Review and Assessment of

Fire & EMS

Services Study

for the

City of West Des Moines

Submitted by

McGrath
CONSULTING GROUP, INC.

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Executive Summary

The reader of this report is encouraged to read the report in its entirety, as reading the executive summary only, will not provide sufficient information to judge the recommendations made within this report. The consultants appreciate different perspectives and encourage the reader to look at this document as a book of opportunities, written by an unbiased consulting team. That will allow the City to enter into discussions and make changes were appropriate.

Although the project was a comprehensive assessment of the West Des Moines Fire and EMS departments, two most prominent issues emerged from stakeholders' interviews:

1. Should the Fire and EMS Departments be consolidated into one city department?

2. What is the value of the Alliance to the city?
    a. Should the Alliance remain "as is"?
    b. Should a more equitable Alliance agreement be developed?
    c. Should the city withdraw from the Alliance agreement?

The consultants sent a draft report to the City to ensure that they had addressed all of the items outlined in the Request for Proposal. The consultants requested both the Fire and EMS chiefs provide feedback from the draft report and have re-assessed each comment clarifying when appropriate. The consultants appreciate all individuals who provided input to the draft report.

This documents best represents the findings of our assessment, which required extending the project by approximately six weeks focusing on the Alliance and EMS issues. All recommendations within each section are categorized as illustrated in the table below. In addition, at the end of the report, all the recommendations are listed in a summary in priority order. An excel spreadsheet will be provided with the summary of recommendation for use by the city for future planning.

Priority	Definition	Example
1	**Urgent/Immediate**	Potential threat to life, legal and regulatory compliance violations; physiological needs; essential preventative action needed
2	**Pressing < Priority 1**	Significant impact on organization; action needed as soon as possible
3	**Important < Priority 2**	Organization will benefit by addressing soon; items that should be accomplished
4	**Future Consideration**	Items needs to be addressed; develop future plan of action; low consequences of delay-action
5	**Information Only**	Organization should be aware; take under consideration

Consolidation of Fire & EMS

Although the outcome of the reassessment of the Alliance agreement might have the significant impact on this decision, the consultants believe the issues can be separated. At this time, the consultants do not recommend consolidation of the fire and EMS departments; however, future consideration of consolidating the departments may be appropriate when one of the two existing chiefs (fire or EMS) retire. At that point, the departments could be combined resulting in cost saving. However, it also means that staffing would continue with fire personnel, EMS personnel and eventually a combination of Fire/EMS. A consolidated department would not mean forcing EMS individuals who do not wish to become firefighters, to become firefighters or firefighters to become EMS providers.

Value of the Alliance

The consultants were alarmed by the number of individuals, including elected officials, city officials, departments leadership team members, department heads, and public safety employees who indicated they didn't understand the agreement and/or finances about the Iowa EMS Alliance. There were individuals who felt very strongly about the Alliance and how it benefited the City. Conversely, there were an equal number who felt the Alliance was not cost-effective for the City, and in some cases, detrimental to the WDMEMS department. However, the majority of individuals, when interviewed about the Alliance, simple confided they "really don't know".

The best summary of the Alliance agreement is that it is too complex and lacks the transparency, which most municipalities strive for. The number of stakeholders who indicated they really didn't understand the Alliance, is understandable.

The Consultants recommend an independent audit of the Alliance accounting to ascertain the actual cost of the Alliance. If it is determined that continuance with the Alliance is in the best interest of the City, then the City should ensure that the contracts articulate the terms of the agreement, including the cost sharing agreement.

The following is a brief overview of the sections of the report.

Overview

The overview of fire and EMS departments are presented from a historical to present day status. Included in the study is a description of the Public Safety Answering Point – Westcom (PSAP). The City of West Des Moines holds the distinction of having all three of its public safety departments (police, fire, and EMS) holding industry accreditation.

Governance

Although there appears to be an issue, the report included a section of the role of the Council Oversight. The fire chief had been recently hired and the consultants found the department to be well lead and managed. The consultants highly recommend that a 40 hour/week second in command (Assistant Chief) be added to the management team.

The EMS chief has a long tenure with the City and currently serves as the EMS chief and Director of Westcom, a consolidated PSAP. In addition, he oversees the Alliance agreement with UnityPoint Health for the city. Although the chief has a proud history of serving the city, the consultants are recommending a full-scale audit of the Alliance agreement and an Employee Satisfaction Survey for EMS employees.

Emergency Activities

Each department's emergency activities are illustrated in a variety of categories (i.e. calls by day of the week, by time of day, by month, etc.). In the EMS department 9-1-1 calls/hospital transports indicated a three-year average of 52.89% of calls were city 9-1-1, whereas, 47.11% were hospital.

Response Times

Response time data was sub-divided into five components with a description of who/what agency was most responsible for meeting industry standards. Overall, the department's response times were most adequate. The one area for improvement is Turnout Time (out the door time from dispatch notification) for both the fire and EMS department.

Standard of Coverage

The Standard of Coverage (SOC) predominately is a fire department assessment of total community risk. However, input from all safety providers is essential. The fire department is currently being monitored, reviewing and adjusting their SOC as the municipality continues to grow.

Public Safety Answering Point (Dispatch – Westcom)

It needs to be clarified that the Westcom assessment was only limited to the material/data needed that impacted the fire and EMS departments. This was not a comprehensive assessment of the PSAP. With that said, the PSAP appears to be a highly functional organization. There could be improvements by implementing a formal Quality Assurance program between Westcom and the City to continue quality service.

National/Industry Standards

The fire service has a greater number of national standards than EMS; this isn't to say there are not EMS standards. This section defines the most common standards that apply to both safety departments in a format of those that are mandatory and those that are not.

Iowa EMS Alliance

In its current state, the Alliance agreement is far too complex for most to fully understand the fiscal and resource distribution by the city. The consultants are not opposed to a public/private partnership; rather, it appears after extensive assessment, that the city pays an unequable amount in the current agreement. The reader must read the **Fiscal section** of this report to outline the rational for these findings.

Human Resources

The human resource section reviewed all of the systems of recruitment, policies, contract review, and performance evaluations. The city's Human Resource Department was found to be highly professional, efficient, and effective. The concern is the extensive amount of turnover in the EMS department. Industry findings estimate that turnover in the public sector ranges from 9% to 12.5%; whereas, West Des Moines EMS turnover four-year average was 24.53%

Another concern in EMS was the excessive amount of overtime that appeared to go mostly to senior members. There were three individuals who had over $41,000 in overtime in 2015. In addition, the consultants highly recommend that an Employee Satisfaction Survey be conducted in the EMS department and has outlined serval components that should be included in that survey.

Staffing Fire/EMS

The consultants support the fire chiefs program of converting the paid-on-call (volunteers) to a part-time paid position and allowing these individuals to fulfill a shift. In addition, the fire department should add a full-time second in command (40-hour) Assistant Fire Chief.

The three employees categorized as fire-medics should be moved to employees of the fire department, thereby eliminating this job description. The city must address the high turnover of EMS employees, predominately part-time and some full-time, which is a considerable expense and workload for the Human Resource department.

Public Safety Facilities

Each of the facilities was assessed and discussed individually within the report; this included the need for an additional facility. Station # 17 should have a minimum of a three firefighter shift 24/7 on duty. Station #22 is a shared facility between the Cities of West Des Moines and Clive. The consultants support the concept of a shared facility; however, the fiscal arrangement should be re-assessed.

Apparatus/Vehicles

Overall, the city fire and EMS departments seem to have a sufficient amount of apparatus and the consultants are recommending the removal of several pieces from the inventory. The issue that needs to be clarified is the EMS budget item of funding for reserve ambulances. An ambulance becomes reserve after it's normal life expectancy as a 1st line unit. At that point, it is paid for and the only expense should be for maintenance. If the reserve ambulance fund is used for purchasing new replacement ambulances, the city must clarify exactly what they are paying for and what revenue was generated from the sale of the reserve unit.

The consultants do support the EMS re-chassis program for their ambulances where the EMS box is placed on a new chassis and titled as new.

Training

The fire department should increase the area from which they will accept applicants who might wish to become part-time members. They should do this by marketing their fire academy to a large audience. All officers in both fire and EMS should be required to obtain two hours of supervisor training per month, offered in-house while on duty. Additional joint training between fire and EMS is beneficial to both those that provide and receive emergency services.

The consultants believed that EMS employees were mandated to receive 25% of the mandatory 51 hours of continual education in 2015. However, an EMS correction from the draft report indicated they had to achieve 75% of the required continuing hours of training. EMS training data provided for 2015 indicate no employee reached this requirement.

Fire Prevention

The West Des Moines fire prevention bureau (FPB) is a very progressive division of the fire department. In conjunction with the on-duty fire personnel, the FPB annually inspects over 3,000 inspectable occupancies within the city. In addition, the FPB works closely with the police department in conducting fire investigations.

Safety Education

Both the fire and EMS departments are progressive in their public safety education programs. However, there could be improvements in a greater cooperative development of safety curriculums so that each safety department (including police) are giving consistent messages in a similar format.

Fiscal

A brief synopsis of the importance of the fiscal section is not achievable and the reader is encouraged to read this section in its entirety especially in reference to concerns about the EMS Alliance.

Alliance – Should it Continue

There were four sub questions to this section:

> *What is the Value of the Alliance to the City?*
> Certainly, the Alliance provides higher levels of EMS training to some paramedics with their ability to perform functions within the hospital not available to other agencies.
>
> Conversely, there is considerable expense in the turnover rate of part-time EMS employees most associated with Alliance duties. Other employee issues have driven the consultants to recommending an Employee Satisfaction Survey within the EMS department.
>
> Assessment of the actual expense to the city is greatly underestimated in the finding of the consultants.
>
> *Should the Alliance Remain as Is?*
> The simple answer is no! However, the Alliance is far too complex and reassessment of its continuation is appropriate after a comprehensive full-scale audit including all aspects since its inception.

Develop A More Equitable Agreement?
Yes, this would be the first step after the comprehensive full-scale audit to develop a less complicated, easy to understand, and transparent document in conjunction with UnityPoint Health.

Withdraw From the Alliance?
If the full-scale audit findings indicate that this is not an equitable partnership for the taxpayers of the city to embrace, it would be appropriate to consolidate fire and EMS and place it under a single department head.

Introduction

McGrath Consulting Group, Inc. was commissioned by the West Des Moines (WDM) City Council to conduct an operational assessment (audit) of the West Des Moines Fire Department (WDMFD) and the West Des Moines Emergency Medical Services Department (WDMEMS). The purpose of this study is to present, to the leadership, an independent, non-biased assessment of each of the departments' functionality and preparedness, as well as to identify areas of excellence within the departments and also explore opportunities for improvement. Included within the scope of the project was a thorough study of the "Iowa EMS Alliance", a public/private 28E agreement between the City of West Des Moines EMS Department and UnityPoint Health-Des Moines (UPH).

(Note: throughout the report the terms Iowa EMS Alliance, City/UnityPoint agreement, and Alliance are used interchangeably.)

As part of the study, the consulting team conducted a series of interviews (small groups, individually, or by phone) with the following:

- West Des Moines City Council members
- West Des Moines City Manager
- West Des Moines Mayor
- West Des Moines Police Chief
- West Moines Human Resources (2)
- West Des Moines Fiscal (2)
- UnityPoint Fiscal (1)
- West Des Moines Fire Department
    - Fire Chief
    - Deputy Chief (Shift Commanders) (3)
    - Deputy Chief Training
    - Deputy Chief Fire Prevention
    - Lieutenant Fire Prevention
    - Public Education Specialist
    - Career Fire Lieutenants (4)
    - POC Fire Lieutenants (2)
    - Career Firefighters (12)
    - POC Firefighters (2)
    - Members Survey Responses
    - IAFF Local 3586 Officers
- Alliance (6)
- West Des Moines EMS Department
    - EMS Chief

    - Assistant EMS Chiefs (2)
    - EMS Deputy Chief (1)
    - EMS Lieutenants (3)
    - EMS Medics/EMTS (22)
    - EMS Union Officials (2)
    - Members Survey Responses
- Former West Des Moines Employees

As the study progressed, two issues became more prominent; each with very conflicting perspectives by those interviewed. The two issues were:

- What is the value of the Alliance to the City?
    - Should it remain as is?
    - Develop a more equitable agreement?
    - Withdraw from the Alliance?

- Should the WDMFD and WDMEMS departments be consolidated into a single department?

It is important for the reader to understand that a study of this nature is a snapshot in time, and numbers of employees, vehicles, and policies are always fluid; therefore, the consultants attempted to be consistent with the data/numbers, whenever possible. Any report of this nature is only as good as the data and information provided to the consulting team and for an audit of this nature, a significant amount of documentation was required. Every effort was made to obtain accurate data and examine the issues from a non-prejudicial perspective. Without question, collecting non-conflicting data was challenging; however, each department's leadership made every effort to provide the material requested.

Therefore, the recommendations made within this report, are based on quantitative data and qualitative observations by the consulting team who have spent years in either fire, EMS, emergency services or an aspect related to that endeavor. Appendix A lists the data that was requested by the consulting team prior to the first site visit.

Initially, five consultants were assigned to the project; however, two additional consultants were added due to their area of expertise. Each consultant was assigned topics that were appropriate to their specific skills and expertise.

- Dr. Tim McGrath, CEO – Project Manager – Fire/EMS (paramedic) background
- Chief Michael Stried – Lead Consultant – Fire/EMS (paramedic) background
- Battalion Chief Larry Pieniazek – Fire Consultant – Fire/EMS (EMT) background
- Dr. Victoria McGrath, CEO McGrath Human Resources Group – Human Resources
- Jim Van Hooser – EMS consultant – non-profit 9-1-1 provider
- Chief Justin Heim – EMS consultant – Paramedic background
- Robert Stedman – Fiscal/Administration

The primary contact and scheduling for the consulting team was Fire Chief Craig Leu. The consulting team wishes to thank City Manager Tom Hadden for ensuring the consulting team would be unrestricted in their assessment efforts. A special thanks to all stakeholders who provided information.

Although the perspectives of those interviewed were diverse, the consultants at no time were restricted or influenced by any WDMFD or WDMEMS member, City Council Members, or other elected and/or appointed officials or their agents. Rather, the consultants took a non-biased professional assessment of the WDMFD and WDMEMS Departments, which has produced these study findings.

The report is divided into major sections, each of which will begin on a new page. Each section contains a discussion and describes the WDMFD and WDMEMS structures and their practices, policies, and/or data – as documented during the time of the study. Each section (when applicable) includes consultants' recommendation(s). The report concludes with a summary – by section – of all recommendations/opportunities.

Recommendation Hierarchy

All recommendations will be distributed throughout the report where appropriate and will end with a "Priority Rank" using the table below:

Table 1: Priority Hierarchy

Priority	Definition	Example
1	**Urgent/Immediate**	Potential threat to life, legal and regulatory compliance violations; physiological needs; essential preventative action needed
2	**Pressing < Priority 1**	Significant impact on organization; action needed as soon as possible
3	**Important < Priority 2**	Organization will benefit by addressing soon; items that should be accomplished
4	**Future Consideration**	Items needs to be addressed; develop future plan of action; low consequences of delay-action
5	**Information Only**	Organization should be aware; take under consideration

Overall Analysis

Consultants have the advantage of standing on the balcony and looking down at the operation from a global perspective without the history of past wrongs or personal events. Any organization has areas of excellence as well as room for potential improvement, and the WDMFD and WDMEMS departments are no exception. The overall analysis of these organizations however, found two groups of dedicated individuals that provide highly skilled fire, rescue and emergency medical services to their constituents.

Although the consultants were repeatedly told "fire and EMS work well together,", the study findings would suggest it would be more accurate to state that fire and EMS respect each other and perform functions well at the same emergency scene. However, even at these emergency scenes they function as two independent departments; which, in some cases results in two separate command structures (one fire, one EMS) at the same emergency event. There is very little joint training and the supervisors of one department are very reluctant to provide supervision to an employee of the other department. The consultants will emphasize that each department is excellent at what they do, but have copious opportunities to function more efficiently and effectively as a team.

Overview of Departments

Fire Department

The history of the West Des Moines Fire Department (WDMFD) dates back to 1893. It was at that time that the West Des Moines City Council appointed a crew of "bucket brigade" members to help control fires within the city limits. The construction of its first fire station was reported to have been built in 1900, and the first "new" piece of fire apparatus was purchased in approximately 1937. The station was built in the city's Valley Junction Business District. The first members of the department were all volunteers, and this same form of a dedicated volunteer firefighting force was in place for nearly 100 years. Many volunteers over those years dedicated countless hours in protecting the city from fire.

In 1972, it was determined by the city council that a fulltime position of Fire Chief/Building Inspector was warranted, and one was hired. As the city expanded and expectations of its citizenry grew, eight full-time (Career) firefighters were hired to supplement the all-volunteer firefighting force. These firefighters were placed on a schedule that had them working during the daytime hours, Monday through Saturday when the availability of volunteers was more limited. Over the next 10-15 years, additional firefighters were hired creating more full-time positions as additional stations were needed with city boundaries expanding and growth emerged. The career firefighters meshed in with the volunteer force in providing firefighting coverage "around the clock". During this same time period, a separate department within the city was created to provide EMS Services (Ambulance) to the community. The ambulance services had been previously provided through the Police Department up until that time.

Today, the WDMFD is a full-service fire and rescue organization providing essential public safety and emergency services to a quickly growing population base. The fire department operates out of five Public Safety stations in providing fire suppression, first response (EMS), technical rescue, hazardous materials (hazmat) response, fire prevention/public education activities, as well as conducting fire investigations.

On a daily basis (24/7), there are three engines and one truck (aerial apparatus) staffed with three

or four career firefighting personnel (fulltime) including a Lieutenant, and one Driver/Operator. Additionally, there is another engine covered by part-time staffing for 12-hours on certain nights of the week, based upon their availability. Each of the three shifts are supervised by a Deputy Chief, also working 24/7, and is assigned to a command vehicle. There are three full-time staffers assigned to the Fire Prevention Bureau and two part-time members. They are under the direction of a Deputy Chief/Fire Marshal and one Lieutenant. Full service fire prevention services are provided through this division, as well as, Public Fire Safety/Educational opportunities.

The City of West Des Moines currently was found to consist of 47.47 square miles with approximately 62,500 residents. The population influx increases on a daily basis to approximately 135,500 due to its vast business and commercial properties being located within its corporate limits. West Des Moines actually lies within the four counties of Polk, Dallas, Warren and Madison. The Raccoon River divides the city, flowing from west to east, in the approximate center of the city, and is traversed by Interstates 35 and 80, as well as Freeway 235.

ISO Rating and Accreditation

The Insurance Services Office (ISO) is a recognized agency which thoroughly evaluates fire protection services for the purpose of setting insurance ratings in a given area. The WDMFD is proud to have lowered their classification from a Class 3 to a Class 2 in 2014. West Des Moines Class 2 rating places the Fire Department as only one of 13 departments in the State of Iowa with such a designation.

Accreditation: The term accreditation is a comprehensive self-assessment and evaluation model that enables organizations to examine past, current, and future service levels and internal performance and compare them to industry best practices and strive for improving delivery of fire services.

The Center for Public Safety Excellence (CPSE) is the only accreditation program for fire service organizations. The accreditation program is administered by the Commission on Fire Accreditation International (CFAI), and allows fire and emergency service agencies to have a third-party assessment. The WDMFD utilizes this system to:

- Evaluate the performance of the department
- Develop community-specific Standards of Cover (Risk Assessment)
- Determine community risk and safety needs

The WDMFD was first accredited in 2006 and successfully attained reaccreditation status in 2016. The WDMFD is only one of 220 accredited fire agencies in the world with 211 of those located inside the borders of the United States; as well as one of only four departments in the state of Iowa to gain such a status

The WDMFD strives to fulfill the following:

Vision Statement
"To Strive Toward a Safer Community for our Citizens, Businesses and Visitors"

Mission Statement
"Dedicated to Saving Life and Property"

Emergency Medical Services Department

Emergency Medical Services (EMS) has a long and storied history. The West Des Moines Police Department originally modified a station wagon in the early 1960's to transport patients to the hospital. This vehicle was staffed by police auxiliary members. In that era, the main goal of the ambulance was to rapidly transport patients to definitive care at the hospital. The modern West Des Moines EMS program evolved again in the early 1980's as the responsibilities were shifted from law enforcement to a third service volunteer delivery model. Current Chief Jeff Dumermuth, at that time, held dual EMS Director and Police Administrative Assistant/Dispatch responsibilities through 1990 when his responsibilities transitioned solely to focusing on expanding the EMS Department.

In 2008, the WDMEMS entered into a public-private partnership between the City and UnityPoint Hospitals to create the Iowa EMS Alliance. While the Alliance will be detailed in a later section, this arrangement has bifurcated the responsibilities of the organization into both standard 9-1-1 and hospital emergency and non-emergency transports. UnityPoint shares the expense of municipal employees, equipment, and a proportional share of administrative costs.

The department utilizes two separate medical directors to oversee the delivery of services: Dr. Chad Torstenson, MD, oversees 911 operations while Dr. Cory Vaudt, DO, oversees hospital operations.

At the time of this report, the department has an approved staffing level of 82 employees. There are currently 31 full-time and 48 part-time employees within the department. The administrative division consists of the Chief, two assistant chiefs (one funded by 50% Westcom budget) and a deputy chief of training. The EMS administrative secretary and on additional assistant chief are funded 100% in the Westcom budget.

The operations division consists of three shift supervisors, 26 EMT Basics, 39 paramedics and 3 firefighters/paramedics that are shared employees with WDMFD. There are full time and part time positions that are currently unfilled.

West Des Moines EMS currently operates a total of 10 ambulances: three of which are assigned to the City for 911 operations 24/7, two assigned for hospital transports, one "peak load" staffed ambulance for hospital transports which is staffed 8 hours a day, 5 days a week. There are several ambulances held in reserve which can be put into service in either the city or for hospital transports as needed and one ambulance equipped for Pediatric and Newborn Intensive Care.

The EMS Department also utilizes a "special events" trailer used for incident command purposes, a John Deere Gator equipped for patient transport from rugged or inaccessible areas, ten bicycles for special events use and "Pete the Paramedic", a remote controlled robot used for public education purposes.

The EMS Department has maintained an active role in state, regional and national organizations and is committed to furthering and improving the delivery of emergency medical services to the City of West Des Moines.

Accreditation

The WDMEMS Department has been accredited by the Commission on Accreditation of Ambulance Services (CAAS) since 2001. WDMEMS is one of 160 accredited agencies in the United States and one of only three in the State of Iowa. Similar to the accreditation standards met by the WDMFD with CFAI, CAAS accreditation establishes a "gold standard" model of a service which validates delivery of service and organizational performance standards via an independent review of peers.

Westcom Emergency Communications

Westcom Dispatch Center is a consolidated public safety dispatch facility, aka: Public Safety Answering Point (PSAP). Westcom dispatches police, fire, and EMS for the City of West Des Moines and police and fire for four adjourning municipalities.

In 2000, the cities of West Des Moines, Clive, and Urbandale had separate and independent PSAPs, each staffed by the respective city. By March 2001, Clive and Urbandale closed their PSAP and joined Westcom. In 2012, the City of Norwalk and in 2015 the City of Waukee, also joined Westcom.

Westcom currently has 32 employees consisting of 26 full-time and 6 part-time employees working three shifts 24/7/365 with 8 dispatch stations in the operation room. Both the CAD and radio systems were being upgraded at the time of the site visit.

Westcom had an impressive answering and dispatch time which meet all of the current industry and national standards. In 2015 the PSAP handled 175,379 phone calls of which 49,738 or 28.4% of all calls were emergency 9-1-1 calls.

Governance

The City of West Des Moines is governed under the mayor-council form of government, along with a council appointed city manager. The makeup of the council consists of the mayor, three council members, who each represent one of the city's three wards, and two at-large council members. While the city council is ultimately responsible for all aspects, oversight and decision making authority, the city manager coordinates the day-to-day business operations of the city. Each appointed city department head is afforded oversight in managing their day-to-day operations as related to his/her own division.

The consultants met with the following governing officials and department heads:

- City Council (all five members)
- City Manager
- Emergency Medical Services and Communication Chief
- Finance Director
- Fire Chief
- Human Resources Director
- Mayor
- Police Chief

Additionally, within the City of West Des Moines, a three-member Civil Service Commission, appointed by the city council, is in place as created under the Code of Iowa, Chapter 400-Civil Service statute. This commission exists to provide oversight and protection to the city and those covered as it relates to full-time police officers, firefighters and certain other full-time city employees. This oversight is to assure compliance with the federal and state laws prohibiting discrimination on the basis of race, sex, age, handicap, national origin, disability, political or religious opinions and affiliations.

The commission is charged with establishing and maintaining hiring and promotional lists for police officers and firefighters through competence evaluation of the applicant in the particular field of examination (Iowa Code 400.8).

Council Oversight/Role

The West Des Moines City Council is a diverse group which brings considerable expertise from varying arenas in performing their roles as elected officials. The background, experience and biographies of the elected officials clearly provide a wealth of professional business sense in making decisions within their roles. Oversight and direction from the council to the city manager and the various department heads are important aspects in assuring efficient day-to-day delivery of service is provided.

Role of the Council in Directing the Fire Chief and the EMS Chief

The council's responsibility is to consider new policies and/or changes to existing policies based upon a thorough evaluation of gathered data. In determining such policies, consideration and evaluation should be inclusive of all aspects of the issue including the Fire Chief and/or EMS Chief's detailed presentation of the topic under consideration. Council policies may involve determining levels of service the department will provide (i.e., fire suppression, fire prevention, rescue, EMS operations, etc.). Both the Fire Chief and EMS Chief are given clear and detailed direction from the council and are allowed to determine their policies of operation as to how each department will meet such direction of the council, and also be held accountable for meeting that direction.

Taxpayers Liaison

Each council member is the conduit to the public, who provide the fiscal resources to ensure city services, including the fire department, are funded. Their responsibility is to improve the relationship between the citizens, fire department and the council itself. They must ensure that their actions are prudent for the general public as a whole. They should be supportive for the department and aid in reinforcing and "selling" their endeavors.

Performance Review of the Command Staff (Chiefs)

It is essential that the city council provides a formal annual evaluation of the performance of the department heads including the Fire Chief and the EMS Chief. The council should define their expectations (in writing) for the next fiscal year, as well as address the progress made during the

current budget year. The Fire Chief and EMS Chief should also evaluate each officer holding a rank in their respective senior command structure (Fire: Deputy Chiefs; EMS: Assistant Chiefs and Deputy Chief) annually to assure their responsibilities and assignments are met.

Oversight of Departmental Fiscal Activities

The city council (or their conduit) is responsible for reviewing monthly activity reports, monitoring the approved fire department budget, while maintaining oversight and accountability involving fire department expenditures. This may be accomplished through the finance department assuring reports are provided to the elected officials.

Capital Planning

The city council should continue to provide support to both the Fire Chief and EMS Chief in the area of future growth and planning. The importance of such direction would enable the chief to work with and implement the current strategic plan. Forecasting future vision of the department and constructing the master plan incorporating future capital expenditures such as apparatus replacement, station construction, personnel, as well as other "big ticket" items is an important factor in determining and coordinating future budget implications. Such a master plan should be reviewed and updated annually to be kept current with changing conditions. The council should continue to utilize the expertise of the department's leadership team in the process of capital planning.

Set Department Goals in Conjunction with the Chiefs

The key word here is with the Fire Chief and EMS Chief. The final decision for all issues ultimately lie with the city council, but setting departmental goals must involve the open and honest discussion with the fire/EMS chief and his/her "team". The city manager is the conduit for these discussions; once established, each respective chief must fulfill, implement, or carry out the city council's directives.

Setting goals should follow the "SMART" format and should be:

- Specific – define exactly what is to be expected

- Measurable - a feedback system to indicate progress and accomplishment of the goal
- Attainable – ensure the respective chief has the needed resources to accomplish the goal
- Relevant – a set priority of importance to the delivery of quality, cost-effective services
- Time Frame – a method to communicate progress and a well-defined outcome as to when the goal is to be completed

Leadership

Fire Department and EMS Department

There are many aspects which need to come together to assure that a safety department runs well, but none really stand out more than the department's *Leadership*. Leadership does not, however, solely lie with the Fire Chief or EMS Chief alone; it involves the *management team* structure and *their* commitment toward the organizations vision. When an organization is highly successful, credit is given to the Chief; whereas, when the organization is dysfunctional, the blame is also pointed to the Chief. The truth is that it is the entire organization, including the *management team* that is responsible for its success or its dysfunction.

Fire Chief

The current Chief has been in this position for a relatively short time, but has appeared to accomplish much during this time. Any time a new fire chief comes in from the "outside," many times there is a "learning curve" or adjustment period for fire department members as well as with the chief. Through the consultant's evaluation and interview process with department members, it was apparent that this changeover in leadership has had a very positive effect department wide. The consultants did take an in-depth look at the overall picture of just how the current position of fire chief is viewed from many perspectives. To assist the consultants in gaining a clear understanding as to the culture of the fire department, extensive interviews were conducted with the City Council members and Officials, the Fire Department Officers/Rank-and-File Personnel, as well as with the Chief himself.

Staff Officers

Currently, the fire chief is the only administrative officer of the fire department solely responsible for administering the day-to-day business activities. The chief is supported with five Deputy Fire Chief's. There is one Deputy Chief assigned to the Fire Prevention Bureau, one assigned to the Training Division, and three being assigned to supervise one of each of the three shifts. There is a total of 16 Fire Lieutenants with one assigned to the Fire Prevention Bureau, 4 assigned to each of the three shifts, and 3 Paid-On-Call.

Upon the consultant's evaluation of the fire department's management team, it was felt that the day to day supervision and management of the three working shifts appear to be quite adequate for mitigation of emergencies, planning, and conducting routine shift operations. However, the administrative workload easily could be overwhelming for any one single chief officer to adequately manage efficiently. The addition of a true "second in command" (Assistant Chief) is warranted within a fire department and city the size and magnitude of West Des Moines. A survey of surrounding fire departments found neighboring departments and similar size departments had a 40-hour second in command (titles changed but position was 40 hours 2nd in command):

- Urbandale (2)
- Norwalk
- Waukee
- Clive (3)
- Iowa City
- Sioux City
- Waterloo
- Council Bluffs

Additional justification for a fire department Assistant Chief is discussed in the Staffing section of this report; factors considered in coming to such a conclusion included call volume, scope of budget, span of control, as well as evaluating the current duties, assignments, and current necessities required of the fire chief.

West Des Moines Emergency Medical Services

EMS Chief

The current Chief has served the organization for over thirty years and has made great strides in remaining responsive to emerging needs in both the community and as a pioneer in implementing new, and sometimes radical, ideas. It was clear to the consultants that the Chief takes a lot of pride in both the City and the EMS organization. It also became readily apparent to the consultants that there are some large, overshadowing elements that exist within the organization, but the biggest issue and area of concern was the Alliance. The consultants recognize through copious stakeholder interviews that not everyone will agree on the Alliance's effectiveness or need in a public safety setting. However, the consultants do not believe personal feelings overly influenced stakeholder comments on the efficacy and efficiency of the organization.

The consultants interviewed a large number of EMS employees and discovered considerable frustration, dissatisfaction, and concerns for safety. The consultants believe it is in the best interest of the city, EMS leadership team, and employees to conduct an "Employee Satisfaction Survey". A survey of this nature could be overseen by the city's Human Resources department who can ensure the employee's comments would be kept in confidence and eliminate fear of retribution of loss of employment. If the City conducts such a survey, it has to make a commitment to take the comments seriously and develop a plan of action to respond to employees as well as take action on those items that it deems appropriate.

Recommendation – Employee Satisfaction Survey

- *All EMS employees should be encouraged to participate in a confidential satisfaction survey overseen by either the city's Human Resource department or an independent contractual service.* ***Priority 2***

Staff Officers

The EMS Chief is direct report for three Assistant Chiefs, one of whom is assigned to oversee general operations of the department, one oversees logistics and the third oversees the Westcom

dispatch center. There is a full-time Deputy Chief of training. There are also three shift Lieutenants, one per shift, who oversee the general operations of their daily shift and personnel.

During the consultants' stakeholder interviews, there was concern expressed by some members of the management team that there is no parity in rank between the fire department and the EMS department. It was articulated that the fire department shift commanders were Deputy Chiefs while the EMS Lieutenants held the same rank as an Engine Lieutenant, but had ultimate responsibility for their entire shift of on-duty personnel. It appeared that the perceived disparity in rank title has created an environment where EMS Lieutenants feel less valued than the fire department Deputy Chiefs, despite having many of the same responsibilities on a day to day basis.

Recommendations – Governance/Leadership

- *Consider the creation of the position of Assistant Fire Chief to support the Fire Chief in management of administrative requirements.* ***Priority 2***

- *Consider reclassifying the EMS Lieutenants to a rank that is more reflective of their daily shift responsibilities.* ***Priority 2***

Emergency Activities

Overview

This section highlights the emergency response data for the West Des Moines Fire Department and EMS Department, for the study period of 2013-2015; however, some data was provided reflecting a 10-year period specific to the Fire Department. Relevant, detailed, and concise data pertaining to each department is essential in providing archival documentation as well as for planning purposes.

The prime responsibility of the fire and EMS departments is to respond to and mitigate their respective emergencies in a safe and efficient manner. Although this activity accounts for a relatively small percentage of a department's overall time, its state of readiness must always be maintained at maximum levels. The challenge for fire and EMS managers is to identify resources needed to provide the highest levels of service and assure the safety for those in need of assistance as well as for the rescuers. Fire and EMS chiefs along with department supervisors must be able to provide the resources needed to carry out these missions. Managers must utilize various means to collect, categorize, and evaluate data to help justify their needs. Various leadership and management functions should be considered in making critical decisions. Among such functions should include, but not be limited to:

- Fiscal management
- Staffing
- Resource deployment
- Budgeting
- Purchasing
- Strategic planning
- Program development/implement
- Program oversight/assessment
- Assuring competency
- Assuring cost-effective/efficient services
- Communication with elected officials

Department leadership can quantify the above objectives through good data. The International Association of Fire Chiefs (IAFC) defines good data as data that meets three components:

- **Good Data is Relevant** – you are collecting information on the things that matter, like response times and number of calls for service.

- **Good Data is Accurate** – your processes for data collection must be consistent and trustworthy.

- **Good Data is Reliable** – a measurement from one company is equivalent to the same measurement from another company. You don't have to "adjust your data to accommodate known distortions".

Source: International Association of Fire Chiefs: Weathering the Economic Storm, December 2008

Fire Department

The West Des Moines Fire Department is a full-service fire department which provides public safety emergency services to a rapidly growing community. The full-time department staffing consists of 59.5 firefighters, officers, administrative and civilian members, along with thirty-one part-time members (numbers as of August 2016). Fire and rescue services provided include fire suppression, first-response emergency medical services (EMS), specialized/technical rescue and hazardous materials (Haz-Mat) response services, as well as complete fire prevention bureau activities and services.

In providing such services, the fire department operates out of five strategically located Public Safety stations located in West Des Moines which house its staff, apparatus and equipment. Currently, the fire department staffs three engine companies (One of which is referred to as an "*ALS-Engine"*) and one aerial (Ladder) apparatus. These units are staffed daily with 3-4 career personnel 24/7, and are under the supervision of a Deputy Fire Chief serving as the shift commander. An additional engine is staffed approximately 5 nights a week (12-hour night shifts) with 3-4 paid-on-call personnel supplementing the department's fire firefighting capabilities. All firefighting personnel are certified through the State of Iowa to the Firefighter II level, and additionally, all fire department officers are certified to the Fire Officer II level.

The daily career staffing levels are currently set with a minimum of fourteen personnel and a maximum of seventeen. Additionally, the program which allowed volunteer personnel to supplement the career staff in a part-time capacity, has recently been implemented. The program is designed to assist in maintaining the four-person manning levels on each piece of apparatus.

The fire department is supplemented with various other pieces of apparatus, including a brush truck, a water tender (aka: tanker), two support utility vehicles, two reserve engines, and several staff cars.

In dealing with-and mitigating incidents involving hazardous materials such as accidental spills, exposures, releases etc., the WDMFD is trained and ready to respond. All fire department personnel are trained through the State of Iowa and are certified to the Hazardous Material Operational level. Such training enables the fire department to respond to, investigate, identify, and stabilize such incidents to the operational level. The WDMFD relies on, and works in conjunction with, the Des Moines Fire Department Regional Hazmat Response Team for all incidents requiring advanced, technician level personnel to mitigate an incident. The two fire departments work under a specific 28E agreement for these services.

The WDMFD responds to certain emergency medical services (EMS) calls within their respective station areas in providing "first responder level" emergency medical care. All fire department personnel are trained and certified to a minimum of EMT-Basic level", although this is the minimum level of certification for all career members, some part-time and paid-on-call personnel do not have State EMS certifications. This response is in support of the West Des Moines Emergency Medical Services Department- - a *third-service* advanced life support (ALS) city ambulance provider and would respond on the call as well. Such a fire department response would occur basically due to the three circumstances shown below:

- When an ambulance is not readily available within the city
- Automatically, as support of an ambulance in "back-up" role on certain identified EMS calls
- Upon any request from an ambulance crew for additional manpower assistance e.g. lift assists

Housed at Station 22 is what is referred to as an "ALS Engine" which is staffed with a certified Firefighter-Paramedic (EMT-P). Station 22 is considered a "Joint Station" in that it is a *shared-cost station* with the City of Clive. This arrangement and setup shares the total cost of operating and provides fire and EMS coverage to a portion of each jurisdiction. The engine responds to

any request for Fire or EMS services within its district and relies on an ambulance from the respective jurisdiction to provide the transport of the patient.

The WDMFD provides a wide range of technical rescue coverage to its residents including: vehicle extrication, confined space/trench/collapse/rope rescue, as well as water rescue. The technical rescue team generally responds out of one station utilizing the career staff; however, all first-due companies are trained to the technical rescue-awareness level.

The fire department relies on their neighboring departments as mutual aid "partners" on a regular basis in providing additional resources when needed for any type of incident. The WDMFD does not utilize any type of "Automatic Aid" response to its fire incidents, but they do request their services as necessary. Various "28-E" mutual aid agreements are in place to provide protection for services rendered and all requests for mutual aid is requested through the Westcom 9-1-1 PSAP.

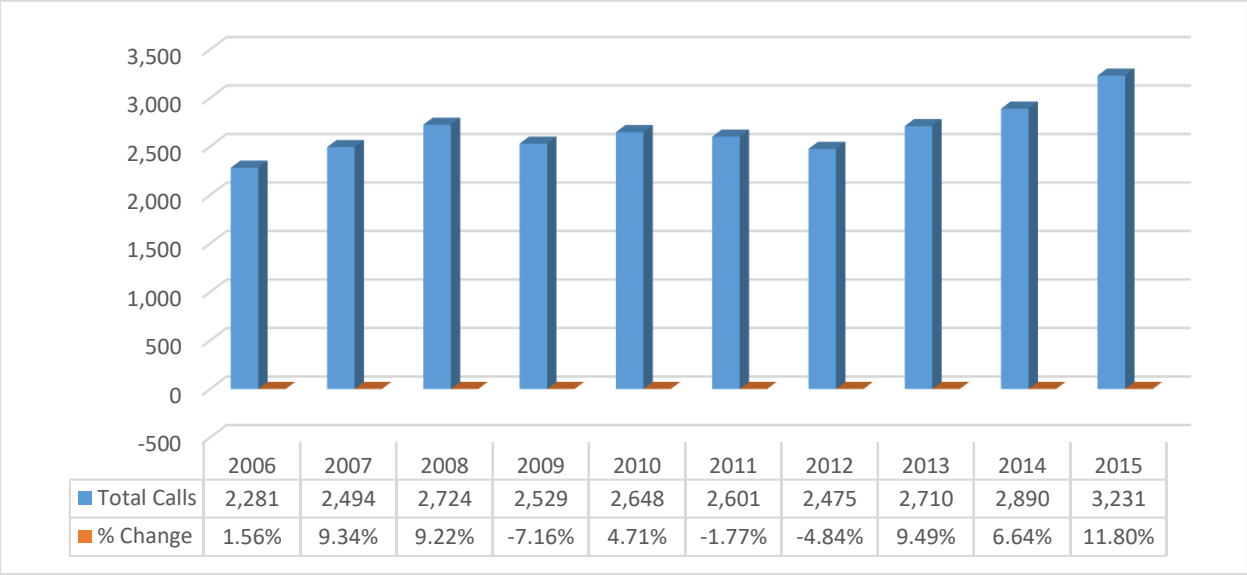
In the State of Iowa, under the jurisdiction of the Office of the Secretary of State, the 28-E agreement provision is defined as a document permitting state and local governments in Iowa to make efficient use of their powers by enabling them to provide joint services and facilities with other agencies and to co-operate in other ways of mutual advantage. Identified below are some of the agencies found to have such 28-E agreements on file:

- Joint Public Safety station WDM-Clive
- State of Iowa/WDM IMAC
- Des Moines/WDM Fire Training Academy
- Polk County Emergency Management Agency/WDM
- Westcom E911 Dispatch/WDM

Ten Year Emergency Activity Totals

The WDMFD provided call response totals for the last ten years. The figure below illustrates the total fire incidents over the last ten years.

Figure 1: **Ten Year Total Emergency Activities**



The annual percentage of yearly increase or decrease in total emergency responses is illustrated in the table below:

Table 2: Percentage Change in Total Calls 2006 - 2015

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Call Total	4,470	4,447	4,819	4,377	4,675	4,309	4,078	4,281	4,474	4,622
% Change	1.52%	-0.51%	8.36%	-9.17%	6.80%	-7.82%	-5.36%	4.97%	4.50%	3.30%

The data provided reflects a modest increase of 4.16% increase in call activity over the past ten years. Yearly increases and decreases in call volume is not uncommon in the industry. Many factors affect such "peaks and valleys", including changes in response policies, record keeping, loss of business and industry occupancies, significant weather events, as well as other various factors.

Total Calls vs. Total Unit Responses

The WDMFD publishes data on total unit responses. These figures account for how many apparatus responded to a given emergency. For example, a structure fire would bring multiple units whereas a car fire might only bring one unit. Although total unit responses can be helpful, it can also be misleading as to the activities of the fire department. For example, the table below

illustrates the total number of emergency calls versus the total number of emergency unit responses:

Table 3: Total Calls vs. Total Units

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Calls	2,281	2,494	2,724	2,529	2,648	2,601	2,475	2,710	2,890	3,231
Total Units	4,470	4,447	4,819	4,377	4,675	4,309	4,078	4,281	4,474	4,622

The consultants are not suggesting the fire department is attempting to inflate their activities; rather to the non-fire individual reading the numbers it might appear that in 2015 the fire department had 4,622 an actual 43.05% inflation of total emergency responses.

Recommendation – Total Call Volume

- *The fire department should publish only the total emergency call activity in its reports and utilize total unit responses for apparatus maintenance and replacement purposes only.* ***Priority 3***

Incidents by Nature

The WDMFD documents its incidents through the use of the National Fire Incident Reporting System (NFIRS) program under authority of the United States Fire Administration (USFA). NFIRS categorizes incident types into nine categories with each category having a series number with multiple sub-categories under each main series number. The USFA collects and analyzes NFIRS data from participating states in order to provide a legal record of fact, assist fire department administration in evaluating its fire and EMS effectiveness, and to collect data for use at the state and national levels.

The following table and figures reflect the 2013-2015 emergency activities of the WDMFD utilizing the NFIRS series categories:

Table 4: WDMFD NFIRS Categories 2013 - 2015

Incident Type	2013	2014	2015	3 Year Total	% of Total
(100) Fire	166	143	154	463	5.2%
(200) Overpressure/Explosion	15	16	*	31	0.4%
(300) Rescue	1,001	1,140	1,453	3,594	40.7%
(400) Hazardous Materials	233	201	196	630	7.1%
(500) Service Calls	89	105	574	768	8.7%
(600) Good Intent	388	391	*	779	8.8%
(700) False Alarm	802	887	842	2,531	28.7%
(800) Weather Related	0	0	8	8	0.1%
(900) Special Incident	17	7	4	28	0.3%
Total	2,711	2,890	3,231	8,832	100%

** No data provided for these NFIRS categories*

National Fire Incident Reporting System (NFIRS) Code Guide

Series 100 - Fire

The sub-categories for Fire include:

- Structure fire
- Fire in mobile property used as a fixed structure
- Mobile property (vehicle) fire
- Natural vegetation fire
- Outside rubbish fire
- Special outside fire
- Cultivated vegetation, crop fire
- Fire, other

Series 200 - Overpressure Rupture, Explosion

The sub-categories for Overpressure-Rupture include:

- Overpressure rupture from steam, no fire
- Overpressure rupture from air or gas, no fire
- Overpressure rupture from chemical reaction, no fire
- Explosion, no fire, excessive heat, scorch burns with no ignition

Series 300 – Rescue/Emergency Medical Services

The sub-categories for Rescue/Emergency Medical Services include:

- Medical assist
- Emergency medical service incidents
- Lock-in
- Search for lost person
- Extrication, rescue
- Water and ice-related rescue
- Electrical rescue

- Rescue or EMS standby
- Rescue, emergency medical service (EMS) incident, other

Series 400– Hazardous Material, Conditions

The sub-categories for Hazardous Materials/Conditions include:

- Chemical release, reaction, or toxic condition
- Radioactive condition
- Electrical wiring/Equipment problem
- Biological hazard
- Accident, potential accident
- Explosive, bomb removal
- Attempted burning, illegal action

Series 500 - Service Call

The sub-categories for Service Calls include:

- Person in distress
- Water problem
- Smoke, odor problem
- Animal problem or rescue
- Public service assistance
- Unauthorized burning
- Cover assignment, standby at Public Safety station, move-up

Series 600 – Good Intent Calls

NFIRS reporting is very subjective and the category of "Good Intent Calls" often is a catchall for incidents which are somewhat uncommon or are unclear as to which NFIRS category is most appropriate.

The sub-categories for Good Intent Calls include:

- Dispatched-canceled enroute
- Wrong location, no emergency found
- Controlled burning
- Vicinity alarm
- Steam, other gas mistaken for smoke
- EMS call where party has been transported
- Haz-Mat release investigation w/no Haz-Mat found
- Good intent call, other

Series 700 – False Alarms/Calls

The sub-categories for False Alarm and False Calls include:

- Malicious, mischievous false alarm
- Bomb scare
- System or detector malfunction
- Unintentional system or detector operation (no fire)

- Biohazard scare
- False alarm and false call, other

Series 800 - Severe Weather and Natural Disaster

The sub-categories for Weather Incidents include:

- Severe Weather and Natural Disaster

Series 900 – Special Incident Type

The sub-categories for special incidents include:

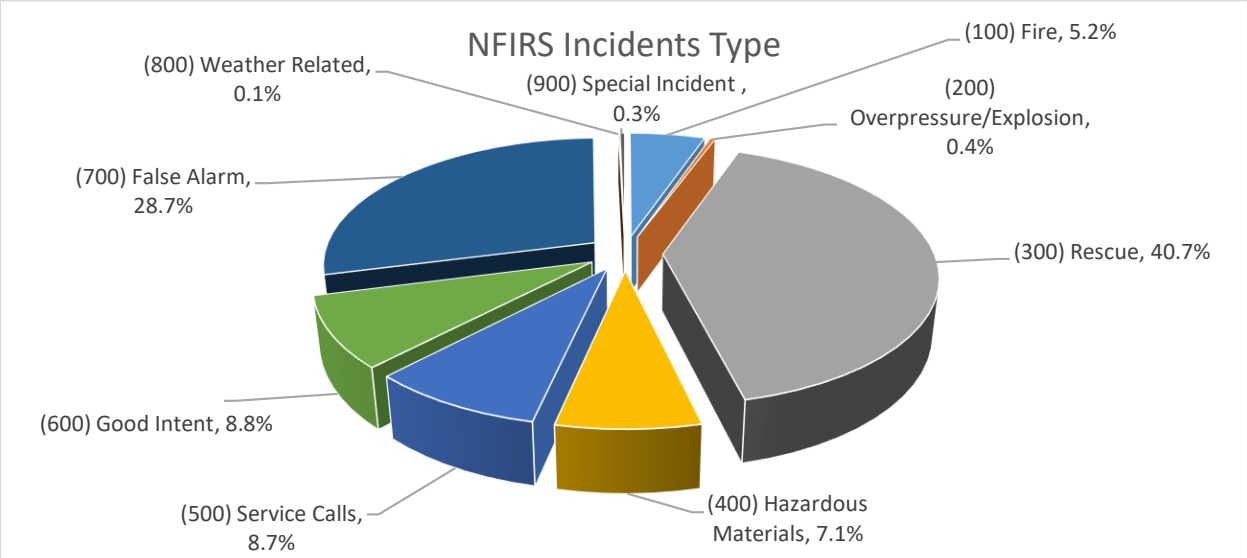
- Citizen's complaints

As outlined above, the NIFRS provides a vast assortment of options detailing emergency response to incidents. The system allows for the identification and categorization of emergency responses for the purpose of tracking such data on a nationwide basis.

WDMFD Incidents by Type

Identified in the figure below are the various NFIRS coding of WDMFD Incidents

Figure 2: WDMFD NFIRS Categories 2013 - 2015



Simultaneous/Overlapping Incidents

The collection and review of data regarding simultaneous calls is advantageous to fire department leadership in determining resource deployment, staffing, budgeting, and planning. The consultants normally include simultaneous incidents data as the first component when

examining service trends. A thorough review of WDMFD's simultaneous data is provided within this section.

The term "simultaneous incidents" is a term utilized in the industry which refers to times when the fire department is handling an emergency situation and another unrelated emergency incident occurs, requiring immediate department response. Depending on the record management system utilized by a department, these incidents might be called overlapping, or back-to-back calls.

The significance of the amount and frequency of simultaneous incidents can result in increased response times or greater usage of mutual aid. There is no consensus in the industry as to an exact number when simultaneous incidents require additional resources. Fire departments do not have the ability to "stack calls" as do police agencies who routinely prioritize calls and dispatch accordingly. With few exceptions, when 9-1-1 requests the fire department, it is for an emergency – at least in the opinion of the caller.

If every piece of fire apparatus were available at its assigned location, every time a call for service was received, the fire department's reliability would be 100%. If, however, a call is received for a particular station/unit, but that station/unit is already committed to another incident, the next closest unit must respond from a different station or source; the substitute company may exceed the maximum prescribed response time.

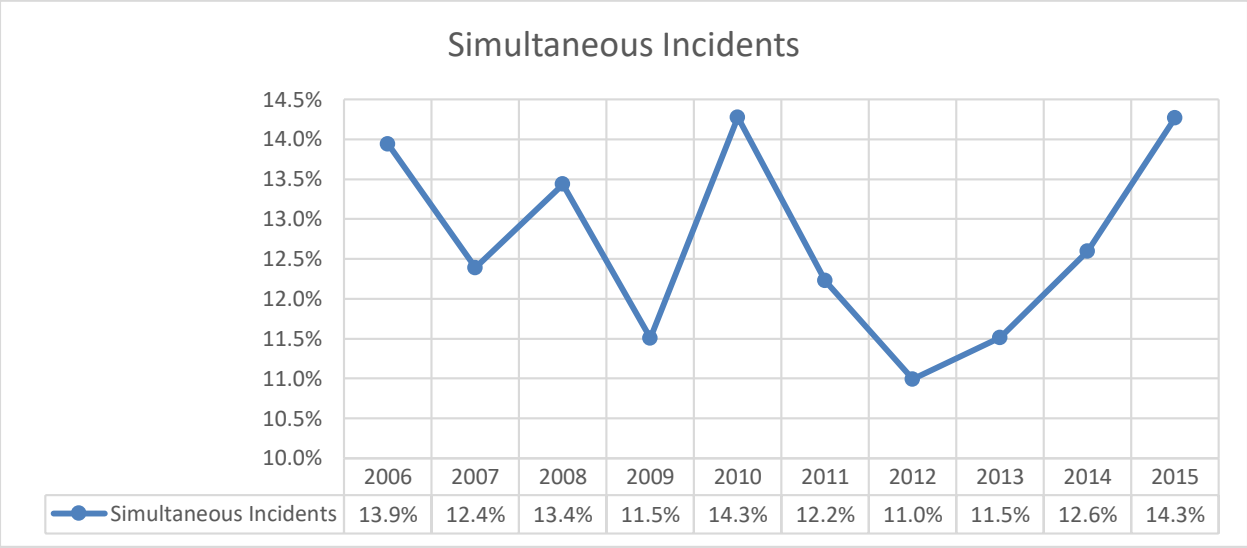
WDMFD Simultaneous Calls

The table and figure below illustrates the number of simultaneous calls and the percentage to total calls for WDMFD for the period 2006-2015.

Table 5: WDMFD Simultaneous Incidents

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Simultaneous Incidents	318	309	366	291	378	318	272	312	364	461
Total Incidents	2,281	2,494	2,724	2,529	2,648	2,601	2,475	2,710	2,890	3,231
% of Total	13.9%	12.4%	13.4%	11.5%	14.3%	12.2%	11.0%	11.5%	12.6%	14.3%

Figure 3: WDMFD Simultaneous Incidents



The ten-year average for simultaneous calls was 12.7% occurrence of all emergency responses.

WDMFD Mutual Aid

The fire department provided the three-year total of mutual aid given and received as illustrated in the table below:

Table 6: WDM Mutual Aid - Given/Received - 3 Years

2013			2014			2015			3 Year Total		
Department	MA Given	MA Received	Department	MA Given	MA Received		MA Given	MA Received		MA Given	MA Received
Clive	1		Clive	2		Clive	2		Clive	5	
Cumming			Cumming	3		Cumming	2		Cumming	5	
Dallas Center			Dallas Center	1		Dallas Center			Dallas Center	1	
Des Moines	4		Des Moines	2		Des Moines			Des Moines	6	
Grimes	1		Grimes			Grimes	1		Grimes	2	
Johnston	1		Johnston	1		Johnston			Johnston	2	
Minburn			Minburn	1		Minburn			Minburn	1	
Norwalk	3		Norwalk	3		Norwalk	5		Norwalk	11	
Urbandale	10		Urbandale	7		Urbandale	7		Urbandale	24	
Van Meter			Van Meter	1		Van Meter	3		Van Meter	4	
Warren County			Warren County			Warren County	1		Warren County	1	
Waukee	4		Waukee	14		Waukee	15		Waukee	33	
West Des Moines		5	**West Des Moines**		15	**West Des Moines**		3	**West Des Moines**	0	23
Windsor Heights	10		Windsor Heights	9		Windsor Heights	8		Windsor Heights	27	
Grand Total	**34**	**5**	**Grand Total**	**44**	**15**	**Grand Total**	**44**	**3**	**Grand Total**	**122**	**23**

Note: Station #22 is a shared station and if the WDMFD apparatus had to respond to a mutual aid request of the Clive Fire Department these numbers have been removed.

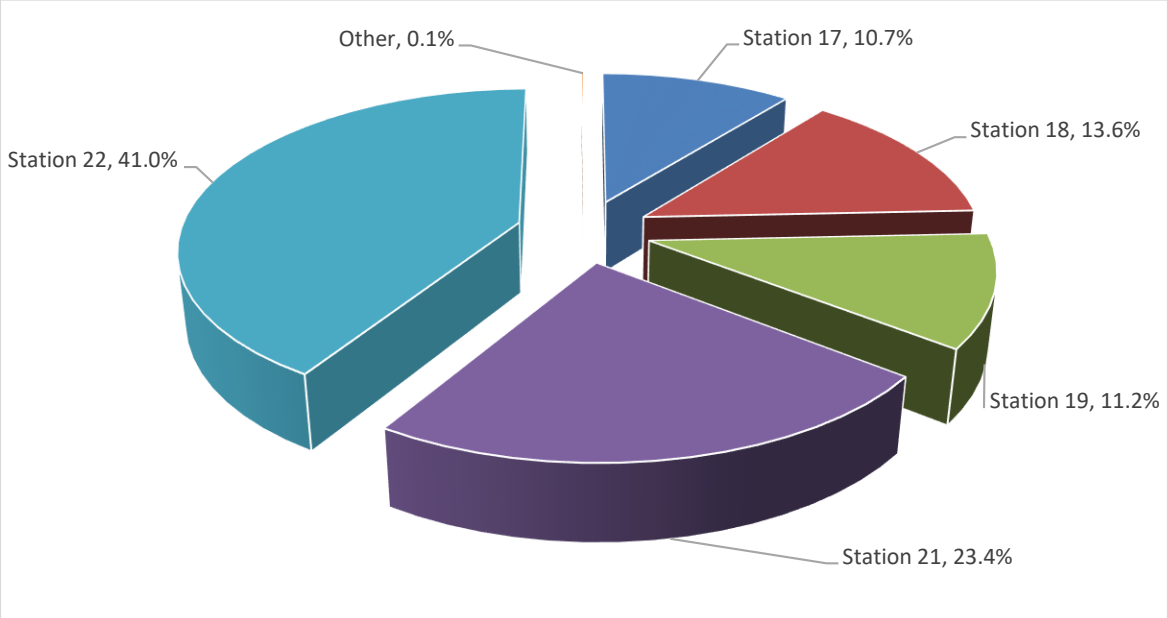
Incidents by Station/District

The WDMFD has five Public Safety stations and the table and figure below illustrates the actual number of calls and percentages for each respective station.

Table 7: 3-Year Total Calls by Station/District

Incident by Station	2013	2014	2015	3 Year Total	% of Total
Station 17	260	301	379	946	10.7%
Station 18	380	419	402	1,201	13.6%
Station 19	234	298	453	985	11.2%
Station 21	670	690	704	2,064	23.4%
Station 22	1,158	1,182	1,285	3,625	41.0%
Other	2	0	8	10	0.1%
Total	***2,704***	***2,890***	***3,231***	***8,831***	***100%***

Figure 4: 3 Year Total Calls by Station/District



Incidents by Shift

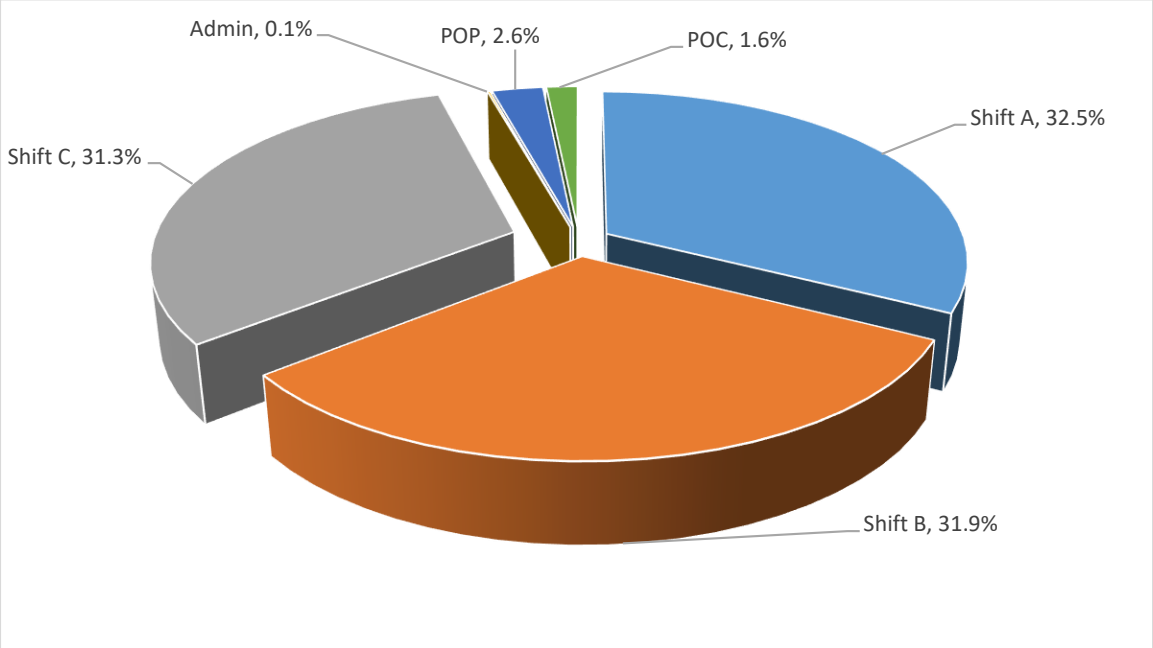
Department leadership, in analyzing the incident comparison by the individual shifts, may appear to be of little use other than to provide bragging rights for the most active shift. It has been found; however, that such findings can be of some value if the leadership utilizes the data for quality control purposes. If a given shift's annual incident totals conflict greatly with other shifts data, fire department administration can review the overall incident responses by each shift and identify as to whether the inconsistency is department-wide or problematic to a particular shift.

In either case, examining incidents by shift is primarily a quality control tool. Nothing remarkable was found between the three WDMFD shifts with regards to incident variance.

Table 8: 10 Year WDMFD Calls by Shift

Shift	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total	% of Total
Shift A	720	792	871	818	852	860	762	914	990	1,042	8,621	32.5%
Shift B	695	805	856	804	821	822	830	861	928	1,043	8,465	31.9%
Shift C	700	769	870	763	851	843	803	831	865	1,022	8,317	31.3%
Admin	8	2	0	1	3	2	4	5	5	3	33	0.1%
POP	158	127	127	125	79	17	18	24	21	6	702	2.6%
POC					42	57	58	75	81	115	428	1.6%
Total	2,281	2,495	2,724	2,511	2,648	2,601	2,475	2,710	2,890	3,231	26,566	100%

Figure 5: 10 Year WDMFD Calls by Shift



** Total call numbers per year conflicted with other data provided*

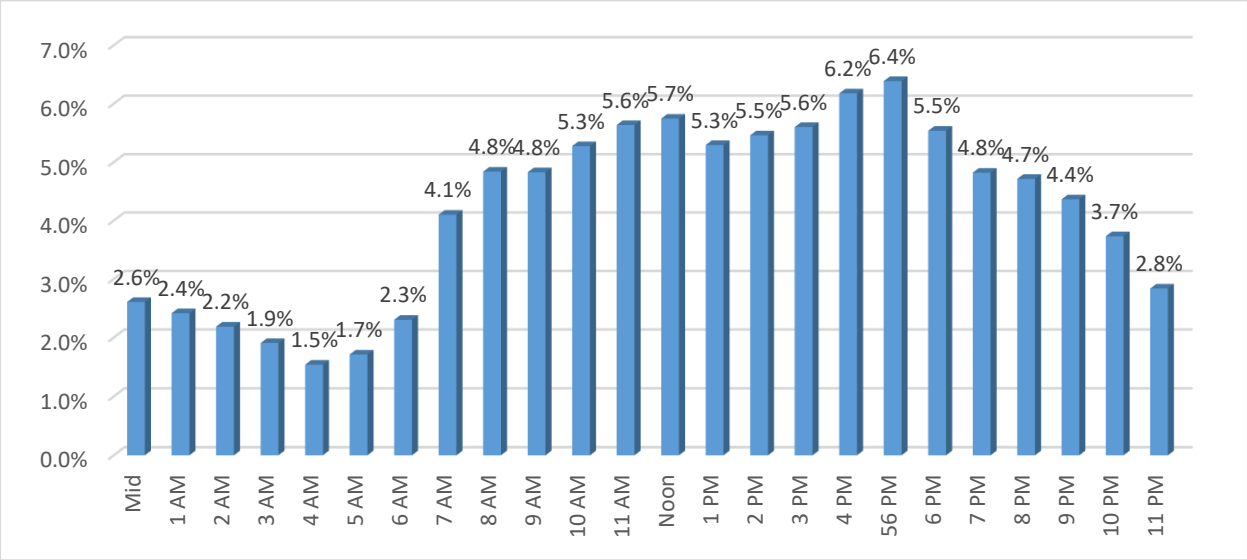
Key

A=Career Stafing Shift
B=Career Stafing Shift
C=Career Stafing Shift
Admin=Administration
POP = Paid-on-Call Staffing
POC = Paid-on-Call

Incidents by Time of Day

The data regarding the call by time of day for the 10-year study period identified that the highest percentage of calls for service were between the hours of 7:00 A.M. and 10:00 P.M., or when the majority of people are awake and active. Data review of emergency incidents by time of day is one factor utilized by leadership to consider alternative staffing methods such as peak staffing during certain times of the day. The figure below illustrates the 10-year average of emergency incidents as related to time of the day.

