

FFRD provides services from a single facility (fire hall) with a fleet of two engines, one tanker/tender, one rescue, and two grass with a staff of 10 volunteer/paid-on-call personnel, including one Fire Chief, one Assistant Chief, one Training Officer, two Captains and five other firefighters/responders.

Isanti Fire District (IFD)

IFD is a joint powers organization operating under a board comprised of representatives from the City of Isanti and the surrounding Townships served. The department provides fire suppression, BLS medical first response, vehicle extrication, technical rescue (high-angle rope, confined space, and wilderness search and rescue), and public education services to the City of Isanti as well as the Townships of Athens, Bradford, Isanti, Oxford, Spencer Brook, and Stanford. The population of the service area is estimated at 17,188 in an area of approximately 157 square miles resulting in an overall population density of 109.5 persons per square mile. Growth within the area is reported to be moderate but steady.

IFD provides services from three strategically located facilities (fire halls) with a fleet of five engines, one aerial ladder, three rescues, three tanker/tenders, three grass rigs, and five other ancillary apparatus and vehicles. Services are provided by a combination of full-time and paid-on-call personnel consisting of one full-time Fire Chief, two POC Assistant Chiefs, one POC Captain, one full-time Fire Technician, and 28 other firefighters/responders.

Milaca Fire Department (MFD)

MFD is a municipal department operating under the auspices of the City of Milaca. The department provides fire suppression, BLS medical first response (limited), vehicle extrication, limited technical rescue, and public education services to the Cities of Bock, Milaca, and Pease as well as the Townships of Bogus Brook, Borgholm, Granite Ledge, Hayland, Milaca, Milo, and Page. The population of the service area is estimated at 9,173 in an area of approximately 169 square miles resulting in an overall population density of 54.3 persons per square mile.

MFD provides services from a single facility (fire hall) consisting of two separate buildings with a fleet of two engines, two tanker/tenders (also certified as engines), two rescues, two grass rigs, and one other ancillary vehicle with a staff of 24 volunteer/paid-on-call personnel, including two co-Fire Chiefs, two Deputy Chiefs, two Captains, and 19 other firefighters/responders.

NE Sherburne Fire & Rescue (NESFR)

NESFR is municipal organization operating within Baldwin Township. The department provides fire suppression, BLS medical first response, and vehicle extrication. The population of the service area is

estimated at 4,672 in an area of approximately 34.9 square miles resulting in a population density of 133.9 persons per square mile.

NESFR did not provide information or data for this project and did not meet with the project team during the site visits.

Princeton Fire-Rescue Department (PFRD)

PFRD is a municipal department operating under the auspices of the City of Princeton. The department provides fire suppression, BLS medical first response, vehicle extrication, technical rescue (surface water, ice, confined space, high-angle rope) to the City of Princeton as well as the Townships of Blue Hill, Bogus Brook, Greenbush, Princeton, Spencer Brook, and Wyanett. The population of the service area is estimated to be 18,000 in an area of approximately 176 square miles resulting in a population density of 102.3 persons per square mile.

PFRD provides services from two facilities (primary station and a substation) with a fleet of four engines, one aerial ladder, three tanker/tenders, four grass rigs, and 11 other ancillary apparatus and vehicles. The department is staffed with 34 volunteer/paid-on-call personnel including one Fire Chief, one Assistant Chief, four Captains, and 28 other firefighters/responders.

The following figure summarizes the basic organizational overview elements of the study agencies.

Figure 2: Summary of Basic Organizational Overview Elements

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Department Preferred Acronym	FFRD	IFD	MFD		PFRD
Governance Authority	Direct operating department of City of Foreston	Joint Powers Authority	Direct operating department of City of Milaca		Direct operating department of City of Princeton
Name of County	Mille Lacs	Isanti	Mille Lacs		Mille Lacs
Jurisdictional Limits	Encompasses all of the governmental boundaries of the community, along with additional contractual service areas	Encompasses all or portions of several different governmental units	Encompasses all of the governmental boundaries of the community, along with additional contractual service areas		Encompasses all of the governmental boundaries of the community, along with additional contractual service areas
Communities Served (all or portion)					
Primary Risk Types	Rural residential and agricultural, Industrial manufacturing in the City	Urban residential and commercial, Suburban residential and light commercial, Rural residential and agricultural	Urban residential and commercial, Suburban residential and light commercial, Rural residential and agricultural, Industrial manufacturing		Suburban residential and light commercial, Rural residential and agricultural, Remote wildland or wilderness areas, Industrial manufacturing, GA airport
Community Growth Level	Very limited	Moderate, but steady	Very limited		Light to moderate
Year Agency Formed	1931	1907/1999	1896		1881

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Services Provided	Fire suppression, BLS emergency medical first responder, Vehicle extrication, Hazmat operations-level, Public education, Tech Rescue is a combined effort with other departments	Fire suppression, BLS emergency medical first responder, Vehicle extrication, Hazmat operations-level, Technical rescue- high-angle rope, Technical rescue- confined space, Technical rescue- wilderness search and rescue, Public education	Fire suppression, BLS emergency medical first responder, Vehicle extrication, Hazmat operations-level, Public education		Fire suppression, BLS emergency medical first responder, Vehicle extrication, Hazmat operations-level, Technical rescue- high-angle rope, Technical rescue- surface water, Technical rescue- ice water, Technical rescue- confined space, Technical rescue- building collapse, Technical rescue- wilderness search and rescue, Public education
Dispatch Agency	Mille Lacs County Sheriff's Office	Isanti County Sheriff's Office	Mille Lacs County Sheriff's Office		Mille Lacs County Sheriff's Office
Support Positions	City Clerk	None	None		None
Staffing Methodology	On-call responders coming from home or work	7a to 9p career staff at Station 1, duty crews on at night and weekends. POC at stations 2 and 3. One member assigned to station response at Stations 2 and 3 on weekends.	On-call responders coming from home or work		On-call responders coming from home or work

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Minimum On-Duty Strength or Typical On-Call Availability	5	17	14		15
Latest ISO Rating	7/9/10	4/7/10	5/9		4/7
Last ISO Survey Conducted In	2000	2012	2000		2000

Governance and Lines of Authority

All organizations must be governed in order for them to operate effectively. How that governance is organized and exercised, however, can vary widely. For the study departments, four are municipal (FFRD, MFD, NESFR, and PFRD) while IFD is a joint powers organization, which is governed by a board consisting of members from multiple municipalities.

Within the organizations, proper lines of authority must be in place so that personnel know to whom they should report for supervision. It is common for small organizations to have limited lines of authority with wide spans of control whereas larger organizations may have more resources to better distribute workload. How these lines of authority are established is also important. Traditionally, volunteer departments have elected their internal leadership; however the League of Minnesota Cities has recently recommended that this practice be abandoned in favor of appointment of supervisory personnel by the governing board. It is also recommended that all personnel receive periodic performance evaluations so as to educate all personnel on community and oversight expectations and provide feedback regarding historical performance.

Based on interviews with the participating agencies, three of the departments have elected officers (FFRD, NESFRD, and PFRD) and IFD and MFD have appointed personnel. In addition, it was determined that none of the agencies have routinely conducted performance evaluations on officer and/or line staff positions. The figure below summarizes the governance and lines of authority elements for the study departments.

Figure 3: Summary of Governance and Lines of Authority Elements

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Organization Type	Municipality	Joint Powers Authority	Municipality	Municipality	Municipality
Name Of Governing Entity, Board or Person	City Council	JPA Board	City Council		City Council
Fire Chief Status	Elected officer position	Appointed by Board	At-will employee with no personal contract		Elected officer position
Elected Fire Chief Term of Office	One year	2 Years	N/A		Two years

Foundational Policy Documents

Foundational policy documents are those policies, manuals, and handbooks that provide general direction to all personnel within an organization. Within municipal organizations, these documents can include city personnel or human resources policies and/or manuals. Most emergency services organizations also maintain at least some level of administrative and operational guidelines/policies commonly referred to as standard operating guidelines/procedures (SOG/SOP). In addition, some volunteer non-profit organizations also maintain a constitution and by-laws that outlines membership in the organization as well as other general rules and regulations.

The study departments have varying levels of foundational policy documents. ESCI briefly reviewed each agency's documents to ensure that they covered the most common topics and provided both administrative and operational aspects of the organization including critical civil liability policies. The figure below summarizes the foundational policy document elements of the study agencies.

Figure 4: Summary of Foundational Policy Elements

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Titles of Policy Documents	City Policies, SOGs, Relief Association Bylaws	SOGs	City personnel policies, Administrative manual, Relief Association Bylaws, SOGs, Job Descriptions		Member Handbook, SOGs, City Personnel Policies, Relief Association Bylaws
Quality of Administrative Policy Documents	Well organized and complete	Well organized and complete	Well organized and complete		Well organized and complete
Important Civil Liability and Risk Management Policies Present	Yes	Yes	Yes		Yes
Quality of Standard Operating Policies	Very good	Very good, Up to date	Very good		Reasonably well organized
Adequate Operational Scene Guidance	Yes	Yes	Yes		Yes

Organizational Design

How an organization is designed is an important factor in how efficiently the department operates. Like most other volunteer and combination fire departments, the study departments are designed in a typical top-down hierarchy as illustrated in the following figures.

Figure 5: Organizational Chart – FFRD

```
        Foreston
       City Council
            |
        Fire Chief
            |
        Assistant
          Chief
            |——— Training
            |      Officer
            |
        Captains (2)
            |
        Firefighters
```
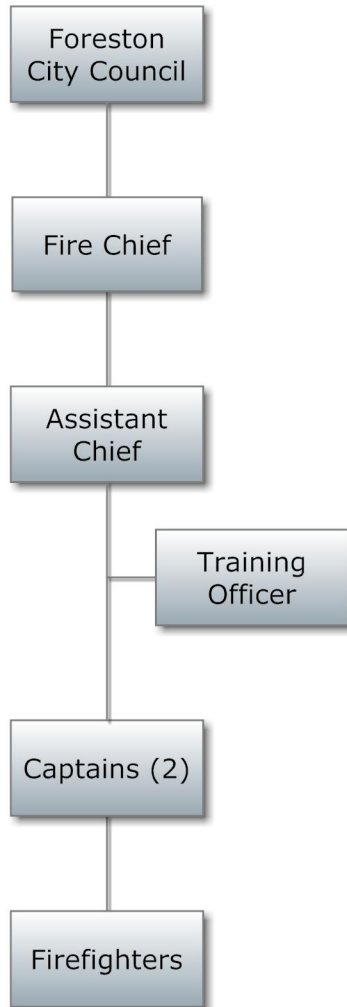
Figure 6: Organizational Chart – IFD
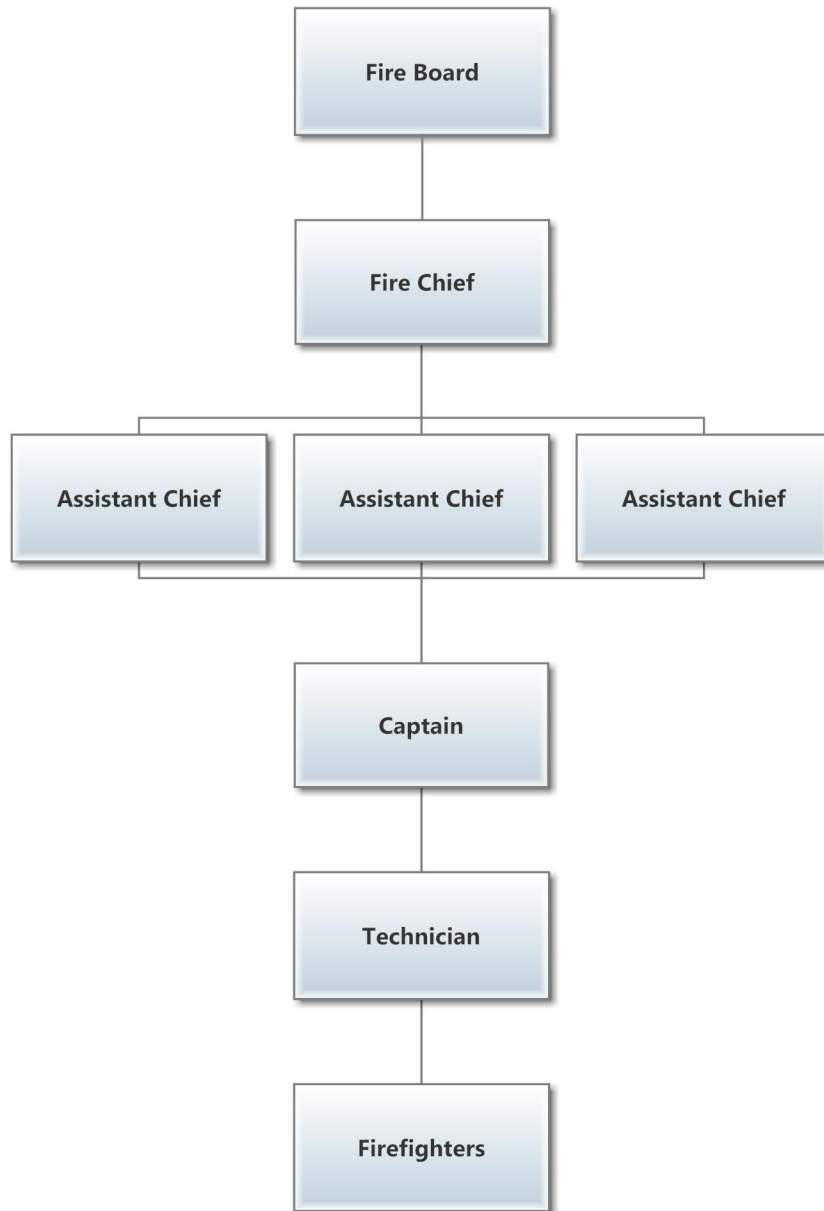
Figure 7: Organizational Chart – MFD

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                    ┌─────────────┐
                    │ Fire Board  │
                    └─────────────┘
                           │
            ┌──────────────┴──────────────┐
      ┌──────────────┐            ┌──────────────┐
      │ Fire Chief 1 │            │ Fire Chief 2 │
      └──────────────┘            └──────────────┘
            │                            │
            └──────────────┬──────────────┘
      ┌──────────────┐            ┌──────────────┐
      │ Deputy Chief │            │ Deputy Chief │
      │      1       │            │      2       │
      └──────────────┘            └──────────────┘
            │                            │
            └──────────────┬──────────────┘
      ┌──────────────┐            ┌──────────────┐
      │  Captain 1   │            │  Captain 2   │
      └──────────────┘            └──────────────┘
            │                            │
            └──────────────┬──────────────┘
                    ┌─────────────┐
                    │ Firefighters│
                    └─────────────┘
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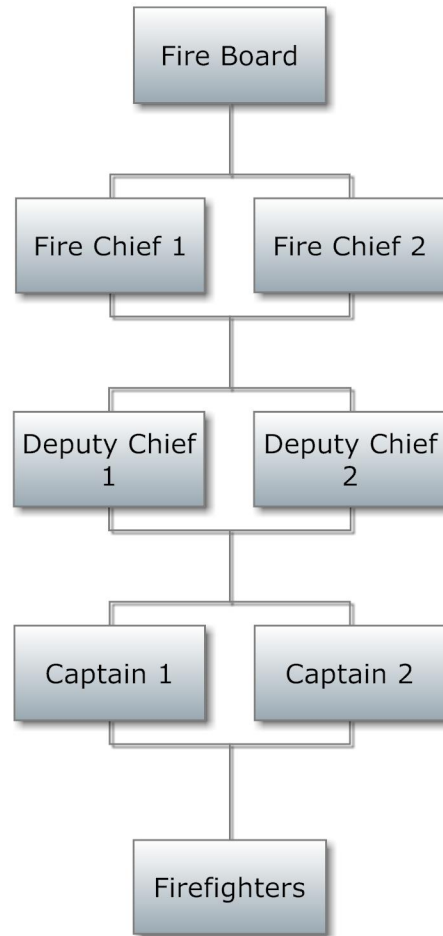
Figure 8: Organizational Chart – PFRD
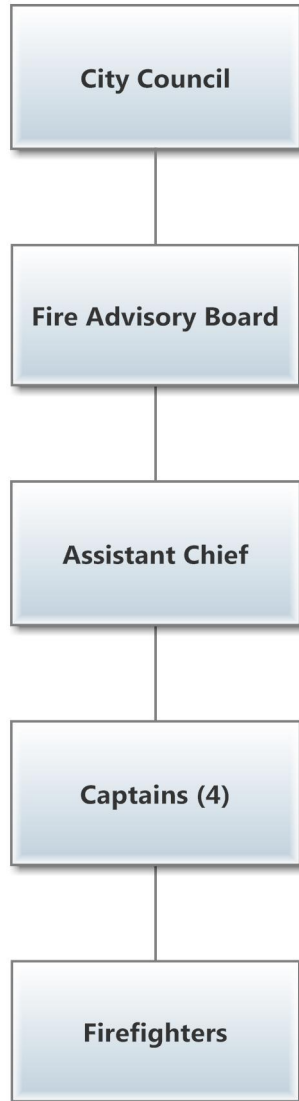
Figure 9: Summary of Organizational Design Elements

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Department	Princeton Fire Rescue
Department Has Clear Unity of Command	Yes	Yes	Yes		Yes
Department Organized With Clear Operating Divisions	No	No	No		Yes
Specific Programs With Managers Designated	No	No	No		Yes
Individuals That Report Directly To The Chief	All	All	All		AC, and Captains
Chief's Span of Control	11	33	24		5
Chief's Disciplinary Authority	Suspension from duty and recommendation for termination	Suspension from duty and recommendation for termination	Suspension from duty and recommendation for termination		Suspension from duty and recommendation for termination
Quality of Job Descriptions	None	Complete, thorough and up-to-date	Complete, thorough and up-to-date		Complete, thorough and up-to-date

Budget, Funding, Fees, and Taxation

All organizations, regardless of size and/or function, need adequate funding to continue operations and fulfill their mission. The study agencies are no different. Although each has their own methodology of generating revenue, they must each use those funds to provide continued services to their respective communities. The following figures summarize the budgets and funding or each organization.

Foreston

As already discussed, FFRD is a municipal fire department that receives its funding through the general fund of the City of Foreston. Revenue for operations of the department is generated through ad valorem taxes of the City as well as through contracts with the Townships that are protected. FFRD provided only a total budget that was not itemized. Thus, the following figure illustrates how FFRD compares to national and state values regard cost per 1,000 population.

Figure 10: FFRD Cost per Capita Comparison
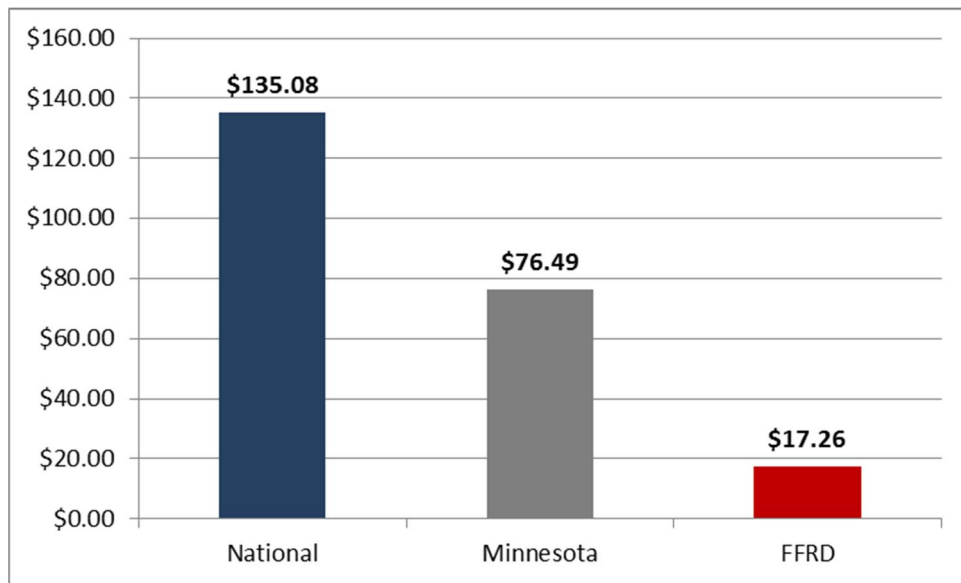
Isanti

As already discussed, IFD is a joint operating fire district that operates under a form of joint powers authority consisting of member organizations. As such, funding for IFD comes from each of the participating jurisdictions using a version of the KOPP Formula. The following figure summarizes the department's overall budget for the last four years, including the current fiscal year.

