Polk County Shared Services Study

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By – Pat Simpson
Fire and Emergency Services Consulting
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I. The Study

The purpose of this feasibility study is to provide ways to increase efficiency, effectiveness, and/or cost saving methods through voluntary and cooperative shared services. The report also includes possible alternatives for the departments to share fire and rescue services.

The consultant performed a feasibility study and prepared a written report on sharing fire and rescue services for the following departments: Crookston; Crookston Rural; East Grand Forks; Fisher; Climax; Neillsville; Beltrami; Fertile; Winger; Mentor; Erskine; McIntosh; Fosston.

The study considered the following:

1. Should we implement automatic aid?
2. Decreased fire and increased EMS run volume.
3. Decreased staffing availability, particularly during the day.
4. Higher expectations from the general public.
5. Should we consider more pay and if so how much?
6. A varied fire contract the cities charge the townships, Can we standardize?
7. Do we have the right equipment in the right places in the county?

II. Polk County Background

Polk County, Minnesota is a county located in the U.S. state of Minnesota. The population was at 31,516 in 2013. Its county seat is Crookston, and the largest community is East Grand Forks. The county was formed in 1858 and organized in 1872. According to the U.S. Census Bureau, the county has a total area of 1,998 square miles (5,170 km²), of which 1,971 square miles (5,100 km²) is land and 27 square miles (70 km²) (1.3%) is water. Total area is larger than the states of Rhode Island or Delaware.

Demographic data shows there were 31,516 people, 12,070 households, and 8,050 families residing in the county. The population density was 16 people per square mile (6/km²). There were 14,008 housing units at an average density of 7 per square mile (3/km²). The racial makeup of the county was 94.18% White, 0.33% Black or African American, 1.30% Native American, 0.30% Asian, 0.02% Pacific Islander, 2.57% from other races, and 1.30% from two or more races. 4.79% of the population was Hispanic or Latino of any race. 41.7% were of Norwegian, 19.7% German and 5.8% French ancestry.
There were 12,070 households out of which 32.30% had children under the age of 18 living with them, 54.90% were married couples living together, 8.50% had a female householder with no husband present, and 33.30% were non-families. 28.90% of all households were made up of individuals and 13.80% had someone living alone who was 65 years of age or older. The average household size was 2.47 and the average family size was 3.07.

In the county the population was spread out with 25.90% under the age of 18, 9.70% from 18 to 24, 24.80% from 25 to 44, 22.20% from 45 to 64, and 17.40% who were 65 years of age or older. The median age was 38 years. For every 100 females there were 98.10 males. For every 100 females age 18 and over, there were 95.50 males.

The median income for a household in the county was $35,105, and the median income for a family was $44,310. Males had a median income of $31,472 versus $21,535 for females. The per capita income for the county was $17,279. About 7.30% of families and 10.90% of the population were below the poverty line, including 13.30% of those under age 18 and 10.90% of those ages 65 or over.

III. Polk County Fire Departments

Polk County fire departments protect people, property and environment in an area that covers nearly 2000 square miles much of the area is agricultural and some wildland that is subject to periodic wildfire hazards. Virtually all of the inhabited areas are considered rural/urban interface areas. Six major federal/state highways traverse the entire area along with heavily used county highways. A main railroad line goes into North Dakota and ties into a line from Canada carrying a wide variety of goods and hazardous materials.

Population Served: Combined service area population is more than 48,170 permanent residents, with increases in population based on seasonal homes/cabins and tourism.

Stations: Member fire departments operate out of 14 stations employing approximately 288 career, volunteer, and paid on call firefighters. Some member communities also operate Emergency Medical Services (EMS) first responders.

Diverse Staff: Firefighters come from all walks of life and represent a true cross-section of the population. They are people who care about their neighbors and their communities. Many members are also cross-trained in Emergency Medical Services, Wilderness Search and Rescue, Water and Ice Rescue, Hazmat specialties, Confined Space Operations, Vehicle Extrication and Wildland Firefighting.

Diverse Communities: Many of the municipalities and townships served range in population from 150 to 14,000 people. Each community is unique and diverse from its neighbor making emergency service responses as challenging as the larger populated areas of the country. For example, some residents are non-English speakers.
Polk County Fire Chiefs Association is a formal organization of the 13 individual fire departments serving the county and some neighboring areas.

Member Departments

1. Crookston 2. Crookston Rural
7. Beltrami 8. Fertile
11. Erskine 12. McIntosh
13. Fosston

On February 5, 2015 representatives from the participating departments met with the Fire and Emergency Services consultant to discuss the expectations of the group for the shared services study. On February 6th and 7th the team toured all county fire stations, assessed fire apparatus, and met with department representatives.

Each department is broken out below with basic data and feedback from department representatives.

City of Crookston Fire Department and Crookston Rural Fire Department

Crookston Fire Department located at 620 South Main Street. The City of Crookston is one of two urban areas in the county, with a population of 9000 and area of 6 square miles this equates to 1500 people per square mile. The Crookston Rural Fire Department serves a population of approximately 12,000 people spread over an area of 468 square miles for a rural population density of 25.6 people per square mile. The total City and rural area includes the City of Crookston and a rural area consisting of fourteen townships. The Crookston Fire Department roster consists of a full-time Fire Chief, six full-time Career Firefighters, and twenty-five paid-on-call Firefighters. Command Officers include 4 Captains; 3 Lieutenants; a training officer; and a safety officer. CFD apparatus includes 4 engines, 1 tender, 1 ladder, 2 rescues, and 3 brush/wildland units. CFD responds to about 350 calls for service annually including all types of fire related services except EMS. The CFD budget for 2014 was $776,000 for the City and $99,000 for the rural area which equates to a cost per citizen served of $86.22 for the city of Crookston and $7.07 for rural area citizens.

CFD sees its strengths as, personnel training, career and POC working relationship, equipment, good administration, problem solving, and emergency incident roles based upon your position in the truck.

CFD sees areas for improvement as, specialized training, regional training, and dispatching.
Polk County Shared Services Study

East Grand Forks Fire Department

East Grand Forks Fire Department operates from two stations located at 415 Fourth Street NW and 243 Fifth Avenue SE. East Grand Forks is the second urban area in Polk County with a population of 8,602 and an area of 6 square miles for a city population density of 1433.7 people per square mile. The EGFFD serves an area population of approximately 12,000 spread over 188 square miles for a population density of 63.8 citizens per square mile. The EGFFD roster includes 10 career personnel (fire chief, 3 assistant chiefs, 3 engineers, and 3 firefighters) plus 24 paid on call members. EGFFD apparatus includes 4 engines, 1 ladder, 1 tender, 1 rescue and 1 brush/wildland unit. EGFFD responded to 175 fire related calls in 2014 and 660 EMS calls. The departmental budget in 2014 was $1,250,656 which equates to a cost per citizen served of $104.22.

EGFFD sees its strengths as equipment, stations, first responders, and good staff.

EGFFD sees areas for improvement as turnout on calls, being ready for the calls.

Neillsville Fire Department

Neillsville Fire Department operates from one station located at 201 Highway 75 N and serves a population of 150 citizens spread over 40 square miles for a population density of 3.75 people per square mile. NFD roster has 10 members including a fire chief and an assistant chief and 8 firefighters. NFD responded to 4 fire calls in 2014. NFD apparatus includes 3 engines, 1 tender, and 1 brush/wildland unit. The departmental budget in 2014 was $5,000 for a cost per citizen served of $33.33.

NFD sees its strengths as good personnel, all firefighters respond to fire calls, apparatus in good repair, and 2 two Hurst tools.

Areas for improvement include lockers for firefighters, EMT certification for staff, and the need for more volunteers.

Climax Fire Department

Climax Fire Department operates from one station located at 107 W Broadway and serves a population of 500 citizens living in a 76 square mile area for a population density of 6.57 people per square mile. CFD roster has 26 members including a fire chief, 2 assistant chiefs, and 23 firefighters. CFD responded to 2 fire and 15 EMS calls in 2014. CFD apparatus includes; 1 engines, 2 tenders, and 1 rescue. The departmental budget for 2014 was $20,000 for a cost per citizen served of $40.

CFD sees it strengths as community support, staff, the core group of firefighters, and EMS staff.

Areas for improvement include a need for more equipment specifically replacing the 2 tenders.