Figure 6: WDMFD 10 Year Average Calls by Time of Day



** Total call numbers per year conflicted with other data provided*

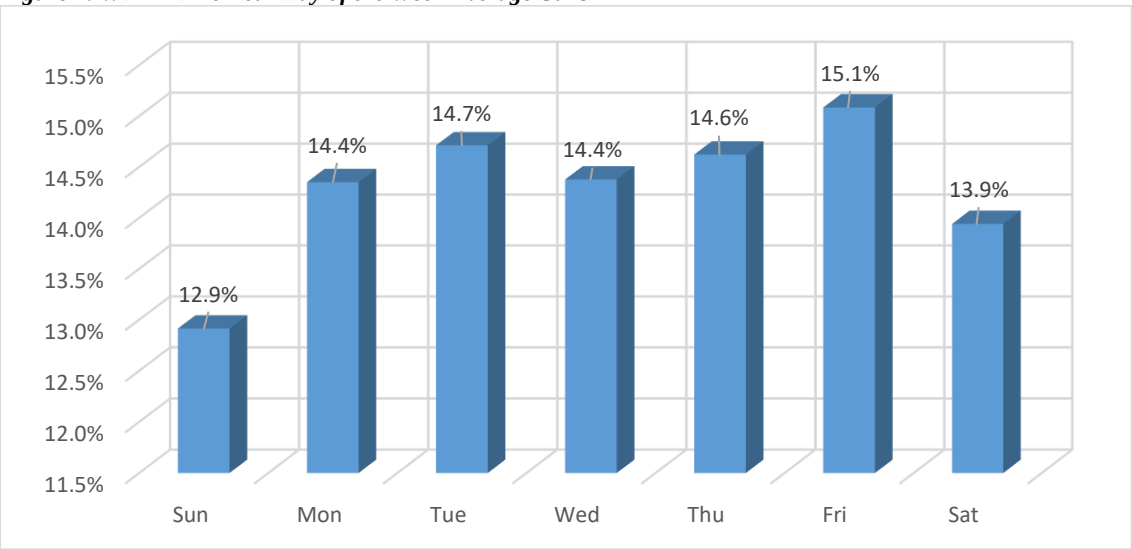
In the majority of studies, the time of day data usually illustrates as a bell curve which peaks in the mid-afternoon and is lowest while most individuals are sleeping. WDMFD data is consistent with the norm.

Incidents by Day of the Week

Incidents reviewed by day of the week are another benchmark utilized by leadership to manage and allocate resources within an organization. Along with time of day and by month data found, such information may be of value if patterns are determined suggesting peak, or alternative staffing models are warranted. In reviewing the data pertaining to calls by the day of the week for WDMFD, no wide disparity in call volume by day of week have been identified.

The figure below illustrates the ten-year average of emergency incidents as they pertain to day of the week.

Figure 7: WDMFD 10 Year Day of the Week Average Calls



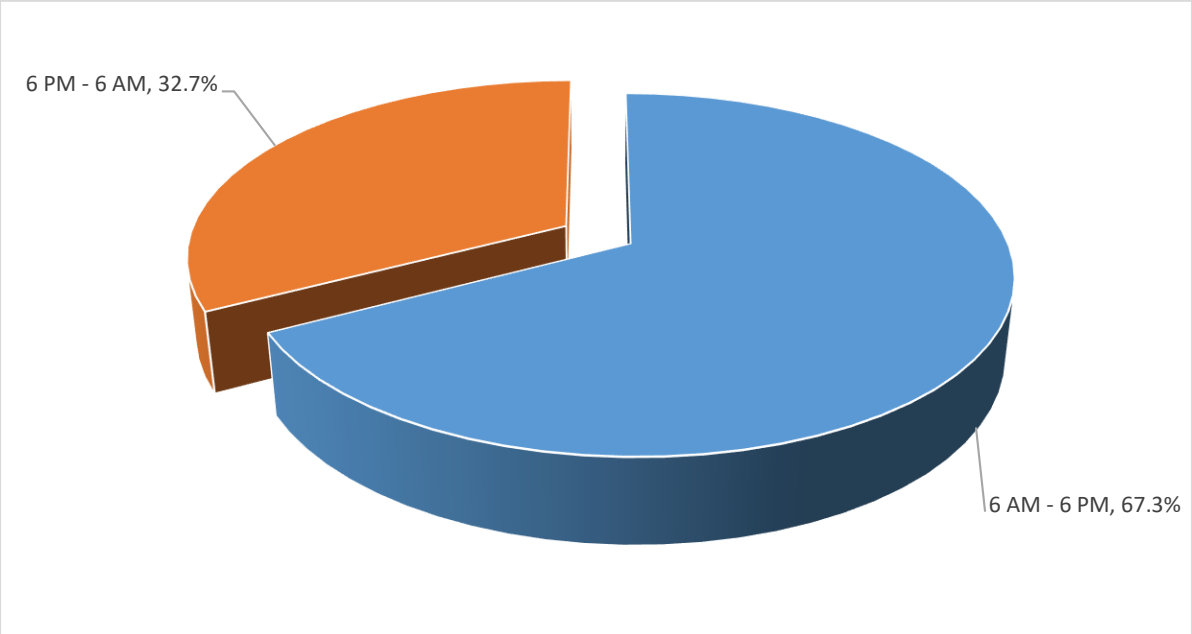
3 Year Average Calls by Day & Night

The fire department tracks calls by two periods of the day: daytime is from 6 AM to 5:59 PM and night represents 6 PM to 5:59 AM as illustrated in the table and figure below:

Table 9: 3 Year Calls by Day/Night 2013 - 2015

Year	6 AM - 5:59 PM	6 PM - 5:59 AM	Total
2013	1,828	882	2,710
2014	1,548	756	2,304
2015	1,257	634	1,891
Total	1,828	882	2,710
% of Total	67.5%	32.5%	

Figure 8: 3 Year Calls by Day/Night 2013 - 2015

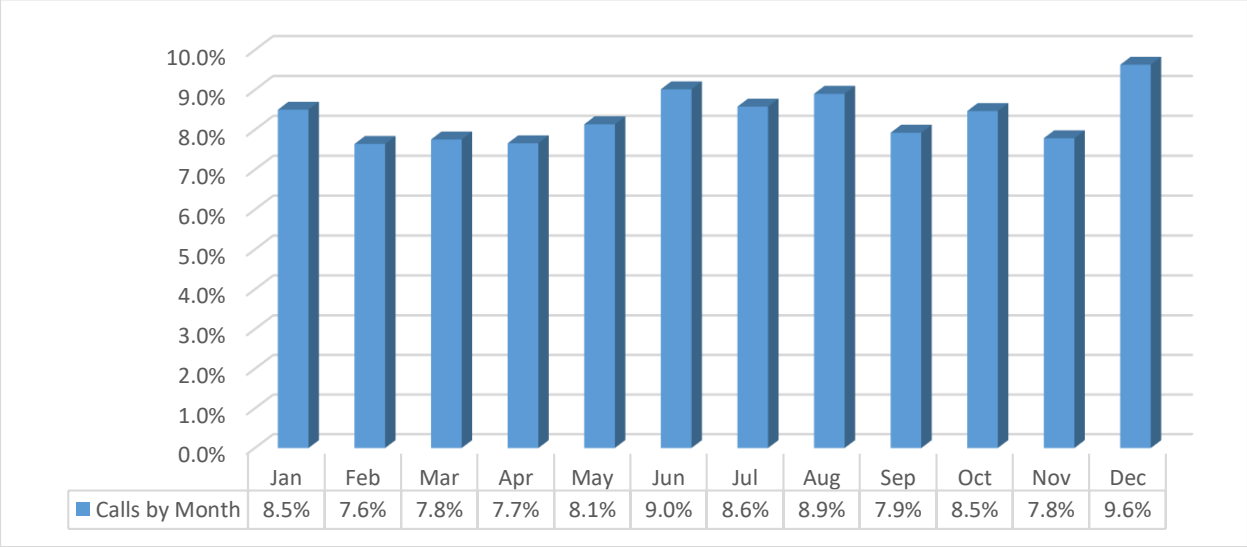


** Total call numbers per year conflicted with other data provided*

Incidents by Month

The 10-year average for calls by month for the WDMFD showed no identifiable or remarkable spikes in calls for service. Routine minor spikes for service in winter months and summer were seen, which is routine for such a climate as West Des Moines.

Figure 9: 10 Year Average of Calls by Month



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Calls by Month	8.5%	7.6%	7.8%	7.7%	8.1%	9.0%	8.6%	8.9%	7.9%	8.5%	7.8%	9.6%

EMS Department

Note: Throughout the EMS Emergency Activity section, the reader could discover conflicting call data numbers depending on the data source provided. The consultants have done their best to minimize these conflicts.

Similar to the WDMFD, the EMS Department provides a superior level of services to a community that is still expanding. The full time staff consists of 31 employees including administrative, management, operational and civilian staff. Emergency Medical Services consist of both 9-1-1 and hospital inter-facility transfers and response.

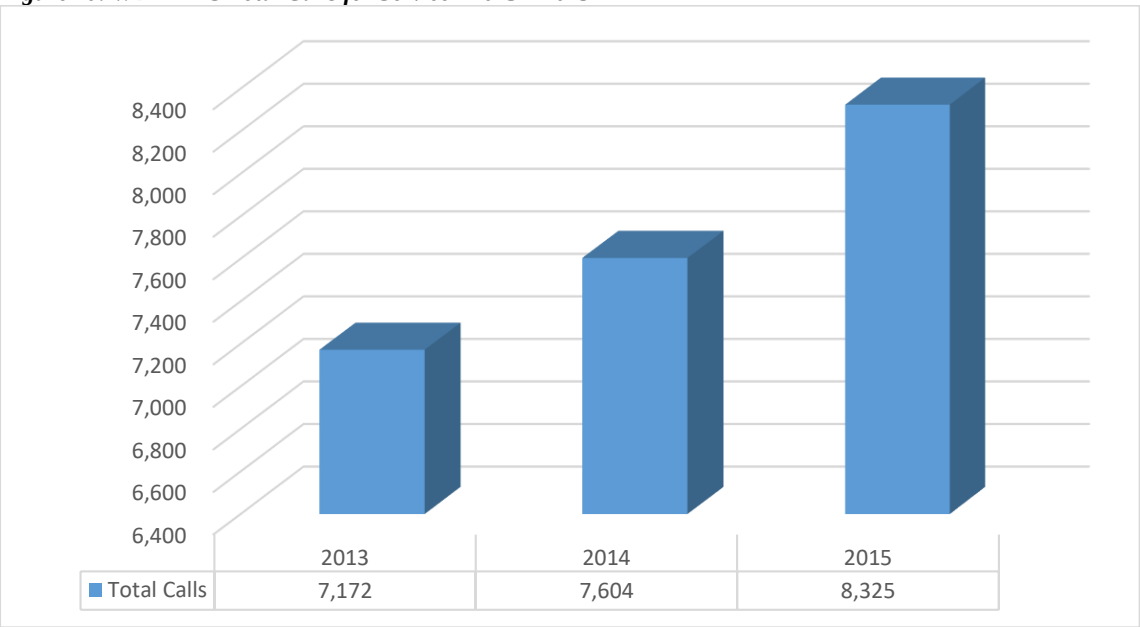
WDMEMS operates and staffs three Advanced Life Support (ALS) ambulances that respond solely to 9-1-1 calls for service. These ambulances respond from three Public Safety stations throughout the city (Stations 17, 19 and 21). Additionally, WDMEMS operates and staffs two Advanced Life Support (ALS) inter-facility transfer ambulances, which are housed at Methodist Medical Center and Methodist West Hospital, respectively. All five ambulances are staffed 24/7 with a mix of career, three quarter-time and part-time staff.

Ambulance staffing generally consists of two paramedics, but it is not uncommon to staff a paramedic and EMT paired together. An additional peak load ambulance is staffed eight hours a day, Monday through Friday for inter-facility transports that typically require basic life support skills. One shift commander Lieutenant oversees daily operations of all EMS personnel on duty. All career EMS staff are certified as Iowa Critical Care Paramedics.

WDMEMS has mutual aid agreements with several surrounding communities. The unique staffing arrangement of both the 9-1-1 and hospital operations allows for hospital resources to respond to incidents and handle additional calls for service. This minimizes the need for outside mutual aid ambulances to be called into the city to assist. According to WDMEMS Administration, mutual aid was requested to respond to calls for service 8 times in 2015, of which 3 of those were handled by mutual aid ambulances already standing by in the City while WDMEMS were participating in a disaster drill.

WDMEMS provided call response totals for the last three years. The table and chart below illustrates total EMS incidents from 2013 – 2015 and whether or not the call for service was a City response or an Alliance (hospital) response:

Figure 10: WDMEMS Total Calls for Service - 2013 – 2015



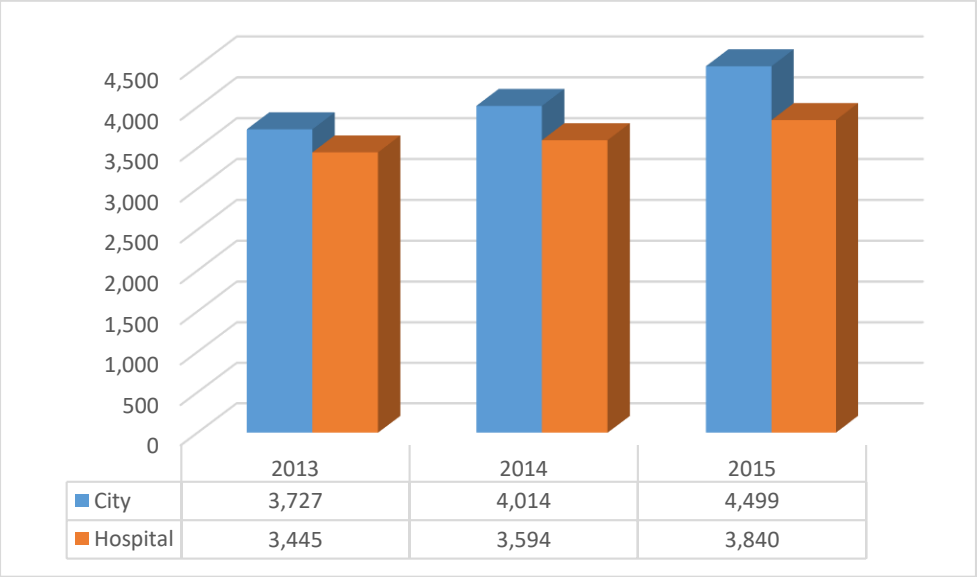
Note: In the figure above, there is some slight variation in the total number of calls each year, depending on the source of data. These are minor aberrations and do not represent any statistical significance of concern.

As evidenced by the chart above, WDMEMS has experienced a 14% total increase in call volume over the last three years. These calls are divided into city 9-1-1 calls and hospital ambulance calls as illustrated in the table and figures below:

Table 10: City 9-1-1 and Hospital Calls - 2013 - 2015

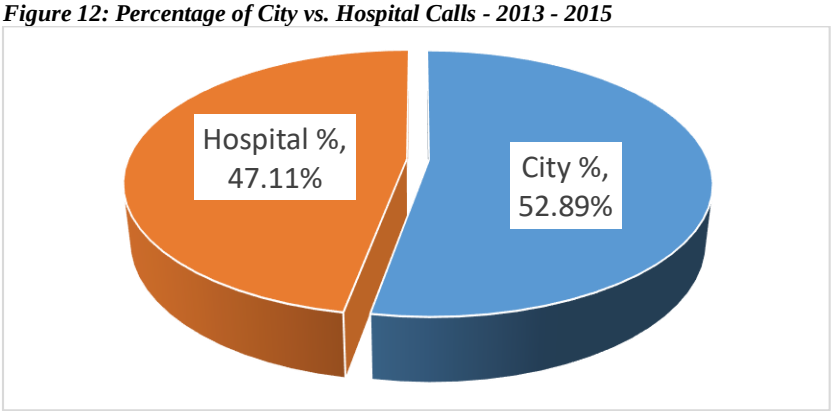
Year	City	Hospital	Total	City %	Hospital %
2013	3,727	3,445	7,172	51.97%	48.03%
2014	4,014	3,594	7,608	52.76%	47.24%
2015	4,499	3,840	8,339	53.95%	46.05%
			Avg.	52.89%	47.11%

Figure 11: City 9-1-1 and Hospital Calls - 2013 - 2015



On the three-year average approximately % of calls for service occur in the city, while 47% of calls for service are handled by the Alliance ambulances for the three-year study period as illustrated in the table below:

Figure 12: Percentage of City vs. Hospital Calls - 2013 - 2015



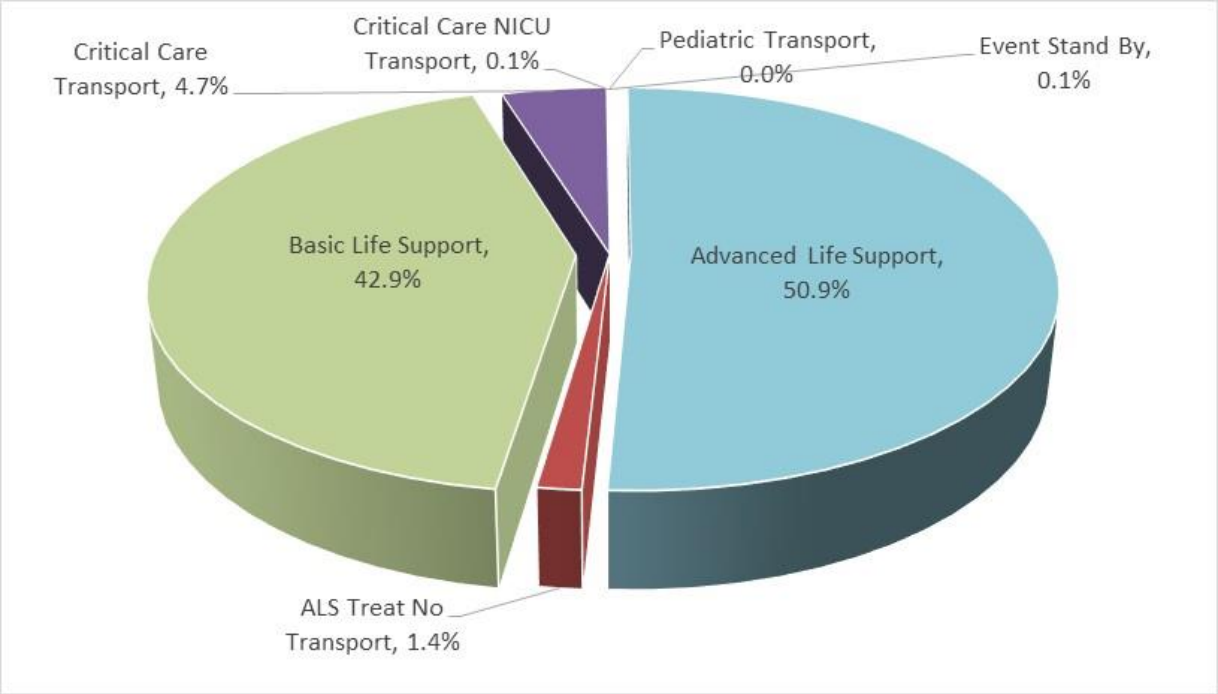
Total Calls for Service Analysis

The following tables and charts show the total aggregate calls for service between 2013 – 2015 broken down by ambulance and the type of call – basic life support vs. advanced life support, et cetera.

Table 11: Calls for EMS by Type of Response - 2013 – 2015

Calls by Response	2013	2014	2015	% of Total
Advanced Life Support	3,585	3,802	4,365	50.9%
ALS Treat No Transport	224	49	58	1.4%
Basic Life Support	3,011	3,362	3,531	42.9%
Critical Care Transport	349	385	347	4.7%
Critical Care NICU Transport	0	0	16	0.1%
Event Stand by	3	6	6	0.1%
Pediatric Transport	0	0	2	0.0%
Total	**7,172**	**7,604**	**8,325**	**100%**

Figure 13: Calls for EMS by Type of Response - 2013 – 2015



EMS Calls by Unit

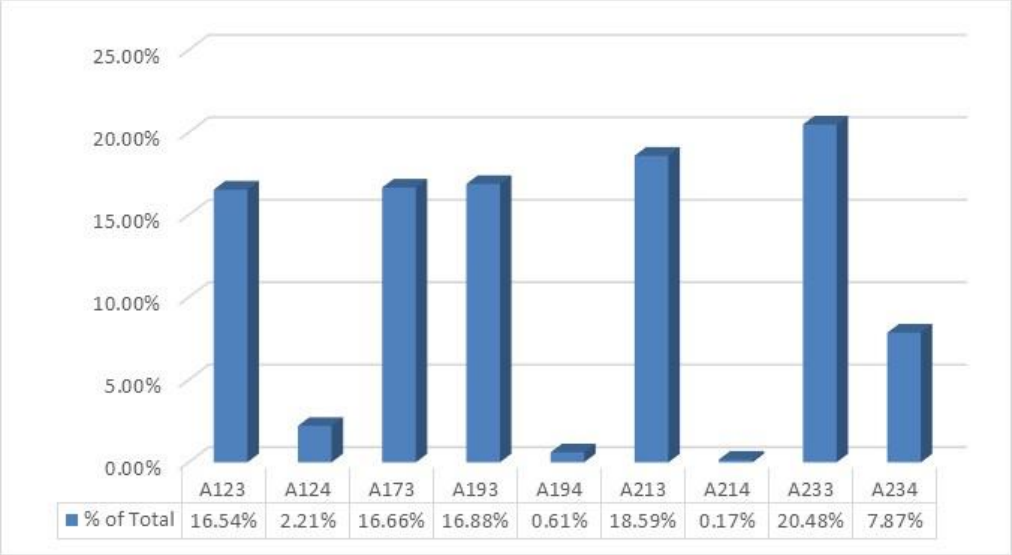
The following table and figure illustrates the percentage of calls handled by each EMS ambulance over the three-year period. In most cases, as an ambulance is replaced, the new unit retains the number of the old unit; however, historically there has been several exceptions.

Table 12: EMS Calls by Unit - 2013 - 2015

Calls by Unit	% of Total
A123	16.54%
A124	2.21%
A173	16.66%

Calls by Unit	% of Total
A193	16.88%
A194	0.61%
A213	18.59%
A214	0.17%
A233	20.48%
A234	7.87%

Figure 14: EMS Calls by Unit - 2013 - 2015



Current Ambulance Assignment

There was considerable conflicting data as to the number of ambulances in service or in reserve varying from nine to ten ambulances. One possible reason is that the study is a snapshot in time and perhaps an ambulance was being added or removed from the fleet. At the time of the study the ambulances that were assigned are illustrated in the table below:

Table 13: Current Ambulance Assignments

ID	Assignment	Status
A123	Hospital	1st Line
A124	Hospital	Peds/NICU
A173	Station 17	1st Line
A174	Station 17	Reserve
A193	Station 19	1st Line
A194	Station 19	Reserve
A213	Station 21	1st Line

ID	Assignment	Status
A214	Unknown	Unknown
A233	Hospital	1st Line
A234	Hospital	1st Line

Unlike fire apparatus, which generally respond within their assigned area unless there is a large incident or fire; EMS ambulances frequently crisscross the community in answering calls for service due to other ambulances already committed on a call. Based on an assessment of the aggregate data for 2013 – 2015, call volume appears to be fairly equally distributed among the 1st line hospital and city ambulances.

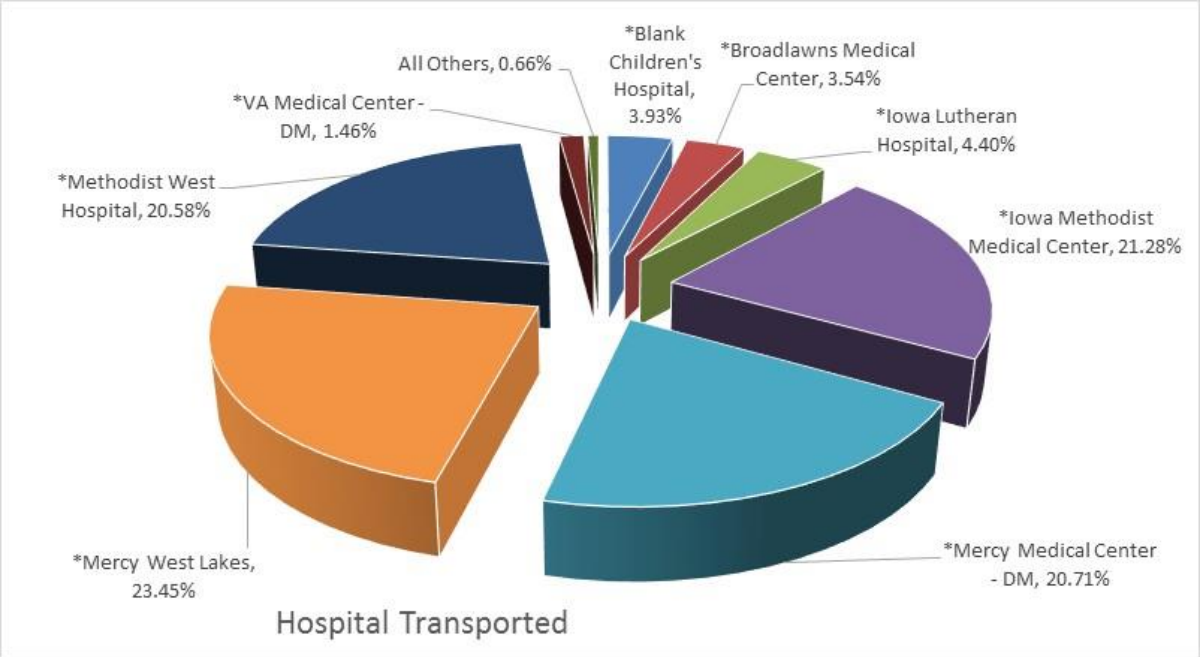
Hospital Destinations

WDMEMS provided a list of 41 hospitals that they have transported patients to during the three-year study period. The table and figure below represents aggregate data of city ambulance transports:

Table 14: Hospital Transported - 2013 - 2015

Hospital	% of Total
*Blank Children's Hospital	3.93%
*Broadlawns Medical Center	3.54%
*Iowa Lutheran Hospital	4.40%
*Iowa Methodist Medical Center	21.28%
*Mercy Medical Center - DM	20.71%
*Mercy West Lakes	23.45%
*Methodist West Hospital	20.58%
*VA Medical Center - DM	1.46%
All Others	0.66%
Total	100%

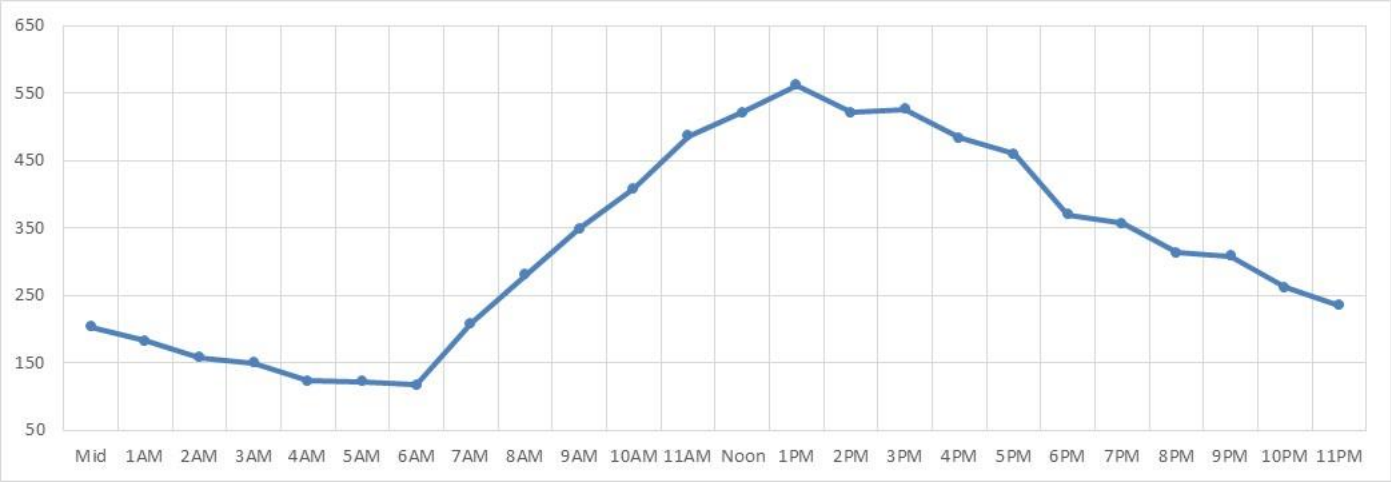
Figure 15: Hospital Transported City Ambulances - 2013 - 2015



Incidents by Time of Day – City & Hospital

The data regarding calls by time of day for 2013 - 2015 identified that the highest percentage of calls for service were between the hours of 7:00 A.M. and 10:00 P.M., or when the majority of people are up and awake. The figure below illustrates the three-year average for calls by time of day:

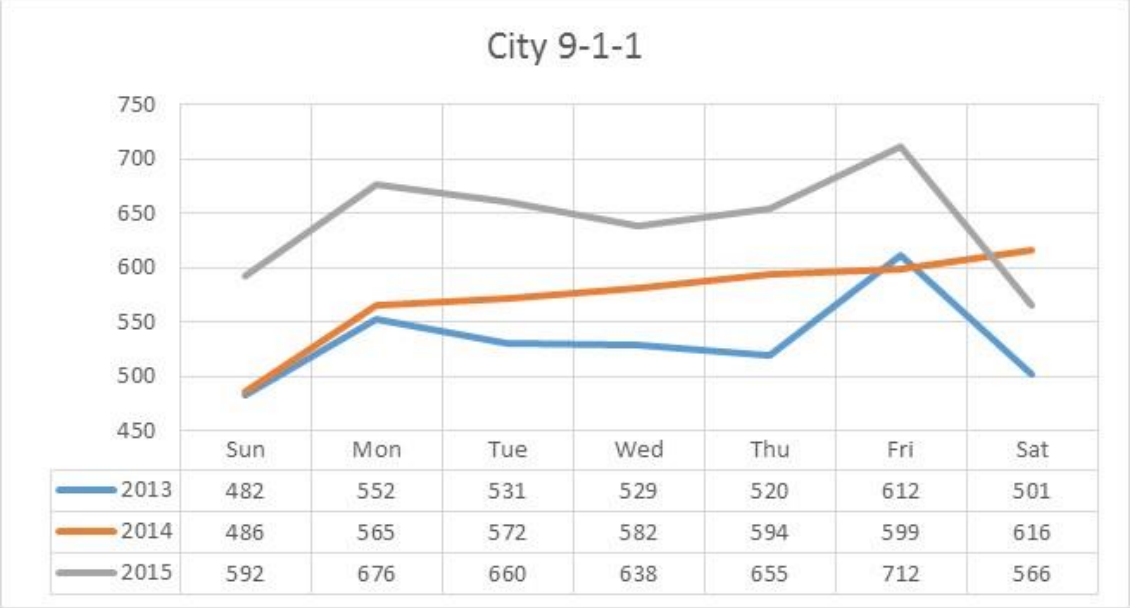
Figure 16: WDMEMS Calls by Time of Day - 2013 - 2015



Incidents by Day of the Week

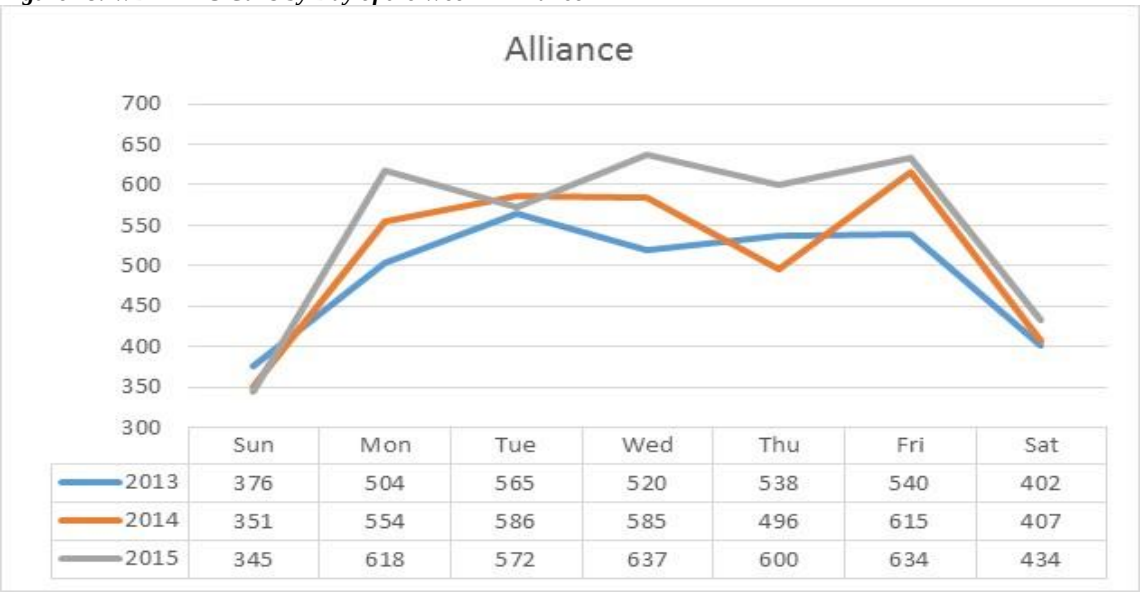
Incidents reviewed by day of the week are another benchmark utilized by leadership to manage and allocate resources within an organization. The consultants will provide three figures for day of the week" 1st City 9-1-1 ambulances, 2nd Alliance ambulances, and 3rd combined day of the week.

Figure 17: WDMEMS Calls by Day of the Week – City 9-1-1



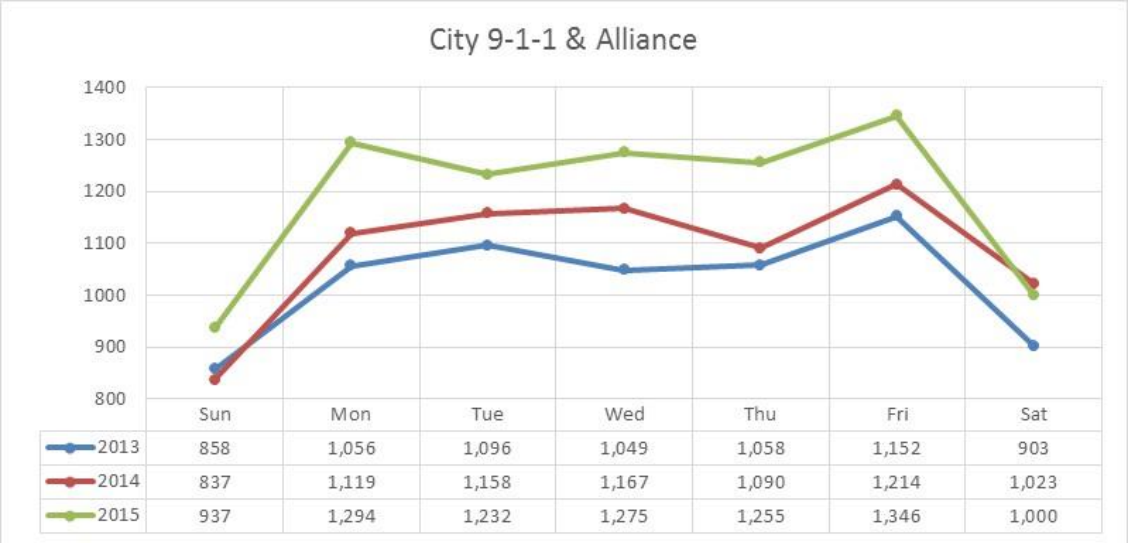
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
2013	482	552	531	529	520	612	501
2014	486	565	572	582	594	599	616
2015	592	676	660	638	655	712	566

Figure 18: WDMEMS Calls by Day of the Week – Alliance



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
2013	376	504	565	520	538	540	402
2014	351	554	586	585	496	615	407
2015	345	618	572	637	600	634	434

Figure 19: WDMEMS Calls by Day of the Week - All Calls



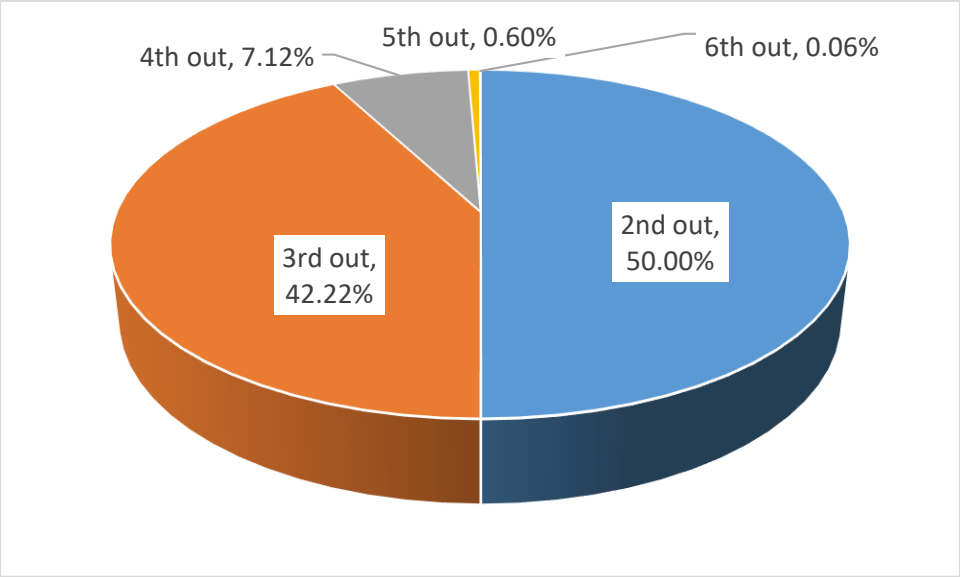
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
2013	858	1,056	1,096	1,049	1,058	1,152	903
2014	837	1,119	1,158	1,167	1,090	1,214	1,023
2015	937	1,294	1,232	1,275	1,255	1,346	1,000

When the calls are combined (City & Alliance), there is a consistent pattern with Fridays being the busiest day of the week for EMS.

Simultaneous Calls

The data provided indicates that simultaneous EMS incidents represent approximately 16.79% of all calls for the three-year study period. The consultants believe that the actual percentage of simultaneous calls is actually about 28.98% because data was not recorded in 2013 and 2014 for 2nd ambulance out. The figure below illustrates the most likely breakdown calculated on the ratio of 2015 data to 2013 and 2014.

Figure 20: WDMEMS Simultaneous Calls - 2013 – 2015



During the site visits by the consultants, it was not uncommon to hear multiple EMS 9-1-1 calls occurring simultaneously. The hospital ambulances are dispatched by the hospital so the consultants were unaware when they were being dispatched.

Response Times

Providing emergency services is largely about response times. How long it takes the fire or EMS department to get on location to begin to mitigate the fire or provide emergency medical service is the primal issue. There are three significant components that determine how long it takes from the time 9-1-1 is answered until the emergency responders arrive:

- Dispatch – Pubic Safety Answering Point (PSAP)
- West Des Moines Fire or EMS Department
- Uncontrollable elements such as weather, traffic, road constructions, rail traffic, etc.

To improve response times, validate response times, or use response time data in quality/assurance programs, it requires a unified joint effort between the PSAP (dispatch) and the provider department.

Response Time Components

When examining response times, it is essential that all parties are talking about the same response time components. The actual measurement of response time must include the understanding of all the following components of response time:

Detection Time: The time it takes to detect the emergency incident and dial 9-1-1.

Notification Time: The time from when the call is received by dispatch (PSAP) to the time the department is notified.

Turnout Time (Out the Door Time): The time it takes personnel to prepare and leave quarters after notification.

Travel Time: The time the first apparatus/ambulance leaves the station to the time it arrives on the scene. (The term travel time ends when the unit arrives on location of the emergency)

Mitigation Time: The time the first apparatus arrives at the scene to the time when actual extinguishing/treatment (mitigation) efforts begin.

Response Time Components Controlled By:

The following agency/department controls the response time components elements:

The following department controls these response time components elements:

Note: *the consultants understand that EMS is a third service and therefore, could argue that NFPA standards are developed for the fire service, not EMS. However, inasmuch as the highest percentage of EMS is provided by fire departments (46% of all EMS providers) those agencies are held to the NFPA standard.*

Dispatch (PSAP) Control:

- Alarm Transfer Time – *(NFPA 1221 – 2013 edition: shall not exceed 30 seconds 95% of all alarms)* calls that do not come directly to the dispatch center, who is responsible for notification to the fire department, must be transferred.
    - *Not an issues inasmuch as both landlines and cellular are received by Westcom*

- Alarm Answering Time – *(NENA – all emergency calls answering shall not exceed 10 seconds 90% of all alarms)* from the time the call/alarm is received and entered into the CAD system.
    - *Westcom data averaged 8 seconds and meets this requirement*

- Alarm Processing Time – *(NFPA 1221 – 2013 edition: shall not exceed 60 seconds 95% of all alarms)* – from entry into the CAD system to the actual time the voice or electronic means is utilized to notify the fire department.
    - *Westcom has a unique system of when 9-1-1 is answered within eight seconds, the call-taker hits the appropriate department key (police, fire, or EMS) and CAD copies the callers address and sends a pre-alert tone to the proper agency. Westcom data indicates that this takes an additional 6.03 seconds or the agency is notified within 14.03 seconds.*
    - *The fire department was the only department that provided actual data indicating that once the dispatch is completed, the average is 25 seconds.*

Often these time are combined into the heading "Notification Time". The following agencies that have standards for communication centers – the Federal Emergency Management Agency (FEMA), National Emergency Number Association (NENA), National Fire Protection Agency (NFPA), and the Associated Public-Safety Communications Officials (APCO).

Fire & EMS Department Control:

- Turnout Time / Out the Door Time – *(NFPA 1710 – 2016 edition – section 4.1.2.1: shall not exceed 60 seconds for EMS and 80 seconds for fire and special operations)* the time from when the fire department is notified by dispatch until the first mitigation unit leaves the station or begins their response.
    - *Fire Department*

        - *Provided data for multiple years the average turnout time was 1 minute 55 seconds, which far exceeds the NFPA 1710 standard of 80 seconds.*
    - *EMS Department*
        - *Uses Emergency Medical Priority Dispatching therefore, an EMS call falls into five categories and the response changes with each as illustrated in the figure below. The average 3-year Turnout Time was 1 minute 36 seconds exceeding the NFPA 1710 standard of 60 seconds*

Figure 21: EMS Turnout Times by Type of Response – 3 Year Average

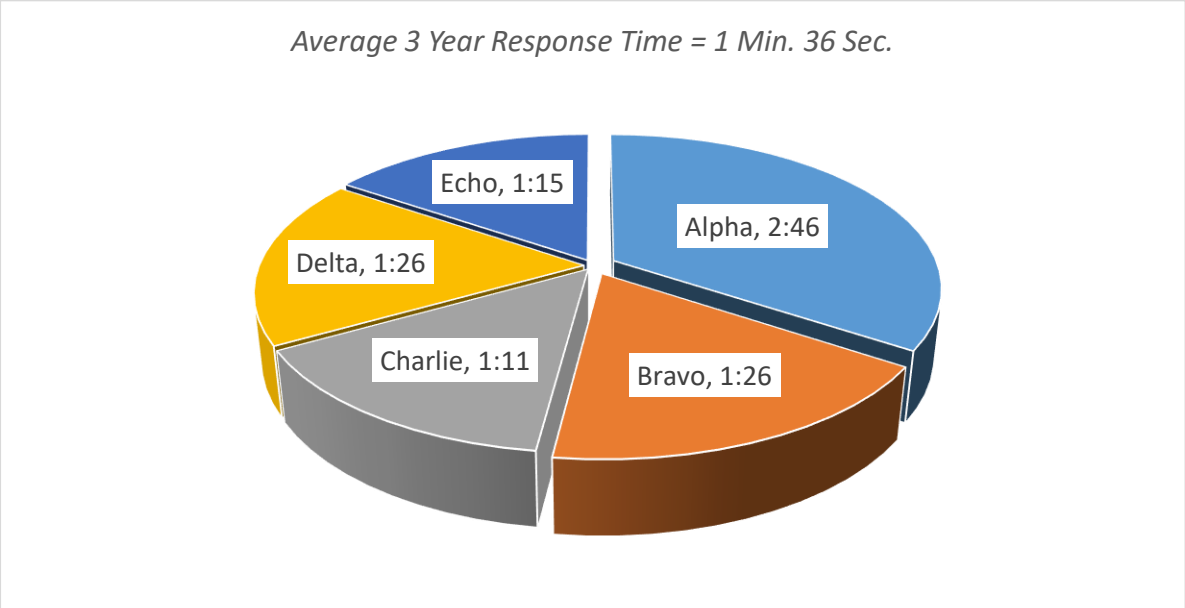


Table 15: EMS Response Codes

Type	Capability	Response Mode	Nature
Alpha	BLS	Cold (single unit)	Non-Life Threating
Bravo	BLS	Hot/Cold (multiple units)	Non-Life Threating (IV needed)
Charlie	ALS	Cold (single unit)	Possible Life Threating
Delta	ALS	Hot (multiple units)	Life Threating
Echo	ALS & Special Units	Hot (multiple units)	Life Threating = Closest unit

- Mitigation Time / Intervention Time – *(NFPA 1710 requires immediately upon arrival)* – from arrival of the department until mitigation efforts begin.
    - *Data was not requested*

- On Scene Time / Total Response Time – from the time the PSAP dispatched the department until they arrived on the scene.
    - *Fire Department*
        - *Provided data for multiple years and the average time was 6 minutes and 14 seconds. This time either meets or slightly exceeds NFPA 1710, depending on the nature of the call.*

- *EMS*
    - *Did not provide data but did provide an average figure that showed the time for EMS calls where the ambulance responded with lights and siren was 5 minutes 47 seconds. This meets the NFPA standard of 6 minutes and meets the CAAS Standard. (times were for city ambulances)*

No or Limited Agency Control:

- Travel Time / Drive Time – *(NFPA 1710 – 2016 edition – section 4.1.2.2: shall not exceed 240 seconds initial assigned unit and 480 seconds for the "first alarm assignment")* the time from when the unit leaves the station until it arrives at the emergency scene. There are many uncontrollable factors: distance to the scene, traffic, weather conditions, availability of closest emergency unit, etc.
    - Fire Department = 4 minutes 59 seconds or (299 seconds)
    - EMS Department = 3 minutes 57 seconds or (237 seconds)

Recommendation – Response Time

- *Greater emphasis should be placed on improving the Turnout Times for both fire and EMS. Turnout Times are in complete control of the department leadership and not impacted by any other circumstance.* ***Priority 2***

Standard of Response Coverage

The term Standards of Cover (SOC), also referred to as Standards of Response Coverage (SORC), is a system for the evaluation/analyzing of resource management and deployment. It is used in determining whether a fire department is properly prepared to meet its community's potential risks.

Standards of Cover (SOC) is applicable to all fire departments, EMS departments and districts, career and volunteer, large and small. However, there is no 'one size fits all' SOC. The SOC must take into account factors unique to the community in which the department serves.

Such a plan identifies specific performance goals tied to the individual community to measure the effectiveness of their fire department or district. The SOC process does not solely look at the number of fire stations, paramedics and firefighters, but considers the entire state of readiness within a given jurisdiction. Overall safety to a city's emergency responders, as well as to its citizenry and visitors, is at the forefront of any such a plan

This section will discuss various factors involving what is referred to as community risk and risk potential as it relates to the WDMFD and EMS Department's preparedness in responding to emergencies. Among areas covered will be the identification of specified risks, potential risks, the departments' preparedness for such risks, and nationally recognized standards.

A SOC study dissects just what exposure a community is found to have within its coverage area as it relates to overall risk potential with regards to certain hazards, frequency, as well as the normal state of readiness the WDMFD and EMS Department presents on a daily basis. An integral part of strategic planning and SORC development is the allocation and distribution of resources to meet the goals and objectives of a community's master fire protection and emergency medical services plan.

It is recognized by the consulting team that the WDMFD has recently been evaluated by the Commission on Fire Accreditation International (CFAI) and has been awarded a "Re-

Accredited" status. Similarly, the EMS Department was recently audited by the Commission on Accreditation of Ambulance Services (CAAS) and the consultants fully expect WDMEMS to retain their accreditation. These accreditation processes identify, among other factors, each department's preparedness and commitment to managing risk. With that being said, it should be noted that the consulting team conducted their evaluation within this area as well.

At the heart of this section is the overall evaluation of risk within the city of West Des Moines as it refers to fire danger and emergency medical services' needs is at the forefront. Identified below are key elements considered in a community's SORC evaluation and planning:

- **Overview –** A "Big Picture" review of the community identifying its general makeup, looking at business, industry, residential, infrastructure as well as identifiable hazardous occupancies. Other important aspects include demographics, geography, census (both listed as well as transient) and any specific unique community features.

- **Community plan expectations –** Identifying the community's expectations of its fire department and EMS department is an important aspect which must be considered in plan development. Knowing just what the community expects helps assist fire and EMS leaders and elected officials in determining service goals of the department.

- **Community risk assessment -** This is a critical step in the SORC process. Evaluation of response capabilities, mutual aid partners, and life safety education activities should all be identified and assist in based on classification. Four levels of risk are generally identified – Low, Moderate, Significant, and Maximum risk and are detailed below:

  - **Low risk:** Areas zoned and used for agricultural purposes, open space, and other low intensity uses.

  - **Moderate risk:** Areas zoned for single family properties, small commercial and office uses, and equivalently sized business activities.

  - **High risk:** Business districts, high density residential, light industrial, and large mercantile centers.

  - **Maximum risk:** High rise, unprotected residential and commercial properties, heavy industrial, and high life risk institutional properties.

Risk factors other than fire must also be considered, such as emergency medical service demand, technical rescue potential, available transportation, natural hazards, weather, as well as other areas. The overall goal is to evaluate and determine the likelihood of an event happening and resulting in potential consequences. The SORC process analyzes deployment based on the overall risk assessment. Essentially, the outcome of a plan should answer the questions of how many properly trained personnel must arrive in what time frame, to achieve the desired outcome?

Community Assessment

As the SORC of the City of West Des Moines was conducted utilizing the interview process, as well as data assessment; it was found that the city has enjoyed recent growth in population as well as business ventures, and by all appearances such growth shows no signs of letting up. For example, recently announced during the writing of this report is that Microsoft is set to build its largest data center in the United States in West Des Moines. This project will cost $1.5 billion to 2.5 billion which will complement the other two Microsoft facilities within the city; creating approximately 133 jobs.

The city appears to have done well in keeping up with the growth in providing crucial city services. As with any growing community new streets and access to major roadways has occurred; additionally, new roadway river crossings have been built allowing quicker access for emergency vehicles to more past remote locations.

As the city was evaluated from a risk perspective, it was noticeable to the consultants that there was little to no heavy industry or high hazard occupancies found to be present. A relatively small area, approximately five square miles, located in the eastern portion of the city-just north of the Raccoon River, was found to be the home to an area zoned for light industry. This area was found to consist of light manufacturing and warehousing occupancies. Although the city was said to possess a long history of rail in its early years, and was reported that it actually was created from a railway environment, only three rail line remains active in the city today.

There are two primary malls- the Valley West Mall near Station #21, which was opened in 1975, and the Jordon Creek Town Center that opened in 2004. Both of these shopping centers are vast in nature with height of the malls predominantly one story to two stories. Within the general proximity of the malls, are numerous "big-box" type stores as well as many mixed-use strip malls, restaurants and other associated commercial type occupancies.

There is an area referred to as the "Medical Region" in the general proximity of Station #22 and the I-235/I-80 corridor. This area of the city is home to two hospitals, a large number of associated medical offices, and specialty clinics.

The east side of the city, as mentioned previously as the "older" part of the city, is the home to what is referred to as the Valley Junction Business district. The district consists of a number of small business shops, boutiques, antique shops, and restaurants. This section of the city is host to a number of community events during holidays, as well as summer/Farmer's Markets. The area is approximately five square blocks in size, mostly historic in nature, and much of the construction dates back to the earlier 1900's. The City is in the process of implementing phases of retro-fitting these businesses with fire protection sprinkler systems.

There is not any specific area with a high concentration of high-rise structures as they typically are dispersed throughout the City. However, it is helpful for the reader to know the NFPA definition of a high-rise building:

> *NFPA 101 – Life Safety – Chapter 3 Definition 3.3.36.7 High-Rise Building (2015 edition) as: A building where the floor of an occupiable story is greater than 75ft (23m) above the lowest level of fire department vehicle access.*

Most of the high-rise facilities are either hotels or corporate office occupancies with built-in detection and fire protection systems

Current data was shown that the city was home to over 60,000 jobs and had one of the lowest unemployment rates in the Midwest. The table below reflects examples of some of the higher concentrations of employees occupying various business office facilities within the City of West Des Moines.

Table 16: West Des Moines Employers/Employees

Employer	Employees
Wells Fargo	10,830
West Des Moines School District	1,214
Athene USA	1,161
Hy-Vee Inc.	986
FBL Financial Group	977
Sammons Financial Group	515
The Iowa Clinic	495
Met Life	490
GuideOne Insurance	445
Businessolvers	440

The eastern portion of the city is home to the "older" single and multi-family occupancies where 50 plus year old homes were found frequently, whereas the remainder residential occupancies in the city were of much newer construction. The fastest growing occupancy classifications is Multi-family residential; however, growth in the areas of business, commercial, medical and office complexes cannot be overlooked. Both the WDMFD and WDMEMS Department have a strong commitment to the Area of Fire Prevention and Life Safety Education.

As the consulting team met, evaluated, and studied these areas, each department was found to be very pro-active with such endeavors. An aggressive fire prevention bureau and life safety education program supported by the city, requires the vast majority of business, commercial, educational, multi-family residential, and medical facilities with automatic fire sprinkler systems and/or automatic early warning fire alarm systems monitored 24/7. Additionally, an equally strong commitment to fire prevention education is provided to business, industry, and educational facilities, including the conducting of fire drills.

Both the WDMFD and WDMEMS Department were found to be very well prepared to provide necessary fire protection and life safety coverage within its coverage area. Detailed reports and documentation involving training, staffing and emergency response activities are contained within this report supporting such opinion.

Mutual Aid

In discussions with the administrative staff of the WDMFD and WDMEMS Department, it was discovered that the current mutual aid partners were well qualified, quick to respond, and very effective when called upon. The five departments that are utilized regularly included: Waukee, Clive, Norwalk, Urbandale and Windsor Heights Fire Departments. The process currently in place for requesting mutual aid is carried out through West Des Moines' Westcom emergency 911 dispatch center.

The fire department command staff was clear that when the need for additional resources from other communities arose, there is no reluctance to call for mutual aid. Historically, it was found that the current system worked very quickly and efficiently, regardless of the magnitude of the request. A summary of a three-year fire department mutual aid was included in the Emergency Activities section of this report.

Within the State of Iowa-Office of the Secretary of State, there is a provision afforded government entities, including fire departments, that offer a level of legal protection in working with, and offering and receiving assistance with other entities. The program referred to as the "*28E" provision*, provides a legal agreement (contract), signed by the various entities, providing a level of protection for all parties involved. The WDMFD and WDMEMS Department currently has numerous 28 E agreements with various fire departments, counties, as well as with the State of Iowa in providing protection.

Recommendations –Community Risk/Standards of Response Coverage

- *Continue to review, monitor, and adjust the current Standard of Response Coverage plan as growth and changes occur within the city. This should include departmental 28 E agreements where appropriate.* ***Priority 5***

Public Safety Answering Point/Dispatch

The Westcom Dispatch Center (WDC) is a consolidated public safety answering point (PSAP, aka: dispatch) for police, fire and emergency medical services for the cities of:

- Clive
- Norwalk
- Urbandale
- Waukee

- For the City of West Des Moines
  - Police
  - Fire
  - EMS

The facility is located in the West Des Moines Public Safety building at 8055 Mills Civic Parkway. The consolidation of PSAP discussions began between the cities of Clive, Urbandale, and West Des Moines and came into reality with the closing of Clive and Urbandale PSAPs in 2001; shortly after, Norwalk joined Westcom, followed by the city of Waukee in 2015.

Agency Dispatch Statistics

Westcom provided their data for dispatches for the fiscal year of 2015 – 2016 for all of the following agencies, illustrated in the table below:

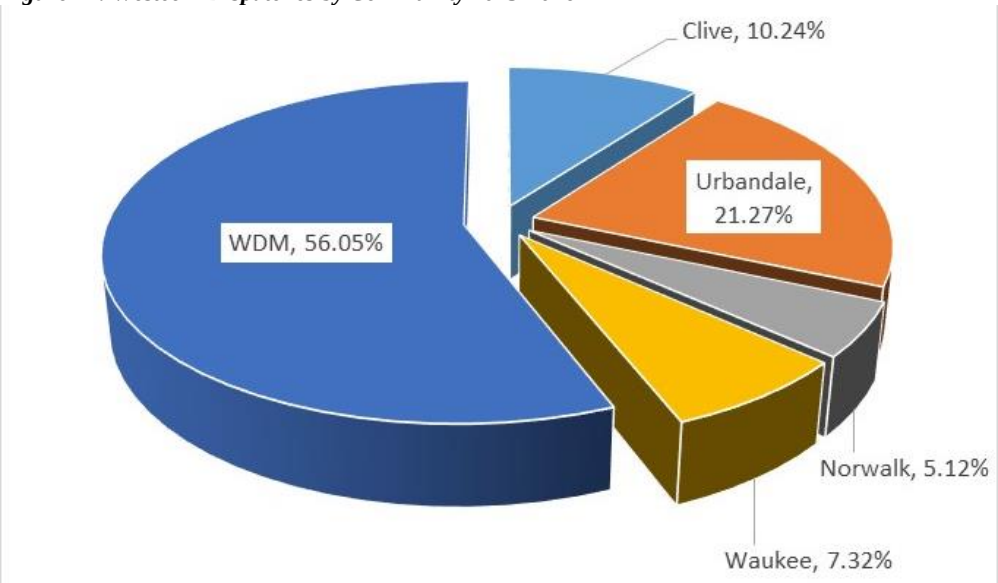
Table 17: Westcom Total Dispatches 2015-2016

CALLS FOR SERVICE FY 2015-2016													
Agency	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Totals**
Clive PD	1,615	1,491	1,431	1,471	1,389	1,360	1,454	1,443	1,324	1,412	1,511	1500	17,401
Clive FD	146	137	144	144	119	146	156	151	136	134	146	159	1,718
Urbandale PD	3,146	3,261	2,922	3,162	2,920	2,737	2,962	2,642	2,893	3,267	3,486	3125	36,523
Urbandale FD	280	285	248	258	258	251	312	257	239	282	251	284	3,205
Norwalk PD	834	778	762	651	625	789	649	705	717	733	785	663	8,691
Norwalk FD	63	83	72	71	61	79	86	71	76	72	79	64	877
Waukee PD	971	977	1,137	1,067	901	995	1,037	959	1,140	1,181	1,256	1103	12,724
Waukee FD	129	92	130	115	100	115	114	89	111	97	115	107	1,314
WDM PD	8,817	8,670	8,886	8,877	7,894	8,398	8,502	8,068	7,921	7,729	7,903	829	92,494
WDM FD	263	304	279	289	285	289	309	265	256	298	289	317	3,443
E220	48	56	62	63	42	63	61	44	61	52	63	61	676
WDM EMS	739	763	664	677	658	739	766	746	748	755	739	735	8,729
Total													***187,119***

**E220 calls for service are paid by Clive & have been removed from WDM FD calls for service.*

The distribution of dispatches for the five members of the consolidation, is illustrated in the figure below:

Figure 22: Westcom Dispatches by Community 2015-2016



Telecommunicators

The term telecommunicator is the industry term for individuals who answer emergency telephone calls and/or dispatches emergency responders. Telecommunicators are most often referred to as dispatchers and/or call-takers; such is the case in the Westcom PSAP. The importance of dispatcher/call-taker cannot be understated; they are the first link and lifeline to the caller, as well as to the emergency responders. One of their greatest attributes is the ability to remain calm, quickly get critical information from a very excited caller under stressful situations, and quickly prioritize their actions. The dispatcher/call-taker is the ultimate team player who must work with a wide variety of personalities and expectations.

Westcom, at the time of the site visit, had 32 employees consisting of 26 full-time and 6 part-time employees as illustrated in the table below:

Table 18: PSAP Position & Tenure

Number	Position	Avg. Tenure
4	Administration	6.2 years
	Chief of EMS and PSAP	
	Assistant Chief Logistics	
	Assistant Chief Operations	
	Administrative Secretary	
4	PSAP Supervisors	13.6 years
18	Dispatchers	10.8 years
3	Call-takers	11 months
3	Trainees	< year

There are eight dispatch/call-taker stations in the operations room. Each shift has a supervisor or senior dispatcher to oversee operations. Newer employees, after training, begin as call-takers and with experience and additional training advance to dispatchers; however, all dispatchers can function as call-takers when needed.

Dispatch Shifts

The 24 hour operations are divided into three shifts: Days, Evenings, and Nights. Evenings and nights divided again into different time frames as illustrated below:

Table 19: PSAP Shifts & Minimum Staffing

Shift	Start	Ends	Minimum Staff
Days	7:00 AM	3:00 PM	4
Evenings – Sun-Mon	3:00 PM	11:00 PM	4
Evenings – Tue-Sat	3:00 PM	11:00 PM	5
Nights	11:00 AM	3:00 PM	4
Nights	3:00 AM	7:00 AM	3

PSAP Equipment

The PSAP is currently updating their computer aided dispatch (CAD) system from the current Sungard CAD400 to TriTech Inform CAD to be completed by January of 2017. In addition, Westcom is updating their radio infrastructure to be a part of the Iowa Statewide Interoperable Communication System Board (ISICSB) initiative.

Interoperability – an effort by the Federal Emergency Management Agency (FEMA) to have states to address the incompatibility of different jurisdictions or agencies of having the ability to communicate directly over a mutual working frequency at joint response operations. The goal is to create an infrastructure that operates in a single frequency band or technology to allow different frequency bands to become compatible.

Phone Activities

There are six wireline trunks and eight wireless trunk phone lines into the PSAP, all with rollover capability when busy. The wireless trunks are Phase II capable. Phase II service requires that wireless carriers provide Automatic Location Identification (ALI) information to the PSAP centers. The accuracy requirements for this service are 50 meters (164 feet) for 67% of calls and 150 meters (492 feet) for 95% of calls with hand-based solutions, or 100 meters (328 feet) for 67% of calls and 300 meters (984 feet) for 95% of calls with network-based solutions. Therefore, if a caller utilizing a cell phone dialed 9-1-1 and was unable to speak, the PSAP could trace the call to a location close to the cell phone.

The table below illustrates the phone activity of the PSAP for the three-year study period:

Table 20: Westcom Phone Activity - 3 Years

Year	Incoming	Outgoing	Abandoned	Total Calls
2013	125,085	33,870	5,989	164,944
2014	126,184	35,766	6,144	168,094
2015	132,076	36,295	7,008	175,379

Westcom is the emergency backup communication center for the Warren County Sheriff's Office telephones and the City of West Des Moines Law Enforcement Center (LEC), Emergency Operation Center (EOC) for radio and CAD. Westcom has a 100% emergency power generator fueled by natural gas or propane.

PSAP Standards

9-1-1 Answering Times Standards

There are four agencies that have published standards for communication centers pertaining to 9-1-1 answering times: Federal Emergency Management Agency (FEMA), National Emergency

Number Association (NENA), National Fire Protection Association (NFPA), and the Associated Public-Safety Communications Officials (APCO).

FEMA: requires the National Incident Management System (NIMS) to utilize the National Fire Protection Association NFPA 1221 – 2016 edition as its standard for answering emergency calls. NFPA 1221 standard requires:

Installation, Maintenance, and use of Emergency Services Communications Systems

NFPA 7.4 Operating Procedures

7.4.1 95% of alarms received on emergency lines shall be answered within ***15 seconds***, 99% of alarms shall be answered within 40 seconds.

7.4.1.1 Compliance with 7.4.1 shall be evaluated monthly using data from the previous month.

7.7 Communications centers shall establish a quality assurance/improvement program to ensure the consistency and effectiveness of alarm processing.

National Emergency Number Association (NENA): The NENA serves as the only professional organization solely focused on 9-1-1- policy, technology, operations, and education. NENA 56-005 June 2016 stated:

3.0 Call taking standards

3.1 Standard for answering 9-1-1 Calls. Ninety percent (90%) of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within ***ten (10) seconds*** during the busy hour (the hour each day with the greatest call volume, as defined in the NENA Master Glossary 00-001). Ninety-five (95%) of all 9-1-1 calls should be answered within twenty (20) seconds.

3.2 Order of Answering Priority. It is the responsibility of on-duty Telecommunicators to answer all in-coming calls. All phone calls will be answered in order of priority. 1st priority will be the 9-1-1 and emergency 7/10-digit phone lines; 2nd priority will be non-emergency lines and 3rd priority will be the administrative and/or internal phone lines

3.3 Standard Answering Protocol – 9-1-1 lines. All 9-1-1 lines at a primary Public Safety Answering Point (PSAP) shall be answered beginning with "9-1-1."

Associated Public-Safety Communications Officials (APCO)

APCO is an international organization of public safety communication professionals. The standards set by APCO are 90% of the incoming E9-1-1 calls are answered in *ten (10) seconds* or less. APCO by referencing the NENA 3.0 standard.