Figure 11: IFD Historical Budget
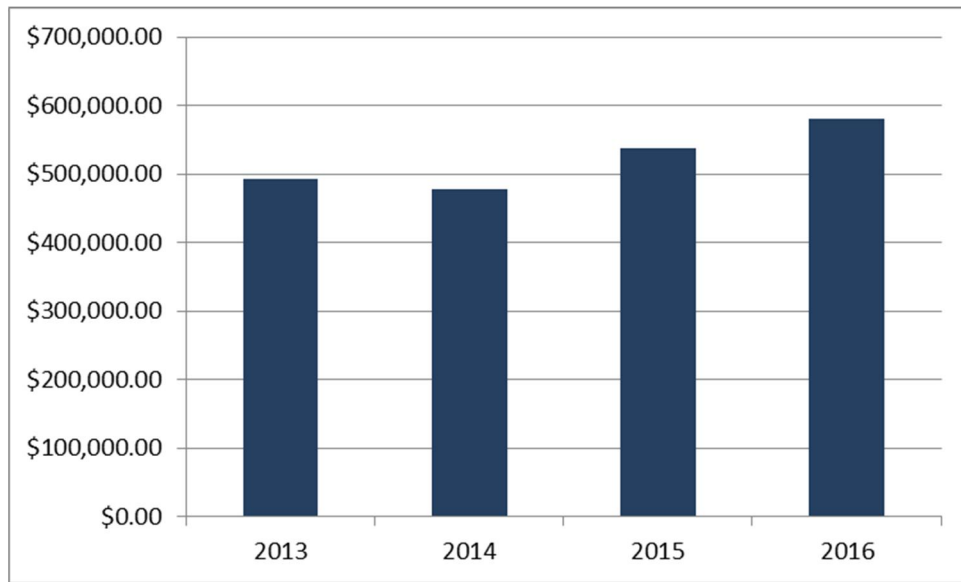
When the overall budget is evaluated in regards to the three primary categories of personnel, operations, and capital, most of IFD's budget is dedicated to operational costs, which is common for volunteer and combination departments. This distribution is illustrated in the following figure.

Figure 12: IFD Budget Distribution
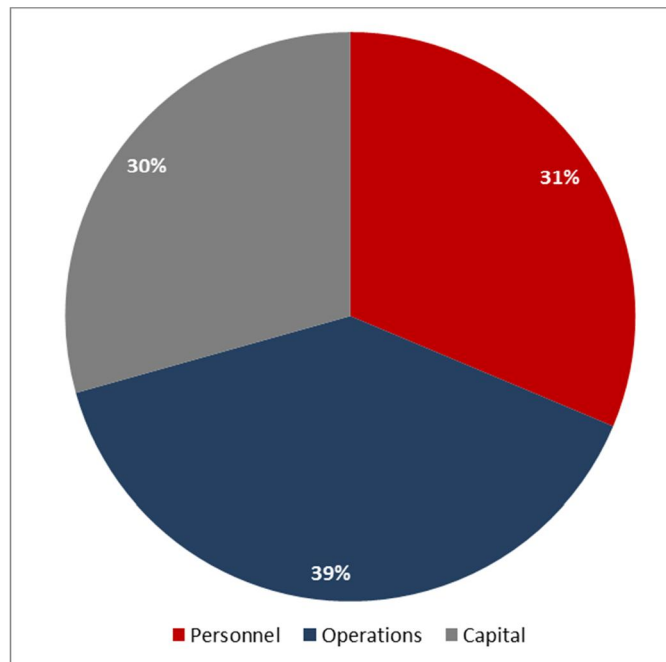
In comparison to national and state costs per capita IFD' expenditures are significantly below those levels as illustrated in the following figure.

Figure 13: IFD Cost per Capita Comparison
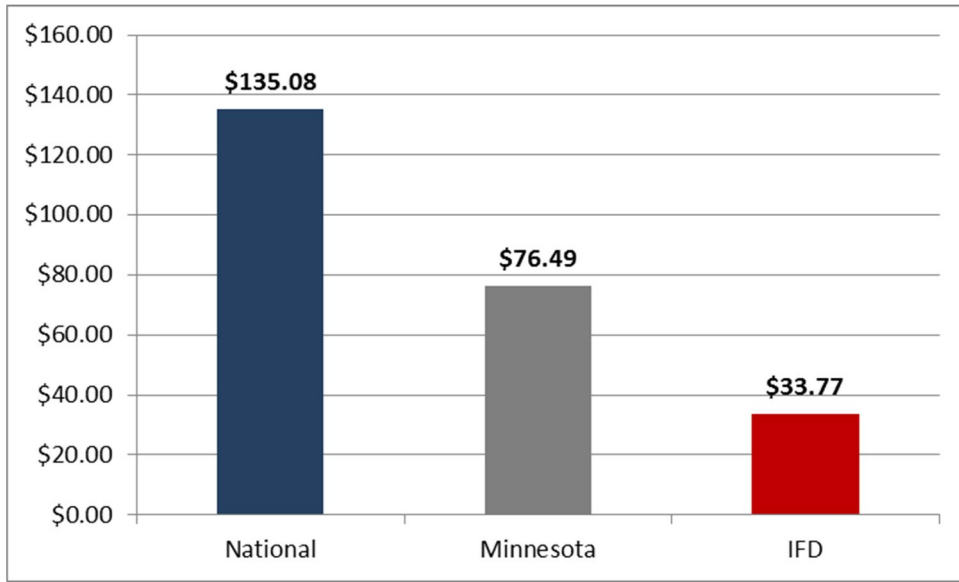
Milaca

As already discussed, FFRD is a municipal fire department that receives its funding through the general fund of the City of Milaca. Revenue for operations of the department is generated through ad valorem taxes of the City as well as through contracts with the Townships that are protected. The following figure summarizes the department's overall budget for the last four years, including the current fiscal year.

Figure 14: MFD Historical Budget
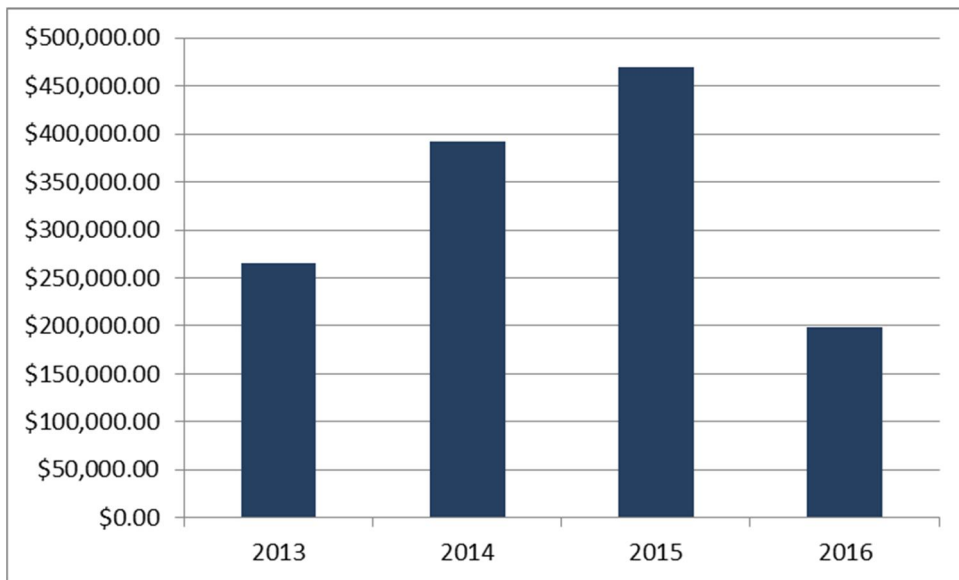
When the overall budget is evaluated in regards to the three primary categories of personnel, operations, and capital, most of MFD's budget is dedicated to operational costs, which is common for volunteer and combination departments. This distribution is illustrated in the following figure.

Figure 15: MFD Budget Distribution
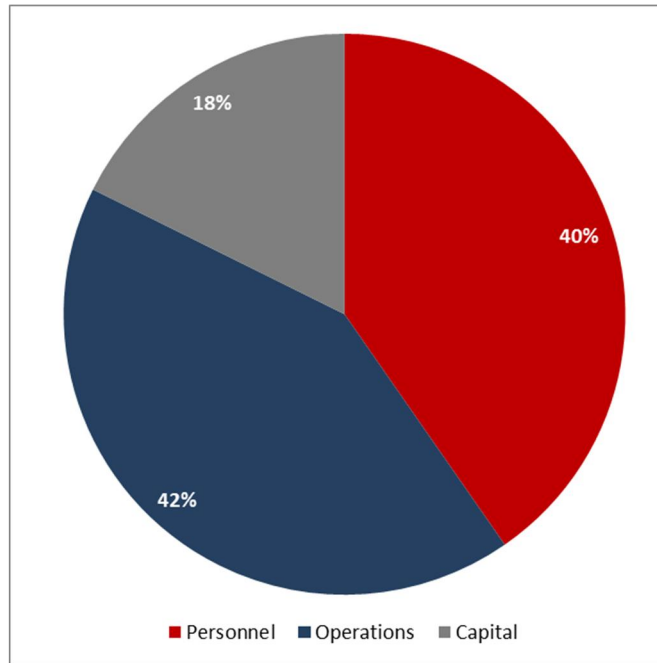
In comparison to national and state costs per capita, MFD, like the other study departments, is significantly below that level of expenditure as illustrated below.

Figure 16: MFD Cost per Capita Comparison
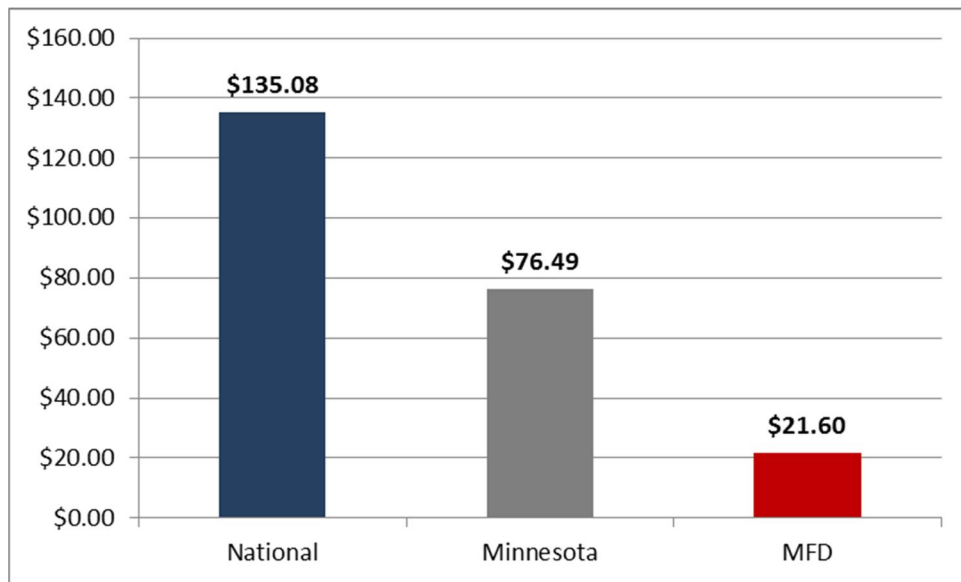
NE Sherburne

As already discussed, NESFD is a joint operating fire district that operates under a form of joint powers authority consisting of member organizations. As such, funding for NESFD comes from each of the participating jurisdictions. No financial data was provided for this project.

Princeton

As already discussed, PFRD is a municipal fire department that receives its funding through the general fund of the City of Princeton. Revenue for operations of the department is generated through ad valorem taxes of the City as well as through contracts with the Townships that are protected. The following figure summarizes the department's overall budget for the last four years, including the current fiscal year.

Figure 17: PFRD Historical Budget
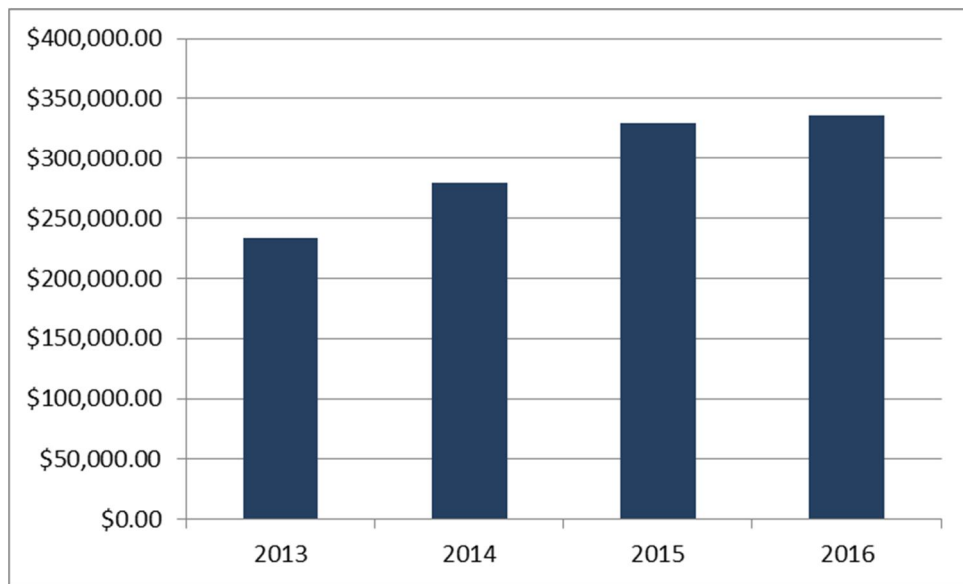
When the overall budget is evaluated in regards to the three primary categories of personnel, operations, and capital, most of IFD's budget is dedicated to operational costs, which is common for volunteer and combination departments. This distribution is illustrated in the following figure.

Figure 18: PFRD Budget Distribution
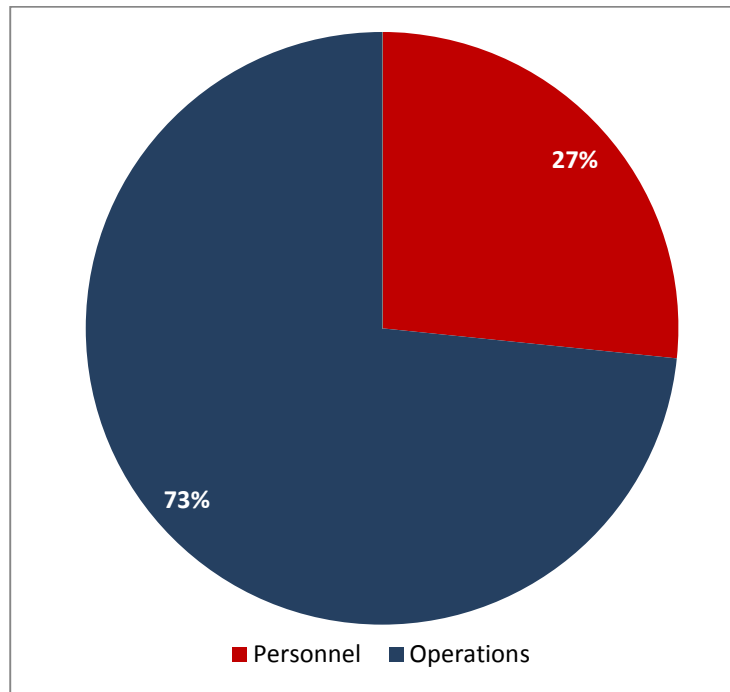
In comparison to national and state costs per capita, PFRD, like the other study departments, is significantly below that level of expenditure as illustrated below.

Figure 19: PFRD Cost per Capita Comparison
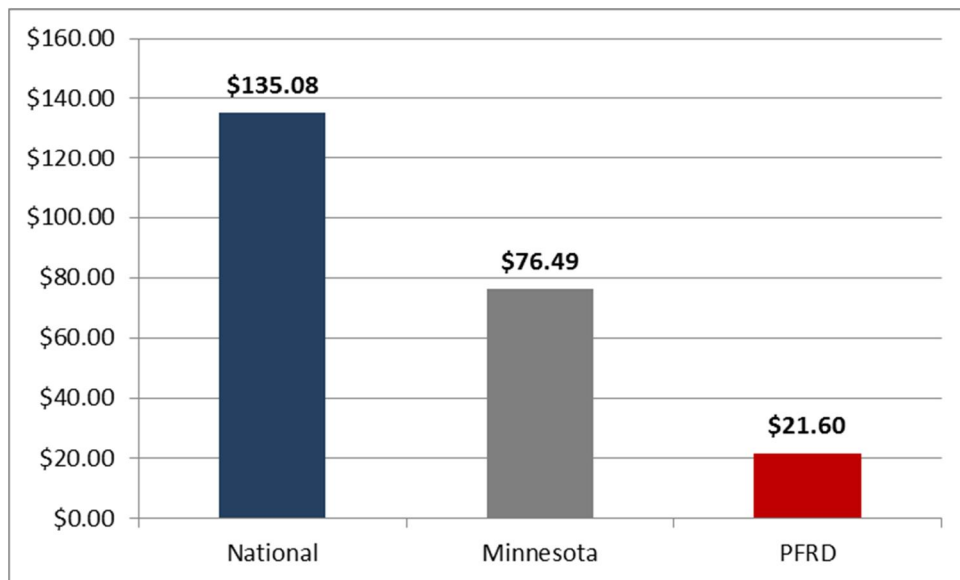
Similarly to each of the individual study agencies' cost per capita, the region also is significantly below national and state values.