Erskine Fire Department

Erskine Fire Department operates from one station located at 101 Grant Avenue and serves a population of 1100 citizens living in an 88 square mile area for a population density of 12.5 people per square mile.
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EFD roster includes a fire chief, an assistant chief, 2 captains and 19 firefighters. EFD responded 11 fire and 90 EMS calls in 2014. EFD apparatus includes; 2 engines, 1 tender, 1 rescue, and 7 brush/wildland units. The 2014 departmental budget was $54,000 for a cost per citizen served of $49.09.

EFD sees its strengths as number of firefighters. Good equipment (some old), and the 800 MHZ radio system.

Areas for improvement include more young firefighters and a capital improvement program.

Mentor Fire Department

Mentor Fire Department operates from 1 station located at 52 Lincoln Avenue N and serves a population of 800 citizens living in an 80 square mile area for a population density of 10 people per square mile. MFD roster includes a fire chief; 2 assistant chiefs; safety officer; and training officer plus 21 firefighters. MFD responded to 25 fire calls and 75 EMS calls in 2014. MFD apparatus includes, 2 engines, 1 tender, 1 rescue, and 5 brush/wildland units. The 2014 department budget was $28,000 for a cost per citizen of $10.50.

MFD sees its strengths as commitment and good equipment

Areas for improvement are recruitment of more fire and EMS people.

Fosston Fire Department

Fosston Fire department operates from one station located at 300 Johnson Ave S. and serves a population of 4010 citizens living in a 315 square mile area, for a population density of 12.7 people per square mile. FFD roster includes a fire chief, 2 assistant chiefs, 2 captains, and 2 training officers plus 18 firefighters. FFD responded to 62 fire calls and 2 EMS calls in 2014. FFD apparatus includes; 2 engines, 2 tenders, 1 rescue, and 5 brush/wildland units. The 2014 departmental budget was $91,000 for a cost per citizen served of $22.70.

FFD sees its strengths as well trained staff, good rapport of personnel, a lot of equipment, and a full roster.

Areas for improvement include communications, and finding ways to be involved in the department.

McIntosh Fire Department

McIntosh Fire Department operates from one station located at 210 Cleveland Ave and serves a population of 1400 citizens living in a 150 square mile area, for a population density of 9.3 people per square mile. MFD roster includes a fire chief, assistant chief, 2 captains, and a safety officer plus 16 firefighters. MFD responded to 14 fire and 41 EMS calls in 2014. MFD apparatus includes; 2 engines, 1 tender, 2 rescues, and 4 brush/wildland units. The 2014 departmental budget was $38,000 including capital items, for a cost per citizen served of $27.14.
MFD sees its strengths as the first responders, and good equipment and people.

Areas for improvement recruiting more young people and daytime responders.

Winger Fire Department

Winger Fire Department operates from one station located at 638 Main St. and serves a population of 250 citizens living in a 100 square mile area for a population density of 2.5 people per square mile. WFD roster includes a fire chief, assistant chief, and 13 firefighters. WFD responded to 10 fire and 30 EMS calls in 2014. WFD apparatus includes; 2 engines, 1 tender, 1 rescue, and 7 brush/wildland units. The 2014 departmental budget was $18,000 for a cost per citizen served of $72.00.

WFD sees its strengths as response from members, and the ability to get the job done.

Areas for improvement include pump training and EMS certification.

Fertile Fire Department

Fertile Fire Department operates from one station located at 10 E Main ST and serves a population of 3000 citizens living in a 273 square mile area for a population density of 11 people per square mile served. FFD roster includes a fire chief, 2 assistant chiefs, and a medical officer plus 21 firefighters. FFD responded to 45 fire calls in 2014. FFD apparatus includes; 3 engines, 2 tenders, 1 rescue, and 5 brush/wildland units. The 2014 departmental budget was $43,000 for a cost per citizen served of $14.33.

FFD sees its strengths as the organizational brotherhood and a family involvement.

Areas for improvement include training incentives.

Beltrami Fire Department

Beltrami Fire Department operates from one station located at Highway 1 E Polk Road and serves a population of 250 citizens living in a 72 square mile area for a population density of 3.5 people per square mile served. BFD roster includes a fire chief, assistant chief, and 2 captains, plus 20 firefighters. BFD responded to 3 fire calls and 7 EMS calls in 2014. The 2014 budget was $7,000 for a cost per citizen served of $28.

BFD sees its strengths as being a young department, improving equipment, and leadership.

Areas for improvement include equipment, training, specialized response to risks, and a sustained training level.
Fisher Fire Department

Fisher Fire Department operates from one station located at 106 N 3rd ST and serves a population of 510 citizens living in a 76 square mile area for a population density of 6.7 people per square mile served. FFD roster includes a fire chief, assistant chief, captain and lieutenant, plus 23 firefighters. FFD responded to 10 fire calls and 16 EMS calls in 2014. The 2014 budget was $28,000 for a cost per citizen served of $54.90.

FFD sees its strengths as the people and community support, equipment, enough equipment for its needs and the annual pig roast (300 -400 guests).

Areas for improvement include the need for more young people, replacement for Engine #2, and training.

Polk County Fire Departments Data

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
<th>No FF</th>
<th>Engine</th>
<th>Ladder</th>
<th>Tender</th>
<th>Rescue</th>
<th>Brush and Wildland</th>
<th>No Stations</th>
<th>Fire Calls</th>
<th>EMS Calls</th>
<th>2014 Budget</th>
<th>Sq. Mi.</th>
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<td>7</td>
<td>2</td>
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<td>0</td>
<td>1</td>
<td>1</td>
<td>300</td>
<td>0</td>
<td>776,000</td>
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<td>Crookston rural</td>
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<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>50</td>
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<td>EGF</td>
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<td>1</td>
<td>1</td>
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<td>2</td>
<td>175</td>
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<td>16</td>
<td>28,000</td>
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<td>1</td>
<td>1</td>
<td>4</td>
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<td>1</td>
<td>3</td>
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<td>1</td>
<td>45</td>
<td>43,000</td>
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<td>Winger</td>
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<td>1</td>
<td>2</td>
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<td>10</td>
<td>18,000</td>
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<td>1</td>
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<td>McIntosh</td>
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<td>21</td>
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<td>2</td>
<td>4</td>
<td>1</td>
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<td>Fosston</td>
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<td>2</td>
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<td>5</td>
<td>1</td>
<td>62</td>
<td>91,000</td>
<td>315</td>
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<tr>
<td>TOTAL</td>
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<td>288</td>
<td>29</td>
<td>2</td>
<td>16</td>
<td>13</td>
<td>34</td>
<td>14</td>
<td>711</td>
<td>2,450,656</td>
<td>1952</td>
<td></td>
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</tbody>
</table>

Polk County Fire Rescue services serve an approximate population of 48,170 citizens in 1952 square miles, with 288 firefighters. Apparatus included 29 engines; 2 ladders; 16 tenders; 13 rescues; and 34 brush/wildland units. In 2014 there were 1618 calls for service. The approximate total budget for 2014 was $2,500,000.

IV. General Findings

A study of this nature is designed to organize and represent a snapshot in time; workplace cultures vary and change all the time. In some instances by reporting this information we are memorializing what is already known, but not being addressed. In other cases the reporting of this information can stimulate ideas and action. We include this analysis for the purposes of the later choice.

Operations

Polk County Fire Chiefs Association is an organization of fire departments in Polk, Minnesota the current 13 member departments cover an area of about 2,000 square miles in the county and some adjoining townships. The departments respond to 711 fire calls and 907 EMS calls in 2014 based upon State Fire Marshall’s Office data. EMS is the largest part of most member departments’ calls for those which
provide first responder EMS services. The most widely recognized standard used in response time analysis for volunteer fire departments is outlined in National Fire Protection Association (NFPA) Chapter 1720: Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments.

**National Fire Protection Association (NFPA) 1720**

NFPA 1720 was updated in 2004 and addresses benchmarks to be used by volunteer organizations in the delivery of their services, including specific recommendations regarding staffing and response times.

**Table 1: NFPA 1720 - Staffing and Response Time Standards**

<table>
<thead>
<tr>
<th>Demand Zone</th>
<th>Demographics</th>
<th>Staffing/Response Times</th>
<th>Percentage of Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Risks</td>
<td>Authority Having Jurisdiction (AHJ)</td>
<td>AHJ</td>
<td>90</td>
</tr>
<tr>
<td>Urban</td>
<td>&gt;1000 people/mi</td>
<td>15/9</td>
<td>90</td>
</tr>
<tr>
<td>Suburban</td>
<td>500-1000 people/mi</td>
<td>10/10</td>
<td>80</td>
</tr>
<tr>
<td>Rural</td>
<td>&lt;500 people/mi</td>
<td>6/14</td>
<td>80</td>
</tr>
<tr>
<td>Remote*</td>
<td>Travel distance ≥8 mi.</td>
<td>4</td>
<td>90</td>
</tr>
</tbody>
</table>

* Upon assembling the necessary resources at the emergency scene, the fire department should have the capability to safely commence an initial attack within 2 minutes 90 percent of the time. Source: NFPA 1720, 2004 Edition.