Westcom Answering Data

Westcom meets all of the above national and industry standards as illustrated in the table below:

Table 21: 9-1-1 Answering Times

Westcom 9-1-1 Answering				
Range Answering	**2013 # of Calls**	**2015 # of Calls**	**2015 # of Calls**	**% of Total**
0 to 0 seconds	94	142	174	0.3%
0 seconds to 10 seconds	37,429	35,346	37,290	78.1%
10 seconds to 20 seconds	7,084	9,643	11,115	19.7%
20 seconds to 30 seconds	471	680	867	1.4%
30 seconds to 40 seconds	129	122	202	0.3%
> 40 seconds	58	61	90	0.1%
Total	45,265	45,994	49,738	100%
Average Answering	*:07 seconds*	*:08 seconds*	*:08 seconds*	*:07.67 seconds*

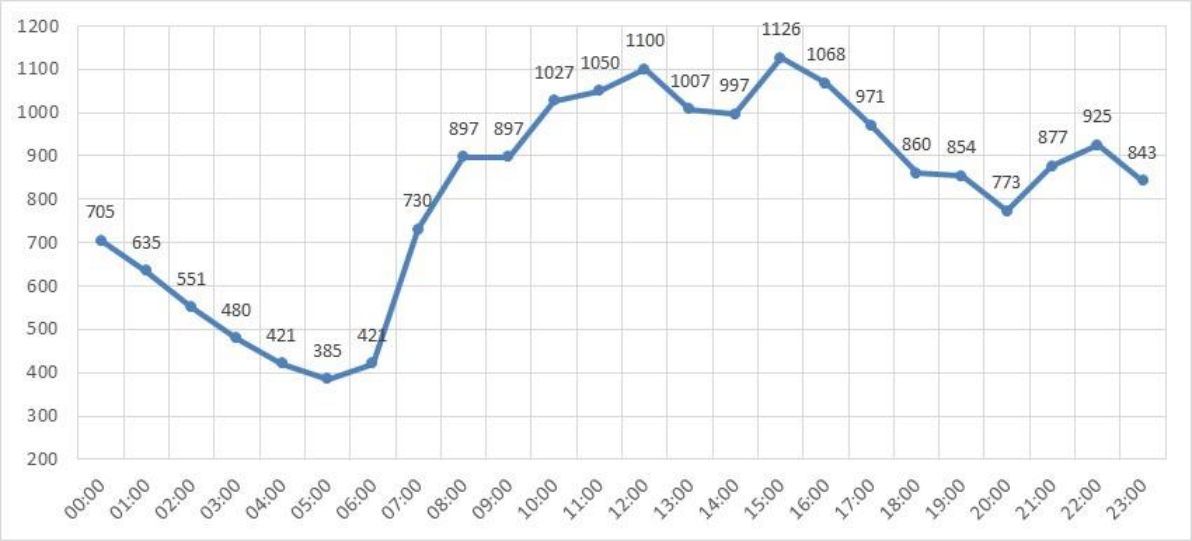
Westcom Answering to CAD

Westcom was unable to provide strategical data inasmuch as their current CAD system involves two separate systems. However, when the call-taker receives the call they enter into CAD, by button push, police, fire, or EMS. The CAD system sends a "pre-alert" to the responding agency simultaneously as the dispatcher takes the call from the call-taker. The result is an almost instant "pre-alert" to the responding agency with additional information being communicated by the dispatcher. This might result in a few responses needing to be cancelled by dispatch, but should result in a very improved "out the door" time for fire and EMS.

Westcom Activity Level

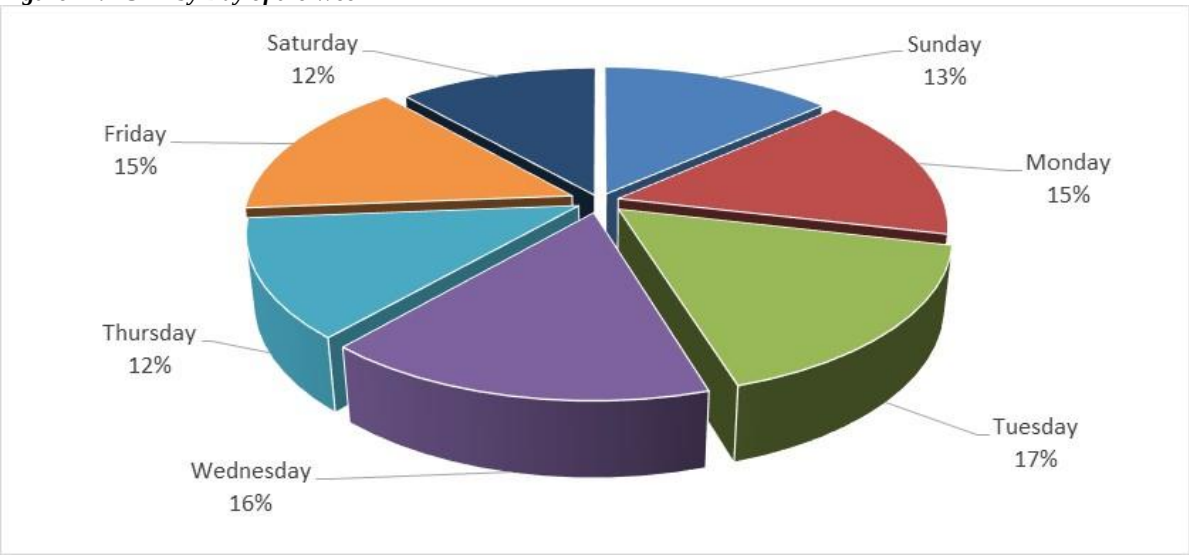
The consultants were provided data for PSAP dispatches by time of day and day of the week for the three-year study period. For ease of reading, the consultants compared that data to a monthly report by Westcom May of 2016 (19,600 calls). The following two figures better represent the average dispatch activities of the PSAP:

Figure 23: PSAP by Time of Day



Most often, calls distribution is similar to a bell curve with the early morning hours being the least dispatches and peaking mid-day. The figure above is not greatly dissimilar to data provided in most studies.

Figure 24: PSAP by Day of the Week



Westcom Summary

The consultants were pleased with the transparency and response to data request by the PSAP. Although only having been with the PSAP for a short time, the Assistant Chief of Operations was very responsive to questions. The PSAP seemed to function in a very efficient manner and the individuals interviewed showed confidence in their skills. The average tenure of the dispatchers of 10.8 years, which exceeds the average found in other PSAP studies.

The following are recommendations for consideration by the administration of Westcom:

Recommendation – Westcom

- *Once the transition of the CAD system and interoperability is completed, the PSAP needs to develop a formal Quality Assurance program. Although random calls are reviewed, the PSAP would benefit from a formal program.* ***Priority 3***

- *The new CAD system should ensure that strategical data can be retrieved to confirm "time from CAD entry to Dispatch" and this data becomes part of the Quality Assurance program.* ***Priority 2***

National/Industry Standards

The WDMFD has standards (some mandatory and some advisory) which impact how they provide fire and EMS. Unlike the fire service, that have a considerable number of industry standards, the EMS industry has few; in fact, prior to 1990 there were none.

The American Ambulance Association (AAA) created an Ad Hoc committee which resulted in the Commission on Accreditation of Ambulance Services (CAAS). Coupled with the Commission on Fire Accreditation International (CFAI), there was finally a benchmark for excellence.

These standards covered all aspects of an organization including: structure, interagency relations, management, finance, community relations and public affairs, human resources, clinical standards, safety and risk management, equipment and facilities and communication centers. These standards were designed to help increase operational efficiency and decrease risk and liability across the entire organization.

It must be noted that the City of West Des Moines is one of few that has all three public safety providers: police (Commission on Accreditation for Law Enforcement – CALEA), fire (CFAI), and EMS (CAAS) accredited by outside professional agencies.

This section will address the national and industry standards which apply to West Des Moines fire and EMS providers – divided into separate sections.

Fire Department Standards

National Fire Protection Association (NFPA)

Non-mandatory

The National Fire Protection Association creates and maintains private and copyrighted standards and codes for usage and adoption by local governments. NFPA was formed in 1896 by a group of insurance firms; their mission was to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes, standards,

research, training, and education. Today, the NFPA includes more than 70,000 individual members, representing nearly 100 nations.

The first fire department to be represented in the NFPA was the New York City Fire Department in 1905. Today, the NFPA includes representatives from fire departments, fire insurance companies, manufacturing associations, trade unions, trade associations, and engineering associations.

NFPA is responsible for 300 codes and standards that are designed to minimize the risk and effects of fire by establishing criteria for building, processing, design, service, and installation all over the world. It's more than 200 technical codes and standards development committees are comprised of over 6,000 volunteer seats.

Source: NFPA website/overview

There is much disagreement as to the meaning of the words "codes and standards". NFPA defines a standard as:

> *A document, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Non-mandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the Manual of Style for NFPA Technical Committee Documents.*

NFPA defines a code as:

> *A standard that is an extensive compilation of provisions covering broad subject matter or that is suitable for adoption into law independently of other codes and standards.*

Source: NFPA Glossary of Terms 2016 edition

If one were accepting the NFPA definition, it would appear that all standards listed in any NFPA code, other than in the appendixes, are in fact mandatory. Such would be the case if a governing body were to adopt the code in which the standard is listed. However, governing bodies are not

required to adopt the NFPA codes; whereas, many view the NFPA terms codes and standards as a benchmark by which to judge against.

The understanding of the significances of NFPA codes and standards becomes more complicated in the event of which a firefighter might be seriously injured or killed in the line of duty. In these events, NFPA codes have the effect of a double-edged sword; the fire department is not required to meet them, but the fire department would most likely be judged against these standards by a host of investigating agencies.

Therefore, it is advantageous for everyone in a decision-making position to be familiar with NFPA codes and standards. Leadership's decisions pertaining to resources and the deployment of those resources should be based on knowledge of current industry standards as outlined by NFPA.

NFPA 1710 or NFPA 1720

NFPA adopted two standards addressing fire department organization and development: NFPA 1710 (Organization and Development of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments), and a sister standard NFPA 1720 (Organization and Development of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Volunteer/Paid-On-Call Fire Departments).

If a department's employees are both career and volunteer/part-time, they are classified as a "combination fire department". NFPA's definition is: **Combination Fire Department –** a fire department having emergency service personnel comprising of less than 85% majority of either volunteer or career membership.

The table below illustrates the category of employees, number of employees in each category, and the percent they represent of total employees in the WDMFD:

Table 22: Fire Department Employees

Employee Type	# of	% of Total
Career	57	64.04%
Part-time	32	35.96%
Total	89	100%

After August 15, the staffing level was anticipated to be as illustrated below:

Table 23: Fire Department Anticipated Employees After 8-15-2016

Employee Type	# of	% of Total
Career	59.5	65.75%
Part-time	31.0	34.25%
Total	90.5	100%

By definition it could appear that WDMFD would be classified as a combination fire department and the Authority Having Jurisdiction (AHJ) would make the decision of which standard should apply. However, the fire department is utilizing their volunteers as part-time employees (currently in transition), which better aligns them with the career employees. The consultants recommend that the AHJ **does not adopt** NFPA 1710, but uses it as the benchmark for operations.

Recommendation – NFPA Standard

- *The city should not adopt either NFPA standard. Adoption would include the adoption of all OSHA and NFPA standards by reference.* ***Priority 2***

- *Plan to continue to meet as many NFPA 1710 standards as possible in the future; again without adopting the standard.* ***Priority 4***

Occupational Safety and Health Administration (OSHA)

Mandatory

OSHA states that "once fire fighters begin the interior attack on an interior structural fire, the atmosphere is assumed to be "Immediately Dangerous to Life or Health" (IDLH) and section (g)(4) of OSHA's Respiratory Protection Standard, 29, CFR 1910.134 [**two-in/two-out**] applies." OSHA defines interior structural firefighting "as the physical activity of fire suppression, rescue, or both inside of buildings or enclosed structures which are involved in a fire situation beyond

the incipient stage." This rule is commonly referred to as the **"two-in/two-out" rule**, which is OSHA's mandatory requirement for interior firefighting.

OSHA requires that all fire fighters that are engaged in interior structural firefighting must wear SCBAs. SCBAs must be NIOSH-certified, positive pressure, with a minimum duration of 30 minutes. [29 CFR 1910.156(f) (1) (ii)] and [29 CFR 1910.134(g) (4) (iii)]

OSHA requires that all workers that are engaged in interior structural firefighting operations, beyond the incipient stage, use SCBA and work in teams of two or more. [29 CFR 1910.134(g) (4) (I)] Fire fighters operating in the interior of the structure must operate in a buddy system and maintain voice or visual contact with one another at all times. This assists in assuring accountability within the team. [29 CFR 1910.134(g) (4) (I)]

OSHA requires at least one team of two or more properly equipped and trained fire fighters are present outside the structure before any team(s) of fire fighters enters the structural fire. This requirement is intended to assure that the team outside the structure has the training, clothing, and equipment to protect them and, if necessary, safely and effectively rescue fire fighters inside the structure. For high-rise operations, the team(s) would be staged below the IDLH atmosphere. [29 CFR 1910.134(g) (3) (iii)]

OSHA requires that one of the two outside person's function is to account for and, if necessary, initiate a fire fighter rescue. Aside from this individual dedicated to tracking interior personnel, the other designated person(s) is permitted to take on other roles, such as incident commander in charge of the emergency incident, safety officer, or equipment operator. However, the other designated outside person(s) cannot be assigned tasks that are critical to the safety and health of any other employee working at the incident.

Any task that the outside fire fighter(s) performs while in standby rescue status must not interfere with the responsibility to account for those individuals in the hazard area. Any task, evolution, duty, or function being performed by the standby individual(s) must be such that the work can be abandoned, without placing any employee at additional risk, if rescue or other assistance is

needed. [29 CFR 1910.134(g) (4) (Note 1)]. Any entry into an interior structural fire beyond the incipient stage, regardless of the reason, must be made in teams of two or more individuals. [29 CFR 1910.134(g) (4) (I)].

Recommendation – OSHA

- *The fire department leadership must continue to ensure that the OSHA "two-in/two-out" rule is practiced on all structure fires.* ***Priority 5***

Insurance Service Offices, Inc. (ISO)

Non-mandatory

Insurance Services Office (ISO) – ISO is a leading source of information about property casualty insurance risk that provides risk information to many industries, including government. The ISO Public Protection Classification program is designed to help establish fire insurance premiums for residential and commercial properties based in part on a community's fire protection services.

Although the primary purpose of this tool is to rate fire protection from which insurance rates can be established, ISO ratings have been one of the few benchmarks to compare community fire protection. Realizing the true intent of the ISO classification, it should not be the sole determining factor in establishing public fire protection. Rather, the schedule should be considered an instrument for comparison and an additional factor from which to make a decision.

New Classifications

Through ongoing research and loss experience analysis, ISO identified additional differentiation in fire loss experience within ISO PPC™ program, which resulted in the revised classifications. ISO based the differing fire loss experience on the fire suppression capabilities of each community. The new classifications will improve the predictive value for insurers, while benefiting both commercial and residential property owners. Here are the new classifications and what they mean.

Split Classifications

ISO developed a split classification for a community – for example 2/2Y – the first number (2) is the class that applies to properties within 5 road miles of the responding fire station and 1,000 feet of a creditable water supply, such as a fire hydrant, suction point, or dry hydrant.

The second number (2Y) is the class that applies to properties within 5 road miles of a fire station but beyond 1,000 feet of a creditable water supply. ISO has revised the classification to reflect more precisely the risk of loss in a community. The prior 2013 classifications and the revised new classifications are illustrated in the table below:

Table 24: New ISO Split Classifications

Prior Classification	New Classification		Prior Classification	New Classification
1/9	1/1X		1/8B	1/1Y
2/9	2/2X		2/8B	2/2Y
3/9	3/3X		3/8B	3/3Y
4/9	4/4X		4/8B	4/4Y
5/9	5/5X		5/8B	5/5Y
6/9	6/6X		6/8B	6/6Y
7/9	7/7X		7/8B	7/7Y
8/9	8/8X		8/8B	8/8Y
9	9		8B	9

Benefits of the Revised Split Class Designations

- To the fire service, the revised designations identify enhanced fire suppression capabilities used throughout the fire protection area
- To the community, the new classes reward a community's fire suppression efforts by showing a more reflective designation
- To the individual property owner, the revisions offer the potential for decreased property insurance premiums

ISO Fire Suppression Rating Schedule

Since July, 2013, any community being evaluated by ISO will be graded on the revised FSRS. These changes are also incorporated in the Public Protection Classification (PPC). This applies

to cities, towns, villages, fire protection districts, and other graded areas that are evaluated based on the major elements of their fire suppression system.

The revised FSRS makes increased reference to the national consensus standards of the National Fire Protection Association (NFPA), American Water Works Association (AWWA), and Association of Public-Safety Communications Officials International (APCO). Using feedback from those organizations and many other industry associations, ISO revised its PPC evaluation to make it more accurately reflect modern fire prevention and suppression capabilities. By incorporating more direct references to national consensus standards, ISO is reinforcing that it doesn't just write standards, but uses recognized fire suppression and prevention practices as the basis for the PPC evaluations.

The new schedule continues to evaluate three major categories of fire suppression: ***fire department, emergency communications, and water supply.*** In addition, it includes a new ***Community Risk Reduction*** section that recognizes community efforts to reduce losses through fire prevention, public fire safety education, and fire investigation. The addition of the new risk reduction section represents a major shift in emphasis in the FSRS, giving incentives to communities that strive to reduce fire severity proactively through a structured program of fire prevention activities. Examples of fire prevention programs include wild land-urban interface ordinances, certificate of occupancy inspections, and inspections of fire prevention equipment.

"The revised FSRS continues to provide incentives to communities to strengthen their public fire prevention programs. The revision reflects current trends in fire protection, credits a community's fire prevention and fire protection capabilities in a measured, analytical way, and improves the predictive nature of the evaluation process" (Source: ISO web site).

There has been growing involvement in community efforts to limit losses before they happen, led largely by fire departments and their personnel. It is not easy to quantify the efforts made toward fire prevention and fire safety education, but there is enough anecdotal evidence to indicate that the more done to prevent a fire, the less likely a fire will happen or that it will be a major event.

The following are samples of the FSRS revisions:

Fire Department Section

The fire department section recognizes fire departments use various methods to solve the critical issues of economic constraints as it relates to recruitment and retention. One way that ISO addressed this is through enhanced recognition for automatic-aid, personnel, and equipment. This includes an increase in the factors relating to automatic-aid for fire departments that operate with common fire ground procedures. In addition, ISO now offers credit to fire departments that develop and use standard operating procedures and incident management systems. ISO, based on NFPA 1710, also considers a fire department's deployment analysis as a potential alternative to ISO's traditional road-mile distribution study. That study established optimal distances for standard response districts around each fire station — 1.5 road miles for an engine company and 2.5 road miles for a ladder service company. In conjunction with that change, ISO shifted emphasis from the number of apparatus and equipment carried, to the proper deployment of those resources by adjusting point totals for the relevant sections.

ISO modified its apparatus equipment lists to include only items specified in NFPA 1901. That change will more closely align the schedule with consensus standards and allow additional flexibility to revise ISO lists if there are significant changes to NFPA 1901.

Many other areas of the fire department evaluation make increased reference to consensus standards, particularly in fire department training, where credit will now be available for officer certification. The evaluation of pre-incident planning is now based on annual, rather than semiannual, inspections.

Some of the changes directly affect the minimum facilities evaluated by the FSRS. By referencing NFPA 1901, ISO increased minimum pump capacities for apparatus needed to qualify for minimal recognition under Class 9 and separately for Classes 1 through 8B to follow NFPA requirements more closely. ISO also placed additional emphasis on

firefighter safety, such as personal protective equipment and increased recognition for driver/operator training, with the realization that personnel can carry out successful fire suppression operations, only if they are able to avoid accidents and injury.

Emergency Communications Section

One of the most rapidly changing areas in fire suppression has been in communications. The revised FSRS — referencing APCO standards — reflects current technology by incorporating major revisions to this section, with a pronounced shift in emphasis from hardware, such as phone lines and radio equipment, to a more performance-oriented evaluation. The element of time is critical in allowing firefighters to attack a fire in its early stages, and the revised schedule places greater value on a communication center's ability to answer and process emergency calls in time frames specified by the NFPA. ISO also eliminated evaluation of phone lines and phone listings; instead, it considers enhanced 911, wireless technology, VOIP, CAD, and GIS capabilities.

Water Supply Section

In the water supply section, the FSRS now includes specific credit for communities, water utilities, or fire departments that enhance their understanding of a water system through periodic fire hydrant flow testing that meets NFPA and AWWA standards. The revised schedule also includes additional credit for flow through a single hydrant from a maximum of 1,000 gpm to 1,500 gpm, in accordance with AWWA.

Credit Point Changes

While the total credit points for the existing major categories remain unchanged, ISO increased or decreased the point weights for some sections.

The total credit points still are:

- Emergency Communications (formerly "Fire Alarm"): 10 points
- Fire Department: 50+ points
- Water Supply: 40 points

The community risk reduction section has a weight of 5.5 points, resulting in a revised 105.5+ total available points. The inclusion of the new ISO section with its extra points allows recognition of communities that include effective fire prevention practices without applying undue penalty for those that have not yet adopted such measures.

An important change throughout the revised FSRS is the way ISO credits record keeping. When no documentation exists to substantiate an item under review, ISO will not give credit for the section unless otherwise stated in the schedule. That means essentially a "no records, no credit" approach. ISO also established a new limit of 75% of the credit points possible when only partial documentation of an item exists. ISO implemented those changes to emphasize the importance of proper record keeping.

ISO Point Scale

In review, ISO evaluates fire departments on a 100-point scale into three categories:

- 10% Receiving and Handling Fire Alarms (Dispatch)
- 50% Fire Department
- 40% Water Supply

The best rating is a Public Protection Classification (PPC) of 1 and the lowest is 10 as illustrated in the table below:

Table 25: ISO PPC Point Scale

PPC	Points
1	90.00 or more
2	80.00 to 89.99
3	70.00 to 79.99
4	60.00 to 69.99
5	50.00 to 59.99
6	40.00 to 49.99
7	30.00 to 39.99
8	20.00 to 29.99
9	10.00 to 19.99
10	0.00 to 9.99

WDMFD ISO Classification

The actual ISO Public Protection Classification document for West Des Moines indicated the ISO survey became effective in April 2014. The City of West Des Moines received a split classification of 2/2Y.

The table below illustrates the number of departments Countrywide and in Iowa holding PPC classifications; the highlighted blue line illustrates the number and percentage of departments nationally and in Iowa that have a Class 2 rating as of 2016.

Table 26: National & Iowa ISO Classifications - 2016

2015	National	% of Total	Iowa	% of Total
Class 1	178	0.37%	0	0.00%
Class 2	1,164	2.39%	13	0.56%
Class 3	3,265	6.71%	31	1.33%
Class 4	6,749	13.88%	116	4.97%
Class 5	9,464	19.46%	211	9.05%
Class 6	8,392	17.26%	424	18.18%
Class 7	4,484	9.22%	459	19.68%
Class 8	1,250	2.57%	182	7.80%
Class 8B	1,552	3.19%	106	4.55%
Class 9	10,377	21.34%	723	31.00%
Class 10	1,757	3.61%	67	2.87%
Total	**48,632**	**100.00%**	**2,332**	**100.00%**

The figures below illustrate the ISO Classes – Countrywide

Figure 25: ISO Countrywide/National Classifications - 2016

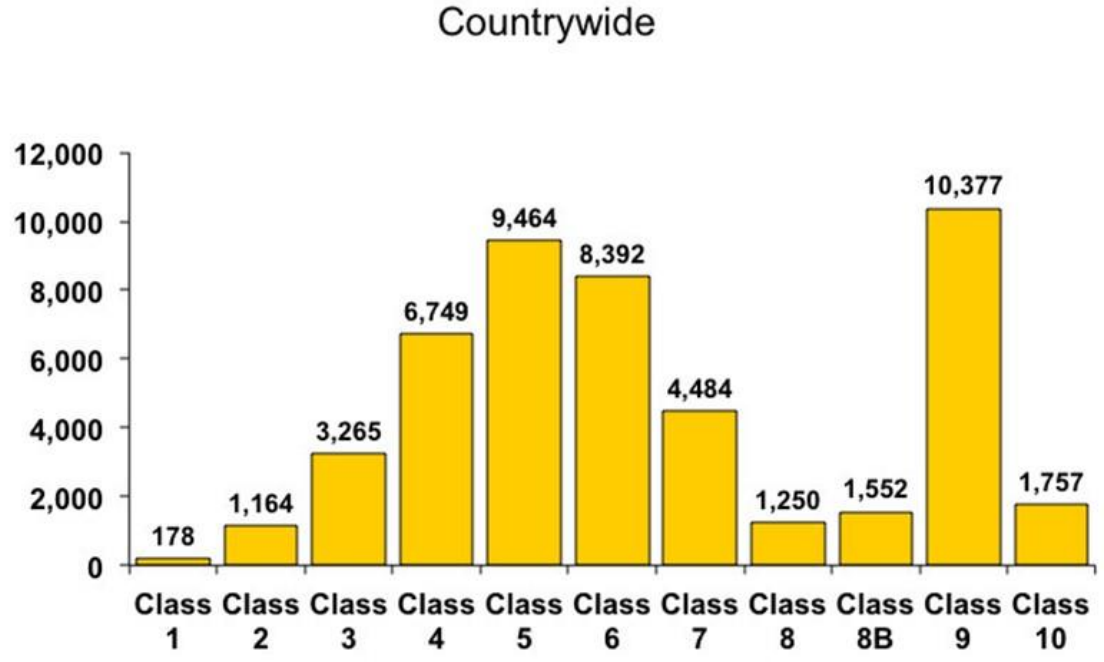
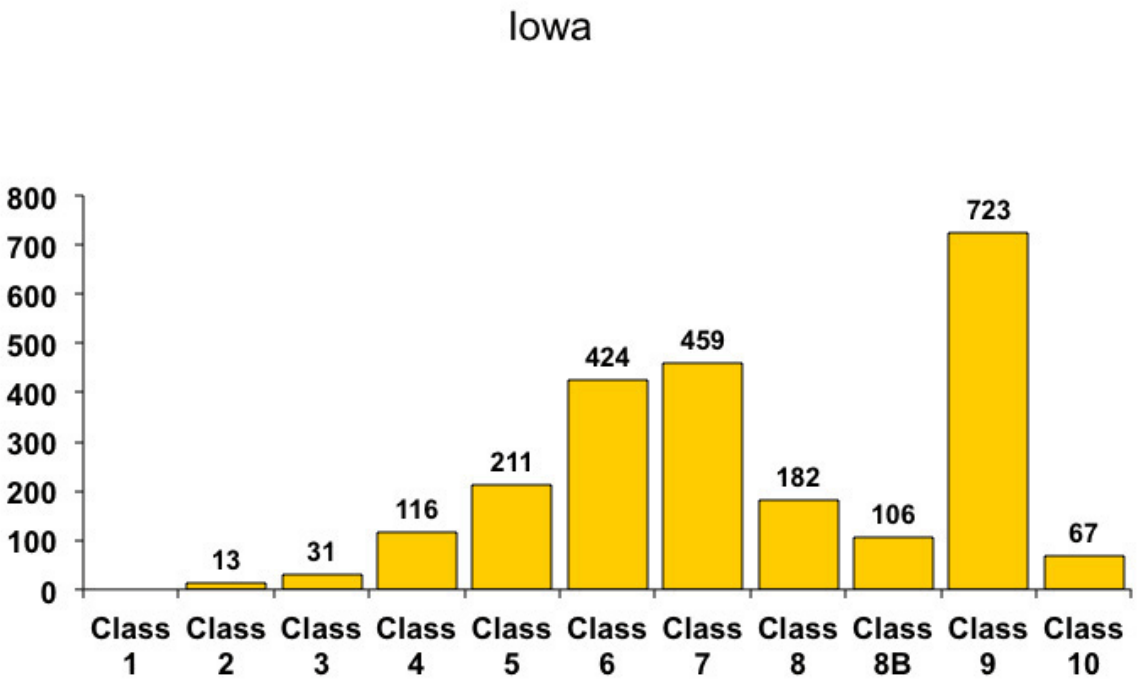


Figure 26: ISO State of Iowa Classifications – 2016



The explanation of points awarded in each of the categories for the Class 2 is illustrated in the table below:

Table 27: West Des Moines ISO Points Each Category of Survey

Feature	Credit Given	Maximum Credit
Emergency Reporting		
Credit for Emergency Reporting	2.55	3.00
Credit for Telecommunicators	3.99	4.00
Credit for Dispatch Circuits	3.00	3.00
Credit Received	*9.54*	*10.00*
Fire Department		
Credit for Engine Companies	5.92	6.00
Credit for Reserve Pumpers	0.49	0.50
Credit for Pumper Capacity	3.00	3.00
Credit for Ladder Service	3.73	4.00
Credit for Reserve Ladder & Service Trucks	0.00	0.50
Credit for Deployment Analysis	7.46	10.00
Credit for Company Personnel+	5.08	15.00
Credit for Training	7.14	9.00
Credit for Operational Considerations	2.00	2.00
Credit Received	*34.82*	*50.00*
Water Supply		
Credit for Supply System	30.00	30.00
Credit for Hydrants	2.97	3.00
Credit for Inspection & Flow Testing	3.40	7.00
Credit Received	*36.37*	*40.00*
Divergence*	-4.26	
Community Risk Reduction	3.96	5.50
Total Credit	***80.43***	***105.5***

The final ISO classification credit awarded is 80.43, which falls into the Class 2 as illustrated below:

Table 28: ISO Class 2 Points

PPC	Points
2	80.00 to 89.99

Recommendation – ISO

- *An ISO classification of Class 2 is an impressive rating. However, the consultants do not believe any additional resources or fiscal commitment should be made to reduce the classification to a Class 1; rather, the city should attempt to maintain the Class 2 rating in the future.* ***Priority 5***

Emergency Medical Services Standards

National standards pertaining to emergency medical services are very limited with most standards addressing Public/Private Safety Answering Point/dispatch which address: 9-1-1 answering times and 9-1-1 call transfer times, which were addressed in the Public Safety Answering Point/Dispatch section of this report.

As previously noted, WDMEMS is classified as a "third service"; and involves a stand-alone department within a city or county government, like the fire and police departments. This model is often perceived by providers as favorable because of its dedication to emergency ambulance service and appears to provide parity between EMS and its public-safety peers.

In as much as the most common method in providing EMS is fire based (fire departments) it is appropriate for non-fire based EMS agencies to utilize the National Fire Protection Association (NFPA) standards that address EMS delivery in addition to the CAAS metrics.

Other Standards

"Back in 1966, EMS did not really exist". Ambulance services were mostly limited to transporting people without really providing any care. Sometimes the people working on the ambulance had advanced first aid training from the American Red Cross since no EMT or paramedic curricula existed. Personnel did not need a medical license, and background checks usually consisted of checking to see if there was a driver's license; therefore, the term "ambulance drivers" evolved. As an ambulance manager, you did not have to worry about response time standards, advanced medical equipment, training, quality improvement programs, medical direction and many other facets today's leadership must deal with."

(Source: EMSWORLD Ludwig on Leadership: Managing Your Ambulance Service 50 Years Ago by Gary Ludwig June 26, 2016)

However, their efforts in the early 1950s, the American College of Surgeons developed the first training program for ambulance attendants. By 1966, the Highway Safety Act was passed that required all states to adopt highway safety programs to comply with Federal standards. In the 1970s, the National Highway Traffic Safety Administration (NHTSA) developed a 40-hour program that evolved into the First Responder EMS program.

In 1971, the first text book was published by the American Academy of Orthopedic Surgeons (AAOS) titled: Emergency Care and Transportation of the Sick and Injured. By 1973, the Emergency Medical Services Act was enacted by Congress. The first paramedic (EMT-Paramedic) was recognized by the American Medical Association (AMA). The NHTSA divided EMS service delivery into certifications of: First Responder, EMT-Ambulance, EMT-Intermediate, and EMT- Paramedic in 1985. Today, the NHTSA has published the National Emergency Medical Services Education Standards. The advancement of emergency EMS continues to evolve.

Of course today, the "gold standard" in EMS is accreditation which WDMEMS has achieved.

Accreditation Certification

As previously noted, West Des Moines is within an elite group that has all public safety providers accredited: police (Commission on Accreditation for Law Enforcement – CALEA), fire (CFAI), and EMS (CAAS) are accredited by outside professional agencies.

The fire department is one of 220 agencies worldwide that has obtained the Commission on Fire Accreditation International and only one of four in the state of Iowa fire departments that is accredited as illustrated in the table below:

Table 29: Iowa CFAI Accredited Departments

Iowa CFAI Agencies
Davenport
Iowa City
Sioux City
West Des Moines

The EMS department is one of 170 agencies in the United States, Canada, and West Indies to obtain the Commission on Accreditation of Ambulance Services and one of four in Iowa.

Table 30: Iowa CAAS Accredited Departments

Iowa CAAS Agencies
West Des Moines EMS & Iowa Alliance, West Des Moines
MEDIC EMS, Davenport
Siouxland Paramedics, Inc., Sioux City
UnityPoint Health – Trinity regional Medical Center, Fort Dodge

Ideal EMS Delivery Model

Although fire based EMS is the most prominent model (see above figure) it doesn't mean it is the most prudent for the community. The truth is, there is no one ideal EMS system; rather copious, local factors that determine the best delivery method for a community. The consultants learned early in the study that a significant issue in this report would be: should the WDMEMS department be consolidated into a single department with the fire department. The consultant's recommendation to this question will be under separate heading.

Consolidation of Fire & EMS

As frequently as the question of the Alliance was raised by stakeholders, so was the question if the fire department and EMS department should be consolidated into a single department? It is important to state that the issue of fire and EMS consolidation does not need to be tied to the decision about the Alliance; the two departments could consolidate with or without the Alliance.

Much has been written on the benefits and detriments of consolidation (centralization/decentralization) of emergency service providers. Research of consolidation, whether in political science, economics, or other social sciences, have as a common denominator – fiscal concerns. Most often the consideration towards consolidation of services is driven from a fiscal perspective rather than a desire for improved services; often both can be accomplished.

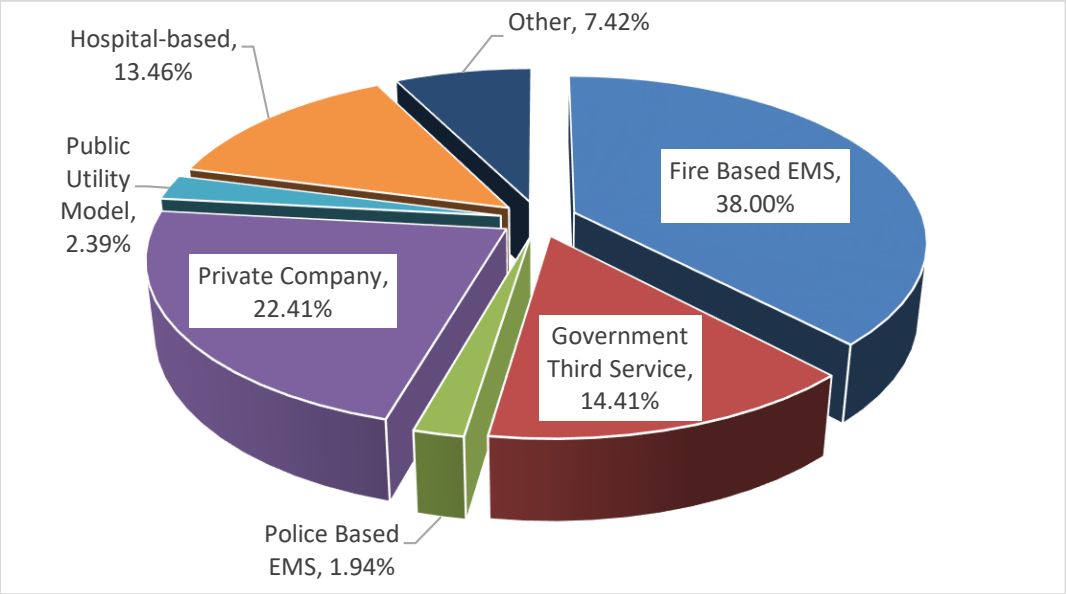
WDMEMS is classified as a municipal "third service". Only 14.41% of all EMS providers nationally are classified as "third services". This involves a stand-alone department within a city or county government, like the fire and police departments, that are dedicated to emergency ambulance service only. It is traditionally staffed with civilian employees and, like its public-safety counterparts, is completely owned, financed and operated within the local government structure; however, West Des Moines has established a public/private partnership. The term "third service" does not imply that it is inferior to the other public safety services.

The table and figure below illustrates how EMS is provided in the United States where staffing is comprised of career and part-time:

Table 31: EMS Providers National

Provider	Career	Combination	Average
Fire Based EMS	27.07%	48.92%	38.00%
Government Third Service	14.29%	14.52%	14.41%
Police Based EMS	2.25%	1.62%	1.94%
Private Company	27.07%	17.74%	22.41%
Public Utility Model	2.63%	2.15%	2.39%
Hospital-based	19.92%	6.99%	13.46%
Other	6.77%	8.06%	7.42%
Source: EMS Magazine - 9th Annual National EMS Systems Survey			

Figure 27: EMS Providers National



In West Des Moines, the municipal government "third service" includes a partnership between WDMEMS and UPH (Alliance); providing hospital patient transports and back-up ambulance service, and the primary 9-1-1 EMS provider for the City of West Des Moines.

"Business as usual" is fast becoming an unacceptable option for many governing bodies. A concern expressed by some elected officials was the ever increasing costs of providing fire service, inasmuch as significant fire events in West Des Moines are minimal and EMS activities continues to grow. All acknowledged that fire suppression resources were necessary, but questioned if there was a more cost-effective way to maximize existing resources and save money through consolidation.

Consolidate Incentives

There are many incentives to consolidate and the consultants have attempted to identify the top three that would be most beneficial to West Des Moines:

- *Standardization of services, programs, and training resulting in greater functionality, improved services, and employee safety. The two current departments do limited training together and according to numerous individuals interviewed, at times, function as two separate command systems at the same event; which should be a concern for safety.*

- *Eliminate Redundancy – consolidation means one administrative, support, and training staff, might also eliminate some duplication of equipment, apparatus, services, and programs.*

- *Future Cost Avoidance – a common misperception is that consolidations will initially save significant money. Some initial savings might occur, but the greatest cost savings in consolidation is future cost avoidance. It is most likely that leadership/management positions could be reduced as they become vacant due to retirements or leaving the City.*

Consolidation Obstacles

As with the incentives, the consultants have identified three obstacles to implementing consolidation that will most challenge the commitment of those that govern.

- Tradition – WDMEMS is one of few "third services" in Iowa and has had a strong reputation for quality service. Consolidating the best of both departments might still be seen as diminishing services.

- Single leadership – whomever becomes the Chief of the consolidated department, the management philosophy must align with the service demands within the City. Having an existing Chief become the leader of the consolidated department will require clear expectations from those that govern to ensure neutrality.

- Department membership (current and past) – can have strong influence and the ability to apply political pressure. The same can occur with tenured elected officials who might have been involved in the initial political action which established the City/Hospital partnership.

Types of Consolidations

There are many types of municipal safety departments' consolidations. The consolidation models for consideration by West Des Moines are:

- ***Administrative Consolidation*** *– Two or more safety departments remain separate, while administrative/staff functions, such as chief, clerical, and personnel, are combined. An example would be a single Chief and leadership/management team overseeing both organizations.*

- ***Operational Consolidation*** *– Each department remains separate but join together both administrative and operational functions, and deliver services as if they were one department.*

- **Full Consolidation** – Two agencies completely merge into a single legal agency. All service demands in each department are looked at as a single function of the department.

If consolidation were to be considered in West Des Moines, the consultants believe that *full consolidation* would be best suited.

Recommendation – Consolidation Type

- *Full consolidation would be the best consolidation type in joining the fire department with the EMS department.* ***Priority 5***

What's in a Name?

When it comes to the consolidated name – sometimes everything. Consolidated efforts have failed because of disagreement on what the newly formed department should be called. Most organizations are reluctant to change the name of their organization, noting that there is a proud tradition and somehow changing the name disrespects those that have served prior. For most outside the departments – a name change is not significant; for those within the departments it is very significant.

The consultants have found that changing the departments' name has some value. It becomes a clear indicator to all that business as usual has changed and a new approach and cooperative effort is important to governing officials. Of course, West Des Moines has an advantage because all of the employees of both departments are City employees, members of both departments are represented by the same union, and each department is familiar working with the other.

Therefore, a different name might be: West Des Moines EMS/Fire Department. This suggestion is based on the type of service most often provided and has nothing to do with a preference by the consultants of one department more important than the other.

Recommendation - Consolidated Department Name

- *If the fire and EMS departments were to consolidate, a new name of West Des Moines EMS/Fire Department is recommended.* ***Priority 5***

Should Fire and EMS Departments Consolidate?

After much discussion about what consolidation is, incentives, obstacles, type of consolidation, and new name the consultants *would not recommend* consolidation at this time, but future consolidation is probable.

Rationale

Expertise of specialization is a current benefit to West Des Moines. The current arrangement allows individuals who wish to specialize in one discipline (fire or EMS) to concentrate their total efforts in becoming very advanced in skills within that discipline, versus having to learn two very different service delivery methodologies. If the Alliance continues after fiscal reassessment, the partnership with the hospital allows for significant opportunities for paramedics and EMTs to become more proficient in their treatment skills.

The city maintaining a "third service" enhances the individual's ability to concentrate their efforts in the type of service desired, perhaps resulting in greater tenure of employees. After considerable assessment of each department, the consultants believe that the "third service" model provides a better level of EMS in the City. If for some reason, the current Alliance agreement is to disband, the paramedic's in-hospital training might also diminish or dissolve. In that event, perhaps some arrangement with UPH could still allow for more advance clinical training. If not, the Chief of EMS could seek other training opportunities concentrating on EMS skills only.

Conversely, the consultants believe there are cost savings by consolidation of fire and EMS. This is especially true at the leadership/management level and clerical level of both departments. As described "future cost avoidance" is a major fiscal factor in consolidations. In most consolidations, after a few years from implementation the administration level is diminished; whereas, the field personnel numbers are not.

Why Might Consolidation Be Advantageous in the Future

Although the Alliance and consolidation are different issues, many will find it hard to separate one from the other. The reassessment of the fiscal aspect of the Alliance must be determined before any consolidation efforts were to occur. In addition, the best time to consolidate is when there is a vacancy at the Chief's level. The current EMS Chief has a long proud history with the City of West Des Moines and it is speculated that retirement might be in the near future. The Fire Chief is relatively new and appears to be performing well and one could anticipate his tenure with the City might be longer than the EMS Chiefs. When one of these positions becomes vacant, it would be advantageous for the City to thoroughly investigate consolidation. This should not imply that one of the two existing Chiefs should or should not get the job of the new consolidated department; rather, consolidating fire and EMS into a single department will take new/different job skills.

Having three safety departments has its own set of challenges and perhaps one of the biggest is what do you do with the fire personnel if predominately, EMS provides the emergency medical treatment. One could continue with the fire department serving as "first responders"; the consultants highly support the closest source of help should be dispatched. However, paramedics in the fire department are expensive and maintaining their skill levels is challenging when they have limited opportunities to utilize their skills. Strong concerns were expressed to the consultants during interviews that the fire service is becoming cost prohibitive in its current organizational structure.

In summary, keep the "third service" and reassess consolidation when one of the existing department head positions become vacant. Ensure the administration of the consolidated department understands, and is capable, of implementing a new service delivery model. It is hard for the consultants to recommend a different approach when the project medical director indicates that a patient's best chance of survival is within the city limits of West Des Moines, referring to level of expertise of the WDMEMS.

Recommendation – Consolidation

- *Consolidation of the fire department and EMS department is not recommended at this time.* ***Priority 5***

- *Future consideration of consolidation of the two safety departments should occur when one of the two current Chiefs positions becomes vacant. The individual who becomes the Chief of the consolidated department must possess the skills, education, and experience to succeed in that role.* ***Priority 3***

Iowa EMS Alliance

The Iowa EMS Alliance (Alliance) was established in 2008 as a public/private agreement between UnityPoint Health Des Moines (UPH) and the City of West Des Moines, specifically, West Des Moines EMS (WDMEMS). Participating UPH facilities consist of Iowa Methodist Medical Center, Methodist West Hospital, Iowa Lutheran Hospital, and Blank Children's Hospital, but the agreement does allow for other hospitals to join the Alliance, though no additions have been made since the initial structure. The agreement is allowed by Iowa State Code 28E, which enables state and local governments to cooperate and provide joint services with private organizations in ways that are mutually beneficial (source: Code of Iowa Chapter 28E agreement).

Description of the Iowa EMS Alliance

The Alliance is currently staffed by 82 people, all of whom are employees of WDMEMS, with proportional personnel expenses being shared through a formula by UPH. Staffing consists of:

- 10 administrative, billing, and shift lieutenant personnel with costs shared by formula with UPH;
- 12 full-time medics assigned to city 9-1-1 units funded by the city;
- 9 full-time medics funded by UPH assigned to hospital transport units;
- 6 full-time medics funded cooperatively by UPH and the city;
- 3 paramedics funded by WDMFD whose time is shared equally with WDMEMS; and,
- A fluctuating staff of part-time medics and EMTs whose cost are shared proportionately by formula by the city and UnityPoint.

City 9-1-1 and hospital transport staffing are generally managed separately, but available hospital ambulance may be accessed for overflow 9-1-1 calls during periods of unexpected call volume peaks. City 9-1-1 ambulances, however, are not used for hospital transports unless the call originates in the City of West Des Moines with a hospital as the transport destination.

All full-time lead medics are required to possess at least an associate's degree, must maintain critical care credentials, and are expected to earn and maintain all qualifications necessary to work 9-1-1 and hospital transport units. City/hospital duty assignments are handled through a seniority-based shift-bid program. Bid assignments are generally six-months in length, but do not preclude medics being shifted from city to hospital assignments and vice versa based upon situational need.

Distribution of Calls

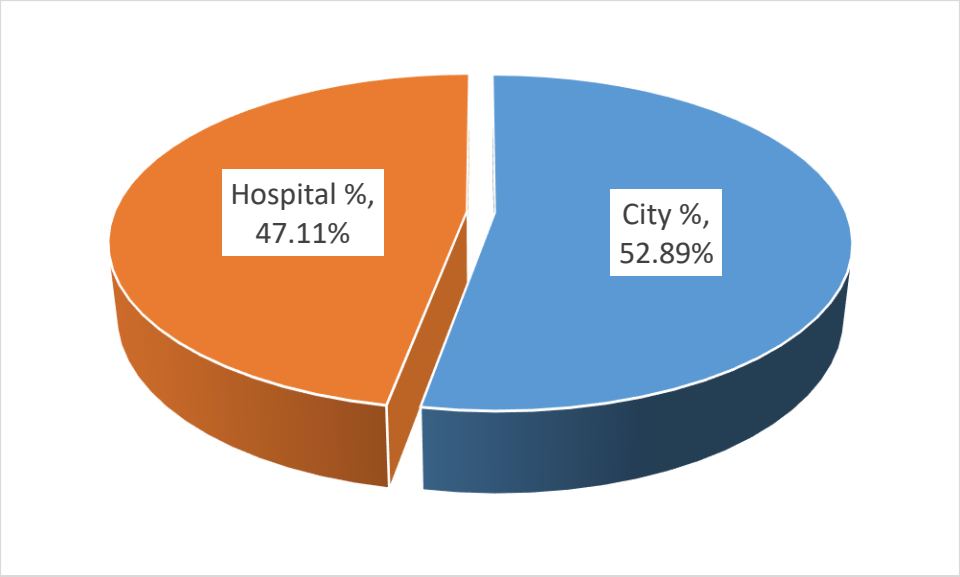
In terms of call volume, 9-1-1 units are busier than transport crews, but hospital transports can be much longer in duration and bring greater need to monitor and manage fatigue in personnel for safety and clinical performance considerations. The table below illustrates the breakdown of EMS calls for the city and hospital for each of the three-year study period:

Table 32: Breakdown of EMS Calls; City vs. Hospital

Year	City	City %	Hospital	Hospital %
2013	3,727	51.97%	3,445	48.03%
2014	4,014	55.97%	3,594	50.11%
2015	4,499	62.73%	3,840	53.54%

The three-year average for breakdown of EMS responses for city verses hospital is illustrated in the figure below:

Figure 28: Three Year Average of Percentage of Calls



Alliance Initial Premise

Under the initial agreement, WDMEMS met UPH's need for reliable transport services that could operate at specialized levels without facing the cost and organizational needs of starting a separate service. UPH provided WDMEMS with financial and equipment support and specialized training and experience opportunities. In order to ensure mutual benefit, five key principles drove the formation of the agreement:

- *No portion of the agreement could negatively impact 9-1-1 service to the community;*
- *The agreement must provide and maintain a high level of patient care;*
- *The agreement must result in operational effectiveness, maximizing resources and revenues;*
- *The agreement must improve the service and response quality of the UPH transport teams;*
- *The agreement must improve and maintain staffing and training, providing expansion of knowledge and skills for all personnel.*

Stakeholder Perceptions of the Alliance

As previously noted in the Executive Section of this report the consultants were alarmed by the number of individuals, including elected officials, city officials, departments leadership team members, department heads, and public safety employees who indicated they didn't understand the facts about the Iowa EMS Alliance. There were individuals who felt very strongly about the Alliance and how it benefited the City. Conversely, there were an equal number who felt the Alliance was not cost-effective for the City, and in some cases, detrimental to the WDMEMS department. However, the majority of individuals, when interviewed about the Alliance, simple confided they "really don't know"; there were few stakeholders with a neutral view.

Alliance Misconceptions as Outlined by EMS Leadership

During a meeting with the consultants, EMS Administrators conveyed that there are many misconceptions about the Alliance among department members, City Council and the

community as a whole. EMS Administrators readily acknowledged that they have done a poor job of communicating the tangible and intangible benefits of the Alliance to all stakeholders.

Listed are the most common misperceptions about the Alliance as defined by EMS Leadership.

- *Tax money is spent benefitting a private entity*
- *9-1-1 units are often not available for emergency city calls due to them being utilized for hospital transfers*
- *There is no benefit to the city*
- *The Alliance partnership is just a scheme to generate more patients for UPH*
    - *UPH targeted transports are not part of the contract*
    - *Data is tracked and reported to UPH competitor hospitals*
    - *Transport diversity has consistently remained the same as prior to the Alliance agreement*
- *WDMEMS does not benefit from the Alliance*
- *The Alliance would be dissolved if better communication existed*

These perceptions or misperceptions are far more prevalent than most realize. Without factual information being communicated, individuals have a tendency to fill-in the blanks with all sorts of information, including rumors. The Alliance facts, after a thorough re-assessment, should speak for themselves and only need to be provided in a completely transparent manner.

Alliance Questions

Four main questions articulated to the consultants during the interviews were:

- *What is the value of the Alliance to the City?*
- *Should the Alliance remain as is?*
- *Develop a more equitable agreement?*
- *Withdraw from the Alliance?*

Each of these questions will be addressed in this report; however, the understanding of the Alliance is a complex issue and the reader is encouraged to read the entire report, especially the

fiscal section that pertains to the EMS department and the Alliance. The consultants spent a significant amount of time attempting to confirm accurate data/information about the formation, operations, staffing, and fiscal implications of the Iowa EMS Alliance. Without question, it was apparent to the consultants that there was no easily obtainable document that comprehensively explained the facts about the Alliance to the elected and city officials and/or employees.

Human Resources

The human resource section, in most audits, spends considerable time reviewing all of the systems of recruitment, policies, contract review, performance evaluations, discipline and terminations. With the City of West Moines, most of these areas are under control of the City's human resource department, and as such, have many of the policies in place and are not only well documented, but well organized and in compliance. Thus, there is little to comment.

There are a few areas that the consultants will provide some comment and insight. In addition, the consultants will provide comments on both the union contracts – provided in the Appendix D and Appendix E. This is for informational purposes only. As organizations negotiate, one rarely has the opportunity to sit back and view the entire contract as sessions concentrate on specific language issues. Thus, this is an overall view of the language and all recommendations are for consideration by both parties and subject to contract negotiations. Finally, the consultants offered to review the City's employee handbook and that can be found in Appendix F.

This section will concentrate on the following areas: recruitment of part-time members in the EMS and fire department; application of the Fair Labor Standards Act; and turnover within the EMS department.

Recruitment

Fire Department

Recruitment for full-time firefighters is also governed by the City's Civil Service Board. Testing consists of a written exam, passing of the Candidate Physical Ability Test (CPAT), and an oral board. There are also points awarded for being a veteran. The recruitment of paid on call, or now called part-time firefighters, has been done separately; however, the human resources staff is working with the fire department to consolidate the testing process to utilize the same testing criteria for both full-time and part-time members of the department.

Many department across the country are having difficulty recruiting volunteer/ part-time firefighters as the criteria is the same. Furthermore, the time commitments of most individuals –

work and family – make part-time commitments difficult. The Fire Chief and human resources indicated that there was a 60-minute residency restriction on part-time members. Although this may be a residency requirement with union employees, part-time employees are not bound by union restrictions and this residency requirement should be eliminated. Since part-time members now sign up and stay in the station, such a requirement is no longer necessary. By opening up the residency restrictions, the department should be able to recruit from surrounding departments and have a better candidate pool.

EMS Department

The human resource department has attempted to coordinate the recruitment of part-time and full-time EMS personnel; thus, utilizing the same testing process for both. This has been difficult at times, due to the number of part-time versus full-time openings. Full-time openings are guided by the City's Civil Service; thus, all testing is approved through this board, and once testing is completed, the civil service approves the list. The City also incorporates not only human resources, but members of the department in the testing process in order to utilize the specialties of a number of employees.

The testing process consists of a written exam, job performance evaluation; and a listening test. The only concern by the consultants is that the written exam is one that has been developed by the department and has not been validated and as such, this could come under scrutiny if challenged. The City provided the oral interview questions and found them to be rather complete.

A topic of significant concern within EMS, related to the part-time employees, is turnover – the consultants recommends integrating some of the turnover concerns into the questions during the interview. Such as – long term professional goals of the candidate, questions regarding types of work schedules and problems with different schedules – especially the long transports that may be required; and other issues that have been brought up during exit interviews with departing EMS employees; although not a final solution, this may be a way to identify some issues prior to offering employment to new applicants.

Summary

Overall, the recruitment activities for both full-time and part-time personnel are well organized and coordinated between both departments and human resources. The processes utilized are up-to-date, compliant, and integrate Fire/ EMS administration, personnel, and the Civil Service. As with any system, there will always be ways to improve, and it appears that human resources is always looking for ways to improve the process and hire quality employees for each of the departments.

Recommendations - Recruitment

- *Investigate changing the EMS written test to one that is validated so that if challenged, the City will not be in a liable situation.* ***Priority 3***

- *Eliminate the residency requirement for part-time firefighters; or widen the distance to broaden the pool of candidates.* ***Priority 3***

- *Continue to integrate the testing process of full-time and part-time firefighters.* ***Priority 4***

Fair Labor Standards Act -Fire

The basic regulation under the FLSA is the payment of overtime. According to the FLSA, individuals who work more than 40 hours per week are entitled to compensation at time and one-half. Under the FLSA, a municipality can designate a work cycle for fire and police departments utilizing the 7k exemption component for relief of overtime. The FLSA allows the municipality the ability to designate a work cycle from 7 to 28 days. Each cycle has an associated number of hours that the employee is allowed to work before the payment of overtime. Hours actually worked over the allowable amount under the law must be paid at one and one-half the normal rate. The fire department has established the twenty-seven (27) day schedule in which twelve (12) hours of overtime will be paid during a normal work cycle (216 hours worked and overtime required after working 204 hours).

There needs to be a distinction between "hours worked" and "hours paid". The FLSA only requires that overtime be paid for actual hours worked. For example, in a 27-day cycle; if the employee were to take a day off during the 27-day cycle, these hours would not count toward the

accumulation of overtime. He/she would be paid for their vacation time, but not at an overtime rate. As an example: an employee is scheduled to work 216 hours. During the cycle, the employee is granted and takes a 24-hour vacation day, and covers 12 hours for another employee. Here is how overtime is calculated:

Example 1 – FLSA Paid as Hours Worked

FLSA cycle hours = 216

- 24 hours vacation time

192 hours worked

+ 12 hours for added shift

204 hours work (no overtime accumulated)

The employee, however receives 228 hours of pay (add the 24 hours of vacation time) all at straight time.

Example 2 – FLSA Paid as all Hours Paid

FLSA cycle hours = 216

+ 12 hours for additional shift coverage

228 hours paid as follows:

204 hours paid at straight time

24 hours paid at time and one-half

The current practice in West Des Moines is to treat all time off benefits – holidays, vacation, and sick as hours worked. The Fair Labor Standards Act does not require any time off benefits such as vacation, holiday or sick leave to be used in the calculation of overtime; however, many municipalities have gone above the law and use these hours in the overtime calculation. The fire department needs to be commended, in that compared to many fire departments, its overtime is not as significant; thus, through the use of part-time employees, and other measure, it is making efforts to keep costs controlled.

In the event the fire department finds that it needs to either control costs, or raise revenue to funds additional staffing and/or programs, this transitioning from hours worked to hours paid

may be one area for the department to explore. In other fire department studies, the consultants have performed an analysis in which just sick leave was removed from the calculation of overtime. In most organizations, this has resulted in approximately a $2 – 3,000 savings per employee.

Another option is the addition of a Kelly Day. "Kelly days," (a term utilized in the fire service for days off taken to minimize overtime) are used in some fire departments to help offset the work schedule and the cost of overtime. Employees are provided a specific day off within the work cycle in order to either reduce or eliminate overtime. The day off is determined by administration, and is a day – without pay – during the week in which overtime is at its greatest. The day must be determined by administration – not another vacation day - and utilized in the work period to offset overtime.

Both of these recommendations – movement of sick leave from the overtime calculation, or the addition of a Kelly day, would need to be negotiated as part of the agreement; and should be considered when overtime costs become a fiscal concern with the City.

As part of the turnover analysis, the Consultant asked the City for a break down, by employee of base pay and overtime for a fiscal year. Unfortunately, the current human resource system cannot easily provide that information; however, a member of the human resource staff was able to provide for the 2015 calendar year base salary and overtime (without the July increase) for both the fire and EMS departments. Typically, the Consultant finds in the fire department a problem called compression, where salary plus overtime of a lower rank provides a greater salary than the higher rank. This compression problem causes employees in the higher rank issues as they assume higher levels of responsibility at a lower pay; as well as limits promotion as many perceive taking a promotion as taking a pay cut.

The data, however, for the 2015 calendar year, does not show compression to be a problem within the fire department. In fact, as compared to a number of fire studies, the fire department has managed its overtime very well. As discussed in the FLSA section, by working a 24/48 schedule, there is an inherent amount of overtime that will be paid just by working the regular

work schedule, as well as coverage for sick, vacation, training, etc. – that is evidenced by the overtime amounts around $2,000 – 5,000. There are only a few employees that exceed that amount and those employees are probably the ones that typically volunteer for overtime, special assignments, or there was an event within the department. Thus, overtime within the fire department is not, at this time, a problem and is well managed.

Table 33: Fire Department Overtime Analysis

Position Code	Wage Rate	OT Total	Total Comp
FD-FD_DR_OPR-18	$70,150.08	$13,443.22	$83,593.30
FD-FIREFIGHT-19	$66,859.52	$14,157.48	$81,017.00
FD-FF_PARAMED-22	$73,775.52	$4,548.66	$78,324.18
FD-FD_DR_OPR-21	$70,150.08	$5,456.64	$75,606.72
FD-FD_INSPCT	$73,760.96	$1,798.50	$75,559.46
FD-FD_DR_OPR-21	$70,150.08	$4,655.29	$74,805.37
FD-FIREFIGHT-19	$63,641.76	$11,057.88	$74,699.64
FD-FD_DR_OPR-19	$66,859.52	$7,717.98	$74,577.50
FD-FD_DR_OPR-22	$70,150.08	$4,199.16	$74,349.24
FD-FIREFIGHT-19	$66,859.52	$6,938.03	$73,797.55
FD-FD_DR_OPR-22	$70,150.08	$2,656.10	$72,806.18
FD-FD_DR_OPR-18	$70,150.08	$2,367.31	$72,517.39
FD-FIREFIGHT-19	$66,903.20	$5,539.20	$72,442.40
FD-FD_DR_OPR-21	$66,859.52	$5,000.24	$71,859.76
FD-FIREFIGHT-22	$66,859.52	$4,857.12	$71,716.64
FD-FIREFIGHT-19	$66,859.52	$4,746.96	$71,606.48
FD-FD_DR_OPR-19	$66,903.20	$4,250.16	$71,153.36
FD-FIREFIGHT-18	$66,859.52	$4,158.72	$71,018.24
FD-FD_DR_OPR-18	$70,150.08	$246.44	$70,396.52
FD-FD_DR_OPR-22	$70,150.08	$146.04	$70,296.12
FD-FIREFIGHT-18	$66,859.52	$2,999.04	$69,858.56
FD-FIREFIGHT-18	$66,859.52	$2,854.56	$69,714.08
FD-FIREFIGHT-21	$66,859.52	$2,278.32	$69,137.84
FD-FD_DR_OPR-19	$66,859.52	$1,908.48	$68,768.00
FD-FIREFIGHT-21	$66,859.52	$1,363.20	$68,222.72
FD-FIREFIGHT-18	$66,859.52	$852.24	$67,711.76
FD-FIREFIGHT-18	$66,859.52	$590.04	$67,449.56
FD-FIREFIGHT-19	$54,934.88	$3,716.10	$58,650.98
FD-FIREFIGHT-19	$54,934.88	$3,288.35	$58,223.23
FD-FIREFIGHT-22	$47,465.60	$7,203.75	$54,669.35
FD-FIREFIGHT-22	$47,465.60	$3,306.96	$50,772.56

Position Code	Wage Rate	OT Total	Total Comp
FD-FIREFIGHT-21	$47,465.60	$2,480.53	$49,946.13
FD-FIREFIGHT-18	$47,465.60	$778.21	$48,243.81
FD-FIREFIGHT-18	$47,465.60	$605.02	$48,070.62
FD-FIREFIGHT-18	$47,465.60	$296.46	$47,762.06

Recommendation - FLSA

- *If the fire department fiscal conditions warrant – consider moving sick leave from overtime calculations or add a Kelly day to decrease overtime costs.* ***Priority 5***

Compensation – Fire

The consultants analyzed the fire department's union compensation schedule. A common problem in fire departments is compression. Compression is when base salary plus overtime creates a situation where a lower rank employee earns more than a higher rank employee. The causes of compression are contract language creating overtime situations and how the salary schedule is created. Due to the limited overtime budget within the fire department, it is doubtful that the department has a compression problem. Furthermore, upon review of the compensation schedule within the union agreement; there is sufficient distance between ranks. When building a compensation schedule in public safety, a range of 8 – 10% is built in between ranks. There is 21% between the firefighter and the driver rank – more than sufficient to account for a normal amount of overtime.

The study is not a compensation study; however, in order for the fire department to continue to be cost effective, it is critical to maintain its part-time firefighter program. The part-time firefighter compensation is as follows:

Table 34: Part-Time Fire Salary Schedule

	Firefighter	Firefighter/EMT
Starting	$12.50	$14.00
Year 3	$13.50	$15.00

The starting salary for a part-time firefighter appears rather low and one would question if this would be attractive to individuals, especially due to the time and training commitments required.

The consultants suggest that an increase should be tied to number of hours committed to the department rather than years of service. It is assumed that hours are already being tracked for service to the department, so establish thresholds of service, and reward those with increases in compensation. This may entice more commitment – rather than years of service. In addition, as with the full-time firefighters, any incentives to achieve additional certifications and earn compensation may be useful. Obviously, the risk is that you are training individuals for other departments; however, individuals who feel that the WDMFD respects and commits to its employees may find that employees will stay longer.

The department should also look into LOSAP (Length of Service Award Program) – it is a program that provides a pension to individuals who stay with the department for a period of time. The purpose is to find small ways in which employees feel valued within the organization; thus enticing them to commit to the department.

Recommendation - Compensation

- *Re-evaluate the compensation structure for part-time firefighters to not only increase the wages to be more competitive, but to tie the increases to hours of service rather than years of service.* ***Priority 3***

- *Consider more incentives for longevity – such as the Length of Service Award Program (LOSAP).* ***Priority 3***

EMS and Turnover

A concern regarding the turnover rates for part-time employees within the EMS division was raised. This is a complicated issue, as there are a variety of reasons for turnover. The major causes of turnover stem from wages, working conditions – or in the case of EMS, fatigue, the work schedule, or the type of work, and of course, the final reason for turnover is management.

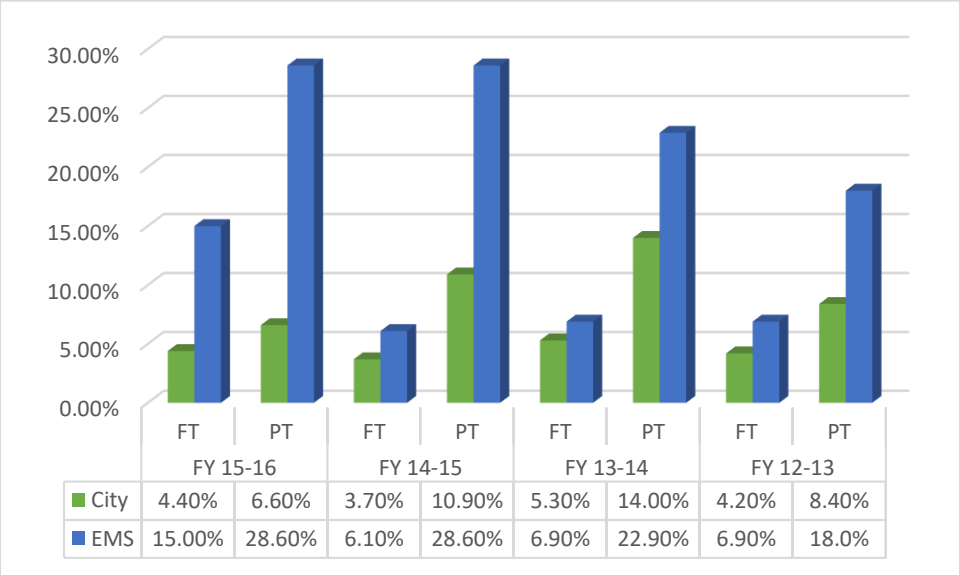
It is first necessary to determine if turnover, is in fact, an issue. Unfortunately, there are no national statistics to determine what a normal rate of turnover is within public safety. Nationally, the public sector had experienced low turnover; however, over the years due to economic changes as well as changes in the demographics of the workforce, turnover within the public

sector has increased. According to some publications, turnover in the public sector was around 9% in 2009 and has increased to 12.5% in 2012.