Figure 20: Service Area Cost per Capita Comparison
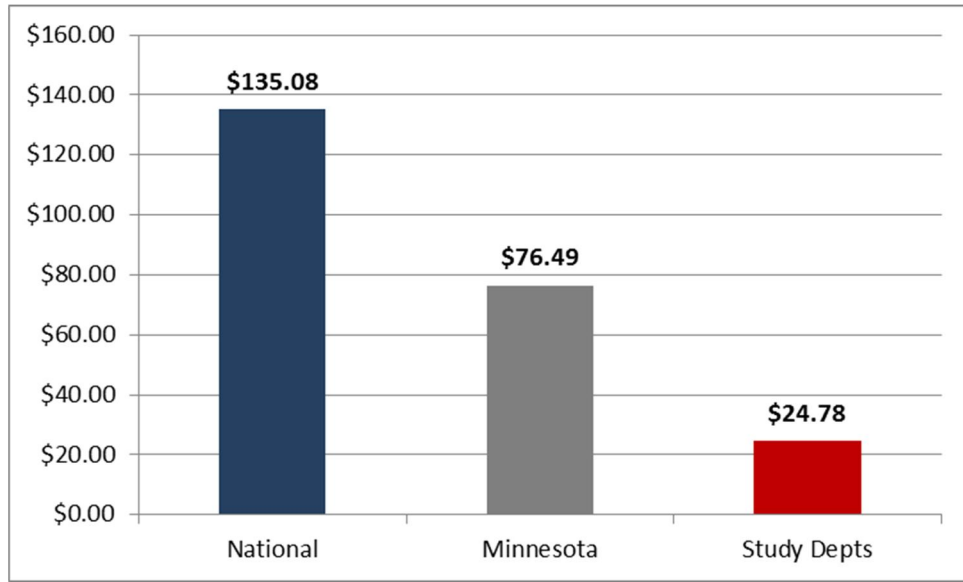
CAPITAL ASSETS AND CAPITAL IMPROVEMENT PROGRAMS

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 21: Foreston Fire and Rescue Station
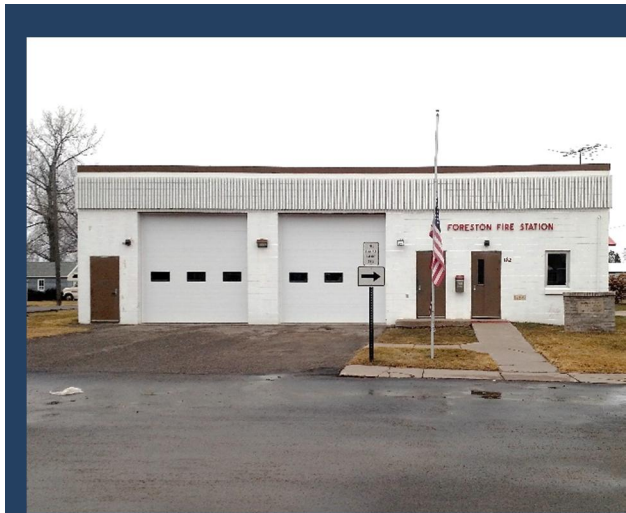
The Foreston Fire and Rescue service area is served by a single fire station, consisting of four, single-depth apparatus bays of back-in configuration. It is an older masonry structure, built in 1984 that is in generally fair condition.

In the station are one fire engine, two grass vehicles, and one rescue vehicle. An adjacent building houses an additional engine.

The station is older and clearly aging. It is adequate for its current use but has limited long term viability.

Survey Components	Observations
Structure	
Construction type	Concrete block structure built on grade on a concrete slab
Date	1984
Seismic protection/energy audits	None
Auxiliary power	None
Condition	Fair and aging
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	The apparatus bays are full to capacity and there is no room for future expansion
Accommodations	
Exercise/workout	None
Kitchen/dormitory	Some limited kitchen facilities are in the meeting room
Lockers/showers	A small decontamination shower is in the apparatus bay area
Training/meetings	A meeting room seats approximately 20 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 keyed locks
Apparatus exhaust system	None

Figure 22: Isanti Fire Department Station 1

The Isanti Fire Department operates out of three fire stations. Station 1 is in Isanti and serves as the department's main station. It includes four apparatus bays, one of which is of drive-through configuration, housing two fire engines, an aerial ladder truck, a water tanker, a grass fire unit and three support vehicles. It is of masonry construction and was constructed in 1982.

The building is not owned by the fire department but is leased from the city and is shared with the police department.

Survey Components	Observations
Structure	
Construction type	Concrete block structure on a concreate slab
Date	1982
Seismic protection/energy audits	None
Auxiliary power	None
Condition	Fair but aging
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 apparatus bays are filled to capacity. While adequate for current use, there is little room for additional vehicles in the future
Accommodations	
Exercise/workout	Some equipment is located in the training room
Kitchen/dormitory	There are no residential accommodations or kitchen facilities.
Lockers/showers	None
Training/meetings	A good sized classroom is capable of accommodating about 40 people.
Protection Systems	
Sprinkler system	The station is fully protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place
Security	All doors have combination locks
Apparatus exhaust system	All large apparatus have exhaust removal systems installed

Figure 23: Isanti Fire Department Station 2

Isanti Station 2 is a four bay facility that was constructed in 2002 and is in excellent condition overall. The bays house two fire engines, a water tanker, a grass fire vehicle, a rescue unit and a technical rescue trailer.

There is a meeting room and dual gender restrooms in the building, but there are no 24 hour crew accommodations, because the station is exclusively staffed by paid on call personnel.

The structure is of steel construction and does not exhibit any significant maintenance challenges.

Survey Components	Observations
Structure	
Construction type	Masonry block walls and steel frame roof structure. Steel room covering.
Date	2002
Seismic protection/energy audits	Only when originally designed
Auxiliary power	None
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	There is some room for future expansion, though limited
Accommodations	
Exercise/workout	None
Kitchen/dormitory	There are no residential accommodations and no kitchen.
Lockers/showers	None
Training/meetings	A good sized classroom is present. One office area is also in 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 electronic locks
Apparatus exhaust system	None

Figure 24: Isanti Fire Department Station 3

Isanti Station 3 is a large, nearly new building, still partially under construction. It is an extensive facility with three apparatus bays and room for future 24-hour staffing.

The second and third floors are unfinished. It is planned that they will house a large meeting and kitchen area on the second floor and several small apartment style residential accommodations on the third floor for resident responders.

The station has considerable capacity for expanded use in the future.

Survey Components	Observations
Structure	
Construction type	Masonry block structure built on grade
Date	2010
Seismic protection/energy audits	Only when originally designed
Auxiliary power	None
Condition	Excellent – still under construction
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is ADA compliant in the public areas. Adequate storage space is available.
Future viability for shared service considerations	The station is adequate for its current use, and there is considerable capacity for expanded future use
Accommodations	
Exercise/workout	None
Kitchen/dormitory	And small kitchen is present with plans for larger one and residential quarters on the upper floors.
Lockers/showers	None currently
Training/meetings	A meeting/classroom area has room for about 30 students. Additional meeting space is planned for the second floor.
Protection Systems	
Sprinkler system	The station is protected by a fire sprinkler system on the first floor only at this time.
Smoke detection	Smoke detection is in place on the first floor only
Security	All doors have electronic locks
Apparatus exhaust system	None

Figure 25: Milaca Fire Station

The city of Milaca and the adjacent service area is served by a single fire station consisting of two large buildings. One building has five apparatus bays, three of which are double in depth and back-in configuration. The other has two apparatus bays.

Both buildings previously served an electric power company and provide the fire department with a considerable amount of space and room for expanded future use, as well.

Survey Components	Observations
Structure	
Construction type	Building 1: Masonry and wood frame. Building 2: Steel clad, steel frame. Both built on grade on a concrete slab
Date	Unknown
Seismic protection/energy audits	None known
Auxiliary power	An automatically starting backup generator is present in one of the buildings
Condition	Good
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is partially ADA compliant. Storage space is adequate for current use
Future viability for shared service considerations	The apparatus bays are nearly full but there is some room for additional vehicles in the future
Accommodations	
Exercise/workout	Exercise equipment is located in a vacant apparatus bay
Kitchen/dormitory	A kitchen is adjacent to the meeting room. There are no sleeping accommodations.
Lockers/showers	None
Training/meetings	A good sized and well- appointed 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 key locks
Apparatus exhaust system	None

Figure 26: Northeast Sherburne Fire Station[1]

The Northeast Sherburne Fire Station is in a large facility consisting of three apparatus bays, all of which are double in depth. One of the bays is also a drive through configuration.

The station appears to be somewhat newer and in generally very good condition. It includes offices and a day room with a small kitchen. There are no 24-hour residential accommodations in this station.

Survey Components	Observations
Structure	
Construction type	Steel frame structure, steel clad built on a concrete slab
Date	Unknown
Seismic protection/energy audits	When originally designed only
Auxiliary power	None
Condition	Very good
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is not fully ADA compliant. Storage space is adequate for current use.
Future viability for shared service considerations	The apparatus bays are full and there is little room for additional vehicles in the future
Accommodations	
Exercise/workout	None
Kitchen/dormitory	A small kitchen is in the day room area. There are no residential accommodations.
Lockers/showers	None
Training/meetings	A meeting room is present 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

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[1] Based on external observations only.

Figure 27: Princeton Fire Rescue Main Station

The Princeton Main Fire Station consists of five, double-depth fire apparatus bays, all of a drive-through configuration. The station is nearly new and is an excellent facility. The station does not house 24-hour responders, however there are two individual sleeping rooms in place for future use. A large meeting room is present with a small kitchen. Six offices provide adequate work area for officers and admin support staff. The station is new and is a shared facility with the Princeton Police Department. The building houses two engines, two tankers, an aerial ladder, an equipment vehicle, a grass unit, and a rescue vehicle.

Survey Components	Observations
Structure	
Construction type	Masonry, built on on-grade concrete slab
Date	2014
Seismic protection/energy audits	When designed
Auxiliary power	Automatic starting emergency generator is in place but not yet connected
Condition	New
Special considerations (ADA, mixed gender appropriate, storage, etc.)	Station is configured for mixed gender use, is ADA accessible, and adequate for its intended use
Future viability for shared service considerations	Excellent with room for future expansion, if needed
Accommodations	
Exercise/workout	An exercise room is shared with the Police Department
Kitchen/dormitory	A commercial grade kitchen is in place. Two, single sleeping rooms are present but not currently in use.
Lockers/showers	Dual gender showers are available
Training/meetings	A large meeting room is well appointed and accommodates approximately 75 students
Protection Systems	
Sprinkler system	Station is fully protected by a fire sprinkler system
Smoke detection	Smoke detection is not in place, except in the sleeping area
Security	All doors have electronic locks
Apparatus exhaust system	No, but automatic ventilation system is present

Figure 28: Princeton Fire Department Wyanett Station

Princeton's second station in Wyanett is a steel frame, steel clad structure that consists of three drive-through style apparatus bays and no other accommodations. The building is not owned by PRFR, but rather by Wyanett Township and shared with the fire department. The township occupies one half of the space and the balance houses fire department equipment which includes two fire engines, two water tenders, and two grass fire units.

As a volunteer station, no residential facilities or other accommodations are in the station.

Survey Components	Observations
Structure	
Construction type	Steel frame, steel clad walls and roof.
Date	2013
Seismic protection/energy audits	When designed
Auxiliary power	None
Condition	Excellent
Special considerations (ADA, mixed gender appropriate, storage, etc.)	The station is ADA compliant and storage space is adequate
Future viability for shared service considerations	Adequate for current use, with room for expanded future use
Accommodations	
Exercise/workout	None
Kitchen/dormitory	None
Lockers/showers	None
Training/meetings	None
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 some that are new and in excellent condition to others that are aging and due for replacement before long. Some of the stations observed are close to or have reached their maximum capacity in terms of room for future expansion that can be expected as workload and service demand increases.

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, independent agencies that simple 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.

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

Foreston

FFRD has six response vehicles including two engines, a water tender, two grass units and a rescue truck, as detailed below.

Figure 29: FFRD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	1981	Luverne	Fair	4	1,250	1,200
Engine 2	Engine	1978	Pierce	Poor	2	1,250	1,200
Tender	Water Tanker	1991	International	Good	2	150	2,500
Grass 1	Grass	2003	Ford F350	Excellent	2	200	300
Grass 2	Grass	1986	Dodge Ram	Fair	2	200	200
Rescue	Rescue	2007	Ford F550	Excellent	4	-	-

With an average age of 25, FFRD equipment ranges in age from nine to 38 years. Some units have reached or exceeded their acceptable service lives and are due for replacement.

Isanti

IFD operates from a total of three fire stations with a fleet of five engines, three water tankers, an aerial ladder truck, three grass fire vehicles, and five first response/rescue units.

Figure 30: IFD Major Apparatus – Station 1

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	2006	Custom/Peterbilt	Very Good	2	2,000	1,000
Engine 12	Engine	1986	Custom/Ford	Good	2	1,500	500
Tanker 1	Tanker	2000	Sterling	Good	1	150	2,000
Ladder 1	Aerial ladder	1988	Grumman	Good	2	1,500	350
Grass 1	Grass/Brush	1988	Chevrolet	Fair	1	60	250
Rescue 1	Rescue/1st Response	2015	Chevrolet Silverado	Very Good	1	-	-
Rescue 12	Rescue/1st Response	2012	Chevrolet Impala	Very Good	1	-	-
Rescue 13	Rescue/1st Response	2012	Chevrolet Impala	Very Good	1	-	-

Figure 31: IFD Major Apparatus – Station 2

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 2	Engine	2000	Custom/ Freightliner	Very good	2	1,500	1,500
Engine 22	Engine	1975	General Fire/Ford	Fair	2	1,500	500
Tanker 2	Tanker	2000	Sterling	Good	1	150	2,000
Rescue 2	Rescue/1st Response	2001	Ford F350	Very good	1	-	-
Grass 2	Grass/Brush	1986	Chevrolet	Fair	1	60	250
Tech Rescue	Rescue equipment		Featherlite trailer	Excellent	-	-	-

Figure 32: IFD Major Apparatus – Station 3

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 2	Engine	1982	Custom/ Ford	Fair	2	1,500	1,500
Tanker 3	Tanker	1989	International	Fair	1	150	2,000
Grass 3	Grass/brush	1995	Chevrolet	Good	1	60	250
Rescue 3	Rescue/1st Response	2006	Dodge	Very good	1	-	-

With an average of 19.4 years of age, ISD's equipment ranges in age from new to 41 years in age. It is apparent from observing the vehicles that they are well cared for and properly maintained, indicative of pride in ownership.

A number if Isanti's vehicle will be due for replacement in the near future, as is typically found. Commendably however, the district has recognized the importance of planning ahead for vehicle replacement and has a schedule, as well as reserved funding source, in place to meet its upcoming needs.

Milaca

Listed below is MFD's major apparatus. There are two engines, three water tankers, two grass fire vehicles, two rescue units, and a snowmobile. They are listed below:

Figure 33: MFD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	2007	Sterling	Very good	5	1,250	1,000
Engine 2	Engine	1993	Freightliner	Fair	5	1,250	2,000
Tanker 1	Tanker/pumper	2014		Excellent	2	1,000	3,000
Tanker 2	Tanker/pumper	2004	Sterling	Fair	2	1,000	2,000
Grass 6	Grass	1986	Dodge	Fair	2	500	300
Grass 9	Grass	2011	Polaris	Very good	2	50	50
Rescue 1	Rescue	1992		Very good	5	-	-
Rescue 2	Rescue	1997	Chevrolet	Very good	4	-	-
Tanker 3	Reserve tanker	1987	Engle	Fair	2	250	2,000
Snowmobile	Snowmobile	1999	Artic Cat	Good	2	-	-

Milaca's vehicles fall in a wide range of age 2 to 30 years with an average age of 17 years. The "first out" units are newer and in very good to excellent condition. The remaining vehicles, while older, remain serviceable however the 1993 engine and the 1987 tanker are reaching their typically expected service lives, and should be considered for replacement in the near future.

NE Sherburne

No data was provided.

Princeton

PFRD operates a fleet of four fire engines, one aerial ladder truck, three water tankers, and four grass fire units. All appear to be well maintained and fully serviceable. They are detailed in the following figure.

Figure 34: PFRD Major Apparatus

Apparatus Name	Type	Year	Make/Model	Condition	Minimum Response Staffing	Pump Capacity (GPM)	Tank Capacity (GAL)
Engine 1	Engine	1990	White/GMC	Fair	2	1,500	1,200
Engine 2	Engine	1980	American LaFrance	Fair	2	1,500	500
Engine 5	Engine	1992	Spartan	Good	2	1,500	750
Engine 8	Engine	2004	Peterbilt	Very good	2	1,750	750
Ladder 1	Aerial	1985	Sutphen	Fair	1	1,500	500
Tanker 2	Water tanker	1989	International	Fair	1	-	2,000
Tanker 4	Water tanker	1999	GMC	Good	1	350	2,000
Tanker 9	Water tanker	1996	Freightliner	Good	1	270	3,000
Grass 3	Wildland	2007	Dodge Ram	Very good	1	150	200
Grass 6	Wildland	1991	Ford	Good	1	200	200
Grass 7	Wildland	2010	Ford	Very good	1	200	200
Grass 10	Wildland	1987	Chevrolet	Fair	1	200	200

PFRD's major apparatus range in age from 6 to 36 years with an average age of 21.8 years. The primary units are newer and in good condition. The 1980 engine has reached its typically expected service life and some other vehicles should be considered for replacement in the near future.

Capital Replacement Planning

When opportunities for cooperative, and possibly consolidated, efforts, 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. In many instances, fire departments reviewed have little, if any, structured capital replacement planning in place. The agencies participating in this study, however, have taken more steps toward looking toward their future needs than most. The participant's approaches are summarized below:

Foreston

FFRD has established a "truck fund" to partially address future replacement costs. The fund is primarily funded by donations and costs above the amounts available in the fund will be requested through the city budget when the need arises. There is not a formal replacement schedule.

Isanti

IFD has established a five-year Capital Improvement Plan. Anticipated replacement needs have been identified in advance and scheduled appropriately to distribute the financial impact. Funding is set aside

in dedicated accounts so that a significant amount of the costs can be met with available dollars. Isanti has done a good job of planning which is not limited to apparatus, but includes facility maintenance, small equipment, firefighter turnout gear and other needs.

Milaca

MFD has a Capital Improvement Program in place. Although it is ending this year and will need to be updated, it effectively schedules all fire apparatus replacement in advance, forecasting future needs. Gambling revenues are dedicated to equipment replacement in Milaca and total approximately $50,000 annually. In addition, communities that are served under contract by MFD pay $12,500 each year, cumulatively, into a reserve fund.

NE Sherburne

No data was provided

Princeton

All of PFD's vehicles were recently evaluated for their future replacement timing and listed by priority. While a schedule is now in place, commendably, it is not backed by a dedicated funding source. Instead, when the equipment becomes due for replacement funding will need to be requested as a part of the annual budget process. 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 an example of service lives and replacement values.

Figure 35: 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 36: Future Apparatus Replacement Summary

Agency	Number of Engines	Average Age of Engines	Number of Tankers	Average Age of Tankers
Foreston	2	36	1	25
Isanti	5	26	3	19
Milaca	2	16	3	14
NE Sherburne				
Princeton	4	24.5	3	21
Total	**19**	**25.6**	**15**	**19.75**

In addition to the above, PFRD has an aerial ladder truck that is 31 years of age and IFD operates a 28 year old ladder truck.

Fire engines in the study agencies average just over 25 years in age, however it is noted that the average includes some reserve units. While many are newer, some will be in need of replacement or have already exceeded their accepted service life. If compared to the example replacement life and cost data in Figure 35, earlier, it is apparent that some 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 Isanti, which maintains two fire engines in two of its stations. If IFD finds that they routinely need only one fire engine in service at each station, and that other(s) are purely in reserve, they may be able to enter into an agreement to share an engine with another department to share the associated cost.

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.

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

In career emergency services organizations, personnel represent the single greatest expenditure within a department's budget. Volunteer and combination agencies, however, commonly experience a much lower personnel expenditure. 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 system's 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 the community.

Operational Staffing Levels

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 figure summarizes the operational personnel within the study agencies.

Figure 37: Summary of Operational Staff

	FFRD	IFD	MFD	NESFD	PFRD
Fire Chief	1	1	2		1
Deputy Chief	0	0	2		
Assistant Chief	1	2	0		1
Training Officer	1	0	0		1
Captain	2	1	2		4
Firefighter	5	29	19		28
Total	**10**	**33**	**25**	**0**	**35**

The following figures compare each of the study departments to national and state averages regarding personnel per 1,000 population in each of their respective response areas.