Polk County fire services cover about 2,000 square miles of land area and a population of 48,000. This creates a jurisdictional population density of 24 people per square mile. Summer population is significantly more with vacationer in numerous resorts and parks. This population density puts Polk County in the “rural” demand zone classification and recommends an initial response of 6 personnel responding to fire calls within 14 minutes, 80% of the time. Some areas are also considered remote which NFPA 1720 recommends at least 4 firefighters 90% of the time, but has no response time requirement. The cities of Crookston and East Grand forks are both considered urban areas with population density of more than 1000 people per square mile which recommends a response of 15 firefighters within 9 minutes 90% of the time.

The National Fire Protection Handbook makes staffing and initial response complement recommendations for structural fire calls based on the number of firefighters arriving on the scene depending upon the risk of occupancy (low, medium, and high-hazard occupancy). The NFPA staffing recommendations by the type of hazard areas:

**High-Hazard Occupancies** (schools, hospitals, nursing homes, explosive plants, refineries, high-rise buildings, and other high-risk or large fire potential occupancies): at least 4 pumpers, 2 ladder trucks (or combination apparatus with equivalent capabilities), 2 chief officers, and other specialized apparatus as may be needed to cope with the combustible involved; not fewer than 23 firefighters and 2 chief officers.
Medium-Hazard Occupancies (apartments, offices, mercantile and industrial occupancies not normally requiring extensive rescue or firefighting forces): at least 3 pumpers, 1 ladder truck (or combination apparatus with equivalent capabilities), 1 chief officer, and other specialized apparatus as may be needed or available; not fewer than 16 firefighters and 1 chief officer.

Low-Hazard Occupancies (one-, two-, or three-family dwellings and scattered small businesses and industrial occupancies): at least 2 pumpers, 1 ladder truck (or combination apparatus with equivalent capabilities), 1 chief officer, and other specialized apparatus are recommended to be available; not fewer than 12 firefighters and 1 chief officer.

The recommendations and guidelines outlined in the Chapter 1720 and the NFPA Handbook should be considered, but are not necessarily the final word as the NFPA guidelines do not address how fire departments will also be able to comply with the OSHA-mandated “Two-in/Two-out” rule (discussed below). Also, the NFPA guidelines do not address OSHA’s requirement that a rapid intervention team (RIT) be on-scene at a working fire.

Occupational Safety and Health Administration (OSHA) Regulations

Additional mandated requirements for staffing are related to OSHA’s regulations for firefighter safety. To protect the safety of firefighters, the United States Department of Labor and OSHA have enacted 29CFR1910.134, known as the two-in/two-out rule that requires four personnel on scene at all structure fires before initial interior attack begins.

OSHA - Firefighting is a dangerous and physical labor-intensive profession. Although technologically the tools and equipment used by firefighters have changed dramatically over the years, the basic goals have remained almost unchanged: to preserve life and protect property by successfully extinguishing fires—and not get hurt in the process. To accomplish this, firefighters must be able to quickly and efficiently gain access to a fire and apply an extinguishing agent (typically water, but foam and other agents are gaining in popularity). This requires emergency responders to operate in dangerous environments where they are at high risk for serious injury or death.

To protect the health, safety, and welfare of firefighters, the federal government enacted regulations to ensure that firefighters operate safely in and around structure fires. Enacted by the Department of Labor and the Occupational Safety and Health Administration (OSHA), 29 CFR 1910.134, also known as “Two-in/Two-out,” mandates that there must be a minimum of four personnel on the scene of a structural fire before personnel can initiate interior operations. Two firefighters must remain on the exterior of the structure, properly equipped with full turnout gear and self-contained breathing apparatus (SCBA) to act as a Rapid Intervention Team (RIT) in the event the firefighters operating inside the structure become incapacitated or trapped. Although OSHA allows one RIT member to have an additional role such as incident commander or safety officer, as long as rescue activities can be performed without jeopardizing the safety of other firefighters, a pump operator cannot make up part of the RIT unless the apparatus utilizes a positive water source, which allows the pump to be unstaffed for a period.
Insurance Services Office (ISO)

Insurance Services Office (ISO) community fire protection ratings have been a benchmark for jurisdictions for decades. The system measures the effectiveness and efficiency of three key parts of community fire protection; fire department, water distribution, and alarm notification system. However, there are two key limitations of this benchmark. First is that the evaluation is only used by some insurance companies, with several large insurers doing their own risk assessment by individual occupancy. Second is the fact that residential insurance rates for participating insurers are banded for class #2 through class #8 communities. This means that the premium for insurance to homeowners is the same for these communities. The only occupancy type which has separate rates for each class number (#) is commercial occupancies where the needed fire flow is below 3500 gpm for suppression. The bottom line is that ISO ratings are a good benchmark for suppression activities of a community but do not evaluate the key areas of prevention, code enforcement, and planning and zoning which are the proactive functions of community fire defense planning.

Demand and Deployment Analysis

This section discusses current call volume and coverage offered by the fire departments in Polk County. As discussed in the previous chapters, there are many factors that should be considered when determining the appropriate number of stations, including demand for services, population, density of demand and population, size of the jurisdiction, and desired response times. This chapter applies these factors to the current and future situation of Polk County.

Methodology

Before any analysis took place, project team members gathered and reviewed information related to properly locating fire stations, including:

- Current apparatus deployment
- Current and projected demand and workload

Actual incident data were gathered from Minnesota State Fire Marshal's Office (SFMO). Data included addresses for geocoding and type of incident. Geographic information system (GIS) files used for the analysis were obtained from the Minnesota Department of Transportation and Polk County departments.

Incident Trend Type

The SFMO provided call data from January 2010 to December 2014. During this time, departments in Polk County responded to 7404 incidents. Figure 1 shows the call volume by incident type (EMS, fire, other call for service) over the last five years in the Polk County. Call volume has increased by about 10 percent increase since 2010 or about 2% annually.
East Grand Forks has the greatest call volume of all departments in Polk County and averaged just over 2 calls per day between 2010-2014. Figure 2 shows call volume by type for each department in Polk County from 2010 through 2014. Most departments had a majority of their call volume comprised of EMS calls. Crookston had more “Other” (service calls, false alarms, good intent, etc.) calls than they did EMS calls over the same time period. Table 1 provides greater detail of incident volume for each department.
Figure 2 and Table 2 break call volumes down by year for each service. Most departments have a low and pretty stable call volume with the exception of East Grand Forks. In 2012 and 2013, other and EMS calls increased around 7% from 2010-2011 levels. In 2014, call volume decreased, with most of the decline coming from other calls (service calls, false alarms, good intent, etc).

Table 1: Call Volume for Polk County Fire Departments by Type, CY10-CY14

<table>
<thead>
<tr>
<th>Department</th>
<th>EMS</th>
<th>FIRE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELTRAMI FD</td>
<td>25</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>CLIMAX FD</td>
<td>31</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>CROOKSTON FD</td>
<td>162</td>
<td>562</td>
<td>828</td>
</tr>
<tr>
<td>EAST GRAND FORKS FD</td>
<td>3006</td>
<td>287</td>
<td>868</td>
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<tr>
<td>ERSKINE FD</td>
<td>374</td>
<td>80</td>
<td>41</td>
</tr>
<tr>
<td>FERTILE FD</td>
<td>34</td>
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<td>23</td>
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<tr>
<td>FISHER FD</td>
<td>87</td>
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<tr>
<td>FOSSTON FD</td>
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<td>110</td>
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<tr>
<td>MCINTOSH FD</td>
<td>79</td>
<td>35</td>
<td>10</td>
</tr>
<tr>
<td>MENTOR FD</td>
<td>207</td>
<td>59</td>
<td>34</td>
</tr>
<tr>
<td>NIELSVILLE FD</td>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>WINGER FD</td>
<td>3</td>
<td>26</td>
<td></td>
</tr>
</tbody>
</table>
Figure 3: Call Volume for Polk County Fire Departments by Year, CY10-CY14

- **BELTRAMI FD**
- **CLIMAX FD**
- **CROOKSTON FD**
- **EAST GRAND FORKS FD**
- **ERSKINE FD**
- **FERTILE FD**
- **FISHER FD**
- **FOSSTON FD**
- **MCINTOSH FD**
- **MENTOR FD**
- **NIELSVILLE FD**
- **WINGER FD**