In 2009, the National Institute of Health conducted a longitudinal study of turnover and the cost of turnover in EMS. This is probably the only formal study conducted, as any turnover studies conducted afterwards, regionally cite this study as the mean of turnover rates for EMS. Dr. Daniel Patterson, sampled 40 EMS agencies over a six (6) month period. The results of the study indicated a mean turnover rate of 10.7%. The rate did vary across agencies: all paid agencies – 10.2%; mixed agencies – 12.3%; and all volunteer agencies – 12.4% turnover rates.

The City has maintained turnover data for a number of years. The following chart illustrates the comparison of turnover between the City and the EMS department, as well as between full-time and part-time employees.

Figure 29: EMS vs City Turnover Comparison



From the data provided, the part-time turnover rates for WDMEMS over the four (4) year period average, was 24.53%. Full-time turnover data has increased from 6.9% to 15% this fiscal year. The data indicates that EMS has a higher than normal turnover rate, not only compared to the City as a whole, but also as compared to any of the studies that have been conducted nationally.

There has been a four-year trend in turnover for part-time personnel. But there is concern that within the last fiscal year, the full-time turnover has significantly increased. When there is excessive turnover, it is indicative of a problem within the department. If the City or department administration does not attempt to find the cause or causes of turnover, it will continue to be a problem and eventually, the service to the patient will begin to suffer.

There is also a cost to turnover. The human resources department attempted to calculate just the cost to fill a position. The human resources department has identified these categories of costs:

Table 35: Estimated Human Resources Turnover Costs

City of West Des Moines - Approximate Costs of EMS Recruitments		
Item	***Approximate Cost**	**Comments**
Des Moines Register Ad	$350.00	For this recruitment we just posted on CareerBuilder/Local EMS Websites/Flyers at hospitals. We use various advertising depending upon each recruitment. I have used an estimate cost of when we use the Des Moines Register.
HR Front Desk Staff Time	$337.50	Estimate of 10 hours handling questions/running background checks/posting on website/completing new hire/entering employee into eP and creating files/scheduling physicals and drug screens
Human Resources Administrator Time	$2,101.95	Estimate 40 hours of my time per recruitment spent planning for recruitment and presenting to Civil Service/reviewing applications/sending correspondence/updating postings/placing ads/calculating scores/handling background checks/answering candidate's questions/scheduling interviews/sending hire letters
EMS Administrative Secretary Time	$226.80	Emily estimates she spends about 30 minutes per candidate taking phone calls for testing/getting everything set up for testing/scoring listening tests (written exams are scored electronically). 13 candidates tested for this recruitment
EMS Assistant Chief Time	$421.52	Receiving feedback from interview panel/running verification of certifications/second interviews/reference checks
Oral Board/Medical Board/Physical	$717.46	4 employees served on the Oral Board; 3 employees served on the Medical Board; 2 employees handled the physical. 7 candidates made it to this part of the process. Preparation for interviews started at 8:00 am and we were finished at approximately 3:30 pm.

City of West Des Moines - Approximate Costs of EMS Recruitments		
Item	***Approximate Cost**	**Comments**
Cost of Lunch for Interview Panels	$124.36	Actual cost of lunches for this recruitment.
Physical/Drug Screens	$480.00	$120/candidate
DCI Background Check	$280.00	$15/candidate for DCI; $40/candidate for out of stated background/$15 per candidate for driving record check
HR New Hire Orientation/Safety Training	$151.74	Approximately 4 hours to complete for FT (to cover benefits)
Total Costs	**$5,191.33**	

**Approximate costs based upon 2016 FT Paramedic Recruitment and estimate of 4 placed on certified list*
*** City salary includes 35% addition of benefits*

It costs approximately $5,191per opening to advertise, interview, conduct pre and post-employment processes. This cost does not include any of the EMS orientation processes, cost of overtime to fill the vacated position, nor the fatigue factor on employees who are working more due to the unfilled position.

Looking at just the fiscal year 2015-2016 – the cost to the human resource department was $57,101 in time and expenses to fill the 11 part-time EMS vacancies. If all 16 EMS vacancies are included, the total cost is $83,056.

The costs however, do not stop there. All new employees then go through a one-week EMS Academy. The cost of one week of the trainer's salary is $2,776.11 (including benefits) along with the salaries of the employees within the class. This salary does not include any prep time, or the cost of materials for the course. In 2016, there were 16 openings – assuming the City held four (4) EMS academies of four (4) students each (1/2 EMT's and 1/ 2 paramedics – all part-time). Thus, to fill the 16 openings in 2016, the City expended more than $105,650 in City employee time and training was spent, with not all of the expenses accounted for, nor all of the indirect costs to EMS employees considered.

Table 36: Recruitment Expense Summary

HR Recruitment Summary	
16 FT/PT Vacancies – Advertising, Employee Time & Benefits, Expenses, Tests, Etc.	$83,056

Academy	
Trainer Time & Benefits x 4 trainers	$11, 104.45
16 EMS students (assumed all 16 PT w/o benefits- 8 EMT – 8 Paramedic)	$11,489.28
Total Academy Salaries (no other expenses included)	$22,593.73
Total Recruitment Expense	
	$105,649.70

Assumes part-time positions – full benefits of employees, therefore, not included.

A moderate amount of turnover is healthy for any organization; however, a higher than normal amount of turnover is costly to the organization and is usually an indication of problems within the department and must be addressed.

The following will examine some of the leading causes of turnover and the affects within the EMS department.

Compensation

Compensation is one of the major reasons for turnover. Part-time and full-time employees are paid off the same wage scale. The first issue is that there is little difference in the salary ranges of the EMT and the paramedic. Considering the difference in skill sets, there should be a greater spread in the salary ranges of these two positions. This project was not a compensation study; thus, the consultants was not commissioned to study the wages of the area. Initially, an examination of the salary schedule was conducted.

The Human Resources Director provided a 2016 Medical Transportation Survey that had salary data. Thus, the 2016 average market minimum salary for an EMT was $13.69 per the survey; thus, the 2016 starting salary of $14.38 for an EMT was in line (with the one survey). The average market rate was $16.65 per the one survey – would equate to approximately step 10 of the salary schedule. The average market rate, is defined as the rate an employee should be earning when he/she is capable of performing the position, is usually found around steps 4 – 7 in most compensation schedules. Step 10 is slightly higher; however, the consultants did not get into the construction or compensation philosophy of the union wage schedule. Thus, the

schedule would appear to be slightly below the average market wage of EMT's utilizing this limited data.

The wage for a starting paramedic, again utilizing the same Medical Transportation Survey, has a starting paramedic wage of $18.08 and an average market wage of $22.06. The paramedic wage scale appears to be lower than the limited survey external market, and there is insufficient distance between the wages of an EMT and a paramedic. One would assume with overtime, an EMT would make the same, if not more than a paramedic. Considering the skill level necessary for paramedic the wage should be commensurate.

Considering the time involved with the long runs and skills required, the City should conduct a compensation study and increase the wage grids of the paramedic levels within the EMS department. Further, a compensation study would determine if salaries are still competitive with the external market.

Compensation and Overtime

It was often heard by the consultants that the compensation by EMS employees was above average with overtime. One employee told a consultant that with overtime, last year he made over $90,000. The point, however, is that compensation is being increased through overtime, not by the base salary. Looking at the last fiscal year, it is evident, that there is a large amount of overtime.

Table 37: EMS 2015 Calendar Year Overtime Analysis

Position Code	Base Wage (based on 2600 hours)	Overtime above 2080	Total Base (includes OT)	Total Add'L OT	Total Comp
EM-LEAD_MEDIC	$49,370.05	$26,466.40	**$75,836.45**	**$19,560.60**	**$95,397.05**
EM-EM_LT	$54,961.59	$28,975.20	**$83,936.79**	**$8,708.25**	**$92,645.04**
EM-LEAD_MEDIC	$48,909.73	$27,343.20	**$76,252.93**	**$14,231.30**	**$90,484.23**
EM-EM_LT	$54,345.51	$29,555.04	**$83,900.55**	**$1,434.90**	**$85,335.45**
EM-LEAD_MEDIC	$49,000.45	$27,343.20	**$76,343.65**	**$5,277.24**	**$81,620.89**
EM-LEAD_MEDIC	$48,725.41	$27,343.20	**$76,068.61**	**$4,451.31**	**$80,519.92**
EM-LEAD_MEDIC	$47,999.54	$26,998.08	**$74,997.62**	**$2,394.03**	**$77,391.65**
EM-LEAD_MEDIC	$48,013.00	$27,343.20	**$75,356.20**	**$1,578.24**	**$76,934.44**
EM-LEAD_MEDIC	$41,906.51	$21,897.04	**$63,803.55**	**$11,044.23**	**$74,847.78**
EM-LEAD_MEDIC	$47,208.44	$26,390.64	**$73,599.08**	**$958.45**	**$74,557.53**

Position Code	Base Wage (based on 2600 hours)	Overtime above 2080	Total Base (includes OT)	Total Add'L OT	Total Comp
EM-LEAD_MEDIC	$38,337.85	$21,468.00	**$59,805.85**	**$12,993.18**	**$72,799.03**
EM-LEAD_MEDIC	$41,650.21	$23,238.48	**$64,888.69**	**$4,438.86**	**$69,327.55**
EM-LEAD_MEDIC	$39,997.61	$22,465.44	**$62,463.05**	**$5,689.77**	**$68,152.82**
EM-LEAD_MEDIC	$40,075.44	$22,590.72	**$62,666.16**	**$5,405.35**	**$68,071.51**
EM-LEAD_MEDIC	$40,471.76	$22,763.52	**$63,235.28**	**$4,640.86**	**$67,876.14**
EM-LEAD_MEDIC	$41,940.98	$23,576.88	**$65,517.86**	**$1,368.73**	**$66,886.59**
EM-PARAMED-TF	$60,925.20	$0.00	**$60,925.20**	**$5,552.84**	**$66,478.04**
EM-LEAD_MEDIC	$39,514.65	$22,228.80	**$61,743.45**	**$2,433.18**	**$64,176.63**
EM-LEAD_MEDIC	$40,033.22	$22,354.08	**$62,387.30**	**$27.17**	**$62,414.47**
EM-EM_BL_SPC	$61,251.04	$0.00	**$61,251.04**	**$66.33**	**$61,317.37**
EM-LEAD_MEDIC	$38,797.10	$21,926.88	**$60,723.98**	**$568.62**	**$61,292.60**
EM-PARAMED-FT	$32,200.51	$18,024.16	**$50,224.67**	**$4,016.69**	**$54,241.36**
EM-LEAD_MEDIC	$35,484.85	$16,326.84	**$51,811.69**	**$864.84**	**$52,676.53**
EM-PARAMED-FT	$32,584.05	$18,288.00	**$50,872.05**	**$1,453.19**	**$52,325.24**
EM-PARAMED-FT	$32,180.47	$17,961.12	**$50,141.59**	**$1,859.64**	**$52,001.23**
EM-PARAMED-FT	$31,921.56	$9,558.60	**$41,480.16**	**$8,766.21**	**$50,246.37**
EM-PARAMED-FT	$31,326.51	$17,528.64	**$48,855.15**	**$1,366.87**	**$50,222.02**
EM-PARAMED-TF	$44,822.91	$0.00	**$44,822.91**	**$2,537.66**	**$47,360.57**
EM-PARAMED-LTH	$33,028.84	$0.00	**$33,028.84**	**$5,032.29**	**$38,061.13**
EM-EMT-FT10	$31,415.58	$0.00	**$31,415.58**	**$3,592.43**	**$35,008.01**
EM-EM_LT	$19,085.06	$11,056.80	**$30,141.86**	**$1,536.01**	**$31,677.87**
EM-EMT-FT	$30,303.89	$0.00	**$30,303.89**	**$1,296.55**	**$31,600.44**
EM-PARAMED-TF	$27,463.30	$0.00	**$27,463.30**	**$1,164.12**	**$28,627.42**
EM-PARAMED-LTH	$27,399.62	$0.00	**$27,399.62**	**$1,145.17**	**$28,544.79**
EM-EMT-LTH	$18,221.55	$0.00	**$18,221.55**	**$5,825.79**	**$24,047.34**
EM-EMT-TF	$21,473.68	$852.51	**$22,326.19**	**$358.22**	**$22,684.41**
EM-PARAMED-LTH	$21,718.69	$0.00	**$21,718.69**	**$0.00**	**$21,718.69**
EM-PARAMED-LTH	$13,510.30	$3,885.60	**$17,395.90**	**$0.00**	**$17,395.90**
EM-PARAMED-TF	$16,166.93	$0.00	**$16,166.93**	**$0.00**	**$16,166.93**
EM-PARAMED-LTH	$15,877.97	$0.00	**$15,877.97**	**$27.17**	**$15,905.14**
EM-PARAMED-LTH	$10,791.05	$2,683.44	**$13,474.49**	**$1,755.94**	**$15,230.43**
EM-PARAMED-FT	$8,617.98	$5,140.80	**$13,758.78**	**$0.00**	**$13,758.78**
EM-PARAMED-LTH	$12,964.74	$0.00	**$12,964.74**	**$351.80**	**$13,316.54**
EM-EMT-LTH	$12,990.97	$0.00	**$12,990.97**	**$116.00**	**$13,106.97**
EM-EMT-FT8	$10,369.89	$0.00	**$10,369.89**	**$252.54**	**$10,622.43**
EM-PARAMED-LTH	$9,788.27	$0.00	**$9,788.27**	**$0.00**	**$9,788.27**
EM-EMT-LTH	$9,352.40	$0.00	**$9,352.40**	**$0.00**	**$9,352.40**
EM-PARAMED-LTH	$8,691.60	$0.00	**$8,691.60**	**$78.60**	**$8,770.20**
EM-PARAMED-LTH	$8,086.38	$0.00	**$8,086.38**	**$0.00**	**$8,086.38**
EM-EMT-LTH	$7,802.35	$0.00	**$7,802.35**	**$0.00**	**$7,802.35**
EM-PARAMED-LTH	$7,547.02	$0.00	**$7,547.02**	**$0.00**	**$7,547.02**
EM-PARAMED-LTH	$7,127.95	$0.00	**$7,127.95**	**$115.98**	**$7,243.93**
EM-EMT-LTH	$6,951.60	$0.00	**$6,951.60**	**$0.00**	**$6,951.60**
EM-EMT-LTH	$6,352.10	$0.00	**$6,352.10**	**$352.50**	**$6,704.60**

Position Code	Base Wage (based on 2600 hours)	Overtime above 2080	Total Base (includes OT)	Total Add'L OT	Total Comp
EM-PARAMED-LTH	$6,684.27	$0.00	**$6,684.27**	**$0.00**	**$6,684.27**
EM-EMT-LTH	$6,412.04	$0.00	**$6,412.04**	**$183.31**	**$6,595.35**
EM-PARAMED-LTH	$6,529.06	$0.00	**$6,529.06**	**$0.00**	**$6,529.06**
EM-PARAMED-LTH	$6,198.50	$0.00	**$6,198.50**	**$0.00**	**$6,198.50**
EM-PARAMED-LTH	$5,781.45	$0.00	**$5,781.45**	**$0.00**	**$5,781.45**
EM-PARAMED-LTH	$5,559.50	$0.00	**$5,559.50**	**$0.00**	**$5,559.50**
EM-PARAMED-LTH	$5,465.72	$0.00	**$5,465.72**	**$0.00**	**$5,465.72**
EM-EMT-LTH	$4,476.50	$0.00	**$4,476.50**	**$495.00**	**$4,971.50**
EM-EMT-LTH	$4,714.82	$0.00	**$4,714.82**	**$0.00**	**$4,714.82**
EM-PARAMED-LTH	$4,523.74	$0.00	**$4,523.74**	**$0.00**	**$4,523.74**
EM-EMT-LTH	$3,840.73	$0.00	**$3,840.73**	**$599.78**	**$4,440.51**
EM-PARAMED-LTH	$3,811.68	$0.00	**$3,811.68**	**$0.00**	**$3,811.68**
EM-EMT-LTH	$3,321.61	$0.00	**$3,321.61**	**$0.00**	**$3,321.61**
EM-EMT-FT8	$2,385.10	$0.00	**$2,385.10**	**$15.78**	**$2,400.88**
EM-EMT-FT8	$2,048.38	$0.00	**$2,048.38**	**$31.57**	**$2,079.95**
EM-EMT-FT8	$2,051.65	$0.00	**$2,051.65**	**$0.00**	**$2,051.65**
EM-EMT-LTH	$1,666.06	$0.00	**$1,666.06**	**$52.61**	**$1,718.67**
EM-EMT-LTH	$1,627.49	$0.00	**$1,627.49**	**$0.00**	**$1,627.49**
EM-EMT-LTH	$1,571.36	$0.00	**$1,571.36**	**$0.00**	**$1,571.36**
EM-EMT-LTH	$1,188.61	$0.00	**$1,188.61**	**$0.00**	**$1,188.61**
EM-EMT-LTH	$1,038.22	$0.00	**$1,038.22**	**$0.00**	**$1,038.22**
EM-PARAMED-LTH	$810.36	$0.00	**$810.36**	**$0.00**	**$810.36**
EM-EMT-LTH	$617.33	$0.00	**$617.33**	**$0.00**	**$617.33**
EM-EMT-LTH	$441.95	$0.00	**$441.95**	**$0.00**	**$441.95**
EM-EMT-LTH	$431.42	$0.00	**$431.42**	**$0.00**	**$431.42**
EM-EMT-INT	$201.60	$0.00	**$201.60**	**$0.00**	**$201.60**

To explain the chart, EMS provides must be compensated for overtime for hours worked over 40 in a defined work week. Discussed in the FLSA section, the City calculates the pay based on 2,600 hours; thus, there is a predetermined amount of overtime just in working the regular schedule. The second column of the chart above is the overtime an employee receives through working one's schedule. The total Additional overtime is overtime above the employees regular schedule. There are several issues to be discussed with this analysis: the amount of overtime; how overtime is calculated; and who receives overtime.

One can count on overtime only so long before employees become burnt out. The consultants feel that is starting to become evident by the increase in turnover in full-time employees, as well as the consistently high turnover in part-time employees. Although employees know what the

job is when hired, it takes some time before they can bid into jobs that require less Alliance transports, and the fatigue factor takes its toll.

With that said, what is interesting, is that the vast preponderance of overtime is given to the lead medics – the higher salaried personnel within the department. This could also be a source of turnover as individuals who are not compensated as highly, and cannot achieve salaries as lucrative become disenfranchised and leave the department. As one analyzes the distribution of overtime, it is evident, that there is no equalization of overtime assignments among all employees within the department. What is not evident, is the amount of overtime for part-time, as their schedules may not lend to overtime pay, but still require longer shifts.

In addition to the distribution of overtime and the disproportion of annual salary, the City should be very concerned with compression. Compression is when salary plus overtime of a lower rank provides a total salary greater than the rank(s) above. This stifles promotion as employees would take a pay decrease when promoting to a higher rank. This is obviously present within the EMS department. Why would an employee move to an assistant chief or deputy chief where there is no overtime and take what probably will be a significant pay cut?

Overall, serious consideration needs to be given to the amount of overtime provided to employees within the EMS department – who is given overtime; how is it distributed; what is the distribution between full-time and part-time; and the make-up of total salary (base pay or overtime).

EMS Overtime Calculation

The EMS employees work a 24/48 work schedule and as such, per the Fair Labor Standards Act (FLSA), must still be paid overtime for hours worked over 40 in a work week. The department, back in 1996, devised a formula to determine the hourly rate of pay for 24-hour EMS employees. Through this calculation, the annual salary is divided by 3,337.6 hours. Included in this calculation is overtime, however, FLSA does not allow the use of overtime in the calculation of the regular rate. As a result, the hourly rate of pay is lowered from traditional 24/48 employees.

Within the fire service, the 24/48 work schedule is extremely prevalent. The FLSA has accepted two methodologies for calculating the regular rate of pay for employees working a 24/48 schedule, or any of its variations. It is a simple calculation of taking either the average of 56 hours per week multiplied by 52 weeks to get 2,912 hours per year. Some departments reduce the 56 hours per week to 53 hours per week; therefore, eliminate Kelly days or overtime, and again multiple by 52 weeks to obtain 2,756 hours per year.

Another option would be utilize a portion of the current calculation. The first part of the calculation starts with the equation: 365 days in a year x 24 hours = 8,760 hours / year divided by 3 shifts – 2,918.4 hours worked. Up until this point the formula is fine. Thus, the annual salary is divided by 2,918.4.

The consultants would strongly recommend moving to the more accepted 24/48 regular rate calculation –2,912. There are numerous FLSA opinion letters supporting this regular rate calculation. Furthermore, it does not significantly reduce the hourly rate, and subsequently reduce the overtime rate.

Note: The regular rate calculation (determining the hourly rate) is separate from the 7k exemption (determining when overtime is calculated), as described above in the fire section, which allows an overtime calculation different than 40 hours in a defined work week. Thus, EMS employees, unless they meet the criteria of FLSA – (FLSA 20 USC §203(y) Definitions) would need to be paid overtime for hours worked in excess of 40 hours as the City is currently doing.

Alliance Stipend

The Alliance transports, through conversations with employees, appear to be the most problematic and may be one of the sources of turnover. As will be discussed in both the schedule and leadership sections, long transports and the number of calls leads to fatigue. For employees whose job within the department is part-time, this may be extremely problematic.

There were conversations with consultant's that many full-time EMS employees were allowed to withdraw from an alliance transport and a part-time employee was required to take the run. The City may want to consider an extra stipend added to transports in excess of X miles to incent individuals to take these longer runs. Thus, an employee who is either assigned to work at an Alliance station, or assigned to Alliance transport would receive an extra $2.00 per hour compensation while on the transport. The extra stipend would start from the time the ambulance leaves the station to its return. Time needed to restock the ambulance, etc. would be at the regular rate of pay. Although this compensation does not alleviate the fatigue factor (to be discussed in schedules), it may provide an incentive for employees to take these transports.

Recommendation -Compensation

- *Maintain the EMT wage grid, but determine where the average market rate should be attained and adjust the schedule if necessary.* ***Priority 3***

- *Conduct an analysis of how overtime assignments are distributed. Develop a rotation system, whereby all employees have access to overtime to reduce these excessive amounts of overtime.* ***Priority 2***

- *Conduct an external market analysis and adjust the paramedic wage grid to not only ensure the wages are competitive to the market; but to increase the spread between an EMT and paramedic.* ***Priority 2***

- *Evaluate the mix and develop a balance between base pay and overtime, as well as the work schedule – may need to be reconfigure. Change the work schedule to reduce overtime (and fatigue); reconfigure the system to determine how overtime is allocated; and rework the base pay schedule.* ***Priority 2***

- *Change the EMS hourly rate calculation to the more accepted 2,912 hours per year or 2,918.4 hours per year. Overtime will continue to be paid for hours worked over 40 within a defined work week.* ***Priority 3***

- *Consider an extra stipend, i.e., $2.00 per hour, for employees assigned to the Alliance station, or on transports in excess of XX miles as an incentive for longer transports.* ***Priority 4***

Work Schedules

The 24/48 work schedule is common in fire based departments. Studies have shown that it is the most cost effective; however, it is a less productive schedule when running a 24/7 operation. With that said, there have been a number of studies that are now coming forth, showing departments that run primarily EMS related calls, are finding the 24/48 to be more strenuous. Adequate daily sleep is needed to perform optimally as well as stay healthy.

Sleep deprivation is linked with increased errors in tasks requiring alertness, vigilance and quick decision-making. Longer work shifts and compressed work weeks are seen as beneficial in fire and EMS personnel. Thus, the challenge is to achieve the benefits of a given work structure, while minimizing the potential decrements in performance and cumulative adverse health effects.

A recent article in JEMS, cites a number of physical and mental factors associated with workplace fatigue (Workplace fatigue creates dangerous risks for EMS employees; JEMS, Jan 8, 2015). In addition, employees have varied needs for different non-work related reasons; travel, family, and education, are just some of the needs employees want time off for. Finally, we have a generation of workers entering the work force that may not feel the same loyalty and commitment that past generations of workers felt toward the employer. Thus, developing a work schedule that meets the needs of the department, community, and employees is difficult; and, often the major reason for leaving a job.

Fatigue Matrix

In order to better account for fatigue and its potential impact on performance, WDMEMS developed the Fatigue Matrix. The matrix provides an objective, non-punitive framework for determining the fatigue level of active personnel. Personnel are expected to assess their potential for fatigue throughout their shifts. Specific activities and work conditions receive a point value. When earned points reach certain levels, they receive a green, yellow, or red rating:

- Green requires no action.

- Yellow attracts continued scrutiny from the supervisor and may result in the medic being restricted from long-distance transports. Yellow may also result in a medic being substituted with other personnel who do not have elevated fatigue ratings. The fatigued medic will then be reassigned to another response unit not impacted by long distance transport potential (9-1-1 unit) which would be more likely to allow a portion of down-time for recovery.

- When a medic receives a red-level fatigue rating, they are subject to having tasks and response duration limited and supervisory personnel have discretionary authority to restrict activity further until rest time is acquired.

Employee's Concerns – Fatigue Matrix

Although EMS leadership should be commended for their efforts in the development of a fatigue matrix program, the stakeholders interviewed expresses serious concerns. The consultants have already expressed the need for an "Employee Satisfaction Survey" with the employees of the WDNEMS. How to improve the fatigue matrix should be included in that survey.

Recommendation – Fatigue Matrix

- *Include the issue of the fatigue matrix in the "Employee Satisfaction Survey" previously recommended. Priority 2*

Types of Work Schedules

The most common strategies for EMS professional staffing is to employ unique or mixed use of 8, 10, 12, or 24-hour shifts. Each type has its own combination of pros and cons, and within each type there exist several models of rotating shifts through a work week. A survey was conducted by the United States Metropolitan Municipalities EMS Medical Directors Consortium of large, urban EMS systems. The following is a summary of the survey findings in relation to the various shift schedules (Emergency Medical Services Evidence-Based System Design White Paper for EMSA; University of Oklahoma Emergency Medicine, 2011).

It is also evident by the overtime analysis, that the current work schedule, predominately among lead medics, is causing a significant amount of overtime just by working the normal work schedule. A change in the work schedule may assist in reducing that overtime amount.

The 8-Hour Model

The 8-hour model uses three shifts through each 24-hour period and can be used for ambulances that operate 24 hours continuously, or for ambulances that operate during peak staffing periods. In the study, there were only a handful of EMS departments that responded to utilizing this model of staffing (Honolulu, Hennepin County Medical Center EMS in Minneapolis, and the New York Fire Department).

Advantages:

- Effectively utilized in urban geographies that have a consistent distribution of patients across the service area.
- Ideal environment to optimize patient care and employee safety, especially in busy, high-performance systems.
- Providers are exposed to a large number of patient care encounters in a short amount of time; with minimal compromise to quality of care and employee safety due to fatigue.
- The model is most effective in environments with relatively rapid ambulance back-in-service time (turnaround time) at hospitals. Extended delays at hospitals could compromise the advantage of this model.
- Employee work schedule is predictable with 5 days on, lending itself to lifestyle balance.
- Overtime can be minimized as it is not built into the system.

Disadvantages:

- The 8-hour model requires more staffed positions than either the 12 or 24 hour shifts.
- If transitioning from a different staffing model that had built-in overtime to an 8-hour model with none to limited overtime, may be difficult with the resulting reductions in salary.

The 8-hour model is extremely flexible in its ability to meet the demands of high volume departments. The model, coupled with peak demand staffing, results in rested employees on the street in a cost effective manner.

The 10-Hour Model

Of the 31 organizations that completed the United States Metropolitan Municipalities EMS Medical Directors Consortium survey, only Denver utilizes a 10-hour model. This model can be developed on a six, nine, or twelve-day rotation. Similar to the 8-hour model, the 10-hour model works best for high volume, stressful, urban environments.

Advantages:

- There is no built in overtime.
- Scheduling can be flexible using either 4-day or 3-day tours with an added flex day.
- The schedule facilitates staffing for surge events such as conventions, special events, weather, etc.
- The built in flex day allows for training time during the workweek, and/or continuing education without costing additional overtime.
- Provides for two 3-day weekends every month which is viewed as positive by employees.

Disadvantages:

- The 10-hour shift creates 4-hour holes in ambulance coverage depending upon the deployment schedules and/or service area. Thus, the schedule demands sophisticated rotation and scheduling solutions to provide consistent coverage.
- This staffing model may serve as an ideal solution for systems utilizing widespread status management, such as Denver.
- There are anecdotal challenges with the model with increased abuse of sick leave, especially when transitioning from a traditional 12 and 24-hour work schedule.

The 12- Hour Model

The 12-hour shift is most frequently chosen among non-fire based EMS agencies. While there are a number of variations of how this model is utilized, it is incredibly adaptable to the broad range of service areas and employee expectations. As with the 8 and 10-hour models, the 12-hour accommodates high volume and demanding environments with allowable fatigue and burn-out for providers.

Advantages:

- Crews can integrate personal life with work.
- Provides more consistent distribution of ambulance coverage.
- This model typically requires fewer staff overall; including part-time reserve staff when compared to the 8 and 10-hour models.

Disadvantages:

- Requires built in overtime averaging 4 hours each work week.
- Additional costs may be incurred due to limited time for required training, orientation, and education while on shift.
- It is not as operationally efficient as a 10-hour shift, as it may require additional staff positions.

The 24-Hour Model

The 24-hour shift provides for the most straightforward, lowest cost staffing and a personal/work lifestyle favored by many public safety providers. There are a few different versions of the 24-hour shift model. The first is the shift rotation – 24/48, 24/72 or a combination of these. The second distinction is the use of a Kelly Day or Furlough Day which allows for a day off within the schedule to reduce overtime.

Advantages:

- Ideal for low volume, static systems with fewer than eight to ten runs per ambulance in a 24-hour period.

- Emphasis on reliable response times where there are fewer, busier ambulances that are unable to reach certain areas within an acceptable response time.
- Allows crews to train during the shift.
- Provides a lifestyle that is more traditional with public safety.

Disadvantages:

- Built-in overtime costs are significant in this model.
- A given service area may require more low volume, 24-hour shift ambulances to meet acceptable response standards when compared to a more efficient model using higher volume 12-hour shift staffed ambulances.
- A strong CQI, remediation, and continuing education program is required to assess and safeguard provider competencies.
- There is much debate regarding patient and provider safety in the 24-hour shift model. Several studies highlight impaired performance, judgment, and quality of care in the remaining early morning hours of the shift. Furthermore, these concerns are more apparent when crews approach ten to twelve or more patients in a 24-hour period. The Austin Travis County EMS System found that 24-hour shifts significantly compromised customer service and quality of care in urban and suburban communities.
- Employee safety was also negatively impacted due to larger time periods of low alertness and falling asleep while driving home from shifts.

The 51s Model

The last model is a mix of 12 and 24 hour shifts developed by Timothy Earles over six (6) years ago. The model seeks to provide the ideal balance of provider performance, lifestyle and efficiency through a rotating combination of 12 and 24 hour shifts. According to Mr. Earles, the 12 hour shifts can be replaced with 10-hour shifts in larger systems and continue to meet service goals while reducing overtime costs. Thus, the 51s model can be applied to any type of EMS agency, regardless of call volume.

51s is comprised of five (5) types of shift schedules to accommodate a wide variety of lifestyle needs, all utilizing set days for each schedule. Most employee's frequently express a preference to a nonrotating, same day every week pattern. So 51s utilizes set days each week in all five (5) of its options. Another employee preference is to have weekends off to spend with family, and both the first and second shift option of 51s incorporates 3-day weekends every week.

A third preference is to have the ability to attend standard college course schedules without interruption, so the third shift option gives every Monday, Wednesday, and Friday off to do so – and Sunday as well to catch up with studies or unwind before beginning another week. The fourth shift, in addition to normal days off, offers regular four-day breaks for those who like to travel, while allowing attendance of Tuesday/Thursday courses. The fifth and final option is a modified Baylor shift requiring 6% fewer hours than the others, with 80% of these shifts worked over the weekend. This provides an option for those facing rising day-care costs or children needing supervision afternoon school, but whose spouses work during the week *(EMSWorld.com).*

Table 38: Breakdown of 51s Shift Schedule

	WK	Thurs	Fri	Sat	Sun	Mon	Tues	Wed
A	1				12	12		24
	2				12	24		12
	3				12	12		24
	4				12	24		24
	Seven 12-hr shifts and five 24-hr shifts totaling 204 hours / 4 weeks							
	WK	**Thurs**	**Fri**	**Sat**	**Sun**	**Mon**	**Tues**	**Wed**
B	1	12	24				24	
	2	12	12				24	
	3	12	24				12	
	4	12	12				24	
	Seven 12-hr shifts and five 24-hr shifts totaling 204 hours / 4 weeks							
	WK	**Thurs**	**Fri**	**Sat**	**Sun**	**Mon**	**Tues**	**Wed**
C	1	24		12			12	
	2	24		12			12	
	3	24		12			24	
	4	24		12			12	
	Seven 12-hr shifts and five 24-hr shifts totaling 204 hours / 4 weeks							
	WK	**Thurs**	**Fri**	**Sat**	**Sun**	**Mon**	**Tues**	**Wed**
	1			24		24		
	2			24		12		24

	WK	Thurs	Fri	Sat	Sun	Mon	Tues	Wed
D	3			24		24		12
	4			24		12		
	Three 12-hr shifts and seven 24-hr shifts totaling 204 hours / 4 weeks							
	WK	Thurs	Fri	Sat	Sun	Mon	Tues	Wed
E	1		12		24			12
	2		24		24			
	3		12		24			
	4		24		24			12
	Four 12-hr shifts and six 24-hr shifts totaling 192 hours / 4 weeks							

Advantages:

- Allows staff to choose their shift option according to their preferences for frequency and length. The first three (3) options require working just 12 times every four weeks, with more 12-hour than 24-hour shifts. The last two (2) options require working only 10 times every four weeks, but with more 24-hour shifts than 12-hour shifts.
- The concern of fatigue, mistakes, poor service and burnout are reduced when just five overnight shifts are required of 60% of staff every four weeks, or six or seven overnight shifts for the remaining 40% of the staff. The need for straight night shifts, often the most difficult to staff, is eliminated as well. Fewer days are worked per year than traditional 12-hour shift schedules require, and fewer hours are worked per year than with traditional 24-hour shift schedules.

Table 39: Comparison of Time Worked: 51s vs Traditional Shift Types

Shift Type	Shifts Per Week	Hrs. Per Week	Days Per Year	Hrs. Per Year
24 hr. ABC	2-3	56	122	2,912
51s	2-3	51	130-156	2,652
12 hr.	3-4	42	182	2,184

- Each choice of 51s is designed to allow maximum benefit from vacation taken on the right days, and the system is more easily able to anticipate and accommodate the need for fill-in staffing. Less benefit time is needed to accommodate employee interests.

- Improves service by steering more resources toward 12-hour peak load units that are staggered throughout the day to saturate busier areas until call volume drops in the late-night and early-morning hours.

Disadvantages:

- Static staffing schedules. May allow more tenure employees to get the 'better' shifts, while new employees the 'less desirable'.
- The schedule was developed in 2009, thus is new.

Self-Scheduling Model

In researching articles on staffing models, the consultants found two (2) organizations that allow employees to write in their schedule on a regular basis. Employees sign up for shifts (10, 12, or 24); thus, ensuring the schedule meets the employee's schedule. The caveat is a set number of hours allowed per week, and that all shifts must have adequate coverage. The burden of changing days as well as scheduling is with the employees. Obviously, there is oversight by management. The two (2) Minneapolis departments expressed the employee satisfaction was significant.

Recruitment and retention of part-time employees is and has been extremely problematic. Many believe that the problem has increased since the inception of the Alliance. The 24/48 schedule can be part of the problem, as extremely long transports, with little down time, can become troublesome for part-time employees, as well as full-time employees who bear the burden of these runs. Thus, the department needs to look as to whether the 24/48 schedule is still the optimal scheduling model with the volume of calls. The City is continuing to grow, so the call volume – not only for the Alliance, but also for the City, will continue to grow, and a 24-hour shift for EMS personnel has continued to be evaluated as one that may no longer be in the best interest of the employee and the patient.

The department needs to seriously consider either the 51s schedule, possibly for the Alliance stations, or changing to a 12-hour schedule. What is apparent, is that the fatigue factor is an

element of turnover and needs to be considered in determining the future work schedule within the EMS department.

Recommendation – Shift Schedule

- *Evaluate the 51s staffing model or the 12-hour model especially for part-time personnel, but also for full-time personnel as the call volume continues to increase.* ***Priority 2***

Station Rotation

In addition to the work schedule, the consultants heard that employees need to bid, based upon seniority, for different shifts. Thus, newer employees appear to have a greater number of Alliance transports than longer tenured employees. The City and union need to work together to change the transfer language for full-time employees, and work a rotation system for part-time employees so that Alliance transports are more equally distributed. This, along with a change in the work schedule, should help to more equally distribute the work load and minimize fatigue, allowing a better work/life balance.

Note: A change in the work schedule will necessitate a restructuring of the compensation schedule, reallocating compensation to base salary rather reliance on overtime to achieve market competitiveness.

Recommendation – Shift Rotation

- *Develop a rotation for part-time, but also full-time personnel, so that Alliance calls are spread out more equally among department personnel.* ***Priority 3***

Leadership

When an organization has high employee turnover all potential issues must be examined, including: scheduling, policies, compensation, job assignments, perceived inequality, and leadership. In any case when dissatisfaction is a common theme during EMS employee interviews, both leadership and employees want to address those issues.

The perception of the Alliance and whether it is good or hinders the department, appears to be the focal point of discussion among employees. Those that feel they benefit from it, obviously

feel it is good for the department. Those that feel it impinges on their career goals, feel it should go away. The long transports figure into the fatigue and stress among employees, not only from an overtime perspective, but also those who receive the routes. It certainly appears to be a factor in the turnover within the department.

Leadership bears the responsibility for resolving turnover; leadership has the responsibility to determine the reasons for it. Some of it is beyond the department/city's control. Some individuals seek part-time positions as stepping stones to full-time employment. Others will have situations occur within their personal lives that will cause them to leave the WDMEMS department. However, efforts need to be made to reconfigure the compensation system to increase the base wage, and decrease the overtime; modify the work schedule to decrease the fatigue and realign the work-life balance; consider an incentive stipend for longer Alliance transports; develop a rotation system to equalize the Alliance transports among all staff; and to continually work to ensure that supervisors throughout the department treat all employees on a consistent basis.

Through these efforts, there should be a decrease in turnover within the department. Without it, turnover will continue to increase, and soon it will affect not only the employee's health and safety, but that of the patient as well.

Recommendation - Leadership

- *Ensure all supervisory personnel are trained on the fatigue model so that standards are applied consistently.* ***Priority 3***

Performance Evaluations & Succession Planning

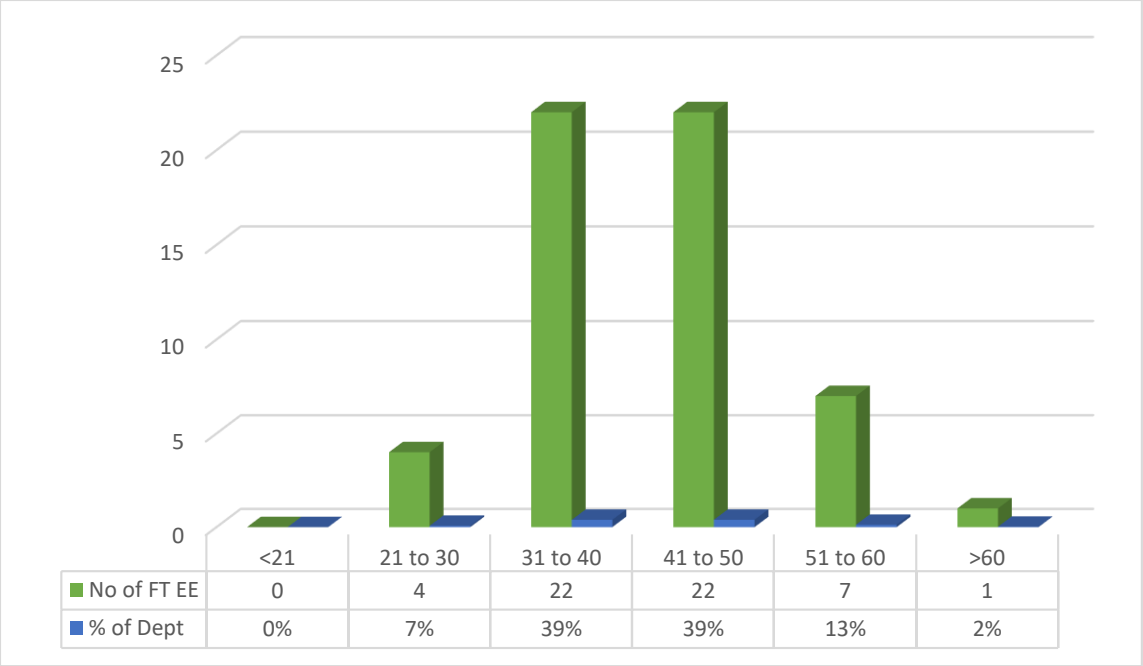
Performance management and developing talent in an organization is essential. Before evaluating and making recommendations, it is necessary to look at the age and years of service make-up of each department.

Fire Department

Full-Time Membership

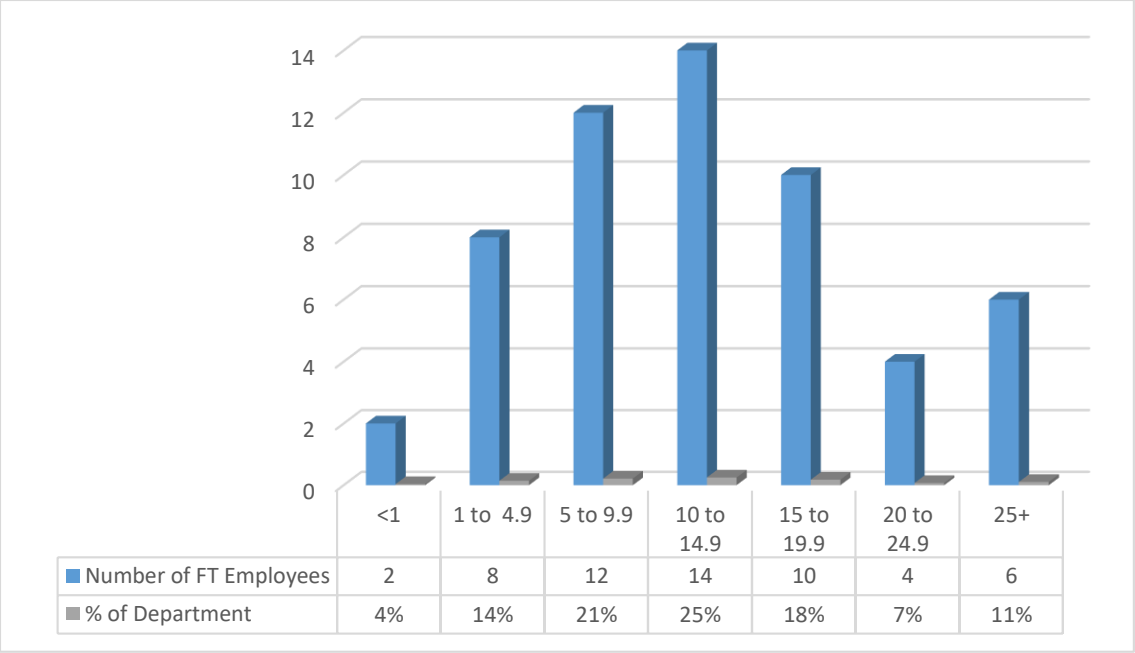
The full-time employees provide the leadership within the department. From an age perspective, there is a nice mixture within the department, with 46% of employees 40 years and younger; and 54% over the age of 40.

Figure 30: WDMFD Full-time Employee Age Analysis



With this mixture of age, the department should take advantage of individual's skills and experience to mentor those younger within the department.

Figure 31: WDMFD Full-time Years of Service Analysis



	<1	1 to 4.9	5 to 9.9	10 to 14.9	15 to 19.9	20 to 24.9	25+
Number of FT Employees	2	8	12	14	10	4	6
% of Department	4%	14%	21%	25%	18%	7%	11%

The years of experience also confirms the ability of more senior employees to mentor others within the department. The performance evaluation process should encourage professional development – not only in operations, but also in officer development, as there are a number of individuals who appear that within several years may have the ability to retire, leaving vacancies in leadership positions.

Part-Time Members

The department needs to be concerned with the make-up of the part-time membership. Volunteerism typically appeals to those under 30 and as one begins to have work and family responsibilities, it becomes more difficult to devote time to part-time endeavors. The skills necessary for a part-time firefighter are no different than that of a full-time firefighter; thus, the amount of time for education and training can take a toll on a part-time firefighter / EMT.

The current demographics of the department indicate that 59% of the department's part-time employees had less than 5 years of experience; and 28% of the department is age 30 or less. The group that is at risk for having dual commitments and leaving – 31 – 40 years of age – comprise of 44% of the department.

Figure 32: WDMFD Part-time Years of Service Analysis

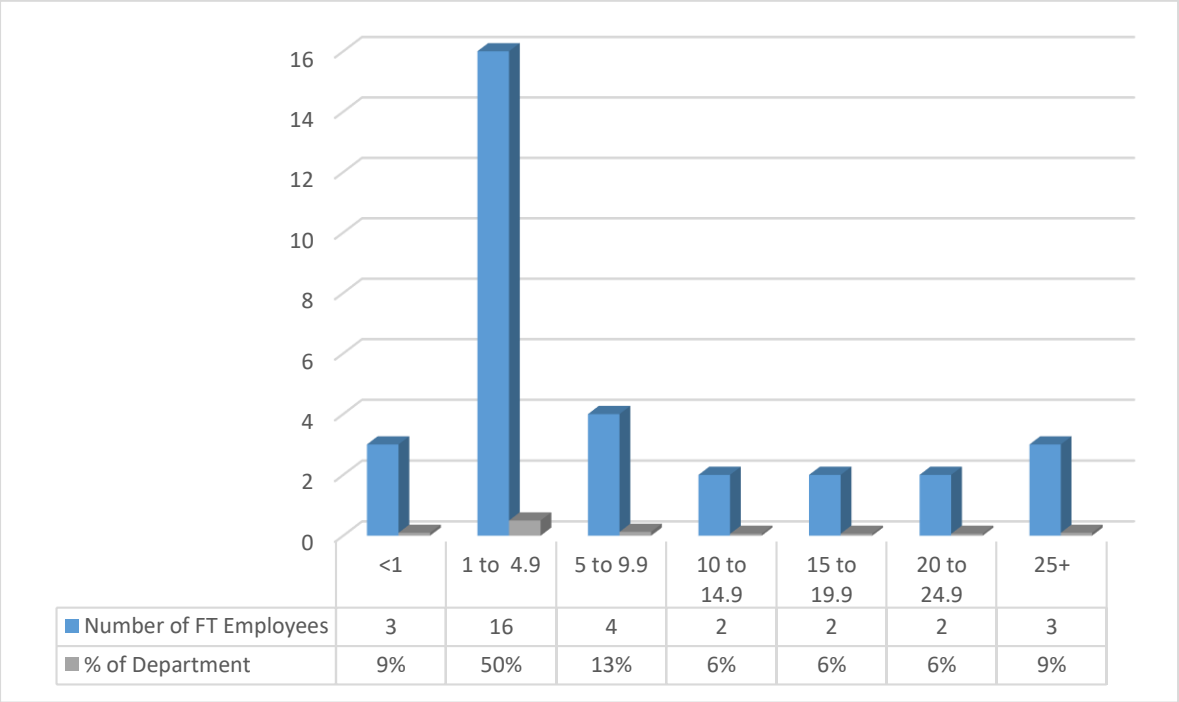
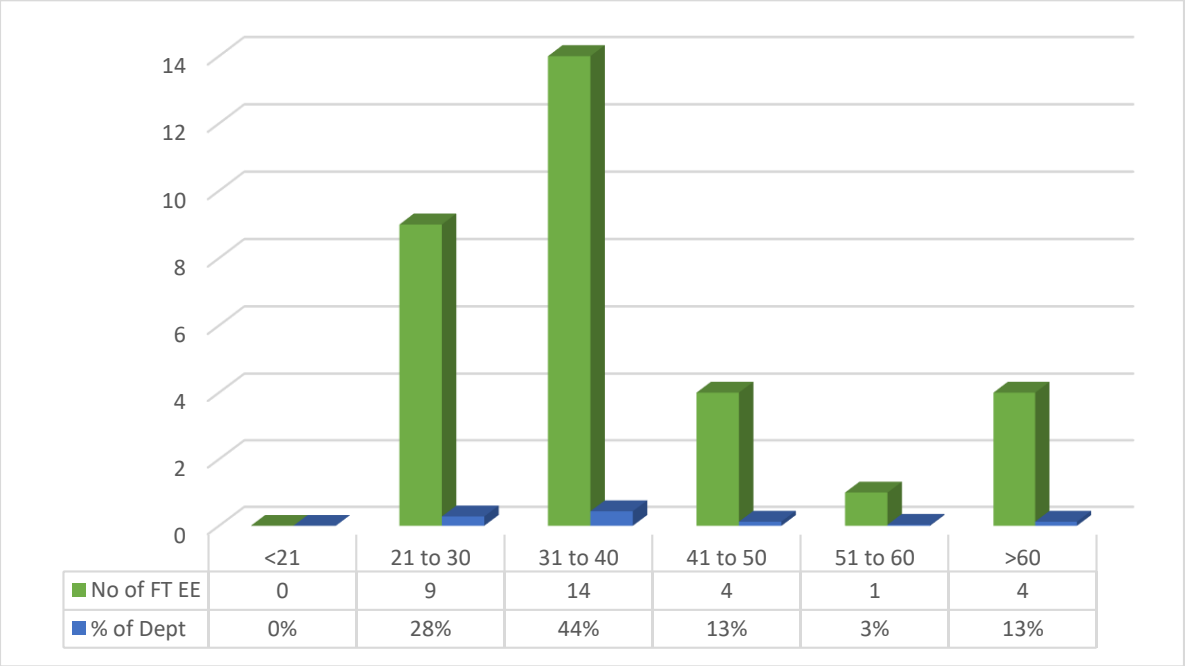


Figure 33: WDMFD Part-time Age Analysis



Based on this, it is incumbent of the leadership of the department to actively engage the part-time employees to ensure their needs are being met. Unlike full-time employees who work for salary and benefits (in addition for the love of the profession), part-time employees seek to fulfil a need

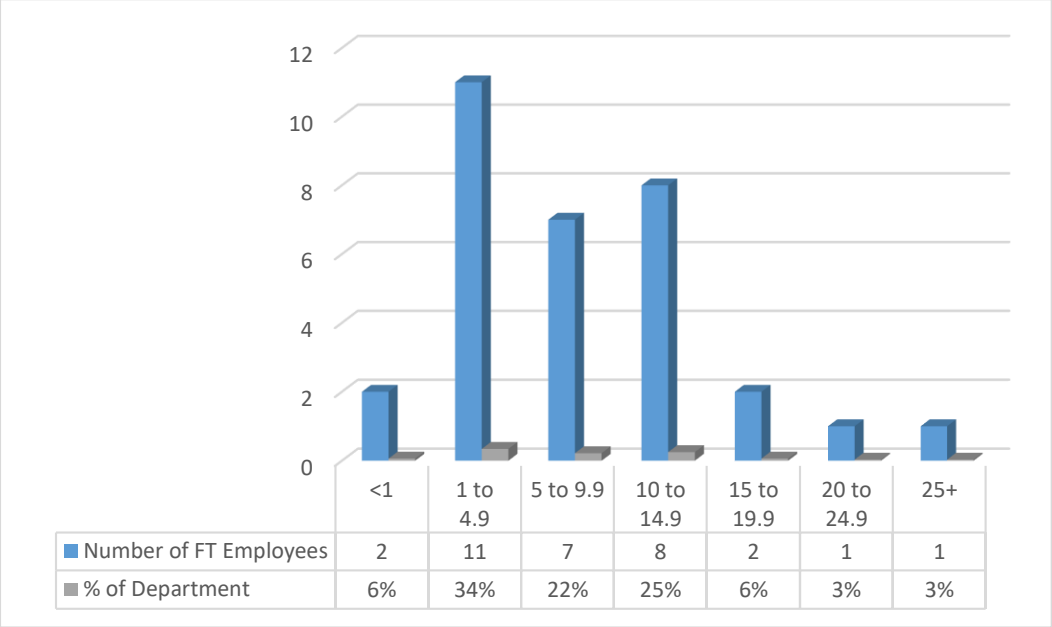
or to serve their community. The performance evaluation process may need to be adapted to evaluate skills, but also the needs of the individual and why the commitment to the WDMFD. Furthermore, the department utilizes the part-time employees as a pool to fill full-time positions; thus, encouraging and rewarding professional development – through payment of courses and/or adding to compensation – will encourage members to stay with the department.

EMS Department

Full-Time Membership

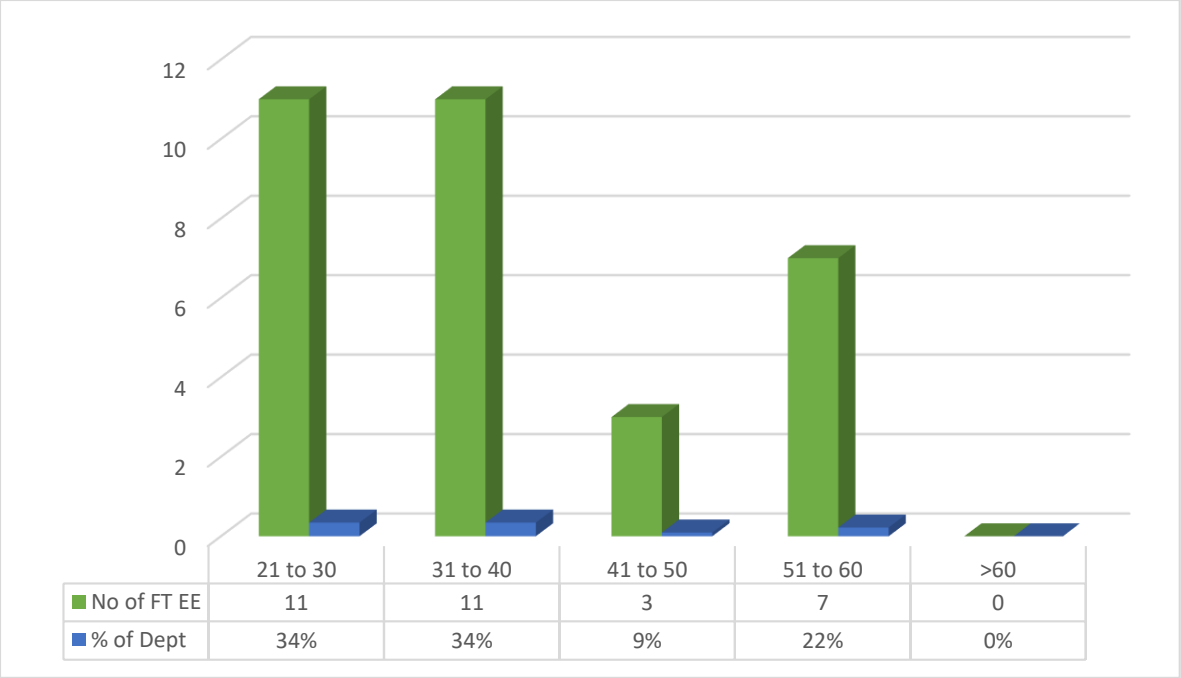
The full-time employees of the EMS department are both relatively young – 64% are age 40 or younger, and 63% have less than 10 years of experience. This can be a challenge to leadership, as there are limited members of the department to provide leadership and mentorship to this group. Furthermore, there is a larger group of employees vying for limited promotional opportunities. It is therefore incumbent upon leadership to make available professional development opportunities as well as project management to develop leadership skills.

Figure 34: WDMEMS Full-time Years of Service Analysis



	<1	1 to 4.9	5 to 9.9	10 to 14.9	15 to 19.9	20 to 24.9	25+
Number of FT Employees	2	11	7	8	2	1	1
% of Department	6%	34%	22%	25%	6%	3%	3%

Figure 35: WDMEMS Full-time Age Analysis

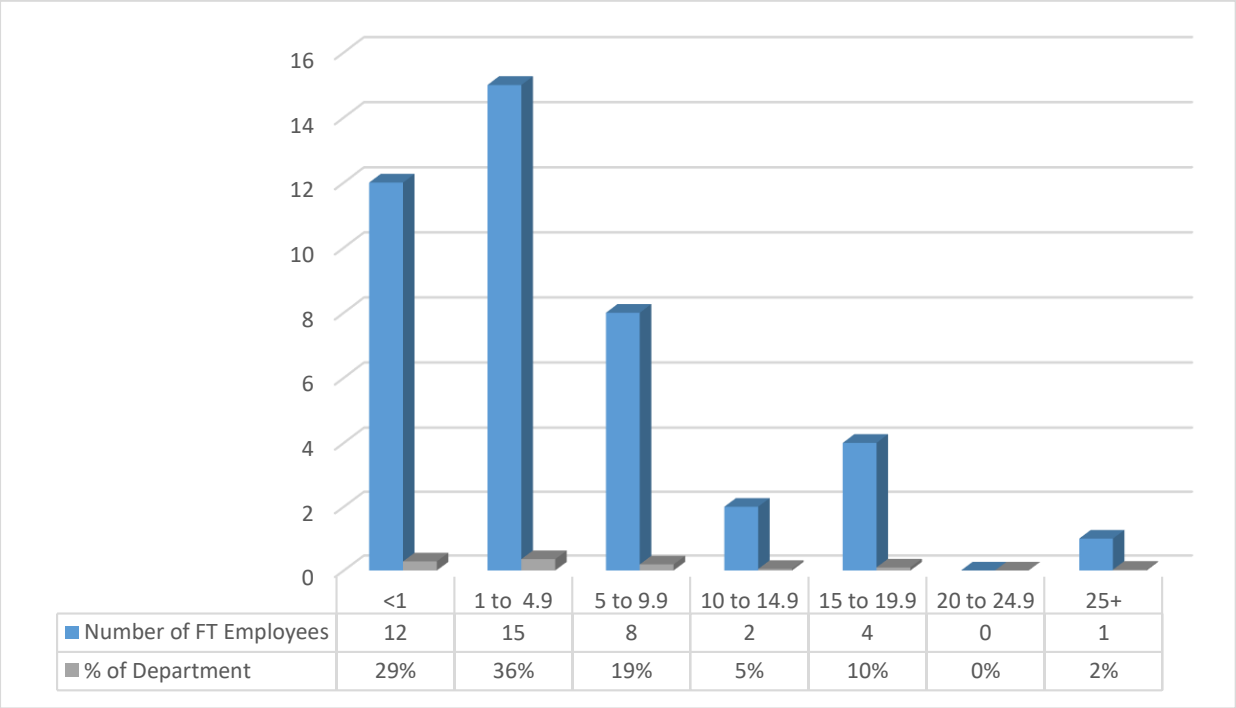


	21 to 30	31 to 40	41 to 50	51 to 60	>60
No of FT EE	11	11	3	7	0
% of Dept	34%	34%	9%	22%	0%

Part-Time Employees

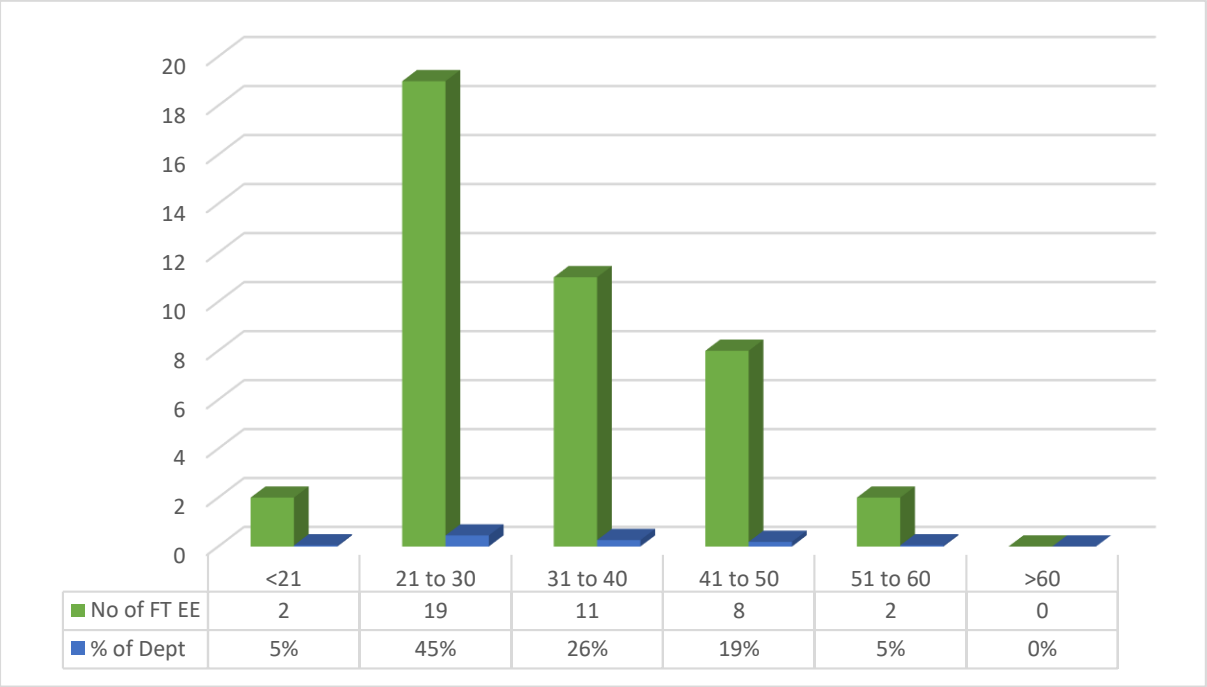
As previously discussed, there has been a lot of turnover of part-time employees within the EMS department, and the years of service within the department illustrates that with 64% of the employees with less than 5 years of service. If 10 years or less is evaluated, that accounts for 83% of the department. Thus, there are only 5 employees, or 17% of the department with more than 10 years of service.

Figure 36: WDMEMS Part-time Years of Service Analysis



The average age of the department is 30 or under – 45% of the department; thus, this group of employees desires more creative work schedules and wants more work-life balance. Thus, the change from the 24/48 work schedule may be a way in which to meet the needs of this group and help reduce turnover. The 51s work schedule was developed by individuals who realized that individuals wanted control over their work schedules and this schedule may cater to this group of individuals who need to balance a part-time job, another job, family and other commitments.

Figure 37: WDMEMS Part-time Age Analysis



	<21	21 to 30	31 to 40	41 to 50	51 to 60	>60
No of FT EE	2	19	11	8	2	0
% of Dept	5%	45%	26%	19%	5%	0%

Recommendations – Performance Evaluations & Succession Planning

- *Performance evaluations in both departments should concentrate on professional development, not only of operational skills, but also for those interested in leadership & management for succession planning.* ***Priority 3***

- *Part-time performance evaluations in the fire department should have discussions on the needs of the employee and their needs within the fire service for retention purposes.* ***Priority 3***

- *EMS leadership needs to concentrate on professional development of employees and retention activities due to the young age and years of service. There is high risk of continued turnover due to limited promotional opportunities.* ***Priority 3***

- *Alternative work schedules continue to be made available to part-time EMS due to age and limited years of service, to limit turnover and cater to the needs of the group of individuals.* ***Priority 2***

Staffing Fire/EMS

This section of the report deals with the current staffing levels of both the fire and EMS departments. The fire department staffing methodology for volunteers has changed during the course of the study and this section will discuss the current new staffing methodology implemented in August 2016. The same category of employees could apply to the EMS department.

Types of Staffing Methodologies

Most businesses purchase insurance to cover their facilities (property) and belongings (contents). Many businesses also purchase a business interruption policy. Businesses do this to ensure that a devastating fire will not result in the business failing; the policy provides income until they are able to recover from the loss. Unlike business, government cannot purchase business interruption insurance; therefore, most communities invest in their fire departments to ensure the continued flow of tax dollars that provide the essential services for the citizens, as well as the businesses in the community, in addition to providing life safety to their citizens. The West Des Moines City Council is responsible for ensuring that protective services are adequate for citizens and businesses of their community.

While the WDMFD currently utilizes a combination staffing model, the consultants will briefly address each types of staffing methodology and options that could be utilized in the future by the city.