Figure 38: FFRD Personnel per 1,000 Population Comparison
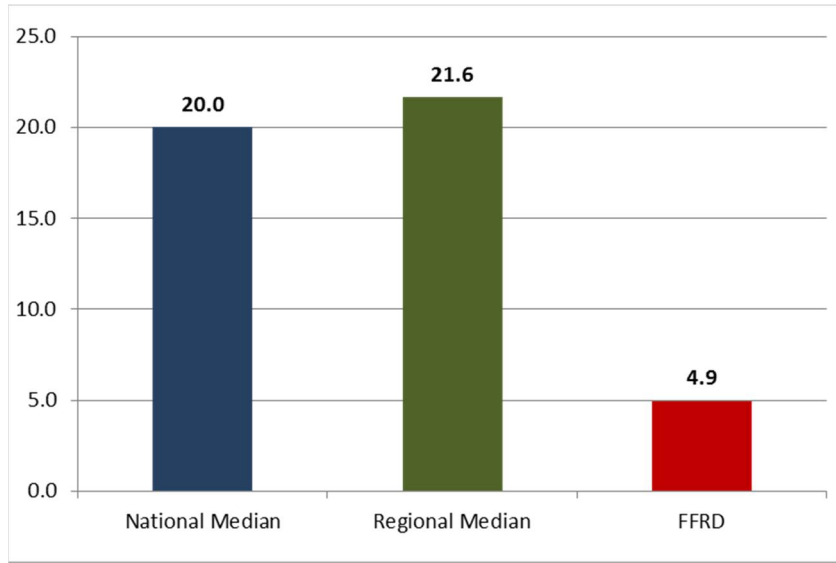
As illustrated in the figure above, FFRD has a significantly lower level of personnel when compared to other communities of similar size.

Figure 39: IFD Personnel per 1,000 Population Comparison
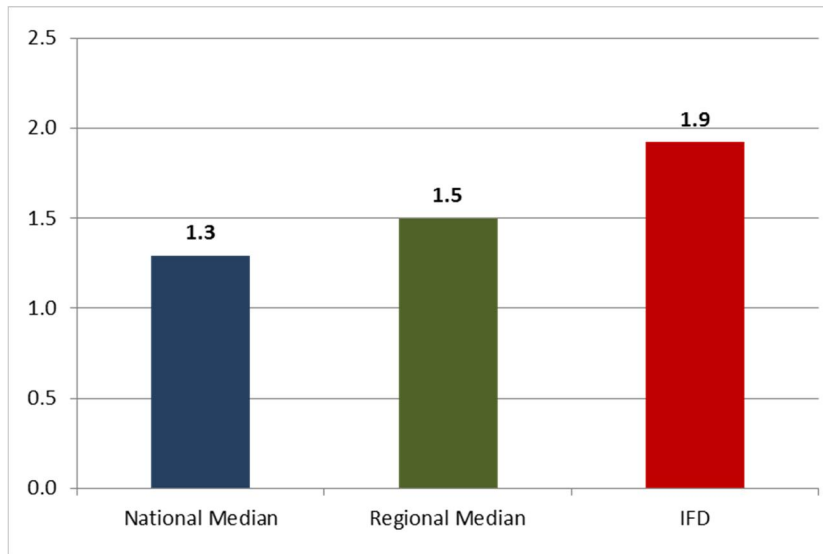
Although IFD appears to have a higher level of personnel when compared to population, NFPA does not provide data on combination fire departments. Thus, the preceding figure includes both career and volunteer personnel for this study department.

Figure 40: MFD Personnel per 1,000 Population Comparison
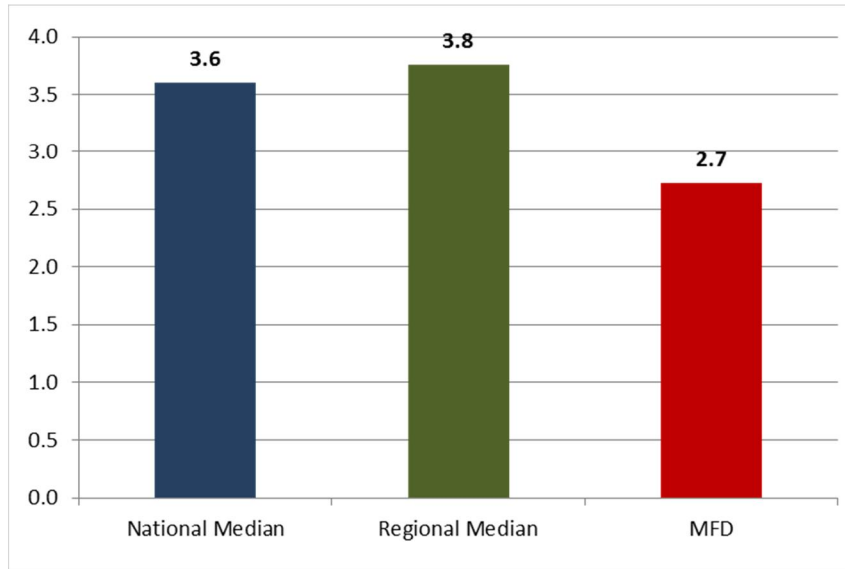
MFD is slightly below the national and regional comparisons with regard to personnel per 1,000 population and PFRD (noted below) is slightly above the comparable data.

Figure 41: PFRD Personnel per 1,000 Population Comparison
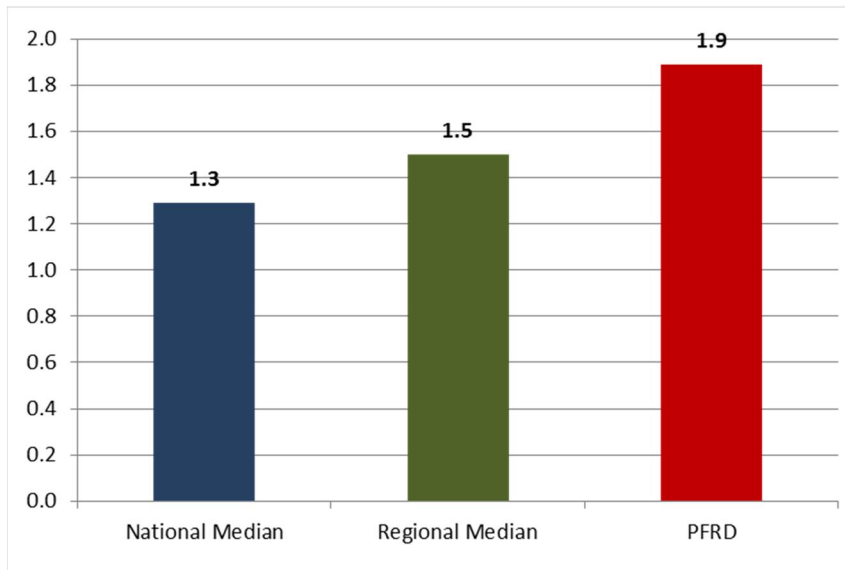
These figures are not to say that any one of the study department are either under or over-staffed but rather to provide a comparison to similarly sized departments providing service to similarly sized populations. The availability of personnel determines a department's capabilities, not the raw number of personnel on their respective rosters. The figure below summarizes the staffing elements reviewed by ESCI.

Figure 42: Summary of Staffing Elements

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Types of Volunteer/POC Duty	Voluntary on-call response	Career staff during the day at Station 1, voluntary on-call staff at Station 2 and 3 as well as duty crews on nights and weekends	Voluntary on-call response		Voluntary on-call response
On-Call Communication Method	Voice pager	Voluntary sign-up for duty times	Voice pager		Voice pager
Station Duty Assigned	None	Voluntary sign-up for duty times	Voluntary sign-up for duty times		None
Station Duty or Call Duty Periods Paid	Paid for calls made only, normal rate	Paid for calls made only, normal rate	Paid for calls made only, normal rate		Paid for calls made only, normal rate

Staffing Performance

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 sharply—medical calls, hazardous materials calls, and every sort of household emergency 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.

The following figure summarizes each department's average staffing performance for structure fires over the past five years.

Figure 43: Historical Staffing Performance

	FFRD	IFD	MFD	NESFD	PFRD
2011		10.1			18.0
2012		9.6			16.5
2013		10.3			16.0
2014		14.7			18.6
2015		12.9			17.1

Data provided by FFRD and MFD did not contain staffing information. NESFD did not provide data.

Application, Recruitment, and Retention Programs

As with most volunteer systems, the study area struggles within acquiring and retaining personnel. Volunteer fire department must be vigilant in seeking out personnel that have both the desire and ability to perform the often high-stress tasks of emergency response. However, it should be noted that, in most cases, it is not the fire department's responsibility to generate personnel but rather the community's obligation to provide them.

The fire service, as an industry, recommends that application processes for candidates be standardized and comprehensive including establishing minimum physical ability standards, requiring pre-appointment

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[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.

medical examinations, and conducting thorough background checks. The following figure summarizes each study department's programs for new personnel.

Figure 44: Summary of Application, Recruitment, and Retention Programs

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Minimum Physical Standards Established	No physical standards	Yes	Yes		No physical standards
Pre-Appointment Medical Exam Required	Yes	Yes	Yes		Yes
Hiring Authority	City Council	Joint Powers Board	City Manager		City Council
Applicant Process Includes	Application sheet, Application review, Criminal history check, Medical examination, Probationary period	Application sheet, Application review, Criminal history check ,Physical agility test, Medical examination, Metal Aptitude Test, Probationary period	Application sheet, Application review, Criminal history check, Physical agility test, Medical examination, Probationary period		Application sheet, Application review, Criminal history check, Medical examination, Probationary period

None of the study departments have a formalized member retention program. There are a number of resources available through the National Volunteer Firefighter Council that outline recommendations for retention programs. As communities change and grow, particularly for affluent communities, the ability to acquire and retain personnel will become more and more difficult. Later in this report, recommendations will be provided regarding a regional program for member retention efforts.

Testing, Measurement, and Promotional Processes

Although each of the study departments are volunteer, it is still necessary to ensure that personnel are well-trained and receive the necessary skills and knowledge necessary for them to provide leadership to future personnel. All fire departments, regardless of size or staffing model, should develop and implement formal programs to ensure that personnel can consistently perform the skills learned during initial training sessions. This ongoing training and evaluation will assist the department at making changes to future training sessions as well as to potentially prevent injury to personnel during an emergency response.

In addition, developing comprehensive sets of job descriptions with minimum requirements for each position will allow the departments to promote individuals that are the most qualified rather than simply appointing them. The following figure summarizes the testing, measurement, and promotional processes elements.

Figure 45: Summary of Testing, Measurement, and Promotional Processes

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Periodic Capability Testing to Measure Minimum Standards Compliance	No formal periodic testing- observation only	No formal periodic testing- observation only	No formal periodic testing- observation only		No formal periodic testing- observation only
Periodic Performance Evaluations	No	No	No		No
Formal Promotional Testing	No	No	No		No

The most important aspect of any emergency services agency is its ability to deliver services when requested. This section of the report evaluates the current and historical service delivery elements of demand, distribution, concentration, reliability, and response performance.

Demand

Demand can be defined in a number of ways but, for the purposes of this report, the project team was most interested in total activity for each of the study departments. Analysis of demand begins with a review of historical overall demand for each organization.

Figure 46: Overall Historical Service Demand
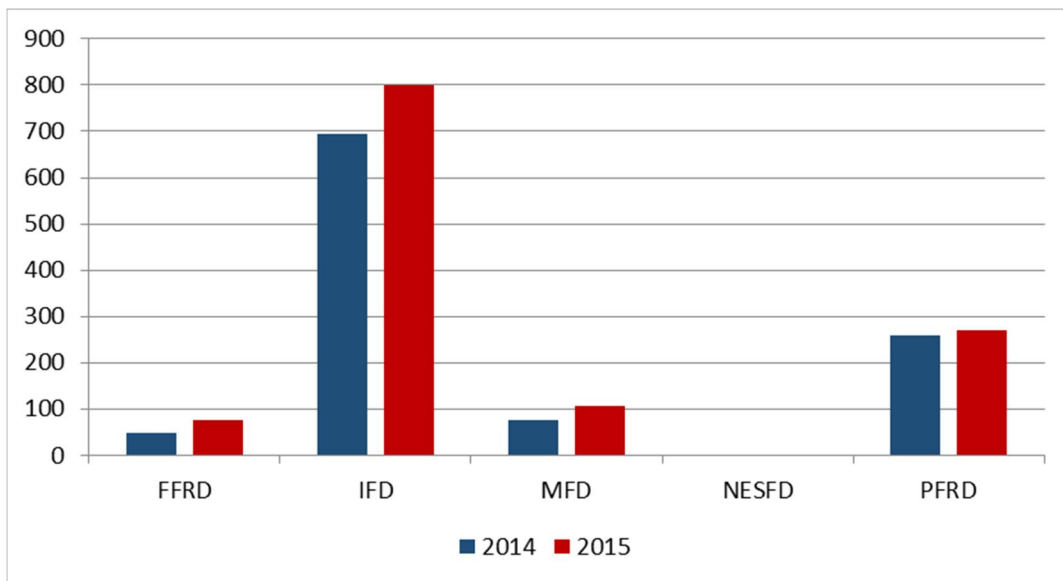
As expected, IFD is the busiest of the study departments with PFRD representing the next busiest department. This overall demand is broken down further in the following figures into three primary categories: Fires, Medical Responses, and Other Incidents, which include alarms, public assists, rescues, etc.

Figure 47: Historical Service Demand by Category – FFRD
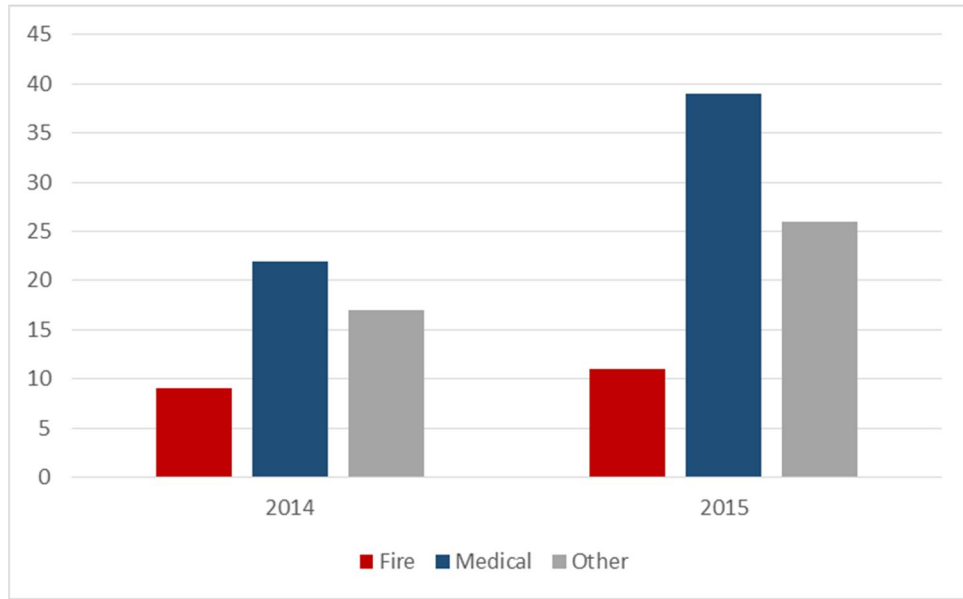
As with any department that is involved in the delivery of emergency medical services, even at the first response level, that category of incidents will comprise a majority of overall service demand.

Figure 48: Historical Service Demand by Category – IFD
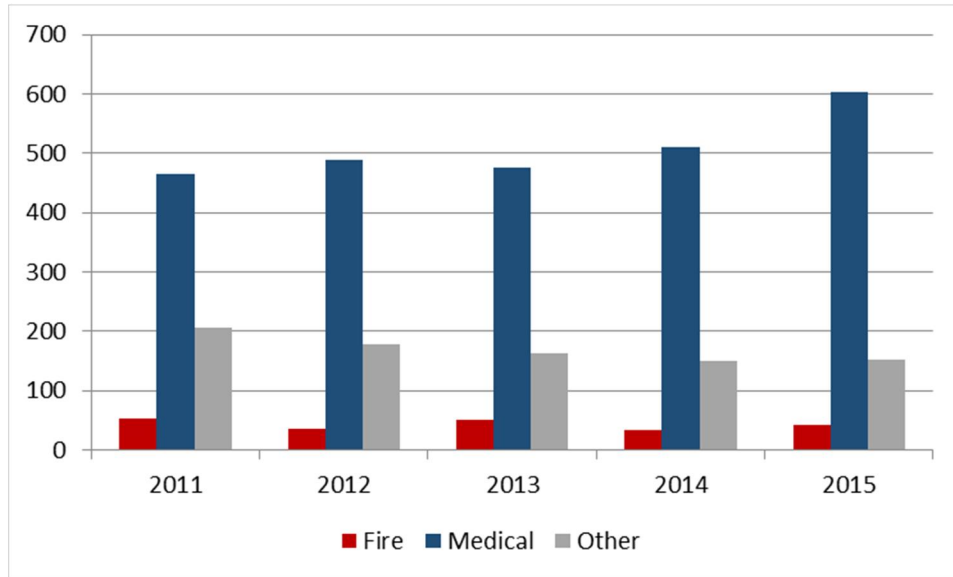
Figure 49: Historical Service Demand by Category – MFD
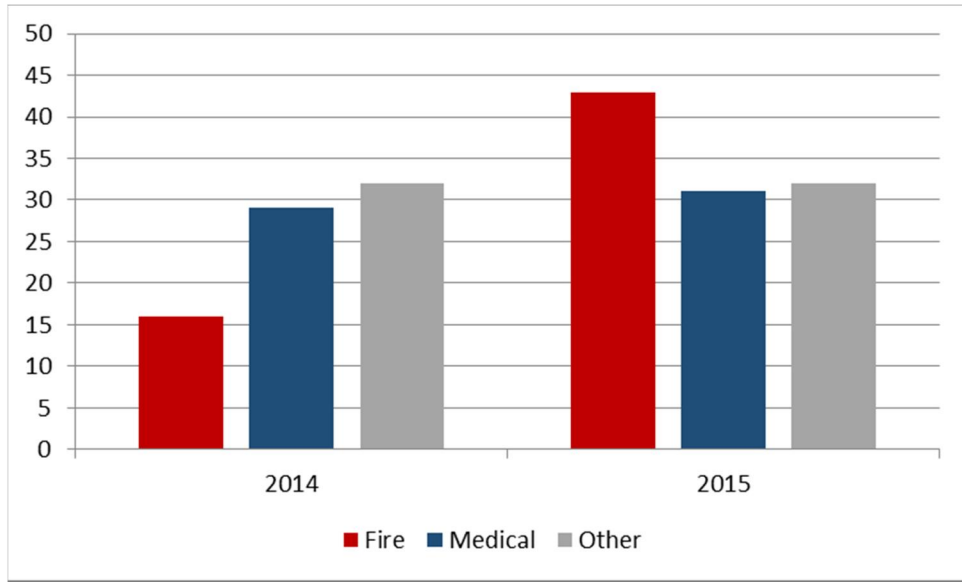
For MFD, first increased from 2014 to 2015 and the other categories remained relatively flat.