Legend:
- **2014**
- **2013**
- **2012**
- **2011**
- **2010**
Table 2: Call Volume for Polk County Fire Departments by Year, CY10-CY14

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Total</th>
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<td>10</td>
<td>6</td>
<td>12</td>
<td>5</td>
<td>47</td>
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<tr>
<td>CLIMAX FD</td>
<td>25</td>
<td>19</td>
<td>5</td>
<td>2</td>
<td></td>
<td>51</td>
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<tr>
<td>CROOKSTON FD</td>
<td>329</td>
<td>317</td>
<td>307</td>
<td>275</td>
<td>324</td>
<td>1552</td>
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<tr>
<td>EAST GRAND FORKS FD</td>
<td>726</td>
<td>734</td>
<td>843</td>
<td>1023</td>
<td>835</td>
<td>4161</td>
</tr>
<tr>
<td>ERSKINE FD</td>
<td>103</td>
<td>105</td>
<td>114</td>
<td>81</td>
<td>92</td>
<td>495</td>
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<tr>
<td>FERTILE FD</td>
<td>40</td>
<td>34</td>
<td>49</td>
<td>36</td>
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<td>194</td>
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<td>FISHER FD</td>
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<td>33</td>
<td>37</td>
<td>31</td>
<td>24</td>
<td>145</td>
</tr>
<tr>
<td>FOSSTON FD</td>
<td>61</td>
<td>64</td>
<td>53</td>
<td>59</td>
<td>61</td>
<td>298</td>
</tr>
<tr>
<td>MCINTOSH FD</td>
<td>10</td>
<td>34</td>
<td>16</td>
<td>17</td>
<td>47</td>
<td>124</td>
</tr>
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<td>MENTOR FD</td>
<td>72</td>
<td>23</td>
<td>83</td>
<td>55</td>
<td>67</td>
<td>300</td>
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<tr>
<td>NIELSVILLE FD</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>8</td>
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<td>2</td>
<td>2</td>
<td>10</td>
<td>10</td>
<td>29</td>
</tr>
</tbody>
</table>

Station Location Analysis

This section provides a look at station and call locations for Polk County. The primary objective is to determine what areas, if any, are in need of additional resources and how resources can be distributed to serve the county more efficiently. Maps are included to show theoretical response reaches based upon the current station and apparatus locations. These theoretical response reaches are based on the length of road segments and speed limit attributes contained in road centerline data from the Minnesota Department of Transportation GIS Department. TIGER road centerline data was combined with county provided data to ensure adequate coverage of roads and information such as speed limits and one-way routes.

Figure 4 shows an overview of Polk County and the location of the fire departments that serve it.
Figure 5 shows what areas can theoretically reached within 5 and 10 minutes of travel from the nearest station. Since these coverage areas are built upon the GIS road network, errors in the data such as missing or unconnected roads may impact the creation of the coverage area. With a rather linear road network, most of the populated areas in Polk can be reached with travel times of 10 to 15 minutes. However, incident data with greater detail, such as time stamps for each phase of the response, would allow officials to view the impact that dispatch and turnout times have on overall response time and geographic coverage for Polk County.
Figure 5: 5 and 10 Minute Theoretical Coverage Area, Polk County
Knowing where the calls are occurring is also an important factor in determining if stations are adequately placed for response. Each call listed in the data given by the SFMO contained an addressed. These calls were geocoded or placed on the map by matching them road information obtained from MnDOT. Unfortunately, due to data differences; like colloquial road names, outdated or poorly classified information, only 67 percent (4697 out of 7404) of the calls could be geocoded. It would be beneficial for Polk County officials to work with MnDOT to ensure accurate data is being presented by both departments. As expected, a density map created from these calls shows the highest activity occurred in the East Grand Forks area. Figures 6, 7 and 8 show the density of emergency incidents per square mile. Figure 6 provides an overview of Polk County, while Figure 7 and 8 show greater detail of the East Grand Forks and Crookston area and the eastern half of the county, respectively.
Figure 6: Polk County Calls per Square Mile, CY10-CY14
Figure 7: Western Polk County Calls per Square Mile, CY10-CY14
Figures 9 – 20 at the end of the chapter show detailed coverage areas with 5, 10, 12, and 15 minutes of travel as well as a border delineating 5 miles from the identified fire station. Coverage polygons end at the county border due to data limitations created by trying to join multiple county road networks together and do not represent travel limitations.
Figure 12: Theoretical Coverage Area for East Grand Forks FD
Figure 13: Theoretical Coverage Area for Erskine FD
Figure 14: Theoretical Coverage Area for Fertile FD
Polk County Shared Services Study

Figure 15: Theoretical Coverage Area for Fisher FD
Figure 16: Theoretical Coverage Area for Fosston FD
Figure 17: Theoretical Coverage Area for McIntosh FD
Figure 18: Theoretical Coverage Area for Mentor FD
Polk County Shared Services Study

Figure 19: Theoretical Coverage Area for Neilsville FD
Standard Operating Guidelines (SOG)

Each department in Polk County indicates that they have SOG’s for operations. The question is how these individual procedures work with other department’s SOG’s since differing operational protocols can be dangerous on the emergency scene. This issue should be a key area of investigation in the near future as well as creating a single master SOG for all departments to use during joint response.
Polk County Shared Services Study

The Departments have the personnel resources to meet NFPA #1720 and response capabilities for all hazard occupancies. All hazard occupancies would require additional outside equipment resources on the initial assignment.

Polk County fire services will need a full set of response policies (box alarms) which provide 1st through 5th alarm assignments for all fires and related emergencies. These SOG’s should include mutual aid departments to provide adequate equipment and personnel to handle any anticipated incident. These SOG’s should be in alignment with the NFPA standards cited above. An example of a complete box alarm or response policy for a Minnesota department is included in Appendix A of this report to assist.

Training
Most county departments train once each month and have additional training whenever possible. Each department establishes its own schedule and the topics to be covered in these training sessions. Some shared training occurs between member departments when a training session is of interest to multiple departments (who respond together routinely).

Organization and Management
Individual fire departments in the area remain autonomous but have realized the advantages to solving problems which cross jurisdictional boundaries or which present risks which exceed individual resources. To that end, Polk County Fire Chiefs association is now being used to tackle issues of staffing, training, communications, and equipment, to name a few.

Polk County Fire Chiefs Association is structured in a traditional way with a president, vice president, etc. and meets regularly to discuss issues of mutual concern and to allow members to network as needed.

Finance
Individual departments in Polk County budgets range from $5,000 to $1,250,656 annually and Capital Improvement Plan (CIP) programs go from nonexistent to an annually adjusted project. Cost per citizen served ranges from $10 to $98.20. This cost per citizen is below the National average of $104 for volunteer and combination departments and most are below Minnesota’s average of $68.61 per citizen served (2013 calculations).

Polk County Fire Chiefs Association operates without dues. The organization is now evaluating the possibility of expanding to help individual departments with major purchases and seeking grants to improve service delivery.

Apparatus and Facilities
Apparatus
Individual member department’s equipment ranges from 2 engine, 1 water tender, and 1 wildland truck to 11 pieces of fire and EMS apparatus. There are 94 pieces of apparatus and major equipment listed in department information. Condition of this apparatus and equipment is from adequate to excellent with most being in good to excellent condition, even if over 25 years old. Maintenance is mostly done by
staff with outside companies used for pump testing, aerial testing, ladder testing, and hose testing in some member departments.

**Replacement Scoring System**

Many U.S. fire departments use a scoring system developed by the American Public Works Association (APWA) Fleet Service Committee for assessing fire apparatus for replacement, or a scoring system similar to it. The scoring system entails considering a combination of variables that include age, mileage, maintenance costs, and operating conditions. A replacement score is calculated for each vehicle based on the sum of its scores for age, usage, and condition. The data for these calculations are usually obtained from computerized vehicle maintenance records and work orders, but can also be obtained otherwise.

The age of the vehicle is scored by assigning one point for each month from the date on which it was purchased. The usage score assigns one point for each 1,000 miles traveled or 3.5 points for each 100 hours of use, whichever is higher. The condition of the vehicle is scored on a scale of zero to four (with zero being the best and four the worst) for each of five aspects: body, interior, functionality, maintenance/repair cost, and mission. These values are summed with the points assigned for age and mileage to obtain the overall vehicle score. If the overall score exceeds the point limit established for the respective vehicle category, the vehicle is recommended for replacement.