Career Shift Employees

Career shift staffing ensures a certain level of immediate initial response for the emergency incident. Although both career, part-time, and paid-on-call/volunteer employees are professionals, the time dedicated to the profession within each of these categories of employees suggests that career employees should be better trained and perform at a higher level than part-time and/or paid-on-call/volunteer employees. Again, this is not derogatory towards part-time or paid-on-call/volunteer personnel; rather, being on-duty for extended periods of time provides

career employees the opportunity to train when not involved in emergency or other assigned duties.

Conventional wisdom suggests that having on-duty personnel will improve response time by allowing emergency apparatus the ability to respond more quickly. This will eliminate the time spent waiting for off-duty personnel to arrive at the fire station. Career employees add a degree of safety to the emergency team inasmuch as the individuals work and live with each other and have a greater opportunity to develop a team environment, which is especially valuable on the emergency scene. Career employees are often more involved in the daily activities of the fire department and can usually handle a variety of duties not suited for part-time or paid-on-call volunteer employees.

Having career personnel on duty on a daily basis allows the fire chief to develop strategic plans as to how emergency incidents will be handled with known, available resources. This staffing model ensures that a city will be able to immediately respond with a known quantity of personnel and equipment to a reported emergency situation. In addition, a known (assigned) number of personnel will staff each piece of apparatus.

Paid-On-Call/Volunteer Employees

It is important to make a distinction between volunteer and paid-on-call members. Although both are comprised of individuals who are highly dedicated and professional, the difference lies in the fact that a true volunteer member does not receive any monetary reimbursement; whereas paid-on-call members receive compensation, most often on an hourly basis or per-call basis (stipend). As such, paid-on-call members could be considered employees of the city and subject to the requirements of federal wage and hour regulations.

Volunteer/paid-on-call fire departments have been an intricate part of the fire service in the United States for over 300 years. The key to success using this methodology is directly related to the ability to find dedicated individuals who have the desire and time to become proficient in the delivery of critical firefighting and other lifesaving services. Although many principles and

concepts are similar in career and volunteer departments, other aspects differ – particularly as they relate to response times, personnel, and program management.

The economics of volunteer/paid-on-call firefighters is the number one reason some communities embrace this type of organization. City governing councils are faced with maintaining or increasing public safety services, while revenues remain stagnate or diminish. With that said, one must not assume that volunteer organizations are free.

Volunteer organizations are built on four basic premises – pride, exclusivity, influence, and competition. The early volunteer organization had a tremendous amount of pride in the service it provided. It was exclusive in that only a few were allowed to join. It had tremendous influence, particularly in local political issues and elections. As a result of volunteer fire departments "springing up" (often next door to one another), these organizations were in competition with one another – primarily because of the number of volunteer companies in many communities and the lack of coordination among them.

The volunteer/paid-on-call organizations face many challenges not found – or at least not emphasized – in the career organization. Volunteer/paid-on-call organizations must spend considerable time and effort in recruiting and maintaining its memberships. The recruitment process must become one of "salesmanship." Thus, organizational principles such as hierarchy, unity of command, and span of control are placed on the back burner, while human relations and motivations are emphasized. Once individual needs have been met and the volunteer is a part of the organization, then organizational principles are taught and applied.

Managing volunteer/paid-on-call members is every bit as difficult as managing career employees – perhaps more so. One must not forget that an essential aspect of management involves responsibility, whether the department is a volunteer, combination, or career department. These responsibilities include budget, discipline, legal compliance, planning, delegating, establishment of policies and procedures, adequate service delivery, etc.

Fire chiefs of volunteer/paid-on-call departments must meet the needs of their members. Most firefighters do not join and remain members of volunteer/paid-on-call departments for monetary reasons. The reasons often range from a sense of community to the recognition of being a firefighter. The fire chief must recognize these needs; find a compromise between members' conflicting needs; and search for a way that the organization can meet individual needs. The chief must also recognize when these methods need to change so that the organization can retain members while remaining within budgetary guidelines.

Volunteer/paid-on-call staffing presents several challenges. Organizing members into functional companies becomes difficult due to the uncertainty of who will be able to respond to various alarms. On the emergency scene, unity of command and span of control become difficult to establish and maintain. This task is much different and far more challenging than in an organization that relies on career personnel, who are assigned to regular shifts and working hours.

Volunteer/paid-on-call organizations tend to operate in a more informal manner than career or combination organizations. While this approach often seems to work quite well, it is not always the most efficient. The department could find it more difficult to control or set performance expectations for a volunteer organization due to its perceived lack of direct control.

Volunteer/paid-on-call departments have a tendency to recruit members with very similar backgrounds and values as the existing membership. Diversity is a major challenge in volunteer/paid-on-call departments. Without this diverse pool of individuals, the basic operation and maintenance of the department and equipment might depend on a chosen few or in some cases not be accomplished at all.

Although the consultants have described challenges with paid-on-call staffing methodology, they highly recommend continuation of this staffing method until which time the call volume exceeds the capabilities of the paid-on-call members' ability to devote the time needed. Although there are advantages to career staffing, this staffing methodology is associated with a whole new set of

challenges. Currently, ISO grades a department on its staffing by requiring three volunteer/paid-on-call members to be the equivalent of one career employee.

Part-Time Employees

The fire department is currently in transition from volunteer/paid-on-call to a more formal scheduling of these members, thus creating part-time employees. Obviously, part-time employees can be scheduled to provide coverage during certain times of day or days of the week. It allows these individuals to become part of the on-duty team, thereby, allowing them more opportunities for training. The WDMFD allows part-time employees to fill in vacancies for career members who are off-duty due to vacation, sick, or other situations. This again allows the part-time employees to become more active in the department and helps create a team environment which adds to employee safety.

Paid-On-Premise Employees

A method available to the WDMFD is the use of Paid-On-Premise (POP) employees. POP employees have been found to be a highly successful method of staffing in areas that have a number of career departments in close proximity. Utilizing this scenario, the community could hire individuals that were already certified firefighters/EMTs on a part-time basis to either fully staff or augment shifts. POP personnel usually work twelve-hour blocks a few days per pay cycle or month. This could result in a significant reduction of salaries and avoidance of future pension liability for the city versus hiring its own career employees.

There are both advantages and disadvantages to paid-on-premise employees. However, the consultants are finding more departments utilizing this staffing method due to the significant cost savings of a POP employee over a full-time employee. There are departments that utilize paid-on-premise personnel to staff their stations 24/7. Although paid-on-premise staffing is highly discouraged by the International Association of Fire Fighters (IAFF) to its members, in a growing number of areas in the United States, there seems to be no lack of participants – both union and non-union firefighters - willing to fill these positions. However, in areas such as West Des Moines, there are fire departments and private ambulance services that have employees

certified in fire, or EMS, or perhaps both. Therefore, the department is afforded the opportunity to hire paid-on-premise personnel to address future staffing needs.

Privatization/Contractual

The consultants have dealt with municipalities/districts that either do not have their own fire department or have a combination of their own employees and individuals hired through a service (contract) that provides everything from personnel to apparatus and equipment. There are also communities that are protected by totally private fire departments.

The fiscal benefits are the most attractive reason to contract fire/EMS services. In this scenario, the city reaches agreement with the service provider and has no additional expenses. In other words, the cost of fire service becomes a fixed line item in the budget. The city hires positions, not individuals; all overtime, sick, vacation (etc.) benefits become the responsibility of the service provider.

The most commonly heard complaint about contractual employees is their tenure with the service provider. Many individuals who take these positions do so until full-time career positions become available in career departments, so turnover can be a concern.

Fire Department Staffing Methodology

In August 2016, the total fire department personnel count is illustrated in the table below. The volunteer/paid-on-call have been converted to part-time and assigned shifts and on-duty in station responsibilities.

Table 40: WDMFD Current Staffing

Employee Type	# of	% of Total
Career	59.5	65.75%
Part-time	31.0	34.25%
Total	90.5	100%

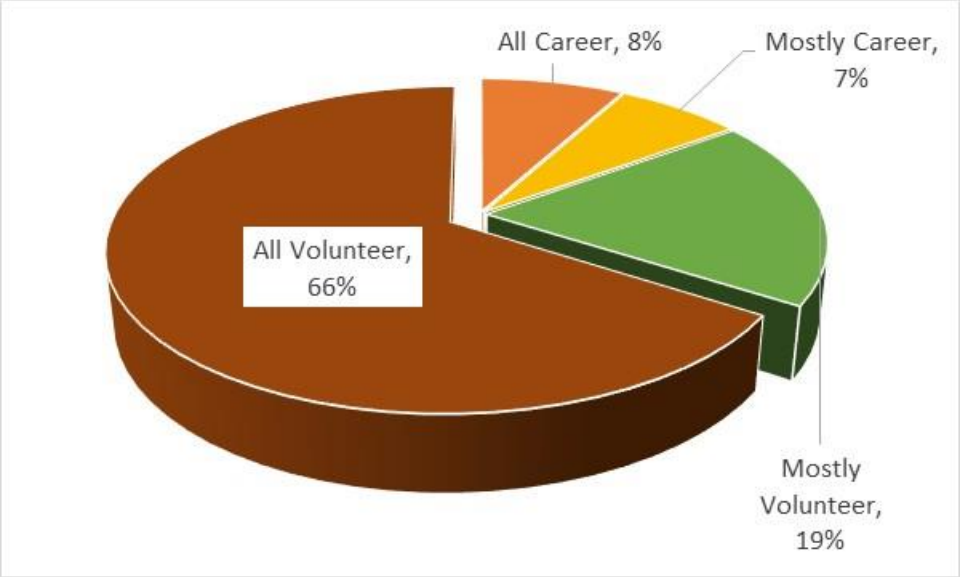
National Staffing Methodology Comparison

NFPA in 2016 reported the following four types of departments and the percent of US population they protect:

Table 41: Types of Departments & Percentage of US Population Served

Type of Department	# of Departments	US Population Served
All Career	8%	46%
Mostly Career	7%	19%
Mostly Volunteer	19%	17%
All Volunteer	66%	19%

Figure 38: Types of Departments & Percentage of US Population Served



An important aspect in a department's planning to effectively control and extinguish fires, as well as to handle efficiently other types of emergency calls, is to provide an adequate staff, readily available to respond to, and perform essential tasks. Ultimately, the staffing and deployment model utilized by a community must balance the identifiable risk, along with the costs associated with providing such a service. Ultimately, it is purely a question of how much risk the community is willing to accept and at what cost.

Within this study, the reader will find that the consultants not only looked at the stated residential census count, but also took into consideration vast increases in daily census consideration of the high concentrations of corporate office facilities, medical complexes, commercial occupancies, hotel/motel facilities, as well as educational facilities. All of these areas assist in evaluating overall community risk factors.

At the heart of most studies are their current, as well as future, staffing methodologies and their associated costs. The largest line item in most city's budgets pertain to personnel costs. It is normal for fire chiefs and firefighters of all ranks to wish for an increase in numbers of fire department staff in order to better serve their citizens. Larger staffing levels may equate to a greater margin of safety, for both the citizens of the community and the firefighters, as well as faster mitigation times resulting in diminished losses.

On the other side of the equation is the *reality* of just what a city can afford. The hiring of additional firefighting personnel is expensive and normally a large ticket item within the fire department's budget. Decisions between wants, needs, and the ability to pay for such added expenses become blurred and emotions can at times create an uneasy environment in which individuals/groups choose sides on such issues. In reality, all sides strive for the highest level of protection for their citizens and employees – however, achieving such a balance along with the ability to fund such expenditures is the issue.

A fire department must be a unified workforce with a complement of components. All of these components must be tied together by leadership, teamwork, and an understanding of the mission. The mission should be set by the leadership, clearly and unequivocally. This mission is no different in West Des Moines, where the clarity of its mission is clear-to carry out and mitigate, fire, rescue, and other emergencies that arise. It is further clear that the on-duty staff is responsible for handling such emergencies and working *closely* with other city departments in providing the best emergency services to its citizenry.

The demographics of a community can play into the overall demand on emergency services. Two such factors are the percentage of the community living below the poverty level, and the

ethnicity of the population. According to the National Fire Protection Association, those living below the poverty level tend to have a higher fire risk profile. In terms of median household income and the actual population below the poverty line, there is an extremely low risk threshold for the city.

It was found that the most recent income data (City-Data.com) showed that West Des Moines had a median household income of $71,941 in 2013. Additionally, it was found that only approximately 9.3% of current city residents would fall below the Federal Health and Human Services poverty guidelines income level of $24,300 or less per year.

The socio-ethnic make-up of a community can also have an impact on the fire risk profile. Cultural differences with regard to cooking, use of candles, and smoking materials can all play a part in a community's risk of an unwanted fire. Seventy-one percent of the people who died of unintentional or flame injuries were African American, while 25% were White. Unfortunately, statistically African American individuals faced a risk of fire death almost twice that of whites.

The most recent census figures reported that the ethnic makeup of the City of West Des Moines was as follows:

Table 42: West Des Moines Demographic Ethnicity

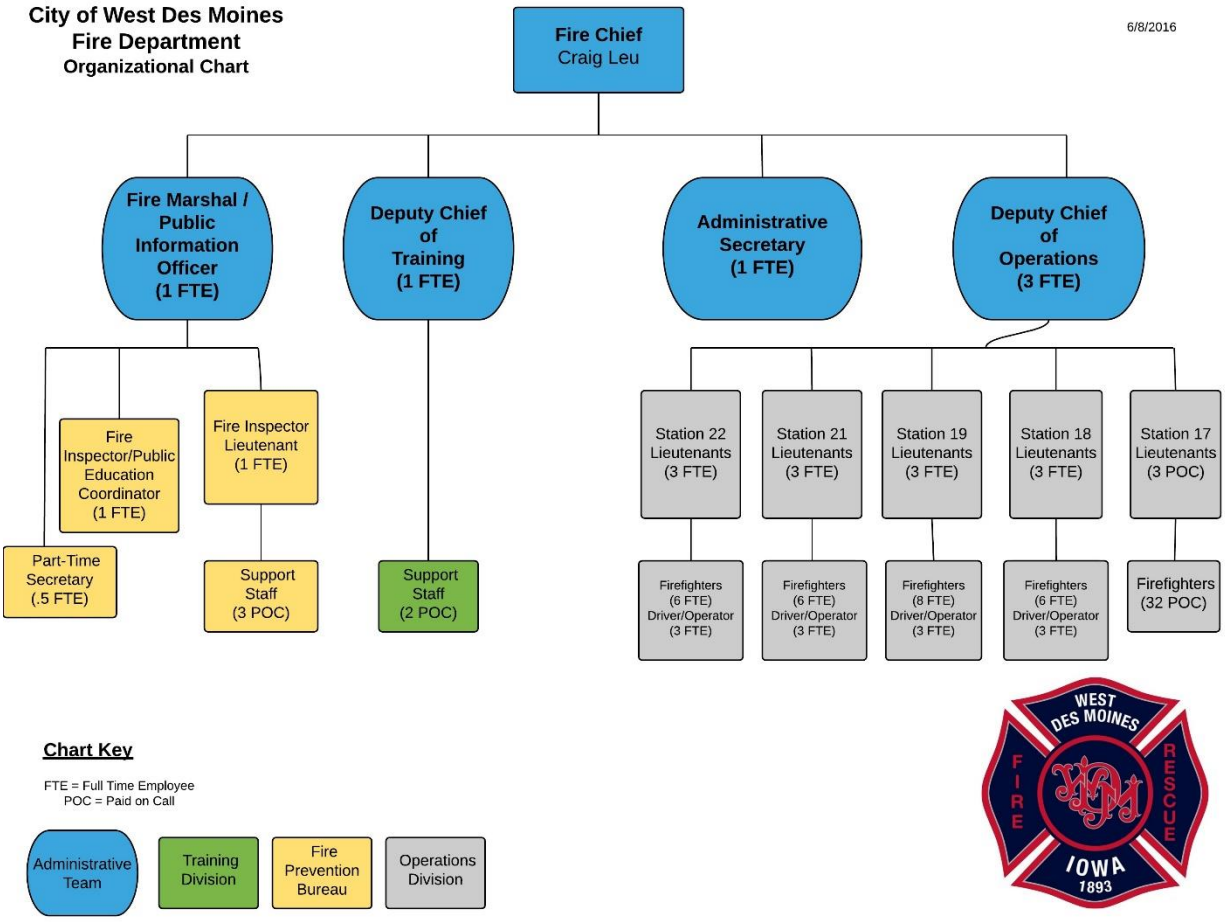
Ethnicity	Percentage of West Des Moines Residents
White	88.36%
Asian	4.79%
African American	3.31%
Two or more races	1.89%
Other	1.65%

Source: CensusViewer 2010 Census

Fire Department Current Staffing

The consultants were provided a revised organization chart for the department during the writing of this section. The figure below illustrates the most recent distribution of fire department personnel and includes an anticipated additional part-time secretary.

Figure 39: WDMFD Organization Chart



Administrative Personnel

The Fire Chief must serve as the leader and develop the vision of the organization, mentor the managers (officers), and develop a team concept that goes beyond the needs of the fire department, but addresses the overall needs of the City. Officers make the vision a reality and develop functional teams to ensure the strategic mission of the organization is being accomplished.

Currently, the administrative staff of the WDMFD consists of the Fire Chief and one Administrative Assistant. There is no daily second in command; rather, the next ranking officer works shifts as the Deputy Chief Shift Commander. Although the Deputy Chiefs might be well-qualified, they are not there every day to add to the consistency of leadership. The WDMFD is

in need of an additional full-time administrator (assistant chief) to help develop and ensure consistency within the organization.

A survey of surrounding fire departments all had a fulltime second in command working 40 hours a week to enhance the fire department leadership team. Although not all departments titled the position Assistant Chief, the position was a traditional work week schedule. In organizations, similar to West Des Moines, a second command – who is there on a daily basis – adds continuity to the administrative and management oversight of the department. The WDMFD would benefit from one additional administrative position.

In addition, the justification for this recommendation is that the Assistant Chief position will oversee the day-to-day operations of the department adding consistency and ensuring a second individual is prepared to function as the Chief Officer in the absences of the Fire Chief.

Recommendation – Assistant Fire Chief

- *The need for a second administrator (Assistant Chief) within the fire department was apparent and whose job responsibilities should be related to the Operational aspects of the department, while the Chief concentrates on the Administrative aspects.* ***Priority 3***

Shift Personnel

The rank and file full-time shift personnel work a "California" (most common name for the schedule utilized below) shift schedule which is:

- 24 hours on duty
- 24 hours off duty
- 24 hours on duty
- 24 hours off duty
- 24 hours on duty
- 96 hours (4 days) off duty.

The Deputy Fire Chiefs (Shift Commanders) work a traditional 24 hours on-duty followed by 48 hours off-duty schedule. Therefore, there is an inconsistency of working with the same shift personnel.

Consistency of Supervision

Although not common, to find the shift commander working an inconsistent shift with the on-duty shift personnel there is one advantage – to ensure that each shift does not become and act as its own fire department. However, the consultants have found that inconsistent shifts between supervision and shift personnel is usually more problematic than uniformity of supervision.

In WDMFD's case, each shift commander must account for the diversity in personnel resulting in a greater effort to ensure rules and procedures were implemented the same across each of the three shifts. Shift personnel indicated that they learn the idiosyncrasies of each shift commander and adjust their work accordingly. Although the inconsistent supervision of shifts seems to be working, the consultants recommend that a one-year trial period be implemented that teams the shift commander with the same on-duty shift personnel. The most practical method to accomplish this would be to move the shift commanders to the "California" schedule.

At the end of the 12-month period, one career firefighter rotates to a different shift. Only three firefighters rotate per year and it will take seven more years before that individual will rotate again. The shift commander would remain with the shift assigned and does not rotate.

Recommendation – Supervision Shift Consistency

- *A 12-month trial shift change should be tried in which the shift commanders and shift personnel are assigned as a team and work the same schedule.* ***Priority 4***

Minimum/Maximum Shift Staffing

The fire department indicated that the minimum number of on-duty shift personnel is 14. The maximum number of on-duty shift personnel is 17; both numbers include the shift commander.

The current manning levels on each piece of fire apparatus is a maximum of four, and a minimum of three. Overtime, or use of a part-time employee is utilized if manning were to fall below the minimum number on a piece of apparatus.

The table below illustrates the daily on-duty staffing in 2015. The data was limited to 2015 inasmuch as the three year totals were very confusing due to the number of stations in service over that time and that minimum staffing number had changed.

Table 43: Staffing Levels of On-Duty Personnel - 2015

2015		
Staffing Level	**Shift Days**	**% of Shifts**
13	3	0.82%
14	159	43.56%
15	139	38.08%
16	59	16.16%
17	5	1.37%
Total	**365**	**100%**

One will immediately notice that if the minimum on-duty staffing is 14, how can there be three days in 2015 were the numbers are lower? On some rare occasions, the fire department is unable to find anyone willing to work (includes career and part-time) and therefore the minimum dropped to 13 for either part or all of the day.

The consultants emphasize that a minimum of 14 on-duty should be maintained. In many organizations, a forced overtime is mandated, where one member going off-duty is mandated to remain until which time the vacant position can be filled. This is a policy that should be embraced by both the fire department leadership and labor. If such a policy is not implemented, than the message is that the real minimum is 13 and perhaps 13 should become the minimum figure saving overtime and part-time expense.

Recommendation – Minimum Staffing

- *The department should ensure that the minimum staffing is 14 by developing a forced overtime policy. A procedure should be established to identify the process of mandatorily holding over a member whose shift has ended, until which time a replacement can be found.* ***Priority 3.***

The department also provided data which indicated the number of days in which overtime was paid for off-duty personnel to work a vacancy as illustrated for 2015 below:

Table 44: Overtime Needed to Reach Minimum Staffing - 2015

2015		
# of FF on OT	**Shift Days**	**% of Shifts**
No OT needed	227	62.19%
1	96	26.30%
2	24	6.58%
3	17	4.66%
4	1	0.27%
Total	**365**	**100%**

The calling back of career fire personnel to provide station coverage during emergencies is done very infrequently. The utilization of mutual aid companies to provide adequate station coverage during emergencies is the more common practice.

The full-time rank and file career firefighters are represented by the International Association of Firefighters (Local 3586) and are working under a current contract. This contract does not include any of the Deputy Fire Chiefs or Lieutenants.

Paid-On-Call Now Part-Time

The old paid-on-call staff responded to emergencies as called for, as well as work an occasional 12-hour nighttime shift at Station 17 as a part-time Engine Crew". It was reported that the paid-on-call program as it stood before the current reorganization was in disarray; obviously the reason for the transition to part-time paid positions.

It is common in studies to hear fulltime employees' express dissatisfaction with any volunteer/paid-on-call/part-time employee who holds the rank of an officer; WDMFD was no exception. The reality is a member who is not fulltime has less time to devote to many aspects in being a firefighter/officer. However, this does not automatically make them inferior to a fulltime employee. The expectations by leadership must be different and those expectations need to be

based on the establishment of core competencies (discussed in greater detail in the Training section of this report). As the complexity of the job increases, the ability of all members to demonstrate their ability to meet the department's core competencies is essential.

Currently, there is a policy that allows for a part-timer to be utilized as a "fill-in" in the event a career firefighter has a day off. By doing so, it permits the piece of apparatus to maintain a full 4-person crew. This program has been supported by the career staff; but again, must be based on core competencies.

The department leadership has implemented a program that changes volunteer/paid-on-call to a part-time position in which they can be assigned a shift to provide station coverage in Station 17 and/or act as the fourth person with the career on-duty personnel. At the writing of this report, there was not sufficient data to illustrate the results.

Recommendation – Part-Time Staffing

- *The consultants fully support the efforts by the department leadership to convert the volunteer/paid-on-call staffing methodology to part-time status and assigning shifts to those personnel.* ***Priority 5***

Station 17 Staffing

Station 17 serves as the fire training center, maintains an EMS unit, but no fulltime coverage of any firefighting crew. Occasionally, reported as 4-5 nights a week, there is a 4-person part-time engine company staffing; however, this does not include any weekends or holiday coverage. The training officer works out of this station throughout the week.

Apparently the public perception is that on-duty fire and EMS protection is available from Station 17 24/7/365. During the interviews with council members, several mentioned their concern that Station 17 was not staffed 24/7 with on-duty personnel. In reality, a firefighting crew is there less than half of the time.

The Fire Chief has worked diligently to develop the part-time program that will place Station 17 engine in service more frequently. The majority of officers felt that the older part of town, on the

east side of the city, which is station 17's initial response district, was a higher risk factor for fire due to its older home construction as well as apartments and multi-family occupancies.

Recommendation – Station 17 Staffing

- *The Fire Chief should continue to develop a plan that will provide for fire protection on-duty personnel 24/7, with a combination of part-time and career personnel. The area being protected by Station 17 warrants a 24/7 engine company.* ***Priority 2***

Fire-Medic Position

A topic in full consensus was the dysfunction of the three Fire-Medic positions currently assigned to the EMS department. This was expressed to the consultants by both the Fire and EMS Chiefs, as well as the Human Resource Director.

These three positions pre-date the existing Fire Chief and were created during a time when consolidation between the two departments was being explored. It was explained to the consultants that these positions were created to assist in filling a need in both departments by sharing the personnel costs and responsibilities. Despite the best of intentions in the past, it is clear to the consultants that this position is neither functional nor conducive to effective employee relations at this time. Currently, the three Fire-Medics split their time between an ambulance with WDMEMS and the ALS Engine Company shared with the City of Clive.

The three positions are currently funded wholly from the fire department budget and the three employees are represented by the fire department union contract. Both EMS and Fire Administrators articulated to the consultants that the three fire-medics do not particularly enjoy being assigned to an ambulance and their sick time usage typically increases on the days that they are assigned to an ambulance. Further, the EMS Department has concerns that the department has no supervisory authority over the three employees, however, the EMS Lieutenants do provide input into the performance evaluations of the three fire-medics.

Similarly, the Fire Department has concerns because three fire-medics are considered minimum manpower and when they are assigned to the ambulance, the fire department must often utilize overtime to fill the positions to maintain minimum staffing levels. Further, it was argued, that

when there is a fire in the City of West Des Moines, the ambulance with the fire-medic responds to the scene and the fire-medic becomes attached to a firefighting crew, necessitating an additional City ambulance to respond to the fire scene, effectively two of the three City ambulances out of service for the duration of the fire.

While this staffing arrangement may have been feasible in the past, it is readily apparent to the consultants that it does not work today. Stakeholders unanimously agreed that the three positions should be "written off" from the EMS Department staffing matrix and additional full-time employees should be hired that are dedicated 100% to the EMS Department's staffing needs.

The consultants are aware of the political, fiscal and legal challenges that such changes may elicit. Human resources staff were in full agreement that this change needs to be made and while they said that it would pose a challenge for them, if there was consensus from the Union, those hurdles could be overcome relatively easily. There would be a savings to the fire department with less shifts requiring overtime coverage.

Recommendation – Three Fire-Medic Positions

- *The three existing fire-medic positions should be dissolved and the three personnel assigned full-time to the fire department. There will be challenges in the transition process but the consultants believe it is achievable and in the best interest of the city and employees.* ***Priority 2***

Staffing EMS Department

The WDMEMS Department has an authorized staffing level of 82 employees. There are currently 31 full-time employees of the organization, including administration and 48 three-quarter-time and part-time employees. The rank and file full-time personnel work a 24/48, or 24 hours on, 48 hours off duty, staffing schedule. Available shifts are filled with three-quarter time and part-time personnel. The EMS Chief, two Assistant Chiefs and Deputy Chief each work a traditional Monday through Friday schedule.

At the writing of this section there were two full-time and five part-time EMS paramedic positions open. The full-time rank and file career staff are represented by the International Association of Firefighters (Local 3586) and are working under a current contract, separate from that of the WDMFD. This contract does not include any of the Lieutenants or Administrative staff.

Because of the unique partnership created by the Iowa EMS Alliance (Alliance), WDMEMS' staffing model changes on a regular basis. There are a total of five ambulances staffed 24/7 – three of which are assigned to the City for 911 responses and two that are assigned for Alliance inter-facility transport purposes. There is one Alliance ambulance staffed for 40 hours a week which alleviates some of the peak load calls for service and it was explained to the consultants that this ambulance typically handles basic life support transports to other facilities.

The Alliance was an overshadowing issue with respect to staffing and during stakeholder interviews, two groups of employees were generally found: those who were largely in favor of the Alliance and those who were dead-set against it. However, despite the division among employees, there is significant stakeholder concern from all groups regarding the perceived turnover of part-time employees. Many stakeholders related that the Alliance has had a negative impact on morale and employee retention because new employees are generally assigned to the hospital ambulances after completing their new employee orientation and the long distance transports, some of which occur in the middle of the night, do not bode well for new EMTs and Paramedics who are entering the EMS field.

Other stakeholders argued the opposite and articulated that the Alliance gives inexperienced (and experienced) employees an opportunity to perform skills in a controlled setting of the hospital and in the field in which they may never or infrequently encounter in a 911 response setting. Several examples were offered including the intubation and cannulation of newborn babies. These skills, stakeholders argued, allowed WDMEMS to be more confident and comfortable when treating atypical patients than are usually treated during 911 responses.

Numerous internal and external stakeholders questioned the efficacy and efficiency of West Des Moines retaining their specialized skills of infectious control transport, Neonatal Intensive Care and pediatric treatment if the Alliance were to be divested from WDMEMS. However, numerous internal and external stakeholders also articulated the perceived morale issues the Alliance has created and it was expressed to the consultants many times that WDMEMS used to be the "who's who" of Iowa EMS and that it was a desirable place to work prior to the Alliance. Now, because of the Alliance, recruiting has become so stretched that the department is hiring people for the sake of just putting a warm body in a seat to fulfill a position.

West Des Moines Human Resources agreed that part-time staffing is a concern due to the high turnover rate of employees as compared to other municipal. HR staff indicated that a large amount of their time was spent in recruiting part-time employees and conducting exit interviews for those who wished to participate in them upon leaving employment.

There were many stakeholders interviewed who articulated a passion for staffing the Alliance ambulances, because it affords them a unique perspective of EMS that is not often observed in emergency 9-1-1 acuity calls for service. However, there was a general consensus that the Alliance is creating stress on the staffing model as there are hundreds of hours being unfilled when part-time employees do not sign up to work. Many stakeholders lamented the frequency of emails and text messages seeking staffing coverage. One stakeholder relating that an email or text once in a while, would lend more credibility in the request to provide coverage and people would go out of their way to fill the shift. At the present time however, such requests are so frequent that it's easy to ignore them because the situation reveals a need for staffing that should be handled by administration.

The EMS leadership provided information to the consultants that through mid-October 2016 "that the Deputy Chiefs and above have covered a total of 1,301.5 hours so as to avoid mandatory overtime or overtime in general and assure staffing. Chiefs have also filled a seat on a responding ambulance a total of 117 times in the calendar year to date (mid-October 2016)". When the leadership team must divert their management/leadership responsibilities to focus on elimination of overtime, it is prudent for leadership to examine staffing levels, or question the

role of management personnel. This is not to imply that that top leadership should not be expected on rare/emergency situations to provide patient treatment, but not on a regular basis.

Recommendation – EMS Staffing

- *It appears that either more staffing, or as suggested in the human resource section, a review of the compensation, work schedule, Alliance work rotation, and long run stipend combination is needed to increase the response to Alliance transports is needed.* ***Priority 2***

- *Re-evaluation of distribution of overtime so that longer tenured employees are not the only employees receiving the extra compensation; thus, helping to minimize the turnover and reduce the lack of staffing and need for employee coverage.* ***Priority 2***

- *Need to assess who is responsible for determining call-in – the employee or administration? If there are significant openings, then it should be Administration's responsibility to fill – not the employee.* ***Priority 2***

Public Safety Facilities

The West Des Moines Fire and EMS departments provide coverage to the city of West Des Moines, including an area of 39.48 square miles and a population of 65,000 (plus an additional daily transient count of approximately 60,000) The fire department also provides service to Clive through a shared ALS engine company operating from Station 22. The city utilizes five Fire/EMS Public Safety facilities (aka: stations) staffing various EMS and fire apparatus and vehicles. The EMS chief is also the director of the city's Westcom-E-911 dispatch center where dispatching services are operated out of the basement at Station 19. The EMS department also utilizes accommodations at both the Methodist West Hospital in West Des Moines and Methodist Hospital in Des Moines as part of their cooperative efforts through the Alliance. The Administrative headquarters for the fire department is located at Station 21 and the Administrative headquarters for the EMS department is located at Station 19.

Fire & EMS Public Safety Facilities

Station 17

Figure 40: WDM Station 17

Station 17 is located at 1401 Railroad Ave, West Des Moines 50265. The station is staffed with a 24-hour paramedic ambulance and fire service presence of volunteer employees on various nights. This facility doesn't have any fulltime fire personnel assigned – only an EMS crew. The station is also home to the fire department's training facility, including the training tower, a large outdoor training area housing training props, as well as the training offices. This facility has just received major remodeling, including roof work, window replacement, exterior brick replacement, and work on the heating and air conditioning.

The station is a two story non-combustible structure, built in 1991. It is outfitted with a complete automatic fire sprinkler system, and is fully protected with an automatic fire alarm system as well. The fire protection systems are both monitored 24/7 through an off premise agency. The station also has a complete back up emergency generator fueled by natural gas and was found to be 17,500 square feet in size.

The first floor of the station has the apparatus floor with associated rooms and the training offices. The apparatus bay and associated rooms are 7,100 square feet in size and the office/training room covers approximately 5,000 square feet. The living quarters occupy the second floor and the area there is 5,400 square feet.

The following apparatus/equipment is assigned to Station 17: Engine 221A, Engine 172, Engine 170, Tanker 176, Tower 175, Attack 177, Air Refill Trailer, Antique Seagrave Fire Engine, Ambulance 173, along with a reserve ambulance.

The apparatus floor has five drive-through bays with an assigned apparatus in front of each door, which prohibits utilization of the drive through feature. The apparatus floor has 10 overhead doors measuring 16 feet high by 14 feet wide. The doors are controlled both by wall mounted switches and apparatus remote control devices. The station is equipped with a Plymovent™ air ventilation system for all assigned apparatus to remove all exhaust gases from the building. The floors have the excess water drained off through a series of trench drains.

The air refill for the Self Contained Breathing Apparatus (SCBA) is vented to the outside for the intake air. Proper documentation and Hydrostatic testing on all tanks was found to be in order, and the station is equipped with an approved explosion proof filling station.

The second floor living quarters appeared to be adequate, although somewhat "dated". Accommodations were found to be equitable for both the male/female personnel assigned to work out of this station. This includes sleeping quarters, locker rooms with restroom/shower facilities for men and women, kitchen, and a lounge area.

There is a fire pole from the second floor to the first, but the floor area around the pole was boarded up during construction. The consultants recommend that the pole should be removed for safety concerns.

Recommendation – Station 17

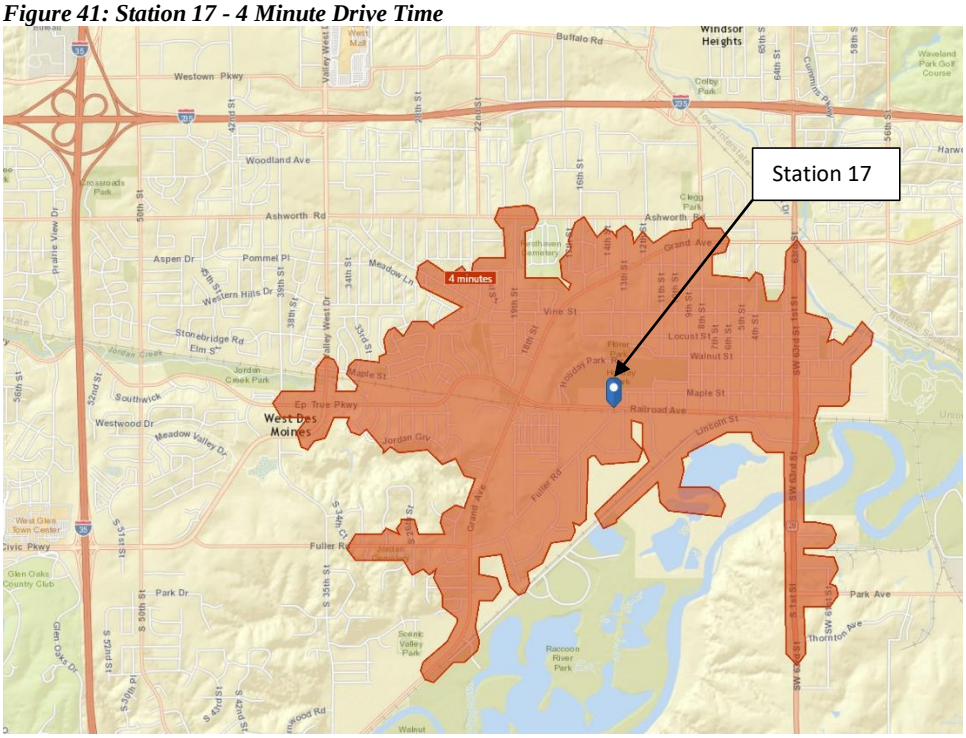
- *Station #17 should have their fire pole removed or the second floor pole opening sealed off; thereby, ensuring the pole cannot be used for safety concerns,* ***Priority 3***

- *The city should have a minimum crew of three, preferably four, on-duty firefighters 24/7 in this facility. This staffing can be accomplished with full-time, part-time, or combination of both staffing methodology.* ***Priority 3***

Station 17 Drive Time

NFPA 1710 requires a four-minute drive time response for the first emergency unit to arrive 90% of the time. The GIS figure below illustrates a four-minute drive time (area colored Burnt Orange) from Station 17.

Figure 41: Station 17 - 4 Minute Drive Time

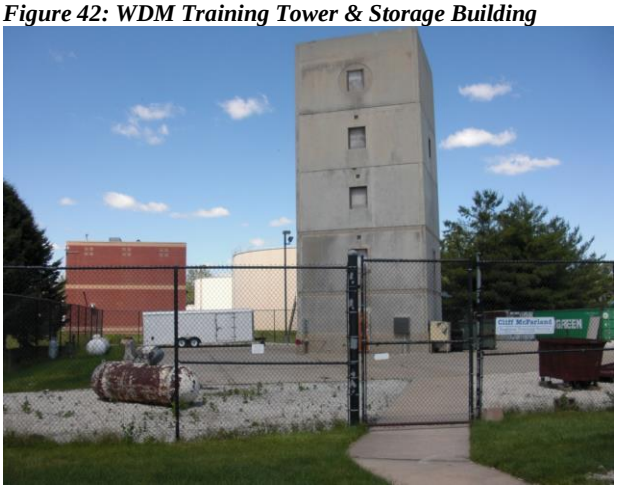


Training Tower

Attached to the station 17 property is the fire training academy. This includes a five story training tower, individual outside propane fuel fired props, other natural gas fired props and a storage building. Additionally, there are two large storage containers present, one used for combustion training and one for storage.

The training tower is precast concrete and measures 20 feet by 20 feet. The training storage building is 25 feet by 75 feet. The training storage building is of metal non-combustible construction, with a poured concrete floor. These two structures are shown in the two figures below:

Figure 42: WDM Training Tower & Storage Building



WDM Station 18

Station 18 is located at 5025 Grand Ave, West Des Moines 50265, and was built in 2002 into the side of a hill. The construction was designed to allow rain runoff water to flow to the center of the building; unfortunately, there have been considerable problems with roof leaks over the years.

The two story station is of non-combustible construction, and has two drive-through apparatus bays. One door is for the fire museum, and a single back- in bay is for their pod truck. The total square footage of the station is 16,900 square feet, has a full fire sprinkler system, and a full fire alarm system. Both the sprinkler system and the fire alarm systems are monitored by a private service 24/7. The station is fully protected with emergency power back up through a diesel generator on site with a 500-gallon fuel tank checked monthly or after each use.

Apparatus Section

The apparatus floor and associated areas are 8,660 square feet. There are six overhead doors for the apparatus floor which are 15 feet high by 12-foot-wide and are controlled by wall mounted switches and vehicle remotes. The apparatus assigned to the station is as follows: Engine 180, U187 Pod Truck, Mechanical Pod, Specials teams Pod, Boat Trailer, 12' Zodiac boat w/ 30 horse motor, one "Wave Runner", Command 186 and a1937 antique pumper in the museum. There is no EMS staff or apparatus assigned to this station.

The station is fully outfitted with a Plymovent™ air system for removal of exhaust gasses. There are not any "scrubbers", as there are strict departmental rules forbidding the starting of small engines in the stations. The station is equipped with an SCBA air compressor and associated fill station. Currently, there is no outside piped air intake to supply the compressor with fresh air. The documentation and hydrostatic testing were all in order, and there is an approved fill station.

The consultants are specifically referring to the section entitled "Other Specific Requirements" using the following site: (**https://www.osha.gov/dts/osta/otm/otm_viii/otm_viii_2.html#10**) in their request for immediate action on outside air supply.

Recommendation – Station 18

- *Station #18 should install a direct pipe to the outside of the building to supply intake air for the air compressor used to fill the Self Contained Breathing Apparatus bottles.* ***Priority 1***

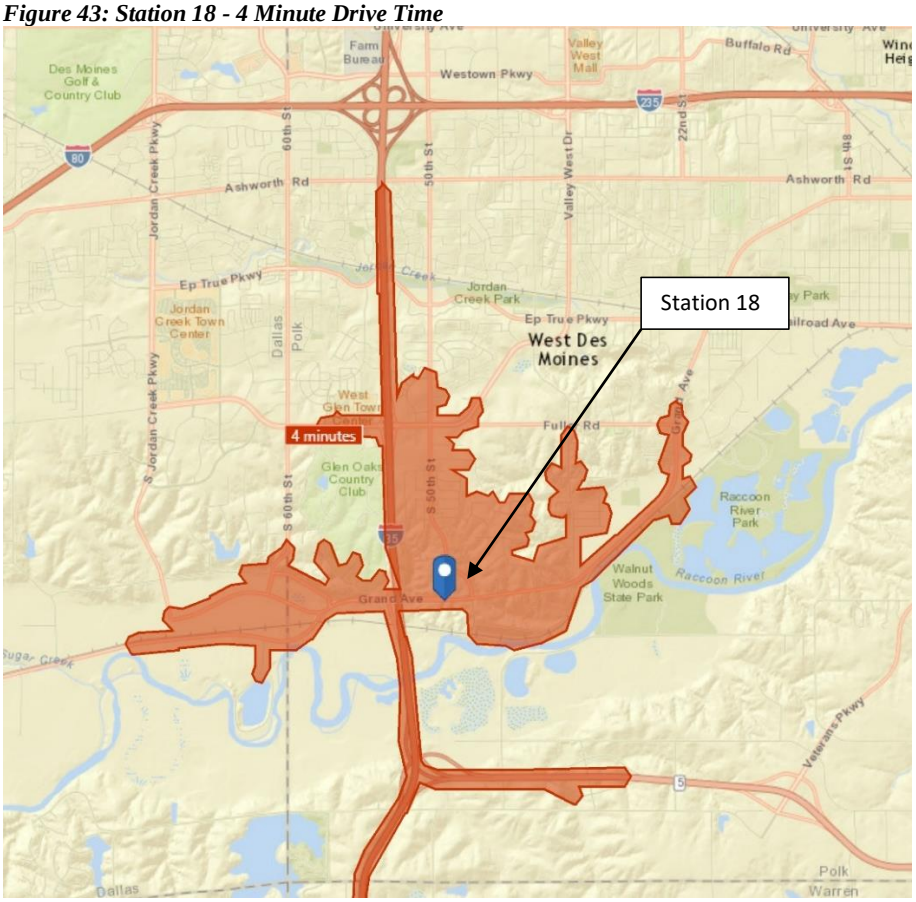
Living quarters

The living quarters consist of equal-but separate, male and female combined locker rooms with washroom and shower facilities, individual dorm rooms, lounge, kitchen and two offices-one general office, and one for the Lieutenant. The only access to the second floor living quarters are two steel stair cases. The living quarters are approximately 8,240 square feet.

Station 18 Drive Time

The GIS figure below illustrates a four-minute drive time (area colored Burnt Orange) from Station 18.

Figure 43: Station 18 - 4 Minute Drive Time



Station 19

Station 19 is located at 8055 Mills Civic Parkway 50266, and is the headquarters station for the EMS Service. The station is a one story, non-combustible building with a basement housing the Westcom dispatch facility. The station was built in 2007 and was originally intended for Police, Fire, and EMS use. The police department ultimately decided not to utilize the facility, but the Fire and EMS departments have utilized it well. The facility was built with a shell for a basement, with an undetermined purpose. Westcom was added and moved into Station 19 in 2009.

The ground floor level of the station is 17,250 square feet. The station has a full fire sprinkler system, as well as a complete automatic fire alarm system. Both of these systems are monitored 24/7 by an outside agency. The station is also provided with full emergency power back up through a natural gas back-up generator.

The basement houses the Westcom dispatch operation and is under the direction of the EMS Chief. The total square footage of the basement area is 3,249 square feet.

Apparatus Section

The area of the apparatus floor is 5,900 square feet which includes a couple of side rooms. There is one drive-through bay along with two half-bays which have a single door on one end, and are single depth. The four overhead doors measure 14 feet by 16 feet. There is also a garage near the EMS administrative offices that measures 10 feet by 10 feet, and these doors are controlled by wall mounted switches or through vehicle remotes. The station is outfitted with a Plymovent™ air filtration system providing coverage for all apparatus floor vehicle positions to assist in removing exhaust gases from the building.

Apparatus/equipment assigned to this station is as follows: Car 199 (EMS Supervisor), Foam 197, Engine 190, and Ambulance 193, as well as a number of rotating reserve and hospital ambulances, The EMS director's car, and the EMS Operations Assistant Chief's car.

Living area

The living area consists of 6,131 square feet and includes the following: kitchen, lounge, fitness room, men's and women's locker/washroom/shower rooms, reports room, and individual dorm rooms.

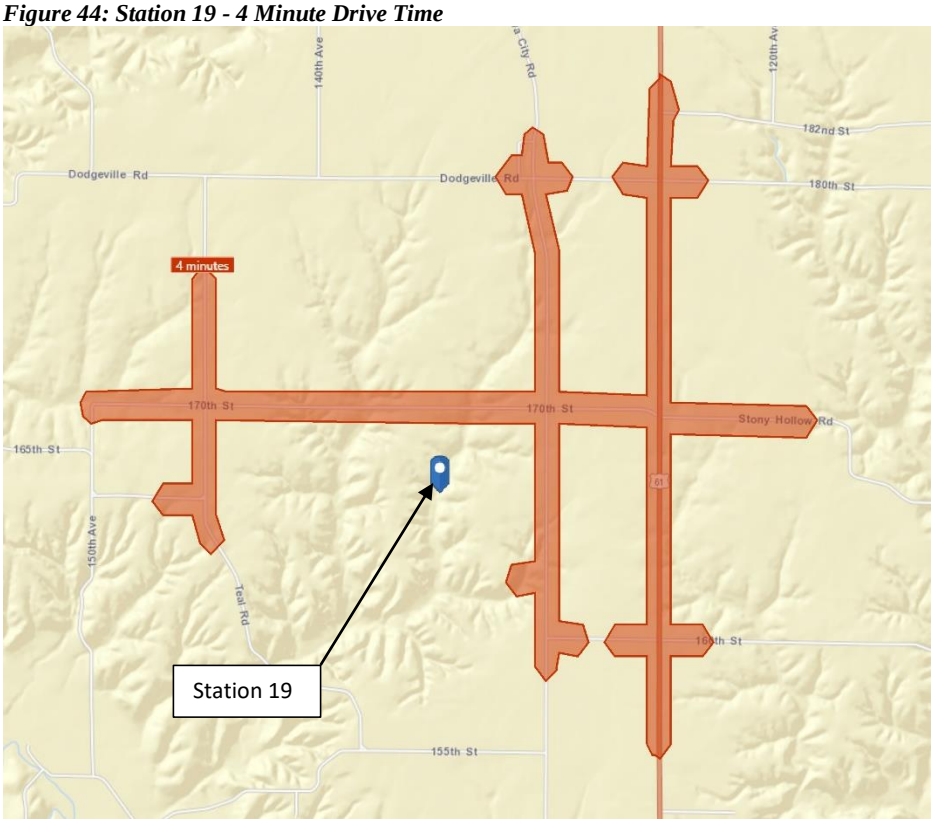
Emergency Medical Services Administration

The administration area for EMS is approximately 5,219 square feet. This area consists of three offices, two large areas with cubicles for billing and administrative help, several areas for staging and rotating equipment, a large conference room, and the garage which houses the EMS supervisor's vehicle.

Station 19 Drive Time

The GIS figure below illustrates a four-minute drive time (area colored Burnt Orange) from Station 19.

Figure 44: Station 19 - 4 Minute Drive Time



Station 21

Station 21 is located at 3421 Ashworth Road, 50265, and was built in 1972 with a substantial renovation in 1994; the EMS Administration moved out in 2007. The station is a one story-two bay drive through station with a basement under the administration portion where Fire Administration currently resides. Station 21 is considered fire department headquarters station, and at one time, housed the police department as well.

The total square footage of the ground floor is 10,824 square feet. The station is protected by a full fire sprinkler system and fire alarm system. Both of these systems are monitored 24/7 by a private monitoring service. The station has a full emergency backup power system through an emergency generator powered by natural gas in the event of any power failure.

Apparatus Section

Station 21 has an apparatus floor covering approximately 4,500 square feet. There are two drive-through bays, each with front and rear 14 foot by 14 foot overhead doors. The doors are operated by wall mounted switches, as well as vehicle remotes. Apparatus normally assigned to this station is as follows: Ladder 215, Reserve Engine 210, a county Emergency Trailer, the on-duty Deputy Fire Chief's SUV (Shift Commander), Fire Chief's vehicle, Fire Prevention Bureau Cars, and Ambulance-Medic 213. The apparatus bays have a Plymovent™ emissions exhaust system to remove exhaust gases from the building. The apparatus floor is heated through a radiant heat system.

Basement

The basement area of the station includes four offices, the female locker room, training room, a fitness/workout room, and some storage. The area of the basement is approximately 3,000 square feet. The female locker room is not considered convenient by the female medics member assigned to this station. It was felt by some members assigned to this station that potential mold issues may be present in the basement. Although it was not apparent to the consultants, such concerns should be investigated through proper means.

Living Area

The living area covers 3,372 square feet and consists of the kitchen, lounge, locker room, dormitory, bathroom, a station office, reports room, and the Deputy Fire Chiefs office/ room. NOTE: The station Lieutenant's office is in the administrative wing next to the Chief's office.

Fire Administration

The administrative wing is 2,952 square feet in size and includes the Fire Prevention Bureau, a Conference room, the Administrative Assistant's reception/work space, an office machine room, the Fire Chief's office and a shift Lieutenants office. The consultants inquired as to why the duty Lieutenants office was located next to the Chiefs Office instead of the Deputy Chief. Suffice it to say, that logistically, the necessities for relocating the Shift Commander's office and sleeping area, could not be easily accomplished.

In a "perfect world", having the Assistant Chief and on-duty Deputy Fire Chief's Office in close proximity to the Fire Chief's Office is good practice. Having a lower ranking officer's office located next to the Chief's office could promote dysfunction within the chain-of-command structure. Consideration should be given to align the Fire Department Administration offices in a more efficient manner.

The consultants acknowledge that currently there is insufficient room in Station 21 to accomplish this type of administrative configuration; however, there was discussion of moving the training room in Station 21 to another facility thereby creating the necessary room.

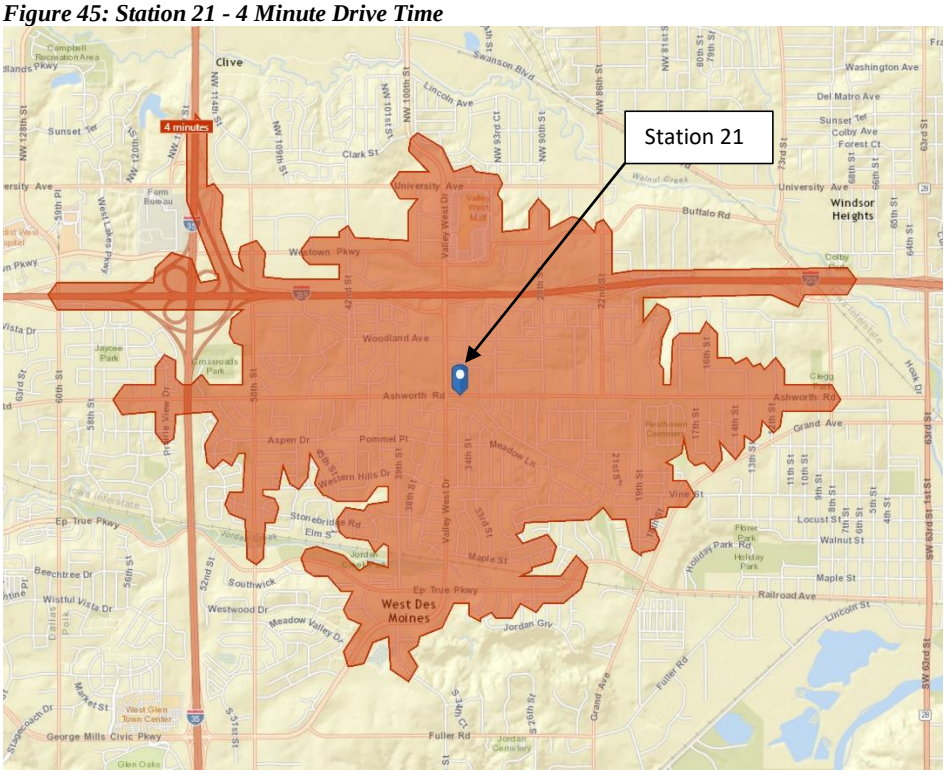
Recommendation – Station 21

- *Consider housing all fire administration personnel in the same facility, such as Station 17. These accommodations will require some renovations.* ***Priority 3***

Station 21 Drive Time

The GIS figure below illustrates a four-minute drive time (area colored Burnt Orange) from Station 21.

Figure 45: Station 21 - 4 Minute Drive Time



Station 22

Station 22 is a shared station between the City of West Des Moines and City of Clive. The location of the station is 1801 68th Street, Clive, Iowa 50324. The station was built in 1993 and has had no alterations. The station is a one story non-combustible building with two drive through-double deep apparatus bays. The station's footprint is in the shape of, and depicts a fire officers "bugle"- dissected in the middle by the apparatus floor. The total size of the station is 10,950 square feet and is fully sprinkled with an automatic fire alarm system throughout. Both systems are monitored by a private-off site alarm monitoring service 24/7. The station has complete back up emergency power through a natural gas fired generator.

Apparatus Section

The size of the apparatus floor and common area is 4,400 square feet, which also includes the rooms adjacent with common use to the truck floor. There are two full drive-through bays-double depth, with doors that are 14 feet by 14 feet. The doors are controlled by both wall mounted switches and vehicle remotes.

Apparatus assigned to this station include ALS-Engine 220, Reserve Engine 221B, and Tower 225. A Plymovent™ vehicle exhaust system is installed and used by each of the apparatus in the station to aid in removing vehicle emissions from the building. Additionally, there is a scrubber installed for any additional fumes not produced by the vehicle emissions. The station is equipped with an SCBA air compressor and fill station, the compressor, however, is not piped for outside intake air. Outside air is required to be used for intake air per OSHA Standards.

Recommendation – Station 22

- *Station #22 should install a direct pipe to the outside of the building to supply intake air for the air compressor used to fill the Self Contained Breathing Apparatus bottles.* ***Priority 1***

The documentation and hydrostatic testing was all good and the fill station was of an approved type.

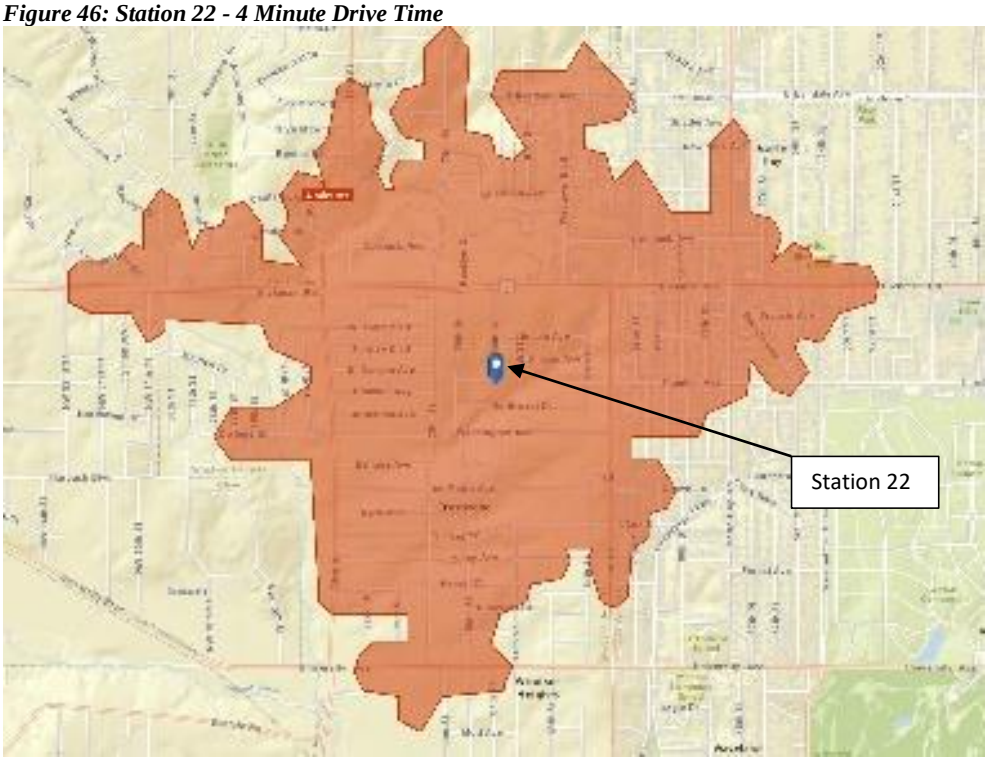
Living Area

The living area is 6,550 square feet and consists of the station office, an officer's office, a physical fitness room, kitchen, dormitory, male and female locker rooms with separate washroom and showers, and a lounge.

Station 22 Drive Time

The GIS figure below illustrates a four-minute drive time (area colored Burnt Orange) from Station 22.

Figure 46: Station 22 - 4 Minute Drive Time



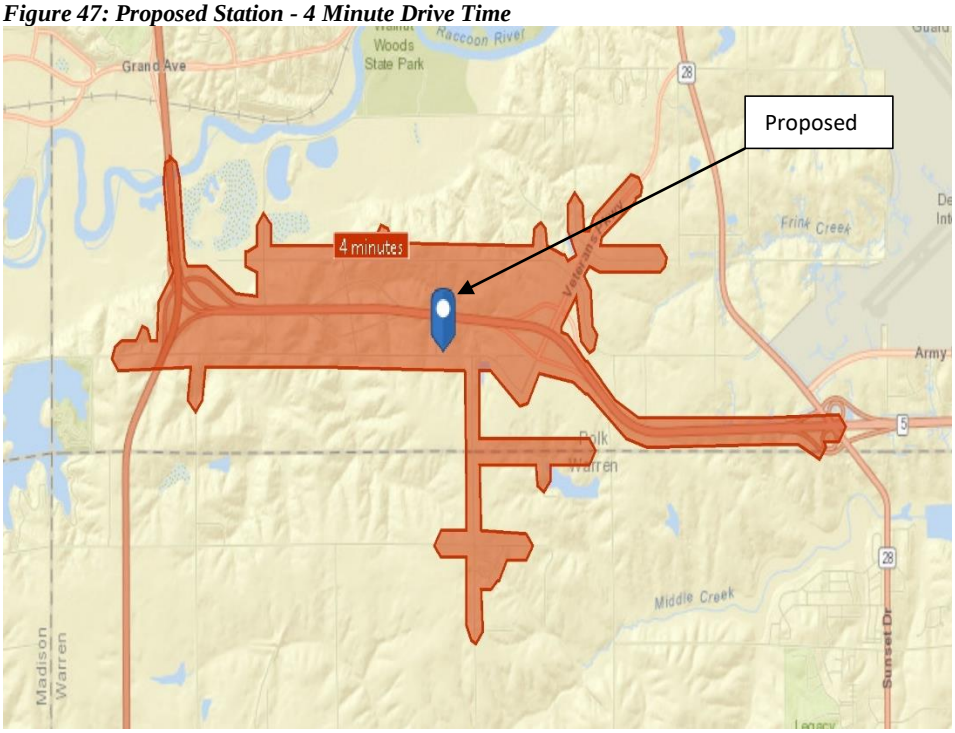
Anticipated Need for a New Station.

It was strongly voiced that soon there may be a need for another station in the southern/rural area where development has already begun and is expected to accelerate when the new roadway and bridge are completed. Currently, it was believed that the best location for this station would be in the 22nd Street and Maffitt Lake Road area.

Proposed New Station Drive Time

The GIS figure below illustrates a four-minute drive time (area colored Burnt Orange) from the proposed site for an additional station.

Figure 47: Proposed Station - 4 Minute Drive Time



Public Safety Facility Response Districts & Overlap

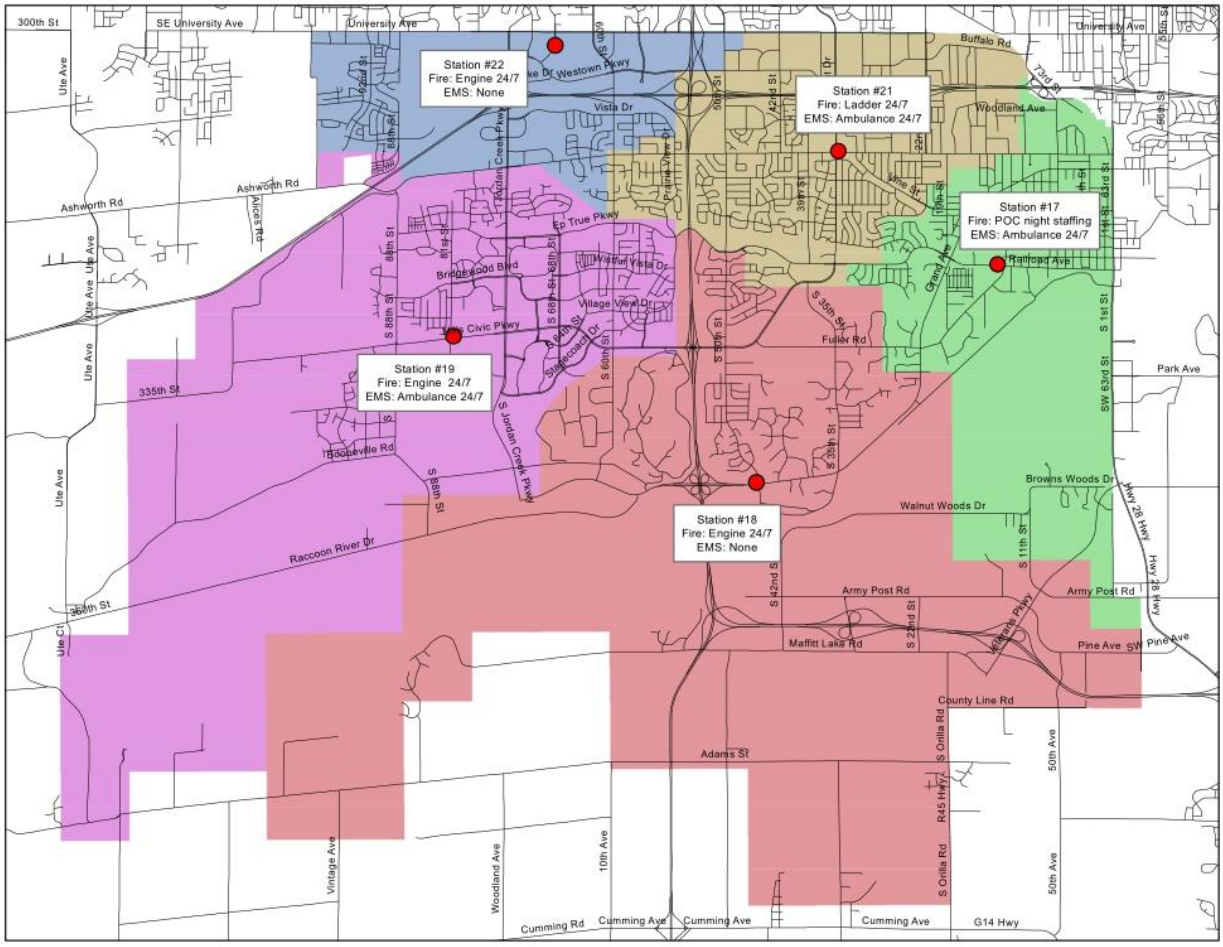
The fire department provided the following figure that illustrates the location of the five existing public safety facilities and their respective emergency response districts (aka: still district). Simply stated, any emergency existing within the purple color on the figure will receive Station 19 resources. Of course, if Station 19 resources were already committed to a prior emergency, another Station would be sent.