Figure 50: Historical Service Demand by Category – PFRD
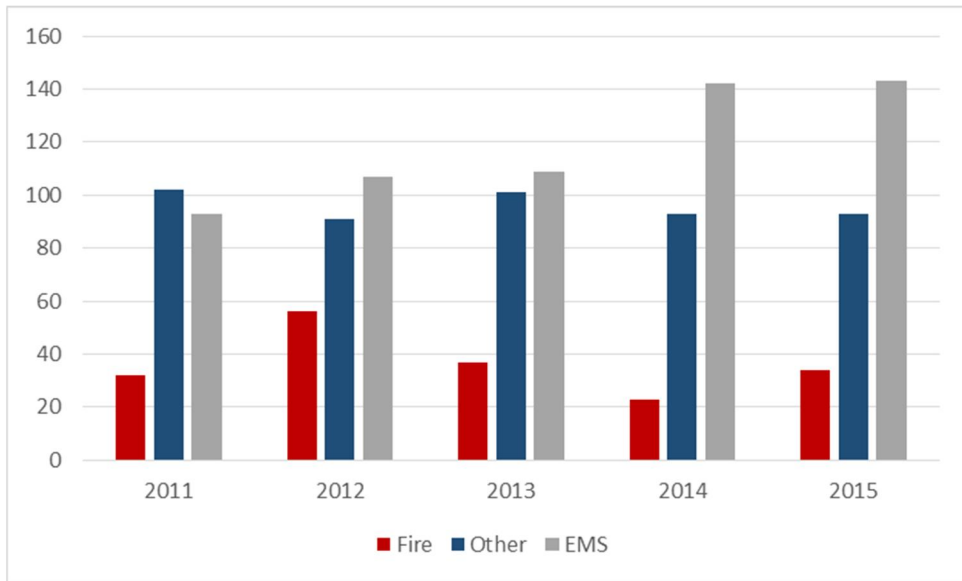
For PFRD, fire service demand has been variable as has medical service demand but other incident types have seen a significant increase over the last five years. This could be due to a chance in how incidents are coded in the records management system or a change in what incident types the department response to.

The next analysis looks at service demand temporally; by month, day, and hour, and aggregates the data into a regional perspective.

Figure 51: Service Demand by Month - FFRD
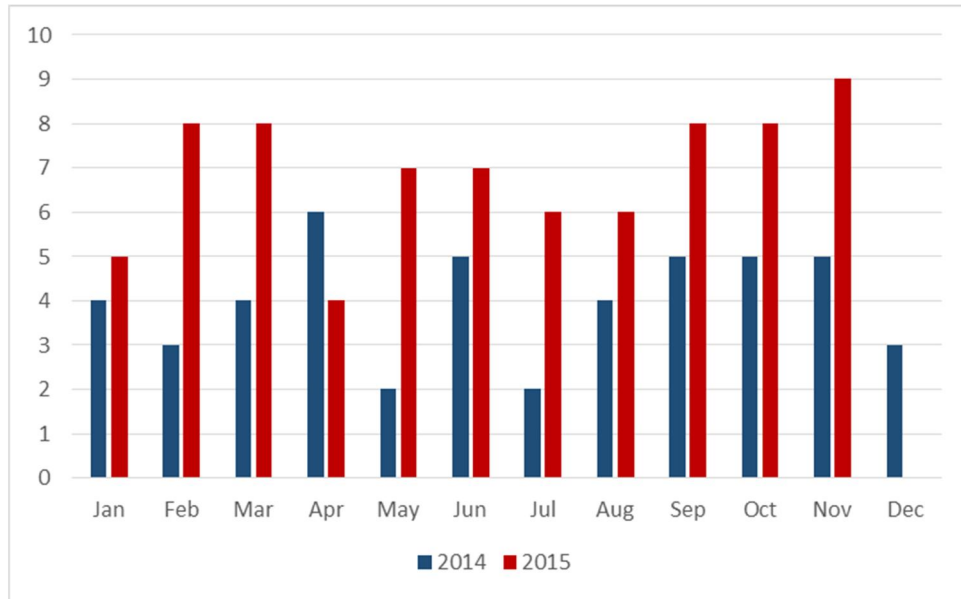
Figure 52: Service Demand by Month – IFD
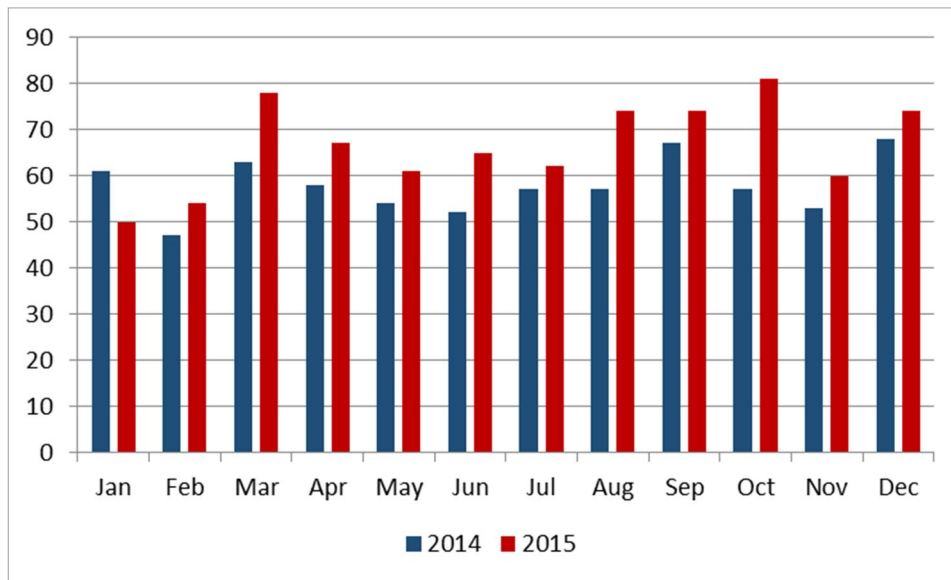
Figure 53: Service Demand by Month – MFD
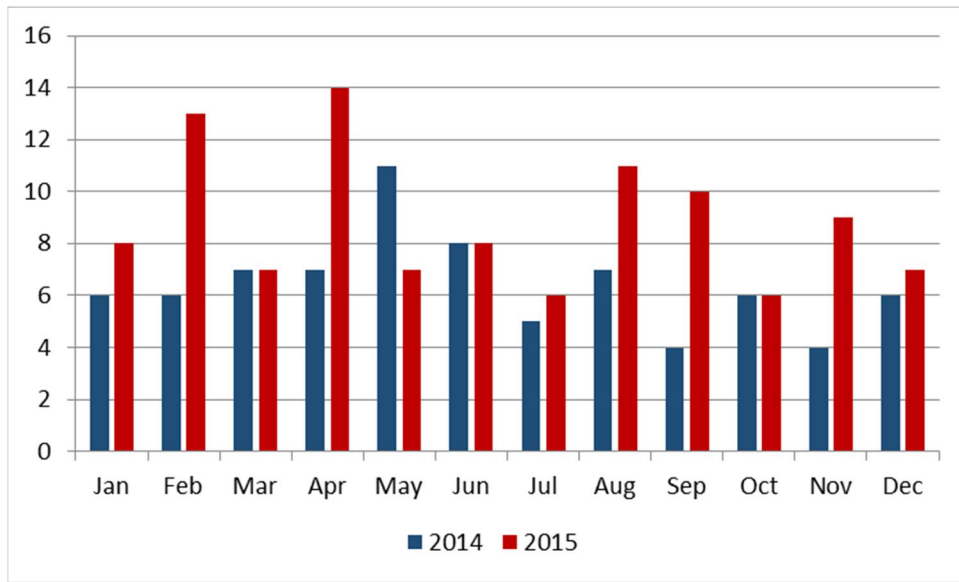
Figure 54: Service Demand by Month – PFRD
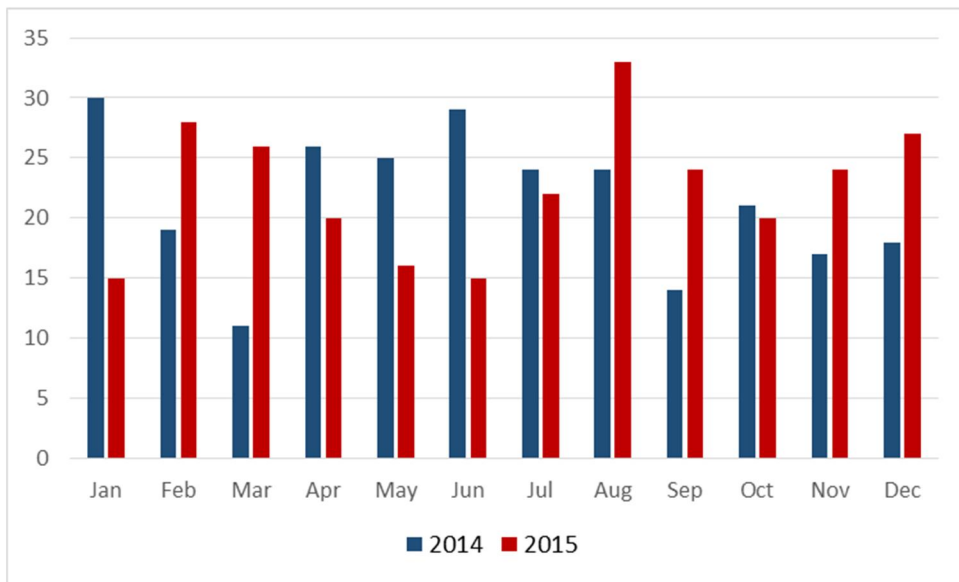
As can be seen in the preceding figures, only IFD and MFD have any discernable pattern from year to year, with higher volumes in the spring and fall when the general population is more active. The next analysis looks at demand by day of week.

Figure 55: Service Demand by Day of Week - FFRD
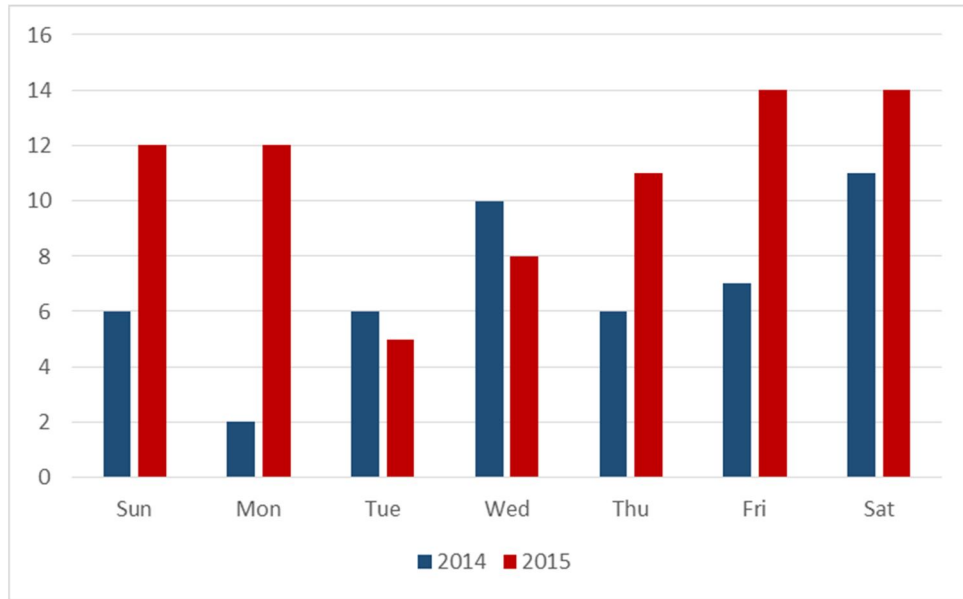
Figure 56: Service Demand by Day of Week – IFD
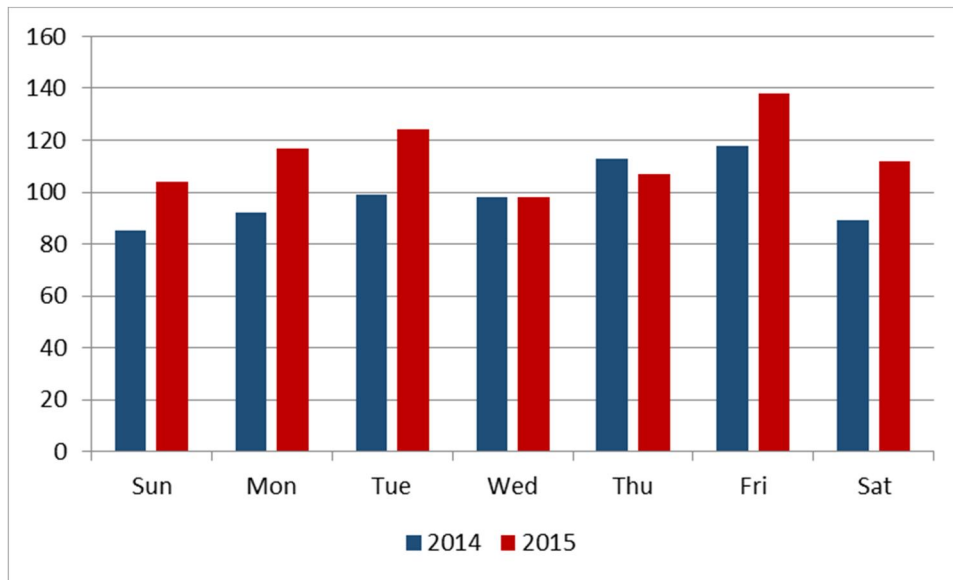
Figure 57: Service Demand by Day of Week – MFD
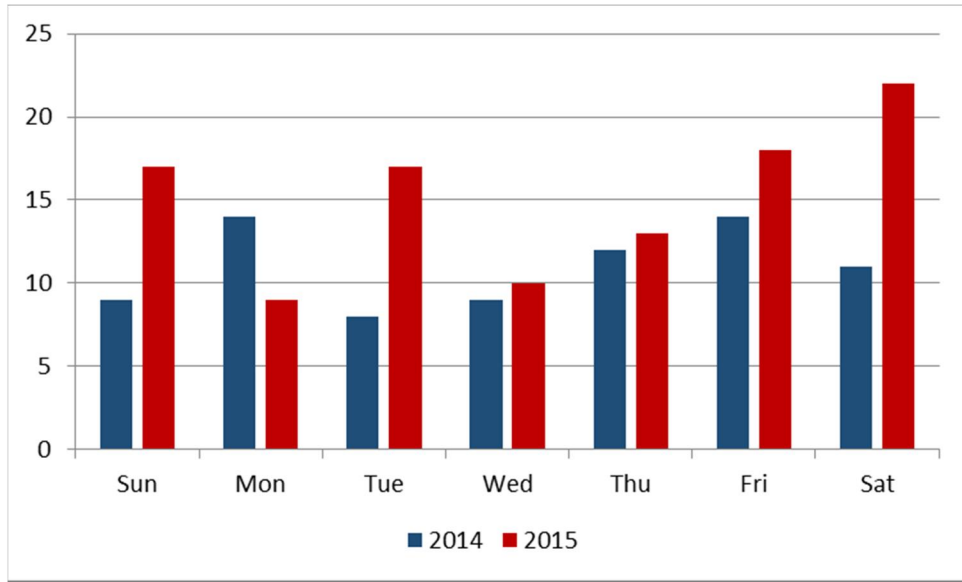
Figure 58: Service Demand by Day of Week – PFRD
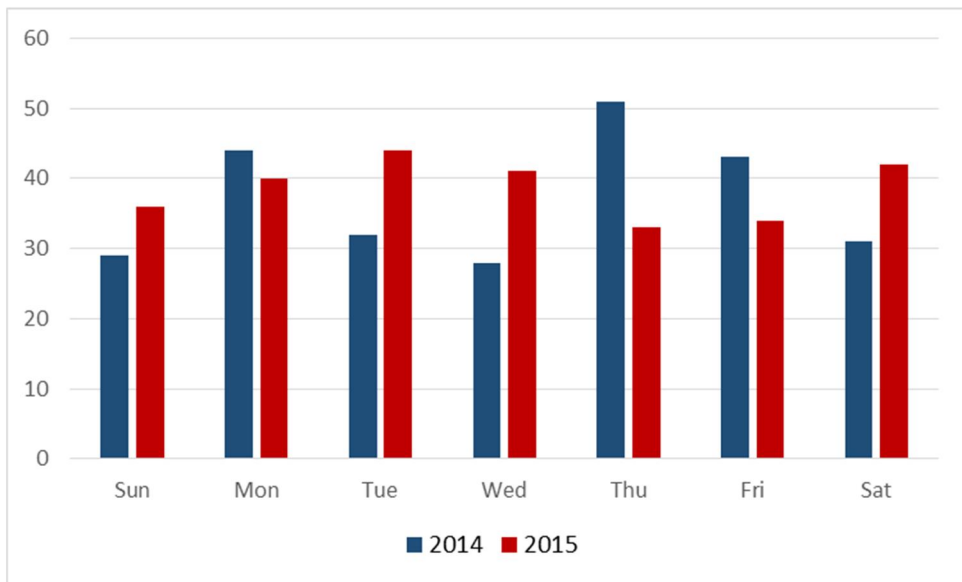
As before, there is little in the way of a pattern for service demand based on day of week. Each department's busiest day has changed over the past two years. The final analysis is that of incidents by hour of day.