**Table 4-1: Maximum Vehicle Points Before Disposal/Replacement is Recommended:**

<table>
<thead>
<tr>
<th>APWA System</th>
<th>Vehicle Category</th>
<th>Maximum Vehicle Points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sedans, station wagons, and jeeps</td>
<td>162</td>
</tr>
<tr>
<td></td>
<td>Light-duty trucks</td>
<td>196</td>
</tr>
<tr>
<td></td>
<td>Medium- to heavy-duty trucks (including ambulances)</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>Fire apparatus</td>
<td>225</td>
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</tbody>
</table>

<table>
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<tr>
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<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
<th>#7</th>
</tr>
</thead>
<tbody>
<tr>
<td>When Built</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Mileage</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Interior Condition</td>
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<td></td>
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<td></td>
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<td></td>
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<td>Functionality</td>
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<td></td>
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<tr>
<td>Maintenance &amp; Repair</td>
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<tr>
<td><strong>Total Score</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When built – unit gets 1 point for each month from date of manufacture  
Current Mileage – unit gets 1 point for each thousand mile  
Body Condition – score 1 through 5: 1(excellent), 2(good), 3(fair), 4(poor), 5(replace)  
Interior Condition – score 1 through 5: 1(excellent), 2(good), 3(fair), 4(poor), 5(replace)  
Functionality – score 1 through 5: 1(excellent), 2(good), 3(fair), 4(poor), 5(replace)  
Maintenance & Repair – score 1 through 5: 1(excellent), 2(good), 3(fair), 4(poor), 5(replace)  
Mission – score 1 through 5: 1(excellent), 2(good), 3(fair), 4(poor), 5(replace)  
Total Score – add entire column
The critical component in any service-life-assessment system is the absolute requirement that a vehicle must be able to safely and reliably perform in a manner consistent with the vehicle’s design purpose, regardless of mileage or hours of use. Elected officials and organizational leaders must remember that fire service vehicles are subject to much more demanding operational conditions than other vehicles in a jurisdiction’s fleet. Rapid acceleration and deceleration, hard turns, quick stops, and other extreme demands are placed on fire apparatus on a regular basis. Additionally, fire apparatus are almost always fully-loaded with equipment. The water carried on a pumper can easily weigh several tons (over 12 tons in the case of a pumper-tanker), and aerial ladders may weigh more than 40 tons. Public works type trucks are not always at their maximum load, which reduces wear and tear on suspension, brake, and driveline systems.

**Facilities**

There are 14 stations and these stations range in condition from new, up to date buildings to century old facilities which were originally built for horse drawn apparatus. Station condition also ranges from up to date and code compliant to undersized, structurally unsound, and non-code compliant.

The location of these stations was based upon needs at the time the structures were constructed, but may not be optimum for today’s needs. This includes facilities where population growth or recreational activities have caused increased risks.

**Fire Prevention**

Fire prevention in Polk County fire departments is very basic with most departments limiting efforts to tours and demonstrations during fire prevention week annually. Inspections, code enforcement, and investigation are not part of individual departments, except in Crookston and East Grand Forks, due to lack of personnel and funding for these support services.

**Area Risks**

Risks in the area are both natural and man-made. Natural risks include wildlands and lakes as well as seasonal issues such as snow, flooding, spring and fall seasonal issues, and severe storms. Man-made risks include:

**Climax**

Grain Elevator –

Agronomy Station –

**Nielsville**

No unusual hazards.

**East Grand Forks**

American Crystal Sugar

Simplot Soil Builders (Fertilizer & Chemicals)
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Senior High School
Central Middle School
2 Elementary Schools
Sacred Heart Private School
Riverside Christian School
Northland Community College
5 Senior Living Complexes
Alzheimer Complex
BNSF Railway
Water Treatment Plant
Minnesota Grain Perling Elevator
Enbridge Pipeline
Viking Pipeline
Excel Energy Pipeline
Large Apartment Complex (10)
Douglas Half Way House
Hwy 2 & Hwy 220 Corridors
Farmers Finest Bean Company
River Cinema Movie Theater

**Erskine**

Burlington Northern and Canadian Pacific Railroads intersection
Central Harvest States fertilizer plant and terminal
Win-E-Mac Schools
Nursing home
Above ground 30,000 gallon propane storage
20 unit and 30 unit apartment complexes

**Beltrami**

West Central Ag Services
Polk County Shared Services Study

Fertile
TDS Fertilizer and Chemical storage –
Central harvest States Grain Elevator -
Fertile Oil and Propane Bulk Storage Plant -

Crookston
American Crystal Sugar Company
Crookston Valley Cooperative
Calumet Superior LLC
Ferrell Gas
University of MN, Crookston
Washington School
Our Savior’s School
Highland School
Crookston High School
Enbridge Pipeline
Viking Nat. Gas Pipeline
Great Plains Natural Gas Pipeline
BNSF Railroad

Mentor
American Hess Corporation, 14.5 M gallon LP storage facility
Legumex Walker Sunflower dehulling plant
Maple Lake < 700 separate parcel and 5 campgrounds
Paquin Farms potato seed warehouses
Old Mentor School building

An additional risk for the area is simply the remoteness of structures due to the makeup of the land. Dense forests, marshes, and woodland lakes make it difficult to conduct fire and rescue services.
Volunteer Recruitment and Retention

**Recruitment** – Recruiting citizens to become volunteer fire/rescue responders can be a daunting task if not approached in a systematic manner. This systematic approach begins with identifying the most likely demographic groups where potential volunteers may be included. This will be an important discussion for the Polk County Fire Chiefs and we encourage you to begin this conversation immediately. Across the country there are three emerging groups of volunteer firefighters: mothers that stay at home; college students; and empty nesters. Motivating citizens to join a fire department is one of the largest challenges facing volunteer fire service throughout the country. It is important to find out how many of the current volunteers will stay active and for how long. The future viability of a volunteer force is at stake, and should be the focus of future recruitment efforts. This will mean looking for future members in citizen groups either under-represented or not represented in the current department roster.

A very successful volunteer recruitment program in Virginia is recruiting over 300 new members annually. Their program begins using a page on the jurisdiction website, a Facebook account, and a toll free phone number. All contacts are immediately contacted by a volunteer recruiter from the fire/rescue department (within 24 hours). An appointment is set up and each candidate gets a briefing on the potential job, a scheduled ride along is set up, and an application is filled out. The key is to keep candidate interest high, and identify how best to use the talents of new member so they stay motivated and involved. Polk County can certainly use this coordinated system to increase the volunteer cadre.

**Retention** – While people join volunteer fire-rescue departments for many reasons, retention issues boil down to two distinct reasons: problems that arise in one’s life and factors relating to the individual fire department or the fire service itself. To retain new and current members, volunteer departments must display four essential characteristics that address these two root problems with volunteer retention:

- The program must meet the individual’s needs
- The program must provide its membership with reward and recognition
- The program must provide adequate supervision and leadership
- The program must challenge its members

Any recruitment or retention programs that are to be considered must take into account the four aforementioned characteristics that must be present in a quality fire-rescue program.

There are numerous professional organizations that have developed model programs that can be used in this recruitment and retention effort. There is no reason to “reinvent the wheel” if tried and proven programs exist to assist volunteer fire-rescue organizations with these matters. The National Volunteer Fire Council at [www.nvfc.org](http://www.nvfc.org) and the Fireman’s Association of the State of New York (FASNY) at [www.fasny.com](http://www.fasny.com) (close neighbors) both have quality programs and provide assistance that can help this program get started. From the Pennsylvania General Assembly, the Legislative Budget and Finance Committee developed an excellent report titled, *The Feasibility of Regionalizing Pennsylvania’s*
Volunteer Fire Companies. This report also provides some ideas and guidance pertaining to the recruitment and retention problems within the volunteer fire service in Pennsylvania.

Assistance can also be obtained through the Federal Emergency Management Association (FEMA) and the U.S. Fire Administration (USFA) at www.usfa.fema.gov. Both of these organizations have published numerous free reports on Recruitment and Retention among the Volunteer Fire Service. One such resource publication, Recruitment and Retention in the Volunteer Fire Service: Problems and Solutions Final Report December 1998 outlines numerous programs and resources that have been tried and have proven successful throughout the nation. There is also a similar report titled: Emergency Medical Services (EMS) Recruitment and Retention Manual written in 1995 for FEMA and the USFA that deals with these specific problems in the EMS community.