Color Code – Response Districts

- Station 17 = Green
- Station 18 = Burnt Orange
- Station 19 = Purple
- Station 21 = Gold

- Station 22 = Blue

Figure 48: WDM Current Fire Response Districts



Facility/Station Overlap

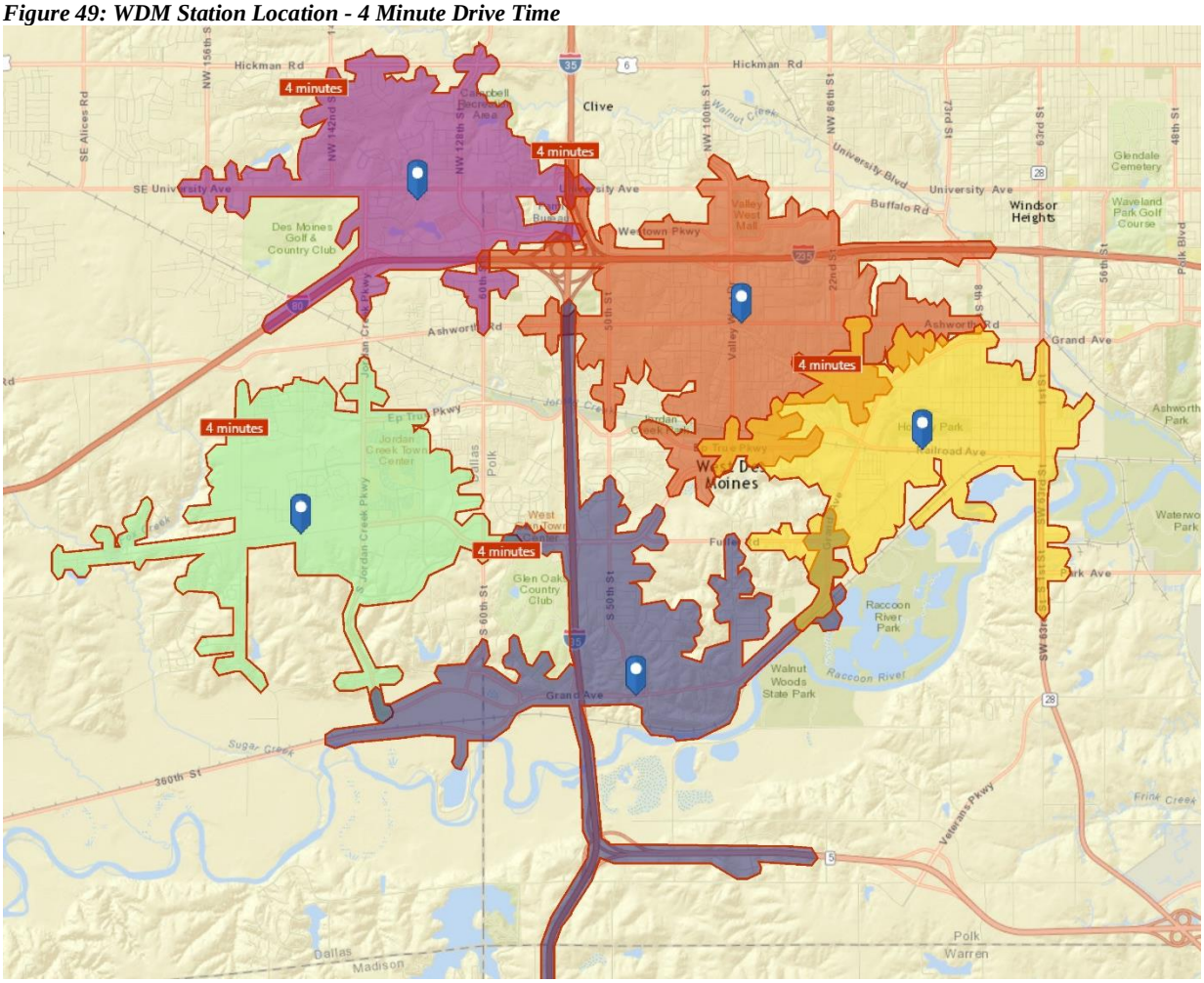
The term facility overlap refers to the area within the response districts that can be reached by more than one station within the NFPA four-minute drive time. Ideally, a slight amount of overlap is desirable, as it indicates that the stations are placed far enough apart to cover the maximum amount of area. Excessive overlap is not desirable because the duplication of resources is not needed.

The figure below illustrates the same current five facilities locations; however, the GIS map illustrates a four-minute drive time (NFPA 1710 standard) for each station.

Color Code – Response Within a Four Minute Drive Time

- Station 17 = Yellow
- Station 18 = Dark Blue
- Station 19 = Green
- Station 21 = Burnt Orange
- Station 22 = Blue

Figure 49: WDM Station Location - 4 Minute Drive Time



The figure is a global view of the five facilities four-minute drive time; however, what can be seen is a resulting different color where two stations would overlap (both reach within four-minutes) For example, Station 21 (Burnt Orange) and Station 17 (Yellow) have the most overlap

resulting in a *gold color* between the two stations. A smaller overlap can be seen where Station 17 and Station 18 meet within a four-minute drive time.

Could West Des Moines Eliminate a Station?

When public safety facilities are first constructed, they are almost always in the exact perfect spot; however, as community growth occurs, service demands change and one might question – e.g. "why wasn't the station moved further south etc."?

With that said, the consultants do not believe the overlap between the current location of the facilities is problematic or suggesting that one of the existing five facilities could be eliminated. The only possibility to eliminate a single station would be to move multiple others and even than emergency response would be negatively affected. Conversely, it would appear that significant planning had occurred that addressed future community growth with the current facility placement.

Other EMS Facilities – UnityPoint.

West Des Moines Emergency Medical Services houses an ambulance at Methodist West Hospital in West Des Moines, part of the UnityPoint Health system. WDMEMS by contract, are provided office space located near the Emergency Room, along with two sleeping quarters. The ambulance is housed in an enclosed climate controlled garage.

In addition, West Des Moines Emergency Medical Services houses EMS vehicles at Methodist Hospital in Des Moines, part of the UnityPoint Health system. One full-time and one-day ambulance is assigned to this location. The on-duty medics also have two sleeping rooms with attached washrooms, and a full office on a separate floor for the crew to do their required paperwork and reports.

Recommendation – Other Stations

- *A new station, currently in the planning process, is supported. The proposed location is appropriate.* ***Priority 5***

- *Based upon current call volume, no stations can be eliminated at this time.* ***Priority 5***

Apparatus/Vehicles

This section will address the rolling stock (vehicles and apparatus) of both the West Des Moines Fire and EMS departments. It is important for the reader to understand that the data in this section represents a "snapshot in time" and changes in vehicles/apparatus may have occurred during the writing of this report.

Fire Department

The West Des Moines Fire Department provides fire and rescue protection for the City of West Des Moines and part of Clive covering an area greater than 39.48 square miles. One engine assigned to Station 22 (no EMS unit assigned) is staffed with paramedics in order to provide ALS treatment prior patient transport.

Odometers vs. Engine Hour Meters

An hour meter is a gauge or instrument that tracks and records overall elapsed time that the engine is actually running and is normally displayed in hours and tenths of hours. Engine hour meters are used to log running time of equipment to assure proper maintenance of expensive machines or systems. This maintenance typically involves replacing, changing or checking parts, belts, filters, oil, lubrication or running conditions in engines, motors, blowers, and fans, etc. Compared to other studies, some of the WDMFD apparatus had higher engine hours recorded for apparatus of comparable manufacture and age. There are no conclusions that can be drawn from these engine hour readings other than the apparatus is certainly utilized.

Fire trucks, ambulances, and police cars may all have significantly higher running times compared to mileage. Fire trucks can be running for hours at the scene without clocking a single mile. The same is true with ambulances who's on-scene idle time might be less than a fire engine but occurs more frequently. If maintenance is performed on these vehicles based on odometer readings only, engine life may be affected. Maintenance personnel understand the wear issues surrounding a vehicle's engine hour time compared to road miles; and therefore replacement needs should not be based on apparatus/vehicle appearance and mileage, but take into account, all factors including engine hours.

The following table illustrates where the department apparatus was assigned at the time of the site visit.

Table 45: Fire Department Apparatus Assignment

Apparatus ID	City Number	Manufacturer	Apparatus Type	Year	Mileage	Engine Hours	Pump in GPM	Tank in Gal	Status
			Station 17						
Eng. 221A	679	Emergency 1	Pumper	1995	54,347	3,927	1,500	500	Reserve
Eng. 172	683	Emergency 1	Pumper	1992	71,367	4,816.00	1,500	500	Reserve
Eng. 170	667	American La France	Pumper	2007	25,403	1,930	1,500	500	1st Line
Tanker 176	692	Pierce	Tanker	2004	3,826	476	n/a	2,000	1st Line
Tower 175	685	Emergency 1	Tower Ladder/ Quint	1991	44,368	2,542	1,500	500	1st Line
Attack 177	669	Ford F350	Brush Truck	2001	10,114	n/a	250	300	1st Line
Air Refill Trailer	610	Mako	SCBA Mobile	2004	n/a	n/a	n/a	n/a	1st Line
Antique	676	Seagrave	Antique Pumper	1953					Public Ed
			Station 18						
Eng. 180	666	American La France	Pumper	2008	79,382	5,568	1,500	500	1st Line
U187	686	Ford F550	Utility Pods	2008	10,435	648	n/a	n/a	1st Line
Mechanical POD									1st Line
Special Teams Pod									1st Line
Boat Trailer Modified	695	Home Made	Tow Behind	2013					1st Line
12' Zodiac Boat	674	12 foot boat W/ 30 Hrs	Boat	2008					1st Line
Wave Runner	693	Wave Runner	Water Craft	2011		29			1st Line
Command 186	689	International Freightliner	Water Rescue	2006	7,825	912			1st Line
Antique Engine	691	International	Pumper	1937					Pub. Ed
			Station 19						
A197	668	Ford F550	Air/Foam unit	2006	34,142	2,130			1st Line
Eng. 190	671	Pierce	Pumper	2008	128,847	9,148	1,500	500	1st Line
			Station 21						
Chiefs Car	613	Ford, Explorer	Command	2016	1,108				Assigned
Fire Marshals Car	605B	Chevy	Utility	2014	22,333				Assigned
Inspector Car	607	Ford Explorer	Utility	2010	41,631				Assigned
Inspector/pub Ed	601B	Ford Explorer	Utility	2013	25,721				Assigned
PT Inspector	600B	Chevy Tahoe	Utility	2007	83,878				Pool
Duty Deputies Car	606	Chevy Suburban	Command	2013	50,023				1st Line
PT Inspector	611	Ford Explorer	Utility	2006	50,207				Pool
Eng. 210	677	Emergency 1	Pumper	1991	50,524	4,225	1,500	500	Reserve
Trk. 215	665	Pierce 105' Rear mount	Aerial/Quint	2010	50,193	4,614	2,000	500	1st Line
County Trailer									
			Station 22 - Shared						
Eng. 220	664	Pierce	Pumper	2016	4,131	406	1,500	750	1st Line
Eng. 221B	670	Pierce	Pumper	2001	19,734	1,470	1,500	500	Reserve
Tower 225	678	Sutphen 100 Foot	Tower/Quint	1995	40,494	Replaced	1,500	500	1st Line

Note: Engine 220 is brand new and replaced 221B which is now the new Reserve Engine for the paramedic Engine 220; however, they have not at this time renumbered 221A that used to be the back-up for Engine 220.

The headings of: Apparatus ID represents the number assigned to the apparatus by the fire department, City Number represents the maintenance shop number assigned by the city, Manufacturer is who built the apparatus, either commercial or custom. Apparatus Type defines the fire department usage of the apparatus/vehicle. Year represents the year the unit was

manufactured. Mileage represents the reading on the odometer at the time of the site visit. Engine Hours are the actual number of hours the drive engine has been in use. Pump in GPM represents the capacity of the pump discharge in gallons per minute. Tank in Gal represents the size of the water tank on the apparatus, and Status is the current usage of the apparatus/vehicle.

Apparatus Maintenance

Until recently, the maintenance was done by a certified Emergency Vehicle Technician (EVT) who is also a career firefighter at Station 18; however, that was changed to allow the firefighter to concentrate on his firefighter responsibilities. Currently, the maintenance work is done by the city Mechanical shops. There are no certified EVT's there, but the fire department leadership interviewed thought that the mechanics were more than capable of doing the work effectively. Often the question is not ability when it comes to repairs performed by a certified EVT; rather, it becomes an issue in a case of an accident or litigation. Currently, any specialized work is sent to an appropriate vendor.

Repair Procedure

When a deficiency is found with the apparatus, it is recorded on the daily work sheet and the station officer is notified. The officer notifies the Chief and Deputy Chief of maintenance via Sharepoint®. If the repair work is critical, the unit is moved to Station 17 and placed in an "out of service status" and a reserve unit is picked up. The maintenance department is notified and they would pick up the unit needing repairs.

The maintenance shop indicated that routine parts normally needed are readily available in the area and there is no need to order them and keep them in stock. The documentation is maintained by the city maintenance department with full copies sent to the Deputy Chief of Maintenance and he logs them into Firehouse ensuring that a complete copy is available in the public safety station system. All parties involved are aware that apparatus and equipment need lifelong records of all preventative maintenance, problems, required testing, along with needed repairs, and necessary diagnostics. They understand that not only does the documentation need to show what specifically was done mechanically, but that it must accurately reflect the parts, cost, and

relationship to the overall vehicle or tool. This documentation may very well be needed in the case of an injury, death, or accident involving one of the apparatus or a piece of equipment.

All fueling of department vehicles and apparatus is carried out at the maintenance facility. There are provisions available through the maintenance department to deliver fuel to an emergency scene if the need arises. Mechanics are also available to respond to a particular station or an emergency scene if necessary. Small or minor repairs to hand tools and equipment are done in-house at the stations. Local small-engine repair shops are utilized for power equipment repairs as needed. Pump and aerial testing, along with ground ladder recertification, is conducted on an annual basis. National Fleet Testing Services Inc., 912 Coyote Drive, Junction City, Kansas, 66441 (913-634-7329) conducts the aerial and ladder testing, while Emergency Apparatus Maintenance Inc., 7512 4th Ave. Lino Lakes, Minnesota, 55014, (800-326-3911) carries out the pump testing. All associated documentation sheets along with the certification records are placed on file in the fire chief's office upon completion.

Apparatus condition

The consulting team found that each piece of fire apparatus appeared to be in good condition and outfitted with tools and equipment as outlined per *NFPA 1900 standards*, as well as the Insurance Service Office (ISO) 2013 *Fire Suppression-Rating Schedule*. The equipment stocked on the various apparatus also appeared to be in good functional order. There is specific vehicle extrication equipment on the apparatus that responds out of Stations 18 and 22, and technical rescue equipment from the pod located at Station 18.

Sufficiency of Apparatus

Sufficiency of apparatus can be considered in two divergent ways: the *amount* of apparatus and its *capability*. The consultants have observed fire departments that have an abundance of apparatus, often resulting in apparatus that is rarely, if ever, deployed; or, more apparatus than the department is able to staff. In other instances, departments are under-equipped and/or the apparatus is lacking the tools required to perform tasks on the emergency scene.

It appears that the apparatus in WDMFD's inventory is appropriate as it currently sits. There are points which should be reviewed by department administration. The consultants question whether there is a need to utilize and maintain the pod system at Station 18? In addition, is there a need for the foam truck at Station 19? It was recognized that a plan was in place to maintain and utilize spare apparatus appropriately, but caution must be observed as to amounts and quality of such apparatus. The cost benefit of maintaining excessive apparatus must be considered.

Recommendation – Sufficiency of Apparatus

- *Investigate transferring equipment and remove the truck and PODs from the inventory.* ***Priority 3***

- *Assess the need to maintain A197 (Air Foam Unit) and consider transferring equipment and remove the unit from the department's inventory.* ***Priority 3***

Apparatus Replacement

Fire apparatus, like all types of mechanical devices, have a finite life. How long that life may be depends on many factors, such as mileage, engine hours, quality of the preventative maintenance programs, technology advancements, quality of the driver training program, rule enforcement, quality of the original builder and components, availability of parts, and custom or commercial chassis, and the ability of the district to generate funding, general appearance, etc.

Over the years, the NFPA has attempted to define life expectancy of apparatus with little success. However, under the 2016 edition of NFPA 1901, Annex D, titled Guidelines for First-Line and Reserve Fire Apparatus.

> It is recommended that apparatus more than 15 years old that have been properly maintained and that are still in serviceable condition, be placed in reserve status; be upgraded in accordance with NFPA 1912; and incorporate as many features as possible of the current fire apparatus standard *(see section D3).*

Another significant factor in equipment replacement worth re-emphasizing, as outlined in the NFPA standard, is the rapidly changing area of technology, much of which is directly related to firefighter safety. Based on this factor, apparatus technology becomes an issue when considering

replacement. Apparatus that were not manufactured to the applicable NFPA fire apparatus standard or that are over 25 years old should be replaced.

Apparatus / Vehicle Replacement Schedule

The West Des Moines city government follows a working funded replacement program for the orderly replacement of apparatus and equipment to avoid impractical fiscal problems. The table below illustrates the WDMFD current replacement schedule as well as the consultants recommended replacement schedule.

Table 46: Existing and Recommended Replacement Schedule

Type of Apparatus	Current Service Life	Recommended
Engine/Pumper	15 yrs.	15 yrs. Reserve 3 yrs.
Ladder/Aerial/Tower	15 yrs.	20 yrs. Reserve 2 yrs.
Tenders	15 yrs.	20 yrs. Reserve 2 yrs.
Auxiliary Vehicles	As Needed	As Needed
Cars/ Pick-ups/ SUVs	7 Yrs. No Reserve	7 Yrs. No Reserve

The table below reflects the consultants recommended replacement schedule as it applies to each existing piece of apparatus:

Table 47: Consultants Replacement Schedule

Apparatus	City/Shop Number	Apparatus Type	Year	Replace
PT Inspector Car	600	Transport	2007	Overdue
Inspector/Pub Ed. Car	601	Transport	2013	2020
Fire Marshals Car	605	Supervision	2014	2021
Duty Deputy Car	606	Command	2013	2020
Inspectors Car	607	Transport	2010	2017
Air Refill Trailer	610	Air Refill	2004	As Needed
PT Inspector Car	611	Transport	2006	Overdue
Chiefs Car	613	Command	2016	2023
Engine 220	664	Pumper	2016	2031 to reserve
Truck 215	665	Quint Rear Mount 105'	2010	2030 to reserve
Engine 180	666	Pumper	2008	2023 to reserve
Engine 170	667	Pumper	2007	2022 to reserve
Foam 197	668	Foam Unit	2006	As Needed
Attack 177	669	Brush Truck	2001	As Needed

Apparatus	City/Shop Number	Apparatus Type	Year	Replace
Engine 221B	670	Pumper	2001	Reserve/Replace 2019
Engine 190	671	Pumper	2008	2023 to reserve
12-foot Zodiac Boat	674	Boat Trailer	2008	As Needed
Antique	676	Public Ed.	1953	
Engine 210	677	Pumper	1991	Remove from service
Tower 225	678	100' Tower Ladder	1995	Remove from Inventory
Engine 221A	679	Pumper	1995	Remove from Service
Engine 172	683	Pumper	1992	Remove from service
Tower 175	685	Aerial Tower	1991	Overdue
U187	686	Pod Truck	2008	As Needed
Command 186	689	Command Van/ Water Rescue	2006	As Needed
Antique Engine	691	Museum	1937	
Tender 176	692	Tender	2004	2024 To Reserve
Wave Runner	693	Personal Watercraft	2011	As Needed
Boat Trailer	695	Boat Trailer	2013	As Needed
Mechanical Pod				As Needed
Special Teams Pod				As Needed

Future Apparatus – Quint Apparatus

A quint, or quintuple combination pumper, is a fire service apparatus that serves the dual purpose of an engine and a ladder truck. The name quint is derived from the Latin prefix quinque, meaning five, and refers to the five functions that a quint provides: pump, water tank, fire hose, aerial device, and ground ladders.

There is little agreement in the fire service profession as to the value of Quints and the decision to purchase and utilize Quints is usually based on the Chief's personal preference. Supporters of the quint concept point out the versatility of the apparatus, which allows it to take the place of a traditional ladder/aerial apparatus. Opponents point out it is an expensive piece of apparatus to run and its features are not needed. In addition, ladder/aerial apparatus usually needs to arrive at the emergency scene quickly in order for it to be placed in the most advantageous location to maximize its use. It is important to remember that a quint can serve as an engine or aerial device, but rarely can it adequately perform both functions simultaneously.

EMS Apparatus

The WDMEMS and the Alliance ambulances meet the U.S. General Services Administration (GSA) federal KKK A-1822F standards for ambulance design and safety; as of the writing of this section the standards are being revised to address additional safety features. However, the final document has yet to be published. In part, the delay lies in the fact that both CAAS and NFPA have proposed new ambulance guidelines, and both standards differ.

Inasmuch as WDMEMS is CAAS certified, they meet the most recent 2015 standard for ambulances which reads:

> "…best serve patients by providing ground ambulances that are safe, nationally recognized, properly constructed, easily maintained, and when professionally staffed and provisioned, will function reliably in prehospital or other mobile emergency medical service".

In addition, the State of Iowa Department of Public Health requires system certification and renewal to ensure the service provider is meeting the standards set forth by state statue. The WDMEMS and Alliance programs meet all state requirements.

The following table provides a detailed report as to where each of the Emergency Medical Services (EMS) ambulances and vehicles are assigned, as well as specific information on each particular unit.

Table 48: WDMEMS Vehicles

City #	Apparatus ID	Manufacturer	Apparatus Type	Year	Mileage	Assignment	Owned	Status
587	Car 199	Chevy, Tahoe	Duty Supervisor	2013	47,059	Station 19	City	1st Line
591	A 213	Ford F 450	Ambulance	2014	29,956	Station 21	City	1st Line
592	A 194	Ford F 450	Ambulance	2009	Unknown	Station 19	City	Reserve
593	A 173	Ford F 450	Ambulance	2012	73,558	Station 17	City	1st Line
594	A 174	Ford F 450	Ambulance	2010	7,414	Station 17	City	Reserve
595	C-200	Chevy, Tahoe	Command	2012	33,382	Chief	City	1st Line
597	A 193	Ford F 450	Ambulance	2011	95,353	Station 19	City	1st Line
604	C-201	Chevy, Tahoe	Command	2013	33,382	Chief	City	1st Line

City #	Apparatus ID	Manufacturer	Apparatus Type	Year	Mileage	Assignment	Owned	Status
625	A 234	Mercedes/Sprinter	Ambulance	2016	108,620	Peak Time	Hospital	1st Line
626	A 233	Ford F 450	Ambulance	2014	195,913	Methodist-W	Hospital	1st Line
627	A 124	Freightliner	Ambulance	2014	91,234	Neo-Natal	Hospital	1st Line
628	A 123	Ford F 450	Ambulance	2015	39,234	Methodist-M	Hospital	1st Line
	Gator1			2005				Call
	Trailer			2006				Call
	Golf Cart 1					Water Tower		Call
599		Haulmark	Event trailer	2000		Station 19	City	Call
589		Wells Cargo	Golf Cart	2002		Station 19	City	Call
590		Explorer	Support	2007	Unknown	Station 19	City	Call
598		Ford, Crown-Vic	Support	2007	Unknown	Station 19	City	Call

**Each of the ambulances utilize "Life Line" brand boxes on their units except for unit 625, which is a "Sprinter" type Ambulance Style.*
**Unfortunately, the majority of the special events EMS equipment was temporarily out of its regular quarters, being stored at an alternate storage site, which did not allow the consultants to evaluate.*
**The only number which can be relied upon to identify a particular EMS unit is the city/ Shop number. The radio ID number for a given unit at a certain location is picked up by its replacement-the reserve apparatus when the primary unit goes down.*

Reserve Ambulances – Conflict Data

What would appear to be a simple task of determining how many ambulances were actually in-service and reserve remains most complex. The complexity appears to focus on reserve ambulances (this issue is further discussed in the Fiscal Section of this report). The city purchases the ambulances used for 9-1-1 calls within the city. However, when that ambulance is placed in reserve, the city is paying 57% to the 42% by UnityPoint in a reserve ambulance fund. There should be no costs for a reserve ambulance (other than maintenance) only the expense for a new ambulance.

For example: you own two cars and you wish to replace the oldest one with something new. However, the trade-in value or sale value is very minimal so you decide to keep the vehicle in the garage in case you need it when one of the other cars is out of service. You don't fund that vehicle as it is already paid for. Reserve ambulances are like your older car – they are already paid for. Unless the reserve ambulance fund is really a fund for purchasing new ambulances than the cost sharing procedure needs to be more transparent.

Apparatus Maintenance

All the apparatus and equipment for the WDMEMS are maintained and serviced by the city maintenance facility. As mentioned above, there are no EVTs on the maintenance staff, but the EMS Administration also feels confident in their abilities to maintain their fleet. Any work needed, which exceeds the capabilities of the mechanics, would be turned over to the appropriate outside vendor.

The documentation is maintained by the city maintenance staff with complete copies being sent to the Assistant Chief of Operations who in turn enters them into their computer program. It is recognized by the department as to the importance of detailed, lifelong records of EMS apparatus being maintained. Preventative maintenance, thorough diagnostics, as well as quality repairs were found to be a commitment made by the maintenance staff toward the EMS apparatus as well. EMS leadership indicated that not only does the documentation show what repair was performed specifically, but accurately reflect what parts, costs, as well as its relationship to the overall vehicle or tool.

This documentation may very well need to be produced in the event of an injury, death, or accident involving a particular piece of equipment or apparatus. All fueling of department vehicles and apparatus is done at the maintenance facility. There are provisions available through maintenance to deliver fuel to an emergency scene if needed. Mechanics are also available to respond out to a station or an emergency scene if needed.

Apparatus Condition

The EMS apparatus and equipment condition appear to be in excellent condition. Each of the units appeared to be clean, well kept, and in excellent running condition. None of the ambulances had engine hour meters, which would more accurately indicate engine running time and wear.

Recommendation – Engine Hour Meters

- *All future ambulances purchased should be equipped with an engine hour meter to more accurately record engine running time.* ***Priority 3***

Sufficiency of Apparatus

Sufficiency of apparatus can be considered in two divergent ways: the *amount* of apparatus and its *capability*. With regards to the WDMEMS Department, the apparatus and equipment found in its inventory, along with their respective uses, are very much in line with what one would expect. The Mercedes/Sprinter (625) is proving to be an excellent choice for its role on the department. The Neo Natal Intensive- Care unit (627) is a specially designed unit which can transport two independent patient pods at the same time along with family members making it invaluable when needed.

Vehicle Replacement

As previously noted, emergency vehicles have a finite life and the condition in which WDMEMS maintains its vehicles, that life is extended. As ambulances are being considered for replacement, the chassis is routinely found to be in worse condition than the modular "boxes" which are mounted onto them. Currently, WDMEMS has a program allowing for a chassis replacement utilizing the existing "Modular Boxes" resulting in a cost savings to the city. This type of program is seen industry wide, and has been shown to be very cost effective.

Another program currently incorporated by WDMEMS is the changing from the traditional layout of the box normally outfitted with a bench seat for use by the care givers, to being replaced with "Captain's chairs". Included in the design is an ergonomically designed storage system built around the chair, which allows the caregiver to remain seated and utilize their seat belt while providing patient care. This results in greater safety for the employee in the event of an accident.

Apparatus / Vehicle Replacement Schedule

The West Des Moines city government has a working funded replacement program to foster an orderly replacement of EMS apparatus and equipment to lessen the fiscal burden of large-ticket items.

Table 49: WDMEMS Replacement Schedule & Consultants Recommendation

Type of Apparatus	Current Service Life	Recommended
Ambulances	5 yrs. Reserve 2 yrs.	5 yrs. Reserve 2 yrs.
Cars/ Pick-ups/ SUVs	7 Yrs. No Reserve	7 Yrs. No Reserve
Auxiliary Vehicles	As Needed	As Needed

As noted in the above table, the consultants agree with the current replacement program and recommend no changes in the current replacement plan.

The table below illustrates each of the WDMEMS vehicles and the consultant's recommended date for replacement.

Table 50: WDMEMS Vehicle Replacement Schedule

Apparatus	City Number	Apparatus Type	Year	Rechassis	Replace
Car 199	587	Duty Supervisor	2013		2020
Golf Cart Trailer	589	To Move Golf Cart	2002		As Needed
Explorer	590	Support Vehicle	2007		Overdue
Ambulance 213	591	Ambulance (Primary)	2014	Every other Replacement	2019
Ambulance 194	592	Ambulance (Reserve)	2009	Every other Replacement	2016
Ambulance 173	593	Ambulance (Primary)	2012	Every other Replacement	2017 To Reserve
Ambulance 174	594	Ambulance (Reserve)	2010	Every other Replacement	Overdue
C-200	595	Supervisor Car	2012		2019
Ambulance 193	597	Ambulance (Primary)	2011	Every other Replacement	2016 To Reserve
Crown Victoria	598	Support Vehicle	2007		2014
Event Trailer	599	Special Event Trailer	2000		As Needed
C-201	604	Supervisor Car	2013		2020
Ambulance 234	625	Peak Time Ambulance	2016	Every other Replacement	2021 To Reserve
Ambulance 233	626	Ambulance (Primary)	2014	Every other Replacement	2019 to Reserve
Ambulance 124	627	Ambulance Neo Natal	2014	Every other Replacement	2019 to Reserve
Ambulance 123	628	Ambulance (Primary)	2015	Every other Replacement	2020 to reserve
Gator 1		Off Road	2005		As Needed
Gator Trailer		Flatbed Trailer	2006		As Needed
Golf Cart 1		Events Golf Cart			As Needed

Thus, no recommendations for change in replacement schedules.

Training

Each public safety division training section will be under its own respective department heading. However, effective and quality training within a fire and EMS department is at the core of assuring preparedness and readiness to meet the requirements necessary for emergency services in a safe and efficient manner. Without such training, a department may undoubtedly fall short when called upon to deal with operational emergencies

Supporting and maintaining such a training program within the department is an important aspect of risk management, as well as potentially lessening exposure to injury for its firefighters. Providing adequate, interesting, and informative training sessions to fire department personnel can be very challenging and difficult for fire training officers to deal with. The amount of time needed to adequately train department members to ensure competency and coordination, while maintaining proficiency with skills, is one of the biggest challenges faced by department officials. Training is a major factor in provider's safety, as well as attaining desired results on the emergency scene.

Emergency providers perform to the level they are trained, typically under times of extreme danger and stress. The statement ***"How you train is how you will perform on the emergency scene during an emergency"*** describes the absolute need for providing an effective training component within a fire or EMS department.

Fire Department

WDMFD is predominantly a career department, with a volunteer element providing limited coverage at one of its stations on certain nights of the week. The WDMFD does, in fact, provide training and educational programs to its force that work toward assuring a state of readiness and preparedness to carry out its mission. The ultimate authority and overall responsibility for developing effective methods of extinguishing and preventing fires does, in fact, lie with the Fire Chief It is commonly found however, that in progressive fire departments, such responsibilities are often delegated to competent personnel and positive results are the byproduct. Such is the case in West Des Moines where the fire department training division is under the direction of a

Deputy Fire Chief who plans, directs, and assures that departmental fire and rescue training is conducted and carried out following local, state and federal guidelines.

Nationally accepted practices incorporating recognized training materials published by IFSTA (International Fire Service Training Association) and other organizations are utilized by the West Des Moines Fire Training Division as part of their delivery of training. All WDMFD Public Safety stations include a training area/classroom and are complimented with a variety of reference materials. Training and educational resources, printed and non-printed library materials, and media equipment, are available in sufficient quantity as well.

Additional opportunities for fire and rescue training exist through a local junior college facility. The Des Moines Area Community College (DMACC) offers a wide variety of fire and rescue related coursework, including degree and certificate programs. The Fire Department supports and encourages such training and offers a tuition reimbursement program for career and POC members in such endeavors.

As data was reviewed and interviews were conducted, it was found that the planning, formulation, scheduling and delivery of classroom and practical training evolutions meet or exceed conformance with current national, state, and recognized industry standards.

Current Training Qualifications for WDMFD Staff

- All firefighters shall maintain an Iowa Fire Fighter II certification
- All career firefighters shall maintain an Iowa EMT-B qualification
- All driver/operators of emergency apparatus shall maintain Iowa driver/operator licensure including a CDL
- All Fire Department Officers shall be Iowa Certified Fire Officer I and Certified Fire Instructor I
- Successfully completed required training and competencies are contained within the annual training schedule

Competencies vs. Training Hours

In addition to the actual training program itself, assurances must to be in place to confirm such training correlates into performance skills and that competencies have been mastered and retained in order to perform tasks safely and efficiently. A well-constructed training program will employ a system of checks and balances to ensure all members receive required training and document core competencies (practical training evolutions). It was apparent to the consultants that the WDMFD does just that, and such documentation was found in good order.

The Training Division Chief provided data showing the processes in place to assure required training sheets including officer "signed-off competencies" are monitored and placed on file. The topic of measuring competencies of department personnel continues to raise strong feelings from both those that manage the department and those department members who provide the actual service. Yet everyone seems to agree that a most important issue is safety of the emergency responders. Therefore, is it reasonable for a Chief to base the abilities of the emergency responder personnel on their certifications and monthly training records or attendance at drills, versus their actual ability to not only perform the task, but also to do so in a safe manner? Competency is the "quality of being adequately or well qualified physically and intellectually to perform the responsibilities of the position".

The tables below provide cumulative training hours for the WDMFD (2013-2015):

Table 51: Fire Department Training Topics 2013 - 2015

Category	# of Classes	Attendees	# of Hours
West Des Moines Training - 2013			
Safety Training	135	649	1,552
Driver's Training	30	224	380
Driver/Operator	1	1	32
Incident command	18	108	391
Instructor I	1	1	32
Fire Officer	2	2	80
General Officer Dev.	18	140	416
Tech Rescue	158	777	2,645
Recruit Drill school	32	377	1,428
Haz Mat Refresher	12	105	328

Category	# of Classes	Attendees	# of Hours
EMS	115	1,220	2,954
Fire Conferences	10	40	409
West Des Moines Training - 2014			
Safety Training	91	649	1,786
Driver's Training	85	466	1,166
Driver/Operator	0	0	0
Incident command	10	84	317
Instructor I	1	2	64
Fire Officer	2	2	80
General Officer Dev.	12	105	281
Tech Rescue	161	797	2,302
Recruit Drill school	56	416	2,188
Haz Mat Refresher	15	167	494
EMS	177	1,674	3,429
Fire Conferences	9	33	356
West Des Moines Training - 2015			
Safety Training	102	714	1,886
Driver's Training	120	616	1,477
Driver/Operator	1	4	128
Incident command	16	48	168
Instructor I	1	1	32
Fire Officer	1	1	40
General Officer Dev.	15	76	212
Tech Rescue	176	934	3,225
Recruit Drill school	6	34	122
Haz Mat Refresher	9	31	68
EMS	199	1,900	3,644
Fire Conferences	9	33	356

Career Daily Shift Training

The training division publishes a monthly training calendar providing various topics for the rank and file shift personnel to train on. Monday through Saturday mornings (9:00-12:00) are dedicated for each station to conduct the assigned training sessions, generally conducted by the station Lieutenant. All personnel overseeing departmental training, including the career fire Lieutenants, are certified by the State of Iowa to the Instructor I level.

Lesson plans and outlines are provided to assure competent and uniform delivery of the various topics. Performance-based evaluations along with written and skill-based testing are tools incorporated into the development and delivery of such training programs to assure subject matter is being delivered effectively. In addition to the formal weekly station drills, multi-company drills and exercises involving multiple station companies are conducted at various times and occasionally utilize the departments training facility and/or various props to carry out such evolutions.

Each West Des Moines Public Safety station is outfitted with a dedicated training area/classroom, as well as available various training manuals and reference materials such as printed and non-printed library materials and media equipment. Target Solutions® is a major learning tool that is utilized by the West Des Moines Training Division in bringing timely, up to date online training to the public safety stations. This service is used as a supplemental tool in aiding the overall fire training program. Computerized fire training programs have become quite popular in providing distant learning in the fire service. This type of offering affords certain training topics to be obtained and/or made up for missed training sessions. Practical portions of such training can be obtained at a later time in the station to assure competencies are met.

The training division follows-and adheres to, the Iowa State Fire Marshal's requirements (24 hours/year) for annual training hours, as well as the Insurance Services Office (ISO) (240 hours/year) requirements in planning its monthly/annual training schedules.

Weekly Volunteer Training/Volunteer Fire Academy

One night per week is dedicated to the training of the volunteer members of the WDMFD. Each Wednesday night (7:00 – 10:00) is set aside to conduct such training with the exception of the first Wednesday of the month, which is set aside for the Volunteer Association meeting. There are two nights a month designated for firefighting training, with one night for technical or specialized rescue training. This volunteer training follows the same requirements and assurances for competencies of instructors as well as accountability of the students.

The West Des Moines Training Division provides one volunteer training academy per calendar year for the purpose of providing entry level training for new volunteer personnel for the WDMFD. It does open up the class to surrounding departments to send recruits based on openings in the class. This course is under the direction of the Deputy Chief in charge of training.

Instructors utilized for the academy are generally WDMFD officers or firefighters. The academy runs approximately six months and incorporates nights and weekends to accomplish the roughly 240 hours of classroom, hands-on, and practical training. Upon successful completion of the course, the candidates are awarded their state accreditation for Firefighter I, Firefighter II, and Hazardous Materials Operations. The last two academies conducted (2015 & 2016) each had a total of six students with three being members of the WDMFD. Although the records have shown diminished numbers over the past two years, it was felt by the consultants that the academy has been an important tool in providing a worthwhile training program for new members of the department, as well as for surrounding departments as well.

Recommendation – Training Academy

- *Although the attendance in numbers of volunteers is historically low, the consultants support the continuation of the Fire Academy in order to provide new volunteer members the critical training they need.* ***Priority 3***

- *The WDMFD should explore greater marketing of area volunteers in an effort to offset the expense of conducting the training for a limited number of WDMFD volunteers.* ***Priority 3***

Certifications

The WDMFD places a very high degree of importance in assuring their members receive both basic and advanced training and certifications. The certification process provides the members with the training and education needed to perform their duties, and provides the department with the documentation needed to demonstrate their level of professionalism. The personnel associated with the certifications listed below are required to obtain the various amounts of continuing education hours related to each certification. Many of these hours are available "in house" or on duty, but many must be gained through outside training. In regard to EMT

continuing educational hours, it was found that there was very little, if any, option for either on duty firefighters or EMS department personnel to attend the other department's regularly scheduled "in house" continuing education EMS classes. These comments were made in spite of the fact that the EMS department indicated they posted their training schedule annually and fire personnel are invited to attend. The consultants believe better communication and coordination of department training schedules could improve this issue.

The table below illustrates certifications of members of the WDMFD:

Table 52: WDM Member's Certifications

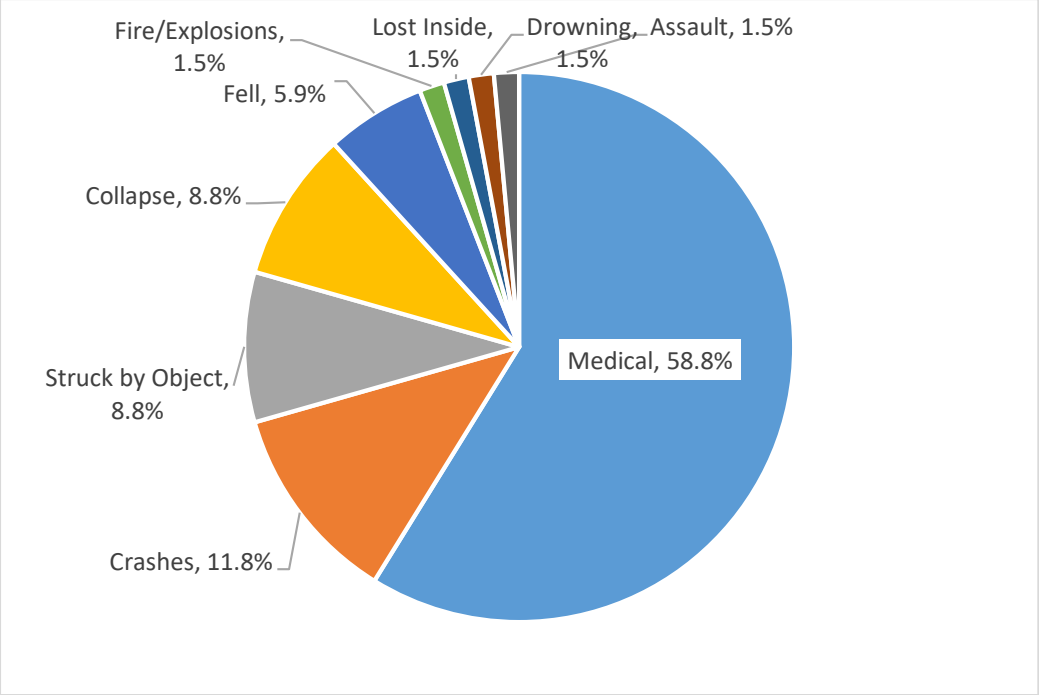
Certification	# of Members
Firefighter I	3
Firefighter II	84
Fire Officer I	32
Fire officer II	12
Haz-Mat Operations	79
Fire Instructor I	24
Fire Instructor II	2
Qualified Operator-Engine	42
Qualified Operator-Aerial	30
Qualified Operator-Tender	36
EMT-Basic	40
EMT-Paramedic	9
CPR Certified	56
Fire Inspector I	11
Fire Inspector II	3
Tech Rescue-Operations	63
Tech Rescue-Technician	24
Extrication Specialist-Technician	37
Water Rescue-Technician	34
Certified Fire Safety Officer	22

Emergency Vehicle Driver Training

The driving of departmental vehicles, both non-emergency-everyday driving, as well as under emergency conditions (lights and sirens), is a routine part of providing services, but it is also one of the most important. The fact that the driving of any emergency vehicle is generally considered a "routine" duty, in reality, the driving of department owned staff cars, SUV's, or

small, medium and large trucks does, in fact, carry a higher degree of liability. this is the second leading cause of death for firefighters and EMS personnel as illustrated in the figure below:

Figure 50: Causes of Firefighter Death



Source: NFPA Firefighter Fatalities in the United States – 2015

The WDMFD takes a very serious approach to assure that all department drivers and operators go through a rigorous training program prior to being permitted to operate any department vehicle.

Driver/operators of fire department apparatus must go through a rigorous qualification program prior to driving department vehicles. All drivers are qualified through the Fire Service Training Bureau (FSTB) prior to undertaking the departmental driver qualification program which adheres to NFPA Standards for apparatus operators. Once a member masters the competencies of driving a certain piece of apparatus, they become "Driver Operator" qualified. They then begin a training period to continue to practice their driving skills, but will undertake the task of learning the engine, aerial, or tender along with all of its particular operation, equipment and familiarization. Once that process is completed, a testing process is undertaken before they are permitted to become qualified to operate the apparatus on the emergency response level. An

annual re-qualification process is in place consisting of ongoing review of basic driving skills, officer evaluation, and passing an annual road test. All apparatus operators must maintain CDL licensure.

Wellness-Fitness Program

The City of West Des Moines currently has a wellness and fitness program which is offered to all members of the fire department. This program is in conjunction with the annual/bi-annual fire department physicals and medical evaluations which are provided to all department members.

The department takes a proactive approach to physical fitness standards for all members of the department. Each public safety station is outfitted with a full complement of workout equipment with time allotted daily for utilization.

Training Calendar

The training division publishes a monthly training calendar containing various subjects assigned to be taught throughout the department for that particular month. The makeup of the calendar is as follows:

- Week 1- Safety related topics
- Week 2- EMS related topics
- Week 3-Fire related topics
- Week 4- Fire related topics
- Week 5- Tech Rescue related topics

The subject matter is designed to meet the requirements as set forth by the Iowa State Fire Marshal, Iowa OSHA, as well as the Insurance Services Office (ISO). The assigned training is predominantly conducted by the station Lieutenants or their designee. It is the responsibility of the firefighters to make up any particular training subjects missed. The Training Chief monitors all departmental training, as well as its respective documentation and records maintenance. Outlines below are the various topics incorporated into the monthly training schedule.

Table 53: WDMFD Training Topics

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Safety Trng. Annual Safety Awar. Complete Quiz Under Safety Trng.	Safety Trng. Bloodborne Pathogens Complete Quiz Under Safety Training	Safety Trng. Haz Com Complete Quiz Under Safety Training	Safety Trng. Driving Safety Complete Quiz Under Safety Training	Safety Trng. Fire Safety/EAP Complete Quiz Under Safety Training Complete Emerg. Prep Readiness Drill	Safety Trng. PPE Complete Quizzes Under Safety Training	Safety Trng. Eletrical Watch Video Complete Quiz Under Safety Training	Safety Trng. Trailer Safety Review PPT. Complete Quiz Under Safety Training	Safety Trng. LO/TO Complete Quiz Under Safety Training	Safety Trng. Confined Space Complete Quiz Under Safety Training	Safety Trng. Elevator Safety	Safety Trng. Make-Up Complete Quiz Under Safety Training
EMS Trng. Respiratory Emergencies	EMSCardiac Emergencies	EMS Trng. Scene Size-up Contaminated Pt.	EMS Trng. Assessment Trauma Pt.	EMS Trng. Assessment Mediacal Pt.	EMS Trng. Vital Signs and SAMPLE History	EMS Trng. Well Being of EMT	EMS Trng. Bleeding& Shock	EMS Trng. Musculoskeletal Injuries	EMS Trng. General Pharmacology	EMS Trng. Lifting & Moving Pt.	EMS Trng. Medical: Legal & Ethical Issues
Fire Trng. SCBA Safety Trng. SCBA NXG2 Watch Vedio Complete Quiz for NXG2 Annual Fit Test	EMS/CPR-AED Certificaton	Fire Trng. Haz Mat	Fire Trng. Defensive Driving Trng. Target Solutions	Fire Trng. S-Drive NFPA 1410 Vol 22-253 #1 Forward Lead-Out.pdf Sta. 22,19	Driver's Trng. Hands-on	Fire Trng. S'Drive NFPA 1410 Engine Drills Hose Lays Practice	Fire Trng. S'Drive NFPA 1410 Engine Drills Hose Lays Evaluations	Driver's Trng. Hands-on	Fire Trng. Search and Rescue	Safety Trng. Make-Up Complete Quiz Under Safety Training	Christmas
Fire Trng. PPE Donning Test Fit Testing Air Consumption Test	Fire/Rescue Trng. Ice Rescue Team (Hands-On Drill) Evaluation Test	Fire Trng. Haz Mat ERG Review	Fire Trng. Vol 22-266 NFPA 1410 Evolution Truck Co Knots	Fire Trang. Vol 22-253 #1 Forward Lead-Out.pdf Sta. 17,18,21	Driver's Trng. Hands-on	Fire Trng. S'Drive NFPA 1410 Engine Drills Hose Lays Practice	Vehicle Extrication Hands-on	Driver's Trng. Hands-on	Fire Trng. FF Survivial	Turkey Drill	Happy New YEAR!!!
			Fire/Rescue Trng. Rope Rescue Team (Hands-On Drill) Evaluation Test Rope Rescue Check Sheet			Fire/Rescue Trng. Water Rescue Team (Hands-On Drill) Evaluation Test		Fire /Rescue Trng. ConfinedSpace Trench Rescue Team (Hands-On Drill) Evaluations			

Standard Lesson Plans

The WDMFD Training Division maintains and provides complete and thorough lesson plans, outlines and materials necessary to conduct its assigned training sessions. It was found by the reviewer that much time and effort has been put into this endeavor to assure industry standards and current acceptable practices are followed. Continuity and uniformity in delivery of the departments training classes were found to be of high importance to the training chief. It was apparent to the consultants that the training division's goal was for all members to be provided the same material in the similar format.

Lesson Plans Should Contain:

Each training session should require the following:

- Class/lesson title
- References
- Lesson plan
    - Goal
        - Objectives
    - Learning objectives
    - Reference to the curriculum utilized by the department
    - Listing of materials needed
    - Location of the training
    - Time required
- Lesson preparation
- Motivation for learning the particular subject
- Lesson outline
- Practice
- Summary
- Method to ensure competency
- Documentation
- Instructor certification
- Participant signatures

Supervisor (Fire Officer) Training

The West Des Moines Fire Training Division provides quarterly officer training for all fire department officers. The training sessions are scheduled on a quarterly basis and are held on three consecutive days, one of which is during the evening to accommodate the Paid-on-Call Officers. This provides 12 hours of supervisory training per year and it is felt by the consultants that this falls short of what should be delivered to its department officers.

The table below illustrates suggested training topics appropriate for line officers (including acting officers) through the rank of Fire Chief:

Table 54: Officer Training Program

Training - Supervision Topics	
Principle of Supervision	Managing Change
Management vs. Leadership	Diversity
Supervisor: Linking Pin Concept	Problem Solving
Ethics	Managing Differences
Dealing with Conflict	Managing Multiple Projects
Legal	Time Management
- Harassment	Delegation

Training - Supervision Topics	
- Discrimination	Performance Management
- Job (race, religion, sex or national origin)	- Documentation
- Age	- Evaluations
- Disability (Americans with Disabilities Act)	Employee Attitudes
- Military	- Coaching
- Fair Labor Standard Act (FLSA)	- Motivation
- Family Medical Leave Act (FMLA)	- Empowerment
- Gender-pay differences	- Influencing
- Pregnancy	- Discipline
- Immigration	Confidentiality
- Sexual Orientation	Strategic Thinking
Workplace Safety	Political Savvy
Communication	Negotiating
Interpersonal Relationships	Creativity
Team Building	Innovation

NIMS Training

The National Incident Management System (NIMS) is a systematic, proactive approach to assist fire departments and other agencies of government, nongovernmental organizations, and the private sector as well as, to work together *seamlessly* in managing incidents involving all threats and hazards—regardless of cause, size, location, or complexity—in order to reduce loss of life, property and harm to the environment.

One major structural component found within the NIMS framework, mandates a single incident command voice to direct a given incident. It has been determined that for the overall safety of victims, rescuers as well as the public as a whole, that a sole manager (Incident Commander) or management team (Unified Command) shall be in charge and have the ultimate authority at the scene of an emergency. Much research has gone into formulating, adopting, and implementing the NIMS concept, and it emphasizes that allowing more than one unified voice directing a specific incident may create an inherently dangerous operation.

The fire department leadership is trained in, and utilizes, the necessary components of NIMS/ICS in the mitigation of its incidents. The data reviewed showed that department officers on all levels have attended various NIMS courses and have trained on the subject matter providing

them the necessary tools to follow the incident management format effectively. The EMS chief indicates all EMS supervisory staff has received the required NIMS training.

The consultants concern is not related to the actual training; rather, is the incorporation of a single unified command being incorporated. Auto accidents, structure fires and situations where both fire and EMS departments must operate together are examples of such incidents. The consultants were repeatedly told that it is not uncommon for have separate and distinct command structures were fire and EMS services are needed. Such a setup of command does not follow nationally accepted practices of NIMS (non-compliant), and could present serious operational and safety concerns. It is felt by the consultants that this area of incident command should be addressed.

Recommendation – Officer Training

- *All department officers, including acting officers, should be required to obtain a minimum of two hours of training in Supervision Topics per month, in addition to all other training requirements. The classes should address the specific needs of the City of West Des Moines.* ***Priority 2***

- *The fire department and EMS Department must coordinate their incident command structure for the safety of each organization. Training with, and implementing of the NIMS components, should be a priority.* ***Priority 1***

Inter-Departmental Operations

The working relationships with any given town or city between its various internal departments is key in providing an effective product to its citizenry. West Des Moines is no different and it appears to enjoy a very good atmosphere of good working relationships between the various departments as found by the consultants.

Both the EMS and Fire Departments have been studied and evaluated closely. As this section has examined all aspects of fire department training, it was found that there is a very efficient, thorough, and comprehensive plan to deliver its training. Issues were uncovered relating to inter-department training between the fire and EMS Departments that should be addressed. Previously noted were the issues regarding incident command procedures that needed to be addressed.

Additionally, the opportunities to improve working relationships should be identified in working more cohesively on calls involving both departments. Establishing joint training sessions should be considered to foster closer working relationships operating more as one "team" on calls involving both departments. Auto accident incidents and structure fires were situations identified where there was room for improvement. Improving communication between fire and EMS department mid and upper level officers, as well as each departments training chiefs, would be a great place to start on implementing such a plan.

Recommendation – Inter-Department Training

- *Although not witnessed by the consultants, a large number of interviewees indicated there were serious "disconnects" between fire and EMS departments on some joint emergency scenes. Therefore, joint training between fire and EMS should occur on a monthly basis.* ***Priority 2***

- *All EMS providers should be certified in NIMS courses equivalent to the fire department.* ***Priority 2***

Training Facility

The WDMFD Fire Department's Station 17 is designated as its training station. The training facility does have a Fire Training Tower where actual firefighting scenarios can be implemented to permit a more realistic atmosphere. Areas, such as SCBA, fire attack, search and rescue and ladder work, are just a few of the many uses of the tower. Various training props were found to be available at the training site as well. The specialized technical rescue team members utilize the various props and tower for their training purposes as well.

Having and maintaining such a fire training facility, along with providing its varied props, is crucial in providing "realistic" scenarios. This type of training is important in maintaining firefighting skills through exposure to products of combustion (heat and smoke), as well as other fire ground activities within a controlled environment. Additionally, this satisfies requirements for practical skills evolutions.

It is important to maintain balance between the delivery of class room and hands-on type training. Typically, members of the fire service need training that provides knowledge, but they

thrive in hands-on training as this is the basis for the work they perform. Attaining that correct balance in providing class room vs. hands on training will aid in maintaining the highest degree of interest and preparedness.

ISO and Accreditation

The Insurance Service Office classification of municipalities might influence insurance rates, both residential and commercial. The Insurance Services Office (ISO) has made revisions to its Fire Suppression Rating Schedule, including changes to required training for fire departments. These modifications impact the number of hours needed for ISO-related training topics.

The breakdown of ISO's new requirements are highlighted below:

- **Company Training:** ISO is now calling for 16 hours per month for a total 192 hours per year. This is a reduction from 20 hours per month and 240 hours per year that were previously required.
- **Hazardous Materials Training:** ISO is now requiring six hours per year, which is up three hours from previous years.
- **Driver Training:** There have been no changes to the number of hours required for this category. Departments are still expected to have personnel complete 12 hours per year.
- **New Driver Training:** ISO has added 20 hours of training to this category. Personnel are now in need of 60 hours per year, up from 40.
- **Officer Training:** The Officer Certification Requirement remains steady at 12 hours per year.
- **Recruit Training:** Personnel, who automatically get credit if their department requires state certification as an employment pre-requisite, are required to complete 240 hours. This number is unaffected by ISO's recent changes.
- **Facility Training:** This category, referring to training done at a training facility, is no longer called "Training Drills." Personnel are now required to complete 18 hours per year, which was reduced from 24 hours.
- **Pre-Planning Review:** ISO is now requiring one review per year. In previous years, this was a bi-annual requirement.
- **ISO's revisions:** are now more aligned with NFPA standards.

The awarded classifications of fire protection ratings given by the Insurance Services Office (ISO), as well as awarding an official accreditation by the Commission on Fire Accreditation International (CFAI) for a particular fire department, are done so through a thorough, detailed and complete evaluation process. Numerous factors and subject areas are studied very closely prior to the distribution of any awards.

With the recent re-classification of the WDMFD by the ISO to a "Class 2" status, coupled with CFAI's Re-Classification of WDMFD as an Accredited fire department, speaks very highly of the commitment to training within the department. The State of Iowa State Fire Marshal's Office only requires 20-hours of training per- year; whereas, ISO requires 192-hours of "Company Training" per member per year. The training division data was found to meet or exceed these annual requirements and is being conducted in compliance with state and nationally accepted practices.

EMS Department Training

The WDMEMS department training division is overseen by a Deputy Chief. EMS training is a core responsibility in any organization, but the reality is performing EMS in the field is a high frequency, low risk event in West Des Moines.

The WDMEMS is a busy organization. Employees are actively engaged in providing emergency medical treatment in the field, which makes it easier for department administration to identify metrics of concerns/weakness and create plans to remedy them. For example, if an employee is having difficulty starting intravenous (IV) lines, WDMEMS, through the Alliance, can send employees into the hospital to practice IVs. Similarly, if an employee has not completed an endotracheal intubation in quite some time, the Alliance allows for employees to gain access to the operating room at the hospital to practice intubations along with an experienced anesthesiologist.

Similar to the fire department training, providing interesting and realistic training to EMS department personnel can be a significant challenge for training staff to contend with. However, the reality is, and most EMS training officers will agree, the value of EMS training is measured by outcomes in the field.

Difficulty in Assessing EMS Training

The consultants had significant difficulty in assessing the EMS Department's training records. Because of a non-user friendly records management system, Department staff had difficulty generating the necessary data the consultants sought. Department staff provided the entire 2015 training folder, which included monthly curriculum, training rosters and CEH forms submitted.

Upon request of individual training records, it was learned that the RMS was unable to provide an output in a manner that would generate reports by employee by years. Thus, EMS Department staff manually tabulated data for employees in 2015. The information contained in this section is based on the assumption that EMS Department staff provided an accurate as possible depiction of the training and hours reflective of each employee. Some variation may exist, though the consultants are satisfied that any discrepancy is small and unintended by EMS department staff.

Through an evaluation of the EMS department's training records and materials, it was found that the department is compliant with State of Iowa and national consensus standards with respect to the type and frequency of continuing education. The training Deputy Chief demonstrated a large repository of reference material and primary sources that are made available to employees when needed.

Similar to the fire department, additional opportunities for emergency medical services training exist through a local junior college facility. The Des Moines Area Community College (DMACC) offers a wide variety of coursework, including degree programs. The WDMEMS department supports and encourages such training and offers a tuition reimbursement program for employees who pursue higher education. The department regularly utilizes The University of

Iowa Hospitals and Clinics EMS Learning Resources Center (EMSLRC) to obtain EMS Continuing Education Hours (CEH) approval. The EMSLRC requests copies of course agendas, outlines, handouts and instructor qualifications *prior to* the course being taught before CEHs are approved. Additionally, the EMSLRC requires some form of evaluation (quiz, exam, observation) for each certified course.

EMS Employees Formal Continuing Education Hours

The EMS department's only data pertaining to training hours per employee was limited to formal continuing education hours for each employee in 2015. Four individuals' hours have been removed from the table: Chief, two Assistant Chiefs, and the Deputy Chief. Therefore, hours were given for 69 employees as illustrated in the table below:

Table 55: EMS Employee CEH – 2015

Job Title	Formal CEH Hours 2015
EMT	na
EMT	na
EMT	na
EMT	na
EMT	na
EMT	na
EMT	na
EMT	na
EMT	na
EMT	na
EMT	na
EMT	na
EMT	24
EMT	20
EMT	16
EMT	16
EMT	16
EMT	13
EMT	10
EMT	10
Entry Level Paramedic	35
Entry Level Paramedic	26

Job Title	Formal CEH Hours 2015
Entry Level Paramedic	22
Intermediate	20
Intermediate	2
Lead Paramedic	37
Lead Paramedic	33
Lead Paramedic	33
Lead Paramedic	30
Lead Paramedic	30
Lead Paramedic	29
Lead Paramedic	29
Lead Paramedic	27
Lead Paramedic	26
Lead Paramedic	25
Lead Paramedic	25
Lead Paramedic	25
Lead Paramedic	24
Lead Paramedic	23
Lead Paramedic	21
Lead Paramedic	20
Lead Paramedic	19
Lead Paramedic	16
Lieutenant	29
Lieutenant	25
Lieutenant	19
Paramedic	na
Paramedic	30
Paramedic	26
Paramedic	22
Paramedic	19
Paramedic	16
Paramedic	16
Paramedic	13
Paramedic	13
Paramedic	12
Paramedic	10
Paramedic	10
Paramedic	10
Paramedic	7

Job Title	Formal CEH Hours 2015
Paramedic - Acting Lead	30
Paramedic - Acting Lead	27
Paramedic - Acting Lead	24
Paramedic - Acting Lead	10
Paramedic - Acting Lead	10
Paramedic Firefighter	14
Paramedic Firefighter	11
Paramedic Firefighter	7

The large number of individuals marked "na" appear to be new hires from comparing hiring dates to recorded CEH. The data also included records for the first half of 2016 which were consistent findings inasmuch as the high amount of turnover of employees in WDMEMS.

The Deputy Chief indicated, there were 51 hours of Continuing Education available to employees in 2015, excluding the mandatory CPR, ACLS and PALS training. He also indicated that the 51 hours recorded did not include outside conference training or additional professional education obtained by employees.

The EMS Department requires all staff to attend a minimum of 75% available trainings per year, as well as maintaining their respective level of certification (EMT or Paramedic) and any additional certifications necessary such as CPR, Emergency Vehicle Operations, Advanced Cardiac Life Support, Pediatric Advanced Life Support, et cetera.

In reviewing individual training data for 2015, employees averaged 20.2 hours of training. It would appear from the table above that none of the employees listed meet the 75% or 38.25 hours in 2015. However, one long-time employee only had two documented hours of training which is of considerable concern, since staff are required to attend at least 75% of available trainings each year.

The consultants were provided with the 2015 core training data and it was readily apparent that at first glance, the department was well organized with record presentation and preservation. Scanned copies of curricula and training rosters are maintained in separate electronic folders for

each month of the year. The training conducted within the department is consistent with offerings expected in an organization of similar size.

Of concern to the consulting team were comments by employees that employee certifications had lapsed. Conversely, the EMS administration indicated that they had never had an employee's certification lapse. The issue of current certifications should be included in the "Employee Satisfaction Survey" previously recommended.

This issue was difficult for the consultants to discern because the record management system utilized by the department allows for the entry of these certifications and their expiration dates, which automatically generates an email to department administration and the employee when a certification is close to expiration. Staff acknowledged the issue and related control measures have been put into place to prevent this from occurring in the future. However, maintaining current certifications is the responsibility of the employee; and assurance of such is the responsibility of leadership.

Findings

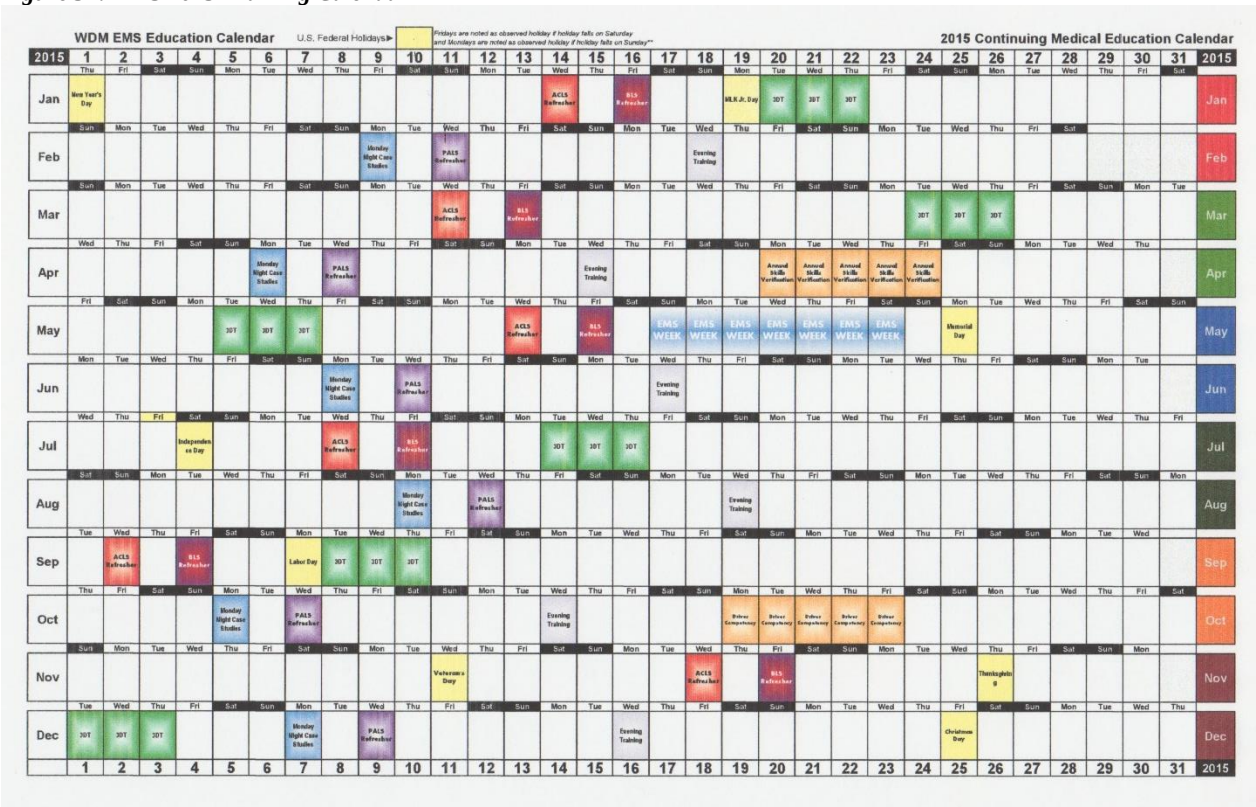
What appears to be a comprehensive training program cannot be validated due to the inability to provide records from the data management system. The consultants believe that one could sit down and examine copious training events and hand record hours, which would paint a considerably better picture; however, having to resort to this method raises questions on accuracy.

Training Topics

The department maintains a training calendar where annual classes and training topics are identified prior to the new year beginning. The department conducts "three day trainings" every other month on topics of pertinence to EMT and Paramedic providers. At least one training session is held in the evening to accommodate part-time personnel who are unable to attend during the day.