Figure 59: Service Demand by Hour of Day - FFRD
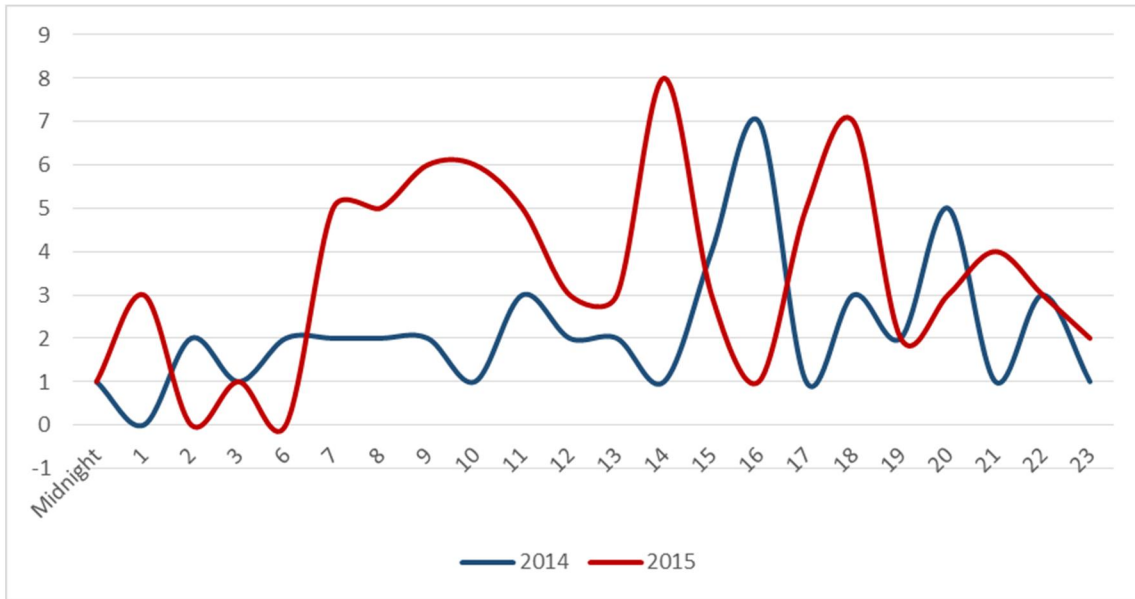
Figure 60: Service Demand by Hour of Day – IFD
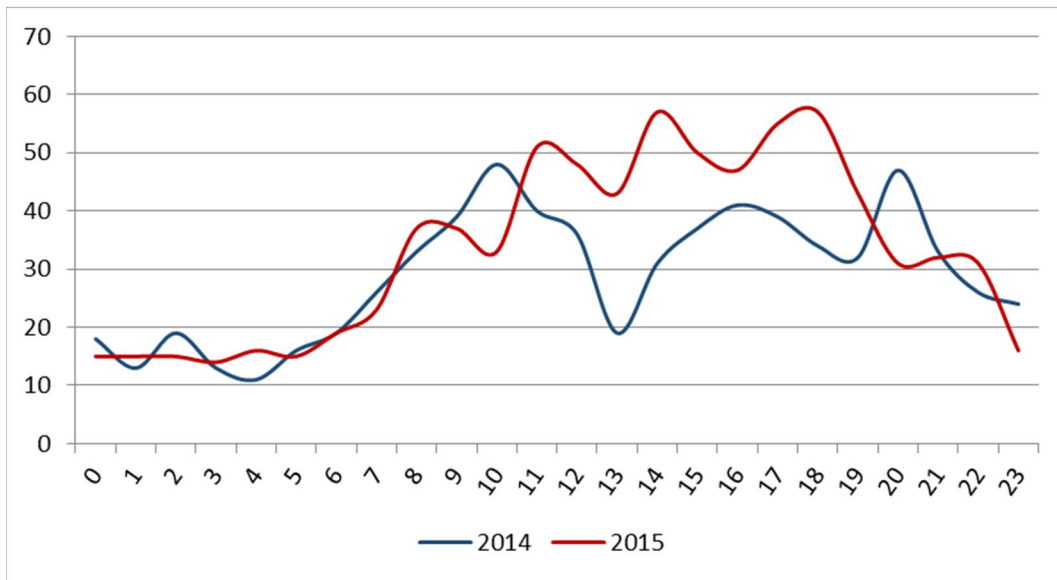
Figure 61: Service Demand by Hour of Day – MFD
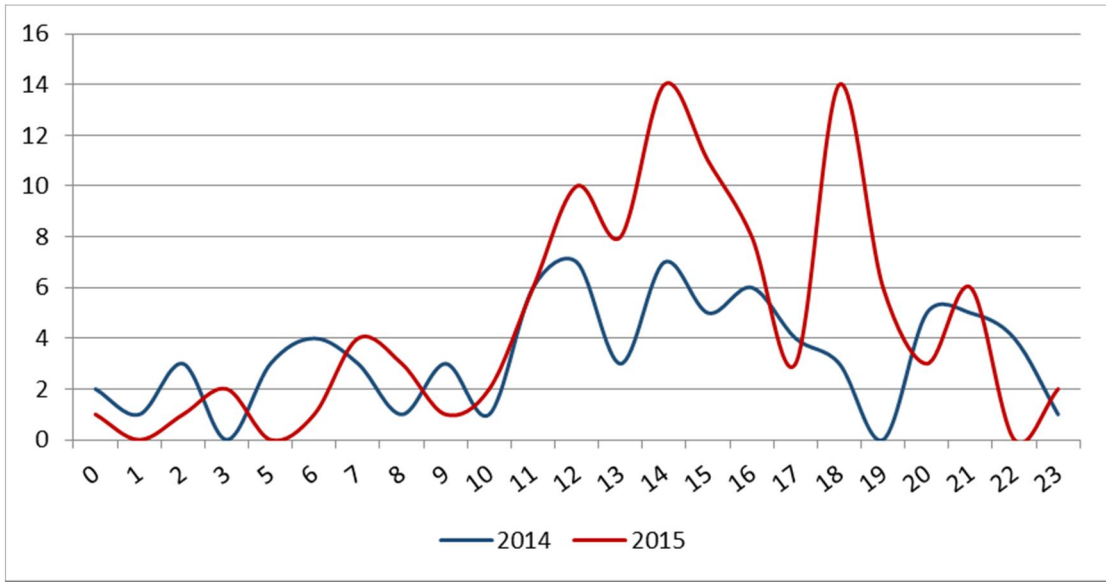
Figure 62: Service Demand by Hour of Day – PFRD
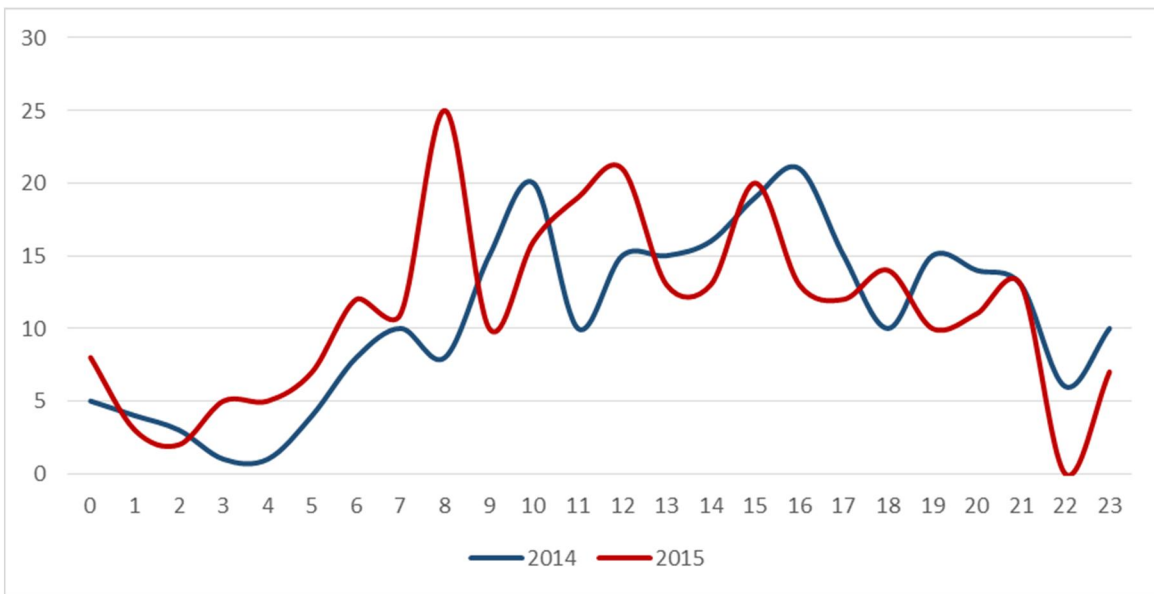
Generally, departments that are involved in the provision of EMS tend to see service demand increase between the hours of 6:00 a.m. and 8:00 a.m.; peaking during the mid-afternoon hours; then declining into the evening. As seen in the preceding figures, hourly service demand is highly.

Distribution

Distribution is an analysis that illustrates travel capability of specific units based on the existing roadway network. In essence, travel time is mapped using geographic information system (GIS) software and a model is created that estimates how much of a given area can be covered within a specified period of time. The following figure illustrates the study departments' four- and eight-minute travel capabilities.

Figure 63: Travel Capability
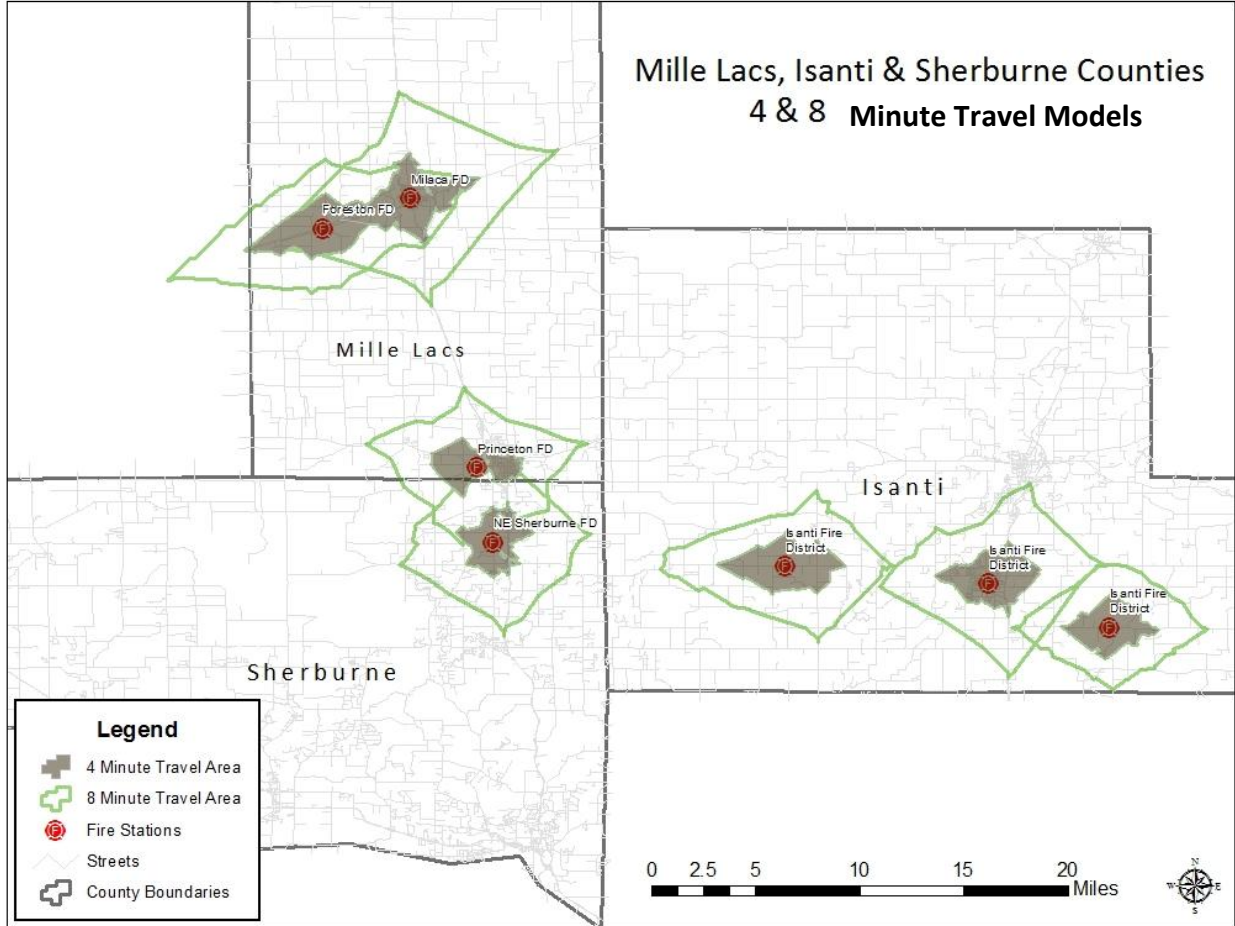
Based on this analysis, there is a significant portion of the area that is outside the four and eight-minute travel models. However, the population and service demand in these areas is likely less than would be feasible to deploy additional resources.

The Insurance Services Office (ISO) also provides guidance on where stations should be located. To receive maximum credit under the distribution section of the Public Protection Classification (PPC) system, a property must be within five road miles of a fire station; within 1.5 miles of a fire engine; and within 2.5 miles of an aerial apparatus, and five miles of total coverage from each fire station. The following figure illustrates these three ISO travel distances.

Figure 64: ISO Distribution Models
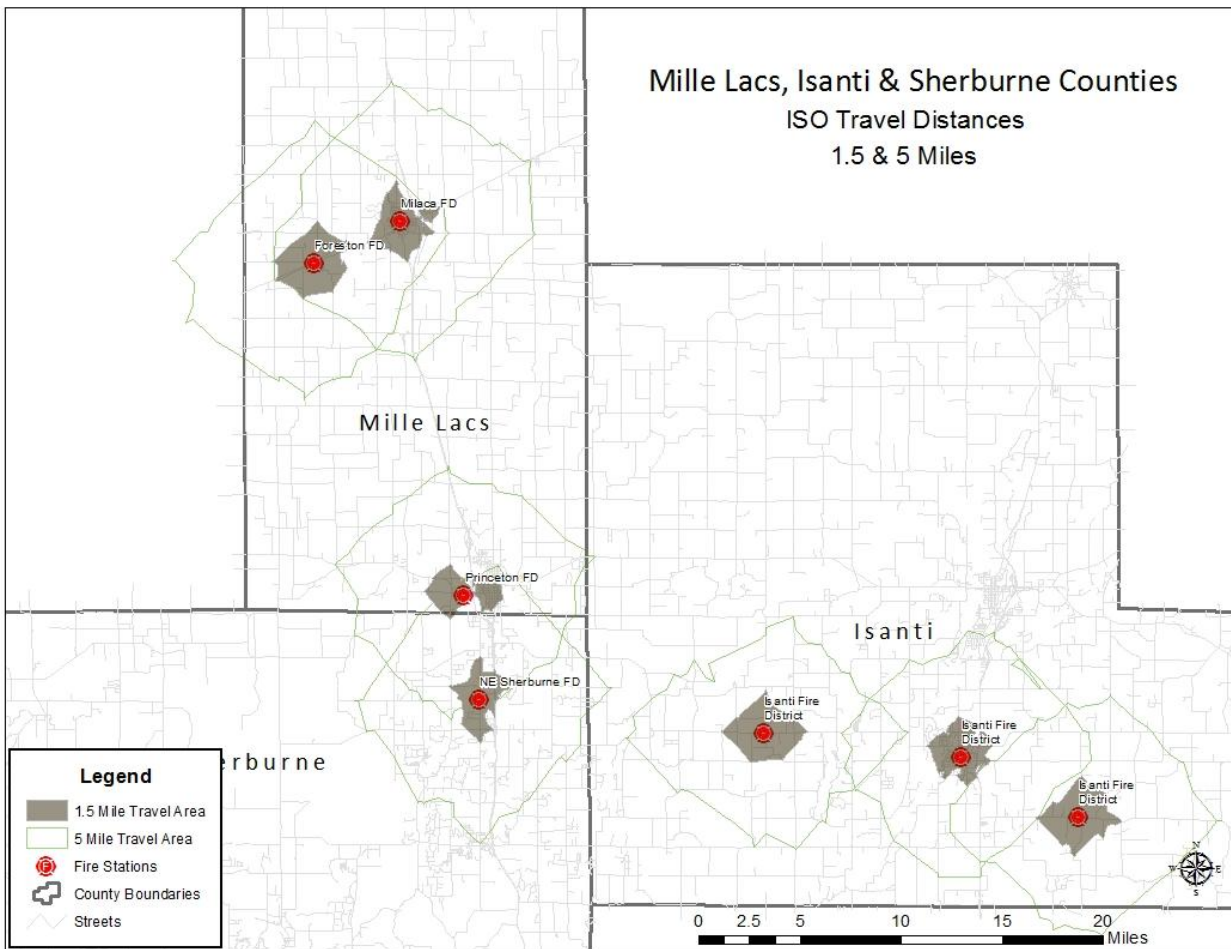
As can be seen in the preceding figure, only a small portion of the overall area lies within the 1.5 mile ISO travel distance. A much larger area lies within five miles of existing stations, leading to lower fire insurance rates for residents in those areas. Those properties lying outside of five miles from an existing station may find it difficult to obtain reasonably priced fire insurance.

Response Performance

Perhaps the most visible and notable aspect of emergency services to the public, response performance is the primary measure by which the public gauges overall effectiveness. Response time can be measured in a number of ways but industry standards suggest that performance be measured on a percentile rather than simply reporting the average.

Response time, however, is not simply a matter of operational response. The response time continuum begins when someone calls 9-1-1 and ends when the appropriate resources are on the scene of the incident. 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.

Before entering this discussion, however, it is important to provide a brief discussion about how the statistical information is presented, particularly regarding 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. This is also called the 50th percentile.

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

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

For this analysis, ESCI was most interested in the ability to respond with the appropriate resources to the highest percentage of incidents. For this reason, ESCI analyzed National Fire Incident Reporting System (NFIRS) and computer aided dispatch (CAD) data and generated average and 90th percentile response performance for emergency incidents only.

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 recommends that career fire departments be en route to emergency incidents within 60 seconds for medical responses and 80 seconds for fire responses; allowing an extra 20 seconds to don protective clothing that is not required for medical incidents. This time period is known as turnout time. *NFPA 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer or Combination Departments*, however, does not contain a turnout time performance recommendation since personnel are often responding from home, work, or elsewhere from within and outside the community. For volunteer and combination fire department, the same travel time recommendations remain but the overall response performance recommendation is tiered based on population density.

NFPA 1710 includes a performance objective of 240 seconds or less of 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. The volunteer and combination response performance recommendation is summarized below.

Figure 65: NFPA 1720 Response Performance Recommendations

Classification	Population Density	Response Target	Percentile
Urban	>1,000	9:00	90th
Suburban	500 – 999	10:00	80th
Rural	<500	14:00	80th

For this analysis, ESCI was able to analyze National Fire Incident Reporting System (NFIRS) data that records alarm time, arrival time, and available time. The following figure summarizes the study departments' overall response performance during 2014 and 2015.

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[3]National Fire Protection Association. *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*, 2010.

Figure 66: Historical Total Response Performance

Average					
	FFRD	**IFD**	**MFD**	**NESFD**	**PFRD**
2014	0:11:12	0:07:03	0:09:53		0:06:47
2015	0:09:28	0:06:24	0:11:19		0:07:34
80th Percentile					
	FFRD	**IFD**	**MFD**	**NESFD**	**PFRD**
2014	0:15:00	0:10:00	0:13:24		0:09:00
2015	0:13:00	0:09:00	0:15:00		0:11:00

Based on the response performance analysis performed by the project team, each of the study departments are performing at acceptable levels. NFPA 1720 recommends a 14 minute response time at the 80th percentile for rural areas and each of the study departments are meeting that goal, with the exception of MFD, but the goal was actually attained in 2014. Each department should listen to their respective communities regarding future expectation for the delivery of emergency services and continually monitor response performance to ensure that goals are being met sufficiently.

The following figure summarizes the operations and command elements of the study departments and recommendations on how to improve efficiencies throughout the system are provided as appropriate.

Figure 67: Summary of Operations and Command Elements

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Levels of Tactical Pre-Incident Planning	Pre-incident plans for all commercial/industrial/assembly/institutional	Pre-incident plans for only high-hazard occupancies, Plans updated at least annually	Pre-incident plans random occupancies only		Pre-incident plans random occupancies only
Levels of Operational Planning	Mutual aid agreements in place-no formal assignment system	Resources managed by standard apparatus assignment based on call-type, Mutual and automatic aid agreements in place-no formal assignment system	Mutual aid agreements in place-no formal assignment system		Mutual aid agreements in place-no formal assignment system
Hydrant Locations Mapped	Yes, no main sizes or flow rates shown	Yes, no main sizes or flow rates shown	Yes, no main sizes or flow rates shown		Yes, with main sizes and flow rates
Alternate Static Water Points Mapped	No	Yes	Yes		Yes, with formal deployment/shuttle plans
Maps Available in All Vehicles	Yes, department vehicles only	Yes, department vehicles only	Yes, department vehicles only		Yes, department vehicles only
Standard Response Recommendation Based on Type of Call	Yes	Yes	Yes		Yes
Minimum Number of Responders per Apparatus Standardized	Yes	Yes	Yes		No
Turnout Time Standards Established	No	No	No		No
Total Response Time Standards Established	No	No	No		No

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Simultaneous Incident Cover Plans	Station move-up manually by Incident Commander	Station move-up manually by Incident Commander	Station move-up manually by Incident Commander		None
Is a Duty Officer Assigned 24-Hours Per Day	No formal system	Yes- assigned on-call command officer	No formal system		No formal system
Is Incident Command System Used	Most of the time- NIMS compliant	Most of the time- NIMS compliant	Most of the time- NIMS compliant		Always- NIMS compliant
Incident Arrival Size-Up Announcement Required	All incidents with significant risk	Not formally required and inconsistently performed	All incidents with significant risk		All incidents with significant risk
Initial Strategy Declaration Required on Arrival	Working structure fires only	Working structure fires only	Working structure fires only		Not formally required and inconsistently performed
Is an Accountability System Used on All Major Incidents	Always	Always	Most of the time		Most of the time
Do Command Officers Have Formal Strategy and Tactics Training	No formal training requirements specific to strategy and tactics	No formal training requirements specific to strategy and tactics	Yes		
Do Command Officers Have Formal Building Construction Training	No formal training requirements specific to building construction	No formal training requirements specific to building construction	No formal training requirements specific to building construction		
Minimum Level of Hazmat Certification for Responding Personnel	Hazmat- Operations	Hazmat- Operations	Hazmat- Operations		Hazmat- Operations
Formal Safety Officer Assignment	All incidents with significant risk	All working structure fires	All working structure fires		All working structure fires

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Two-In, Two-Out OSHA/EPA Compliance	Inconsistent application of two-in, two-out rule	Strict compliance two-in, two-out rules	Inconsistent application of two-in, two-out rule		Inconsistent application of two-in, two-out rule

Mutual and Automatic Aid Programs

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

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

Basic Mutual Aid upon Request

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

Written Mutual Aid Agreements

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

Automatic Aid Agreements

Once again, this form of mutual aid takes the process an additional step further by detailing certain circumstances under which one or more community's specific resources will respond automatically upon notification of a reported incident in the neighboring community. In essence, automatic aid agreements expand a community's initial first alarm response to certain types of incidents by adding resources from a nearby neighbor to that response protocol. Typically, such agreements are for specific geographic areas where the neighbor's resource can be expected to have a reasonable response time and are only for

specific types of incidents. An example of such an agreement would be having a neighboring community's engine respond to all reported structure fires in an area where it would be closer than the second or third-due engine from the home community. In other cases, the agreement might cover a type of resource, such as a water tender or aerial ladder, which the home community does not possess. An example of this would be having a neighboring community's water tender respond to all reported structure fires in the areas of the home community that do not have pressurized hydrants.