Volunteer Incentives and Recognition – Incentive and recognition programs are very important for fire and rescue volunteers. Given the enormous time demands, training demands, and personal risks, it is easy for volunteers to burn out and quit after only a few years of service. Incentives and recognition programs are essential components to maintaining a strong cadre of experienced volunteers and to prevent a revolving door situation. For the equivalent loaded salary cost of one career firefighters, a great deal of recognition, incentive, and recruiting programs for volunteers can be implemented.

Many local governments across the nation have strengthened their incentive programs for volunteer firefighters. The cost of incentives is small and economically justifiable if they help recruit and retain volunteers and forestall hiring more career employees. Volunteers in the fire and rescue service today are the first line defenders for any type of emergency or disaster.

Station Live-in Programs– One of the strongest incentive programs for volunteers, particularly younger volunteers, is the station live-in program. Individual volunteer departments can establish minimum standards for members to live at the station. Usually, volunteers must sign up for two to four duty nights per week to qualify. Live-in programs are an excellent incentive as well as a recruitment and retention tool. They not only promote participation, but they guarantee that volunteers will be at the station and ready to answer emergency calls without having to respond from home to the station. The major drawback to the live-in programs is that they are only an incentive for single volunteers since there is generally no housing available for married volunteers. Also, the sleeping areas are not very suitable for permanent residency (e.g., in most cases they are open bunkrooms instead of individual dorm rooms).

Recognition – Volunteers generally want to be appreciated and receive some form of recognition for their service to the community. Some are willing to work quietly for years and obtain satisfaction just from doing the job, helping people in need, and the camaraderie in the department. However, information obtained from surveys taken by former volunteers (as well as self-perception of the volunteers) from across the country indicates that a little recognition goes a long way. Although most volunteers never mention the desire for recognition, it is almost always well received when given and usually deleterious when withheld.

Health Insurance – The jurisdictions could provide health insurance for volunteers who meet certain minimum requirements. This type of incentive program is currently being used in Sedona, Arizona.
Polk County Shared Services Study

**Cable Television and Utility Bills** – Volunteers could be given free cable television, and/or exempted from some local utility bills. This is done in Sitka, Alaska and Lacey, Washington.

**Tuition Assistance** – Volunteers could be offered tuition assistance after a certain period of service, similar to tuition assistance offered to municipal employees in some jurisdictions. Some national EMS organizations make scholarships available to enhance local efforts.

**Retirement Salary Plan** – Many jurisdictions around the country have set up retirement plans for volunteer firefighters. Most of these plans are based on years of service and set up through the state legislature. Bellevue budgets annual contributions that provide a state match to the state’s Length of Service Awards (LOSA) program. This is an excellent program for rewarding volunteer firefighters who put in years of service to their community. A good resource to provide additional information on such programs is the Volunteer Fire Insurance Service, VFIS, located on the web at [www.vfis.com/vfis/vfis_losap.htm](http://www.vfis.com/vfis/vfis_losap.htm).

**Requirements of a Recruitment and Retention Program** – No matter which program is selected, it is imperative that this recruitment, retention and educational effort be a well thought out, on-going, combined effort with the support and backing of all involved parties. This is not a localized or short-term concern but a long-term local and national issue that can’t be solved in a vacuum or without great deal of work. It will take the total commitment, effort and dedication of a wide range of professional, political and civic leaders to make this program a reality. Outside of the box thinking and creative program development is vital to maintaining a healthy volunteer fire-rescue program for the County.

The result of such a program failing is the need to provide this service through a paid or a subscription delivery system. Both of these alternatives will be much more costly for taxpayers than the time and efforts that will be involved in helping maintain a quality well-staffed volunteer fire-rescue system that is currently in place. It is estimated that for a municipality to transition to just one 4-person paid Fire Department, with 24-hour coverage, it would cost approximately $1.5 million dollars a year. This increase would naturally increase the tax levy and have to be sustained for the foreseeable future. Polk County is typical of many small municipalities in the way they provide fire-rescue services. Volunteers are becoming scarcer for all organizations as society continues to evolve into a very busy community. There is little time or effort put forth in the development of an overall regional recruitment and retention program. It is incumbent on the Polk County Fire Chiefs, to take the lead, with their fire-rescue responders to plan out an appropriate strategy as to how to continue to make this fire-rescue system a solvent and viable response system. Coordination and cooperation amongst all involved parties is the only way this system can be stabilized.

**911 communications and Polk County PSAP**

Polk County Sheriff’s Office is the PSAP (Public Safety Answering Point) for all E911 calls in the county. This means all county 911 calls are directed by carriers to this PCSO department. Once initial information is collected the caller is handed off to a communications specialist to handle the call and the emergency services dispatched.
Data shows that in 2014 there were about 1618 fire and EMS calls in Polk County for county fire services. This calculates to 4.5 calls per day and does not include hang-up, kids playing on phone, etc. If we assume a call will average about 2 hours from call initiation to units back in service, this means fire/rescue services are in-service on emergency calls 9 hours per day. There is clearly a need for 24/7/365 county wide fire/rescue dispatching in Polk County.

V. Study Questions and Issues from RFP

There are seven key questions in the grant application which are the foundation for this study. To begin moving forward after this study is finalized it is imperative that an action plan be developed to see that everyone is focused on the same tasks in the same order. An action plan is a process used to organize agreed goals, objectives, and tasks into a structure which can be followed by Polk County fire/rescue services to achieve desired outcomes regarding shared services. To organize this plan the goals will be separated into the 7 areas from the original proposal.

1. Should we implement automatic aid?

Using automatic aid is one way to address the staffing issues that are basically a county wide problem for Polk County fire services. However this is a much more complex undertaking than simply initiating a “box alarm system” county wide. There are several other issues to be resolved before such a system can be effective and efficient:

   A. Training and firefighter competencies need to be uniform in all county departments. This means everyone should have a minimum level of certifications for fire and EMS operations.

   B. There is a need for centralized communications including standardized frequencies, preplanned alarm system for dispatchers, and a funding stream for E911 staffing and needed equipment.

   C. Moving toward standardization in key equipment such as SCBAs, hose, and even vehicle layout.

Goal A. An up to date listing of all apparatus and major equipment is the first step in this process. This will need to be reviewed and updated at least annually.

Goal B. Interlocal agreements will need to in place to begin routine responses outside the home jurisdiction.

Goal C. Response areas should be defined by closest units on first alarm. Second alarm, third alarm, etc. and backfill procedures defined.

Goal D. Standards of training, staffing on units, county wide communications procedures will need to be agreed upon by jurisdictions.
2. Decreased fire and increased EMS run volume.

Less fire and more EMS call volume is what is occurring in nearly all jurisdictions nationwide. This creates two distinct problems for fire departments.

First is the need for any full service department to see EMS as their primary function in the community. Departments must have sufficient personnel certified as medical first responders to deal with the demand and see that the call volume does not result in firefighter burnout.

Second is to see that all firefighters get sufficient training and hands on experience in fire suppression, hazmat, and special operations to be safe and efficient during emergency incidents. Use of county wide and regional training will be more needed to fulfill this gap.

Goal A. Determine which departments will run EMS first responder programs. Though not all may participate, this service delivery should be a county wide service goal.

Goal B. With less fire calls firefighter proficiency is an operational issue and using more hands on and skills training will have to be implemented. Also with multijurisdictional responding training together is essential.

Goal C. Firefighter retention is essential and must be monitored by each department. Morale and feeling a part of the department must also be goals of department officers for staff.

3. Decreased staffing availability, particularly during the day.

Again daytime and especially weekday daytime staffing shortfalls are a national issue for small fire departments across America. There are some ways to find persons who can be available for these times.

1. During recruitment planning looking for stay at home moms, empty nesters, and college students, as well as people who work second or odd shifting schedules, should be a primary focus of a volunteer marketing campaign.

2. Refocusing on the local fire hall being a center of community activity. This means that a daycare for volunteers with kids, a fitness center in the station for citizens, and even planning family activity times are all ways to attract people to serve their community through fire service participation.

Goal A. Recruitment of targeted groups like stay at home moms, empty nesters, and students should be a focus of firefighter recruitment marketing. The key is how to reach and motivate these people to become part of the departments.

Goal B. The fire departments need to develop plans to become a center for their community and provide services for members such as daycare, fitness, and family focused activities on a regular basis.
4. Higher expectations from the general public.

EMS, Hazmat, specialized rescue, and public all hazards safety education are just some examples of the increased activity levels of today’s full service fire/rescue operations. Though a jurisdiction may not deliver all these programs it is incumbent that any service delivery be the best possible programs for the funding and staff available.