The figure below illustrates the 2015 training calendar as posted:

Figure 51: EMS 2015 Training Calendar



The consultants understand that in order to provide a sample of the training calendar, the size restriction would make it unreadable; however, what can be obtained from the table are the color squares represent training topic – with the exception of those in yellow which indicate legal holidays.

Additionally, the department provided numerous ACLS and PALS refreshers throughout the year.

Current Training Qualifications for WDMEMS Staff

- All career EMS Paramedics shall maintain a Critical Care endorsement

- All Paramedics shall maintain American Heart Association Advanced Cardiac Life Support (ACLS) certification
- All Paramedics shall maintain American Heart Association Pediatric Advanced Life Support (PALS) certification
- All EMS staff shall maintain American Heart Association Basic Life Support for the Healthcare Provider (BLSHCP) Cardiopulmonary Resuscitation certification
- All EMS staff shall maintain a current Iowa driver's license with a Class D chauffeur's license with an endorsement 2
- Successfully complete required training and competencies contained within the annual training schedule, including maintenance of all required certifications

Competency Assurance

The Deputy Chief provided data showing the processes in place to assure required training sheets, including officer "signed-off competencies" monitored and placed on file. The records management system (RMS) utilized by WDMEMS was very user friendly for inputting training data, but it was very unfriendly to generate training reports or export data. As such, the consultants were provided with the physical copy of 2015 training records and aggregate date of employee training hours and certification expiration dates. However, while only one previous year and current year to date statistics were provided for review, the on-site assessment did allow the Deputy Chief to visually demonstrate how records are maintained to the consultants and the system appeared to be logical within the parameters and limitations of the RMS software.

Quality Assurance / Quality Improvement

Department administration related that 100% of patient care reports are reviewed by a shift Lieutenant or higher for accuracy in documentation, medical necessity and billing control for consumable equipment and the like. Call data is also parsed by acuity or chief complaint to select cases for additional peer review. Finally, a "grand round" approach is undertaken to identify calls for service which present unique learning opportunities or that would benefit from increased scrutiny in a training environment.

Medical Director Dr. Torstenson maintains an active role in reviewing cases and providing training within the organization and it was articulated that he can frequently be seen attending monthly training events with staff members to answer questions and maintain a visible presence. The consultants were impressed by Dr. Torstenson's hands-on approach with overseeing EMS operations.

New Hire Processing

New employee onboarding consists of a 12-day process. The first day is spent with Human Resources completing new hire paperwork, completing safety training and spending the afternoon learning about the organization and meeting the employee's Field Training Medic (FTM).

Employees are given an orientation manual which must be completed to be released from training. During days two through twelve, new employees learn and must be able to identify and locate numerous departmental forms and be able to articulate basic department functions, including proficiency in technology integral to the organization such as records management system, patient care reporting software, radio communication, et cetera. Employees must also successfully complete an Emergency Vehicle Operations Class.

New employees spend time as a third rider on an ambulance which allows them to become more familiar with departmental operations, policies and procedures. WDMEMS has an extremely comprehensive policy which outlines the process for new employees to complete their orientation and ultimately must take and pass a final written examination and a practical examination with the Deputy Chief. Upon successful completion of the orientation process, new employees are subject to a six-month probationary status.

WDMEMS approach is consistent with other agencies of their size and scope. Each level of development had corresponding evaluation and testing before credentialing could be obtained. What is inconsistent with most EMS providers is the excessive amount of turnover which requires considerable resources to orientate and train new employees.

Recommendation – EMS Training

- *Update the record management system to ensure that accurate training hours per employee are easily assessable and accurate training hours can be validated.* ***Priority 2***

- *Generate a monthly report from the record management system to identify when employees are within 90 days of the expiration of a certification.* ***Priority 3***

- *Generate a monthly report to identify employees who fall below the minimum threshold of training requirements and devise a plan to ensure compliance.* ***Priority 3***

Fire Prevention

Inspection Services

Upon performing a thorough review of data, reports, and conducting extensive interviews, the West Des Moines Fire Prevention Bureau, under the direction of a Deputy Chief/Fire Marshal, appears to be a very pro-active and effective division in administering fire prevention and life safety initiatives. This division, consisting of two sworn personnel (Deputy Chief and one Lieutenant), a fulltime civilian Inspector/Public Education Coordinator, two part-time inspectors, along with the on-duty fire companies conducting routine inspections, work together to conduct all aspects of the fire prevention bureau activities.

The Fire Prevention Bureau currently utilizes the 2009 International Fire Codes. This was adopted by the City of West Des Moines, Ordinance 1741, and amended by local ordinance 4-3-1 (2009 West Des Moines Fire Code) in February 2012. Additional addendums, as well as adapted additional fire/life safety city ordinances, have been adopted in oversight of building construction and fire safety code enforcement. The Fire Prevention Bureau has a program in place to amend the code to include specific local ordinances that improve the life safety conditions in buildings as found necessary. It was reported to the consultants that the city maintains a very high level of fire safety through its aggressive enforcement of their automatic fire alarm and sprinkler system ordinances. Nearly all commercial, industrial, educational, hotel/motel, and multi-family residential occupancies are covered under these regulations and the bureau is heavily supported by the elected officials in this endeavor.

There are approximately 3,000 inspectable occupancies located within the City of West Des Moines, that are inspected annually. These inspections are conducted by the on-duty fire engine/truck company personnel within their respective “zones” or regions of the city which they are assigned. Any violations found during these inspections, or issues needing correction, are followed up with a re-inspection handled by one of the personnel assigned to the Fire Prevention Bureau. New construction (other than single family occupancies) and any type of major remodeling projects require a plan review of the proposed construction by the Fire Prevention Bureau. Any such plans are reviewed by the Fire Marshal or his assistant to assure code

compliance. Hood and duct fire extinguishing systems require testing and approval for new installations, as well as annual testing thereafter. This testing is conducted by the Fire Marshal or his assistant. For new sprinkler systems, alarm systems, or re-calculation of such systems, a third party fire protection engineer is utilized by the Fire Prevention Bureau to review and approve the plans. Lund Fire Protection Services out of Des Moines has been contracted for these services since 2009. Any costs associated with such reviews are borne by the occupant/owner of the occupancy.

Occupancies having required fire alarm systems or automatic fire sprinkler systems require the installation of a Knox Box™ type lock box (a locked device attached to the outside of the structure containing entry keys for immediate access). Additionally, any building with an automatic fire sprinkler system must also have the fire department sprinkler connection pipes outfitted with Knox protective caps installed. The Fire Marshal, along with the bureau's staff, have all completed the State of Iowa's Fire Inspector I certification program. All occupancies which are installed with automatic fire alarm systems, fire sprinklers, or any type of other fire notification systems are required to be monitored through a "third party" monitoring organization. Such third party monitoring must meet certifications of U.L. and shall transmit any type of alarms to the Westcom dispatching center.

Fire Investigations

The WDMFD is dedicated in its endeavor to determine cause and origin of fires, explosions, and other emergency situations that endanger life or property within the city of West Des Moines. Fire investigations are conducted through five assigned members of the fire department who are state certified fire investigators. There is one certified investigator assigned to each of the three shifts, with the Fire Marshal and the Bureau Lieutenant serving as alternates. Additionally, each fire Lieutenant is trained in basic fire investigation.

The fire investigators work closely with the city's police department and are authorized to carry out these investigations through adopted city ordinance 914, 4-1-6 (Duties of Fire Chief) and section 104.10 of the 2006 International Fire Code adopted April 9, 2007. These statutes provide

the authority to investigate the cause of any fire and to protect evidence until the fire investigation is complete.

Pre Fire Planning

There is a program within the WDMFD to provide a pre-fire plan for the majority of the 3,000 inspectable occupancies within the corporate limits. This program entails certain on-duty fire engine/truck companies to conduct this planning and record and make any changes to the database that may have occurred. Such changes are delivered via flash drives and downloaded to the various mobile computer systems throughout the fire department.

The fire companies that are assigned to this program are not assigned to conduct fire inspections. It was reported to the consultants that the program is very effective and does provide a benefit at times when the need arises to know the footprint and other pertinent information for a particular occupancy.

The importance of good pre-fire planning is paramount in providing much needed information, which may not be readily available during emergency situations. Shown below are examples of such information made available through such planning and is strongly recommended by the consultants:

- Owner and key holder contact information
- Occupancy information
- Access points keyed and forcible entry
- Special hazards
- Type of construction
- Available water supply
- Building protection systems and their location
- Utilities, including the location of shut-offs
- Exposures/Hazardous materials presence
- Special resource considerations
- Technical rescue exposures
- Particular life hazard issue
- The presence of lightweight trusses in construction
- Other potential dangers or issues to be made aware of

Safety Education

Public Fire Safety Education

The WDMFD appears quite committed in its efforts to provide effective fire safety educational opportunities to the general public as well as to the business community. Upon evaluation of the Public Education Division, it was found by the consultants that relevant fire and life safety education opportunities are being brought to the community through programs at schools, day care providers, businesses, nursing homes, senior residential communities as well as individual residences. These facts were supported by the data provided and the documented large numbers of adults and children coming in contact with fire department personnel through one of the many fire prevention/safety opportunities offered throughout the year. Additionally, the fire department website as well as other forms of social media is utilized in promoting additional fire and life safety messages.

The data found through evaluation of the programs are evident as shown:

Table 56: Fire Safety Education - Children

Fire Safety Education - Number of Children Served			
Event	**2013**	**2014**	**2015**
Business Public Relations	417	330	150
Daycare/Preschool Visits	633	847	591
Public Relations	792	1,992	1,098
Holiday Events	1,400	980	1,406
Safety Town	220	371	327
School Visits	2,197	2,513	2,288
Station Tours	403	452	323
Truck Tours	72	54	50
Block Parties	26	22	284
Department Open House	400	200	189
Blank Fire Safety House			242
Fire Truck Rides		11	8
Safe Place Use		1	
Totals	***6,560***	***7,773***	***6,956***

Table 57: Fire Safety Education – Adults

Fire Safety Education - Number of Adults Served			
Event	**2013**	**2014**	**2015**
Business Public Relations	632	386	170
Citizen fire Academy	16	16	16
Daycare/Preschool Visits	106	116	137
Public Relations	377	1,931	1,031
Holiday Events	440	350	1,223
Safety Town	14	18	28
School Visits	294	250	342
Station Tours	185	248	206
Truck Tours	35	18	20
Block Parties	20	28	255
Department Open House	2,300	470	269
Blank Fire Safety House			34
Fire Truck Rides		10	6
Smoke Detector Battery Install	54	15	15
Extinguisher Classes	12	156	141
Business Fire Drills	518	1,613	13,918
Senior Citizen Safety			288
Safe Place Use		4	
Totals	***5,003***	***5,629***	***18,099***

The efforts of the Public Education Division of the WDMFD should be commended for their efforts. The numbers reflected above indicate strong support of the City and Fire Department toward fire safety education.

EMS Educational Outreach

American Heart Association Training Center

Under the direction of Deputy Chief Mark McCulloch, the EMS Department maintains an active role in the community as an American Heart Association (AHA) Training Center. Through the training center, the EMS Department oversees approximately 80 CPR instructors who teach varying courses in the community and throughout area school districts. In 2015 the EMS Department, through departmental and adjunct instructors, taught over 3,900 people CPR and/or basic first aid.

Public Education

The EMS Department is extremely active in the West Des Moines community. Through the use of "Paramedic Pete," a motorized, electronically controlled paramedic robot, the department makes contact with area schools during the annual EMS week (held in May). The latest data available to the consultants revealed the department visited seven elementary schools throughout three separate districts in: West Des Moines, Waukee, and a private school during May 14-20, 2016.

As a result of those visits, over 400 students were taught about how to identify public safety officials, calling 911 and other safety topics including, but certainly not limited to: bicycle safety, swimming safety, vehicle safety and the use of sun screen. The department also articulated that 400 bicycle helmets were handed out throughout the month of May 2016.
Of interest to the consultants was data regarding the EMS Week educational outreach during 2015. It was articulated in the data reviewed that over 800 children were impacted in the previous year. However, it does not appear that the department collects quantifiable numbers and relies on guesstimates for their reporting.

Lack of Coordination Among Departments

Throughout the study it was acknowledged by many stakeholders that there is limited discussion, coordination and interaction among the Fire Department and EMS Department in their educational outreach initiatives. While both departments provide different services to the community which often require starkly different skillsets, the ultimate goal of community risk reduction is to identify and attempt to eliminate the top hazards that face the community. Whether it is a high number of slips, trips and falls-type calls for service, misuse of the 911 system or other similar issues, each department has a vested interest in ensuring community education is a priority.

It is readily clear that both departments have a strong desire to produce results related to community risk reduction but those efforts should be focused in a similar direction such that duplication of effort is minimized and the same message is being delivered consistently.

Recommendation-Fire Prevention/Safety Education

- *Consideration should be given to explore and implement the coordination of Fire Prevention Safety, Life Safety, EMS, and Police Public Education efforts between the various departments.* ***Priority 2***

- *During all educational opportunities, obtain quantifiable data including the number of residents, children, etc. impacted by the delivery of a program.* ***Priority 3***

Fiscal Section Overview

As the City of West Des Moines experiences growth in population and the area of the City, the requirements for additional City services become critical. Not only are the services expected by the citizens, but the challenge for governing officials to provide the fiscal resources for these expanded services become critical. When the consultants requested copies of three previous budget years they were referred to the City website for the annual budget documents and the budget documents on the City website were used throughout this fiscal section for reference, information, and data.

The City of West Des Moines has taken the initiative to create 28E Agreements with other public and private organizations to provide the growth in service needs, especially related to Public Safety. The City should be commended for these initiatives with the partnerships and the services being provided.

When the study was started, the consultants heard from many stakeholders that the agreement between the WDMEMS Department and Iowa EMS Alliance (Alliance) was very difficult to understand, especially related to fiscal implications. Many stakeholders believe that the agreement was not producing the costs savings being projected by the EMS Department Administration. The findings in this section will validate those beliefs that the Alliance agreement and the partnership is not producing the costs savings being marketed.

The fiscal section as related to the Alliance was most complex with numerous occurrences of conflicting information or information that could not be validated. Approximately two months of assessment, by the consulting team, was needed to provide what we believe is the most accurate description of the fiscal implications to the City of the Alliance agreement.

Overview of City of West Des Moines Budget

The City of West Des Moines operates on a July 1st to June 30th fiscal year. The city budget is divided into three broad categories that are based on the use and nature of the funds. The first

category is Governmental Funds, which are used to account for the City's governmental type activities. The other two categories include Proprietary Funds, which are used for the City's business type activities and Fiduciary Funds, which are used for any activities in which the City acts in an agent or fiduciary capacity.

The primary focus of this study will be in the category of Governmental Funds and some of the four funds within that category, which include the General Fund, Special Revenue Funds, Debt Service Funds and Capital Project Funds.

The following is a description of each of the four funds as described in the City Budget document:

- **General Fund** is the general operating fund of the City.
- **Special Revenue Funds** are used to account for revenues derived from specific sources that are usually required by law or regulation and are required to be accounted for in separate funds.
- **Debt Service Fund** is used to account for legally mandated reserves and the payment of interest and principal on the City's general long-term debt.
- **Capital Project Funds** are used to account for all resources used in the acquisition or construction of capital facilities.

City Budget Process

The City Budget process is strongly connected with the City Strategic Planning Process and as a result, budget planning is an on-going, year-round process. The two primary components of the City's budget are the operating budget and capital improvement program (CIP) budgets. The consultant's report will focus on these two components in the development of the fiscal section.

The formal budget planning process begins on an annual basis, usually in September, when the departments receive the budget request documents. Normally, the department budget request forms are due to the Finance Department in October and all of the budget requests are service level driven and are developed within the scope of the City's Strategic Plan.

The Capital Budget requests are formalized and, depending on funding resources the City may or may not use, a Citizens Advisory Committee on Capital Planning is required. If this Committee is utilized, it works with city staff to produce a capital improvement plan that meets the needs of the city for future growth. If this citizen committee is not used, the City Manager's Budget Review Team, in conjunction with various key representatives from city departments, prepare and review the proposed capital improvement program budget.

Once the preliminary city budget has been completed, the City Council conducts a number of budget workshops to examine in detail the preliminary operating and capital budget. After the workshops have been completed, the city staff modifies the budgets based on the Council requests and prepares the budget for legal adoption.

Usually in February, a Public Hearing is held on the proposed operating and capital budgets to allow the citizens of West Des Moines to voice any concerns about the budget or the budget process. The final budget is approved by the City Council in late February or early March.

City Budget

The City of West Des Moines appears to be fiscally conservative based on their history of budget expenditures, tax levy rates, and revenue from property taxes.

The City of West Des Moines 2016-17 budget maintained a city property tax rate of $12.00 per $1,000 of taxable valuation. The 2016-17 city budget is projected to generate approximately $52,096,862 from taxes levied against real and personal property. This accounts for approximately 43.72% of the total city operating revenue. It should be mentioned that the City of West Des Moines is located within four different counties, which are Polk, Dallas, Warren, and Madison counties.

The following table reflects the Revenues and Expenditures for the General Fund for the City of West Des Moines for the years 2013-14 through 2015-16.

Table 58: City of West Des Moines Revenue & Expenses 2013-14 to 2016-17

City of West Des Moines – General Fund Revenue and Expenses				
	2013-14 Actual	**2014-15 Actual**	**2015-16 Budgeted**	**2016-17 Budgeted**
Revenues	$60,978,984	$64,705,315	$65,149,204	$66,875,981
Expenses	$60,524,498	$63,265,650	$66,849,833	$69,683,992

The following table indicates the City of West Des Moines 2016-16 Budget Expenditures by Program Basis:

Table 59: FY 2016-17 Expenditures on a Program Basis

FY 2016-17 Expenditures on a Program Basis						
Expenditures	**General**	**Special Revenue**	**Debt Service**	**Capital Project**	**Enterprise**	**FY 2016-17 Budget**
Public Safety	$27,851,643	$3,390,840				$31,242,483
Public Works	$8,505,661	$820,000				$9,325,661
Health & Social Services	$1,065,431	$206,259				$1,271,690
Culture & Recreation	$8,530,015	$311,600				$8,841,615
Community & Economic Dev.	$5,577,529	$1,750,799				$7,328,328
General Government	$7,734,678					$7,734,678
Debt Service Funds		$164,640	$18,934,723			$19,099,363
Capital Project Funds				$46,403,480		$46,403,480
Total Activities	$59,264,957	$6,644,138	$18,934,723	$46,403,480		$131,247,298

City Property Taxes

The City of West Des Moines employs the equivalent of 419 full time positions and 96.08% of the personnel employed by the City are funded by the general fund. The General Fund provides the finances for almost all of the day to day operations of the City. About 65.53% of all General Fund revenue is generated from property tax revenue.

General Fund Tax Levies

Currently there are three operational levies that are levied within the General Fund by the City of West Des Moines. The three levies are the General Levy, Tort Liability Levy, and the Emergency Levy. The primary levy for the City is the General Levy, which is limited by state law to $8.10 per $1,000 of assessed valuation. State law allows the City to levy for tort liability in addition to the $8.10 per $1,000 of assessed valuation. Currently there is no limit on this tort liability levy. State law also allows Cities within Iowa to levy an "emergency tax" of up to $0.27

per $1,000 assessed valuation if the General Fund tax levy is at the maximum allowed by state law. The combined rate General Fund Tax Levy set by the City for the 2016-17 budget is estimated to be $8.5111 per $1,000 of taxable property valuation.

The General Fund levies finance for the following City services:

- **Public Safety** – which includes police and fire protection, ambulance services, and dispatch
- **Community Enrichment** – which includes park operations, library services, and human services
- **Public Services** – which includes public works and community development services
- **Support Services** – which includes the administrative and support services of the City

Other City Levies

The other city levies used for the General Fund Operations include the following:

- **Debt Service** – which is set at $1.95 per $1,000 of taxable property valuation
- **Other Employee Benefits** – which is set at $1.02202 per $1,000 of taxable property valuation
- **Police and Fire Pension** – which is set at $0.51688 per $1,000 of taxable property valuation

Intergovernmental Revenue Funds

The City of West Des Moines generates revenue from various Intergovernmental agreements or grants. The City has a number of reimbursement agreements with surrounding cities, counties, and other organizations. The following table reflects the Intergovernmental Revenue Funds generated by agreements the City Fire and EMS departments have with other agencies as well as grant revenue:

Table 60: Intergovernmental Revenue 2013-14 to 2016-17

Fire/EMS Intergovernmental Revenue 2013-14 to 2016-17				
Intergovernmental Agency	**Actual 2013-14**	**Actual 2014-15**	**Revised Budget 2015-16**	**Budgeted 2016-17**
EMS - Clive	$9,151	$14,714	$25,000	$30,000
EMS - Iowa Health	$187,728	$385,825	$275,000	$275,000

Fire/EMS Intergovernmental Revenue 2013-14 to 2016-17				
Intergovernmental Agency	**Actual 2013-14**	**Actual 2014-15**	**Revised Budget 2015-16**	**Budgeted 2016-17**
EMS - EMS Alliance Transfer to WDM	$120,000	$120,000	$120,000	$120,000
FEMA Grant	$0.00	$22,072	$0.00	$0.00
Fire Westside Fire/EMS Clive	$625,108	$716,175	$697,680	$773,820
Fire - Regional Fire Training	$4,950	$3,300	$2,500	$2,500
Westcom - Joint Dispatch - Clive	$461,465	$248,876	$354,972	$393,029
Westcom - Joint Dispatch - Norwalk	$103,208	$168,305	$205,312	$221,122
Westcom - Joint Dispatch - Urbandale	$558,710	$1,003,421	$897,964	$950,788
Westcom - Joint Dispatch -Waukee	$0.00	$0.00	$368,492	$426,522
Westcom – Misc. Grants	$3,726	$2,003	$2,500	$2,500
Westcom - Transfer to WDM	$278,359	$300,542	$252,568	$260,000
Westcom – Network Use WDM Schools	$10,500	$22,882	$30,000	$30,000

Charges for Services

Several city departments, including the Fire and EMS departments, do charge for some services. The following table reflects the amount of revenue generated by the Fire and EMS departments for various types of charges for the budget years 2013-14 to 2016-17. It should be noted that the Ambulance Fee Charges include the fees for ambulance services from both the City of West Des Moines as well as the ambulances operated for UnityPoint as part of the Iowa EMS Alliance.

Table 61: Fire/EMS Charges for Services Revenue 2013-14 to 2016-17

Fire/EMS Charge for Services Revenue 2013-14 to 2016-17				
Charge for Services	**Actual 2013-14**	**Actual 2014-15**	**Revised Budget 2015-16**	**Budgeted 2016-17**
Ambulance Charges	$3,205,139	$3,082,099	$2,800,000	$3,000,000
CPR Classes	$60,074	$36,566	$50,000	$55,000
EMS Charges	$5,140	$4,265	$500	$500
False Alarm Charges - Fire	$3,650	$4,200	$3,500	$3,500
Fire Charges	$5,535	$6,998	$5,500	$5,500
Fire Plan Review Fees	$46,231	$56,795	$43,000	$53,000

Special Revenue Funds

In the City of West Des Moines annual budget, Special Revenue Funds are used to account for revenue generated from specific sources that are accounted for separately from the city's general fund as required either by law or regulation. The following Special Revenue Funds are specifically related to the Fire and EMS departments:

- **Police and Fire Retirement Funds** - These funds are the City's contribution into the statewide retirement system for the pension of disabled and retired sworn police officers and fire department personnel. These funds are a special levy as part of the general budget.

- **E911 Funds** - These funds are from revenue generated from a monthly surcharge on each telephone access line terminating within Polk, Dallas, and Warren Counties. These funds are used to improve the ability of public safety agencies to achieve inter-operability among Police, Fire and Emergency Medical Service providers, as well as to improve the overall public safety system.

- **Emergency Service Funds** - These funds account for donations to the EMS Department for the purchase of automatic defibrillators that can be placed in businesses with large numbers of employees or city-owned facilities.

Police and Fire Retirement Funds

In the 2016-17 budget, the City of West Des Moines levy amount for the Police and Fire Retirement Funds are projected to be $2,235,007 and the commercial property tax replacement funding for this account is projected to be an additional $116,693.

The following table reflects the annual city contributions from the tax levy for the Police and Fire Retirement Funds for the years 2013-14 to 2016-17.

Table 62: City Contributions - Tax Levy Police/Fire Retirement Funds 2013-14 to 2016-17

City Contributions from the Tax Levy for Police & Fire Retirement Funds 2013-14 to 2016-17				
Revenue	**Actual 2013-14**	**Actual 2014-15**	**Revised Budget 2015-16**	**Budgeted 2016-17**
Property Taxes	$1,933,474	$2,127,961	$2,179,647	$2,205,898
Other City Taxes	$23,971	$29,363	$25,986	$29,109
Intergovernmental	$0.00	$61,201	$130,375	$116,693
Total Revenue	$1,197,265	$2,218,525	$2,336,009	$2,351,700

The City contribution through the tax levy for Police and Fire Retirement Funds has almost doubled in the four period from 2013-14 to the 2016-17 budget. This obviously is a significant increase that the City of West Des Moines has concerns about in terms of the cost of contributions to the Police and Fire Retirement Funds.

The following table reflects the annual City Contribution rate for the Police and Fire Retirement Funds. The annual rates vary and have decreased the last two years.

Table 63: City Contributions Rates to Police & Fire Retirement Funds

City Required Contribution Rate to Police & Fire Retirement Funds 2013-14 to 2016-17	
Fiscal Year	**City Required Contribution Rate**
2007-08	25.48%
2008-09	18.75%
2009-10	17.00%
2010-11	19.90%
2011-12	24.76%
2012-13	26.12%
2013-14	30.12%
2014-15	30.41%
2015-16	27.77%
2016-17	25.92%

E911 Funds

As stated above, the E911 Funds are funds that are from revenue generated from a monthly surcharge on each telephone access line terminating within Polk, Dallas, and Warren Counties. The following table reflects the annual revenue from 2013-14 to 2016-17 from the E911 Funds.

Table 64: Special Revenue Funds - E911 Funds 2013-14 to 2016-17

Special Revenue Funds - E911 Funds 2013-14 to 2016-17				
Revenue	**Actual 2013-14**	**Actual 2014-15**	**Revised Budget 2015-16**	**Budgeted 2016-17**
E911 Funds	$689,468	$812,339	$847,576	$757,576

EMS Funds

As stated above, this fund is used to purchase Public Access Defibrillators that are placed within the community of West Des Moines at various locations. The Public Access Defibrillator

Program is sponsored by the EMS Department and is a joint venture between the EMS Department and various businesses within the community.

The following table reflects the amount of revenue generated for the EMS Trust Funds for the years 2013-14 to 2016-17:

Table 65: Special Revenue Funds - EMS Funds 2013-14 to 2016-17

Special Revenue Funds – EMS Funds 2013-14 to 2016-17				
Revenue	**Actual 2013-14**	**Actual 2014-15**	**Revised Budget 2015-16**	**Budgeted 2016-17**
EMS Funds	$0.00	$4,050	$1,300	$0.00

Chapter 28E of the State of Iowa Code

Introduction of 28E Agreements

Chapter 28E of the Iowa Code is titled "Joint Exercise of Governmental Powers" and allows for agencies to cooperate in a number of ways. This broad grant of power has been clarified by several opinions of the state attorney general. Chapter 28E now "provides authority for the state and local governments to enter into agreements with one or more public or private agencies for joint or cooperative actions pursuant to its provisions".

Fire Department Budget

Fire Department Annual Budget

In 2016-17 the West Des Moines Fire Department total operating budget is $8,116,942, not including funds for Capital projects and Fire Pension contributions, which are in different city budgets.

The annual fire department budget operating expenditures have increased about 28% or $1,794,966 over the period of 2013-14 to the 2016-17 budget years as indicated in the following table:

Table 66: West Des Moines Fire Department Annual Budget 2013-14 to 2016-17

West Des Moines Fire Department Annual Budget 2013-14 to 2016-17				
Expenditures by Object	**Actual FY 2013-14**	**Actual FY 2014-15**	**Revised Budget FY 2015-16**	**Budgeted FY 2016-17**
Personal Services				
Full-Time Employees	$3,678,523	$4,032,401	$4,422,401	$4,650,160
Part-Time Employees	$300,078	$290,498	$345,000	$561,600
Overtime	$182,277	$240,602	$172,500	$238,000
Health, Dental, Life Insurance	$662,170	$706,923	$833,350	$887,859
Retirement Contributions	$125,792	$143,958	$164,748	214,053
Other Pay	$43,161	$53,151	$47,840	$59,290
Total Personal Services	$4,992,001	$5,467,533	$5,985,839	$6,610,962
Supplies and Services				
Operations and Maintenance	$671,201	$726,459	$758,375	$793,235
Conference, Travel & Training	$40,225	$34,709	$45,000	$53,550
Utilities	$145,793	$136,831	$159,195	$165,895
Contractual Obligations	$12,782	$11,493	$15,750	$14,800
Non-Recurring/Non-Capital	$65,210	$28,841	$2,000	$2,000
Total Supplies & Services	$935,211	$938,333	$980,320	$1,029,480
Capital Outlay				
Replacement Charges	$370,082	$364,771	$411,250	$376,500
Computer Hardware & Software	-	-	-	-
Vehicles	-	-	-	-
Miscellaneous Equipment	$24,682	$84,165	$97,000	$100,000
Total Capital Outlay	$394,764	$448,936	$508,250	$476,500
Total Expenditures	$6,321,976	$6,854,802	$7,474,409	$8,116,942

In reviewing the table above, the budget increased $1,794,966 over the four budgets and of that amount, $1,618,961 or about 90% of the increase was for the Personal Services portion of the annual budget. Part of this increase can be contributed to the fact that the staffing of the fire department increased from 51 FTE's in the 2013-14 budget to 59.5 FTE's in the 2016-17 budget. Obviously, the City of West Des Moines is a growing community and additional staffing was required to provide the services to meet the growth.

The budget for part-time employees increased by about $261,522 or about 87% over the four budget years. This can be attributed to the pay increase for part-time employees in the 2016-17 budget, which was required in order to pay them a competitive salary based on what other area fire departments were paying.

Another significant line item that increased under Personal Services was the cost for Health, Dental and Life Insurance. The increase was $225,689 or about a 34% increase over the four budgets. This increase was a result of an additional number of 8.5 FTE's and increases in insurance costs overall during the time period.

The Supplies and Services section of the budget had an insignificant increase over the four budgets as the increase was only $94,269 or about a 10% increase, which as an average is 2.5% increase annually.

Capital Outlay funds are in the fire department budget on an annual basis. These funds are used to fund the vehicle replacement fund, as well as to budget for Miscellaneous Equipment. The vehicle replacement account is based on the estimated years of replacement of each vehicle in the fire department fleet and the historical costs of each vehicle.

The following table is a list of fire department vehicles and the costs of each vehicle that have been purchased over the past four budget years:

Table 67: West Des Moines Fire Department Apparatus Purchased 2013-14 to 2016-17

West Des Moines Fire Department Apparatus Purchased 2013-14 to 2016-17			
Type of Apparatus	**Unit**	**FY Purchased**	**Net Cost**
Ford Explorer – 2013	601B	2011-12	$32,248.31
Chevrolet Suburban - 2012	606B	2012-13	$35,454.58
Chevrolet Tahoe – 2014	605B	2013-14	$29,216.37
Ford Explorer – 2016	613	2015-16	$43,861.00
Pierce Engine Pumper	663	2015-16	$636,627.00

West Des Moines Fire Department Apparatus Purchased 2013-14 to 2016-17			
Type of Apparatus	**Unit**	**FY Purchased**	**Net Cost**
Pierce Engine Pumper – Westside Station	664	2015-16	$595,275.00

The Miscellaneous Equipment over the past three budgets has included the purchase of items such as the following:

- Self-contained breathing apparatus and bottle replacements
- Replacement flooring and carpet in public safety stations
- Replacement of furniture for public safety stations
- Gear Rack for Personal Protective Equipment
- Training Props & Fitness Equipment
- Remodel of public safety station kitchen
- Rescue circular saw
- Class A Uniforms

Capital outlay has increased by $81,736, or about 20%, during the four budget years and the majority of the capital outlay funds are for the vehicle replacement account.

It is important to note that the fire department pays almost all building operating expenses for the five public safety stations. Some costs are shared with the City of Clive for the Westside Public Safety station and Westcom does contribute a small amount for the use of the public safety station.

Fire Department Capital Project Funds

The City of West Des Moines budgets on an annual basis for major projects that are completed on an annual basis. These funds included major projects for the fire department. The following table indicates the Capital Projects and the costs that were included in the last four budgets.

Table 68: West Des Moines FD Capital Projects 2013-14 to 2016-17

West Des Moines Fire Department Capital Projects 2013-14 to 2016-17		
Project	**Fiscal Year**	**Funding Amount**
Fire/EMS Station #17 - Building Envelope	13-14	$1,250,000
Fire/EMS Station #18 - HVAC Improvements	13-14	$12,000
Fire/EMS Station #22 - HVAC Improvements	13-14	$35,000
Fire/EMS Station #17 - HVAC Improvements	14-15	$411,000
Fire/EMS Station #18 - HVAC Improvements	15-16	$550,000
Fire/EMS Station #21 - HVAC Improvements	15-16	$15,600
Fire/EMS Station #21 - Interior Renovation	15-16	$50,000
Fire/EMS Station #18 - Exterior Improvements	16-17	$300,000
Fire/EMS Station #18 – Exterior Lighting	16-17	$56,800
Fire/EMS Station #18 – Flat Roof Replacement	16-17	$11,000
Fire/EMS Station #18 – HVAC Improvements	16-17	$300,000
Fire/EMS Station #21 – HVAC Improvements	16-17	$950,000
FD Capital Projects	**Total**	**$3,941,400**

From the above table, it is very apparent that the City of West Des Moines and the Fire Department understand the importance of maintaining the public safety stations. They have invested an average of $985,350 on an annual basis over the last four budgets.

Fire Retirement Funds

The fire department retirement funds are not in the fire department operating budget and are separate funds within the City of West Des Moines budget. Therefore, if one actually wanted to know the entire costs of the annual fire department budget, the fire Retirement Fund costs would need to be added to the fire department operating budget.

The following table reflects the annual amount of Fire Pension contribution for each area of the fire department's operations and the contribution rate.

Table 69: West Des Moines Fire Pension Contributions 2013-14 to 2015-16

West Des Moines Fire Department Fire Pension Contributions 2013-14 to 2015-16			
Area of FD Operations	**FY 13-14**	**FY 14-15**	**FY 15-16**
Fire Administration	$66,940.98	$50,163.72	$57,594.61
Fire Prevention	$51,464.03	$52,316.08	$50,518.56
Fire Suppression	$709,288.85	$809,060.37	$782,674.31
Westside	$283,029.28	$291,947.49	$245,698.32
Total Fire Pension Contribution	$1,110,723.14	$1,203,487.66	$1,136,485.80
Contribution Rate	30.12%	30.41%	27.77%

Fire Department Revenue

The West Des Moines Fire Department does collect revenue from outside agencies to help offset their annual operating budget. The revenue collected is from charges for services or revenue collected from other agencies or municipalities by Intergovernmental Agreements. For the fire department, the Intergovernmental Agreement revenue is from the Regional Fire Training Center fees and for the 28E Agreement with the City of Clive for the Westside Joint Public Safety station.

The revenue for the Charges for Services is primarily fees collected for false alarms, fire charges, and fire plan review.

The following table reflects the amount of revenue collected by the West Des Moines Fire Department for the budget years 2013-14 to 2016-17.

Table 70: West Des Moines Fire Department Annual Budget Revenue 2013-14 to 2016-17

City of West Des Moines Fire Department Annual Budget Revenue 2013-14 to 2016-17				
Revenue Source	**Actual FY 2013-14**	**Actual FY 2014-15**	**Revised Budget FY 2015-16**	**Budgeted FY 2016-17**
Intergovernmental				
Westside Fire/EMS Clive	$625,108	$716,175	$697,680	$773,820
Regional Fire Training	$4,950	$3,300	$2,500	$2,500
Charges for Services				
False Alarms Charges	$3,650	$4,200	$3,500	$3,500
Fire Charges	$5,535	$6,998	$5,500	$5,500
Plan Review Fees	$46,231	$56,795	$43,000	$53,000
Total Annual Revenue	**$685,474**	**$787,468**	**$752,180**	**$838,320**

The majority of the revenue is from the City of Clive for the operation of the Joint Westside Fire/EMSS. This revenue is to pay for the staffing salaries and benefits, as well as operating cost for the vehicles and public safety station.

Recommendations – Fire Department

- *The City Finance Department should work with the West Des Moines Fire Chief to determine the actual costs for the City of West Des Moines to provide Administrative Services for the Westside Fire Facility agreement.* ***Priority 2***

- *The Fire Chief should work with the City Finance Department to determine if there is a way to share the operational costs for the Public safety stations with the EMS Department. Currently, the Fire Department funds all of the operational costs of the public safety stations including utilities, maintenance, supplies and other needs.* ***Priority 2***

- *The Fire department operating expenses have had very little increase over the last four budgets and it is critical that they maintain their equipment and supply needs to operate safely at emergencies.* ***Priority 4***

Fire Department 28E Agreement – Shared Fire/EMS Westside Public Safety Station

The original 28E agreement for the shared Fire/EMS Westside Public Safety station between the City of West Des Moines and the City of Clive was signed on December 5, 1991. At the time the original agreement was signed, the shared costs were based on the basis that the City of West Des Moines would fund 53% of the partnership and the City of Clive would fund 47% of the partnership. The consultants were told that this was based on the idea that the municipality that would manage the public safety station and staff it should have the responsibility to fund more than a 50% share of the costs.

As part of the 28E agreement, the City of West Des Moines was designated as the Coordinating Agency and is responsible for the following:

- Shall be the contracting authority for the Management Committee of the Joint Facility agreement.

- Subject to review by the Management Committee, shall employ under its Civil Service Rules and Procedures all regular and probationary employees required for the operation of the Joint Facility.

- Shall manage all personnel of the Joint Facility according to its employees and administrative policies, union contracts, civil service, city ordinances, and other applicable laws.

- West Des Moines shall keep and maintain all books and records of the Joint Facility and pay all bills in a timely manner.

The original 28E Agreement was for a 21-year period with an expiration date of December 5, 2012. The original agreement was amended on February 18, 2000.

The last amendment to this agreement was on March 9, 2010 and the amendment made a number of changes to the agreement including the following:

- Provide for a five-year extension of the agreement with an expiration date of June 30, 2017. The agreement does allow, with the approval of both City Councils, for the agreement to be extended for three (3) fiscal year incremental periods.

- The formulas for financing the Joint Facility was changed to language that the costs shall be divided on the basis of a three (3) year average of actual Joint Facility calls for service (in each community) for the immediate three (3) Fiscal years or on a formula recommended by the Management Committee and approved by both City Councils.

- The amendment also removed all verbiage related to construction costs.

It is important to understand the 28E Agreement for the Joint Facility as it does have some limitations that affect the West Des Moines Fire Department operations and budget, as well as the budget of the City of West Des Moines. The City of West Des Moines does own the Public Safety station known as the Westside Public Safety station or the Joint Facility.

The consultants were informed that under the amended agreement for the Joint Facility, the breakdown in funding costs for the two municipalities are shared on an average of the City of West Des Moines funding about 65% and the City of Clive funding about 35% of the Joint Facility budget. Again, this cost sharing is based on the number of calls from the Joint Station into each community.

In discussion with representatives from the City of West Des Moines Fire Department, the consultants learned that within the cost of the Joint Facility, the City of West Des Moines is

responsible for all administrative functions of the shared station, but the City of West Des Moines totally absorbs all of the costs associated with these responsibilities.

The agreement language does not address the Administrative Costs to the City of West Des Moines and it is not addressed in the budget for the Joint Facility. The City of West Des Moines provides the employees, negotiates and administers labor agreements, provides legal services when required, provides payroll services, provides all finance, budget and accounting services, provides services offered by the Human Resources Department, the Information Technology Department and the City Manager's office; but, the Joint Public Safety station 28E Agreement and the budget for this agreement offers no Administrative fees to the City of West Des Moines for providing these necessary services. The City of West Des Moines Fire Chief oversees the daily operations of the Joint Public Safety station, but the City of West Des Moines receives no reimbursement for these services. The City of West Des Moines even provides the lawn care and snow removal services for the Joint Public Safety station without being reimbursed.

As part of the agreement, the City of Clive shares the cost of the staff on duty at the Joint Public Safety station, but the Fire Chief informed the Consultants that the Fire Department has to track who is on duty every day at the Joint Public Safety station instead of just sharing the annual budget costs. This means that who is on duty on any given day can change based on vacations, FMLA, sick leave, workers comp, etc. and the Fire Chief needs to track the staffing changes daily and then the City of Clive pays for the staffing based on who was on duty. Obviously, tracking staffing on a daily basis this close requires a great deal of Administrative time, but the City of West Des Moines receives no compensation for this work. It seems like it would be easier for the agreement to share costs based on staffing the station and not based on who is on duty at the station. The services being provided should be the same on any given day. From a financial standpoint, if the City of West Des Moines is not going to collect for any Administrative Fees under this 28E Agreement, then that means the citizens of West Des Moines are paying for the services being provided completely.

Recommendations - Fire Department

- *The City of West Des Moines should address the fact that in the 28E Agreement with the City of Clive for the Westside Fire Facility, the City collects no reimbursement for the cost of the City to provide Administrative Services for the agreement. The services include Human Resources, Finance, Information Technology, Legal, City Manager's office, City Clerk's office, and Risk Management.* ***Priority 2***

- *The City of West Des Moines should address the issue in the 28E Agreement with the City of Clive for the Westside Fire Facility of West Des Moines having to track staff on a daily basis for reimbursement. The reimbursement should be based on the number of staff on duty and the number of vehicles staffed 24 hours a day, 7 days a week and 365 days a year. The payment for staffing is based on the station and vehicles being staffed and not on who is on duty on any given day. What's important in the partnership is that if there is an emergency call, a fire department vehicle will respond with a minimum number of personnel on the vehicle.* ***Priority 3***

West Des Moines 28E Agreements

The City of West Des Moines has a number of 28E Agreements, in which they have partnerships with other public and private agencies. These 28E Agreements include:

- An agreement between the City of West Des Moines and the City of Clive to construct, maintain and operate a joint fire and emergency medical service facility known as the Westside Fire/EMS Facility.

- An agreement between the City of West Des Moines and the City of Clive, the City of Urbandale, the City of Norwalk and the City of Waukee for the ownership and operation of a consolidated dispatch center for Police, Fire and Emergency Medical Services. This consolidated dispatch center is known as Westcom.

- An agreement between the City of West Des Moines and Westcom for the City to provide Information Technology Services to Westcom.

- An agreement between the City of West Des Moines and the City of Clive for the City of West Des Moines to perform ambulance billing services.

- An agreement between City of West Des Moines and Iowa Health – Des Moines to provide Emergency Medical Services – Ambulances.

Issues with the City of West Des Moines 28E Agreements

In reviewing the 28E Agreements that the City of West Des Moines has with the various partners, the consultants have found very limited language that allows the City to recover their

costs for various Administrative Costs associated with the agreements including the utilization of various City Department services such as: Human Resources, Finance Department, Information Technology, Legal Services, City Manager's office, City Clerk's office or Risk Management.

Each of these 28E agreements will be discussed in more detail under the Fire, EMS, and Westcom budget sections that follow.

Recommendations – 28E Agreement

- *The City of West Des Moines Finance Department should evaluate the cost to the City for participating in these partnerships to assure the City is collecting the costs for providing all services associated with each 28E Agreement.* ***Priority 2***

- *In the future, the City Finance Department should have a leadership role in the development of any revised or new 28E Agreements or any similar types of partnerships involving the City of West Des Moines departments.* ***Priority 2***

EMS Department and Westcom Budget History

In order to understand the current budgets of the EMS department and Westcom, it is important to illustrate the history of the two departments in terms of annual budgets and most importantly, the amount of overtime expenditures on an annual basis for a period of time so one can see the history of how the budgets have changed. Once one understands the history of the budgets, one will be able to understand and compare the separate department budget totals over the years for comparison.

It should be noted that from the budget years 2006-07 to 2008-09, the EMS Department and Westcom operated as two separate departments within the budget. The following table reflects the amount of the budget for the two separate departments, the number of full-time equivalent (FTE) employees within each department, and the total budget for the two organizations.

In the 2007-08 budget, two full time Information Technology personnel were transferred from the Westcom Department to the City of West Des Moines Information Technology Department. This resulted in the 28E Agreement between the City of West Des Moines and Westcom for the

City to provide information technology support services to Westcom. The budget ranged from just over $3.9 million to $4.76 million annually.

The number of employees between the two departments was a total of 39.25 FTE for the last two years as shown in the following table.

Table 71: EMS & Westcom Separate Department Annual Budgets 2006-07 to 2008-09

EMS & Westcom Separate Department Annual Budget 2006-07 to 2008-09					
Fiscal Year	**EMS Budget**	**Full Time Equivalent**	**Westcom Budget**	**Full Time Equivalent**	**Total Budget**
06-07	$2,248,873	19.0	$1,686,461	22.25	$3,935,334
07-08	$2,712,600	19.0	$1,832,578	20.25	$4,545,178
08-09	$2,868,288	19	$1,892,030	20.25	$4,760,318

In 2009-10 budget documents, it was noted that the EMS Chief became the Chief of the Department of Emergency Medical Services and Communications Services and the two departments were combined into one annual budget. As indicated in the table below, the budget increase from 2008-09 budget was an increase of $980,568.

The EMS Alliance started on July 1, 2008, but it was in the 2011-12 budget document that the EMS Department partnership with Iowa Health – Des Moines became apparent and it is easily identified due to the fact the FTE's increased from 39.25 to 51.25 FTE's. It should be noted that the even though the Alliance started on July 1, 2008, the 2008-2009 budget documents do not reflect the new partnership as the staffing level in the budget document remained at 19.0 FTE's. Then in the 2009-10 budget document the EMS Department and Westcom were included as one department and the staffing was 39.25, which included the WDM EMS staff and Westcom staff. It still did not reflect the partnership with the Alliance.

In using the 2010-11 budget of $5,894,536 as the year prior to the Alliance budget being included in the budget document and the current 2016-17 budgeted total of $7,103,861, the

increase in the budget during the four fiscal years is an increase of $1,483,056 or about a 25% increase after the Alliance partnership was included in the budget document.

Table 72: EMS & Westcom Combined Dept. Annual Budgets 2010-11 to 2014-15

EMS & Westcom Combined Department Annual Budget 2009-10 to 2014-15			
Fiscal Year	**EMS – Westcom Budget**	**Full Time Equivalents (FTEs)**	**Total Budget**
09-10	$5,740,886	39.25	$5,740,886
10-11	$5,894,536	39.25	$5,894,536
11-12*	$6,251,355	51.25	$6,251,355
12-13	$6,431,318	50.25	$6,431,318
13-14	$7,103,861	50.25	$7,103,861
14-15	$7,377,412	54.75	$7,377,412

**Iowa Health – Des Moines Partnership Started*

In the 2015-16 budget, the Alliance and Westcom budgets were separated out as two separate budgets as shown in the following table. It should be noted that the first year of the EMS/Iowa Health partnership was in the 2011-12 budget, with the total budget including Westcom was $6,251,355 and in 2016-17 the combined budgets of the Alliance and the Westcom budget is $8,435,426. This is an increase of $2,184,071 or about a 34.93% increase.

Table 73: Alliance & Westcom Separate Depart. Annual Budgets 2015-16 to 2016-17

Alliance & Westcom Separate Department Annual Budgets 2015-16 to 2016-17					
Fiscal Year	**Alliance Budget**	**Full Time Equivalent**	**Westcom Budget**	**Full Time Equivalent**	**Total Budget**
15-16	$4,778,516	40.75	$3,022,060	24	$7,800,576
16-17	$4,985,283	41.25	$3,450,143	24	$8,435,426

One of the concerns regarding the EMS budget is the amount of overtime in the annual operating budget. The following table reflects the amount of overtime in the budget on an annual basis when the EMS/Westcom Departments were included in one budget. The second column reflects

the amount of overtime on an annual basis for the Alliance and the Westcom Department when the two operations were separated into two different budget in 2012-13 and after.

Table 74: Alliance & Westcom Annual Overtime Budgets 2010-11 to 2016-17

Alliance & Westcom Annual Overtime Budgets 2010-11 to 2016-17				
Fiscal Year	**EMS/Westcom Overtime**	**Alliance Budget Overtime**	**Westcom Budget Overtime**	**Total Overtime Budget**
2010-11	$625,598	-	-	$625,598 Actual
2011-12*	$706,492	-	-	$706,492 Actual
2012-13		$685,951 Actual	$94,533 Actual	$780,484 Actual
2013-14		$743,724 Actual	$175,289 Actual	$919,013 Actual
2014-15		$755,578 Actual	$157,689	$913,267 Budgeted
2015-16		$746,150 Budgeted	$82,500 Budgeted	$828,650 Budgeted
2016-17		$796,150 Budgeted	$155,000 Budgeted	$951,150 Budgeted

**Iowa Health – Des Moines Partnership Started*

In reviewing the information in the 2010-11 budget, when the EMS Department and Westcom were under one budget, the actual overtime was $625,598. In 2011-12, the first year of the Alliance being part of the EMS and Westcom budget, the overtime increased to $706,492. Once the two departments, Alliance and Westcom, were separated into two budgets and each had their own budget, the amounts for overtime increased substantially, especially for the Alliance budget. The total budgets for overtime for both departments increased from $706,492 the first year that the Alliance became part of the EMS and Westcom budget, to a total of $780,484 the second year of the partnership.

Probably the best indicator of the increase of overtime is that in the 2010-11 budget, overtime was $625,598 for the EMS Department and Westcom combined. Once Iowa Health – Des Moines became part of the EMS operation and the two budgets were separated, the combined overtime of the Alliance and Westcom increased to an actual overtime budget of $919,013. This

was an increase of $293,415 or a 46.9% increase in three FY budgets after Iowa Health-Des Moines became a partner.

EMS Department & Alliance Budget

In 2016-17, the EMS Department total operating budget is $4,985,283, including funds for Capital outlay and pension contributions.

The annual EMS department budget operating expenditures have increased about 10% or $457,283 over the period of FY 2013-14 to the FY 2016-17 budget years as indicated in the following table:

Table 75: West Des Moines EMS Department Annual Budget 2013-14 to 2016-17

West Des Moines EMS Department Annual Budget 2013-14 to 2016-17				
Expenditures by Object	**Actual FY 2013-14**	**Actual FY 2014-15**	**Revised Budget FY 2015-16**	**Budgeted FY 2016-17**
Personal Services				
Full-Time Employees	$1,353,825	$1,484,490	$1,711,000	$1,668,000
Part-Time Employees	$639,318	$530,366	$406,000	$496,000
Contract Help	-	-	-	-
Overtime	$743,724	$755,578	$746,150	$796,150
Health, Dental, Life Insurance	313,628	$351,848	$424,925	$442,811
Retirement Contributions	$481,749	$488,450	$508,251	$515,847
Other Pay	$11,697	$12,260	$17,485	$19,145
Total Personal Services	$3,543,941	$3,622,992	$3,813,811	$3,937,953
Supplies and Services				
Operations and Maintenance	$578,271	$477,143	$551,580	$580,880
Conference, Travel & Training	$37,723	$19,971	$29,750	$29,750
Utilities	$65	$79	$100	$100
Contractual Obligations	$155,979	$159,289	$165,000	167,000
Donations to Agencies	-	-	-	-
Non-Recurring/Non-Capital	$4,697	$8,206	-	-
Total Supplies & Services	$776,635	$664,688	$746,430	$777,730
Capital Outlay				
Replacement Charges	$151,800	$187,449	$202,275	$188,600
Computer Hardware & Software	$9,413	$3,825	$6,000	$6,000
Vehicles	-	-	-	-
Miscellaneous Equipment	$46,211	$44,290	$10,000	$75,000
Total Capital Outlay	$207,424	$235,564	$218,275	$269,600

West Des Moines EMS Department Annual Budget 2013-14 to 2016-17				
Expenditures by Object	Actual FY 2013-14	Actual FY 2014-15	Revised Budget FY 2015-16	Budgeted FY 2016-17
Total Expenditures	**$4,528,000**	**$4,523,244**	**$4,778,516**	**$4,985,283**

The majority of the budget increases can be contributed to the Personal Services section of the budget and this is directly related to increased personnel costs.

Previously in this section, under the history of the EMS and Westcom budgets, it was shown that for a period of time the EMS and Westcom budgets were separate budgets. Then when the EMS Chief became the Chief of both the EMS Department and Westcom, the budgets were combined for a number of years, specifically the FY 2009-10 to 2014-15.

In July 2008,, the Alliance was formed and for the FY years 2009 -10 to 2014-15,the combined budget was for the Alliance (WDM EMS and UnityPoint) and Westcom Dispatch. Then in FY 2015-16 and 2016-17, the Alliance and Westcom budgets were separated again.

In FY 2014-15, the last year the Alliance and Westcom budgets were combined, the total operating budget was $7,377,412. In the years since the budgets were separated out, the combined totals of both budgets for the Alliance and Westcom in FY 2015-16 was $7,800,576 and in FY 2016-17 the projected combined budgets are $8,435,426. This is an increase since 2014-15 of the total operating budgets of $1,058,014 or about a 14.34% increase.

Alliance Vehicles.

The consultants were informed by the EMS Chief that the City of West Des Moines owns and pays for 100% of three ambulances and the Alliance shares the funding for the two reserve ambulances based on the percentages for the Alliance operating budget, which fluctuates between around 57% plus for the City and 42% plus for UnityPoint. In addition, any staff vehicles for the Alliance are shared on the same operating budget percentage between the City and UnityPoint hospital.

UnityPoint Hospital owns five ambulances of their own. UnityPoint Hospital purchases these vehicles and leases them back to the City of West Des Moines or the Alliance.

The City owned ambulances are funded 100% by the vehicle replacement funds, which on an annual basis, contributions to this fund are charged to the EMS Department. The Finance Department stated on an annual basis about $102,228 is funded to replace the three City owned vehicles in this vehicle replacement fund.

In addition, on an annual basis, the shared budget replacement account funds about $70,000 to $80,000 for the replacement of the two reserve ambulances and about $17,500 annually to replace the staff vehicles. The purchases of these ambulances are shared on the same operating budget percentage of about 57% and 43% between the City and UnityPoint hospital.

The City of West Des Moines Finance Department provided the following information contained in the table to the consultants when asked what new vehicles the EMS Department has purchased in the last five years and the costs.

Table 76: Alliance Apparatus Purchased 2013-14 to 2016-17

Alliance Apparatus Purchased 2013-14 to 2016-17					
Type of Apparatus	**Chassis Year**	**Unit**	**FY Purchased**	**Ownership**	**Net Cost**
Ambulance – Lifeline	2012	597A	2011-12	100% West Des Moines	$141,225.00
Ambulance – Lifeline	2012	593D	2012-13	Alliance	$141,225.00
Ambulance – Lifeline	2014	591C	2013-14	100% West Des Moines	$173,011.00
Ambulance – Lifeline Remount	2016	594D	2015-16	100% West Des Moines	$142,272.38
Chevrolet Tahoe	2012	595C	2012-13	Alliance Owned	$26,940.55
Chevrolet Tahoe	2014	587A	2013-14	Alliance Owned	$29,376.51
Chevrolet Tahoe	2014	604B	2013-14	Alliance Owned	$40,677.46

When the consultants asked the EMS Chief for a breakdown of the number of EMS vehicles and the ownership, we were provided with the following information contained in the following table:

Table 77: Alliance Vehicles and Ownership

Alliance Vehicles and Ownership				
Type of Apparatus	**Chassis Yr.**	**Unit**	**Ownership**	**Replacement Budget Fund**
Ambulance – F - Series	2014	591	West Des Moines	WDM Replacement Fund
Ambulance – F - Series	2016	592	West Des Moines	WDM Replacement Fund
Ambulance – F - Series	2016	594	West Des Moines	WDM Replacement Fund
Ambulance – F - Series	2012	593	Alliance - Reserve	Shared Percentage
Ambulance – F - Series	2012	597	Alliance - Reserve	Shared Percentage
Ambulance – F-Series	2015	628	UnityPoint	UnityPoint – 100%
Ambulance – Freightliner	2014	627	UnityPoint	UnityPoint – 100%
Ambulance – F – Series	2014	626	UnityPoint	UnityPoint – 100%
Ambulance Sprinter	2014	625	UnityPoint	UnityPoint – 100%
Ambulance Sprinter	2012	599	UnityPoint	UnityPoint – 100%
Chevrolet Tahoe	2012	595	Alliance Owned	Shared Percentage
Chevrolet Tahoe	2014	587	Alliance Owned	Shared Percentage
Chevrolet Tahoe	2014	604	Alliance Owned	Shared Percentage

Therefore, in comparing the above two tables, one is the table provided by the Finance Department and it indicates which EMS Department vehicles were purchased in the last five years with 100% City of West Des Moines funds.

The second table indicates the information from the EMS Chief with an inventory of all EMS Vehicles and ownership of each vehicle. The information indicates a total of ten ambulances, but what is unique is that in the information from the Finance Department, it indicates that Unit 597 was purchased with 100% of the City of West Des Moines funds. The information from the EMS Chief indicates that Unit 597 is owned by the Alliance with shared funds using the percentage for operational budget costs.

When the Finance Office was asked about the difference in information, they stated to the consultant that they track the new vehicles purchased and the costs, but once they are purchased, the vehicles may get moved around and the Finance Department doesn't track those changes. In fact, it should be noted that the EMS Department recently placed into service a newly remounted City owned ambulance Unit 592 at Station 17, but it does not appear to be on the list of new vehicles purchased in the last five years.

In this case, it appears that 100% of City funds were used to purchase the 2012 Lifeline Ambulance Unit 597. Once it is moved into reserve, the EMS Chief then records the originally purchased Unit as an Alliance Owned vehicle with costs for replacing it being shared by the Alliance.

When the consultants asked about the reserve ambulances, the EMS Chief indicated that he had hoped that issue wouldn't come up because it was very complicated and difficult to explain and understand.

The consultants have not seen a need to fund reserve ambulances based on the fact that reserve ambulances are usually front-line vehicles that when replaced are then rotated into reserve status for a period of time. As an example, the City of West Des Moines operates three front- line ambulances, and in order to maintain three front-line or in-service ambulances, it is common to have reserve ambulances to use if it has a need for more than three ambulances out at the same time. In the case when a vehicle is out due to maintenance or repairs, a reserve ambulance is available to maintain the three front-line vehicles.

The consultants were informed that prior to the Alliance with UnityPoint, the West Des Moines EMS Department did have five ambulances in the vehicle fleet. Three were used for front-line service and two were utilized as reserve ambulances.

So with that many ambulances, an organization only needs to budget for the three front-line vehicles and as they are replaced, you move one into reserve status and usually the oldest reserve ambulance is taken out of the fleet. To emphasize, an organization simply budgets for ambulances and as a new ambulance is replaced, the old ambulance is placed in reserve. It is one continuous cycle of rotating vehicles, but without funding for the replacement of reserve ambulances being necessary.

The EMS Chief stated the reserve ambulances were owned and funded by the Alliance through the operational budget, but it should be noted that both reserve ambulances have municipal license plates which would indicate they are owned by the City of West Des Moines.

The consultants were told that both the West Des Moines EMS Department and UnityPoint use the two reserve vehicles when either organization has a vehicle out of service for maintenance or when vehicles are being remounted. The consultants were also informed that in the recent past, the reserve ambulances were usually lettered as UnityPoint ambulances with a small West Des Moines EMS Department logo on the fronts doors. It was explained that if a City ambulance was out of service and the City used a reserve ambulance, it could look like a UnityPoint ambulance even though it has municipal license plates. The current reserve ambulance still has City lettering, but they were recently placed in reserve and perhaps the City hasn't had time to place UnityPoint lettering on them yet. It was suggested to the consultants that some EMS department members believed the lettering change had not been completed yet because of the fact that the fire/EMS study was being done at this time,

A new City owned remount ambulance was placed in-service within the last few weeks. The consultants were told that prior to it being placed in-service, UnityPoint used it to make trips out of the City for ambulance transports. This was done prior to the ambulance being lettered with the City of West Des Moines emblems and identification. The consultants were told that City ambulances travel about 15,000 miles or so annually, but that for a UnityPoint ambulance, it is common to have an annual mileage of about 100,000 miles per vehicle.

The issue then becomes, if UnityPoint is using one of the reserve ambulances for a period of time due to a front-line vehicle being out of service, it could be driven approximately 8,000 miles a month. So even if the reserve ambulances are being funded by the Alliance at the percentage that operating costs are shared, which is about 57% for the City and 43% for UnityPoint, how are the number of miles placed on it being funded? If the City uses a reserve ambulance for a month and puts 1,200 miles on it, that is much different than if UnityPoint uses a reserve ambulance for a month and places 8,000 miles on the vehicle.

Issues:

- Funding of ambulances. As hard as the Consultants tried to figure out why reserve ambulances are being funded, and the only explanation by the EMS Chief was that the

issue of the reserve ambulances was too complicated and difficult to explain, this would be a true statement. It is still not clear as to how the shared funds are used to share the costs of the reserve ambulances since the Alliance doesn't purchase new reserve ambulances.

- A reserve ambulance is a used vehicle. It is one that is held as previously explained for use when all other vehicles are out, or when a vehicle in the main fleet is out for repair. So why is it being funded? And, what is being funded? Or, in reality, is the City funding a larger percentage of a new ambulance for the Alliance?

- Finally, if the City had 5 ambulances prior to the Alliance and 2 of them were reserve, why share those 2 reserve ambulances with UnityPoint? If the City still wants to fund reserve ambulances, why fund reserve ambulances using the same formula for sharing operating expenses when it is known that if UnityPoint uses a reserve ambulance they will probably place five times as many miles on the vehicle as the City EMS Department?

If the shared costs for the reserve ambulances is only to create a method for UnityPoint to use one of the two reserve ambulances, it still doesn't sound like a good fiscal plan for the City, especially in light of the fact that the reserve ambulance is funded by the shared costs and the City pays the majority of the shared costs.

It would be much easier for the City to own their own reserve ambulances with their own lettering and for UnityPoint to own their own reserve ambulances. What does make sense is that after about two years, a UnityPoint ambulance would have maybe 200,000 miles on the vehicle and when it is replaced, it is not in the condition for being able to use it as a reserve for a period of time. So the ability of UnityPoint to rotate their front-line ambulances into a reserve ambulance status would be limited; and therefore, using what were previously West Des Moines EMS Department reserve ambulances helps solve the issue for UnityPoint.

EMS Department Revenue

The following table reflects the amount of revenue on an annual basis for the City of West Des Moines EMS Department. This should not be confused with the amount of revenue to the Alliance which is different and shown below in the second table.

Table 78: EMS Department Annual Revenue 2013-14 to 2016-17

City of West Des Moines EMS Department Annual Budget Revenue 2013-14 to 2016-17				
Revenue Source	**Actual FY 2013-14**	**Actual FY 2014-15**	**Revised Budget FY 2015-16**	**Budgeted FY 2016-17**
Intergovernmental				
EMS Clive – Ambulance Billing	$9,151	$14,714	$25,000	$30,000
EMS Iowa Health	$187,728	$385,825	$275,000	$275,000
EMS Alliance Transfer to West Des Moines	$120,000	$120,000	$120,000	$120,000
Charges for Services				
CPR Classes	$60,074	$36,566	$50,000	$55,000
EMS Charge	$5,140	$4,265	$500	$500
Total Annual Revenue	**$382,093**	**$561,370**	**$470,500**	**$480,500**

The table above indicates the amount of revenue for the City of Clive EMS billing services provided by the Alliance. It also reflects the annual revenue from UnityPoint, which is the balance owed to the City after expenses are calculated based on the cost sharing formula for Administration and Operational costs. This cost sharing will be covered in more detail below.

The additional revenue is the Administration Fee charged to the Alliance for services provided by the City of West Des Moines to the Alliance. It should be noted that the $120,000 fee for Administrative Services are paid from the Alliance budget, but the $120,000 is shared by the City and Iowa Health based on percentages.

In the 2015-16 budget, the cost sharing percentage was 55.3% for the City and 44.7% for UnityPoint. So in reality, the Alliance paid the City $120,000 for Administrative Services, but of that amount the City paid $66,360 through the City EMS Department share of the costs.

The following table indicates the amount of annual revenue for the Alliance, with the largest share being revenue from Ambulance Transport Fees.

Table 79: EMS Alliance Annual Revenue 2013-14 to 2016-17

EMS Alliance Annual Revenue Sources 2013-14 to 2016-17				
EMS Alliance Revenue Source	**Actual FY 2013-14**	**Actual FY 2014-15**	**Revised Budget FY 2015-16**	**Budgeted FY 2016-17**
Ambulance Revenue	$3,205,139	$3,082,181	$2,800,000	$3,000,000
UnityPoint	$187,728	$385,825	$275,000	$275,000
City of Clive	$9,151	$14,714	$25,000	$30,000
Other Revenue	$15,053	$13,261	$500	$500
West Des Moines General Fund	$1,357,119	$1,187,049	$1,504,000	$1,499,400
Total Revenue	$4,774,190	$4,683,030	$4,604,500	$4,804,900
West Des Moines Contribution % of Operations	**28.43%**	**25.35%**	**32.66%**	**31.21%**
UnityPoint Contribution % of Operations	**3.93%**	**8.23%**	**5.97%**	**5.72%**
Ambulance Revenue % of Operations	**67.14%**	**65.81%**	**60.81%**	**62.43%**

The above table reflects the fact that in 2016-17, it is expected that ambulance revenue will account for 62.43% of the revenue. The City of West Des Moines will pay 31.21% of the revenue and UnityPoint will provide about 5.72% of the total revenue.