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

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

Each study department already actively participates in both automatic and mutual aid with surrounding departments. The next figure summarizes how mutual and automatic are have been historically used within the study departments.

Figure 68: Mutual and Automatic Aid Utilization – FFRD
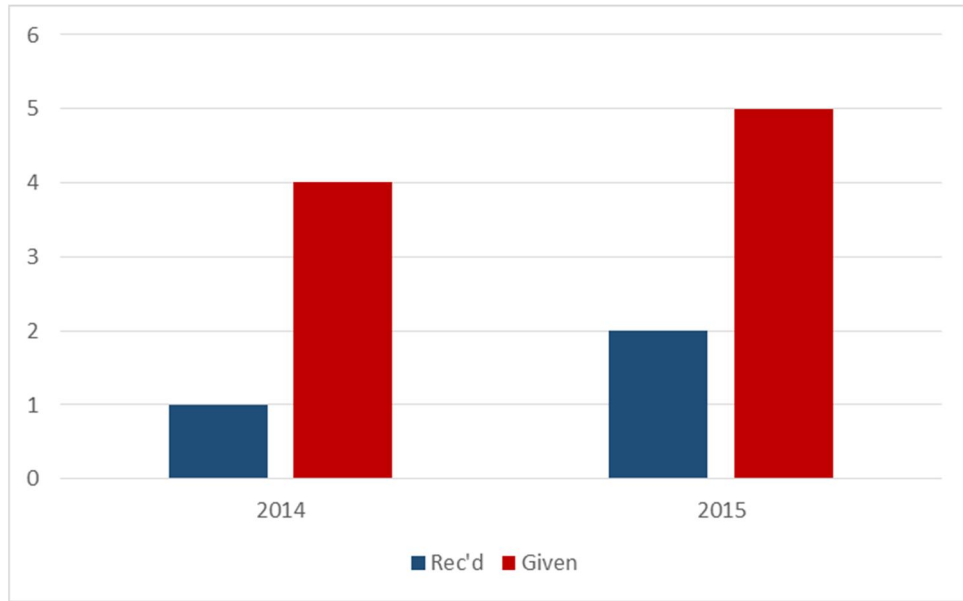
Figure 69: Mutual and Automatic Aid Utilization - IFD
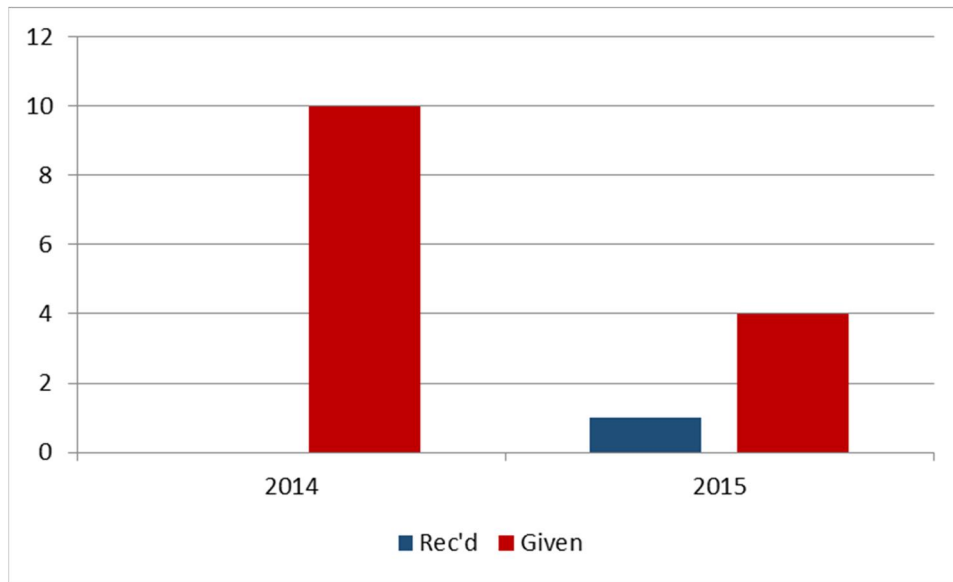
Data provided by MFD did not include mutual and/or automatic aid categorization.

Figure 70: Mutual and Automatic Aid Utilization - PFRD
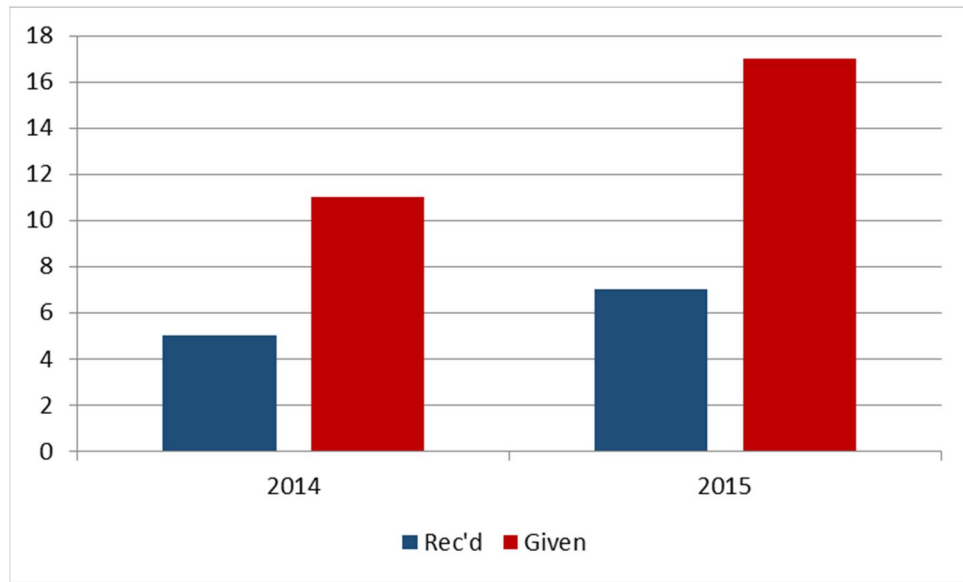
It is obvious from the preceding figures that summarize mutual aid utilization that the study departments are reliant on each other for some incident types; typically structure fires. No fire department can operate completely independent of their adjacent organizations and well-planned formal agreements for assistance will ensure that operations continue smoothly.

SUPPORT PROGRAMS

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

Training

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

Minnesota Training Standards

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

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

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

The following table reviews the participating agencies training programs.

Figure 71: Summary of Training Program Elements

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Initial Training	Once monthly training scheduled for 2 to 3 hours. All personnel trained to Firefighter I and II level and EMR[4]	Personnel trained to Firefighter I level at a minimum, Firefighter II encouraged. EMR required. One drill per month.	Officers plan and deliver. 3 drills monthly, planned 6 months in advance. All are trained to Firefighter I and II level as well as EMR.		Personnel trained to Firefighter I and II level as well as EMR Incorporated into weekly training program. Conducted every Tuesday night.
Training Required Prior to Scene Response	May respond but on-scene tasks are limited until completion of Firefighter I as a minimum	May respond but not make entry or deal with patients until Firefighter I and EMR is completed.	May respond with limited task, may not make entry until completion of Firefighter I and a live burn exercise.		Firefighter I certification is required before making entry to IDLH[5]
Training Required to Leave Probation	6 month probationary period. Completion of probation based on chief's judgement.	One year probation, requires Firefighter I and EMR within the probationary period.	1 year probationary period. Member review and approval of end of probation.		Cannot respond on first or second truck until after one year
Established Minimum Training Hours Annually	Attendance to 75 percent of drills per year required. State certification requires 24 hours per year.	Attendance to 60% of training which also provides the 24 hour minimum hours required for recertification.	Must attend 50% of scheduled training. 36 drills scheduled per year. Firefighter I and II recertification required annually.		Attendance to 30 drills per year required. State certification requires 24 hours per year.

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[4] EMR: Emergency Medical Responder
[5] IDLH: Environment defined as Immediate Danger to Life and Health

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Consistent Officer Training Provided	Safety Officer undergoes special training. All officers attend incident command training.	Supplemental training provided and encouraged. Officers required to train in addition to routine internal training.	Officers are required to obtain 8 hours of training above regularly scheduled training.		Officers required to have seven years' experience, complete Fire Leadership I course.
Consistent Driver/Operator Training Provided	Not formally, incorporated into weekly training	Minimum qualifications to drive are in place. Driver/Operator incorporated into recurring monthly drills	Incorporated into ongoing in-house training plans. Must be Firefighter I certified to drive.		Not formally, incorporated into weekly training
Individual Responsible for Training Program	Training Officer is assigned and reports to the Fire Chief	Captains are responsible for training	Fire Chief		Assistant Chief who serves as Training Officer currently
Certified Instructors Used	None certified. St. Cloud Vocational Technical Institute provides most classes required for certification.	Approximately 7 personnel are certified instructors	One certified plus St. Cloud Vocational Technical Institute used.		Assistant Chief is the only certified instructor
Annual Training Plan Developed and Followed	Annual schedule details planned training for the year	Annual training plan is in place	Training is planned in advance for 6 months		Plan developed quarterly
Software Support for Training Program	Documented in Image Trend software	Documented in Image Trend software	Documented in Image Trend software		Tracked in Firehouse Software

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Training Program Dedicated Budget	Limited funds as available	$14,000 is dedicated in the budget for training	Dedicated training budget of $7,000 annually, plus state reimbursements		Approximately $7,000 budgeted for training plus state grant funds
List Training Resources Available	No formal drill ground. Use area streets and parking lots for training.	Classroom in the station, no drill grounds or training tower is available	Good sized classroom, plus a training building on the property. Currently seeking funds for a live fire building.		Good sized classroom, otherwise use area streets and parking lots
Standard Training Curriculum Manuals Used	IFSTA Essentials manuals used	IFSTA manuals are used.	IFSTA manuals and NFPA standards are used.		IFSTA manuals primarily. No departmental training manuals
Lesson Plans Used	Use IFSTA lesson plans	Use IFSTA lesson plans	On line sources used		Use IFSTA lesson plans
Night Drills Conducted	Yes	Yes	Yes		Yes
Multi-Company Drills Conducted	Limited	Limited	Limited		Yes
Regional Disaster Drills Conducted	Some conducted in the area occasionally	Occasional county wide drills are conducted.	Some conducted in the area occasionally		Annual nuclear drill. Some others on occasional basis.
Periodic Skills Evaluations for Critical Duties in Place	Pump operations skills demonstration required annually	Annual skills testing performed, same as entry level physical agility test. Advisory only, no pass fail requirement.	No		No
Post Incident Analysis Used to Lead Training	Yes	Conducted as needed	Yes		Yes

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Safety Officer Present for all Drills	Yes	Consistently	Not dedicated		On an as needed basis only
Training Records Maintained	In ImageTrend software	In ImageTrend software	In ImageTrend software		Via Firehouse Software
Recertification Requirements	State licensing requires 36 annual hours of training. Required for all personnel.	State licensing requires 36 annual hours of training. Required for all personnel.	State licensing requires 36 annual hours of training. Required for all personnel.		State licensing requires 36 annual hours of training. Not all personnel are required to be licensed but most are.
		All personnel are FFI II and EMR. Also brings in outside instructors from Fire Inc.			95% are FF II cert. Active training program. Well developed, well planned.

Entry Level Firefighter Training

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

All of the fire agencies involved in this study have identified training at the Firefighter I, II and Emergency Medical Responder as their baseline, minimum training standard, which is consistent with state-wide practices. Like nearly all small fire departments, the agencies find themselves challenged to adequately meet the multiple demands associated with firefighter training and skills maintenance.

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

Ongoing Training and Continuing Education

All of the study area fire departments plan their continuing education training around the State's annual recertification requirement of 72 hours every three years, equating to 24 hour annual hours. For a fire department to achieve the recommended minimum of 24 annual hours, it will need to offer training at least twice monthly, assuming that classroom sessions are 2 hours in length. However, it is unlikely that responders are going to attend 100 percent of available training, necessitating access to additional classes. Even with perfect attendance, the 24 hour minimum does not address the additional state and federal training requirements discussed previously. Between the demand for training hours and the difficulties associated with recruiting, training, and maintaining an adequate number of responders, the Mille Lacs and Isanti County fire departments are challenged to meet their training needs.

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

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

- Each organization has a designated training officer or person assigned training responsibilities.
- Each organization creates a plan for future training independently.
- Each agency delivers training differently.
- Each agency needs to meet the same minimum training standards.
- Each organization has minimal time to provide instruction to volunteers, so volunteers may miss provided training and be unable to make up classes.

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

Life Safety Education (Fire Prevention)

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

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

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

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

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

The table below details ESCI's findings in regard to fire prevention:

Figure 72: Summary of Life Safety Education (Fire Prevention) Elements

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Applicable Fire Code	No adopted fire code. State code adoption only.	No adopted fire code. State code adoption only.	No adopted fire code. State code adoption only.		City adopted the 2006 Uniform Fire Code
Local Sprinkler Ordinance Exceeding Model Code	None	None	None		None
Agency Involvement in New Commercial Construction	City building official only. Fire Department may be consulted but does not sign off on permits or conduct inspections.	Fire chief is asked to provide input on new construction plans. Is involved in an advisory capacity but does not sign off on building permits.	City building official. Fire department is consulted on hydrant locations and access questions but does not sign off on permits or conduct inspections.	,	City building inspector approves plans and conducts construction inspections. Fire chief is consulted.
Key-Vault Entry Box Program	None	Installed on a voluntary basis	Knox Box system in place		Knox Box system is in place
Types of Inspections Conducted	No formal inspection program, but do walk through and pre plans on most commercial buildings. State Fire Marshal completes any required annual inspections.	High risk inspections completed by the State Fire Marshal. Fire department provides courtesy inspections on request as an advisory inspection only	No inspection program, only what is completed by the State Fire Marshal. Fire department completes building familiarity tours routinely.		No code enforcement inspections but routine commercial building familiarization tours. State Fire Marshal inspects institutional, hospital, etc.

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Number of Occupancies on Inspection List	N/A	N/A	N/A		N/A
Self-Inspection Incentive Program in Place	No	No	No		No
Inspection Frequency of Commercial Occupancies	N/A. Completed by State Fire Marshal if applicable	N/A. Completed by State Fire Marshal if applicable	N/A. Completed by State Fire Marshal if applicable		N/A. Completed by State Fire Marshal if applicable
Number of Initial Inspections Conducted Previous Year	N/A	N/A	N/A		N/A. Approximately 6 familiarization tours per year.
Number of Re-Inspections Conducted Previous Year	N/A		N/A		N/A
Formal Citation Process	None	None	None		Fire chief can issue citations, usually processed via the State Fire Marshal
Number of Full-Time Personnel Assigned Solely to Inspection Function	None	None	None		None
Company Inspection Program in Place	No	No	No		No

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Formal Training for Inspectors	N/A		N/A		Informal only
Public Education Manager Assigned	Volunteer takes responsibility for most public education	No	Completed by the Fire Chief as an additionally assigned duty		Captain is assigned to public education
Topics Included in Public Education Program	Station and equipment tours, home escape, stop drop and roll, calling 911	Home escape, calling 911, stop drop and roll. Fear of firefighters.	Home escape plans, calling 911, cooking safety, senior safety, don't play with matches		Home escape plans, calling 911, cooking safety, bike helmet training
Publications Stocked and Distributed	Yes	Yes	Yes		Yes
Formal Public Education Training Provided to All Personnel	No	Fire chief additionally assigned duty	No		No
Number of Formal Public Education Contacts Previous Year	Annual prevention presentation to church school. Annual hog roast includes station tours. Foreston Fun days and Santa Days tours and safety talks.	School programs during fire prevention week, station tours, home escape maze at the station.	Annual prevention week school programs plus a more advanced 5th grade program. Chief also makes presentations to the senior center as well as on request.		Annual Fair, Fire Prevention Week, School Programs totaling about 40 presentations per year

	Foreston Fire Rescue Department	Isanti Fire District	Milaca Fire Department	NE Sherburne Fire Rescue Department	Princeton Fire Rescue
Level of Fire Investigation Provided by Agency	Initially completed by Fire Chief.	Initially completed by the fire chief. Is cause is questionable, referred to the State Fire Marshal.	Initially completed by chiefs.		Initially completed by Fire Chief. 3 other members trained in investigation.
Additional Fire Investigation Resources Available	Use Brainerd Fire Marshal or private investigator or referred to State Fire Marshal, as needed.	State Fire Marshal is brought in on more involved investigation	State Fire Marshal is brought in on more involved investigation		State Fire Marshal is brought in on more involved investigation
Individual Responsible for Fire Investigations	Fire Chief	Fire Chief	Fire Chief		Fire Chief
Formal Investigation Training Investigators	Informal only	Several personnel have awareness level training	12 hour awareness class only		For chief and 3 investigators
Juvenile Fire setter Program in Place	No	Uses state resources	Two personnel are trained in juvenile fire setter intervention		Two personnel are trained in juvenile fire setter intervention

Discussion

Of the study agencies, most have not adopted a model fire code on their own, but instead fall under the state adoption of the Minnesota State Fire Code. The exception is Princeton Fire and Rescue, where the city of Princeton has adopted the 2006 edition of the Uniform Fire Code.

New Construction Plan Reviews and Code Enforcement

In terms of new construction building permit processes, none of the agencies conducts a review of submitted plans to check compliance with fire related code concerns. However, the fire chiefs in all agencies indicated that they are, at a minimum, consulted by the building official that is approving submitted plans for commercial new construction. A greater level of involvement should be considered.

Existing Occupancy Code Enforcement Inspections

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

Public Education Outreach

Each of the agencies appreciates the importance of public education outreach and similar efforts are in place in the study area vary. Those efforts generally consist open houses and school programs focused around the annual Fire Prevention Week.

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

Fire Cause Determination and Investigation

In all four agencies, fire cause determination is completed initially by the fire chief. Should a fire be questionable in nature, the chief will generally call for assistance from the State Fire Marshal Deputy that serves the study area.

Section II – Opportunities for Cooperative Efforts

The preceding sections of this report provide a summary of the current operations of each participating organization. The overall intent of the project, however, is to use that information to develop future strategies whereby the study departments can work more efficiently and potentially share resources in a more consistent manner.

This section of the report evaluates potential future strategies that the project team feels are feasible for implementation within the study area. Although NESFR did not provide data and information for this project, it can be assumed that, with proper education and communication, all strategies could include that organization as well.