This means each department must develop mission, vision, and values statements that say who we are, what we do, why we do it, and how well we get the job done. This should not only be a documented part of the department’s bylaws but the credo by which you live as an organization.

**Goal A.** Each department should develop mission, vision, and values statements to identify who they are; what they do; and how they get the jobs done.

**Goal B.** Polk County Fire Chiefs Association should also set mission, vision, and values statements for their bylaws.

**Goal C.** Find ways to get feedback from the public and use the information to stay on point with your citizens.

5. Should we consider more pay and if so how much?

The key here is not so much how much do we pay firefighters to be firefighters, but rather what is a fair and equitable compensation plan for our staff that is also agreeable to our citizens. Most volunteers see pay as secondary to other needs for job satisfaction. That is not to say pay should not be fair but rather that looking at the total compensation package is more effective. Other issues to be analyzed include, pension provisions, payment of fees to attend outside training, bonuses for outstanding performance or advanced certifications like EMT, hazmat OPS, or technical rescue.

This question is more complex than just money and needs to be a focus of department leadership with staff feedback. If done well this will go a long way with departmental morale.

**Goal A.** Assess pay as part of the overall rewards for service program in the departments. This includes employee pay, pension system, payment of fees to attend outside training, bonuses for outstanding performance or advanced certifications like EMT, hazmat OPS, or technical rescue.

**Goal B.** See that the rewards programs for individual departments are equitable across the county departments and similar to other area counties.

6. A varied fire contract the cities charge the townships, Can we standardize?

Standardization of annual fire services fees is the norm in many jurisdictions across the nation. This can be as simple as using a single formula to calculate the fee per township, city, or village. It can also be a county wide fire services fee at the county level that is then distributed to the individual departments again using a single formula.
It is logical to start with the single formula fee per township, city, or village. The county wide system would need a county fire protection district with taxing powers and this is not only much more complex but is politically a very significant challenge. There are fire protection districts in Minnesota that work and districts that have failed. The key here is to start simple and build rather than jumping in before you know how deep the water is or how many sharks are in the water.

**Goal A.** Review all contracts to see what is now the process for each jurisdiction.

**Goal B.** Work with local leaders and departments to see if a single formula can be implemented.

**Goal C.** Consider a county fire services fee to fund all fire service in Polk County.

7. **Do we have the right equipment in the right places in the county?**

As part of the study we have included a deployment and demand analysis. Using your call data and call types we presented a detailed breakout of your equipment, personnel, and station resources as well as where the calls come from, what types of calls they are, and what resources are able to respond. From this we will derived the maps and overlays.

**Goal A.** Using the information from the demand and deployment section of this report develop a county wide plan for equipment needs for Polk County.

**Goal B.** As you move forward consider standardization of apparatus and equipment to make working together easier and safer.

**Goal C.** Consider using part of the proposed county fire services fee to fund a CIP for major equipment and apparatus.

**VI. Master Plan**

There is a need to develop a long range plan for all emergency services in Polk County. This is clearly a priority. Using Polk County Fire Chiefs Association, other key stakeholders, and the local administrations as the working committee, the team should set a plan for the next 2, 5, and 10 years. The long range plan must have sufficient detail to build the structure, operations, and financial foundations for this service and to set a clear course for the foreseeable future.

A strategic process should be used to develop the long range plan for emergency services in the community. All potential stakeholders must be identified and included in this process and all input should be well structured to avoid allegations of favoritism or exclusion.
**Step #1** – Identify the future mission and vision for County emergency services. This is the who, what, when, where, why, and how of the process. It is imperative that this process be consensual between the participating stakeholders.

**Step #2** – Prioritize the critical issues or recommendations that are identified from the organizational analysis process of this study to develop direction for the plan.

**Step #4** – Establish broad brush goals to achieve your desired outcomes. These goals will be general statements of the outcomes needed to achieve and maintain the mission and vision of the Master Plan.

**Step #5** – Set objectives and activities under each goal area to achieve the desired results. This should include specific steps and timelines for these steps, as well as overall timelines for the objectives.

**Step #6** – Feedback and re-evaluation of the plan is essential to the overall success of the process. This must be done routinely during the entire implementation cycle of the plan and at least annually thereafter.
**Prioritizing Recommendations**

There are several recommendations and an action plan in this report. Not all of these are equal in importance. To assist the County fire services with the assessment process, we developed a method to evaluate each recommendation using similar criteria:

1. What is the overall value of the recommendation to the jurisdiction? Does it improve the level of fire or emergency medical service provided to the citizens?

2. What is the overall value of the recommendation to Polk County fire services as an organization? Does it contribute to firefighter safety, employee welfare, or morale?

3. What is the overall level of difficulty to implement the recommendation? Can the recommendation be implemented quickly or does it require a long or difficult planning process?

4. What is the overall cost to implement the recommendation? Is the cost a one-time expenditure or does it require repeated funding?

**Criteria Defined**

A general definition for each criterion follows.

**Value of Recommendation to the Community:** Recommendations with very high value to the community would be those with the potential to significantly improve service delivery such as adding a new service or improving an existing one. An example may be a recommendation that has the potential to significantly reduce loss or response time. A value judgment score of five means the recommendation has very high potential to improve community safety and emergency service delivery. Conversely, a judgment value of 0 means the recommendation will have no impact on community safety.

**Value of Recommendation to the emergency services:** Recommendations with a very high value to the emergency services are those that improve daily operations, improve efficiency and effectiveness, or change the organizational culture and management in a positive way. These can also be recommendations that are perceived by firefighters and EMTs as improving their quality of work life or that improve their safety and health. A value judgment score of five means the recommendation has the highest potential to improve the organization; a score of zero means the recommendation will have no impact on the Department.

**Level of Difficulty to Implement:** Recommendations with a high level of difficulty to implement are those that have long planning cycles, require significant changes to infrastructure, changes to codes or labor agreements, or require major policy changes. Recommendations with a judgment value score of zero means the recommendation has an extreme level of difficulty to implement; a score of five means there is no difficulty.
Cost of Implementation: Recommendations with high implementation costs are those requiring significant capital outlays like new fire stations, land purchases, or large recurring costs such as additional personnel. A recommendation that requires only a minor change in policy, for example, would likely have a low cost of implementation. Recommendations with a judgment value score of five means that it has no implementation cost; a score of zero means that it has an extremely high cost to implement.

Scoring – For each recommendation a value judgment was made using the four evaluation criteria above and a numerical score was assigned. The score ranges are shown in Table 3.

Table 2: Criteria Scoring Range

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Low Score (Poorest)</th>
<th>High Score (Best)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value to the Community</td>
<td>No Value = 0</td>
<td>Extreme Value = 5</td>
</tr>
<tr>
<td>Value to the Organization</td>
<td>No Value = 0</td>
<td>Extreme Value = 5</td>
</tr>
<tr>
<td>Level of Difficulty to Implement</td>
<td>Extreme Difficulty = 0</td>
<td>No Difficulty = 5</td>
</tr>
<tr>
<td>Cost of Implementation</td>
<td>Extreme Cost = 0</td>
<td>No Cost = 5</td>
</tr>
</tbody>
</table>

For example, a recommendation with the highest possible value to emergency services and to the community would have a combined score of 10 for benchmarks 1 and 2. If the same recommendation had the lowest “level of difficulty to implement”, and it also had little (or no) cost to implement, its total score would be 20 points. Such a recommendation would be considered to be a high priority because it could be implemented easily and economically; it would also be of significant value to the community and emergency services.

VII. Polk County 3 Year Plan

The final part of this study is to develop a multi-year plan for Polk County Fire Chiefs to use as a template for future planning of fire/rescue services. This plan is intended to be a broad brush approach to developing a detailed master plan which will be the final product of County Fire/rescue services working out the individual goals and objectives as a team.

It is essential that the final product be a consensual plan created from all stakeholders working together. This study has provided several recommendations, several detailed analyzes, and comparison of Polk County fire/rescue services to national benchmarks. The study is in essence a cookbook of fire/rescue service recipes. The recipes you choose to use and the exact ingredients you add are in fact up to your members. Whether you choose to make dessert before the main course is a decision for your leadership, hopefully with stakeholder input.
Whichever options are chosen, one thing is certain: the process will have its share of supporters and non-supporters who will have a great effect on the outcome of the decisions. The leaders must always keep the mission of all fire/rescue services at the sharp point of this endeavor. That mission is simply to save lives and protect property, and to do what is right for Mrs. Smith.