The EMS Chief shared with the consultants his data that shows the per capita costs for EMS service for the City of West Des Moines has decreased since the Alliance with UnityPoint began.

The EMS Chief's figures are based on a 2010 population of 56,609. The City of West Des Moines pays a General Fund Draw of $1,244,805 for EMS services after ambulance fees and other revenue was subtracted from the expenses. Using the $1,244,805, divided by the population of 56,609, the per capita costs was $21.99.

For comparison, the EMS Chief used 2015 numbers with a population of 63,541 and a City of West Des Moines General Fund Draw of $1,187,000 that resulted in the per capita at $18.68 or $2.91 less per capita costs after the Alliance partnership.

If one used that same formula for 2016, the General Fund Draw of $1,499,400 and using the same population of 63,541, the per capita would now be $23.59 or an increase of $1.60 since 2010.

In reality, this calculation is incorrect since there are numerous costs with operating the Alliance that are not included in the total operating costs used in the example that will be discussed below.

Ambulance Fees

The City of West Des Moines adopts by Resolution all fees for Emergency Medical Services, including Ambulance Services. The Alliance uses the fees adopted by the City Council of West Des Moines for all ambulance services provided by both the West Des Moines EMS Department and the Alliance. The following table reflects the current fees for ambulance service and the dates the resolution was adopted for approval of the fees.

Table 80: City of West Des Moines Ambulance Service Fees

City of West Des Moines – Ambulance Service Fees		
Service	**Fee**	**Date of Resolution**
Basic Life Support	$375.00	6/29/2015
Basic Life Support – Emergency	$600.00	6/29/2015
Advanced Life Support	$450.00	6/29/2015
Advanced Life Support – Emergency	$700.00	6/29/2015
Advanced Life Support – Level 2	$1,000.00	6/29/2015
Advanced Life Support – No Transport	$200.00	12/27/2011
Critical Care Transport	$1,200.00	6/29/2015
Mileage (Loaded)	$13.00	12/27/2011
Administrative Collection Fee	$30.00	12/27/2011
Public Assist Fee	$75.00	12/27/2011
Special Event Coverage	$125.00	6/29/2015
Ambulance Report Request Fee	$10.00	12/27/2011

Ambulance Billing Service

The Alliance performs all of the billing for ambulance services including for both the City of West Des Moines and UnityPoint Hospital. The EMS Department employs one full-time, one 50% part-time, and one .75% part-time billing specialists to perform the billing.

From the list of revenues for the Alliance, it is known that the annual revenue is basically about $3 million dollars annually. But what is not known is how many dollars are not being collected.

EMS billing has become a specialty that requires a great deal of training and knowledge to become proficient in billing for ambulance services and to obtain the highest collection rate for services. It is critical for the ambulance billing service to maintain their knowledge of the rules and changes in rules that pertain to EMS billing in order to avoid problems with the insurance companies or Medicare and/or Medicaid. There are numerous examples of EMS/ambulance departments/services being audited by the federal government for ambulance billing services issues with the final result the agency and/or organization being fined large sums of penalties for failure to follow the rules.

As indicated, the EMS Department does employ billing specialists, but what happens if one of them are out of the office on a long-term illness or on a family medical leave? The question would be who would handle the ambulance billing service then? How quickly could a replacement billing specialist be trained?

Many EMS and ambulance services no longer perform in-house ambulance billing services for many reasons, but primarily due to the complexity of the billing process. There are multiple EMS ambulance billing services that provide the service with very competent staff that are very knowledgeable about the rules pertaining to EMS billing that have experience working closely with state and federal agencies. EMS ambulance billing services usually work on a percentage fee based on the amount of dollars actually collected. The fees can range from about 5% to over 12% and many times the fees are based on the region of the country, the competition for the customers, the number and types of reports expected by the EMS service and sometimes the type of software and computer hardware the billing service could provide.

Another positive about an outside ambulance billing service is the fact that if the outside agency billing specialist is off on a long-term illness or family medical leave, it wouldn't affect the EMS/Ambulance Department since an employee would no longer be performing the billing service. The same result would occur for normal vacations, sick leave, holidays or other time off.

Currently, the Alliance uses Zoll EMS Billings software that was purchased in 2012 according to the City Finance Department Budget Analyst at the costs shown in the following table:

Table 81: Alliance Zoll Billing Software

City of West Des Moines - Alliance Billing Software Zoll Software Purchased in 2012		
RescueNet Billing Software	$16,575	
RescueNet EPCR Deployment	$12,000	
RescueNet Billing Deployment	$10,500	
RescueNet Billing License	$5,000	
RescueNet Billing License	$6,240	
Implementation Cost	$6,118	Travel, lodging, meals – Zoll Staff
Total	**$56,433**	
Ongoing Costs – Annual Maintenance	**$14,071.60**	**Paid Quarterly – Shared Costs**

The information in the above table was provided to the consultants by the WDM Finance Department with receipts for the products that were purchased. It is interesting to note that when this software was purchased by the EMS Department, that during the budget development process the Finance Department was told the funds were going to be used to replace defibrillators. However, after the budget was approved, the EMS Department worked the billing software into the defibrillator replacement plan. In most of the organizations in which the Consultants have conducted studies, this type of transaction would have required the approval of the Finance Director, City Manager, and/or City Council.

UnityPoint Shared Costs

The funding for the EMS Alliance has been a mystery to many of the stakeholders, but it is not too difficult to understand.

The EMS Department tracks Administrative Costs and Operational Costs on a monthly basis. The Administrative costs are shared between the WDMEMS and UnityPoint based on the percentage of total calls by each organization. The Operational costs are shared between the WDMEMS and UnityPoint based on the number of hours that ambulances for each organization are staffed.

Administrative Costs in the Alliance budget include:

- Personnel Services for the EMS Administration Staff

- Supplies and Services for Administration Staff
- Universal Commodities – which include the current annual Administrative Fee of $120,000 paid by the Alliance to the City of West Des Moines for Administrative Services
- Capital – which is basically very limited amounts

Operational Costs in the Alliance budget include:

- Personnel Services – Salaries and benefits
- Supplies and Services for operations
- Universal Commodities
- Capital - which is basically very limited amounts

The following table illustrates the shared costs of the Alliance for FY 2015-16 with the breakdown of costs for the City of West Des Moines and UnityPoint:

Table 82: Alliance Shared Operating Costs FY 2015-16

Alliance Shared Operating Costs FY 2015-16	
Administrative Accounts – Percent of Calls	
Total Administrative Costs	$1,111,977.30
West Des Moines Calls	4,797
UnityPoint Calls	3,871
West Des Moines – Percent Calls	55.3%
UnityPoint – Percent Calls	44.7%
West Des Moines Share of Administrative Costs	$615,384.76
UnityPoint Share of Administrative Costs	$496,592.54
Operational Accounts – Percent of Staffed Hours	
Total Operational Costs	$3,232,850,29
West Des Moines Hours Staffed	26,352
UnityPoint Hours Staffed	19,554
West Des Moines Percent Hours Staffed	57.4%
UnityPoint Percent Hours Staffed	42.6%
West Des Moines % of Hours Staffed Costs	$1,855,793.81
UnityPoint % of Hours Staffed Costs	$1,377,056.48
Total Alliance Shared Costs	
West Des Moines	$2,471,178.57
UnityPoint	$1,873,649.02
Total Costs	**$4,344,827.59**

The final shared costs for each organization is determined by taking the shared operating costs for each organization and subtracting the EMS Ambulance Fee revenue of each organization to determine the final shared costs for each partner.

The following table illustrates the FY 2015-16 final shared operating costs for each organization using the above formula:

Table 83: Alliance Final Shared Costs FY 2015-16

Alliance Final - Shared Costs FY 2015-16	
West Des Moines Total Shared Costs	$2,471,178.57
West Des Moines Ambulance Fee Revenue	$1,492,985.03
West Des Moines Operating Costs Balance Due	**$978,193.55**
UnityPoint Total Shared Costs	$1,873,649.02
UnityPoint Ambulance Fee Revenue	$1,681,874.29
UnityPoint Operating Costs Balance Due	**$191,774.72**

The West Des Moines operating costs balance is generated by the City Budget General Fund and the balance for UnityPoint is paid by them directly to the City.

Recommendations - EMS Department

- *The issue of the reserve ambulances needs to be addressed. Our recommendation is that the City own and maintain the two reserve ambulances at 100% of their own costs. UnityPoint can own and maintain their own reserve ambulances if they decide to do so.* ***Priority 2***

- *It is recommended that the EMS Billing Service be contracted out to a private EMS Billing service for the reasons listed in this section.* ***Priority 2***

EMS Department 28E Agreement – Iowa EMS Alliance

The current 28E Agreement between the City of West Des Moines and Iowa Health - Des Moines for the Provision of Emergency Medical Services – Ambulance is dated March 10, 2008 and it was for a period of five years with an expiration date of June 30, 2013. After the initial five-year term, the agreement renews automatically for a one-year term. The agreement can be terminated by either party upon providing written notice to the other party by no later than September 1st of the renewal year for a June 30th termination.

The agreement does create an Advisory Board made up of members from both organizations.

Under the agreement, the financial terms include the following language:

- Iowa Health – Des Moines shall lease two fully equipped ambulances to the City for One Dollar ($1.00) per year

- The Administrative costs for the operating budget are divided by the proportional EMS Calls for services within the past calendar year.

- Administrative Costs are defined as:
    - All salaries, benefits and training of line staff including workers' compensation insurance coverage.
    - All costs associated with operation of the administration and billing office, which shall include, but not limited to, computer software and maintenance, postage costs, property/casualty insurance, and office supplies.

- The Operational costs for the operating budget are divided based on the proportional number of hours an ambulance is staffed by each organization.

- Operational Costs are defined as:
    - All salaries, benefits and training of line staff including workers' compensation insurance coverage.
    - All costs associated with operating the EMS provided, which shall include but not limited to disposable supplies, fuel, maintenance and medications.

- Each agency will provide suitable living quarters and garages to accommodate the number of ambulances operating by their agency.

- Each agency is required to make the following services available for EMS use:
    - Network connectivity to allow for Internet and VPN access
    - Telephone and all utilities, including water, gas, electric for the facility
    - The garages shall have running water with adequate drainage to allow cleaning of the ambulances.

EMS Department 28E Agreement Issues

One of the major problems with the 28E Agreement between the City of West Des Moines and Iowa Health – Des Moines is the fact that the City is not being reimbursed for a number of City Administrative Costs related to the Alliance operations. These administrative services include the following:

- Human Resources
    - Recruitments

    - Benefit Administration
    - Collective Bargaining

- Finance
    - Payroll
    - Accounting/Reporting
    - Budget Preparation

- Information Technology
    - Software support
    - Hardware Support
    - Infrastructure

- Legal
    - Litigation Service
    - Collection Services

- City Manager's Office
    - Administrative Support

- City Clerk
    - Administrative Support

- Risk Management
    - Insurance Coverages

When the EMS Chief was asked by the consultants about the $120,000 in the Alliance operating budget, we were told it was for annual Administrative Services provided by the City.

When the consultants could not find any language in the 28E Agreement for the Administrative Fee, the consultants asked the EMS Chief where the Administrative Fee language or the fee itself came from. The EMS Chief then stated that he thought Westcom Dispatch was the first 28E agreement with the Administrative Fee and it was included when it was formed. He stated that he understood it to represent 10% of the operating budget and that each agency paid their proportionate share. It should be noted that the Westcom Dispatch 28E Agreement does not have any language referring to the Administrative Fees, but the fees do appear to be 10% of the operating budget.

The EMS Chief further stated that it was his understanding that the Alliance agreement was the same as Westcom Dispatch and that the Administrative funds were intended to offset costs such as payroll, HR, IT, etc. He said the Administrative Fees have always been determined by the Finance Department and it was never touched at the Department level. The EMS Chief referred the Consultant to Mr. Jody Smith, the retired City Finance Director.

The consultants did make contact with the retired Finance Director, who remembered the issue with the 28E Agreement with Iowa Health – Des Moines. From his recollection, Mr. Smith indicated that at the time of the agreement being finalized by the City, that he and his staff brought up the issue that the reimbursement of Administrative Costs to the City were not included in the agreement.

At the time, the EMS Chief stated that it was too late to go back and include those costs in the agreement as it would then require the agreement to go through the whole review process again at the hospital. The EMS Chief stated that the 10% of the operating budget for administrative costs to reimburse the City for general government/support services would definitely be included in the budget. The EMS Chief stated that the administrative costs would be addressed in a Memorandum of Understanding (MOU) on operating procedures.

Mr. Smith stated that putting the Administrative Costs in the agreement language was basically a battle that the Finance Department lost with the EMS Chief and the previous City Manager.

After the consultants talked to Mr. Smith, the current City Finance Director did find notes from a member of the Finance Department from a meeting held on March 5, 2008 to discuss the issue of the Administrative Fees not being included in the 28E agreement with Iowa Health – Des Moines. The notes include who was in attendance at the meeting and the attendees included the EMS Chief, Jody Smith, Sheila Schmitt (Accounting Manager) and a name that the consultants are not able to identify (City Manager).

The notes from this meeting basically confirmed what the consultants were told by Jody Smith regarding the lack of language in the 28E agreement to address the Administrative Costs to the City.

The current Finance Director indicated that he believes what happened was that the first year of the 28E agreement, the budget was set at $120,000 for the Administrative Costs, but the number never was adjusted because the Memorandum of Understanding was never completed nor was the language ever formalized in the 28E agreement.

The current City Finance Director did do some calculations as to the estimated costs to the City for the Administrative services being provided to the Alliance. As stated before, these administrative services include Human Resources, Finance, Information Technology, Legal, City Manager's office, City Clerk's office, and Risk Management.

In his calculations, he used two methods to determine what the percentage should be to reimburse the City. The City has a total of 402 employees and the Alliance has a total of 41 employees, which equals 10.20% of the total City employees.

The second method he used was the total City operating budget of $59,264,957 and the Alliance operating budget is $4,985,283, which equals 8.41% of the total City operating budget.

The Finance Director then calculated the cost of each of the City Departments that provide administrative services to the Alliance and multiplied their budgets by 8.41% to calculate the cost of the services to the Alliance. The following table indicates the estimated costs using the calculation of 8.41% of the City costs:

Table 84: Estimated Costs of City Administrative Services to Alliance

Estimated Costs of City Administrative Services to Alliance	
City Department	
Human Resources	$87,651.54
Finance	$93,456.56
Information Technology	$247,851.81
Legal	$55,003.03

Estimated Costs of City Administrative Services to Alliance	
City Manager's Office	$91,253.08
City Clerk	$34,303.76
Risk Management	$37,432.76
Total	**$646,951.91**

The City could decide to use this calculation or just simply use a number of 10% of the operating budget costs as the fee for providing administrative services to the Alliance. At the present time, the City is only receiving $120,000 annually for these services. If the City decided to use the 10% of the operating budget, the shared costs would be an estimated $498,528, which is substantially more than $120,000 currently being charged. If the City would have been collecting the 10% Administrative Fee since the agreement was implemented, it would have been an approximate $1 million dollars of additional revenue over the last four FY budgets.

Recommendations – EMS Department 28E

- *The City of West Des Moines Finance Department should be the primary city department in the development of any 28E agreements especially in terms of developing cost sharing methods and percentages to assure that the city is not subsidizing any partnerships.* ***Priority 2***

- *The 28E Agreement with Iowa Health – Des Moines should include language for sharing the various costs for the Administration Services being provided by the City of West Des Moines as outlined in this section. The City of West Des Moines is basically subsidizing the agreement at the expense of the City taxpayers.* ***Priority 2***

Westcom Budget

Westcom 28E Agreement

The current 28E Agreement for Westcom includes the communities of the City of Clive, The City of Norwalk, the City of Urbandale, the City of West Des Moines and the City of Waukee. The City of Waukee became a new member with the approval of the new agreement that was approved on February 23, 2015. The agreement is only terminated when one of the Authority Members notifies the other members not later than December 31st of any year and then 18 months after on June 30th the agreement would terminate. All of the equipment and other assets for the consolidated dispatch unit are owned by the unit or Westcom.

The 28E agreement is similar in that there is a Management Committee and that the City of West Des Moines is the Coordinating Agency. The agreement states that the Division of Annual Operating Costs shall be based upon the population of each Authority member (City). For budgeting and "true-up" purposes, the population of Authority members is determined in November each year based on the most recent Federal Census or Census estimates.

There is no reference in the 28E agreement to the payment of an Administration Fee that is currently being paid by Westcom to the City of West Des Moines

The West Des Moines Finance Department did provide the consultant with information as to how Westcom contributes to the City of West Des Moines Administrative Costs. It appears that even though the 28E Agreement for Westcom Dispatch does not have language about Administrative Costs, somehow the costs were historically set at ten (10) % of the Westcom Operating budget.

The following information is a recap of the information provided by the Finance Department to the consultant to explain the Administrative Costs for the 2014-15 Westcom budget.

Table 85: Westcom Dispatch Administration Fee Calculation 2014-15

Westcom Dispatch Administrative Fee Calculation 2014-15	
General Budget (Westcom Dispatch)	
Total General Budget (Westcom)	$2,173,078.14
Non-Recurring/Non-Capital Expense	($3,145.52)
Capital Expense	($54,085.99)
Final General Budget (Westcom)	$2,115,846.63
Percent	.10%
Administration Fee	**$211,584.66**
E911 Polk County	
Total Supplies & Services	$363,890.05
Percent	.10%
Administration Fee	**$36,389.01**
Total FY 2014-15 Administration Fee	**$247,973.67**

It appears that the Westcom Dispatch is being charged an Administration Fee by the City of West Des Moines for the Administrative Services being provided by the City to Westcom

Dispatch on an annual basis at a rate of ten (10) % of the Westcom Dispatch operating budget minus any capital expenses.

In fact, below you will see that the annual amount of Administration fees paid by Westcom Dispatch to the City of West Des Moines follows the ten (10) % rate.

Westcom Annual Budget

In 2016-17, the Westcom total operating budget is $3,450,1143, not including funds for Capital projects which are in a different budget. The increases over the four budget years are somewhat a result of the increase in full-time equivalent (FTE's) employees for Westcom due to the increase in the number of communities involved in the partnership. In the four budget years 2013-14 to 2016-17, the FTE's increased from 21.75 in 2013-14 to 29 FTE's. Obviously, along with an increase in salaries, additional full-time employees increase health insurance, pension and other benefit expenses.

The annual Westcom budget operating expenditures have increased about 51% or $1,169,444 over the period of 2013-14 to the 2016-17 budget years as indicated in the following table:

Table 86: Westcom Annual Budget 2013-14 to 2016-17

Westcom Annual Budget 2013-14 to 2016-17				
Expenditures by Object	**Actual FY 2013-14**	**Actual FY 2014-15**	**Revised Budget FY 2015-16**	**Budgeted FY 2016-17**
Personal Services				
Full-Time Employees	$1,054,264	$1,205,088	$1,489,953	$1,723,155
Part-Time Employees	$52,808	$24,808	$75,000	$75,000
Contract Help	-	-	-	-
Overtime	$175,289	$157,689	$82,500	$155,000
Health, Dental, Life Insurance	$210,874	$233,947	$287,937	$344,681
Retirement Contributions	$212,416	$227,323	$278,530	$356,277
Other Pay	$18,485	$18,846	$19,740	$22,560
Total Personal Services	**$1,274,136**	**$1,867,016**	**$2,233,660**	**$2,676,673**
Supplies and Services				
Operations and Maintenance	$196,651	$188,183	$638,770	$441,570
Conference, Travel & Training	$15,543	$18,068	$15,000	$16,400
Utilities	$44,586	$35,282	$47,8750	$44,250
Contractual Obligations	$225,791	$247,974	$230,000	$260,000
Donations to Agencies	-	-	-	-

Westcom Annual Budget 2013-14 to 2016-17				
Expenditures by Object	**Actual FY 2013-14**	**Actual FY 2014-15**	**Revised Budget FY 2015-16**	**Budgeted FY 2016-17**
Non-Recurring/Non-Capital	$2,000	$3,146	$2,000	$2,000
Total Supplies & Services	**$484,571**	**$492,653**	**$933,520**	**$764,720**
Capital Outlay				
Replacement Charges	$5,691	$9,444	$9,450	$8,750
Computer Hardware & Software	$3,733	$1,518	-	-
Vehicles	$10,000	-	-	-
Miscellaneous Equipment	-	-	-	-
Total Capital Outlay	**$19,424**	**$10,962**	**$9,450**	**$8,750**
Lease/Purchase Payments	**$52,568**	**$52,568**	-	-
Total Expenditures	**$2,280,99**	**$2,423,199**	**$3,176,630**	**$3,450,143**

Another area of the Westcom Dispatch budget is the increase in the 2015-16 fiscal year of the Operations and Maintenance budget by about $450,000 over the previous year. In 2016-17 budget, the Operations and Maintenance budget is still about a $250,000 increase over the 2014-15 fiscal year budget.

In reviewing the Westcom budget, there is an average of only $2,300 to $5,500 for building maintenance funds, almost no funding for natural gas and $10,000 to $14,000 for electricity costs between 2013-14 to 2015-16. In the 2016-17 budget, there is a projected $4,000 for electricity budgeted.

The Westcom budget does have an annual maintenance fee, which is the fee paid to the City of West Des Moines. As discussed above, the Administration fee is ten (10) % of the operating budget, minus any capital expenses. The administration fee paid by Westcom on an annual basis to the City of West Des Moines is indicated in the following table

Table 87: Westcom Annual Administration Fee Paid to West Des Moines

Westcom Budget – Annual Administration Fee Paid to West Des Moines				
	Actual 2013-14	**Actual 2014-2015**	**Budgeted 2015-16**	**Budgeted 2016-17**
Administration Fee	$225,791.07	$247,973.67	$230,000	$230,000

In addition to the operating budget, Westcom does collect fees for 911 as discussed earlier in this section that are used to improve radio interoperability for the emergency services communication

systems. As mentioned earlier, Westcom does have a 28E Agreement with the City of West Des Moines for the City to provide Information Technology services to Westcom. The annual payment for this 28E agreement for the IT services is paid from E911 funds and not from the Westcom budget directly.

Westcom Revenue

As discussed previously in this report, the Westcom Dispatch through a 28E agreement, is a partnership comprised of five communities. The following is the shared cost revenue from the other four communities that comprise the Westcom Dispatch Center along with the City of West Des Moines. The City of Waukee became a member of the Westcom partnership and started paying their share in the 2015-16 fiscal year.

Table 88: Westcom Annual Budget Revenue 2013-14 to 2016-17

Westcom Annual Budget Revenue 2013-14 to 2016-17				
Revenue Source	**Actual FY 2013-14**	**Actual FY 2014-15**	**Revised Budget FY 2015-16**	**Budgeted FY 2016-17**
Joint Dispatch - Clive	$461,465	248,876	$354,972	$393,029
Joint Dispatch - Norwalk	$103,208	$168,305	205,312	$221,122
Joint Dispatch -Urbandale	$558,710	$1,003,421	$897,964	$950,788
Joint Dispatch - Waukee	-	-	$368,492	$426,522
Total Annual Revenue	**$1,961,703**	**$1,420,602**	**$1,826,710**	**$1,991,461**

Westcom Shared Operating Costs

The operating costs for Westcom Dispatch are shared by the five communities that are members of the partnership.

The following table indicates how the costs for Westcom are being shared between the five communities for the 2016-17 budget:

Table 89: Westcom Shared Operating Costs 2016-17 Budget

Westcom Shared Operating Costs 2016-17		
Total Operating Expenses	$3,450,143	
Less Operating Revenue		
WDM Schools	($30,000)	
Miscellaneous Revenue	($2,500)	
Net Operating Costs	**$3,417,643**	

Westcom Shared Operating Costs 2016-17		
Westcom Partner Agencies		**Percentage of Operating**
Clive	$393,029	11.50%
Norwalk	$221,122	6.47%
Urbandale	$950,788	27.82%
Waukee	$426,522	12.48%
West Des Moines	$1,426,182	41.73%
Total	**$3,417,643**	**100.00%**

The above table indicates that the City of West Des Moines contributes the highest percentage of operating costs at 41.73% for FY 2016-17. Again, the shared costs are based on the population of each community and the City has the largest population of the five partners.

Recommendations – Westcom Dispatch

- *The 28E Agreement with Westcom should be re-evaluated by the City Finance Department to determine the appropriate expenses that the City should receive for providing the building and related expenses for the Westcom location in the West Des Moines Public Safety station. The City of West Des Moines is basically subsidizing the agreement at the expense of the City taxpayers.* ***Priority 2***

EMS Overview

As previously stated, the financials related to the Alliance were the most complex with numerous occurrences of conflicting information or information that could not be validated.

Approximately two months of assessment by the consulting team were needed to provide what we believe is the most accurate description of the fiscal implications to the City of the Alliance agreement.

If nothing else is gained from this fiscal assessment of the Alliance, is the fact that this agreement is so complex that at times it defies a simple explanation with validated consensus between the EMS and finance department. This alone should be most problematic to City governing officials who indicated their desire for transparency in West Des Moines government.

To be clear, after considerable review of the information – by multiple attempts - the consultants believe that the City is not being reimbursed fully for the Administrative Services being provided by the City through the agreements. The consultants' findings indicate that the Alliance agreement has been a concern from the beginning of the partnership; and these issues have been identified by the Finance Director and staff at the time the Alliance was created. The EMS Chief told the consultant he didn't have knowledge about the Administrative Fee for Services; however, the study findings are clear that the EMS administration should have been aware of the problem in the lack of language in the agreement to fully reimburse the City for their actual administrative costs.

In this section, the consultants have attempted to explain the funding and the formulas used for the various partnerships. As a result of the lack of clarity, inability to be explained, and its complexity, the Consultants recommend a full scale audit and development of a transparent process. All documents, fees, and agreements should be spelled out and understood by all parties.

Recommendation – Fiscal Overview

- *All three budgets – EMS department, Westcom, and Alliance should be separated, and developed so that they are independent and easier to track revenue and expenses for each organization.* ***Priority 2***

- *The City should conduct a "Full Scale Audit" of all fiscal components of the Alliance agreement since its inception.* ***Priority 2***

- *Based upon the external full-scale audit, systems should be developed so that all accounting of the three organizations are aligned with sound accounting principles, are easy to understand, ensure a check and balance procedure with City finance, and can identify actual costs of service.* ***Priority 3***

Alliance – Should it Continue?

As stated at the beginning of this report, the focus of the study was on the consolidation of fire and EMS and the Alliance. Four main questions heard regarding the Alliance to the consultants during the interviews were:

- *What is the value of the Alliance to the City?*
- *Should the Alliance remain as is?*
- *Develop a more equitable agreement?*
- *Withdraw from the Alliance?*

After a thorough analysis of the Alliance, the Consultants will attempt to answer these four questions.

What is the Value of the Alliance to the City?

The value gained to the City is through the high level of service from highly trained paramedics. WDMEMS staff gained far advanced experience having access to the hospital facilities. It was communicated to the consultants that staff assigned to hospital vehicles could freely roam the hospital emergency department and other areas and assist nursing and physician staff in performing procedures such as IV cannulation and endotracheal intubation on non-traditional patients.

Many stakeholders also touted WDMEMS' gold standard pediatric care due to this arrangement and mentioned personal experiences of intubating neonatal patients, which is rarely done in pre-hospital care. It was also articulated that the long, extended transport times with highly acute patients was a benefit to the provider as the continuum of care was extended, allowing for increased clinical time that 9-1-1 providers often do not experience.

With that being said, stakeholders were also concerned with the Alliance as it was a drain on the resources of the EMS department as a whole. Once again these concerns warrant being heard and

the consultants believe the "Employee Satisfaction Survey" would be beneficial which might improve morale, excessive overtime, unionization, and employee turnover.

Should the Alliance Remain as Is?

With everything considered, the consultants would answer no. However, that answer is far too simple to explain the complexity of the issues. As previously noted, the bottom line advantage is the Alliance is providing a very high level of EMS to those in need in the City of Des Moines. The project medical director emphatically indicated that if you required pre-hospital emergency medical care, your choice of providers should be WDMEMS.

Operationally, there are several concerns. First, the amount and cost of turnover of EMS employees is excessive, resulting in a morale issues for many of the WDMEMS employees, as articulated during the interviews. Recently, the fact that senior full-time paramedics are leaving suggests there is dysfunction within department.

Funding is perhaps the issue that should be of most concern to the governing officials of West Des Moines. The following division of costs for administration and operations of the Alliance for 2015 was given as illustrated in the table below.

Table 90: Percentage of Costs Sharing

2015	City	UPH
Administrative Costs	54.0%	46.0%
Operational Costs	57.4%	42.6%

The consultants were told that administrative costs for payroll processing, human resources, information technologies and other ancillary costs are reimbursed by participating Alliance members, using the same funding formula percentage as illustrated in the table above.

The issue, discovered by the consultants, is that the Administrative Costs are considerably undervalued and the City is encountering significantly higher costs. If these costs were calculated into the shared percentages, the actual City percentage would be notably decreased. The same is somewhat true for the Operational Cost, but to a lesser percentage.

As suggested, an audit needs to occur and the full cost needs to be determined as well as all of the agreements, and processes documented so that the complexity is eliminated and transparency is developed.

Develop A More Equitable Agreement?

The consultants recommend that this is exactly the best solution to the current Alliance findings. Every governing body strives to be cost-effective when it comes to spending taxpayers' dollars. However, it cannot be overlooked that the term "cost-effective" has two parts; **cost** being the dollars needed to provide the service, and **effective** being the ability to provide the proper level of response and services. Both parts are critically important when projecting future levels of emergency service protection, and neither part can ignore the other.

Thus, the City and UPH meet and clearly identify actual and indirect costs in the administration and operations of the Alliance. Every effort should be made to continue the agreement in a mutually fair distribution of costs

Withdraw From the Alliance?

The agreement is basically calculated in the same manner in which it was first implemented without consideration to identifying changes in costs associated with the Alliance since that time. Therefore, after a comprehensive audit and reassessment of all aspects of the Alliance, a document should be developed and published that describes the City and UPH's decision on the continuation or discontinuation of the Alliance. Based upon the data to date, the Consultants are in favor of its continuation; however, that continuation is predicated upon a mutual cost effective consensus between the parties.

Summary of Recommendations

Priority	Objective	Recommendation
1	Officer Training	*The fire department and EMS Department must coordinate their incident command structure for the safety of each organization. Training with, and implementing of the NIMS components, should be a priority.*
1	Station 18	*Station #18 should install a direct pipe to the outside of the building to supply intake air for the air compressor used to fill the Self Contained Breathing Apparatus bottles.*
1	Station 22	*Station #22 should install a direct pipe to the outside of the building to supply intake air for the air compressor used to fill the Self Contained Breathing Apparatus bottles.*
2	Compensation	*Conduct an analysis of how overtime assignments are distributed. Develop a rotation system whereby all employees have access to overtime to reduce these excessive amounts of overtime.*
2	Compensation	*Conduct an external market analysis and adjust the paramedic wage grid to not only ensure the wages are competitive to the market; but to increase the spread between an EMT and paramedic.*
2	Compensation	*Evaluate the mix and develop a balance between base pay and overtime, as well as the work schedule – may need to be reconfigure. Change the work schedule to reduce overtime (and fatigue); reconfigure the system to determine how overtime is allocated; and rework the base pay schedule.*
2	Employee Satisfaction Survey	*All EMS employees should be encouraged to participate in a confidential satisfaction survey overseen by either the city's Human Resource department or an independent contractual service.*
2	EMS Training	*Update the record management system to ensure that accurate training hours per employee are easily assessable and accurate training hours can be validated.*
2	Fatigue Matrix	*Include the issue of the fatigue matrix in the "Employee Satisfaction Survey" previously recommended.*
2	Fire Prevention/Safety Ed	*Consideration should be given to explore and implement the coordination of Fire Prevention Safety, Life Safety, EMS, and Police Public Education efforts between the various departments.*
2	Fire-Medic Position	*The three existing fire-medic positions should be dissolved and the three personnel assigned full-time to the fire department. There will be challenges in the transition process but the consultants believe it is achievable and in the best interest of the city and employees.*

Priority	Objective	Recommendation
2	Fiscal - 28E Agreement	*The City of West Des Moines Finance Department should evaluate the cost to the City for participating in these partnerships to assure the City is collecting the costs for providing all services associated with each 28E Agreement.*
2	Fiscal - 28E Agreement	*In the future, the City Finance Department should have a leadership role in the development of any revised or new 28E Agreements or any similar types of partnerships involving the City of West Des Moines departments.*
2	Fiscal - EMS	*The issue of the reserve ambulances needs to be addressed. Our recommendation is that the City own and maintain the two reserve ambulances at 100% of their own costs. UnityPoint can own and maintain their own reserve ambulances if they decide to do so.*
2	Fiscal - EMS	*The City of West Des Moines Finance Department should be the primary city department in the development of any 28E agreements especially in terms of developing cost sharing methods and percentages to assure that the city is not subsidizing any partnerships.*
2	Fiscal - EMS 28E	*The 28E Agreement with Iowa Health – Des Moines should include language for sharing the various costs for the Administration Services being provided by the City of West Des Moines as outlined in this section. The City of West Des Moines is basically subsidizing the agreement at the expense of the City taxpayers.*
2	Fiscal - FD	*The City Finance Department should work with the West Des Moines Fire Chief to determine the actual costs for the City of West Des Moines to provide Administrative Services for the Westside Fire Facility agreement.*
2	Fiscal - FD	*The Fire Chief should work with the City Finance Department to determine if there is a way to share the operational costs for the Public safety stations with the EMS Department. Currently, the Fire Department funds all of the operational costs of the public safety stations including utilities, maintenance, supplies and other needs.*
2	Fiscal - FD	*The City of West Des Moines should address the fact that in the 28E Agreement with the City of Clive for the Westside Fire Facility the City collects no reimbursement for the cost of the City to provide Administrative Services for the agreement. The services include Human Resources, Finance, Information Technology, Legal, City Manager's office, City Clerk's office, and Risk Management.*
2	Fiscal - Overview	*All three budgets – EMS department, Westcom, and Alliance should be separated, and developed so that they are*

Priority	Objective	Recommendation
		independent and easier to track revenue and expenses for each organization.
2	Fiscal - Overview	*The City should conduct a "Full Scale Audit" of all fiscal components of the Alliance agreement since its inception.*
2	Fiscal - Westcom	*The 28E Agreement with Westcom should be re-evaluated by the City Finance Department to determine the appropriate expenses that the City should receive for providing the building and related expenses for the Westcom location in the West Des Moines Public Safety station. The City of West Des Moines is basically subsidizing the agreement at the expense of the City taxpayers.*
2	Governance/Leader ship	*Consider the creation of the position of Assistant Fire Chief to support the Fire Chief in management of administrative requirements.*
2	Governance/Leader ship	*Consider reclassifying the EMS Lieutenants to a rank that is more reflective of their daily shift responsibilities.*
2	Inter-Departmental Training	*Although not witnessed by the consultants, a large number of interviewees indicated there were serious "disconnects" between fire and EMS departments on some joint emergency scenes. Therefore, joint training between fire and EMS should occur on a monthly basis.*
2	Inter-Departmental Training	*All EMS providers should be certified in NIMS courses equivalent to the fire department.*
2	NFPA Standards	*The city should not adopt either NFPA standard. Adoption would include the adoption of all OSHA and NFPA standards by reference.*
2	Officer Training	*All department officers, including acting officers, should be required to obtain a minimum of two hours of training in Supervision Topics per month, in addition to all other training requirements. The classes should address the specific needs of the City of West Des Moines.*
2	Response Times	*Greater emphasis should be placed on improving the Turnout Times for both fire and EMS. Turnout Times are in complete control of the department leadership and not impacted by any other circumstance.*
2	Shift Schedule	*Evaluate the 51s staffing model or the 12-hour model especially for part-time personnel, but also for full-time personnel as the call volume continues to increase.*
2	Staffing - EMS	*It appears that either more staffing, or as suggested in the human resource section, a review of the compensation, work schedule, Alliance work rotation, and long run stipend combination is needed to increase the response to Alliance transports is needed.*

Priority	Objective	Recommendation
2	Staffing - EMS	*Re-evaluation of distribution of overtime so that longer tenured employees are not the only employees receiving the extra compensation; thus, helping to minimize the turnover and reduce the lack of staffing and need for employee coverage.*
2	Staffing - EMS	*Need to assess who is responsible for determining call-in – the employee or administration? If there are significant openings, then it should be Administration's responsibility to fill – not the employee.*
2	Staffing - Station 17	*The Fire Chief should continue to develop a plan that will provide for fire protection on-duty personnel 24/7, with a combination of part-time and career personnel. The area being protected by Station 17 warrants a 24/7 engine company.*
2	Succession Planning	*Alternative work schedules continue to be made available to part-time EMS due to age and limited years of service, to limit turnover and cater to the needs of the group of individuals.*
2	Westcom	*The new CAD system should ensure that strategical data can be retrieved to confirm "time from CAD entry to Dispatch" and this data becomes part of the Quality Assurance program.*
3	Apparatus - Sufficiency	*Investigate transferring equipment and remove the truck and PODs from the inventory.*
3	Apparatus - Sufficiency	*Assess the need to maintain A197 (Air Foam Unit) and consider transferring equipment and remove the unit from the department's inventory.*
3	Compensation	*Re-evaluate the compensation structure for part-time firefighters to not only increase the wages to be more competitive, but to tie the increases to hours of service rather than years of service.*
3	Compensation	*Consider more incentives for longevity – such as the Length of Service Award Program (LOSAP).*
3	Compensation	*Maintain the EMT wage grid, but determine where the average market rate should be attained and adjust the schedule if necessary.*
3	Compensation	*Change the EMS hourly rate calculation to the more accepted 2,912 hours per year or 2,918.4 hours per year. Overtime will continue to be paid for hours worked over 40 within a defined work week.*
3	Consolidation	*Future consideration of consolidation of the two safety departments should occur when one of the two current Chiefs positions becomes vacant. The individual who becomes the Chief of the consolidated department must*

Priority	Objective	Recommendation
		possess the skills, education, and experience to succeed in that role.
3	Emergency Activities	*The fire department should publish only the total emergency call activity in its reports and utilize total unit responses for apparatus maintenance and replacement purposes only.*
3	EMS Training	*Generate a monthly report from the record management system to identify when employees are within 90 days of the expiration of a certification.*
3	EMS Training	*Generate a monthly report to identify employees who fall below the minimum threshold of training requirements and devise a plan to ensure compliance.*
3	Engine Hour Meters	*All future ambulances purchased should be equipped with an engine hour meter to more accurately record engine running time.*
3	Fire Prevention/Safety Ed	*During all educational opportunities, obtain quantifiable data including the number of residents, children, etc. impacted by the delivery of a program.*
3	Fiscal - FD	*The City of West Des Moines should address the issue in the 28E Agreement with the City of Clive for the Westside Fire Facility of West Des Moines having to track staff on a daily basis for reimbursement. The reimbursement should be based on the number of staff on duty and the number of vehicles staffed 24 hours a day, 7 days a week and 365 days a year. The payment for staffing is based on the station and vehicles being staffed and not on who is on duty on any given day. What's important in the partnership is that if there is an emergency call, a fire department vehicle will respond with a minimum number of personnel on the vehicle.*
3	Fiscal - Overview	*Based upon the external full-scale audit, systems should be developed so that all accounting of the three organizations are aligned with sound accounting principles, are easy to understand, ensure a check and balance procedure with City finance, and can identify actual costs of service.*
3	Leadership	*Ensure all supervisory personnel are trained on the fatigue model so that standards are applied consistently.*
3	Performance Evaluations	*Performance evaluations in both departments should concentrate on professional development, not only of operational skills, but also for those interested in leadership & management for succession planning.*
3	Performance Evaluations	*Part-time performance evaluations in the fire department should have discussions on the needs of the employee and their needs within the fire service for retention purposes.*

Priority	Objective	Recommendation
3	Recruitment	*Investigate changing the EMS written test to one that is validated so that if challenged, the City will not be in a liable situation.*
3	Recruitment	*Eliminate the residency requirement for part-time firefighters; or widen the distance to broaden the pool of candidates.*
3	Shift Rotation	*Develop a rotation for part-time, but also full-time personnel, so that Alliance calls are spread out more equally among department personnel.*
3	Staffing	*The need for a second administrator (Assistant Chief) within the fire department was apparent and whose job responsibilities should be related to the Operational aspects of the department, while the Chief concentrate on the Administrative aspects.*
3	Staffing - Minimum	*The department should ensure that the minimum staffing is 14 by developing a forced overtime policy. A procedure should be established to identify the process of mandatorily holding over a member whose shift has ended, until which time a replacement can be found.*
3	Station 17	*Station #17 should have their fire pole removed or the second floor pole opening sealed off; thereby, ensuring the pole cannot be used for safety concerns,*
3	Station 17	*The city should have a minimum crew of three, preferably four, on-duty firefighters 24/7 in this facility. This staffing can be accomplished with full-time, part-time, or combination of both staffing methodology.*
3	Station 21	*Consider housing all fire administration personnel in the same facility, such as Station 17. These accommodations will require some renovations.*
3	Succession Planning	*EMS leadership needs to concentrate on professional development of employees and retention activities due to the young age and years of service. There is high risk of continued turnover due to limited promotional opportunities.*
3	Training Academy	*Although the attendance in numbers of volunteers is historically low, the consultants support the continuation of the Fire Academy in order to provide new volunteer members the critical training they need.*
3	Training Academy	*The WDMFD should explore greater marketing of area volunteers in an effort to offset the expense of conducting the training for a limited number of WDMFD volunteers.*
3	Westcom	*Once the transition of the CAD system and interoperability is completed, the PSAP needs to develop a formal Quality Assurance program. Although random calls are reviewed, the PSAP would benefit from a formal program.*

Priority	Objective	Recommendation
4	Compensation	*Consider an extra stipend, i.e., $2.00 per hour, for employees assigned to the Alliance station, or on transports in excess of XX miles as an incentive for longer transports.*
4	Fiscal - FD	*The Fire department operating expenses have had very little increase over the last four budgets and it is critical that they maintain their equipment and supply needs to operate safely at emergencies.*
4	NFPA Standards	*Plan to continue to meet as many NFPA 1710 standards as possible in the future; again without adopting the standard.*
4	Recruitment	*Continue to integrate the testing process of full-time and part-time firefighters.*
4	Supervision Consistency	*A 12-month trial shift change should be tried in which the shift commanders and shift personnel are assigned as a team and work the same schedule.*
5	Consolidation	*Full consolidation would be the best consolidation type in joining the fire department with the EMS department.*
5	Consolidation	*If the fire and EMS departments were to consolidate, a new name of West Des Moines EMS/Fire Department is recommended.*
5	Consolidation	*Consolidation of the fire department and EMS department is not recommended at this time.*
5	FLSA	*If the fire department fiscal conditions warrant – consider moving sick leave from overtime calculations or add a Kelly day to decrease overtime costs.*
5	ISO	*An ISO classification of Class 2 is an impressive rating. However, the consultants do not believe any additional resources or fiscal commitment should be made to reduce the classification to a Class 1; rather, the city should attempt to maintain the Class 2 rating in the future.*
5	OSHA	*The fire department leadership must continue to ensure that the OSHA "two-in/two-out" rule is practiced on all structure fires.*
5	Staffing - Part-time	*The consultants fully support the efforts by the department leadership to convert the volunteer/paid-on-call staffing methodology to part-time status and assigning shifts to those personnel.*
5	Standard of Coverage	*Continue to review, monitor, and adjust the current Standard of Response Coverage plan as growth and changes occur within the city. This should include departmental 28 E agreements where appropriate.*
5	Station - Other	*A new station, currently in the planning process, is supported. The proposed location is appropriate.*
5	Station - Other	*Based upon current call volume no stations can be eliminated at this time.*

Appendix A – Fire Data Request

Fire Component

Show each year data separately i.e.2013, 2014, 2015 – do not group years together
We request data in an electronic format on a flash drive or disk
If an area does not apply simply indicate NA
Do not send this information. Once collected we will meet with you on site to review it.
Call if you have any questions – especially before conducting hand counts

- **General Information**
  - Overview of the department
    - History
  - Overview of the area protected
    - District
    - City/Village
    - Any other protection areas
  - Population – Residents of Protection Area
  - In-flux or Out-flux of Daytime Population
  - Department's Strategic Plan

- **Response District –**
  - Map of Coverage Area
  - Map of the District
  - Map of Area of Concern for Relocation of Station
  - Map of Contiguous Surrounding Area Showing Department Stations Locations
  - Total Square Miles Protected
  - Square Miles of Hydrant Area
  - Square Miles of Non-Hydrant Area

- **Personnel Management/Human Resources**
  - Current Roster of Members
  - Personnel (information needed for all employees)
    - List of members (sworn and non-sworn)
      - Hire date
      - Age or date of birth
  - Organizational Chart
  - # of Career
  - # of Paid On Call
  - # of Paid On Premise
  - # of Volunteers

- # of Other Employees (Include civilian)
- Rank Structure (Number of Employees in Each Category)
  - # of days at maximum daily staffing
  - # of days at minimum daily staffing
- Current salary of each employee (name, rank, salary)
- Spreadsheet – name, rank, current salary,
- (if possible, a spreadsheet with the benefit breakout -health, pension, taxes, etc. for fiscal year of the study)
- Labor agreement(s)
- Department's By-Laws (if corporation)
- Police & Fire Commission or Civil Service Regulations
- Employee Policy & Procedure Manual (prefer electronic version)
- Promotional Process – including forms utilized
- History of Turnover (All Employees Last 3 Years – Include Reason and/or Exit Interview Data)
- Recruiting/Retention Programs
- Hiring Process (all forms)
  - Application
  - Hiring packet
  - Reference questions
  - Interview questions
  - Etc.
- Grievances/Discipline Issues
- Performance Evaluation process and forms
- Last year's overtime by employee – include rank
- FLSA pay cycle (if not in contract)
- SOG/SOP Manual – prefer electronic copy – (sure to include HR policy section)
- ESD and/or Department Employee's Handbook
- New employee Orientation Process – (packet and/or forms)

- **The Department**
  - Department SOG's
  - Department Rules & Regulations
  - Annual Reports – Last 3 Years
  - Current ISO Rating
  - Last ISO On-Site Evaluation (copy of point distribution sheet)
  - Accreditations – National or State
    - Last On Site Evaluation
  - Others

- **Emergency Activities – Last 3 Years (All Sub-Sections)**
  - # Of Emergency Responses

- **(NFIRS)** Type of Responses:

NFIRS Series	Nature of Call	# of Call
100	Fires	
200	Overpressure/Explosion	
300	Rescue/EMS	
400	Hazardous Conditions	
500	Service Calls	
600	Good Intent Calls	
700	False Alarm/False Calls	
800	Severe Weather	
900	Special Incidents	
	Total Calls	

- EMS Responses:
  - FD level of response
- Incidents by Time of Day
- Incidents by Day of the Week
- Incidents by Month
- Calls Breakdown by Area (City, District, Town, Etc.)
- Distribution by Shift
- Distribution by Station
- Response Times: (include documentation from dispatch)
  - Notification time
  - Turnout time
  - Drive time
  - Mitigation time
- Mutual Aid – Auto Responses (Given & Received) – With Whom? – Copy(ies) of Written Agreement
- Simultaneous (Overlapping) Call Data

- **Dispatch (PSAP)**
  - Who provides dispatch:
    - Location (address) of dispatch center)
    - Cost
    - Dispatch <u>data</u> – time from receiving call to FD notification
  - Who answers 9-1-1
  - Who answers cellular 9-1-1
  - # of Employees

- # of Shifts
- Staffing per Shift (minimum & maximum)
- EMD Program
- Dispatchers/Call Taker Certifications

- **Fire Station(s) – *<u>include mailing address for each station – include City & Zip</u>***
  - Current Facilities
    - # Of Stations – Street Address
    - Square Footage – (Floor Plans for each if available)
    - Age
  - Future Facility Plans/Needs Documents

- **Apparatus & Equipment –**
  - Type of Apparatus (I.E. Engine, Ambulance, Utility, Truck – Include Manufacturer)
  - Apparatus department ID number
  - Pump & Tank sizes
  - Mileage
  - Engine Hour Reading (if appropriate)
  - Vehicle VIN Number
  - Age of Apparatus
  - Manufacturer
  - Replacement Schedule
  - Apparatus maintenance records
    - Internal
    - External
  - Special Teams Apparatus
  - Specialized Equipment: Haz Mat, Water Rescue, Etc.
  - Radio, Type and Frequencies
  - Computers (Number of, Type, Age, Replacement Plan)
    - In Apparatus?
    - Software Programs

- **Training**
  - Training Records (Last 3 years) for each member
    - Training schedule
    - Training hours per month per employee
    - Training Curriculum & Lesson Plan
    - Instructors qualifications
  - Training Manual
  - Certifications Categories (state/national)
  - Special Teams – certifications

- All current employees certification level

- **Fire Prevention –**
  - Number of inspectable occupancies
  - History of Inspections & Re-Inspections (Last 3 Years)
  - Identification of Codes Adopted

- **Safety Education**
  - Public Safety Education Programs
  - Public Safety Education Data (Last 3 Years)

- **Fiscal**
  - Past three years of audited financials
  - Current year audited financials
  - Past three years budget
    - Operating – include all revenue and expenses
    - Capital - include all revenue and expenses
  - Financial policies and procedures
  - Purchasing policies
  - Equipment or Capital reserve fund ledger
  - Overtime records

  - **Revenue**
    - List of grants applied for and/or received for current year and two previous years
    - List 2% fire dues received current year and two previous years
    - List and explanation of any other department revenue received i.e. inspections fees, permit fee, etc.
  - Other information needed:
    - Equalized Assessed Valuation (EAV) if multiple communities for all

Any Additional Information Deemed Important

Revised: April 2016

Appendix B – EMS Data Request

EMS Component

Show each year data separately i.e.– 2013, 2014, 2015 do not group years together

We prefer data in an electronic format on a flash drive or disk

- **Governance**
  - Composition of governing Board
  - Governing Board involvement in service delivery
- **General Information**
  - Overview of the department
    - History
  - Overview of the area protected
    - City/Village
    - District
    - Any other protection areas
  - Population – Residents of Protection Area
  - In-flux or Out-flux of Daytime Population
  - Department's Strategic Plan
- **Response District –**
  - Map of Coverage Area
  - Map of Community
  - Map of Area of Concern for Relocation of Station
  - Map of Contiguous Surrounding Area Showing EMS Stations Locations
  - Total Square Miles Protected
- **HR/Personnel –**
  - Current Roster of Members
  - Personnel (information needed for all employees)
    - List of members (sworn and non-sworn)
      - Hire date
      - Age or date of birth
  - Organizational Chart
  - # Of Career
  - # Of Paid On Call
  - # Of Volunteers
  - # Of Other Employees (Include Non-Sworn)
  - Rank Structure (Number of Employees in Each Category)
  - Current salary of each employee (name, rank, salary)
  - Spreadsheet – name, rank, current salary,

- (if possible, a spreadsheet with the benefit breakout -health, pension, taxes, etc. for fiscal year of the study)
- Labor agreement(s)
- Department's By-Laws (if corporation)
- Employee Policy & Procedure Manual (prefer electronic version)
- Promotional Process – including forms utilized
- History of Turnover (All Employees Last 3 Years – Include Reason and/or Exit Interview Data)
- Recruiting/Retention Programs
- Hiring Process (all forms)
  - Application
  - Hiring packet
  - Reference questions
  - Interview questions
  - Etc.
- Grievances/Discipline Issues
- Performance Evaluation process and forms
- Last year's overtime by employee – include rank
- FLSA pay cycle (if agency qualifies)
- SOG/SOP Manual – prefer electronic copy – (sure to include HR policy section)
- City/Village/Town/District Employee's Handbook
- New employee Orientation Process – (packet and/or forms)

- **Emergency Activities – Last 3 Years (All Sub-Sections)**
  - # Of Emergency Responses
  - # of Non-emergency Responses
  - Type & Number of Responses:
    - ALS
    - BLS
    - Hospital Transfers (identify name of hospital)
    - Non-emergency transports, etc.
  - Detail any contracts or special arrangements for any other EMS Services provided
  - Incidents by Time of Day
  - Incidents by Day of the Week
  - Incidents by Month
  - Calls Breakdown by Area (City, District, Town, Etc.)
  - Distribution by Shift
  - Distribution by Station
  - Response Times
    - Notification time
    - Turnout time
    - Drive time
    - On scene time

    - Mutual Aid – Auto Responses (Given & Received) – With Whom? – Copy(ies) of Written Agreement
    - Simultaneous (Overlapping) Call Data
    - List Hospitals Transported to (# of transports)
    - Air Medical Transport:
        - Name of agency
        - Location of agency
- **Vehicles & Equipment –**
    - Type of Vehicles (I.E. ambulance, utility, etc.)
    - Vehicle department ID number
    - Mileage
    - Engine Hour Reading (if appropriate)
    - Vehicle VIN Number
    - Age of Vehicle
    - Manufacturer
    - Replacement Schedule
    - Apparatus maintenance records
        - Internal
        - External
    - Specialized Equipment
    - Radio, Type and Frequencies
    - Computers (Number of, Type, Age, Replacement Plan)
        - In Vehicle?
        - Software Programs
- **EMS Station(s) – *include mailing address for each station – include City & Zip***
    - Current Facilities
        - # Of Stations – Street Address
        - Square Footage – (Floor Plans for each if available)
        - Age
    - Future Facility Plans/Needs Documents
- **The Department**
    - Department SOG's
    - Department Rules & Regulations
    - Annual Reports – Last 3 Years
    - Accreditations – National or State
        - Last On Site Evaluation
    - Others
- **Safety Education –**
    - Public Safety Education Programs
    - Public Safety Education Data (Last 3 Years)
- **Fiscal**
    - Past three years of audited financials
    - Current year audited financials

- Past three years budget
  - Operating – include all revenue and expenses
  - Capital - include all revenue and expenses
- Financial policies and procedures
- Purchasing policies
- Equipment or Capital reserve fund ledger
- Overtime records
- Ambulance information –
  - Ambulance revenue current year and two previous years
  - Ambulance billing contract
  - Copy of ambulance rates charged and authority for those rates i.e. ordinance

- **Revenue**
  - List of grants applied for and/or received for current year and two previous years
  - List and explanation of any other department revenue received i.e. inspections fees, permit fee, etc.
  - Identify donations:
    - Total received
    - How is this money handled (e.g. general fund, special account, etc.)

- **Dispatch**
  - Who provides dispatch
    - Location (address of dispatch center)
    - Cost
    - Dispatch data – time from receiving call to FD notification
  - Who answers 9-1-1
  - Who answers cellular 9-1-1
- **Training**
  - Training Records (Last 3 years) for each member
    - Training schedule
    - Training hours per month per employee
    - Training Curriculum & Lesson Plan
    - Instructors qualifications
  - Training Manual
  - Certifications Categories (state)
  - Special Teams – certifications
  - All current employees certification level
  - Continuing Education Requirements
    - Who provides
    - Records of training
    - Conducted on or off duty
    - Cost of continuing education
- **Resource Hospital**

- Project Medical Director contact information
- Involvement level with resource hospital
- Breakdown of where patients are transported (3-year period)

Any Additional Information Deemed Important

Do not send this information. Once collected we will meet with you to review it.

Revised: April 2016

Appendix C – Dispatch/PSAP Data Request

Communications (PSAP) Component

Show each year data separately i.e. 2013, 2014, 2015 and YTD – do not group them

- PSAP
    - History
    - Which agencies do you handle emergency 9-1-1 for?
    - Which agencies do you handle non-emergency telephone calls for (perhaps after hour calls)
    - Breakdown of calls per agency
    - Future PSAP plans
- Personnel
    - Current roster of communications staff -full or part-time
        - Supervisors
        - Dispatchers
        - Call-takers
        - Clerical
        - Others
    - How many assigned to each shift
    - Shift hours
    - Shift rotation and days off cycle
    - Years on the department of each member
    - History of turnover
    - Recruiting/Retention Programs
    - Hiring process
    - Any labor agreement
    - Employee Policy & Procedure Manual
    - Job descriptions
    - SOG of SOP manual
    - Training program
    - Certifications/Specialties of staff
- Activities
    - Number of 911 lines and answering points
    - Number of calls answered
      -By day

      -By time of day

      -Emergency v. non-emergency
    - Listing of clerical/records duties
    - Back-up communications center
- Data – *Request 4 to 6 months of Excel sheet data in addition to averages*

    - Answering times (from when 9-1-1 rings until it is answered)
    - Entry time (from when 9-1-1 is answered until CAD entry)
    - Notification time (from CAD entry until agency is notified)
    - Arrival time (from notification to arrival at scene)
    - Pre-alerts – if so: how accomplished and time from answering 9-1-1)
- Equipment
    - 911 Equipment provider
    - Who does the PSAP answer hard line 9-1-1 calls for?
    - Who does the PSAP answer cellular 9-1-1 calls for?
    - Is cellular 9-1-1 phase II?
    - CAD system
    - Age of communications equipment
    - Radio frequencies monitored
    - Radio types (include base stations)
    - Generator/UPS equipment
    - Computers (type, age, & replacement plan)
    - Software programs used
      -Computer aided dispatch (CAD)

      -Records management (RMS)
    - In car computers
    - Paging system
    - Do you do Emergency Medical Dispatching?
        - If so, what system
        - Computer or cards
    - Do you do Emergency Priority Dispatching?
- Other
    - Mutual aid agreements (pertaining to PSAP)
    - Listing of other communications centers in the county
    - Operating budget for current year and two previous (include all revenue and expenses)
    - Capital equipment replacement plan

Any additional information deemed important is encouraged to be provided.

Appendix D: Fire Department Union Contract Review

The following is a review of the 2015-2018 agreement between the City of West Des Moines and the West Des Moines Associate of Professional Fire Fighters. This is only a review and any recommendations are suggestions by the consultant for discussion and future negotiations. Only areas of interest will be highlighted.

Article 2 – Recognition: Change Paid on Call to part-time firefighter to avoid confusion.

Article 13 – Residency Requirement: Many departments throughout the country are eliminating residency requirements as they are becoming antiquated. With the ability of the Fire Chief to deviate from this requirement in the contract, there could be subjectivity involved; thus, it would be better just to eliminate this requirement, or broaden the geographic area.

Article 10 – Hours of Work: The first paragraph indicates that the hours of work and shifts shall be determined by the EMS Chief – assume it should be the Fire Chief. Twenty-four hour personnel in sub paragraph 1 also are established by the EMS Chief.

Article 21 – Compensation: The Fair Labor Standards Act does not allow the equalization of compensation, rather, overtime, must be paid at the completion of the established pay period. In the case of the fire department – upon completion of the 27-day cycle. The payment of wages on a bi-weekly period can be accomplished as long as the pay roll department is ensuring a calculation that any wages are added and/or deducted from that equalized amount. If this is occurring, then the City would be in compliance.

Article 22 – Overtime: Suggest spelling out all hours that are to be treated in a pay status to avoid confusion. For example, is funeral time considered? Thus, just a clarification of what hours are considered as hours paid.

Section 2: FLSA Overtime: This language is unclear. Not sure how all FLSA overtime 'shall be paid in cash' as cash payments are not acceptable. There must be a different

meaning to this, thus, a better definition to 'cash' should be developed; or the section omitted. Not sure it if it is needed at all.

Section 3: Compensatory Time: Suggest the term 'paid in cash' be changed to 'all overtime hours will be paid in the employee's payroll'.

Article 27 – Mileage Allowance: Eliminate from the contract. Should be City policy not in contract language.

Article 30 – Longevity: Longevity is paid on a lump sum basis annual and as such is subject to overtime. The City is required to compute a complicated calculation annually in order to provide this lump sum longevity benefit; thus, it is recommended to maintain the longevity benefit, but spread it throughout the year and include it in the semi-monthly overtime calculation for ease of calculation.

Article 34 – Holidays: A number of public safety departments are moving to a lump sum amount for holiday pay (not subject to overtime payment) that is equivalent to the number of holidays. The pay is given either once or twice per year. Employees then just work the holiday at regular pay. It eliminates all of the language of when the holiday falls, when it is celebrated, if it is worked, etc. The only downside is if someone leaves mid-year; one might be paid for holidays not worked. Considering the low turnover – most departments feel the lump sum holiday is worth the risk.

Article 35 – Personal Days: The first paragraph has a number of different employee groups, twenty-four (24) hour personnel and eight (8) hour personnel – which are explained throughout the contract. Then for the first time three quarter (3/4), and ten (10) hour personnel are introduced. There are no work schedules outlined for these groups, nor salary schedules. Either these need to be defined, or need to be eliminated from this section of the contract.

Article 36 – Vacation Leave: Same issue as Personal days for ten (10) hour personnel are included. Need to define or eliminate.

Article 37 – Sick Leave: Same issue three-quarter (3/4) and ten (10) hour personnel are included. Need to define or eliminate.

Appendix E: EMS Department Union Contract Review

The following is a review of the 2015-2018 agreement between the City of West Des Moines and the West Des Moines Associate of Professional Fire Fighters, EMT-Paramedics and EMT-Basics. This is only a review and any recommendations are suggestions by the consultant for discussion and future negotiations. Only areas of interest will be highlighted.

Article 2 – Recognition: The contract indicates it covers firefighters; however, in the recognition, the section Included, firefighters, are not listed. Should be clarified if firefighters are included, and if so – what firefighters. Or, the recognition of firefighters removed as they have their own union.

Article 13 – Vacancies and Transfers: Discussed in the report – transfers to stations/shifts should occur more frequently to equalize work as well as mix up crews. Administration and management should work to develop language that allows the ability to move employees on a more regular basis. Some departments move some of the employees to different shifts/stations every three years, then the other group the next three years; thus, mixing up the work groups. This language should not be changed for filling of open positions.

Article 27 – Mileage Allowance: Remove from contract. Should be City policy and not in contract language.

Article 28 – Longevity: Longevity is paid on a lump sum basis annual and as such is subject to overtime. The City is required to compute a complicated calculation annually in order to provide this lump sum longevity benefit; thus, it is recommended to maintain the longevity benefit, but spread it throughout the year and include it in the semi-monthly overtime calculation for ease of calculation.

Article 34 – Holidays: A number of public safety departments are moving to a lump sum amount for holiday pay (not subject to overtime payment) that is equivalent to the number of holidays. The pay is given either once or twice per year. Employees then just work the holiday at regular pay. It eliminates all of the language of when the holiday falls, when it is celebrated, if it is worked, etc. The only downside is if someone leaves mid-year; one might be paid for

holidays not worked. Considering the low turnover – most departments feel the lump sum holiday is worth the risk

Appendix A: Convert all wages to hours versus annual. Change annual calculation to 2,912 rather than current calculation.

Appendix F: City Employee Handbook Review

The following is a review of the City's employee handbook. Only areas of interest will be highlighted.

Introductory Period: Suggest one year for all employees. Six-months can be rather short for some positions. Also, consistency throughout City.

Employment Status: Change Paid -on-Call to Part-time Firefighters.

Residency Requirements: Many agencies are eliminating or expanding residency requirements and that has been recommended for Paid-on-call/part time fire fighters. The limitation most likely is limiting recruitment opportunities. Although the study was not within the police department, with the current police climate, the restriction on recruitment of police officers may prove to be problematic, if it hasn't already.

Personnel Files: Suggest putting a time period in which human resources will respond to requests from employees to review personnel files.

Anti-Harassment: Either within this policy, or in a separate policy, for the Genetic Information Non-Discrimination Act (GINA).

Appropriate Attire: May want to address different color hair; piercings, and tattoos what is and what is not acceptable.

Cellular Telephone: Suggest language that on any device not allowed to take pictures and post. However, taking pictures may be allowed to assist in job, then pictures must become property of the City and not posted on any sites.

Compensation for Additional Time Worked: Suggest the defined work period is spelled out in the policy.

Longevity: Move longevity to a semi-monthly calculation to ease the overtime calculation.

Paid Holidays: We are recommending to our clients a City floating holiday to be designed at the beginning of the year to be used when holidays fall on off days. For example, July 4th is a Tuesday, it is difficult to get individuals to work Monday, so the extra floating holiday could be used that Monday; or if Christmas Eve/Day is Wednesday-Thursday. Thus, an optional holiday to be designated by the City. Nine holidays appear a little light than most organizations.

Paid Vacation: Develop a vacation schedule for management employees. The current schedule is problematic for recruitment of management personnel. The City may want to consider the concept of Paid-time-off (PTO) -combining vacation and sick leave. There are

various ways to integrate the two, and maintain the insurance/buyout program, but more organizations are starting to move to this as a way to incent those who do not abuse sick leave and curb those who do.

Family Medical Leave Act: Need to include the military leave provisions.

Overall the employee handbook is very well written and organized. A few polices the City may want to include:

- Use of City property
- Unemployment compensation
- Pregnancy leave in the fire/EMS service – any special requirements
- Verification of employment

The links within the handbook to other policies and/or forms makes the handbook extremely user friendly and the department should be applauded for its work.