GENERAL PARTNERING STRATEGIES

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. This study area is no exception.

It has already been determined that the study agencies are interdependent on each other as well as other organizations that did not participate in this project. Maintaining the status quo, while accomplishing little organizationally, still provides opportunities for cooperative efforts through the implementation of other options such as enhanced mutual and automatic aid, joint training, joint purchasing, etc. These are considered functional shared services and will be discussed in a later section of this report.

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 this study, 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 instance of the fire departments in this study, due to their smaller size and small number of administrative and support personnel, opportunities for gains with this approach are limited.

*Functional Consolida*tion

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.[6]

This type of cooperative effort can include any function within the study departments that allows them to deliver services. In the preceding Evaluation of Current Conditions section of this report, examples are identified 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

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

as a prelude to a future merger. Some of the more practical functional options include, but are not limited to:

Enhanced Mutual and Automatic Aid Agreements	Timeline: Short term
Objective: Enhance existing mutual and automatic aid agreements and formalize those agreements with city council approval.	
Summary Background: One of the most elemental levels of cooperative service delivery is that of the sharing of valuable resources, both equipment and people. A primary means for sharing resources is by the use of Mutual Aid and Automatic Aid. Mutual Aid involves establishing agreements under which a fire department can request and receive equipment and personnel support for an emergency incident from a neighboring fire department. Automatic Aid is the same, with the exception that it is automated based on dispatch protocols, absent the need for an incident commander to request the assistance.	
Policy Action: Review mutual aid and automatic aid procedures that are currently in place to identify opportunities to increase effectiveness. In jurisdictions for which Automatic Aid procedures have not yet been established, complete the implementation process. Review response times, including the maps provided in this report, to identify areas in which Automatic Aid can be initiated to enhance response. Do not limit consideration to the study agencies, but include review of station locations and travel times from other neighboring fire departments.	

Pro	Con
• Formalization of existing agreements • Identification of responsibilities, duties and liabilities • More efficient response • Reduced requirements on command personnel (automatic dispatch) • Increased interdepartmental cooperation	• Potential of imbalance in responses • Substantial 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.

Develop Uniform Pre-Incident Planning Processes	Timeline: Short term

Objective: Provide a system of shared operational plans for use during emergencies and non-emergent incidents.
Summary Background: Pre-incident plans are an important part of the emergency response system to provide essential information on specific structures and processes. Through timely planning, strategy and tactics can be developed before an emergency occurs. Pre-incident planning involves evaluating protection systems, building construction, contents, and operating procedures that may impact emergency operations.
Policy Action: Inventory current pre-incident planning development in each agency. Evaluate commonality between current systems of pre-incident planning. Consider the establishment of a committee to develop building criteria and data for inclusion in pre-incident plans. Develop a timeline for the implementation, completion, and review of pre-incident plans.

Pro	Con
• Increased safety for all regional responders • More accuracy in planning of critical properties and high risk occupancies	• None

Fiscal Considerations: • Current hardware and software assets and cost to upgrade or purchase hardware and software, if desired • Number of facilities/buildings with existing pre-incident plans versus those yet to be developed • Pace of new construction requiring pre-incident plans • Personnel costs to gather and assemble plans • Unquantifiable potential for prevention of injury or death to emergency responders and the public

Develop a Regional Health and Safety Program	Timeline: Short term
Objective: Provide a fire-service related health and safety program	

Summary Background: A single method and source for providing occupational and health services may provide savings through economies of scale and reduced worker's compensation costs. The Minnesota Department of Labor and Industry (DLI), provides guidance on the formation and management of health and safety program. Additionally, *NFPA 1500, Standard on Fire Department Occupational Safety and Health Programs*, provides the minimum requirements for a fire-service related occupational safety and health program.

Policy Action: Identify applicable requirements and standards for safety committees as established by Minnesota statute. Meet with representatives of both organizations to develop a jointly administered safety program. Determine required and desired specifications for an occupational safety and health program. Create a single personnel policy for occupational safety and health. Conduct baseline testing for firefighters without previous audio and lung function baseline records.

Pro	Con
• Improves health and safety of all personnel across the region • Ensures that all personnel are receiving the same health benefits • Can potentially identify high risk personnel and allow for pre-treatment of serious conditions	• Will increase costs of those departments that do not currently operate a comprehensive health and safety program.

Fiscal Considerations:
- Occupational medicine programs are often menu driven. Items selected for inclusion in the program determine the final cost.
- Additional financial factors involve whether the fire departments elect to exceed mandated requirements, perform some of the occupational medicine functions internally, or consolidate the occupational medicine program with interrelated programs.
- Interrelating programs that share functions include wellness, infectious disease, FIT testing, EMS, and hazardous materials.

Regional Capital Replacement Planning	Timeline: Short term

Objective: Adjacent agencies should work together to adopt a regional capital replacement plan that adequately funds the purchase of future apparatus. Outside regional cooperation, each city should adopt such a plan.

Summary Background: Each fire department uses and maintains a variety of emergency apparatus types. Among the common types of apparatus, each department uses equipment of different makes, models, and configurations. A standard specification and procurement process for each apparatus type would result in lower cost, faster production, and training efficiencies.

Policy Action: •Assemble data on current department apparatus, including: age, mileage, operating hours, maintenance costs, cumulative down time, and annual test results. Use the information to create a single apparatus refurbishment/replacement plan and schedule. Determine the replacement interval and projected life expectancy of each apparatus. Examine the merits of extending the useful service life of apparatus through rehabilitation and refurbishment.

Pro	Con
• 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	• Will require a substantial investment to bring current fleet up to necessary levels for future funding • Will require additional annual funding to ensure that the plan is fully funded

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. • Consider the purchase of stock versus custom apparatus. • Consider leasing versus outright purchase of emergency apparatus.

Joint Purchasing of Equipment and Apparatus	**Timeline:** Long term

Objective: Create a single set of emergency apparatus specifications and provide for single-source uniform emergency apparatus for all study fire agencies.

Summary Background: The study fire departments use and maintain a variety of emergency apparatus types and equipment such as self-contained breathing apparatus (SCBA), personal protective equipment (bunker gear, helmets, gloves, etc.), and all sorts of small and large tools and ancillary equipment . Among the common types of apparatus and equipment each department uses different makes, models, and configurations. A standard specification and procurement process for each apparatus and equipment type would result in lower cost, faster production, training efficiencies, and safer and more efficient scene operations. A joint purchasing program can also lead to a long-term program of sharing equipment across the region to enhance the capabilities of all participating departments. This could include a joint capital replacement plan that encompasses all heavy rolling stock within the region.

Policy Action: Use provided data on current multi-agency fleet to generate a comprehensive apparatus replacement schedule including agreed upon replacement interval and projected life expectancy of all equipment. Examine the potential of refurbishment, rehabilitation, or remounting of apparatus if feasible and evaluate technological updates necessary in small tools and safety equipment. Develop and follow a prescribed load list for apparatus standard equipment.

Pro	Con
• The cost savings of purchasing a stock unit is often 20 percent or more when compared to a custom unit. • Consistency in equipment and compartments on apparatus can increase on scene efficiency and effectiveness. • Ease of training personnel from multiple agencies on use and operation of apparatus and equipment. • Apparatus can be painted in accordance with current department models without losing effectiveness of consistency in construction and operation.	• Potential loss of customization by study agencies. • Long process of increasing consistency. • Specialization of apparatus based on community risk will impact certain equipment needs.

Fiscal Considerations:
• Time and effort savings by preparing fewer bid specifications.
• The prospect for conducting fewer bid processes.
• Cost savings in acquiring emergency fire apparatus and equipment.
• Consider the purchase of stock versus custom apparatus.
• Consider leasing versus outright purchase of emergency apparatus.

Joint Recruitment and Retention Program	Timeline: Short term

Objective: Create a regional recruitment program that draws on the specific demographics of the communities served and coordinates hiring processes that provides for consistent application and evaluation components. Make retention programs (pay, benefits, etc.) more consistent in order to prevent personnel from leaving one agency and joining another.

Summary Background: 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 paid-on-call personnel. Work as a region to develop and implement a joint recruitment program. Apply for a joint grant that covers the entire region's recruitment efforts. Support other departments as applications come in through a system of coordinated review. Work as a region to make pay and benefits more consistent. Work with each municipality to align relief association benefits across the region.

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

Regional Training Program	Timeline: Short term

Objective: Consolidate training programs to provide more options for volunteer attendance and to capitalize on the instructor base of each agency.	
Summary Background: In regard to ongoing training, the departments currently have separate training programs, which may limit instructional opportunity, duplicate recordkeeping, and foster separation of workgroups. This is already being done to a certain degree regarding recruit training. This program should be expanded to include ongoing continuing education for all levels of personnel.	
Policy Action: Agencies should expand the current model of joint initial training and develop joint ongoing training program standards and objectives that comply with published standards and effectively address all mandatory training requirements.	

Pro	Con
• Personnel would have more options to attend training on alternative days/nights. • Interagency training opportunities with consistent instruction should result in enhanced emergency scene cooperation, teamwork, and performance. • Reduced cost and duplication of effort in the planning and development of course materials. • Broader array of topics, apparatus, tasks, and evolutions for the volunteers to experience. • The program could easily expand to include other agencies, further enhancing the training opportunities throughout the region.	• Cooperative effort may result in less agency-specific training and flexibility.

Fiscal Considerations:
• A reduction in duplicated staff effort (reduces soft costs) and training staff to develop similar but separate programs based on the same or differing standards.
• A potential for reduced specialized training costs through a larger pool of personnel.
• The elimination of duplicated staff effort (reduces soft costs) in the selection, development, and updating of separate training manuals.
• Instructional time is likely impacted during multi-agency training sessions by reducing or eliminating the time devoted to adaptive or remedial training.
• An emergency workforce trained under a cooperative system is more efficient and effective in reducing property damage and loss during emergency incidents.
• An elimination or reduction in duplicated staff effort (reduced soft costs) in the creation and updating of multiple training plans.
• Instructional time is increased during multi-agency training sessions with personnel trained to selected certification levels.
• A reduction in costs through coordination of shared training resources and equipment.
• Economies of scale in the collective purchase, use, and maintenance of a single RMS.

Unified Standard Operating Guidelines/Procedures	Timeline: Short term
Objective: Provide guidelines for operation during emergencies, emergent, and non-emergent incidents.	
Summary Background: Currently each fire agency in this study is responsible for developing a unique set of standard operating guidelines for their organization.	
Policy Action: Adopt common operational guidelines that are kept in electronic format for ease of updating and distribution. Give initial and recurring education to personnel on the use of the joint guidelines. Provide for periodic review of manuals and update as necessary.	

Pro	Con
• Improvement in on-scene safety, efficiency and effectiveness of personnel. • Reduced confusion in the delivery of service. • Common methods of approach	• Limited individuality in specific administrative policies and procedures.

Fiscal Considerations:
• The elimination of duplicated staff effort in the creation and updating of standard operating guidelines will reduce soft costs. • Instructional time optimized during multi-agency training sessions by excluding time devoted to adapting to differing procedures.

Operational Consolidation

This strategy joins two or more entities from an operational standpoint through the execution of an intergovernmental agreement (IGA) or other mechanism.

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, remain independent agencies from a legal standpoint, but from a service delivery perspective they operate as one. An Operational Consolidation, accomplished through a written agreement between two or more agencies, requires a significant cooperative commitment is sometimes undertaken as a step 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.

Given the large geographic area of this project and the lack of contiguous response areas, it would be difficult, if not impossible, for the study agencies to operationally consolidate. However, if, in the future, additional agencies expressed a desire to work more closely with the study agencies, this option could apply.

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 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.

As with operational consolidation, the separation of the study agencies would prevent a full legal unification.

Facility Deployment Options

Part of the scope of this project was to identify potential future station locations based on current deployment and travel modeling. Potential future stations will only be necessary if the policymakers within each community determine that the residents desire an increased level of service and are will to pay for that improvement.

Based on the study agencies, there are only two areas that may benefit from an additional station; between NE Sherburne and Isanti Station 2, and between Milaca and Princeton. However, Zimmerman (not included in this study) lies just to the south of NE Sherburne and may be able to cover some of the area to the west of Isanti Station 2.

The area between Milaca and Princeton, as shown on the map below with a potential station location, may benefit from this additional deployment but, in a volunteer only department, it would first be necessary to determine if sufficient personnel live in close proximity to the station to effect an appropriate

response. Additionally, the service demand in this area may not warrant an additional facility and the cost would outweigh the benefit of a new facility.

Figure 73: Future Station Deployment
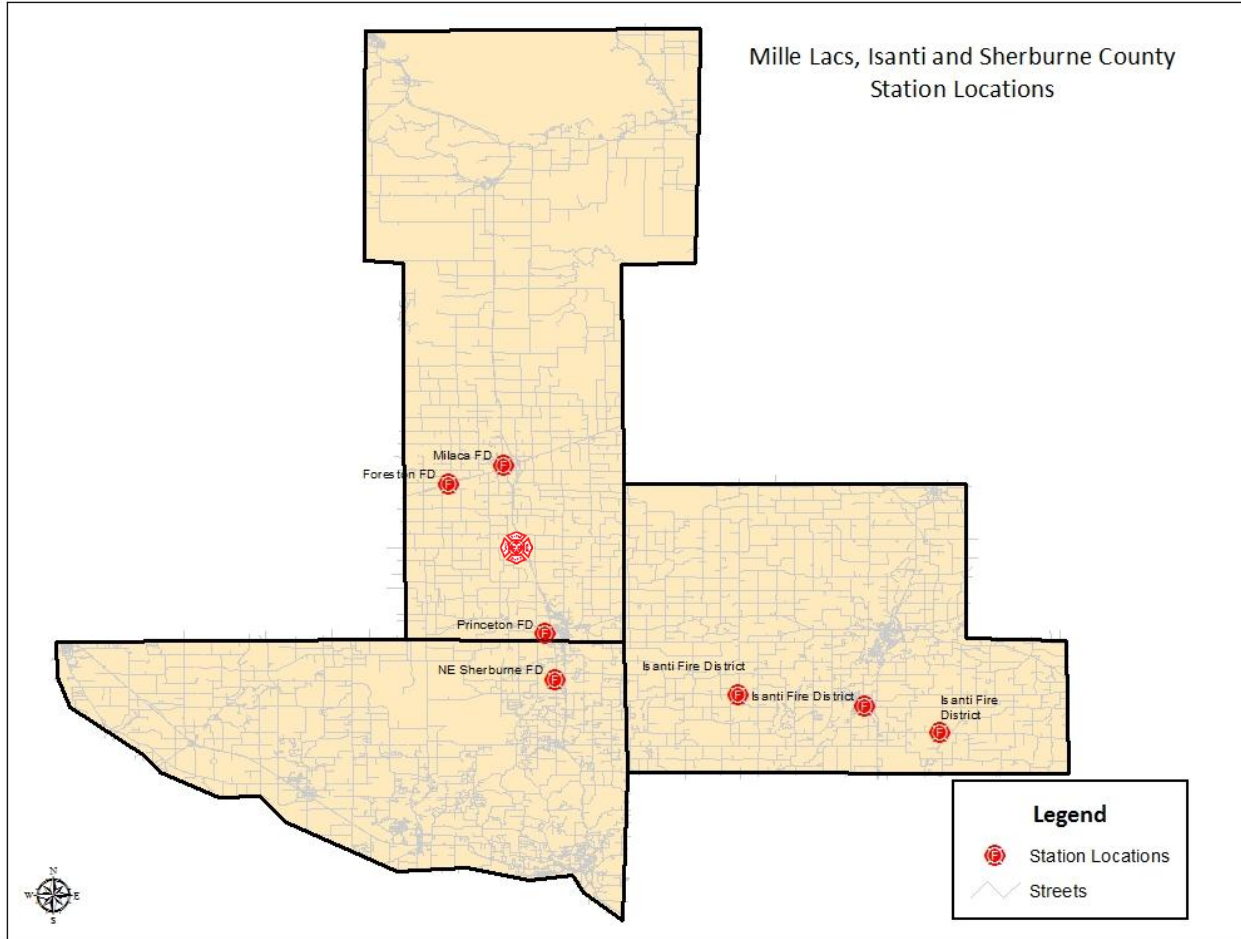
Based on historical service demand and response performance, ESCI does not currently recommend additional facilities within the region.

Section III – Findings, Recommendations, and Plan of Implementation

Throughout the review and analysis of the study departments, it became evident that each of the study agencies, as well as others within the general vicinity, are interdependent upon one another to deliver services, particularly during involved incidents. From this interdependence, the departments have learned to work together operationally and the next logical step is to increase this cooperation to a functional level.

As indicated previously, there are a number of functional cooperative efforts that can be applied to the study department but total consolidation is likely not feasible at this time due to geographic separation. Each of the functional cooperative efforts strategies discussed are feasible and can be extended to other agencies across the region.

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

Conduct Visioning Session with Policymakers

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

For this reason, it is recommended that the elected bodies meet together for the initial discussion of the feasibility study and its projected options and outcomes. Depending on the number of elected officials, the policy-makers 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 department-level personnel whose opinions may be influenced by turf, power, or control issues. Stakeholder input is important, but opportunity can be provided for this once the policy-makers have determined what is in the best interest of their citizens as a matter of public policy.

It is equally important that the policy-makers recognize exactly what decision is under consideration in the initial vision meetings. The purpose is to weigh the strategies, advantages, fiscal outcomes, and potential impediments of the feasibility to determine whether to commit local resources, and move the process forward. The decision is not, at this point, a final decision to execute a determined strategy. The

final commitment to take legal actions necessary to finalize implementation of any given strategy will come much further into the process.

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

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

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

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

After setting the joint vision, this policy-maker group should meet together at set intervals or as needed to hear the progress of the Joint 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:

- o City Manager and County Manager (or equivalent)
- o Fire Chief from each community
- o Finance Director from each community

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:

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

Develop and Implementation Plan

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

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

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

Establish Implementation Working Groups

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

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

Governance Working Group

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

Finance Working Group

The group will look at all possible funding mechanisms and will work in partnership with the governance working group to determine impact on local revenue sources and options. Where revenue is to be determined by formula rather than a property tax rate, such as in a contractual cooperative venture, this group will evaluate various formula components and model the outcomes, resulting in recommendations for a final funding methodology and cost distribution formula. The membership of this group typically involves senior financial managers and staff analysts, and may also include representatives from the agencies' administrative staffs.

Legal Working Group

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

Personnel Working Group

The group will work out all of the details of necessary administrative personnel changes required by the strategy. This involves detailed analysis of processes, procedures, service delivery methods, deployment, and administrative staffing. The membership of this group typically involves senior agency management and mid-level officers.

Communications Working Group

Perhaps one of the most important, this group will be charged with developing an internal and external communication policy and procedure to ensure consistent, reliable, and timely distribution of information related to the cooperative effort. The group will develop public information releases to the media and will select one or more spokespersons to represent the communities in their communication with the public on this particular process. The importance of speaking with a common voice and theme, both internally and externally cannot be overemphasized. Fear of change can be a strong force in motivating a group of people to oppose that which they do not clearly understand. A well informed workforce and public will reduce conflict. The membership of the group typically involves public information officers and senior city or agency management.

Meet, Identify, Challenge, Refine, and Overcome

Once the working groups are established, meeting, and completing their various responsibilities and assignments, it will be important to maintain organized communication up and down the chain. The working group chairs should report regularly to the Joint Implementation Committee. When new challenges, issues, impediments, or opportunities are identified by the working groups, this needs to be communicated to the Joint Implementation Committee so that the information can be coordinated with findings and processes of the other working groups. Where necessary, the Joint Implementation Committee and a working group chairperson can meet with the policy-makers 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 administrative staff begins.