**Polk County 3 Year Plan**

**First 6 months:**
- Update and refine resources lists for each department
- Update and rewrite all mutual and auto aid agreements
- Begin a recruitment and retention marketing program as a county wide initiative

**First year:**
- Start building the box alarms for each department by call type
- Using response polygons from study update first due areas for multi department responses
- Begin dispatching for calls using your county box alarm system

**Second year:**
- Open discussion with PCSO dispatch for a dedicated fire/rescue person in the PSAP
- Update county wide training levels for veteran and new firefighters
- Evaluate a county wide funding source for dispatch, CIP, fire prevention, firefighter training

**Third year:**
- Look at establishing an EMS cadre in county fire/rescue
- Evaluate future stations and equipment by need
- Establish a user group for 911 from county fire/rescue services
- Begin enhancing training on a county level

**Long Range:**
- Look at the need for a Polk County fire/rescue coordinator
- Start using an annual citizen satisfaction survey tool
- Work with Minnesota Fire Marshal to enhance recruitment and retention state wide
Polk County Shared Services Study

Look at joint powers and fire protection district concepts for Polk County fire/rescue services

Working Groups for Polk County Fire Chiefs Association

1. Training and Safety
2. Communications
3. Recruitment and Retention
4. Capital – joint purchasing
5. Operations
## All Structure Fires - Box Alarm Assignment Grid

<table>
<thead>
<tr>
<th>Response Area</th>
<th>Station 1</th>
<th>Station 2</th>
<th>Station 3 (Planned)</th>
<th>No Hydrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map</td>
<td>North of Lyman &amp; East of Galpin</td>
<td>West of Galpin</td>
<td>Lyman &amp; South</td>
<td>Various, mostly south of Pioneer Trail**</td>
</tr>
<tr>
<td>Initial Alarm</td>
<td>Chanhassen</td>
<td>Chanhassen</td>
<td>Chanhassen</td>
<td>Chanhassen</td>
</tr>
<tr>
<td>Utilities</td>
<td>Ridgeview</td>
<td>Excel/Centerpoint/MN Valley Coop</td>
<td>Ridgeview</td>
<td>Ridgeview</td>
</tr>
<tr>
<td>EMS***</td>
<td>Ridgeview</td>
<td>Ridgeview</td>
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</tr>
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</table>

*Confirmed Structure Fire - Request Carver County Fireground Tactical Channel & 3rd Page for Manpower*

<table>
<thead>
<tr>
<th>1st Alarm</th>
<th>Engine</th>
<th>Chanhassen</th>
<th>Chanhassen</th>
<th>Chanhassen</th>
<th>Tender 1</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Engine</td>
<td>Minnetonka</td>
<td>Minnetonka</td>
<td>Shakopee**</td>
<td>Tender 2</td>
<td>Carver</td>
</tr>
<tr>
<td></td>
<td>Ladder</td>
<td>Eden Prairie</td>
<td>Eden Prairie</td>
<td>Eden Prairie</td>
<td>Tender 3</td>
<td>Colgne</td>
</tr>
<tr>
<td>Patching</td>
<td>Request Dispatch to set up patch for MA Depts that do not have Carver County Fireground Tactical Channels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Truck</td>
<td>Minnetonka</td>
<td>Minnetonka</td>
<td>Minnetonka</td>
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<td></td>
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<table>
<thead>
<tr>
<th>2nd Alarm</th>
<th>Engine</th>
<th>Chanhassen</th>
<th>Chanhassen</th>
<th>Excelsior</th>
<th>Tender 5</th>
<th>Prior Lake</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Engine</td>
<td>Victoria</td>
<td>Victoria</td>
<td>Victoria</td>
<td>Tender 6</td>
<td>Chanhassen</td>
</tr>
<tr>
<td></td>
<td>Ladder</td>
<td>Minnetonka</td>
<td>Minnetonka</td>
<td>Minnetonka</td>
<td>Tender 7</td>
<td>Shakopee</td>
</tr>
<tr>
<td>Mutual Aid Chiefs</td>
<td>Hopkins/Edina</td>
<td>Hopkins/Edina</td>
<td>Hopkins/Edina</td>
<td>Tender 8</td>
<td>St Boni</td>
<td></td>
</tr>
<tr>
<td>LSU Rehab</td>
<td>Excelsior/SW Metro Bus</td>
<td>Excelsior/SW Metro Bus</td>
<td>Excelsior/SW Metro Bus</td>
<td>Tender 9</td>
<td>Mound</td>
<td></td>
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<table>
<thead>
<tr>
<th>3rd Alarm</th>
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<th>Hopkins</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Engine</td>
<td>Hopkins</td>
<td>Hopkins</td>
<td>Hopkins</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Ladder</td>
<td>Chanhassen</td>
<td>Chanhassen</td>
<td>Chanhassen</td>
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<tr>
<td>Mutual Aid Chiefs</td>
<td>Bloomington/SLP</td>
<td>Bloomington/SLP</td>
<td>Bloomington/SLP</td>
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</tr>
<tr>
<td>Command Van</td>
<td>SLP</td>
<td>SLP</td>
<td>SLP</td>
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<tr>
<td>Air Truck</td>
<td>Bloomington</td>
<td>Bloomington</td>
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<table>
<thead>
<tr>
<th>4th Alarm</th>
<th>Engine</th>
<th>Carver</th>
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<td></td>
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<td>Bloomington</td>
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<td>Bloomington</td>
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<table>
<thead>
<tr>
<th>5th Alarm</th>
<th>Engine</th>
<th>Victoria</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Engine</td>
<td>Wayzata</td>
<td>Wayzata</td>
<td>Colgne</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Engine</td>
<td>SLP</td>
<td>SLP</td>
<td>SLP</td>
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</tr>
<tr>
<td></td>
<td>Engine</td>
<td>Waconia</td>
<td>Waconia</td>
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</tr>
<tr>
<td></td>
<td>Engine</td>
<td>Mound</td>
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<td>Mound</td>
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</table>

<table>
<thead>
<tr>
<th>6th Alarm</th>
<th>Engine</th>
<th>Plymouth</th>
<th>Plymouth</th>
<th>Plymouth</th>
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</thead>
<tbody>
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<td></td>
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<td>Colgne</td>
<td>Colgne</td>
<td>Wayzata</td>
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</tr>
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<td>Engine</td>
<td>Richfield</td>
<td>Richfield</td>
<td>Jordan</td>
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<tr>
<td></td>
<td>Engine</td>
<td>St Boni</td>
<td>St Boni</td>
<td>Savage</td>
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</tr>
<tr>
<td></td>
<td>Engine</td>
<td>Long Lake</td>
<td>Long Lake</td>
<td>Prior Lake</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*IC initiates all via 3rd page once structure fire is confirmed.

** For areas with no hydrants, the normal box assignments apply. Request * Pumper/Tankers from Chanhassen/Shakopee in lieu of engines on the 1st Alarm.

*** Tenders (Tankers) are requested as needed in order. Stand by coverage beyond the call should be filled with the initial alarm once confirmed.

***EMS resource to be dedicated to responder health & Safety.
Appendix B – APWA System

<table>
<thead>
<tr>
<th>Vehicle Category</th>
<th>Maximum Vehicle Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedans, station wagons, and jeeps</td>
<td>162</td>
</tr>
<tr>
<td>Light-duty trucks</td>
<td>196</td>
</tr>
<tr>
<td>Medium- to heavy-duty trucks (including ambulances)</td>
<td>220</td>
</tr>
<tr>
<td>Fire apparatus</td>
<td>225</td>
</tr>
</tbody>
</table>

### Vehicle Scores

<table>
<thead>
<tr>
<th>Unit</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
<th>#7</th>
<th>#8</th>
</tr>
</thead>
<tbody>
<tr>
<td>When Built</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Mileage</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Condition</td>
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<td></td>
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<tr>
<td>Interior Condition</td>
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<tr>
<td>Functionality</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance &amp; Repair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mission</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When built – unit gets 1 point for each month from date of manufacture
Current Mileage – unit gets 1 point for each thousand mile
Body Condition – score 1 through 5: 1(excellent), 2 (good), 3 (fair), 4 (poor), 5 (replace)
Interior Condition – score 1 through 5: 1(excellent), 2 (good), 3 (fair), 4 (poor), 5 (replace)
Functionality – score 1 through 5: 1(excellent), 2 (good), 3 (fair), 4 (poor), 5 (replace)
Maintenance & Repair – score 1 through 5: 1(excellent), 2 (good), 3 (fair), 4 (poor), 5 (replace)
Mission – score 1 through 5: 1(excellent), 2 (good), 3 (fair), 4 (poor), 5 (replace)
Total Score – add entire column